2022 TECHNICAL PROGRAM AND EXHIBITION GUIDE

SPIE. ASTRONOMICAL TELESCOPES + INSTRUMENTATION

17–22 July 2022
Palais de congrés de Montréal
Montréal, Québec, Canada

SPIE. ASTRONOMICAL TELESCOPES + INSTRUMENTATION

The most valuable technical event for ground-based, airborne, and space-based telescopes and their supporting instrumentation. Researchers and engineers sharing advancements, discoveries, challenges, and project updates with colleagues from around the world.

Conferences and Courses: 17–22 July 2022
Exhibition: 19–21 July 2022
Palais de congrés de Montréal
Montréal, Québec, Canada

Cutting-Edge Research

Training and Education

Free Exhibition

Download the SPIE Conference and Exhibition App

Download the App to view the full schedule of events and participants. Get all the details on your mobile device.

- » Plan your conference schedule and sync between your mobile device and desktop computer
- » Save notes from presentations and events for your trip report
- » Be notified when events added to My Schedule are about to begin
- » Google Maps integration provides views of nearby restaurants, stores, and venues
- » Search for participants, presentations, or events with Google voice commands

Get the App

Stay Connected

SPIE.

SPIE, the international society for optics and photonics, brings engineers, scientists, students, and business professionals together to advance light-based science and technology. The Society, founded in 1955, connects and engages with our global constituency through industry-leading conferences and exhibitions; publications of conference proceedings, books, and journals in the SPIE Digital Library; and career-building opportunities. Over the past five years, SPIE has contributed more than $22 million to the international optics community through our advocacy and support, including scholarships, educational resources, travel grants, endowed gifts, and public-policy development. www.spie.org.

Safe meeting protocols

Masks recommended

Masks are recommended for all indoor spaces regardless of vaccination status.

Keep a safe distance

Respect the personal space and comfort level of others.

Health and safety

Proof of vaccination will not be required. Attendees are encouraged but not required to wear a medical mask during the meeting.

Enhanced sanitation measures will be taken throughout the event

- Masks and hand sanitizers will be widely available for free.
- Conference rooms will allow for social distancing to the extent possible.

How we can all help

- Wash hands frequently
- Respect the personal space and comfort level of others
- Do not attend if you are not feeling well
- Be prepared and have a plan to quarantine if necessary, following guidelines from Travel Canada

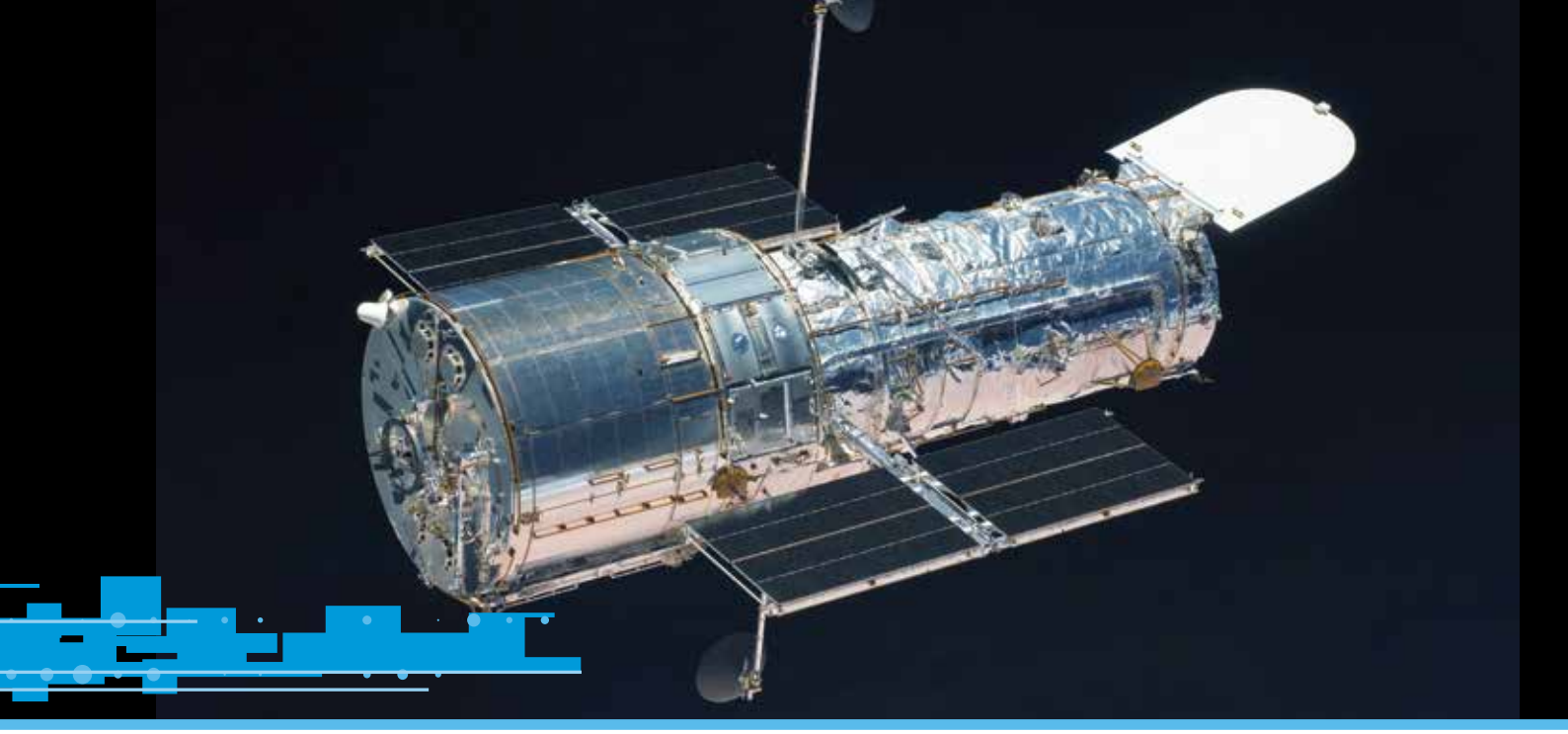
We encourage you to get tested if required for travel, have known exposure, or have symptoms of COVID-19.

Testing for return travel plans, offsite options

View a list of COVID-19 testing locations in Montréal to help you make your return travel plans easier.

- Walk-in Covid-19 tests - 12 locations available: https://www.canadahomedoctors.ca
- Private Covid-19 tests: https://mtlpcr.ca/

spie.org/as
#SPIEastro



Cutting-edge topics in ground- and space-based telescopes, their supporting technologies, and the latest instrumentation—Welcome to SPIE Astronomical Telescopes + Instrumentation

2022 Symposium Chairs

René Doyon
Univ. de Montréal (Canada)

Shouleh Nikzad
Jet Propulsion Lab. (USA)

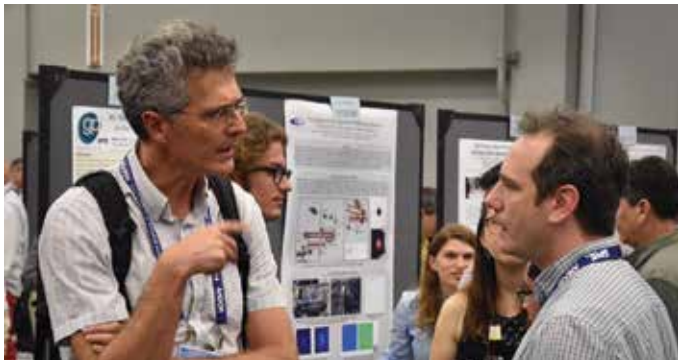
2022 Symposium Co-Chairs

Sarah Kendrew
European Space Agency (USA)

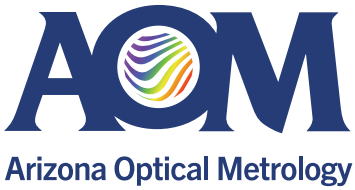
Satoshi Miyazaki
National Astronomical Observatory of Japan

See full details and updates at **spie.org/as** or on the **SPIE App**

Enjoy real conversations, hear the latest breakthroughs, and make important connections.



SPIE thanks our sponsors for their generous support

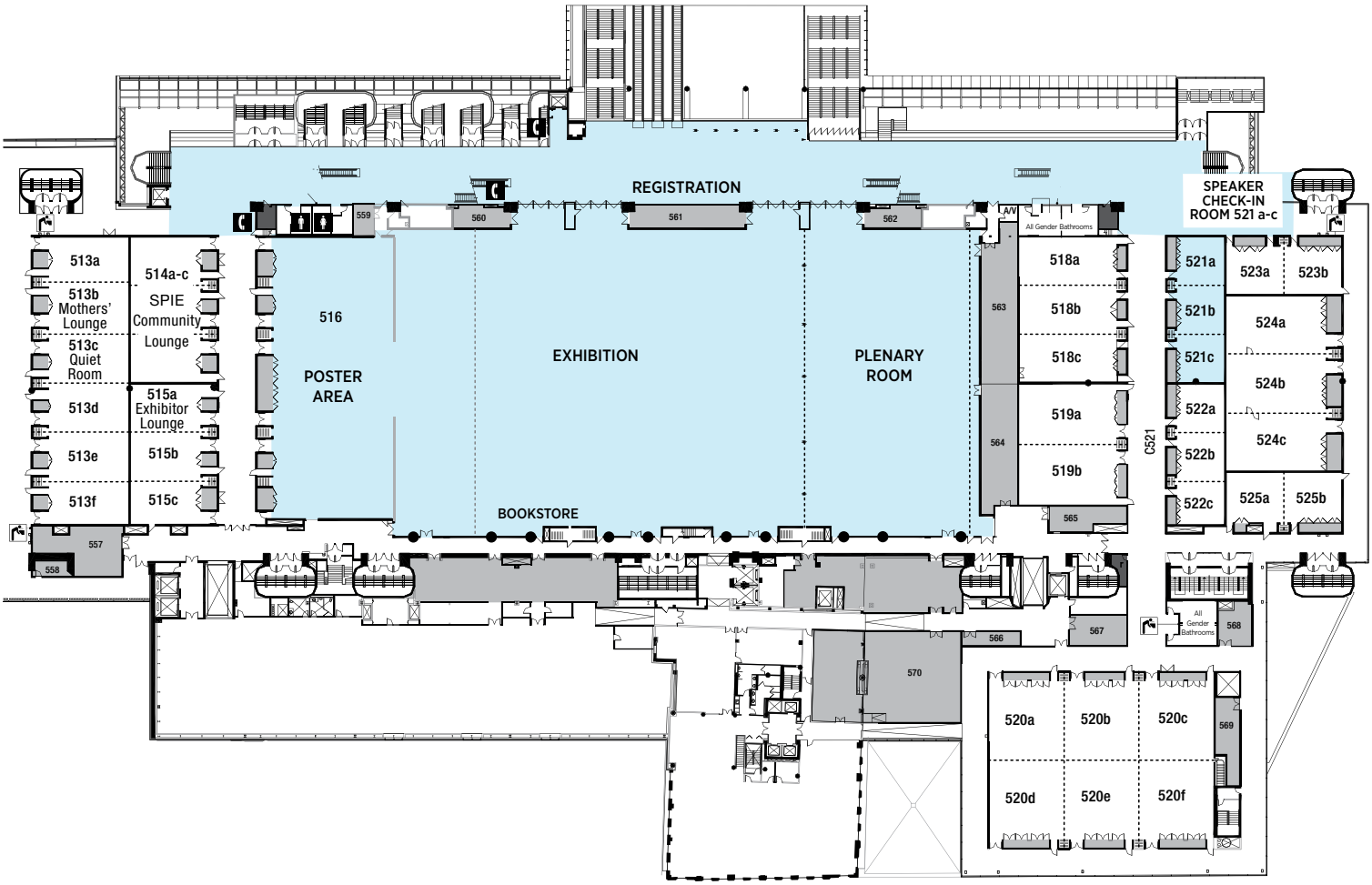


PROMOTIONAL PARTNER

Photonics Media

Floor Plan

Palais de congrés de Montréal
Level 5



Event Daily Schedule

SUNDAY 17 July	MONDAY 18 July	TUESDAY 19 July	WEDNESDAY 20 July	THURSDAY 21 July
View **Technical Conference daily schedule,** page 15				
		EXHIBITION: 10:00–17:00, p. 18–24	**EXHIBITION:** 10:00–17:00, p. 18–24	**EXHIBITION:** 10:00–14:00, p. 18–24
Plenary Presentation: **Talks on the Sloan Digital Sky Survey** (Ramirez, Pogge, Froning), 18:30–19:30, p. 10	*Plenary Presentations:* **The James Webb Space Telescope: Some Key Moments in its History,** *(Smith);* **JWST: Early results and Instruments** *(Gardner, Evans, Girard, Kendrew, Ravindranath),* 08:30–10:00, p. 10	*Plenary Presentations:* **The eROSITA X-ray telescope on SRG,** *(Predehl);* **The Rise and Rise of Exoplanets at the NASA Exoplanet Archive** (*Christiansen),* 08:30–10:00, p. 10	*Plenary Presentation:* **Astro2020 Decadal Report** *(Oschmann, Turner, Driesman, Hamden),* 08:30–10:00, p. 11	*Plenary Presentation:* **Emergent technologies and their impact on future flagship missions: discussion with NASA Astrophysics Chief Technologist and technology leaders** *(Perez, Fossum, Jovanovic, Yu),* 08:30–10:00, p. 11
	Lunch & Learn: Introduction to Equity, Diversity and Inclusion (EDI), 12:00–13:00, p. 12	**Lunch & Learn: Beaded Privilege,** 12:00–13:00, p. 12	**Lunch & Learn: Inequitable Monopoly,** 12:00–13:00, p. 12	**Lunch & Learn: Systematic Change,** 12:00–13:00, p. 12
	Women in Optics Meetup, 15:00–16:00, p. 12	**SPIE Fellow & Senior Member Luncheon,** 12:00–13:00, p. 9	**LGBTQ+ Meetup,** 15:00–16:00, p. 12	**Black in Photonics Meetup,** 15:00–16:00, p. 12
	Poster Session, 17:30–19:00, p. 9	**Student Meetup,** 15:00–16:00, p. 12	**Networking Session,** 16:00–17:00, p. 9	**Poster Session,** 18:00–20:00, p. 9
	Welcome Reception, 19:00–20:30, p. 9	**Recruiting and retaining a diverse workforce panel discussion and mixer,** 16:00–17:30, p. 12	**Poster Session,** 18:00–20:00, p. 9	
		JATIS Editor Reception, 17:00–18:00, p. 9		
		Poster Session, 18:00–20:00, p. 9		

Special events

Poster Sessions

Location: Room 516/517a

Monday 18 July · 17:30–19:00
Tuesday 19 July · 18:00–20:00
Wednesday 20 July · 18:00–20:00
Thursday 21 July · 18:00–20:00

Conference attendees are invited to attend the poster sessions (technical badge required). Authors of poster papers will be present during the poster sessions to answer questions concerning their papers.

Welcome Reception

18 July 2022 · 19:00–20:30
Location: Room 710

Enjoy reconnecting with colleagues at the welcome reception. Please wear your conference badge.

SPIE Fellow & Senior Member Luncheon

19 July 2022 · 12:00–13:00
Location: Room 515bc

All Fellow and Senior Members of SPIE are invited to join your colleagues for an informal SPIE hosted lunch. Fellow and Senior Members planning to attend are asked to RSVP to Brent Johnson (brentj@spie.org).

JATIS Editor Reception

19 July 2022 · 17:00–18:00
Location: Room 522b

Editors for the *Journal of Astronomical Telescopes, Instruments,* and Systems are invited to join us for a reception.

Networking Social

20 July 2022 · 16:00–17:00
Location: Exhibition hall

Join exhibitors for some light refreshments as we celebrate the return of the in-person SPIE Astronomical Telescopes + Instrumentation event.

Plenary Sessions

Plenary sessions will feature speakers presenting on a wide range of topics from across the globe, including research, application areas, and possible late-breaking news.

Sunday Plenary

17 July 2022 · 18:30–19:30
Location: Room 517d

Session Chair: **René Doyon,** Univ. de Montréal (Canada)

Talks on the Sloan Digital Sky Survey

Speakers:

Solange Ramirez, Carnegie Observatories (USA)

Richard Pogge, The Ohio State Univ. (USA)

Cynthia Froning, The Univ. of Texas at Austin (USA)

Monday Plenary

18 July 2022 · 08:30–10:00
Location: Room 517d

Session Chair: **René Doyon,** Univ. de Montréal (Canada)

The James Webb Space Telescope: Some Key Moments in its History

Robert Smith, Univ. of Alberta (Canada)

JWST: Early results and Instruments

Speakers:

Jonathan Gardner, NASA Goddard Space Flight Ctr. (USA)

NIRSpec: **Chris Evans,** European Space Agency, STScI (USA)

NIRCam: **Julien Girard,** Space Telescope Science Institute (USA)

MIRI: **Sarah Kendrew,** European Space Agency (USA)

NIRISS: **Swara Ravindranath,** Space Telescope Science Institute (USA)

Tuesday Plenary

19 July 2022 · 08:30–10:00
Location: Room 517d

Session Chair: **Satoshi Miyazaki,** National Astronomical Observatory of Japan

The eROSITA X-ray telescope on SRG

Peter Predehl, Max Planck Institut (Germany)

The Rise and Rise of Exoplanets at the NASA Exoplanet Archive

Jessie Christiansen, Caltech (USA)

Plenary Sessions

Wednesday Plenary

20 July 2022 · 08:30–10:00
Location: Room 517d

Astro2020 Decadal Report

Members of the Astro2020 Decadal Report engage in discussion on the reporting process and results with the community and community representative.

Moderator: **Sarah Kendrew,** European Space Agency (USA)

Panelists:

Jim Oschmann, Ball Aerospace (retired) (USA)

Jean Turner, Univ. of California, Los Angeles (USA)

Andrew Driesman, Johns Hopkins Univ. (USA)

Erika Hamden, The Univ. of Arizona (USA)

Thursday Plenary

21 July 2022 · 08:30–10:00
Location: Room 517d

Moderator: **Shouleh Nikzad,** Jet Propulsion Lab. (USA)

Emergent technologies and their impact on future flagship missions: discussion with NASA Astrophysics Chief Technologist and technology leaders.

Speakers:

Mario Perez, NASA Headquarters (USA)

Eric Fossum, Dartmouth College (USA)

Nemanja Jovanovic, Caltech (USA)

Nan Yu, NASA Jet Propulsion Laboratory, California Institute of Technology (USA)

See full details and updates at **spie.org/as** or on the **SPIE App**

SPIE Community Lounge

Join your colleagues for focused diversity and inclusion workshops, networking, and community meetups

SPIE. EQUITY DIVERSITY INCLUSION

Location: Room 514, Community Lounge

Networking events

Women in Optics Meetup

18 July 2022 · 15:00–16:00

Join other women in the field for informal discussions and networking.

Student Meetup

19 July 2022 · 15:00–16:00

Come meet your fellow students from all over the world! Make new friends and expand your network.

Recruiting and retaining a diverse workforce panel discussion and mixer

19 July 2022 · 16:00–17:30

Panel discussion about hiring a diverse workforce, lessons learned and best practices from leading companies in the optics community, followed by a networking reception.

LGBTQ+ Meetup

20 July 2022 · 15:00–16:00

Come join us and socialize and network with other LGBTQ+ attendees, students, scientists, and allies in the astronomy community.

Black in Photonics Meetup

21 July 2022 · 15:00–16:00

Join us for a Black in Photonics informal meetup at SPIE Astronomical Telescopes + Instrumentation.

Lunch and Learn events

Lunch & Learn: Introduction to Equity, Diversity and Inclusion (EDI)

18 July 2022 · 12:00–13:00

Join a discussion of EDI in the workplace, recognizing bias, practicing allyship, and understanding institutional barriers.

Lunch & Learn: Beaded Privilege

19 July 2022 · 12:00–13:00

Think about privilege from a different point of view with this visual activity.

Lunch & Learn: Inequitable Monopoly

20 July 2022 · 12:00–13:00

Visualize the inequalities in our world with a modified version of Monopoly.

Lunch & Learn: Systematic Change

21 July 2022 · 12:00–13:00

This final session will build on the topics discussed throughout the week, and offer methods to identify systemic inequities.

SPIE Community Lounge

Meet the organizers onsite at the Community Lounge

Pascale Hibon (she/her), Telescope System Scientist, ESO/VLT

Hibon overviews the end-to-end performance of the 4 8-meter Unit Telescopes (UTs). She is also the acting Adaptive Optics System Scientist at the ESO/VLT, the Laser System Operational Team Chair, and Laser Collision Avoidance Response Project Manager.

Alison Peck (she/her), Program Director, NSF

Peck has been active in Equity, Diversity and Inclusion activities for several years, with a focus on training the next generation of STEM professionals and creating equitable and inclusive programs for students and early career professionals at observatories and other research facilities.

Ameerah McBride, Chief Diversity Officer, AURA

McBride has served as Chief Diversity Officer, Title IX Coordinator and Director of Equity and Inclusion at Texas State University. Prior to those positions, Ameerah was Special Assistant to the Chancellor, Director of Equal Opportunity & Access/Title IX Coordinator and Chief Diversity Officer at the University of Wisconsin-Oshkosh, WI.

Lyndele von Schill (she/her), Director of Diversity & Inclusion, NRAO

Von Schill is an educator and activist, and is passionate about issues related to diversity, inclusion, justice and equity. Her professional work is centered around removing barriers to equitable access to STEM careers by students from BIPOC and LGBTQIA+ communities.

Alysha Shugart, Observations Specialist, Vera C. Rubin Observatory.

Shugart served Gemini South International Observatory as a science operations specialist and diversity advocate for the AURA centers in Chile. Shugart worked to bring different perspectives into light in the organization, including local Chilean D&I activists, lawmakers, anthropologists, and poets.

Sandrine Thomas (she/her), Lead Workplace Culture Advocate, Vera C. Rubin Observatory

Thomas is deeply interested in creating a welcoming, inclusive and respectful environment for everyone, allowing fruitful collaboration. As the other WCAs, she values people's diversity of experience, expertise, and perspective.

Conferences

Two tracks, 12 conferences, more than 2,000 papers

TELESCOPES AND SYSTEMS

- Optical, infrared, and millimeter wave
- Ultraviolet to gamma ray
- Ground-based telescopes and instrumentation
- Airborne telescopes and instrumentation
- Optical and infrared interferometry and imaging
- Adaptive optics systems
- Observatory operations
- Modeling, systems engineering, and project management for astronomy

TECHNOLOGY ADVANCEMENTS

- Advances in optical and mechanical technologies for telescopes and instrumentation
- Software and cyberinfrastructure
- Millimeter, submillimeter, and far-infrared detectors and instrumentation
- X-ray, optical, and infrared detectors

SPIE. DIGITAL LIBRARY

Included with registration:
50 proceedings tokens

Paid registration includes 50 content downloads from the SPIE Digital Library. SPIE will email details on using proceedings download tokens.

Conference Schedule

Sunday 17 July	Monday 18 July	Tuesday 19 July	Wednesday 20 July	Thursday 21 July	Friday 22 July
Telescopes and systems					
Conf. 12180 **Space Telescopes and Instrumentation 2022: Optical, Infrared, and Millimeter Wave** *(Coyle, Matsuura, Perrin);* Location: Room 520 c					
Conf. 12181 **Space Telescopes and Instrumentation 2022: Ultraviolet to Gamma Ray** *(den Herder, Nikzad, Nakazawa);* Location: Room 523					
Conf. 12182 **Ground-based and Airborne Telescopes IX** *(Marshall, Spyromilio, Usuda);* Location: Room 517 d					
Conf. 12183 **Optical and Infrared Interferometry and Imaging VIII** *(Mérand, Sallum, Sanchez-Bermudez);* Location: Room 520 b					
Conf. 12184 **Ground-based and Airborne Instrumentation for Astronomy IX** *(Evans, Bryant, Motohara);* Location: Room 519 a					
Conf. 12185 **Adaptive Optics Systems VIII** *(Schreiber, Schmidt, Vernet);* Location: Room 518 a					
		Conf. 12186 **Observatory Operations: Strategies, Processes, and Systems IX** *(Adler, Seaman, Benn);* Location: Room 520 a			
Conf. 12187 **Modeling, Systems Engineering, and Project Management for Astronomy X** *(Angeli, Dierickx);* Location: Room 520 d					
Technology advancements					
Conf. 12188 **Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation V** *(Navarro, Geyl);* Location: Room 518 c					
Conf. 12189 **Software and Cyberinfrastructure for Astronomy VII** *(Ibsen, Chiozzi);* Location: Room 520 e					
		Conf. 12190 **Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy XI** *(Zmuidzinas, Gao);* Location: Room 524 a			
Conf. 12191 **X-Ray, Optical, and Infrared Detectors for Astronomy X** *(Holland, Beletic);* Location: Room 519 b					

See full details and updates at **spie.org/as** or on the **SPIE App**

Courses

Take advantage of this great opportunity to meet face-to-face with an expert instructor and a group of people with similar goals and challenges.

Price key: SPIE Member / Non-Member / Student Member

In-person courses
View course descriptions and register online.

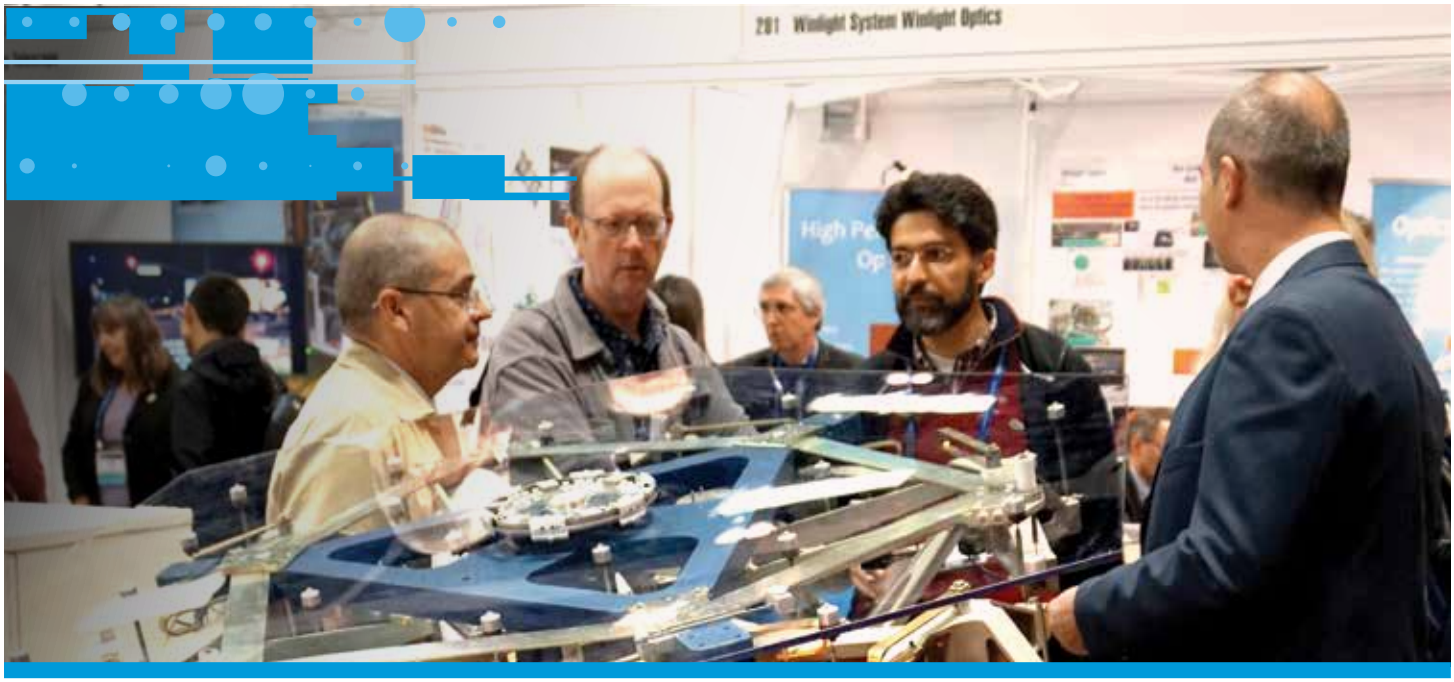
SPIE Members and Student Members receive discounts on courses.

SUNDAY 17 JULY	MONDAY 18 JULY	TUESDAY 19 JULY	WEDNESDAY 20 JULY	THURSDAY 21 JULY
SC135 **Adaptive Optics** *(Tyson)* 08:30–17:30, $745 / $875 / $425	SC906 **Introduction to Visible and NIR Spectrograph Design and Development for Astronomy** *(Sheinis)* 08:30–17:30, $745 / $875 / $425	SC1302 **Cryo-vacuum Design for Ground based Astronomy** *(Lizon)* 08:30–17:30, $745 / $875 / $425	SC1001 **Functioned-based Systems Engineering for the Design of Astronomical Instruments and Control Systems Architectures** *(Schnetler)* 08:30–12:30, $450 / $525 / $285	SC1139 **Systems Engineering and Large Telescope Observatories** *(Lightsey, Arenberg)* 08:30–17:30, $800 / $930 / $447
SC212 **Modern Optical Testing** *(Kim)* 13:30–17:30, $484 / $559 / $299			SC1165 **Introduction to Applied Probability for Systems Engineers** *(Arenberg)* 13:30 - 17:30, $450 / $525 / $285	

SPIE reserves the right to cancel a course due to insufficient advance registration.

MONEY-BACK GUARANTEE
We are confident that once you experience an SPIE course for yourself you will look to us for your future education needs. However, if for any reason you are dissatisfied, we will gladly refund your money. We just ask that you tell us what you did not like; suggestions for improvement are always welcome.

Digital badges and certificates
SPIE awards digital badges and certificates to participants who attend courses and complete the evaluation and quiz. Digital credentials are always accessible, easily shareable, printable at any time, and verified. For more information visit spie.org/digital-badges



SPIE Astronomical Telescopes + Instrumentation Exhibition Directory

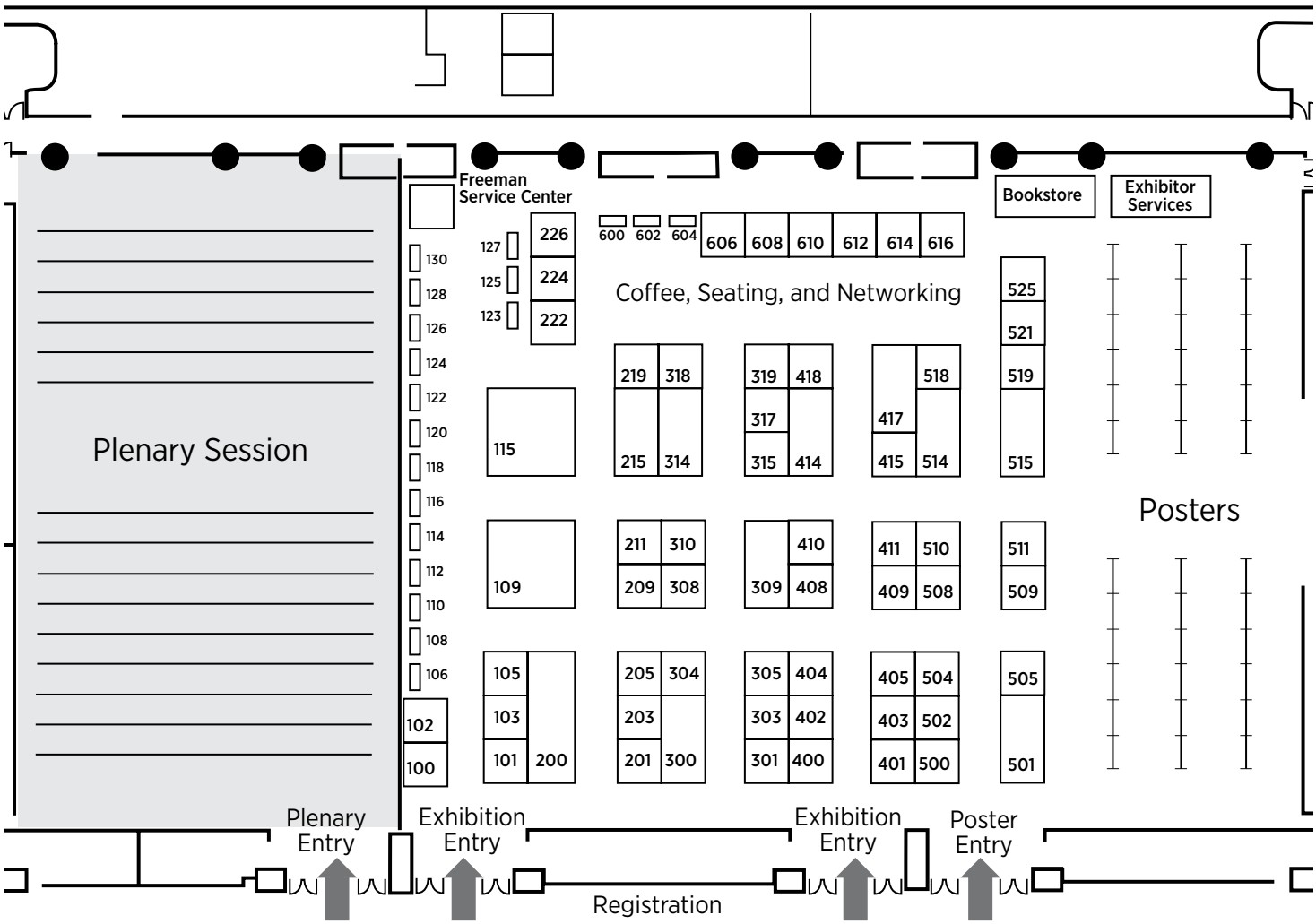
Palais de congrès de Montréal, Montréal, Canada

Tuesday 19 July · 10:00 - 17:00
Wednesday 20 July · 10:00 - 17:00
Thursday 21 July · 10:00 - 14:00

Exhibitors are listed in alphabetical order with full contact information and booth location. Full company descriptions, product announcements, and other information are available on the SPIE App and on spie.org.

Booth Number	Company Name
100	Hart Scientific Consulting International LLC
100	PlaneWave Instruments, Inc.
101	SENER Aeroespacial S.A.
102	Ctr. for Advanced Instrumentation
103	Fibertech Optica Inc.
105	CPI Vertex Antennentechnik GmbH
106	Observatory Sciences Ltd.
108	Boston Micromachines Corp.
109	cosine measurement systems
109	Dutch United Instruments
109	NL Space Pavilion
109	NOVA
109	SRON Netherlands Institute for Space Research
109	TNO
109	VDL ETG Technology & Development bv
110	Infrared Labs., Inc.
112	PHASICS Corp.
114	Applied Surface Technologies
115	ICEX España Exportación e Inversiones, E.P.E
116	Leonardo UK Ltd.
118	Hofstadter Analytical Services, LLC
120	Safran Reosc
122	4D Technology Corp.
124	Ruda-Cardinal, Inc.
126	Cycle GmbH
127	CEDRAT TECHNOLOGIES SA
128	Photonics Media
200	Teledyne
201	ALPAO S.A.S.
203	DynaVac
205	Vera C. Rubin Observatory
209	Andover Corporation
211	ASTELCO Systems GmbH
215	First Light Imaging S.A.S.
215	Imagine Optic SA
219	KiwiStar Optics
222	SKA Observatory
224	Astro Haven Enterprises
300	Materion Balzers Optics
301	Arizona Optical Metrology LLC
302	Thales SESO
303	Sandvik Osprey Ltd.

Exhibition Directory



304 MPB Communications Inc.
304 TOPTICA Photonics, Inc.
305 Photonic Cleaning Technologies
308 MPS Micro Precision Systems AG
309 Officina Stellare S.p.A.
310 Andor Technology Ltd.
314 OHB Digital Connect GmbH
315 QED Optics
317 Armadillo SIA
318 Finger Lakes Instrumentation (a business unit of IDEX Health & Science,LLC)
319 Heraeus Quartz North America LLC
400 BERTIN WINLIGHT
401 Symétrie
402 ASA Astrosysteme GmbH
403 Diffraction Limited
404 Ohara Corp.
405 Alluxa, Inc.
408 Nuvu Cameras Inc.
409 AMOS Ltd.
410 Luxel Corp.
411 Molex
414 Thirty Meter Telescope
415 Hellma Materials GmbH
417 IDOM
418 Spectral Instruments, Inc.
500 Optimax Systems, Inc.
501 National Radio Astronomy Observatory
502 Raptor Photonics Ltd.
504 L3Harris Technologies, Inc.
505 CSEM SA
508 SCHOTT North America, Inc.
509 Kyocera International, Inc.
510 AGC Plasma Technology Solutions
511 EIE Group S.r.l.
514 SPIE Career Center
514 SPIE Membership
515 optics.org
515 SPIE Digital Library
518 Astralis
519 OMP Inc.
600 CBS Inc.
604 Photek Ltd.
608 Aperture Optical Sciences Inc.
610 Association of Universities for Research in Astronomy, Inc.

Visit the web site for most current listing of companies.

Exhibitor Directory

4D Technology Corp. #122
SPIE. CORPORATE MEMBER
3280 E Hemisphere Loop Ste 146, Tucson, AZ, 85706-5039 United States
+1 520 294 5600; fax +1 520 294 5601
4dinfo@ontoinnovation.com; www.4dtechnology.com

AGC Plasma Technology Solutions #510
Avenue Jean Monnet 4, Ottignies-Louvain-la-Neuve, Brabant Wallon, 1348 Belgium
+32 499 993009
www.agc-plasma.com

Alluxa, Inc. #405
SPIE. CORPORATE MEMBER
3660 N Laughlin Rd, Santa Rosa, CA, 95403-1027 United States
+1 855 425 5892
info@alluxa.com; www.alluxa.com

ALPAO S.A.S. #201
SPIE. CORPORATE MEMBER
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Andor Technology Ltd. #310
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s.cummings@andor.com; www.andor.com

Andover Corporation #209
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4 Commercial Dr, Salem, NH, 03079-2800 United States
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info@andovercorp.com; www.andovercorp.com

Aperture Optical Sciences Inc. Booth #608
SPIE. CORPORATE MEMBER
170 Pond View Dr Meriden, CT United States 06450-7142
+1 860 316 2589; fax +1 860 765 6564 info@apertureos.com;
www.apertureos.com

Applied Surface Technologies #114
SPIE. CORPORATE MEMBER
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+1 908 464 6675; fax +1 908 464 7475
co2clean@co2clean.com; www.co2clean.com

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Arizona Optical Metrology LLC #301
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info@cghnulls.com; cghnulls.com

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ASA Astrosysteme GmbH #402
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office@astrosysteme.at; www.astrosysteme.com

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Association of Universities for Research in Astronomy, Inc. #610
1331 Pennsylvania Ave NW Ste 1475, Washington, DC, 20004-1752 United States
+1 202 483 2101; fax +1 202 483 2106
www.aura-astronomy.org

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Planar JSC
PlaneWave Instruments, Inc.
PLC Industries Pte Ltd.
Power Technology, Inc.
Precision Glass & Optics
Precision Laser Scanning
Precision Optical
Princeton Infrared Technologies, Inc.
Princeton Scientific Corp.
Prior Scientific Inc.
Prior Scientific Instruments Ltd.
Prospective Instruments LK OG
Pure Photonics
Pureon Inc.
QED Optics
QED Technologies, Inc.
QED-C
QPC Lasers Inc.
Qual Diamond Hi-Tech
Quartus Engineering Incorporated
Qunnect, Inc.
Radiant Vision Systems, LLC
Raicol Crystals Ltd.
Rainbow Research Optics, Inc.
Raptor Photonics Ltd.
Redondo Optics, Inc.
RedWave Labs Ltd.
Reynard Corp.
RICOR USA, Inc.
Rigaku Innovative Technologies, Inc.
Rochester Precision Optics, LLC
Rocky Mountain Instrument Co.
RPMC Lasers, Inc.
Ruda-Cardinal, Inc.
Saber 1 Technologies
Sacher Lasertechnik GmbH
Safran Optics 1
Salem Distributing Co., Inc.
Santa Barbara Infrared, Inc.
Santec USA Corp.
Satisloh North America Inc.
SCANLAB America, Inc.
ScannerMAX
Schäfter + Kirchhoff GmbH
Schneider Optical Machines Inc.
Schneider Optics, Inc.
SCHOTT North America, Inc.
SCI Engineered Materials
scia Systems GmbH
Science and Technology Facilities Council
Seiwa Optical America Inc.
SemiNex Corp.
Sensors Unlimited, a Collins Aerospace Co.
SFC Energy B.V.
Shanghai Optics Inc.
Sheaumann Laser, Inc.
Shin-Etsu MicroSi, Inc.
Sierra Precision Optics
Sierra-Olympic Technologies, Inc.
Silios Technologies
Sill Optics GmbH & Co. KG
Siskiyou Corporation
Si-Ware Systems
son-x GmbH
Spectral Instruments, Inc.
Spectrogon AB
Spectrogon UK Ltd.
Spectrogon US, Inc.
Spica Technologies, Inc.
SPO Precision Optics
SRI International
StellarNet, Inc.
Stensborg A/S
Superlum Diodes Ltd.
Surface Optics Corp.
Swabian Instruments GmbH
SWIR Vision Systems
Synopsys, Inc.
Syntec Optics
Technica Optical Components, LLC
Technical Manufacturing Corp.
Tecnisco Ltd.
Tecport Optics, Inc.
TelAztec LLC
Teledyne DALSA
Teledyne e2v UK Ltd.
Teledyne FLIR LLC
Teledyne Imaging
Teledyne Judson Technologies
Teledyne Lumenera
Teledyne Photometrics
Teledyne Princeton Instruments
Telops Inc.
TeraXion Inc.
The Charles Stark Draper Laboratory
The Scatter Works Inc.
Thermo Fisher Scientific Inc.
Thirty Meter Telescope
Thorlabs Ltd.
Thorlabs, Inc.
TLC International World Headquarters
TOPTICA Photonics, Inc.
Tower Optical Corp.
TRIOPTICS GmbH
TRUMPF Inc.
Tsaoussis Software Programming LLC
Turning Point Lasers Corp.
TwinStar Optics, Coatings & Crystals, Inc.
Tydex
Umicore Optical Materials USA, Inc.
Universal Photonics Inc.
UQG Ltd.
US Centrifuge
Valtech Corp.
Vermont Photonics Technologies Corp.
Vescent Photonics Inc.
Viavi Solutions Inc.
Vicarious Surgical Inc.
Video Scope International, Ltd.
Video Systems Srl
VIGO System S.A.
Vincent Associates
VisiMax Technologies, Inc.
Vision Engineering Solutions, LLC
Vital Materials Co., Ltd.
Vital Optics Technology Co., Ltd.
Vortex Optical Coatings Ltd.
VORTRAN Laser Technology
Wasatch Photonics, Inc.
Wavelength Electronics, Inc.
World Star Tech
Wuhan National Lab. for Optoelectronics
Wyant College of Optical Sciences
WZW-Optic AG
Xenics NV
XIMEA Corp.
XONOX Technology Inc.
Young Optics Inc.
YSL Photonics
Z & Z Optoelectronics Tech. Co., Ltd.
Zaber Technologies Inc.
Zemax, LLC
Zeus Industrial Products, Inc.
Zhejiang Reci Laser Technology Co., Ltd.
Zurich Instruments AG
Zurich Instruments USA, Inc.
Zygo Corporation

General Information

Badge pick up and registration hours

Location: Palais des congrèss de Montréal, Level 5, Lobby

Saturday 16 July · 16:00 – 19:30

Sunday 17 July · 07:00 – 17:00

Monday 18 July · 07:30 – 17:00

Tuesday 19 July · 07:30 – 17:00

Wednesday 20 July · 07:30 – 17:00

Thursday 21 July · 07:30 – 17:00

Friday 22 July · 07:45 – 17:00

SPIE Cashier

Palais des congrèss de Montréal, Level 5, Lobby
Located in the registration area: Open during registration hours.

REGISTRATION PAYMENTS ONLINE ONLY

If you have already registered and wish to add a course, workshop or special event, you may do this online by signing into your SPIE account.

RECEIPT AND CERTIFICATE OF ATTENDANCE

Preregistered attendees who need an SPIE-stamped receipt or attendees who need a Certificate of Attendance may obtain those at Cashier.

BADGE CORRECTIONS

Badge corrections can be made at the Badge Corrections station. Please have your badge removed from the badge holder and marked with your changes before approaching the counter.

Speaker Check-in and Preview Station

Location: Palais des congrèss de Montréal, Level 5, Room 521

Sunday 17 July · 07:00 – 17:00

Monday 18 July · 07:30 – 17:00

Tuesday 19 July · 07:30 – 17:00

Wednesday 20 July · 07:30 – 17:00

Thursday 21 July · 07:30 – 17:00

Friday 22 July · 07:45 – 17:00

All speakers must stop at Speaker Check-in to upload and preview their slide presentation files at least two hours before their scheduled session or the day before if you present in the first session. Speakers are not able to present using their own devices. All conference rooms have a laptop, projector, screen, lapel microphone, and laser pointer.

Internet access

Location: Palais des congrèss de Montréal, Level 5 Lobbies, Exhibition Hall, and Registration area

Complimentary wireless internet access provided in lobbies on the conference room level and in the exhibition hall. Instructions will be posted onsite.

SPIE Conference and Exhibition App

This useful tool allows you to search and browse the program, special events, participants, exhibitors, courses, and more. It is free and available for iPhone and Android phones. Build your personalized schedule and sync with the online MySchedule tool. Download the app

SPIE Bookstore

Location: Palais des congrèss de Montréal, Level 5

Tuesday 19 July · 10:00 – 17:00

Wednesday 20 July · 10:00 – 17:00

Thursday 21 July · 10:00 – 14:00

Stop by the SPIE Bookstore to browse the latest SPIE Press books, proceedings, and educational materials. While there, get a t-shirt or SPIE tie or scarf to bring home. Credit and debit cards only will be accepted; no cash.

SPIE Course Materials

Open during registration hours.

Browse course offerings or learn more about SPIE courses available in portable formats such as online and customized, in-company courses.

SPIE Press Room

Open during registration hours, Room 522c

For registered press only. The Press Room provides meeting space, refreshments, access to exhibitor press releases, and Internet connections. Press are urged to register before the meeting by emailing name, contact information, and name of publication to media@spie.org. Preregistration closes approximately 10 days before the start of the event.

See full details and updates at **spie.org/as** or on the **SPIE App**

Luggage Check

Location: Level 2–Viger Hall
Only Thursday and Friday

Palais des congrès de Montréal will provide a luggage, package, and coat storage.

Please note hours; no late pickup available.

Business Centre and Information Desk

Location: Level 2–Viger Hall
Open during registration hours

The business centre mainly offers fax and photocopy services to convention delegates. If requested, the information agents will also be pleased to inform visitors about tourist attractions in the city. Maps and brochures are also available.

Child care services

Nanny Services, 888-369-8819

Care.com

Note: SPIE does not imply an endorsement or recommendation of these services. They are provided on an "information only" basis for your further analysis and decision. Other services may be available.

Did you know SPIE offers Family Care Grants to SPIE members? Learn more about deadlines and how to apply.

Gender inclusive restroom

Locations:

- All Gender bathrooms available on the East side of room 517 (shared with other events)
- All Gender bathrooms available besides room 522 (SPIE event exclusivity)

Mothers' Lounge

Location: Palais des congrèss de Montréal, Room 513b
Open during registration hours.

The Mothers' Lounge is a lockable room intended for nursing mothers. There is no storage, running water, or refrigeration available in this space.

Quiet Room

Location: Palais des congrèss de Montréal, Room 513c
Open during registration hours.

The Quiet Room is intended for silent meditation, reflection, or prayer. No mobile device or computer use, and no food or beverages allowed.

Urgent message line

An urgent message line is available during registration hours: +1-360-927-6411

Lost and Found

Location: SPIE Cashier
Open during registration hours.

Found items will be kept at SPIE Cashier in the Registration area during the meeting and available only during registration hours. At the end of the meeting, all found items will be turned over to the Palais des congrès de Montréal Facility Security, phone at 514-871-3141 or email.

Food and beverage services

COMPLIMENTARY COFFEE BREAKS
Each day from 07:30 - 17:00. In the Exhibition Hall during hall hours Tuesday - Thursday.

Check individual conference listings for exact times.

Sponsored by L3HARRIS

FOOD & REFRESHMENTS FOR PURCHASE
Level 1 – Les Galeries du Palais

Hours vary by location. Restaurants include:

Tim Horton's, Sushi Shop, Terra Verde, Subway, Presse Café, Noobox, La Popessa, Café Bistro Van Houtte, and Basha Resto-Grill Hot and cold snacks, hot entrees, deli sandwiches, salads, and pastries are available for purchase. Cash and credit cards accepted.

GRAB-AND-GO CONCESSION COUNTER
Location: Level 5, Lobby Area

Monday–Friday · 07:30-14:00 (based on demand)

Snacks, sandwiches, salads, and a variety of beverages available for purchase.

SPIE Event Policies

Acceptance of Policies and Registration Conditions

The following policies and conditions apply to all SPIE events, both online and in person. As a condition of registration, you will be required to acknowledge and accept the SPIE policies and conditions contained herein.

SPIE has established a confidential reporting system for all SPIE event participants to raise concerns about possible unethical or inappropriate behavior within our community. When at an SPIE event, you may contact any SPIE staff with concerns. If you feel that you are in immediate danger, please dial the local emergency number for police intervention.

Agreement to hold harmless

Attendee agrees to release and hold harmless SPIE from any and all claims, demands, and causes of action arising out of or relating to your participation in the event you are registering to participate in and use of any associated facilities or hotels.

Be well agreement

Any public space where other people are present holds an inherent risk of exposure to COVID-19 and other communicable diseases. By attending this event, I agree to voluntarily assume all risk related to exposure and agree to not hold SPIE or any of their affiliates including partners and sponsors, directors, officers, employees, agents, contractors, volunteers, or sponsored venues liable for illness. I will take necessary precautions while at the event including, but not limited to, engaging in appropriate social distancing, wearing a mask in public areas when not consuming food or beverage if required, minimizing face touching, frequently washing hands, and avoiding risky environments such as overcrowded bars or restaurants. I agree to not attend any SPIE event if I feel ill or had recent exposure to a COVID-19 case.

Anti-harassment policy

It is SPIE policy that all employees, volunteers, and participants are entitled to respectful treatment. Any form of bullying, discrimination, harassment, sexual or otherwise, is unacceptable and will not be tolerated. This policy applies to all locations and situations where SPIE business is conducted and to all SPIE-sponsored activities and events.

Attendee registration and admission policies

SPIE, or their officially designated event management, in their sole discretion, reserves the right to accept or decline an individual's registration for an event. Further, SPIE, or event management, reserves the right to prohibit entry of or to remove any individual whether registered or not, be they attendees, exhibitors, representatives, or vendors, whose conduct is not in keeping with the character and purpose of the event. Without limiting the foregoing, SPIE and event management reserve the right to remove or refuse entry to anyone who has registered or gained access under false pretenses, provided false information, or for any other reason whatsoever that they deem is cause under the circumstances.

Capture and use of a person's image

By registering for an SPIE event, you grant full permission to SPIE to capture, store, use, and/or reproduce your image or likeness, including incidental capture of any individuals in your household or workplace, by any audio and/or visual recording technique and create derivative works of these images and recordings in any SPIE media now known or later developed, for any legitimate SPIE purpose. By registering for an SPIE event, you waive any right to inspect or approve the use of the images or recordings or of any written copy. You also waive any right to royalties or other compensation arising from or related to the use of the images, recordings, or materials. By registering, you release, defend, indemnify, and hold harmless SPIE from and against any claims, damages, or liability arising from or related to the use of the images, recordings or materials, including but not limited to claims of defamation, invasion of privacy, or rights of publicity or copyright infringement, or any misuse, distortion, blurring, alteration, optical illusion, or use in composite form that may occur or be produced in taking, processing, reduction, or production of the finished product, its publication or distribution.

Code of conduct

SPIE is committed to providing a harassment- and discrimination-free experience for everyone at our events, an experience that embraces the richness of diversity where participants may exchange ideas, learn, network, and socialize in the company of colleagues in an environment of mutual respect.

Read complete code

Event cancellation policy

If for some unforeseen reason SPIE should have to cancel an event, processed registration fees will be refunded to registrants. Registrants will be responsible for cancellation of travel arrangements or housing reservations and the applicable fees.

Family-friendly policy

Conference events: All conference technical and networking events require a badge for admission. Registered attendees may bring children with them if they have been issued a badge. Registration badges for children under 18 are free and available at the SPIE registration desk onsite. Children under 14 years of age must be accompanied by an adult at all times, and guardians are asked to help maintain a professional, disturbance-free conference environment.

Exhibition hall: Everyone who attends the exhibition must be registered and have a badge. Badges for children are free and available onsite at the registration desk. Children under 14 years of age must be accompanied by an adult at all times. Guardians are asked to help maintain a professional, disturbance-free exhibition environment. Children under 18 are not allowed in the exhibition area during exhibition move-in and move-out.

Identification requirement

To verify registered participants and provide a measure of security, SPIE will ask attendees to present a government-issued photo identification at registration to collect registration materials. Individuals are not allowed to pick up badges for other attendees. Further, attendees may not have some other person participate in their place at any conference-related activity. Such other individuals will be required to register on their own behalf to participate.

For online events, SPIE requires individuals to register with their legal identity.

Laser-pointer safety policy

SPIE supplies tested and safety-approved laser pointers for all conference meeting rooms. For safety reasons, SPIE requests that presenters use provided laser pointers. Use of a personal laser pointer represents the user's acceptance of liability for use of a non-SPIE-supplied laser pointer. If you choose to use your own laser pointer, you must have it tested at speaker check-in.

No smoking policy

Attendees will observe all non-smoking regulations that are publicly posted by the facilities used by the event.

Online commenting policy

SPIE moderates all comments posted in an online event. We encourage robust discussion, the exchange of scientific ideas, and the sharing of multiple, diverse perspectives. We expect the discussion to be consistent with the norms of scholarly research community interactions at events. Online event participants should report any comments or content that falls short of those community norms. We will remove comments, content, or people that are considered inappropriate by SPIE standards or that:

- are defamatory, libelous, obscene, indecent, abusive, or threatening to others
- infringe the copyright, trademark, or other rights of a third party
- upload viruses or are a cybersecurity hazard
- are off topic or inappropriately commercial in nature
- are in violation of any applicable laws or regulations

Payment policy

Registrations must be fully paid before access to the conference is allowed. SPIE accepts VISA, MasterCard, American Express, Discover, Diner's Club, checks, and wire transfers. Onsite registrations can also be paid with cash.

Recording policy

Conferences, courses, and poster sessions: For copyright reasons, recordings of any kind are prohibited without prior written consent of the presenter or instructor. Attendees may not capture or use materials presented in any meeting/course room or in course notes on display without written permission. Consent forms are available at speaker check-in, SPIE registration, or from SPIE online event hosts. Individuals not complying with this policy will be asked to leave a given session and/or asked to surrender their recording media. Refusal to comply with such requests is grounds for expulsion from the event.

Exhibition hall: Recordings of any kind are prohibited without explicit permission from on-site company representatives. Individuals not complying with this policy will be asked to surrender their recording media and to leave the exhibition hall. Refusal to comply with such requests is grounds for expulsion from the event.

Unauthorised solicitation

Unauthorised solicitation in the exhibition hall is prohibited. Any non-exhibiting organization observed to be distributing information or soliciting business in the aisles, or in another company's booth, will be asked to leave immediately.

Unsecured items

Personal belongings should not be left unattended in meeting rooms or public areas. Unattended items are subject to removal by security. SPIE is not responsible for items left unattended.

Wireless internet service

At most events, SPIE provides wireless access for attendees. Properly secure your computer before accessing the public wireless network. SPIE is not responsible for computer viruses or other kinds of computer damage.

SPIE International Headquarters: PO Box 10, Bellingham, WA 98227-0010 USA · Tel: +1 360 676 3290 · Fax: +1 360 647 1445 · help@spie.org · www.SPIE.org

SPIE Europe Offices: 2 Alexandra Gate, Ffordd Pengam, Cardiff, CF24 2SA UK · Tel: +44 29 2089 4747 · Fax: +44 29 2089 4750 · info@spieeurope.org · www.SPIE.org

HARASSMENT

Harassment consists of unwanted, unwelcomed, and uninvited behavior that demeans, threatens, or offends another.

SPIE is committed to providing a harassment- and discrimination-free experience for everyone at our events, an experience that embraces the richness of diversity where participants may exchange ideas, learn, network, and socialize in the company of colleagues in an environment of mutual respect.

It is SPIE policy that all employees, volunteers, and participants are entitled to respectful treatment. Any form of bullying, discrimination, harassment, sexual or otherwise, is unacceptable and will not be tolerated.

To report harassment you have witnessed or experienced at an event or meeting contact any SPIE staff member or use the SPIE Reporting Hotline:

1-888-818-6898 or **spie.ethicspoint.com**

The SPIE Anti-Harassment Policy may be found at spie.org/harassment

The SPIE Code of Conduct may be found at spie.org/conduct

CONFERENCE 12180

Space Telescopes and Instrumentation 2022: Optical, Infrared, and Millimeter Wave

17 - 22 July 2022 | Room 520 c

Conference Chairs: **Laura E. Coyle,** Ball Aerospace (United States); **Shuji Matsuura,** Kwansei Gakuin Univ. (Japan); **Marshall D. Perrin,** Space Telescope Science Institute (United States)

Program Committee: **Beth A. Biller,** The Royal Observatory, Edinburgh (United Kingdom); **Patricia T. Boyd,** NASA Goddard Space Flight Ctr. (United States); **Kerri L. Cahoy,** Massachusetts Institute of Technology (United States); **Giovanni G. Fazio,** Harvard-Smithsonian Ctr. for Astrophysics (United States); **Sarah Gallagher,** Western Univ. (Canada); **Matthew J. Griffin,** Cardiff Univ. (United Kingdom); **Tyler D. Groff,** NASA Goddard Space Flight Ctr. (United States); **Astrid Heske,** European Space Research and Technology Ctr. (Netherlands); **Sylvestre Lacour,** Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); **Elisa V. Quintana,** NASA Goddard Space Flight Ctr. (United States); **Itsuki Sakon,** The Univ. of Tokyo (Japan); **Dmitry Savransky,** Cornell Univ. (United States); **Motohide Tamura,** National Astronomical Observatory of Japan (Japan); **Shyam Narayan Tandon; Giovanna Tinetti,** Univ. College London (United Kingdom); **Gillian S. Wright,** UK Astronomy Technology Ctr. (United Kingdom)

SESSION 1: MISSION DESIGN: LOOKING BACK, LOOKING AHEAD

17 July 2022 • 09:00 - 10:00 EDT | Room 520 c

12180-1

How history can inform an analysis of alternatives study

Author(s): H. Philip Stahl, NASA Marshall Space Flight Ctr. (United States)

17 July 2022 • 09:00 - 09:20 EDT | Room 520 c

12180-2

Conceiving and Designing Future Missions to Cost and Schedule Requirements

Author(s): Jonathan W. Arenberg, Northrop Grumman Corp. (United States)

17 July 2022 • 09:20 - 09:40 EDT | Room 520 c

12180-3

Technologies for future large optical missions: an ESA perspective

Author(s): Pascal Hallibert, European Space Research and Technology Ctr (Netherlands)

17 July 2022 • 09:40 - 10:00 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 2: MISSION CONCEPTS WITH SMALL SPACECRAFT

17 July 2022 • 10:30 - 12:30 EDT | Room 520 c

12180-4

CubeSpec: Mission overview

Author(s): Bart Vandenbussche, Gert Raskin, Pierre Royer, Dominic Bowman, Hugues Sana, Andrew Tkachenko, Jan Goris, Job Schuermans, Dirk Vandepitte, Jeroen De Maeyer, Filip Heylen, Wim De Munter, Maarten Kempenaers, Jelle Lanting, KU Leuven (Belgium); Bram Vandoren, Tjorven Delabie, Arcsec (Belgium); Vincent Moreau, Etienne Renotte, AMOS S.A. (Belgium)

17 July 2022 • 10:30 - 10:50 EDT | Room 520 c

12180-5

CuRIOS: Cubesats for Rapid Infrared and Optical Surveys

Author(s): Jessica R. Lu, Hannah Gulick, Steven Beckwith, Joshua Bloom, Guy Nir, Univ. of California, Berkeley (United States)

17 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-6

Enabling new discoveries by enhancing current and future telescopes with CSTARS: the Calibration Satellite for Traceable Astrophysical Radiometric Standards.

Author(s): Dmitry Vorobiev, Lab. for Atmospheric and Space Physics (United States); Peter Zimmer, J.T. McGraw and Associates, LLC (United States); Susana Deustua, National Institute of Standards and Technology (United States); Dean Hines, Space Telescope Science Institute (United States); John McGraw, J.T. McGraw and Associates, LLC (United States)

17 July 2022 • 11:10 - 11:30 EDT | Room 520 c

12180-7

The POET mission: a Canadian space telescope for exoplanet astrophysics

Author(s): Jason Rowe, Bishop's Univ. (Canada); Stanimir Metchev, Western Univ. (Canada); Kelsey Hoffman, Bishop's Univ. (Canada); Jean-François Lavigne, Yan Montembeault, ABB Inc. (Canada); Joelene Hales, Samantha Lambier, Western Univ. (Canada); Dereck Lizotte, Bishop's Univ. (Canada); Paulo Miles-Páez, European Southern Observatory (Germany); James Sikora, Bishop's Univ. (Canada); Genaro Suárez, Western Univ. (Canada); Nicholas Swidinsky, Univ. of Lethbridge (Canada)

17 July 2022 • 11:30 - 11:50 EDT | Room 520 c

12180-8

Opto-mechanical model of AZIMOV, the deployable telescope for CubeSat

Author(s): Jean-François Sauvage, ONERA (France); Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Lucie Buron, Marc Ferrari, Pascal Vola, Marc Jaquet, Tony Pamplona, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France); Zeshan Ali, UK Astronomy Technology Ctr. (United Kingdom); Aurélie Bonnefois, Bernard Rosier, Vincent Michau, ONERA (France)

17 July 2022 • 11:50 - 12:10 EDT | Room 520 c

12180-9

The Pandora SmallSat: a mission to spectroscopically study exoplanet atmospheres

Author(s): Kelsey Hoffman, Bishop's Univ. (Canada); Elisa Quintana, NASA Goddard Space Flight Ctr. (United States); Jessie Dotson, NASA Ames Research Ctr. (United States); Knicole Colón, NASA Goddard Space Flight Ctr. (United States); Thomas Barclay, Univ. of Maryland (United States), NASA Goddard Space Flight Ctr. (United States); Pete Supsinskas, Jordan Karburn, Lawrence Livermore National Laboratory (United States); Dániel Apai, The Univ. of Arizona (United States); Christina Hedges, NASA Ames Research Ctr. (United States); Benjamin Rackham, Massachusetts Institute of Technology (United States); Jason Rowe, Bishop's Univ. (Canada); Jessie Christiansen, NASA Exoplanet Science Institute and Infrared Processing and Analysis Center (United States); Thomas Greene, NASA Ames Research Ctr. (United States); James Mason, Johns Hopkins Applied Physics Laboratory (United States); Gregory Mosby, NASA Goddard Space Flight Ctr. (United States); Néstor Espinoza, Space Telescope Science Institute (United States); Emily Gilbert, University of Chicago (United States); Veselin Kostov, SETI Institute (United States), Univ. of Maryland (United States);

Nikole Lewis, Cornell Univ. (United States); Brett Morris, University of Bern (Switzerland); Susan Mullally, Space Telescope Science Institute (United States); Elisabeth Newton, Dartmouth College (United States); Joshua Schlieder, Allison Youngblood, NASA Goddard Space Flight Ctr. (United States); Trevor Foote, Cornell Univ. (United States); Megan Mansfield, The Univ. of Arizona (United States); Kevin Stevenson, Johns Hopkins Applied Physics Laboratory (United States); Steven Villanueva, NASA Goddard Space Flight Ctr. (United States); Joshua Pepper, LeHigh Univeristy (United States)

17 July 2022 • 12:10 - 12:30 EDT | Room 520 c

Lunch Break 12:30 - 14:00

SESSION 3: SOLAR SYSTEM AND THE SUN

17 July 2022 • 14:00 - 17:10 EDT | Room 520 c

12180-10

CLEoPATRA: Contemporaneous LEnsing Parallax and Autonomous TRansient Assay - A space mission concept in support of the Roman Space Telescope

Author(s): Richard K. Barry, NASA Goddard Space Flight Ctr. (United States); Nicholas Rattenbury, The Univ. of Auckland (New Zealand); Frank Ravizza, Lawrence Livermore National Lab. (United States); Gioia Rao, Stela Ishitani-Silva, Gregory Olmschenk, Edward J. Wyrwas, NASA Goddard Space Flight Ctr. (United States)

17 July 2022 • 14:00 - 14:20 EDT | Room 520 c

12180-11

Didymos Reconnaissance and Asteroid Camera for Opnav (DRACO): design, fabrication, test, and operation

Author(s): Zachary J. Fletcher, Kyle Ryan, Carolyn Ernst, Bryan Maas, Joseph Dickman, Jacob Greenberg, Tyler Nelson, Derek Lewis, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); James Mize, Johns Hopkins Univ. Applied Physics Lab. (United States); Andrew Cheng, Dmitriy Bekker, Luis Rodriguez, Terik Daly, Johns Hopkins Univ. Applied Physics Lab., LLC (United States)

17 July 2022 • 14:20 - 14:40 EDT | Room 520 c

12180-12

On the alignment, integration, and testing of the Raman spectrometer for MMX (RAX)

Author(s): Martin Pertenaïs, Conor Ryan, Ute Böttger, Maximilian Buder, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Yuchiro Cho, The Univ. of Tokyo (Japan); Sven Gutruf, Kampf Telescope Optics GmbH (Germany); Till Hagelschuer, Heinz-Wilhelm Hübers, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Andoni G. Moral, Olga Prieto Ballesteros, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Steve Rockstein, Selene Routley, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Fernando Rull, Univ. de Valladolid (Spain); Friedrich Schrandt, Susanne Schröder, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

17 July 2022 • 14:40 - 15:00 EDT | Room 520 c

12180-13

MAJIS/JUICE Optical Head: characterization campaign and performance test results

Author(s): Alessandra Barbis, Marco Barilli, Alessandro Bini, Michele Dami, Enrico Fossati, Giuseppe Pilato, Leonardo Tommasi, Leonardo S.p.A. (Italy); Gianrico Filacchione, Simone De Angelis, Giuseppe Piccioni, Stefania Stefani, Federico Tosi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Cydalise Dumesnil, Paolo Haffoud, Yves Langevin, Institut d'Astrophysique Spatiale (France); Marilena Amoroso, Raffaele Mugnuolo, Agenzia Spaziale Italiana (Italy); Francois Poulet, Institut d'Astrophysique Spatiale (France)

17 July 2022 • 15:00 - 15:20 EDT | Room 520 c

Coffee Break 15:20 - 15:50

12180-14

Development and manufacturing of the receiver telescope for the Ganymede Laser Altimeter (GALA)

Author(s): Henrik von Lukowicz, Johannes Hartung, Robert Jende, Sandra Müller, Mathias Rohde, Jan Kinast, Knut Kleinbauer, Svetlana Shestaeva, Stefan Schwinde, Thomas Peschel, Stefan Risse, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

17 July 2022 • 15:50 - 16:10 EDT | Room 520 c

12180-15

Preliminary SO/PHI data quality assessment through coordinated observations with Hinode/SP

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17 July 2022 • 16:10 - 16:30 EDT | Room 520 c

12180-16

CMAG: A Coronal MAGnetograph mission for studying the inner corona magnetic fields

Author(s): David Orozco Suárez, Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain); Daniel Serrano Lombillo, Luis F. Peñin, Diego Rodríguez Gómez, SENER Ingeniería y Sistemas S.A. (Spain); Luis Bellot Rubio, María Balaguer Jiménez, Daniel Álvarez García, Francisco Javier Bailén, Julia Atienzar, Instituto de Astrofísica de Andalucía (Spain)

17 July 2022 • 16:30 - 16:50 EDT | Room 520 c

12180-17

The Compact Doppler Magnetograph (CDM) for Solar Physics and Space Weather Research

Author(s): Don M. Hassler, Southwest Research Institute (United States); Sanjay Gosain, National Solar Observatory (United States); Jean-Pierre Wuelser, Southwest Research Institute (United States); Thomas N. Woods, Lab. for Atmospheric and Space Physics, Univ. of

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17 July 2022 • 16:50 - 17:10 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 4: CONCEPTS AND TECHNOLOGIES FOR SPACE-BASED INTERFEROMETRY

18 July 2022 • 10:30 - 11:50 EDT | Room 520 c

12180-19

Optical interferometry imaging from space: optimization of the aperture configuration of a dense array

Author(s): Hiyam Debary, Laurent M. Mugnier, Vincent Michau, ONERA (France); Sébastien Lopez, Airbus Defence and Space (France)

18 July 2022 • 10:30 - 10:50 EDT | Room 520 c

12180-20

The Event Horizon Explorer mission concept

Author(s): Peter L. Kurczynski, NASA Goddard Space Flight Ctr. (United States), Rutgers, The State Univ. of New Jersey (United States); Eliad Peretz, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-21

Observing inside the coronagraphic regime with next generation nulling interferometry techniques

Author(s): Eugene Serabyn, Garreth J. Ruane, Bertrand Mennesson, Stefan Martin, Jet Propulsion Lab. (United States); Dimitri Mawet, Nem Jovanovic, Pradip Gatkine, Caltech (United States)

18 July 2022 • 11:10 - 11:30 EDT | Room 520 c

12180-22

The LISA optical bench: an overview and engineering challenges

Author(s): William Brzozowski, Ewan Fitzsimons, Daniel Clarkson, Phil Parr-Burman, Martyn Wells, Zeshan Ali, Maria Milanova, Robyn Sharman, Jennifer Keogh, Science and Technology Facilities Council (United Kingdom); Alasdair Taylor, Michael Perreur-Lloyd, David Robertson, Andrew Earle, Harry Ward, Univ. of Glasgow (United Kingdom)

18 July 2022 • 11:30 - 11:50 EDT | Room 520 c

Lunch/Exhibition Break 11:50 - 13:40

SESSION 5: THE JAMES WEBB SPACE TELESCOPE: THE MISSION AND ITS SCIENCE

18 July 2022 • 13:40 - 15:00 EDT | Room 520 c

12180-23

The James Webb Space Telescope mission status

Author(s): Michael W. McElwain, Lee D. Feinberg, Randy A. Kimble, Charles W. Bowers, NASA Goddard Space Flight Ctr. (United States); J. Scott Knight, Ball Aerospace (United States); Charles Atkinson, Northrop Grumman Corp. (United States); Marshall D. Perrin, Space Telescope Science Institute (United States); Jane R. Rigby, Erin C. Smith, Christopher C. Stark, Susan G. Neff, Jonathan P. Gardner, John C. Mather, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 13:40 - 14:00 EDT | Room 520 c

12180-24

Scientific commissioning of the James Webb Space Telescope

Author(s): Randy A. Kimble, Amy S. DeLisa, NASA Goddard Space Flight Ctr. (United States); Scott D. Friedman, David A. Golimowski, Space Telescope Science Institute (United States); Keith A. Parrish, Carl A. Reis, Jane R. Rigby, Julie M. Van Campen, Lauren R. Wheate, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 14:00 - 14:20 EDT | Room 520 c

12180-25

On-orbit JWST backgrounds from stray light and thermal emission

Author(s): Erin C. Smith, Michael W. McElwain, Jane R. Rigby, Charles W. Bowers, Randy A. Kimble, Christopher C. Stark, NASA Goddard Space Flight Ctr. (United States); Paul A. Lightsey, Ball Aerospace (United States); Macarena Garcia Martin, Space Telescope Science Institute (United States); Alistair C. H. Glasse, UK Astronomy Technology Ctr., The Royal Observatory, Edinburgh (United Kingdom); Ben Sunnquist, Brian Brooks, Martha L. Boyer, Space Telescope Science Institute (United States)

18 July 2022 • 14:20 - 14:40 EDT | Room 520 c

12180-26

The JWST Early Release Science Program for the Direct Imaging and Spectroscopy of Exoplanetary Systems

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18 July 2022 • 14:40 - 15:00 EDT | Room 520 c

Coffee Break 15:00 - 15:30

SESSION 6: THE JAMES WEBB SPACE TELESCOPE: TELESCOPE AND INSTRUMENTS

18 July 2022 • 15:30 - 18:10 EDT | Room 520 c

12180-27

Commissioning the James Webb Space Telescope Optical Telescope Element

Author(s): Lee D. Feinberg, NASA Goddard Space Flight Ctr. (United States); Erin Wolf, Scott Acton, Scott Knight, Ball Aerospace (United States); Marshall D. Perrin, Matt Lallo, Space Telescope Science Institute (United States); Paul Reynolds, Northrop Grumman Aerospace Systems (United States); Ritva Keski-Kuha, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 15:30 - 15:50 EDT | Room 520 c

12180-28

Phasing the Webb telescope

Author(s): D. Scott Acton, Ball Aerospace (United States)

18 July 2022 • 15:50 - 16:10 EDT | Room 520 c

12180-29

Webb Telescope Imaging Performance

Author(s): J. Scott Knight, Ball Aerospace (United States)

18 July 2022 • 16:10 - 16:30 EDT | Room 520 c

12180-30

Status of the JWST/NIRSpec Commissioning Campaign

Author(s): Torsten Böker, European Space Agency (United States); Catarina Alves de Oliveira, European Space Agency (Spain); Stephan M. Birkmann, European Space Agency (United States); Pierre Ferruit,

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18 July 2022 • 16:30 - 16:50 EDT | Room 520 c

12180-31

Optical throughput and sensitivity of JWST NIRSpec

Author(s): Giovanna Giardino, ATG Europe (Netherlands); Rachana Bhatawdekar, European Space Research and Technology Ctr., European Space Agency (Netherlands); Pierre Ferruit, European Space Research and Technology Ctr., European Space Agency (Spain); Stephan M. Birkmann, Tim Rawle, Torsten Böker, Space Telescope Science Institute, European Space Agency (United States); Catarina Alves de Oliveira, European Space Astronomy Ctr., European Space Agency (Spain); Nora Lützgendorf, Marco Sirianni, Space Telescope Science Institute, European Space Agency (United States); Nimisha Kumari, Peter Zeidler, Elena Manjavacas, Space Telescope Science Institute (United States)

18 July 2022 • 16:50 - 17:10 EDT | Room 520 c

12180-32

Astrometric and Wavelength Calibration of the NIRSpec Instrument during Commissioning using a model-based approach

Author(s): Nora Lützgendorf, European Space Agency (United States); Catarina Alves de Oliveira, European Space Agency (Spain); Giovanna Giardino, European Space Agency (Netherlands); Pierre Ferruit, European Space Agency (Spain); Stephan M. Birkmann, Torsten Böker, Tim Rawle, Marco Sirianni, European Space Agency (United States); Peter Zeidler, Space Telescope Science Institute (United States)

18 July 2022 • 17:10 - 17:30 EDT | Room 520 c

12180-33

CHARACTERIZATION OF THE MIRIm DOUBLE PRISM ASSEMBLY aboard JWST: implications for Transit Observations of Exoplanets

Author(s): Patrice Bouchet, Pierre-Olivier Lagage, René Gastaud, Oriane Bombardi, Achrène Dyrek, Samuel Ronayette, CEA-Saclay (France); Sarah Kendrew, Space Telescope Science Institute, European Space Agency (United States); Vincent Moreau, Thierry Orduna, Emmanuel Grégoire, CEA-Saclay (France)

18 July 2022 • 17:30 - 17:50 EDT | Room 520 c

12180-34

Estimation of the super-resolved JWST/MIRI imager PSF from undersampled simulated commissioning data

Author(s): Pierre Guillard, Institut d'Astrophysique de Paris, Sorbonne Univ. (France); Christophe Cossou, AIM, Univ.-Paris-Saclay, CEA, CNRS (France); François Orieux, Lab. des Signaux et Systèmes, CentraleSupélec (France); Andras Gaspar, Steward Observatory, The Univ. of Arizona (United States); René Gastaud, AIM (France); Alistair C. H. Glasse, UK Astronomy Technology Ctr. (United Kingdom), The Royal Observatory, Edinburgh (United Kingdom); Mattia Libralato, Macarena Garcia-Marin, Space Telescope Science Institute (United States); Ioannis Argyriou, Institute of Astronomy, KU Leuven (Belgium); Theodoros Nakos, ALMA (Chile); George H. Rieke, The Univ. of Arizona (United States)

18 July 2022 • 17:50 - 18:10 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 7: MISSIONS FOR EXOPLANET TIME SERIES I

19 July 2022 • 10:30 - 12:30 EDT | Room 520 c

12180-36

The telescope assembly of the Ariel space mission

Author(s): Emanuele Pace, Univ. degli Studi di Firenze (Italy); Andrea Tozzi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Andrea Bocchieri, Univ. degli Studi di Firenze (Italy); Daniele Brienza, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Anna Brucalassi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Chioetto, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Fausto Cortecchia, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Ciro Del Vecchio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Emiliano Diolaiti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Paul Eccleston, RAL Space, STFC Rutherford Appleton Lab. (United Kingdom); Debora Ferruzzi, Mauro Focardi, Vladmiro Noce, INAF - Osservatorio Astrofisico di Arcetri (Italy); Elisa Guerriero, Giuseppina Micela, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Matteo Lombini, Giuseppe Malaguti, Gianluca Morgante, Luca Terenzi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Lorenzo Mugnai, Enzo Pascale, Sapienza Univ. di Roma (Italy); Raffaele Piazzolla, Mario Salatti, Elisabetta Tommasi Di Vigano, Agenzia Spaziale Italiana (Italy); Luca Naponiello, Giampaolo Preti, Antonio Scippa, Univ. degli Studi di Firenze (Italy); Giovanna Tinetti, Univ. College London (United Kingdom); Paola Zuppella, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

19 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-37

AIRS: ARIEL IR Spectrometer status

Author(s): Jérôme Martignac, Jérôme Amiaux, Michel Berthé, Christophe Cara, Cyrille Delisle, Achrène Direk, Luc Dumaye, Jean Fontignié, Alain Goestschy, Audrey Goujon, Benoît Horeau, Norma Hurtado, Duc-Dat Huynh, Gregory Kaszubiak, Pierre-Olivier Lagage, Isabelle Le Mer, Michel Lortholary, Vincent Moreau, Salima Mouzali, Patrick Mulet, François Nico, Thibault Pichon, Lena Provost, Diana Renaud, Victor Schwartz, Michel Talvard, Thierry Tourrette, François Visticot, Axel Arhancet, Damien Bachet, Nicolas Berton, Mickaël Lacroix, Olivier Tellier, Hervé Le Provost, CEA-Paris-Saclay (France); Anne Philippon, Clémence De Jabrun, Jean-Pierre Dubois, François Langlet, Dylan Le Claire, Benoît Lecomte, Gilles Morinaud, Marc Ollivier, Stéphane Tosti, Institut d'Astrophysique Spatiale (France); Vincent Lapeyrère, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris à Meudon (France), Univ. PSL (France), Sorbonne Univ. (France); Marion Bonafous, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris à Meudon (France), Univ. PSL (France), Sorbonne Univ. (France); Jérôme Parisot, Jean-Michel Réess, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris (France), Univ. PSL (France), Sorbonne Univ. (France); Didier Zegadanin, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris à Meudon (France), Univ. PSL (France), Sorbonne Univ. (France); Jean-Philipe Beaulieu, Virginie Batista, Pierre Drossart, Institut d'Astrophysique de Paris (France); Ludovic Puig, European Space Research and Technology Ctr. (Netherlands); Salma Fahmy, European Space Research and Technology Ctr., European Space Agency (Netherlands); Pascale Danto, Gilles Hervet, Oceane Maisonnave, Ctr. National d'Études Spatiales (France); Paul Eccleston, Georgia Bishop, Rachel Drumond, Andrew Caldwell, RAL Space, STFC Rutherford Appleton Lab. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy); Gianluca Morgante, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Mauro Focardi, Emanuele Pace, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 11:10 - 11:30 EDT | Room 520 c

12180-38

ARIEL fine guidance system: design, challenges, and opportunities

Author(s): Konrad R. Skup, Mirosław Rataj, Piotr Wawer, Mateusz Sobiecki, Kamil Ber, Konrad Rutkowski, Grzegorz Szymanski, Radoslaw Trzepalka, Space Research Ctr. Polish Academy of Sciences (Poland); Roland Ottensamer, Gerald Mösenlechner, Armin Luntzer, Univ. Wien (Austria); Hyung Cho, Edmundo Guzman, Warren A. Holmes, Ronald C. Kruid, Renaud Goullioud, Jerry Mulder, Perry G. Ramsey, Albert J. Rieck, Allan J. Runkle, Mark R. Swain, Gautam Visisht, Carissa T. Weber, Jet Propulsion Lab. (United States); Roger Foltz, Tilak Hewagama, NASA Goddard Space Flight Ctr. (United States); Mauro Focardi, Istituto Nazionale di Astrofisica (Italy); Raoul Grimoldi, OHB Italia S.p.A. (Italy)

19 July 2022 • 11:30 - 11:50 EDT | Room 520 c

12180-39

Heat treatment procedure of the aluminium 6061-T651 for the ARIEL telescope mirrors.

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19 July 2022 • 11:50 - 12:10 EDT | Room 520 c

12180-41

The Earth 2.0 space mission for detecting Earth-like planets around solar type stars

Author(s): Jian Ge, Hui Zhang, Yongshuai Zhang, Yan Li, Dan Zhou, Zhenghong Tang, Congcong Zhang, Chaoyan Wang, Yong Yu, Xinyu Yao, Jiapeng Zhu, Shanghai Astronomical Observatory (China); Wen Chen, Xingbo Han, Kun Chen, Yingquan Yang, Xingzi Bi, Kuoxiang Zhang, Innovation Academy for Microsatellites (China); Yonghe Chen, Shanghai Institute of Technical Physics (China); Xiaohua Liu, The Shanghai Institute of Technical Physics (China); Dayi Yin, Shanghai Institute of Technical Physics (China); Quan Zhang, The Shanghai Institute of Technical Physics (China); Baoyu Yang, Shanghai Institute of Technical Physics (China); Chuanxin Wei, Yuji Zhu, The Shanghai Institute of Technical Physics (China); Zongxi Song, Xi'an Institute of Optics and Precision Mechanics (China); Wei Gao, Xi'An Institute of Optics and Precision Mechanics (China); Wei Li, Fengtao Wang, Pengfei Cheng, Xi'an Institute of Optics and Precision Mechanics (China); Chao Shen, Xi'an Institute of Optics and Precision Mechanics (China); Yue Pan, Xi'an Institute of Optics and Precision Mechanics (China); Hongfei Zhang, Jian Wang, Hui Wang, Cheng Chen, Jun Zhang, Zhiyue Wang, Univ. of Science and Technology of China (China); Weicheng Zang, Shude Mao, Wei Zhu, Sharon Xuesong Wang, Tsinghua Univ. (China); Jiwei Xie, Chaofeng Jiang, Dichang Chen, Wei Tang, Mengfei Sun, Mutian Wang, Nanjing Univ. (China); Yanqin Wu, Univ. of Toronto (Canada); Yudong Li, Lin Wen, Jie Feng, The Xinjiang Technical Institute of Physics and Chemistry (China); Kevin Willis, Science Talent Training Ctr. (United States); Chelsea Huang, Ctr. for Astrophysics, Univ. of Southern Queensland (Australia); Bo Ma, Yonghao Wang, Rongfeng Shen, Pak-Hin Thomas Tam, Zhecheng Hu, Yanlv Yang, Sun Yat-Sen Univ. (China); Fabo Feng, Tsung-Dao Lee Institute, Shanghai Jiao Tong Univ. (China); Maosheng Xiang, Max-Planck-Institut für Astronomie (Germany), National Astronomical Observatories (China); Jie Yu, Max-Planck-Institut für Sonnensystemforschung (Germany); Jinghua Zhang, National Astronomical Observatory of China (China); Yaqian Wu, National Astronomical Observatories (China); Weikai Zong, Haibo Yuan, Beijing Normal Univ. (China); Tanda Li, Univ. of Birmingham (United Kingdom); Yinan Zhao, Univ. de Genève (Switzerland); Yuanchuan Zou, Huazhong Univ. of Science and Technology (China); Hongping Deng, Univ. of Cambridge (United Kingdom); Beibei Liu, Zhejiang Univ. (China); Qing-zhu Yin, Univ. of California, Davis (United States)

19 July 2022 • 12:10 - 12:30 EDT | Room 520 c

Lunch/Exhibition Break 12:50 - 14:00

SESSION 8: MISSIONS FOR EXOPLANET TIME SERIES II

19 July 2022 • 14:00 - 17:50 EDT | Room 520 c

12180-42

Science goals of the Earth 2.0 space mission

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19 July 2022 • 14:00 - 14:20 EDT | Room 520 c

12180-43

The Earth 2.0 space mission analysis and spacecraft design

Author(s): Wen Chen, Innovation Academy for Microsatellites (China); Kun Chen, Yingquan Yang, Xingbo Han, Xingzi Bi, Tao He, Xuliang Duan, Jiangjiang Huang, Hong Liang, Kuoxiang Zhang, Haoyu Wang, Liu Liu, Junwang He, Genjian Qin, Jinsong Li, Tian Wang, Innovation Academy for Microsatellites (China); Jian Ge, Univ. of Florida (China); Hui Zhang, Yongshuai Zhang, Dan Zhou, Congcong Zhang, Zhenghong Tang, Yong Yu, Shanghai Astronomical Observatory (China); Weicheng Zang, Shude Mao, Tsinghua Univ. (China); Yonghe Chen, Xiaohua Liu, The Shanghai Institute of Technical Physics (China); Zongxi Song, Xi'an Institute of Optics and Precision Mechanics (China); Wei Gao, Xi'an Institute of Optics and Precision Mechanics (China); Hongfei Zhang, Jian Wang, Univ. of Science and Technology of China (China)

19 July 2022 • 14:20 - 14:40 EDT | Room 520 c

12180-44

Optical design of the transit telescope for the Earth 2.0 mission

Author(s): Dan Zhou, Congcong Zhang, Jian Ge, Hui Zhang, Yongshuai Zhang, Yong Yu, Shanghai Astronomical Observatory (China); Yonghe Chen, Xiaohua Liu, The Shanghai Institute of Technical Physics (China); Zongxi Song, Wei Gao, Xi'an Institute of Optics and Precision Mechanics (China); Hongfei Zhang, Jian Wang, Univ. of Science and Technology of China (China)

19 July 2022 • 14:40 - 15:00 EDT | Room 520 c

12180-45

The PLATO mission design and status

Author(s): Jose Lorenzo Alvarez, Filippo Marliani, Ana Heras, Thomas Walloschek, Marco Gaido, Joseph Huesler, Amadou Whitaker, José Aroca, Alistair Winton, Daniele Teti, Ian Harrison, Fabrice Boquet, Marco Cesa, Philippe Laget, Thomas Kanitz, Sami-Matias Niemi, Yves Levillain, Duncan Goulty, Sean Madden, James Windsor, Juan Pablo Rodríguez García, Nadia Hidalgo Torres, Beverly Brown, Laurence O'Rourke, Mark Kidger, David Milligan, Steve Foley, Francesca Molendini, Marco Ermocida, European Space Agency (Netherlands); Andrea Sacchetti, Frank Steier, Laura León Pérez, OHB SE (Germany); Jean-Luc Petit, Thales Alenia Space (France); Christian Walther, RUAG Space AG (Switzerland); Martin Pertenais, Anders Erikson, Juan Cabrera, César Martín García, Heike Rauer, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Isabella Pagano, INAF (Italy); Miguel Mas-Hesse, Ctr. de Astrobiología (Spain)

19 July 2022 • 15:00 - 15:20 EDT | Room 520 c

12180-46

Status of PLATO mission camera: recent progress on the camera engineering model and MAIV approach for the camera flight models

Author(s): Nicolas Gorius, INAF - Osservatorio Astrofisico di Catania (Italy)

19 July 2022 • 15:20 - 15:40 EDT | Room 520 c

Coffee Break 15:40 - 16:10

12180-47

PLATO: the status of the instrument control unit following its critical design review

Author(s): Rosario Cosentino, Fundación Galileo Galilei - INAF (Spain), INAF - Osservatorio Astrofisico di Catania (Italy); Mauro Focardi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Emanuele Galli, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Manfred Steller, Institut für Weltraumforschung (Austria); Carlo Del Vecchio Blanco, Kayser Italia Srl (Italy); Stefano Pezzuto, Giovanni Giusi, Anna Maria Di Giorgio, David Biondi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Harald Jeszenszky, Harald Ottacher, Gunter Laky, Institut für Weltraumforschung (Austria); Luca Serafini, Kayser Italia Srl (Italy); Dominik Loidolt, Roland Ottensamer, Univ. Wien (Austria); Andrea Russi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Marina Vela Nunez, INAF - Osservatorio Astrofisico di Arcetri (Italy); Armin Luntzer, Franz Kerschbaum, Univ. Wien (Austria)

19 July 2022 • 16:10 - 16:30 EDT | Room 520 c

12180-49

Metrology characterization of the PLATO Telescope Optical Units

Author(s): Marco Pagliazzi, Michele Dami, Marco Taiti, Andrea Novi, Enrico Battistelli, Leonardo SPA (Italy); Jacopo Farinato, Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy); Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy), University of Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy)

19 July 2022 • 16:30 - 16:50 EDT | Room 520 c

12180-50

PLATO EM cryogenic vacuum test campaign #1 results

Author(s): Francesco Borsa, INAF - Osservatorio Astronomico di Brera (Italy); Nicolas Gorius, INAF - Osservatorio Astrofisico di Catania (Italy); Andrea Cottinelli, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 16:50 - 17:10 EDT | Room 520 c

12180-51

PLATO fast front end electronics (F-FEE): performance results of the engineering model

Author(s): Alexander Koncz, Philipp Eigmüller, Harald Michaelis, Heike Rauer, David Wolter, Matthias Tschentscher, Stefan Weisse, Konstantinos Vasiliou, Daniel Tomecki, Sergio Rufini, Andrei Cacovean, Christian Althaus, Boris Jung, Uwe Mueller, Hartmut Korsitzky, Ronny Terzer, Kristian Manthey, Matthias Grott, Jan Ligus, Stubbe Hviid, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Christophe Cara, Tony Lavanant, Jean Fontignié, Dat Huynh, Francois Nico, CEA-Paris-Saclay (France); Sami Niemi, European Space Agency / ESTEC (Netherlands)

19 July 2022 • 17:10 - 17:30 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 9: ASTROMETRY

20 July 2022 • 10:30 - 11:30 EDT | Room 520 c

12180-52

Science and mission profiles for high precision astrometry in the future

Author(s): Fabien Malbet, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alessandro Sozzetti, INAF - Osservatorio Astrofisico di Torino (Italy); Alain Léger, Institut d'Astrophysique Spatiale (France), Univ. Paris-Saclay (France), CNRS (France); Alexis Brandeker, Stockholm Univ. (Sweden); Mario Gai, INAF - Osservatorio Astrofisico di Torino (Italy); Lucas Labadie, Univ. zu Köln (Germany); Gary Mamon, Institut d'Astrophysique de Paris, Sorbonne Univ. (France), CNRS (France); Renaud Goullioud, Jet Propulsion Lab., Caltech (United States), Caltech (United States); Eva Villaver, Ctr. de Astrobiología (Spain)

20 July 2022 • 10:30 - 10:50 EDT | Room 520 c

12180-53

Triple line of sight telescopes for space astrometry

Author(s): Mario Gai, Alberto Riva, Alberto Vecchiato, Deborah Busonero, Beatrice Bucciarelli, Mariateresa Crosta, Mario G. Lattanzi, INAF - Osservatorio Astrofisico di Torino (Italy); Zhaoxiang Qi, Shanghai Astronomical Observatory (China)

20 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-54

Experimenting techniques of global astrometry from space

Author(s): Alberto Vecchiato, Mario Gai, Mario G. Lattanzi, Beatrice Bucciarelli, Alberto Riva, Deborah Busonero, Mariateresa Crosta, INAF (Italy); Zhaoxiang Qi, Shanghai Astronomical Observatory (China)

20 July 2022 • 11:10 - 11:30 EDT | Room 520 c

Lunch/Exhibition Break 11:30 - 13:00

SESSION 10: WIDE FIELD SURVEY MISSIONS

20 July 2022 • 13:00 - 15:20 EDT | Room 520 c

12180-55

GREX-PLUS: Galaxy Reionization EXplorer and PLanetary Universe Spectrometer

Author(s): Akio K. Inoue, Waseda Univ. (Japan); Hidehiro Kaneda, Nagoya Univ. (Japan); Toru Yamada, Institute of Space and Astronautical Science (Japan); Yuichi Harikane, The Univ. of Tokyo (Japan); Daisuke Ishihara, Institute of Space and Astronautical Science (Japan); Tadayuki Kodama, Tohoku Univ. (Japan); Yutaka Komiyama, Hosei University (Japan); Takashi Moriya, Kentaro Motohara, Hideko Nomura, Masami Ouchi, National Astronomical Observatory of Japan (Japan); Shinki Oyabu, Tokushima Univ. (Japan); Toyoaki Suzuki, Takehiko Wada, Issei Yamamura, Institute of Space and Astronautical Science (Japan)

20 July 2022 • 13:00 - 13:20 EDT | Room 520 c

12180-56

Spectral calibration of SPHEREx focal plane

Author(s): Howard Hui, Caltech (United States); James Bock, Caltech (United States), Jet Propulsion Lab. (United States); Sam Condon, Caltech (United States); Charles D. Dowell, Jet Propulsion Lab. (United States); Matt Hollister, Phil Korngut, Caltech (United States); Ken Manatt, Jet Propulsion Lab. (United States); Chi Nguyen, Caltech (United States); Hien Nguyen, Jet Propulsion Lab. (United States); Steve Padin, Marco Viero, Caltech (United States)

20 July 2022 • 13:20 - 13:40 EDT | Room 520 c

12180-57

Euclid Near Infrared Spectrometer and Photometer instrument flight model presentation, performances and ground calibration results

Author(s): Thierry Maciaszek, Ctr. National d'Études Spatiales (France)

20 July 2022 • 13:40 - 14:00 EDT | Room 520 c

12180-58

EUCLID's Near Infrared Spectro-Photometer ready for flight - review of final performances

Author(s): Eduardo Medinaceli, Luca Valenziano, Natalia Auricchio, Enrico Franceschi, Fulvio Gianotti, Paola Battaglia, Ruben Farinelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Stefano Dusini, Chiara Sirignano, Enrico Borsato, Istituto Nazionale di Fisica Nucleare (Italy); Sebastiano Ligori, INAF (Italy); Vito Capobianco, Leonardo Corcione, Donata Bonino, Andrea Balestra, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Gabriele Sirri, Laura Patrizii, Matteo Tenti, Donato Di Ferdinando, Claudia Valieri, Alessandro Renzi, Luca Stanco, Francesco Giacomini, Istituto Nazionale di Fisica Nucleare (Italy); David Le Mignant, Eric Prieto, Franck Ducret, Lab. d'Astrophysique de Marseille (France); William Gillard, Ctr. de Physique des Particules de Marseille (France); Thierry Maciaszek, Institut de Recherche en Astrophysique et Planétologie (France); Sylvain Ferriol, Institut de Physique Nucléaire de Lyon (France); Rémi Barbier, Institut de Physique des 2 Infinis de Lyon (France); Michael Carle, Lab. d'Astrophysique de Marseille (France); Frank Grupp, Max-Planck-Institut (Germany)

20 July 2022 • 14:00 - 14:20 EDT | Room 520 c

12180-59

The Roman Space Telescope Optical System: Overview, Test, and Verification

Author(s): Matthew R. Bolcar, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 14:20 - 14:40 EDT | Room 520 c

12180-60

Roman Optical Telescope Assembly (OTA) Build and Integration Progress

Author(s): Tony L. Whitman, Peter Miller, Dave Smith, L3Harris Technologies, Inc. (United States); Joshua C. Abel, Jeffrey S. Smith, NASA Goddard Space Flight Ctr. (United States); Brian Martens, Perry Voyer, L3Harris Technologies, Inc. (United States)

20 July 2022 • 14:40 - 15:00 EDT | Room 520 c

12180-61

Roman Space Telescope Wide Field Instrument Design Evolution

Author(s): Jeanette L. Domber, Thomas Delker, Ball Aerospace (United States); John Gygax, NASA Goddard Space Flight Ctr. (United States); Arthur L. Whipple, Conceptual Analytics, LLC (United States); Phil Aumiller, Ball Aerospace (United States)

20 July 2022 • 15:00 - 15:20 EDT | Room 520 c

Coffee Break 15:20 - 15:50

SESSION 11: FAR-IR AND MILLIMETER

20 July 2022 • 15:50 - 18:30 EDT | Room 520 c

12180-62

Optimization of instrumentation for a cryogenic far-infrared probe mission

Author(s): Charles M. Bradford, Jet Propulsion Lab. (United States); Jason Glenn, NASA Goddard Space Flight Ctr. (United States); Jennifer Rocca, John Pearson, Jet Propulsion Lab. (United States)

20 July 2022 • 15:50 - 16:10 EDT | Room 520 c

12180-63

The Far-Infrared Spectroscopic Surveyor: probing role of the Interstellar Medium in Star Formation and Galaxy Evolution

Author(s): Dimitra Rigopoulou, Boon K. Tan, Univ. of Oxford (United Kingdom); Brian Ellison, Chris Pearson, STFC Rutherford Appleton Lab. (United Kingdom); Susanne Aalto, Chalmers Univ. of Technology (Sweden); Emmanuel Caux, Institut de Recherche en Astrophysique et Planétologie (France); Ismael Garcia-Bernete, Univ. of Oxford (United Kingdom); Maryvonne Gerin, Observatoire de Paris (France); Javier R. Goicoechea, Instituto de Ciencia de Materiales de Madrid (Spain); Paul Goldsmith, Jet Propulsion Lab., Caltech (United States), Caltech (United States); Leslie Hunt, INAF - Osservatorio Astrofisico di Arcetri (Italy); Carsten Kramer, Instituto de Radioastronomía Milimétrica (Spain); Dariusz Lis, Jet Propulsion Lab. (United States); Georgios Magdis, DTU Space (Denmark); Sergio Molinari, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Volker Ossenkopf-Okada, Univ. zu Köln (Germany); Giorgio Savini, Univ. College London (United Kingdom); Serena Viti, Leiden Observatory, Leiden Univ. (Netherlands); Martina Wiedner, Lab. d'Études du Rayonnement et de la Matière en Astrophysique et Atmosphères (France); Ghassan Yassin, Univ. of Oxford (United Kingdom)

20 July 2022 • 16:10 - 16:30 EDT | Room 520 c

12180-64

Orbiting Astronomical Satellite for Investigating Stellar Systems (OASIS): A Paradigm Shift in Realizing Large Space Telescopes

Author(s): Christopher K. Walker, The Univ. of Arizona (United States); Jonathan W. Arenberg, Northrop Grumman Aerospace Systems (United States); Yuzuru Takashima, Daewook Kim, Heejoo Choi, Siddhartha Sirsi, The Univ. of Arizona (United States); Arthur Palisoc, L'Garde, Inc. (United States); Henry Quach, Marcos A. Esparza, Aman Chandra, The Univ. of Arizona (United States); Antony A. Stark, Harvard-Smithsonian Ctr. for Astrophysics (United States)

20 July 2022 • 16:30 - 16:50 EDT | Room 520 c

12180-65

Millimetron space mission capabilities overview.

Author(s): Andrey M. Baryshev, Kapteyn Astronomical Institute (Netherlands); Thijs de Graauw, Sergey Likhachev, Andrey Smirnov, Evgeniy Golubev, Roman Cherny, Michail Arkhipov, Victor Pyshnov, Sergey Fedorchuk, Nelly Myshonkova, Igor Vinogradov, Andrey Khudchenko, Alexey Rudnitskiy, Astro Space Ctr., P. N. Lebedev Physical Institute (Russian Federation)

20 July 2022 • 16:50 - 17:10 EDT | Room 520 c

12180-66

A submillimeter polarimetric camera for future space missions

Author(s): Vincent Revéret, Philippe André, Louis Rodriguez, Samuel Ronayette, Marc Sauvage, CEA-Paris-Saclay (France)

20 July 2022 • 17:10 - 17:30 EDT | Room 520 c

12180-67

Development of the low frequency telescope optics design for the CMB polarization satellite LiteBIRD

Author(s): Frederick T. Matsuda, Tadayasu Dotani, Japan Aerospace Exploration Agency (Japan); Shingo Kashima, National Astronomical Observatory of Japan (Japan); Ryo Nagata, Japan Aerospace Exploration Agency (Japan); Ryo Nakano, The Univ. of Tokyo (Japan); Kimihide Odagiri, Shugo Oguri, Yutaro Sekimoto, Japan Aerospace Exploration Agency (Japan); Hayato Takakura, The Univ. of Tokyo (Japan); Kazuya Watanuki, Keisuke Yoshihara, Japan Aerospace Exploration Agency (Japan)

20 July 2022 • 17:30 - 17:50 EDT | Room 520 c

12180-68

Cryogenic thermal design and analysis for LiteBIRD payload module

Author(s): Kimihide Odagiri, Masaru Saijo, Keisuke Shinozaki, Frederick T. Matsuda, Shugo Oguri, Toyoaki Suzuki, Hiroyuki Ogawa, Yutaro Sekimoto, Tadayasu Dotani, Kazuya Watanuki, Ryo Sugimoto, Keisuke Yoshihara, Katsuhiro Narasaki, Japan Aerospace Exploration Agency

(Japan); Masahito Isshiki, Seiji Yoshida, Sumitomo Heavy Industries, Ltd. (Japan); Thomas Prouvé, Jean-Marc Duval, Univ. Grenoble Alpes (France); Keith L. Thompson, Stanford University (United States)

20 July 2022 • 17:50 - 18:10 EDT | Room 520 c

12180-69

The Satellite Design for Discovering the Sky at the Longest Wavelengths with Small Satellite Constellations in Lunar Orbit

Author(s): Zhongguang Yang, Dong Han, Innovation Academy for Microsatellites (China); Xiaocheng Zhu, Innovation Academy for Microsatellites (China); Kuoxiang Zhang, Innovation Academy for Microsatellites (China); Tiantong Li, Taijie Li, Innovation Academy for Microsatellites (China); Xuelei Chen, National Astronomical Observatories (China); Jingye Yan, Li Deng, National Space Science Ctr. (China)

20 July 2022 • 18:10 - 18:30 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 12: THE ROMAN CORONAGRAPH INSTRUMENT

21 July 2022 • 10:30 - 11:50 EDT | Room 520 c

12180-70

The Roman Space Telescope Coronagraph Technology Demonstration: Current Status and Relevance to Future Missions

Author(s): Bertrand Mennesson, Vanessa P. Bailey, Robert Zellem, Sergi R. Hildebrandt, Marie Ygouf, Jason Rhodes, Jet Propulsion Lab. (United States); Neil T. Zimmerman, NASA Goddard Space Flight Ctr. (United States); Jeremy N. Kasdin, Princeton Univ. (United States); Bruce Macintosh, Kavli Institute for Particle Astrophysics & Cosmology, Stanford Univ. (United States); Margaret Turnbull, Carl Sagan Ctr. for the Study of Life in the Universe, SETI Institute (United States); Ewan S. Douglas, The Univ. of Arizona (United States); Avi Mandell, NASA Goddard Space Flight Ctr. (United States); Erin Maier, The Univ. of Arizona (United States); Bijan Nemati, The Univ. of Alabama (United States); Guillermo Gonzalez, The Univ. of Alabama in Huntsville (United States); Eric Cady, Brian D. Kern, John Krist, Kathryn Heydorff, Thomas Luchik, Fai Mok, Patrick Morrissey, Ilya Poberezhskiy, A. J. Eldorado Riggs, Fang Shi, Feng Zhao, Jet Propulsion Lab. (United States); Rachel Akeson, IPAC., Caltech (United States); Lee Armus, James Ingalls, Patrick Lowrance, IPAC, Caltech (United States)

21 July 2022 • 10:30 - 10:50 EDT | Room 520 c

12180-71

Roman Coronagraph Instrument: Post-CDR Engineering Overview and Status

Author(s): Ilya Y. Poberezhskiy, Jet Propulsion Lab. (United States)

21 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-72

Super polished mirrors for the Roman Space Telescope CoronaGraphic Instrument: design, manufacturing and optical performances

Author(s): Amandine Caillat, Marc Ferrari, Michel Marcos, Lab. d'Astrophysique de Marseille (France); Céline Pariès, Lab. d'Astrophysique de Marseille (France), HENSOLDT (France); Anne Bonnefoi, Lab. d'Astrophysique de Marseille (France); Vincent Vitrac, Lab. d'Astrophysique de Marseille (France), Thales SESO S.A.S. (France); Mélanie Roulet, Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France)

21 July 2022 • 11:10 - 11:30 EDT | Room 520 c

12180-74

Nancy Grace Roman Space Telescope Coronagraph Instrument Observation Calibration Plan

Author(s): Robert T. Zellem, Jet Propulsion Lab. (United States); Bijan Nemati, Ctr. for Applied Optics, The Univ. of Alabama in Huntsville (United States); Vanessa P. Bailey, Jet Propulsion Lab. (United States); Ruslan Belikov, NASA Ames Research Ctr. (United States); Eric J. Cady, M. M. Colavita, Jet Propulsion Lab. (United States); John Debes, Space Telescope Science Institute (United States); Ewan S. Douglas, Steward Observatory, The Univ. of Arizona (United States); Julien H. Girard, Space Telescope Science Institute (United States); Guillermo Gonzalez, Ctr. for Applied Optics, The Univ. of Alabama in Huntsville (United States); Tyler D. Groff, NASA Goddard Space Flight Ctr. (United States); Sergi R. Hildebrandt, Jet Propulsion Lab. (United States); Bruce Macintosh, Stanford Univ. (United States); Erin R. Maier, Steward Observatory, The Univ. of Arizona (United States); Bertrand Mennesson, Daniel Ryan, Carey Weisberg, Marie Ygouf, Jet Propulsion Lab. (United States); Neil T. Zimmerman, NASA Goddard Space Flight Ctr. (United States)

21 July 2022 • 11:30 - 11:50 EDT | Room 520 c

Lunch Break 11:50 - 13:40

SESSION 13: EXOPLANET DETECTION: MISSION DESIGN

21 July 2022 • 13:40 - 14:40 EDT | Room 520 c

12180-75

An exploration of expected number of exoplanets from a 6m class direct imaging telescope

Author(s): Rhonda M. Morgan, Michael J. Turmon, Jet Propulsion Lab. (United States); Dmitry Savransky, Grace Genszler, Cornell Univ. (United States); Eric Mamajek, Karl Stapelfeldt, Jet Propulsion Lab. (United States)

21 July 2022 • 13:40 - 14:00 EDT | Room 520 c

12180-76

ExoEarth yield estimates for the LUVOIR-A coronagraph instrument

Author(s): Roser Juanola-Parramon, Christopher C. Stark, Neil T. Zimmerman, NASA Goddard Space Flight Ctr. (United States); Axel Q. Potier, Garreth J. Ruane, Jet Propulsion Lab. (United States)

21 July 2022 • 14:00 - 14:20 EDT | Room 520 c

12180-77

The PICTURE-C exoplanetary imaging balloon mission: Laboratory coronagraph demonstrations of high-contrast imaging and low-order wavefront control

Author(s): Christopher B. Mendillo, Kuravi Hewawasam, Thaddeus Potter, Jason Martel, Timothy A. Cook, Supriya Chakrabarti, Univ. of Massachusetts Lowell (United States)

21 July 2022 • 14:20 - 14:40 EDT | Room 520 c

Coffee Break 15:00 - 15:30

SESSION 14: EXOPLANET IMAGING: CORONAGRAPH DESIGN AND DEMONSTRATION

21 July 2022 • 15:30 - 17:10 EDT | Room 520 c

12180-79

Broadband vector vortex coronagraph testing at NASA's High Contrast Imaging Testbed facility

Author(s): Garreth J. Ruane, A. J. Eldorado Riggs, Eugene Serabyn, Wesley Baxter, Camilo Mejia Prada, Jet Propulsion Lab. (United States); Dimitri Mawet, Caltech (United States), Jet Propulsion Lab. (United States); Matthew R. Noyes, Phillip K. Poon, Jet Propulsion Lab. (United States); Nelson Tabiryan, BEAM Engineering for Advanced Measurements Co. (United States)

21 July 2022 • 15:30 - 15:50 EDT | Room 520 c

12180-80

Laboratory Demonstration of High Contrast with the PIAACMC Coronagraph on an Obstructed and Segmented Aperture.

Author(s): Ruslan Belikov, Dan Sirbu, NASA Ames Research Ctr. (United States); David Marx, Camilo Mejia Prada, Eduardo A. Bendek, Jet Propulsion Lab. (United States); Eugene Pluzhnik, Stephen T. Bryson,

NASA Ames Research Ctr. (United States); Brian D. Kern, Jet Propulsion Lab. (United States); Olivier Guyon, Justin M. Knight, The Univ. of Arizona (United States); Kevin W. Fogarty, NASA Ames Research Ctr. (United States); Daniel W. Wilson, Jet Propulsion Lab. (United States); John G. Hagopian, Lambda Consulting (United States)

21 July 2022 • 15:50 - 16:10 EDT | Room 520 c

12180-81

High-contrast imager for complex aperture telescopes (HiCAT): 8. Dark zone demonstration with simultaneous closed loop low-order wavefront sensing and control

Author(s): Rémi Soummer, Emiel H. Por, Space Telescope Science Institute (United States); Raphaël Pourcelot, Observatoire de la Côte d'Azur (France); Susan F. Redmond, Princeton Univ. (United States); Iva Laginja, Lab. d'Astrophysique de Marseille (France); Scott D. Will, NASA Goddard Space Flight Ctr. (United States); James Noss, Marshall D. Perrin, Laurent Pueyo, Ananya Sahoo, Peter Petrone, Keira J. Brooks, Thomas Comeau, Rob Gontrum, Space Telescope Science Institute (United States); John Hagopian, Advanced NanoPhotonics, Inc. (United States); Laurent M. Mugnier, Mamadou N'Diaye, Bryony Nickson, Meiji Nguyen, Space Telescope Science Institute (United States); Jean-François Sauvage, Lab. d'Astrophysique de Marseille (France); Nathan Scott, Johns Hopkins Univ. (United States); Sam Weinstock, Space Telescope Science Institute (United States)

21 July 2022 • 16:10 - 16:30 EDT | Room 520 c

12180-83

Maximizing exo-Earth yields with a hybrid PIAA-vortex coronagraph for next generation space telescopes

Author(s): Kevin W. Fogarty, Dan Sirbu, Rus Belikov, Eugene Pluzhnik, NASA Ames Research Ctr. (United States)

21 July 2022 • 16:30 - 16:50 EDT | Room 520 c

12180-84

First laboratory tests of a triple-grating vector vortex coronagraph

Author(s): David S. Doelman, Leiden Observatory, Leiden Univ. (Netherlands); Mireille Ouellet, European Space Agency (Netherlands); Garreth J. Ruane, Jet Propulsion Lab., Caltech (United States), Caltech (United States); Michael Escuti, North Carolina State Univ. (United States); Sebastiaan Haffert, Steward Observatory, The Univ. of Arizona (United States); Frans Snik, Leiden Observatory, Leiden Univ. (Netherlands)

21 July 2022 • 16:50 - 17:10 EDT | Room 520 c

SESSION 15: WAVEFRONT SENSING AND CONTROL

21 July 2022 • 17:30 - 18:30 EDT | Room 520 c

12180-85

Initial Laboratory Demonstration of Multi-Star Wavefront Control at the Occulting Mask Coronagraph Testbed

Author(s): Dan Sirbu, Ruslan Belikov, NASA Ames Research Ctr. (United States); Eduardo A. Bendek, David Marx, A. J. Eldorado Riggs, Garreth J. Ruane, Camilo Mejia Prada, Brian Kern, Jet Propulsion Lab., Caltech (United States), Caltech (United States)

21 July 2022 • 17:30 - 17:50 EDT | Room 520 c

12180-86

Dark hole maintenance for future coronagraphic space missions

Author(s): Susan F. Redmond, Princeton Univ. (United States); Laurent Pueyo, Space Telescope Science Institute (United States); Leonid Pogorelyuk, Massachusetts Institute of Technology (United States); Jeremy N. Kasdin, Princeton Univ. (United States); Emiel H. Por, Space Telescope Science Institute (United States); Iva Laginja, Lab. d'Astrophysique de Marseille (France); James Noss, Keira J. Brooks, Marshall D. Perrin, Rémi Soummer, Space Telescope Science Institute (United States)

21 July 2022 • 17:50 - 18:10 EDT | Room 520 c

12180-87

Wavelength-resolved photonic lantern focal plane wavefront sensors for large coronagraphic space telescopes

Author(s): Stephen S. Eikenberry, Rodrigo Amezcua-Correa, Daniel Cruz-Delgado, Stephanos Yerolatsitis, Matthew Cooper, Univ. of Central Florida (United States); Rebecca Jensen-Clem, Univ. of California, Santa Cruz (United States); Sergio Leon-Saval, The Univ. of Sydney (Australia)

21 July 2022 • 18:10 - 18:30 EDT | Room 520 c

SESSION 16: ENABLING TECHNOLOGIES: OPTICS, ELECTRONICS AND THERMAL

22 July 2022 • 08:20 - 10:00 EDT | Room 520 c

12180-88

The improved replication technique to fabricate ultra-light CFRP mirrors for space telescopes

Author(s): Shin Utsunomiya, Tsuyoshi Ozaki, Masakatsu Ide, Techlab Co., Ltd. (Japan); Yutaka Yamagata, RIKEN (Japan); Hiroshi Saito, Kazuro Kageyama, Kanazawa Institute of Technology (Japan)

22 July 2022 • 08:20 - 08:40 EDT | Room 520 c

12180-89

Advancing Deformable Mirror Controllers for Exoplanet Imaging

Author(s): Eduardo A. Bendek, Garreth J. Ruane, Camilo Mejia Prada, Jet Propulsion Lab. (United States)

22 July 2022 • 08:40 - 09:00 EDT | Room 520 c

12180-90

Update on the Parabolic Deformable Mirror Testbed for the ExoSpec Project

Author(s): Tyler Groff, Hari B. Subedi, Roser Juanola-Parramon, NASA Goddard Space Flight Ctr. (United States)

22 July 2022 • 09:00 - 09:20 EDT | Room 520 c

12180-91

Broadband spectral characterization of lossy dielectrics for mm/submm optical applications

Author(s): Fabio Columbro, Andrea Occhiuzzi, Luca Lamagna, Lorenzo Mele, Paolo de Bernardis, Silvia Masi, Francesco Piacentini, Giampaolo Pisano, Sapienza Univ. di Roma (Italy)

22 July 2022 • 09:20 - 09:40 EDT | Room 520 c

12180-92

Mechanisms for large IR/O/UV space telescope thermal efficiency

Author(s): Kevin Weed, Joseph Footdale, Erika Bannon, John Harvey, Laura E. Coyle, Ball Aerospace (United States)

22 July 2022 • 09:40 - 10:00 EDT | Room 520 c

Coffee Break 10:00 - 10:30

SESSION 17: ENABLING TECHNOLOGIES: ULTRA-STABLITY

22 July 2022 • 10:30 - 11:50 EDT | Room 520 c

12180-94

Architecture trades to optimize wavefront stability requirements for exoplanet imaging in space.

Author(s): Laurent Pueyo, Space Telescope Science Institute (United States); Leonid Pogorelyuk, Massachusetts Institute of Technology (United States); Iva Laginja, Lab. d'Astrophysique de Marseille (France); Rémi Soummer, Ananya Sahoo, Emiel H. Por, Space Telescope Science Institute (United States); Kerri Cahoy, Massachusetts Institute of Technology (United States); Laura E. Coyle, Scott Knight, Ball Aerospace (United States)

22 July 2022 • 10:30 - 10:50 EDT | Room 520 c

12180-95

Achieved technology maturation of key component-level technologies for ultra-stable optical systems

Author(s): Laura E. Coyle, J. S. Knight, Ball Aerospace (United States); Laurent Pueyo, Space Telescope Science Institute (United States); Matthew East, L3Harris Technologies, Inc. (United States); Robert Hellekson, Northrop Grumman Space Systems (United States); Marcel Bluth, KBR, Inc. (United States); Sang Park, Smithsonian Astrophysical Observatory (United States); Brian Hicks, Benjamin M. Cromey, Ball Aerospace (United States); Ananya Sahoo, Space Telescope Science Institute (United States); Todd Lawton, Northrop Grumman Space Systems (United States); Michael Eisenhower, Smithsonian Astrophysical Observatory (United States); James Tucker, Southern Research (United States)

22 July 2022 • 10:50 - 11:10 EDT | Room 520 c

12180-96

Line-of-sight and wavefront error dynamic stability during coronagraphic imaging for a 6.7-meter inscribed diameter UVOIR segmented telescope with non-contact pointing and vibration isolation

Author(s): Kiarash Tajdaran, Michael S. Jacoby, Larry D. Dewell, Alison A. Nordt, Lockheed Martin Space Systems Co. (United States); John Z. Lou, Jet Propulsion Lab. (United States)

22 July 2022 • 11:10 - 11:30 EDT | Room 520 c

12180-97

Ultra-stable Telescope Testbed: Results and Implications

Author(s): Lee D. Feinberg, Babak Saif, Ritva Keski-Kuha, NASA Goddard Space Flight Ctr. (United States); Perry Greenfield, Space Telescope Science Institute (United States); Sang Park, Smithsonian Astrophysical Observatory (United States); Peter Petrone, Sigma Space Corp. (United States); Steven Williams, Genesis Engineering Solutions, Inc. (United States); Marcel Bluth, KBR, Inc. (United States)

22 July 2022 • 11:30 - 11:50 EDT | Room 520 c

Lunch Break 11:50 - 13:30

SESSION 18: ENABLING TECHNOLOGIES: EXTERNAL OCCULTERS AND FORMATION FLYING

22 July 2022 • 13:30 - 14:10 EDT | Room 520 c

12180-98

NASA's starshade technology development activity

Author(s): Phillip A. Willems, Jet Propulsion Lab. (United States), Caltech (United States); Stuart Shaklan, Renyu Hu, Stefan Martin, Doug Lisman, Serena Ferraro, Matt Stegman, Jet Propulsion Lab. (United States); Anthony D. Harness, Princeton Univ. (United States); Gregg Freebury, TENDEG, LLC (United States); Manan Arya, Stanford University (United States)

22 July 2022 • 13:30 - 13:50 EDT | Room 520 c

12180-99

Completion of model validation experiments at the Princeton starshade testbed

Author(s): Anthony D. Harness, Princeton Univ. (United States); Stuart Shaklan, Phil Willems, Jet Propulsion Lab. (United States), Caltech (United States); N. Jeremy Kasdin, Princeton Univ. (United States); K. Balasubramanian, Philip Dumont, Victor White, Karl Yee, Richard Muller, Simon Vuong, Jet Propulsion Lab. (United States), Caltech (United States); Michael Galvin, Princeton Univ. (United States)

22 July 2022 • 13:50 - 14:10 EDT | Room 520 c

SESSION 19: ENABLING TECHNOLOGIES: DETECTORS

22 July 2022 • 14:10 - 15:50 EDT | Room 520 c

12180-101

The In-Flight Noise Performance of the JWST/NIRSpec Detector System

Author(s): Stephan M. Birkmann, Marco Sirianni, European Space Agency (United States); Giovanna Giardino, ATG Europe (Netherlands); Torsten Böker, European Space Agency (United States); Pierre Ferruit, European Space Agency (Spain); Nora Lützgendorf, Tim Rawle, European Space Agency (United States); Nimisha Kumari, Elena Manjavacas, Peter Zeidler, AURA for the European Space Agency (United States); Catarina Alves de Oliveira, European Space Agency (Spain)

22 July 2022 • 14:10 - 14:30 EDT | Room 520 c

12180-102

Development of an Ultra-Stable Mid-Infrared Detector Array for Space- Based Exoplanet Transit and Phase Curve Spectroscopy

Author(s): Johannes G. Staguhn, NASA Goddard Space Flight Ctr. (United States), Johns Hopkins Univ. (United States); Dale J. Fixsen, Elmer H. Sharp, Avi Mandell, NASA Goddard Space Flight Ctr. (United States); Kevin B. Stevenson, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); Edward J. Wollack, NASA Goddard Space Flight Ctr. (United States)

22 July 2022 • 14:30 - 14:50 EDT | Room 520 c

12180-103

Row and column artefacts in JWST MIRI's Si:As blocked impurity band detectors

Author(s): Daniel Dicken, Institut d'Astrophysique Spatiale (France); Ioannis Argyriou, KU Leuven (Belgium); Macarena Garcia-Marin, European Space Agency (United States); Michael E. Ressler, Jet Propulsion Lab. (United States); Jane E. Morrison, George H. Rieke, The Univ. of Arizona (United States); Pierre Guillard, Institut d'Astrophysique de Paris (France); Michael W. Regan, Space Telescope Science Institute (United States)

22 July 2022 • 14:50 - 15:10 EDT | Room 520 c

12180-104

Optimization of a cryogenic transition-edge sensor detector array for far-infrared astrophysics

Author(s): Locke D. Spencer, Univ. of Lethbridge (Canada); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Christopher Benson, Jeremy P. Scott, Univ. of Lethbridge (Canada); Peter A. R. Ade, Cardiff Univ. (United Kingdom)

22 July 2022 • 15:10 - 15:30 EDT | Room 520 c

12180-105

JWST MIRI detector characterization: observing modes

Author(s): Stacey Bright, Space Telescope Science Institute (United States); Daniel Dicken, Lab. AIM Paris-Saclay, Univ. Paris Diderot (France), CEA-IRFU (France), CNRS (France); Ori Fox, Michael Regan, Space Telescope Science Institute (United States); Macarena García-Marin, European Space Agency (United States); Michael E. Ressler, Jet Propulsion Lab. (United States); Jane E. Morrison, Space Telescope Science Institute (United States); Stacey Alberts, Steward Observatory, The Univ. of Arizona (United States); Yannis Argyriou, Institute of Astronomy, KU Leuven (Belgium); Alberto Noriega-Crespo, Space Telescope Science Institute (United States); George H. Rieke, Steward Observatory (United States); Alistair C. H. Glasse, Gillian Wright, UK Astronomy Technology Ctr. (United Kingdom); Patrice Bouchet, Lab. AIM Paris-Saclay (France)

22 July 2022 • 15:30 - 15:50 EDT | Room 520 c

SESSION P1: POSTERS - MISSION DESIGN: LOOKING BACK, LOOKING AHEAD

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-106

Considerations for the 'after-next' astrophysics: sustainability through mid-century

Author(s): Frank U. Grupp, Univ.-Sternwarte München (Germany); Jonathan W. Arenberg, Northrop Grumman Corp. (United States); Hanna Kellermann, Univ.-Sternwarte München (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-107

The future Very Large Space Telescope concepts for UVIS science

Author(s): Julien Archer, Airbus Defence and Space (France); Dominic Doyle, luca Maresi, Pascal Hallibert, European Space Agency (Netherlands); Didier Castel, Remi Pujol, Thierry Blais, Joel Boyadjian, Stéphane Iugovich, Mike Seymour, Airbus Defence and Space (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-108

Robust Architecture: Foundation for Long Lived Systems

Author(s): Jonathan W. Arenberg, Northrop Grumman Corp. (United States); Keith Havey, L3Harris Technologies, Inc. (United States); Michael Werner, Jet Propulsion Lab. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P2: POSTERS - MISSION CONCEPTS WITH SMALL SPACECRAFT

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-155

Pandora SmallSat data simulation and target selection

Author(s): Trevor Foote, Cornell Univ. (United States); Elisa Quintana, NASA Goddard Space Flight Ctr. (United States); Jessie L. Dotson, NASA Ames Research Center (United States); Knicole D. Colon, NASA Goddard Space Flight Ctr. (United States); Thomas Barclay, Univ. of Maryland, Baltimore County (United States); Pete Supsinskas, Jordan Karburn, Lawrence Livermore National Laboratory (United States); Daniel Apai, University of Arizona (United States); Christina Hedges, NASA Goddard Space Flight Ctr. (United States); Benjamin V. Rackham, Massachusetts Institute of Technology (United States); Jason F. Rowe, Bishop's University (Canada); Jessie L. Christiansen, NASA Exoplanet Science Institute and Infrared Processing and Analysis Center (United States); Thomas P. Greene, NASA Ames Research Center (United States); James Mason, Laboratory for Atmospheric and Space Physics (United States); Gregory Mosby, NASA Goddard Space Flight Ctr. (United States); Nestor Espinoza, Space Telescope Science Institute (United States); Emily A. Gilbert, Univ. of Maryland (United States); Kelsey Hoffman, Bishop's University (Canada); Veselin B. Kostov, NASA Goddard Space Flight Ctr. (United States); Nikole Lewis, Cornell Univ. (United States); Brett M. Morris, University of Bern (Switzerland); Susan E. Mullally, Space Telescope Science Institute (United States); Elisabeth R. Newton, Dartmouth College (United States); Joshua E. Schlieder, Allison Youngblood, NASA Goddard Space Flight Ctr. (United States); Megan Mansfield, University of Arizona (United States); Kevin B. Stevenson, Johns Hopkins APL (United States); Steven Villanueva, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-156

Skyhopper CubeSat: a multi-band NIR telescope for precise intensity measurements

Author(s): Dave Adams, Robert Content, Jon Lawrence, Helen McGregor, Anthony Horton, Australian Astronomical Optics, Macquarie Univ. (Australia); Mike Ireland, The Australian National Univ. (Australia); Lee Spitler, Ross Zhelem, Australian Astronomical Optics, Macquarie Univ. (Australia); Michele Trenti, The Univ. of Melbourne (Australia)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-157

CubeSpec: optical payload

Author(s): Gert Raskin, Bart Vandenbussche, Institute of Astronomy, KU Leuven (Belgium); Jeroen Demaeyer, Maarten Kempenaers, Filip Heylen, KU Leuven (Belgium); Job Schuermans, Hugues Sana, Institute of Astronomy, KU Leuven (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-158

CubeSpec: LED-based calibration system

Author(s): Job Schuermans, Gert Raskin, Dominic Bowman, Jeroen De Maeyer, Maarten Kempenaers, KU Leuven (Belgium); Jacob Pember, KU Leuven (Belgium), Macquarie Univ. (Australia); Pierre Royer, Hugues Sana, KU Leuven (Belgium); Christian Schwab, Macquarie Univ. (Australia); Bart Vandenbussche, KU Leuven (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-159

6U CubeSat deployable telescope for optical Earth Observation

Author(s): Noah Schwartz, Zeshan Ali, William Brzozowski, Maria Milanova, Katherine Morris, Charlotte Bond, Heather Bruce, Phil Rees, Stephen Todd, Donald MacLeod, UK Astronomy Technology Ctr. (United Kingdom); Jean-François Sauvage, ONERA (France); Maxime Dumont, Lab. d'Astrophysique de Marseille (France); Carlos Correia, Univ. do Porto (Portugal)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-160

Optical design, analysis, and calibration using ∂Lux

Author(s): Louis Desdoigts, The Univ. of Sydney (Australia); Benjamin Pope, The Univ. of Queensland (Australia); Peter Tuthill, The Univ. of Sydney (Australia)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-235

Twinkle: a small satellite spectroscopy mission for the next phase of exoplanet science

Author(s): Ian Stotesbury, Billy Edwards, Blue Skies Space Ltd. (United Kingdom); Jean-François Lavigne, ABB Analytical Measurement (Canada); Vasco Pesquita, Airbus (United Kingdom); James Veilleux, ABB Inc. (Canada); Philip Windred, Blue Skies Space Ltd. (United Kingdom); Ahmed Al-Refaie, University College London (United Kingdom); Lawrence Bradley, Sushang Ma, Giorgio Savini, Blue Skies Space Ltd. (United Kingdom); Giovanna Tinetti, University College London (United Kingdom); Til Birnstiel, Universitäts-Sternwarte (Germany); Sally Dodson-Robinson, Department of Physics and Astronomy, University of Delaware (United States); Barbara Ercolano, Universitäts-Sternwarte (Germany); Dax Feliz, Nina Hernitschek, Vanderbilt University (United States); Daniel Holdsworth, University of Central Lancashire (United Kingdom); Ing-Guey Jiang, National Tsing Hua University (China); Matthew J. Griffin, Cardiff Univ. (United Kingdom); Nataliea Lowson, University of Southern Queensland (Australia); Karan Molaverdikhani, Universitäts-Sternwarte (Germany); Hilding Neilson, University of Toronto (Canada); Caprice Phillips, Ohio State University (United States); Thomas Preibisch, Universitäts-Sternwarte (Germany); Subhajit Sarkar, Cardiff University (United Kingdom); Keivan Stassun, Vanderbilt University (United States); Derek Ward-Thompson, University of Central Lancashire (United Kingdom); Duncan Wright, University of Southern Queensland (Australia); Ming Yang, Nanjung University (China); Li-Chin Yeh, National Tsing Hua University (Taiwan); Ji-Lin Zhou, Nanjing University (China); Richard Archer, Yoga Barrathwaj Raman Mohan, Max Joshua, Marcell Tessenyi, Blue Skies Space Ltd. (United Kingdom); Jonathan Tennyson, University College London (United Kingdom); Benjamin Wilcock, Blue Skies Space Ltd. (United Kingdom)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-236

Deep learning for space-borne focal plane wavefront sensing

Author(s): Maxime Dumont, ONERA (France), INESC TEC (Portugal), Lab. d'Astrophysique de Marseille (France); Carlos Correia, Space ODT

(Portugal), INESC TEC (Portugal), Univ. do Porto (Portugal); Jean-François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Jaime Cardoso, INESC TEC (Portugal); Morgan Gray, Olivier Beltramo-Martin, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France), Lab. d'Astrophysique de Marseille (France); Charlotte Bond, UK Astronomy Technology Ctr. (United Kingdom); Aurélie Bonnefois, Vincent Michau, ONERA (France); Olivier Groussin, Lab. d'Astrophysique de Marseille (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P3: POSTERS - SOLAR SYSTEM AND THE SUN

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-161

Metimage Sun Simulator OGSE: from design to achieved performances

Author(s): Pascal Blain, Emmanuel Mazy, Ctr. Spatial de Liège (Belgium); Alexandra Mazzoli, Ctr. Spatial de Liège (Belgium); Ann Baeke, Lionel Clermont, Yvan Stockman, Isabelle Domken, Ctr. Spatial de Liège (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-162

Ghost analysis of the EnVisS camera for the Comet Interceptor ESA mission

Author(s): Simone Nordera, Vania Da Deppo, Paola Zuppella, Paolo Chioetto, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-163

H1RG readout procedures for MAJIS, the VIS/NIR imaging spectrometer of JUICE: impact on the performances

Author(s): Yves Langevin, Vincent Carlier, CNRS (France); Cyrille Hannou, Univ. Paris-Sud (France); Ludovic Gonnod, CNRS (France); John Carter, Univ. Paris-Saclay (France); Federico Tosi, Gianrico Filacchione, INAF (Italy); Cydalise Dumesnil, CNRS (France); Giuseppe Piccioni, INAF (Italy); François Poulet, Univ. Paris-Saclay (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-164

MAJIS focal plane unit: performance of the IR channel filters

Author(s): John Carter, Xuyan Zhang, Benoit Lecomte, Claudia RUIZ DE GALARRETA FANJUL, Paolo Haffoud, Antoine Arondel, Rosario Brunetto, Jean-Pierre Dubois, Cydalise Dumesnil, Yves Langevin, Gilles Morinaud, François Poulet, Institut d'Astrophysique Spatiale (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-165

MAJIS VIS-NIR channel: performances of the focal plane unit - flight model

Author(s): Paolo Haffoud, Antoine Arondel, Institut d'Astrophysique Spatiale (France); David Bolsée, Royal Belgian Institute for Space Aeronomy (Belgium); Vincent Carlier, John Carter, Institut d'Astrophysique Spatiale (France); Miriam Cisneros-González, Royal Belgian Institute for Space Aeronomy (Belgium); Jean-Pierre Dubois, Cydalise Dumesnil, Institut d'Astrophysique Spatiale (France); Gianrico Filacchione, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Ludovic Gonnod, Cyrille Hannou, Véronique Hervier, Institut d'Astrophysique Spatiale (France); Özgür Karatekin, Belgian Institute for Space Aeronomy (Belgium); Christian Ketchazo, Yves Langevin, Jean-Christophe Le Clec'h, Benoit Lecomte, Gilles Morinaud, Institut d'Astrophysique Spatiale (France); Nuno Pereira, Royal Belgian Institute for Space Aeronomy (Belgium); Giuseppe Piccioni, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Ann Carine Vandaele, Lionel Van Laeken, Royal Belgian Institute for Space Aeronomy (Belgium); Mathieu Vincendon, François Poulet, Institut d'Astrophysique Spatiale (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-166

MAJIS IR channel: 3) performance of the focal plane unit

Author(s): John Carter, Paolo Haffoud, Yves Langevin, François Poulet, Christian Ketchazo, Pierre Guiot, Cydalise Dumesnil, Claudia RUIZ DE GALARRETA FANJUL, Antoine Arondel, Vincent Carlier, Jean-Pierre Dubois, Ludovic Gonnod, Cyrille Hannou, Véronique Hervier, Jean-Christophe Le Clec'h, Benoit Lecomte, Gilles Morinaud, Xueyan Zhang, Institut d'Astrophysique Spatiale (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-167

Radiance values inside lunar caves and lava tubes

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-168

PROBA-3 ASPIICS coronograph internal occulter multifunctional coating

Author(s): Karl Fleury-Frenette, STAR Institute (Belgium), Ctr. Spatial de Liege, Univ. de Liège (Belgium); Cédric Lénaerts, Frédéric Rabecki, Camille Galy, Ctr. Spatial de Liege (Belgium); Aline Hermans, Ctr. Spatial de Liege (Belgium); Cédric Thizy, Ctr. Spatial de Liège (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-169

Solar spectral irradiance reconciliation of SORCE and TSIS-1 SIM

Author(s): Steven V. Penton, Stéphane Béland, Jerry Harder, Erik Richard, Thomas Woods, Lab. for Atmospheric and Space Physics (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-170

In-flight Metis radiometric performance verification using the light retro-reflected from its door

Author(s): Chiara Casini, Vania Da Deppo, Paola Zuppella, Fabio Frassetto, Paolo Chioetto, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Federico Landini, Vincenzo Andretta, INAF (Italy); Marco Romoli, Univ. degli Studi di Firenze (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-171

Image quality of data products of the high resolution telescope of the polarimetric and helioseismic imager

Author(s): Fatima Kahil, Achim Gandorfer, Johann Hirzberger, Max-Planck-Institut für Sonnensystemforschung (Germany); David Orozco Suárez, Instituto de Astrofísica de Andalucía (Spain); Kinga Albert, Nestor Albelo Jorge, Max-Planck-Institut für Sonnensystemforschung (Germany); Thierry Appourchaux, Institut d'Astrophysique Spatiale, Univ. Paris-Sud (France); Alberto Álvarez-Herrero, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Julian Blanco Rodríguez, Univ. de València (Spain); Dietmar Germerott, Lucas Guerrero, Pablo Gutierrez-Marquez, Jonas Sinjan, Daniele Calchetti, Martin Kolleck, Sami K. Solanki, Max-Planck-Institut für Sonnensystemforschung (Germany); Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain); Reiner Volkmer, Leibniz-Institut für Sonnenphysik (Germany); Joachim Woch, Max-Planck-Institut für Sonnensystemforschung (Germany); Björn Fiethe, Technische Univ. Braunschweig (Germany); Jose Gómez Cama, Univ. de Barcelona (Spain); Isabel Pérez-Grande,

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-172

Coronal and Heliospheric imaging with Achromatic Metasurfaces Pathfinder (CHAMP)

Author(s): Juliana Vievering, David Shrekenhamer, Angelos Vourlidas, Nora Lane, Joseph Centurelli, Garret Bonnema, Chad Weiler, Joseph Miragliotta, Lance Oh, Johns Hopkins Univ. Applied Physics Lab., LLC (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-173

Processing of ACS-NIR observations to build the solar spectrum with high spectral resolution in the 0.7-1.7 μm domain

Author(s): Abdanour Irbah, Jean-Loup Bertaux, Franck Montmessin, Léa Scheveiler, Gaetan Lacombe, Lab. Atmosphères, Milieux, Observations Spatiales (France); Alexander Trokhimovskiy, Oleg Korablev, Anna Fedorova, Andrey Patrakeev, Alexei Shakun, Space Research Institute (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-238

MAJIS VIS-NIR channel: Performances of the Spare Model Focal Plane Unit

Author(s): Nuno Pereira, David Bolsée, Royal Belgian Institute for Space Aeronomy (Belgium); Miriam Cisneros, Royal Belgian Institute for Space Aeronomy (Belgium), Université Catholique de Louvain (Belgium); Lionel Van Laeken, Ann-Carine Vandaele, Royal Belgian Institute for Space Aeronomy (Belgium); Samuel Gissot, Royal Observatory of Belgium (Belgium); Yves Langevin, François Poulet, Paolo Haffoud, Institut d'Astrophysique Spatiale (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P4: POSTERS - CONCEPTS AND TECHNOLOGIES FOR SPACE-BASED INTERFEROMETRY

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-175

Analysis of a compact interferometric imager

Author(s): Laurent M. Mugnier, Vincent Michau, Hiyam Debary, Frédéric Cassaing, ONERA (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-177

Atmospheric retrievals for LIFE and other future space missions: the importance of mitigating systematic effects

Author(s): Eleonora Alei, Björn Konrad, ETH Zurich (Switzerland); Paul Mollière, Max-Planck-Institut für Astronomie (Germany); Sascha P. Quanz, Daniel Angerhausen, Mohanakrishna Ranganathan, ETH Zurich (Switzerland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P6: POSTERS - THE JAMES WEBB SPACE TELESCOPE

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-179

Extreme angular resolution imaging of substellar companions with JWST

Author(s): Jens Kammerer, Marshall D. Perrin, Laurent Pueyo, Julien H. Girard, Space Telescope Science Institute (United States); Steph Sallum, Univ. of California, Irvine (United States); Tomas Stolker, Leiden Observatory (Netherlands); Frantz Martinache, Observatoire de la Côte d'Azur (France); Jarron Leisenring, Steward Observatory, The Univ. of Arizona (United States); Ben Sunnquist, Anand Sivaramakrishnan, Space Telescope Science Institute (United States); Sylvestre Lacour, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-181

Bayesian retrieval algorithm to detect unresolved point sources in JWST MIRI spectra using the detector-produced interferometric fringes

Author(s): Danny Gasman, Ioannis Argyriou, KU Leuven (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-182

James Webb Space Telescope MIRI shear pupil analysis

Author(s): Ray H. Wright, Derek Sabatke, Ball Aerospace (United States); Randal Telfer, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-183

JWST/NIRCam Coronagraphy: preparing an efficient commissioning with realistic end to end simulations

Author(s): Julien H. Girard, Space Telescope Science Institute (United States); Jarron Leisenring, Steward Observatory, The Univ. of Arizona (United States); Ben Sunnquist, Jens Kammerer, Marshall D. Perrin, Space Telescope Science Institute (United States); Marie Ygouf, Jet Propulsion Lab. (United States); Marcia Rieke, Steward Observatory (United States); Charles Beichman, Infrared Processing and Analysis Ctr., Caltech (United States); Aarynn L. Carter, Univ. of California, Santa Cruz (United States); Christopher Stark, NASA Goddard Space Flight Ctr. (United States); Laurent Pueyo, Alicia Canipe, John Stansberry, Dean Hines, Bryan Hilbert, Howard Bushouse, Mario Gennaro, Martha L. Boyer, Bryony Nickson, Jonathan Aguilar, Marsha Allen, Rémi Soummer, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-184

In-flight performance of the NIRSpec Micro Shutter Array

Author(s): Timothy D. Rawle, Space Telescope Science Institute (United States); Catarina Alves de Oliveira, European Space Astronomy Ctr. (Spain); Stephan M. Birkmann, Torsten Böker, Space Telescope Science Institute (United States); Pierre Ferruit, European Space Astronomy Ctr. (Spain); Giovanna Giardino, European Space Research and Technology Ctr. (Netherlands); Kumari Nimisha, Nora Lützgendorf, Elena Manjavacas, Marco Sirianni, Maurice te Plate, Peter Zeidler, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-185

In-flight performance and calibration of the Grating Wheel Assembly sensors (NIRSpec/JWST)

Author(s): Catarina Alves de Oliveira, European Space Agency (Spain); Giovanna Giardino, European Space Agency (Netherlands); Pierre Ferruit, European Space Agency (Spain); Nora Lützgendorf, Marco

Sirianni, Stephan M. Birkmann, Torsten Boeker, European Space Agency (United States); Nimisha Kumari, Peter Zeidler, AURA, Space Telescope Science Institute (United States); Maurice te Plate, European Space Agency (United States); James Muzerolle, Tony Keyes, AURA, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-186

Quantifying the contamination from nebular emission in NIRSpec spectra of massive star forming regions.

Author(s): Ciaran Rogers, Bernhard Brandl, Leiden Univ. (Netherlands); Guido de Marchi, Giovanna Giardino, European Space Research and Technology Ctr. (Netherlands); Pierre Ferruit, European Space Astronomy Ctr. (Spain); Bruno Rodriguez, Ctr. de Astrobiología (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-187

James Webb Space Telescope wavefront commissioning contingency response

Author(s): Brian Hicks, Erin Wolf, Scott Acton, J. Scott Knight, Ball Aerospace (United States); Lee D. Feinberg, NASA Goddard Space Flight Ctr. (United States); Brian Bauer, Maria Carrasquilla, Taylor Chonis, Eric Coppock, Michael Gordon, Katherine Melbourne, Derek Sabatke, Chanda Walker, Garrett J. West, Gregory Wirth, Ray H. Wright, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-188

Results from Commissioning the James Webb Space Telescope using an Influence Function Matrix for Mirror Alignment

Author(s): Garrett J. West, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-189

Two novel approaches for determining the sky position of an unstacked, segmented-mirror telescope

Author(s): Gregory Wirth, Ball Aerospace (United States); Nicolas Flagey, Space Telescope Science Institute (United States); Michael Gordon, Brian Hicks, D. Scott Acton, J. Scott Knight, Paul Lightsey, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-190

Coarse alignment of the James Webb Space Telescope secondary and primary mirrors without a fine guidance sensor

Author(s): Ray H. Wright, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-191

JWST mirror actuator performance during commissioning

Author(s): Maria Carrasquilla, Erin Wolf, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P7: POSTERS - MISSIONS FOR EXOPLANET TIME SERIES

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-192

The thermal architecture of the ESA ARIEL payload approaching the end of the phase B2

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-193

Toward ARIEL's primary mirror

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-194

Optimization of the Ariel primary mirror

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-195

FEA Testing the Pre-Flight Ariel Primary Mirror

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-196

The instrument control unit of the ARIEL payload: design evolution following the unit and payload subsystems SRR (system requirements review)

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-197

Instrument control and data processing Software for ARIEL ICU

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-198

ARIEL AIRS Focal Plane Assembly

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-199

The detector control unit of the fine guidance sensor instrument on-board the ARIEL mission: design status

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-200

Preliminary surface charging analysis of Ariel payload dielectrics in early transfer orbit and L2-relevant space environment

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-201

Monte Carlo transmission line modelling of multilayer optical coatings for performance sensitivity of a dichroic filter for the ARIEL space telescope

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-202

Ground calibration of the Ariel space telescope: optical ground support equipment design and description

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-203

Conceptual design study of the science payload for the Earth 2.0 mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-204

Camera design and performance for the Earth 2.0 mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-205

Design of a CCD camera prototype for the Earth 2.0 Mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-206

Design of subpixel response characterization measurements for the Earth 2.0 mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-207

Data processing pipeline for the Earth 2.0 mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-208

The effect of pointing stability on Earth 2.0 space mission's photometry precision

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-209

High precision photometry simulations for the Earth 2.0 mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-210

Alignment and integration of the first PLATO camera

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-211

The PLATO TOU optical design: description, properties and nominal performances

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-212

Hartmann data analysis for PLATO TOU EM

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-213

The PLATO mission: camera thermal-vacuum performance verification and testing

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-214

An industrialized and deterministic approach for aligning and focusing the 26 PLATO refractive telescopes, designed for operating in space.

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-215

PLATO Camera Ghosts: simulations and measurements on the Engineering Model (EM)

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-216

Precise localization of the best image plane of PLATO telescope optical units

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-217

PLATO payload, Big data PUS packets classifier and astronomical digital imagette data decompression

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-218

The PLATO Instrument Control Unit Software: a Model Based SW architecture.

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-219

PLATO focal plane assembly (FPA) qualification model (QM): an innovative real-time metrology.

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-220

Preliminary analysis of ground-to-flight mechanical tolerances of the Ariel mission telescope

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P8: POSTERS - WIDE FIELD SURVEY MISSIONS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-221

SPHERExLabTools: A Python Data Acquisition System for SPHEREx Characterization and Calibration

Author(s): Sam Condon, Marco Viero, James Bock, Howard Hui, Phil Korngut, Hiromasa Miyasaka, Caltech (United States); Ken Manatt, Jet Propulstion Lab. (United States); Chi Nguyen, Caltech (United States); Hien Nguyen, Jet Propulsion Lab. (United States); Steve Padin, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-222

The STARSPOT concept (STellar Activity Recorder & SpectroPhotometric ObservaTory)

Author(s): Gábor Furész, Massachusetts Institute of Technology (United States); Jennifer Burt, Jet Propulsion Lab. (United States); Mark Egan, Mary Knapp, Nathan P. Lourie, Alexander Rudat, Massachusetts Institute of Technology (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-223

SwRI's ISpec instrument for the ISCEA observatory: design

Author(s): Todd J. Veach, John Polizotti, Michael W. Davis, Randy Rose, Thomas J. Rose, Mark Phillips, Tonya Brody, Martin Keuchkerian, Southwest Research Institute (United States); Yun Wang, Lee Armus, California Institute of Technology (United States); Andreas Faisst, Caltech (United States); Massimo Robberto, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-224

Measurement and modelling of the chromatic dependence of a reflected wavefront on the Euclid space telescope dichroic mirror

Author(s): Maël Baron, IP2I-LMA (France); Benoît Sassolas, Institut de Physique des 2 Infinis de Lyon (France); Pierre-Antoine Frugier, CEA-IRFU (France); Luis Miguel Gaspar Venancio, European Space Research and Technology Ctr. (Netherlands); Jérôme Amiaux, ESO (Germany); Matthieu Castelnau, Ctr. National d'Études Spatiales (France); Fanny Keller, European Space Research and Technology Ctr. (Netherlands); Guillaume Dovillaire, Pauline Treimany, Rémy Juvénal, Imagine Optic SA (France); Lance Miller, Univ. of Oxford (United Kingdom); Laurent Pinard, Anne Ealet, Institut de Physique des 2 Infinis de Lyon (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-225

The EUCLID VIS On board Software data handling chain

Author(s): Emanuele Galli, Anna Maria Di Giorgio, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Gian Paolo Candini, Saeeda Awan, Mullard Space Science Lab., Univ. College London (United Kingdom); Andrea Russi, Scigè Liù, Giovanni Giusi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-226

Prism assembly for Roman Space Telescope Wide Field Instrument slit-less spectroscopy

Author(s): Bente H. Eegholm, Catherine T. Marx, Victor J. Chambers, NASA Goddard Space Flight Ctr. (United States); Jenny Chu, Jay Voris, Peraton (United States); Guangjun Gao, John P. Lehan, NASA Goddard Space Flight Ctr. (United States); Laurie L. Seide, KBRWyle (United States); Bert A. Pasquale, NASA Goddard Space Flight Ctr. (United States); John G. Hagopian, ATA Aerospace, LLC (United States); Peter A. Morey, Ball Aerospace (United States); Qian Gong, NASA Goddard Space Flight Ctr. (United States); Evan Bray, Peraton (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-239

Machine learning techniques to separate the cosmic from the telluric

Author(s): Frederick Dauphin, Andreea Petric, Michelle Ntampaka, Swara Ravindranath, Space Telescope Science Institute (United States); Jennifer Marshall, Texas A&M University (United States); Etienne Artigau, University of Montreal (Canada); Steven Businger, University of Hawaii (United States); Laurie Rousseau-Nepton, Canada France Hawaii Telescope (United States); Andrew W. Stephens, National Optical-Infrared Astronomy Research Laboratory (United States); Takahiro Morishita, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P9: POSTERS - FAR-IR AND MILLIMETER

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-227

Developing a new generation of integrated micro-spec far-infrared spectrometers for the experiment for cryogenic large-aperture intensity mapping (EXCLAIM)

Author(s): Carolyn G. Volpert, Univ. of Maryland, College Park (United States); Emily M. Barrentine, Mona Mirzaei, Alyssa Barlis, NASA Goddard Space Flight Ctr. (United States); Alberto D. Bolatto, Univ. of Maryland, College Park (United States); Berhanu T. Bulcha, Giuseppe Cataldo, NASA Goddard Space Flight Ctr. (United States); Jake A. Connors, National Institute of Standards and Technology (United States); Nicholas P. Costen, Negar Ehsan, Thomas Essinger-Hileman, Jason Glenn, James P. Hays-Wehle, Larry A. Hess, Alan J. Kogut, NASA Goddard Space Flight Ctr. (United States); Harvey Moseley, Quantum Circuits, Inc. (United States); Jonas Mugge-Durum, Deutsches Zentrum

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-228

Optical characterization & testbed development for μ-Spec integrated spectrometers

Author(s): Maryam Rahmani, Alyssa Barlis, Emily M. Barrentine, Ari D. Brown, Berhanu T. Bulcha, Giuseppe Cataldo, NASA Goddard Space Flight Ctr. (United States); Jake A. Connors, National Institute of Standards and Technology (United States); Negar Ehsan, Thomas Essinger-Hileman, Henry Grant, Jim Hays-Wehle, Wen-Ting Hsieh, Vilem Mikula, NASA Goddard Space Flight Ctr. (United States); Harvey Moseley, Quantum Circuits, Inc. (United States); Omid Noroozian, Thomas R. Stevenson, Eric R. Switzer, Kongpop U-Yen, Carolyn G. Volport, Edward J. Wollack, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-230

Mechanical design and structural analysis for LiteBIRD low-frequency telescope and payload module

Author(s): Shugo Oguri, Japan Aerospace Exploration Agency (Japan); Tadayasu Dotani, Japan Aerospace Exploration Agency (Japan); Masahito Isshiki, Sumitomo Heavy Industries, Ltd. (Japan); Shota Iwabuchi, Tooru Kaga, Frederick T. Matsuda, Yasuyuki Miyazaki, Japan Aerospace Exploration Agency (Japan); Baptiste Mot, Institut de Recherche en Astrophysique et Planetologie (France); Ryo Nagata, Katsuhiro Narasaki, Hiroyuki Ogawa, Toshiaki Okudaira, Kimihide Odagiri, Japan Aerospace Exploration Agency (Japan); Thomas Prouve, Univ. Grenoble Alpes (France); Gilles Roudil, Institut de Recherche en Astrophysique et Planetologie (France); Yasutaka Satoh, Yutaro Sekimoto, Toyoaki Suzuki, Kazuya Watanuki, Japan Aerospace Exploration Agency (Japan); Seiji Yoshida, Sumitomo Heavy Industries, Ltd. (Japan); Keisuke Yoshihara, Japan Aerospace Exploration Agency (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-231

Straylight identification of a crossed-Dragone telescope by time-gated near-field antenna pattern measurements

Author(s): Hayato Takakura, Ryo Nakano, Yutaro Sekimoto, The Univ. of Tokyo (Japan), Japan Aerospace Exploration Agency (Japan); Junji Inatani, Japan Aerospace Exploration Agency (Japan); Masahiro Sugimoto, National Astronomical Observatory of Japan (Japan); Frederick T. Matsuda, Japan Aerospace Exploration Agency (Japan); Shugo Oguri, Japan Aerospace Exploration Agency (Japan), The Univ. of Tokyo (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-232

Heat dissipation of rotation mechanism of polarization modulator unit for LiteBIRD low-frequency telescope

Author(s): Takashi Hasebe, Tommaso Ghigna, Thuong D. Hoang, Yurika Hoshino, Kavli Institute for the Physics and Mathematics of the Universe, The Univ. of Tokyo (Japan); Teruhito Iida, ispace, inc. (Japan); Nobuhiko Katayama, Tomotake Matsumura, Kavli Institute for the Physics and Mathematics of the Universe, The Univ. of Tokyo (Japan); Hiroyuki Ohsaki, Graduate School of Frontier Sciences, The University of Tokyo (Japan); Yuki Sakurai, Okayama Univ. (Japan); Shinya Sugiyama, Saitama Univ. (Japan); Ryota Takaku, The Univ. of Tokyo (Japan); Yutaka Terao, Graduate School of Frontier Sciences, The University of Tokyo (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-233

Assessment of the cosmic-ray impacts for LiteBIRD using Geant4 simulation

Author(s): Mayu Tominaga, Masahiro Tsujimoto, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Hirokazu Ishino, Okayama Univ. (Japan); Samantha L. Stever, Okayama Univ. (Japan), Kavli Institute for the Physics and Mathematics of the Universe (Japan); Serika Tsukatsune, Okayama Univ. (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-234

Study and development of topologies of programming in FPGA for reduction and analysis of data heterodine instruments for radioastronomy

Author(s): Jael Rojas, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P10: POSTERS - THE ROMAN CORONAGRAPH INSTRUMENT

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-109

CANCELED: RST CGI: Characterizing Prism and Polarizer Flight Units

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-110

Simulations of polarimetric observations of debris disks through Roman Coronagraph Instrument

Author(s): Ramya M. Anche, Ewan S. Douglas, Steward Observatory, The Univ. of Arizona (United States); Kian Milani, Steward Observatory, The Univ. of Arizona (United States), Wyant College of Optical Sciences, The Univ. of Arizona (United States); John Debes, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P11: POSTERS - EXOPLANET IMAGING: MODELING AND TECHNOLOGIES

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-111

STOP model implementation for the PICTURE-C exoplanetary imaging balloon mission, progress report I: thermal modeling and verification with flight data

Author(s): Thaddeus Potter, Univ. of Massachusetts Lowell (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-112

DICOS: a demonstrator of advanced active optics and fine pointing techniques for future space based missions

Author(s): Jean-Michel Le Duigou, Laurent Bernard, Matthieu Castelnau, Charles-Antoine Chevrier, Mathieu Clavery, Jean Evrard, Florent Gant, Fréderic Henault, Lorenzo Marelli, Frédéri Mirc, Johan Montel, André Laurens, Alain Peus, Arthur Rafflegeau, Bruno Regnier, Christophe Latry, Ctr. National d'Études Spatiales (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-115

Thermo-mechanical design of the TOLIMAN space telescope

Author(s): Mark George, Christopher Betters, Peter Tuthill, The Univ. of Sydney (Australia)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-116

State-of-the-art of ground and space-based instruments mainly contributed to Earth-type planets discovery : What's the Next ?

Author(s): Ahmed Daassou, Zouhair Benkhaldoun, Univ. Cadi Ayyad (Morocco)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P12: POSTERS - EXOPLANET IMAGING: MISSION DESIGN

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-117

Direct imaging mission planning with precursor radial velocity data: process and validation

Author(s): Corey Spohn, Dmitry Savransky, Cornell Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-118

ExoEarth yield provided by an 8m off-axis segmented telescope equipped with an adaptive optics system

Author(s): Axel Potier, Garreth J. Ruane, Jet Propulsion Lab. (United States); Larry Dewell, Alison A. Nordt, Lockheed Martin Space Systems Co. (United States); Chris Stark, Laurent Pueyo, Space Telescope Science Institute (United States); A. J. Eldorado Riggs, Pin Chen, David Redding, Jet Propulsion Lab. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-119

Diffractive interfero coronagraph exoplanet resolver (DICER): detecting and characterizing all Earth-like exoplanets orbiting Sun-like stars within 10 pc

Author(s): Heidi Jo Newberg, Leaf A. Swordy, Rensselaer Polytechnic Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-120

Simulated design trades for a visible-wavelength integral field spectrograph operating behind a space coronagraph

Author(s): Tyler Baines, Southeastern Univ. Research Association (United States), NASA Goddard Space Flight Ctr. (United States); Neil T. Zimmerman, Roser Juanola-Parramon, NASA Goddard Space Flight Ctr. (United States); Nicholas Susemiehl, Southeastern Univ. Research Association (United States), NASA Goddard Space Flight Ctr. (United States); Avi Mandell, Tyler D. Groff, Michael McElwain, Christopher C. Stark, Geronimo Villaneuva, Maxime Rizzo, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-121

Unscented filtering for directly-observed exoplanet orbits

Author(s): Zvonimir Stojanovski, Dmitry Savransky, Cornell Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P13: POSTERS - EXOPLANET IMAGING: CORONAGRAPH DESIGN AND DEMONSTRATION

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-122

Pushing Scalar Vortex Coronagraphs Toward Achromatic Performance

Author(s): Niyati Desai, Caltech (United States); Eugene Serabyn, Jet Propulsion Lab. (United States); Jorge Llop-Sayson, Caltech (United States); Garreth J. Ruane, Jet Propulsion Lab. (United States); Nemanja Jovanovic, Caltech (United States); A. J. Eldorado Riggs, Stefan Martin, Jet Propulsion Lab. (United States); Arielle Bertrou-Cantou, Dimtiri Mawet, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-123

High-contrast demonstration of a vector vortex coronagraph with a segmented, off-axis aperture

Author(s): A. J. Eldorado Riggs, Garreth J. Ruane, Eugene Serabyn, Wesley Baxter, Camilo Mejia Prada, Jet Propulsion Lab. (United States); Dimitri Mawet, Caltech (United States); Matthew R. Noyes, Phillip K. Poon, Jet Propulsion Lab. (United States); Jorge Llop-Sayson, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-124

Joint optimization of multiple optical planes in a stellar coronagraph

Author(s): Emiel H. Por, Laurent Pueyo, Rémi Soummer, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-125

APLC-Optimization: an apodized pupil Lyot coronagraph design survey toolkit

Author(s): Bryony Nickson, Emiel H. Por, Meiji Nguyen, Rémi Soummer, Laurent Pueyo, Katheryn St. Laurent, Space Telescope Science Institute (United States); Mamadou N'Diaye, Univ. Côte d'Azur (France); Neil T. Zimmerman, NASA Goddard Space Flight Ctr. (United States); Jamie Noss, Marshall D. Perrin, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-126

The Space Coronagraph Optical Bench (SCoOB): 1. Design and assembly of a vacuum-compatible coronagraph testbed for spaceborne high-contrast imaging technology

Author(s): Jaren N. Ashcraft, Wyant College of Optical Sciences, The Univ. of Arizona (United States); Ewan S. Douglas, Steward Observatory, The Univ. of Arizona (United States); Kevin Derby, Wyant College of Optical Sciences (United States); Heejoo Choi, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Large Binocular Telescope Organization (United States); Kyle Van Gorkom, Ramya Anche, Steward Observatory, The Univ. of Arizona (United States); Olivier Durney, Large Binocular Telescope Organization (United States); Sebastiaan Haffert, Lori Harrison, Steward Observatory, The Univ. of Arizona (United States); Maggie Kautz, Wyant College of Optical Sciences (United States); Daewook Kim, Wyant College of Optical Sciences (United States), Steward Observatory, The Univ. of Arizona (United States), Large Binocular Telescope Organization (United States); Jennifer Lumbres, Wyant College of Optical Sciences (United States); Jared R. Males, Steward Observatory, The Univ. of Arizona (United States); Kian Milani, Wyant College of Optical Sciences (United States); Oscar M. Montoya, Steward Observatory, The Univ. of Arizona (United States); George A. Smith, Wyant College of Optical Sciences (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-127

The space coronagraph optical bench (SCoOB): 2. wavefront sensing and control in a vacuum-compatible coronagraph testbed for spaceborne high-contrast imaging technology

Author(s): Kyle Van Gorkom, Ewan S. Douglas, Jaren N. Ashcraft, Sebastiaan Haffert, Daewook Kim, Heejoo Choi, Ramya M. Anche, Jared R. Males, Kian Milani, Kevin Derby, Lori Harrison, Olivier Durney, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P14: POSTERS - ENABLING TECHNOLOGIES: OPTICS, ELECTRONICS AND THERMAL

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-128

The past decade of ZERODUR® glass-ceramics in space applications

Author(s): Janina Krieg, Antoine Carré, SCHOTT AG (Germany); Thorsten Döhring, Technische Hochschule Aschaffenburg (Germany); Peter Hartmann, SCHOTT AG (Germany); Tony B. Hull, The Univ. of New Mexico (United States); Ralf Jedamzik, Thomas Westerhoff, SCHOTT AG (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-129

Factors that favor ZERODUR® mirror substrates for Astro2020's IR/O/UV future Flagship

Author(s): Tony B. Hull, The Univ. of New Mexico (United States); Janina Krieg, Ralf Jedamzik, Peter Hartmann, Antoine Carre, Thomas Westerhoff, SCHOTT AG (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-130

SCHOTT's readiness for monolithic or segmented substrates for Astro2020's IR/O/UV future Flagship

Author(s): Tony B. Hull, The Univ. of New Mexico (United States); Thomas Westerhoff, Janina Krieg, Ralf Jedamzik, SCHOTT AG (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-131

Developing compact and innovative dual-band thermal imagers using multi-layer diffractive optical elements

Author(s): Victor Laborde, Ctr. Spatial de Liège (Belgium); Jérôme Loicq, Technische Univ. Delft (Netherlands); Serge Habraken, Ctr. Spatial de Liège (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-132

MOEMS-based instruments for Universe Observation and Planetology in space: MIRA and the BATMAN family

Author(s): Frédéric Zamkotsian, Patrick Lanzoni, Lab. d'Astrophysique de Marseille (France); Yves Pétremand, Sebastien Lani, CSEM SA (Switzerland); Rudy Barette, Lab. d'Astrophysique de Marseille (France); Michel Despont, CSEM SA (Switzerland); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Luciano Nicastro, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Rosario Cosentino, Adriano Ghedina, Telescopio Nazionale Galileo (Spain); Paolo Di Marcantonio, INAF - Osservatorio Astronomico di Trieste (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-134

Update on the survivability of high-actuator-count MEMS deformable mirror to rocket launch.

Author(s): Axel Potier, Garreth J. Ruane, Camilo Mejia Prada, Wesley Baxter, Duncan Liu, Hong Tang, A. J. Eldorado Riggs, Phillip Poon, Eduardo Bendek, Nick Siegler, Mary Soria, Mark Hetzel, Jet Propulsion Lab. (United States); Charlie Lam, Paul Bierden, Boston Micromachines Corp. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-135

Laboratory characterization of a large format, contactless active mirror with intrinsic rejection of vibrations

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-136

Design and additive manufacturing of systems involving directly printed electrical wires and sensors

Author(s): Hervé Saudan, Lionel Kiener, David Novo, Gérald Perruchoud, Sébastien Lani, Nicholas R. Hendricks, Florent Boudoire, CSEM SA (Switzerland); Chrysoula Manoli, Jérôme Noël, Paolo Petagna, CERN (Switzerland); Mickaël Miler, Damien Bilbeau, Mélanie Henry, RUAG Slip Rings SA (Switzerland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P15: POSTERS - ENABLING TECHNOLOGIES: ULTRA-STABLITY

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-137

Segment-level thermal sensitivity analysis for exo-Earth imaging

Author(s): Ananya Sahoo, Iva Laginja, Laurent Pueyo, Rémi Soummer, Space Telescope Science Institute (United States); Laura E. Coyle, J. Scott Knight, Ball Aerospace (United States); Matthew East, L3Harris Technologies, Inc. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-138

Multi-mode segment WFE tolerancing for coronagraphy at high contrast

Author(s): Iva Laginja, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Ctr. National d'Etudes Spatiales (France); Laurent Pueyo, Ananya Sahoo, Space Telescope Science Institute (United States); Lucie Leboulleux, Institut de Planétologie et d'Astrophysique de Grenoble, Univ. Grenoble Alpes (France), CNRS (France); Jean-François Sauvage, Laurent M. Mugnier, ONERA (France); Keira J. Brooks, Marshall D. Perrin, James Noss, Space Telescope Science Institute (United States); Scott D. Will, NASA Goddard Space Flight Ctr. (United States); Rémi Soummer, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-139

Progress in demonstrating picometer class laser metrology using photonics integrated gauges

Author(s): Jacob H. Wirth, James E. Mason, Alison A. Nordt, Lockheed Martin Space Systems Co. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-141

Picometer-scale edge sensing and actuation for ultra-stable mission concepts

Author(s): Benjamin M. Cromey, Brian Hicks, Jeremy Shugrue, Joseph Ho, Courtney Owen, Austin Grossman, Natalie Fan, Brooke Walters, John S. Knight, Laura E. Coyle, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-142

Integrated modeling of large, segmented telescopes with ultra-stable wavefronts

Author(s): Laura E. Coyle, J. S. Knight, Ball Aerospace (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P16: POSTERS - ENABLING TECHNOLOGIES: EXTERNAL OCCULTERS AND FORMATION FLYING

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-143

Precomputation and interpolation of the matrizant for starshade slewing

Author(s): Jackson Kulik, Dmitry Savransky, Cornell Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-144

CANCELED: Alternate solutions in three-body transfers applied to starshade slewing

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-145

CANCELED: Starshade optical edge scatter: performance vs. materials, coating, and environmental testing

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-147

Final optomechanical upgrades to the Princeton starshade testbed

Author(s): Michael Galvin, Anthony D. Harness, N. Jeremy Kasdin, Princeton Univ. (United States); Stuart Shaklan, Jet Propulsion Lab. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P17: POSTERS - ENABLING TECHNOLOGIES: DETECTORS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-148

Nancy Grace Roman Space Telescope coronagraph EMCCD flight camera electronics development

Author(s): Olivier Daigle, Nüvü Cameras Inc. (Canada); James Veilleux, Frédéric Grandmont, ABB Inc. (Canada); Patrick Morrissey, Christophe Basset, Nathan Bush, Michael Hoenk, Jet Propulsion Lab. (United States); Adam Gilbert, Jérémy Turcotte, Abtin Ghodoussi, Yoann Gosselin, Nüvü Cameras Inc. (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-149

Radiation tolerant, photon counting, visible and near-IR detectors for Exoplanet Spectroscopy

Author(s): Bernard J. Rauscher, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-150

CANCELED: Cosmic Ray Mitigation Techniques in TES Bolometer Arrays for the LiteBIRD Space Mission

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-237

Individual layer thermal conductance on TES legs

Author(s): Angelina H. Harke-Hosemann, Joel Ullom, Peter Lowell, Kelsey Morgan, Johannes Hubmayr, Gene Hilton, Shannon Duff, National Institute of Standards and Technology (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P18: POSTERS - WAVEFRONT SENSING AND CONTROL

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-152

Experimental stabilization of low-order aberrations on Lyot-type coronagraphs using a Zernike wavefront sensor

Author(s): Raphaël Pourcelot, Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); Emiel H. Por, James Noss, Space Telescope Science Institute (United States); Marcel Carbillet, Observatoire de la Côte d'Azur (France); Iva Laginja, Lab. d'Astrophysique de Marseille (France), ONERA (France); Marshall D. Perrin, Laurent Pueyo, Space Telescope Science Institute (United States); Susan F. Redmond, Princeton Univ. (United States); Rémi Soummer, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-153

Tolerance analysis of a self-coherent camera for wavefront sensing and dark hole maintenance

Author(s): Kevin Derby, Sebastiaan Haffert, The Univ. of Arizona (United States); Gregory Allan, Massachusetts Institute of Technology (United States); Jaren N. Ashcraft, The Univ. of Arizona (United States); Kerri Cahoy, Massachusetts Institute of Technology (United States); Supriya Chakrabarti, Univ. of Massachusetts Lowell (United States); Heejoo Choi, Laird Close, Daewook Kim, Young-Sik Kim, Jared R. Males, The Univ. of Arizona (United States); Christopher Mendillo, Univ. of Massachusetts Lowell (United States); Kian Milani, The Univ. of Arizona (United States); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); Leonid Pogorelyuk, Massachusetts Institute of Technology (United States); Ewan S. Douglas, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12180-154

Machine learning wavefront sensing for the James Webb Space Telescope

Author(s): Heriniaina F. Rajaoberison, Joseph S. Tang, The Institute of Optics, Univ. of Rochester (United States); James R. Fienup, Univ. of Rochester (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

REMOTE PRESENTATIONS

12180-114
Lord of the Ring Gratings: how using them as image plane filters for coronagraphy

Contact author(s): Hénault François B., Institut de Planétologie et d'Astrophysique de Grenoble, France

Poster

12180-176
Research on the high-precision simulation method of spatial distributed synthetic aperture optical interference system

Contact author(s): Lin Qin, China Academy of Space Technology, China

Poster

12180-178
Nulling interferometry in space does not require a rotating telescope arrays

Contact author(s): Hénault François B., Institut de Planétologie et d'Astrophysique de Grenoble, France

Poster

12180-78
Study on space near-infrared exoplanet radial velocity detection technique based on spatial modulated Fourier transform spectrometer

Contact author(s): Liu Jilin, Qian Xuesen Lab. of Space Technology, China Aerospace Science and Technology Corp., China

Oral

12180-82
Recent progress of the facility for coronagraphic elemental technologies (FACET)

Contact author(s): Yoneta Kenta, Hokkaido Univ., Japan

Oral

CONFERENCE 12181

Space Telescopes and Instrumentation 2022: Ultraviolet to Gamma Ray

17 - 22 July 2022 | Room 523

Conference Chairs: **Jan-Willem A. den Herder,** SRON Netherlands Institute for Space Research (Netherlands); **Shouleh Nikzad,** Jet Propulsion Lab. (United States); **Kazuhiro Nakazawa,** Nagoya Univ. (Japan)

Program Committee: **Hisamitsu Awaki,** Ehime Univ. (Japan); **Didier Barret,** Institut de Recherche en Astrophysique et Planétologie (France); **Marshall Bautz,** Massachusetts Institute of Technology (United States); **Marcos Bavdaz,** European Space Research and Technology Ctr. (Netherlands); **Enrico Bozzo,** ISDC Data Ctr. for Astrophysics (Switzerland); **Maria Teresa Ceballos,** Univ. de Cantabria (Spain); **Roland H. den Hartog,** SRON Netherlands Institute for Space Research (Netherlands); **Megan E. Eckart,** Lawrence Livermore National Lab. (United States); **Marco Feroci,** INAF - Istituto di Fisica dello Spazio Interplanetario (Italy); **Desiree Della Monica Ferreira,** DTU Space (Denmark); **Luigi Gallo,** Saint Mary's Univ. (Canada); **Jessica A. Gaskin,** NASA Marshall Space Flight Ctr. (United States); **Varoujan Gorjian,** Jet Propulsion Lab. (United States); **Walter M. Harris,** The Univ. of Arizona (United States); **Gillian Kyne,** NASA Jet Propulsion Lab. (United States); **Olivier Limousin,** CEA-Ctr. de SACLAY (France); **Alexander Lutovinov,** Space Research Institute of the RAS (Russian Federation); **Hironori Matsumoto,** Nagoya Univ. (Japan); **Mark L. McConnell,** The Univ. of New Hampshire (United States); **Kyriaki Minoglou,** European Space Research and Technology Ctr. (Netherlands); **Anna M. Moore,** The Australian National Univ. (Australia); **Kirpal Nandra,** Max-Planck-Institut für extraterrestrische Physik (Germany); **Giovanni Pareschi,** INAF - Osservatorio Astronomico di Brera (Italy); **Biswajit Paul,** Raman Research Institute (India); **Taro Sakao,** Institute of Space and Astronautical Science (Japan); **Andrea Santangelo,** Eberhard Karls Univ. Tübingen (Germany); **Hiroyasu Tajima,** Nagoya Univ. (Japan); **Tadayuki Takahashi,** Japan Aerospace Exploration Agency (Japan); **Vincent Tatischeff,** Institut National de Physique Nucléaire et de Physique des Particules (France); **Hiroshi Tsunemi,** Osaka Univ. (Japan); **Sarah E. Tuttle,** Univ. of Washington (United States); **Cui Wei,** Tsinghua Univ. (China); **Richard Willingale,** Univ. of Leicester (United Kingdom); **Jörn Wilms,** Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany); **Yoichi Yatsu,** Tokyo Institute of Technology (Japan); **Shuangnan Zhang,** Institute of High Energy Physics (China); **William W. Zhang,** NASA Goddard Space Flight Ctr. (United States)

SESSION 1: UV I

17 July 2022 • 09:00 - 11:30 EDT | Room 523

Session Chair: Shouleh Nikzad, Jet Propulsion Lab. (United States)

12181-1

The UV-SCOPE mission: Ultraviolet Spectroscopic Characterization Of Planets and their Environments

Author(s): David Ardila, Jet Propulsion Lab. (United States); Evgenya Shkolnik, Arizona State Univ. (United States); John Ziemer, Mark Swain, Jet Propulsion Lab. (United States); James Owen, Imperial College London (United Kingdom); Michael Line, Arizona State Univ. (United States); Parke Loyd, Eureka Scientific, Inc. (United States); Glenn R. Sellar, Jet Propulsion Lab. (United States); Travis Barman, The Univ. of Arizona (United States); Courtney Dressing, Univ. of California, Berkeley (United States); William Frazier, April D. Jewell, Robert J. Kinsey, Carl C. Liebe, Jet Propulsion Lab. (United States); Joshua Lothringer, Utah Valley Univ. (United States); Luz Maria Martinez-Sierra, James McGuire, Jet Propulsion Lab. (United States); Victoria Meadows, Univ. of Washington (United States); Ruth Murray-Clay, Univ. of California, Santa Cruz (United States); Shouleh Nikzad, Jet Propulsion Lab. (United States); Sarah Peacock, NASA Goddard Space Flight Ctr. (United States); Hilke Schlichting, Univ. of California, Los Angeles (United States); David Sing, Johns Hopkins Univ. (United States); Kevin Stevenson, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); Yen-Hung Wu, Jet Propulsion Lab. (United States)

17 July 2022 • 09:00 - 09:20 EDT | Room 523

12181-3

The scientific payload of the Ultraviolet Transient Astronomy Satellite (ULTRASAT)

Author(s): Sagi Ben-Ami, Eli Waxman, Yossi Shvartzvald, Udi Netzer, Avishay Gal-Yam, Eran O. Ofek, Weizmann Institute of Science (Israel); Viktor M. Algranatti, Israel Space Agency (Israel); Shlomi Azaria, Eran Bahalul, Elbit Systems Ltd. (Israel); Merlin F. Barschke, Benjamin Bastian-Querner, Rolf Bühler, Juan M. Haces Crespo, Deutsches Elektronen-Synchrotron (Germany); Daniel Heilbrunn, Elbit Systems Ltd. (Israel); Nirmal Kaipachery, Marek Kowalski, Daniel Küsters, Shrinivasrao R. Kulkarni, David Berge, Deutsches Elektronen-Synchrotron (Germany); Ofer Lapid, Weizmann Institute of Science (Israel); Yonit Miron-Salomon, Ilan Sagiv, Nir Stern, Elbit Systems Ltd. (Israel); Jeremy Topaz, Weizmann Institute of Science (Israel); Francesco Zappon, Deutsches Elektronen-Synchrotron (Germany)

17 July 2022 • 09:20 - 09:40 EDT | Room 523

12181-4

The Polstar FUV Spectropolarimetry Mission

Author(s): Paul Scowen, NASA Goddard Space Flight Ctr. (United States); Richard Ignace, East Tennessee State Univ. (United States); Ken Gayley, The Univ. of Iowa (United States); Gopal Vasudevan, Lockheed Martin Corp. (United States); Robert A. Woodruff, Woodruff Consulting (United States); Coralie Neiner, Observatoire de Paris à Meudon (France); Scott Richardson, Alison A. Nordt, Lockheed Martin Corp. (United States); Tony Hull, The Univ. of New Mexico (United States); Shouleh Nikzad, Charles Shapiro, Jet Propulsion Lab., Caltech (United States)

17 July 2022 • 09:40 - 10:00 EDT | Room 523

12181-5

The Lyman-UV Imaging Spectrograph, a SMEX Mission Concept

Author(s): Sara R. Heap, Univ. of Maryland (United States); Anthony Hull, The Univ. of New Mexico (United States); Stephen Kendrick, Kendrick Aerospace Consulting LLC (United States); Robert A. Woodruff, Woodruff Consulting (United States)

17 July 2022 • 10:00 - 10:20 EDT | Room 523

Coffee Break 10:20 - 10:50

12181-6

Tunable ultraviolet spatial heterodyne spectrometers for high resolving power observations of extended emission line sources.

Author(s): Walter M. Harris, Jason Corliss, Ricardo Maciel, Derek Gardner, Naomi Yescas, Daniel Truong, Elijah Garcia, The Univ. of Arizona (United States)

17 July 2022 • 10:50 - 11:10 EDT | Room 523

12181-7

FIREBall-2(022): challenges, progress, and the road ahead to flight

Author(s): Keri Hoadley, The Univ. of Iowa (United States); Chris Martin, Caltech (United States); Erika Hamden, The Univ. of Arizona (United States); David Schiminovich, Columbia Univ. (United States); Shouleh Nikzad, Jet Propulsion Lab. (United States); Jean Evrard, Ctr. National d'Études Spatiales (France); Bruno Milliard, Lab. d'Astrophysique de Marseille (France); David Valls-Gabaud, Observatoire de Paris (France); Aafaque R. Khan, Simran Agarwal, Haeun Chung, Jessica Li, Trenton Brendel, Carlos Vargas, Nicole Melso, The Univ. of Arizona (United States); Zeren Lin, Marty Crabill, Drew M. Miles, Caltech (United States); Gillian Kyne, Jet Propulsion Lab. (United States); Vincent Picouet,

Ignacio Cevallos, Barbara C. Santiago, Columbia Univ. (United States); Philippe Balard, Patrick Blanchard, Didier Vibert, Lab. d'Astrophysique de Marseille (France); Nicolas Bray, Catherine Hourtolle, Frédéri Mirc, Johan Montel, Ctr. National d'Études Spatiales (France); Jared A. Termini, The Univ. of Iowa (United States)

17 July 2022 • 11:10 - 11:30 EDT | Room 523

Lunch/Exhibition Break 11:50 - 13:00

SESSION 2: UV II

17 July 2022 • 13:00 - 16:10 EDT | Room 523

Session Chair: Anna M. Moore, The Australian National Univ. (Australia)

12181-9

Development of the Lagrange Coronal EUV Imager for the Lagrange L5 ESA mission.

Author(s): Christian Kintziger, Ctr. Spatial de Liège (Belgium); David Berghmans, Royal Observatory of Belgium (Belgium); Valeria Büchel, Physikalisch-Meteorologisches Observatorium Davos/World Radiation Ctr. (Switzerland); Samuel Gissot, Royal Observatory of Belgium (Belgium); Manfred Gyo, Margit Haberreiter, Louise Harra, Physikalisch-Meteorologisches Observatorium Davos/World Radiation Ctr. (Switzerland); Lionel Jacques, Ctr. Spatial de Liège (Belgium); Silvio Koller, Patrik Langer, Physikalisch-Meteorologisches Observatorium Davos/World Radiation Ctr. (Switzerland); Bao Long Levan, Benoît Marquet, Ctr. Spatial de Liège (Belgium); Daniel Pfiffner, Physikalisch-Meteorologisches Observatorium Davos/World Radiation Ctr. (Switzerland); Matthew West, Southwest Research Institute (United States); Philippe Bouchez, Ctr. Spatial de Liège (Belgium)

17 July 2022 • 13:00 - 13:20 EDT | Room 523

12181-10

Quick Ultra-VIolet Kilonova surveyor (QUVIK)

Author(s): Norbert Werner, Jakub Ripa, Filip Munz, Filip Hroch, Masaryk Univ. (Czech Republic); Martin Jelinek, Astronomical Institute of the CAS, v.v.i. (Czech Republic); Jiri Krticka, Masaryk Univ. (Czech Republic); Vladimír Dániel, Jan Gromes, Czech Aerospace Research Ctr. (Czech Republic); Jan Vaclavik, Vít Lédl, Institute of Plasma Physics of the CAS, v.v.i. (Czech Republic); Martin Topinka, Masaryk Univ. (Czech Republic)

17 July 2022 • 13:20 - 13:40 EDT | Room 523

12181-11

Design drivers for the Polstar spectropolarimeter: a FUV/NUV design achieving high spectral resolving power with precise 4-Stokes measurements

Author(s): Robert A. Woodruff, Woodruff Consulting (United States); Coralie Neiner, Observatoire de Paris à Meudon (France); Roberto Casini, High Altitude Observatory, National Ctr. for Atmospheric Research (United States); Gopal Vasudevan, Advanced Technology Ctr., Lockheed Martin Space Systems Co. (United States); Tony Hull, The Univ. of New Mexico (United States); Paul Scowen, NASA Goddard Space Flight Ctr. (United States)

17 July 2022 • 13:40 - 14:00 EDT | Room 523

12181-12

OUL: an ultraviolet wide field imager for the Luna 26 mission

Author(s): Ana Inés Gómez de Castro, Univ. Complutense de Madrid (Spain); Carlos Miravet, Gonzalo J. Taubmann, Laura Diez, Joan Manel Casalta, SENER Aeroespacial S.A. (Spain); Mikhail Sachkov, Institute of Astronomy (Russian Federation); Juan Carlos Vallejo, Univ. Complutense de Madrid (Spain); León Restrepo Quirós, Institución Univ. de Envigado (Colombia); Miguel Chaves, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Shingo Kameda, Rikkyo Univ. (Japan); Ricardo Gil-Hutton, Consejo Nacional de Investigaciones Científicas y Técnicas, Univ. Nacional de San Juan (Argentina)

17 July 2022 • 14:00 - 14:20 EDT | Room 523

12181-13

The Ultraviolet Researcher to Investigate the Emergence of Life: a mission proposal to ESA's F-call

Author(s): Ana Inés Gómez de Castro, Ana de Isidro-Gomez, Univ. Complutense de Madrid (Spain); Diego Gil Leyva, SENER Ingeniería y Sistemas S.A. (Spain); Francesca Bachiotti, INAF (Italy); Julia Leon, Instituto de Astrofísica de Canarias (Spain); Pol Ribes, European Space Agency (Spain); Joan Manel Casalta, Carlos Miravet, SENER Aeroespacial S.A. (Spain); Juan Carlos Vallejo, Univ. Complutense de Madrid (Spain); Mikhail Sachkov, Institute of Astronomy (Russian Federation); Ada Canet, Univ. Complutense de Madrid (Spain); Boris Shustov, Institute of Astronomy (Russian Federation); Raul de la Fuente, Univ. Complutense de Madrid (Spain); Kevin France, Univ. of Colorado Boulder (United States); Lucas Patty, Univ. Bern (Switzerland); Stefano Benetti, INAF - Osservatorio Astronomico di Padova (Italy); Asif ud-Doula, The Pennsylvania State Univ. (United States)

17 July 2022 • 14:20 - 14:40 EDT | Room 523

12181-14

Update on the Full-sun Rocket SpecTrometer (FURST) portable VUV calibration system

Author(s): Genevieve D. Vigil, NASA Marshall Space Flight Ctr. (United States); Nicolas Donders, The Univ. of Alabama in Huntsville (United States); Ken Kobayashi, Amy Winebarger, NASA Marshall Space Flight Ctr. (United States); Charles Kankelborg, Montana State Univ. (United States)

17 July 2022 • 14:40 - 15:00 EDT | Room 523

Coffee Break 15:00 - 15:30

12181-15

Optimizing silicon UV detector response with antireflection coatings, solar-blind bandpass filters and linear variable filters

Author(s): April D. Jewell, Ghazaleh Kafaie Shirmanesh, John Hennessy, Shouleh Nikzad, Jet Propulsion Lab. (United States)

17 July 2022 • 15:30 - 15:50 EDT | Room 523

12181-16

A photon counting imaging detector for UV space missions

Author(s): Lauro Conti, Jürgen Barnstedt, Sebastian Buntrock, Sebastian J. Diebold, Markus Höltzli, Christoph Kalkuhl, Norbert Kappelmann, Thomas Kaufmann, Thomas Rauch, Thomas Schanz, Beate Stelzer, Klaus Werner, Eberhard Karls Univ. Tübingen (Germany); Kevin Meyer, Daniel Schaadt, Technische Univ. Clausthal (Germany); Hans-Rudolf Elsener, EMPA (Switzerland)

17 July 2022 • 15:50 - 16:10 EDT | Room 523

SESSION 3: SOLAR

17 July 2022 • 16:10 - 17:10 EDT | Room 523

Session Chair: Kyriaki Minoglou, European Space Research and Technology Ctr. (Netherlands)

12181-17

The IMpulsive Phase Rapid Energetic Solar Spectrometer (IMPRESS) CubeSat

Author(s): Lindsay Glesener, Demoz Gebre-Egziabher, Univ. of Minnesota, Twin Cities (United States); John G. Sample, Montana State Univ. (United States); Amir Caspi, Southwest Research Institute (United States); David M. Smith, Univ. of California, Santa Cruz (United States); William Setterberg, Ty Kozic, Mansour Savadogo, Christian Berger, Lestat Clemmer, Robert Drake, Univ. of Minnesota, Twin Cities (United States); Allan Faulkner, Montana State Univ. (United States); Annsley Greathouse, Kate Hildebrandt, Runsheng Ma, Mel Nightingale, Meredith Wieber, Univ. of Minnesota, Twin Cities (United States); Trevor Knuth, Univ. of Minnesota, Twin Cities (United States), NASA Goddard Space Flight Ctr. (United States); Kyle Houser, Univ. of Minnesota, Twin Cities (United States); Rubin Meuchel, Larry Springer, Montana State Univ. (United States)

17 July 2022 • 16:10 - 16:30 EDT | Room 523

12181-18

CUSP: a two cubesats constellation for Space Weather and solar flares X-ray polarimetry

Author(s): Sergio Fabiani, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Ilaria Baffo, Univ. degli Studi della Tuscia (Italy); Daniele Brienza, Enrico Costa, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Giovanni Cucinella, IMT S.r.l. (Italy); Ettore Del Monte, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Andrea Del Re, SCAI Connect S.r.l (Italy); Sergio Di Cosimo, Alessandro Di Marco, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Pierluigi Fanelli, Univ. degli Studi della Tuscia (Italy); Fabio La Monaca, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Alfredo Locarini, CIRI Aerospace, Univ. degli Studi di Bologna (Italy); Giovanni Lombardi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Dario Modenini, CIRI Aerospace, Univ. degli Studi di Bologna (Italy); Fabio Muleri, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Andrea Negri, IMT S.r.l. (Italy); Loffredo Pasqualino, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Massimo Perelli, IMT S.r.l. (Italy); John Rankin, Alda Rubini, Paolo Soffitta, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Paolo Tortora, CIRI Aerospace, Univ. degli Studi di Bologna (Italy); Francesco Zaccheo, IMT S.r.l. (Italy)

17 July 2022 • 16:30 - 16:50 EDT | Room 523

12181-19

Exploring the application of image slicers in the EUV for the next generation of solar space missions

Author(s): Ariadna Calcines-Rosario, Durham Univ. (United Kingdom); Sarah Matthews, Mullard Space Science Lab., Univ. College London (United Kingdom)

17 July 2022 • 16:50 - 17:10 EDT | Room 523

Coffee Break 10:00 - 10:30

SESSION 4: ATHENA I

18 July 2022 • 10:30 - 11:40 EDT | Room 523

Session Chair: Marcos Bavdaz, European Space Agency (Netherlands)

12181-21

The X-ray Integral Field Unit on board the ESA's Athena space X-ray observatory: current status

Author(s): Jan-Willem A. den Herder, SRON Netherlands Institute for Space Research (Netherlands); Luigi Piro, INAF (Italy); Vincent Albouys, Ctr. National d'Études Spatiales (France); Massimo Cappi, INAF (Italy)

18 July 2022 • 10:30 - 10:55 EDT | Room 523

12181-22

Design of the X-IFU detection chain for Athena

Author(s): Hervé Geoffray, Ctr. National d'Études Spatiales (France)

18 July 2022 • 10:55 - 11:10 EDT | Room 523

12181-23

The X-IFU Focal Plane Assembly design progress and Development Model feedback

Author(s): Henk J. van Weers, Brian D. Jackson, Damian Audley, Dennis van Loon, Geert Keizer, Johannes P. C. Dercksen, Marcel A. M. van Litsenburg, Nathalie Q. S. Gorter, Rob Wolfs, Roland H. den Hartog, Sander van Loon, SRON Netherlands Institute for Space Research, NWO-I (Netherlands)

18 July 2022 • 11:10 - 11:25 EDT | Room 523

12181-24

The Aperture Cylinder (ApC) from the X-IFU instrument for the Athena mission: current development status.

Author(s): Tanguy Thibert, Lionel Jacques, Etienne Lallemand, Guilhem Terrasa, Ctr. Spatial de Liège (Belgium)

18 July 2022 • 11:25 - 11:40 EDT | Room 523

Lunch/Exhibition Break 11:40 - 13:00

SESSION 5: ATHENA II

18 July 2022 • 13:00 - 13:55 EDT | Room 523

Session Chair: Kazuhiro Nakazawa, Nagoya Univ. (Japan)

12181-25

Scientific opportunities with the Athena Wide Field Imager

Author(s): Kirpal Nandra, Arne Rau, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 13:00 - 13:25 EDT | Room 523

12181-27

CANCELED: Thermal control of the Athena WFI Instrument

Author(s): Christian Beitler, Valeria Antonelli, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 13:25 - 13:40 EDT | Room 523

12181-28

Mitigation of bandwidth limitation induced crosstalk on Athena's WFI

Author(s): Maximilian Herrmann, Robert Andritschke, Michael Bonholzer, Günter Hauser, Mie S. Magelund, Johannes Müller-Seidlitz, Jonas Reiffers, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 13:40 - 13:55 EDT | Room 523

SESSION 6: ATHENA OPTICS

18 July 2022 • 13:55 - 16:30 EDT | Room 523

Session Chair: William W. Zhang, NASA Goddard Space Flight Ctr. (United States)

12181-29

ATHENA optics technology development

Author(s): Marcos Bavdaz, Eric Wille, Mark R. Ayre, Ivo Ferreira, Brian Shortt, Sebastiaan Fransen, Mark Millinger, European Space Agency (Netherlands); Maximilien J. Collon, Giuseppe Vacanti, Nicolas M. Barrière, Boris Landgraf, cosine measurement systems (Netherlands); Mark Olde Riekerink, Jeroen Haneveld, Ronald Start, Micronit B.V. (Netherlands); Coen van Baren, SRON Netherlands Institute for Space Research (Netherlands); Desiree Della Monica Ferreira, Sonny Massahi, Sara Svendsen, Finn E. Christensen, Technical Univ. of Denmark (Denmark); Michael Krumrey, Evelyn Handick, Physikalisch-Technische Bundesanstalt (Germany); Vadim Burwitz, Max-Planck-Institut für extraterrestrische Physik (Germany); Giovanni Pareschi, Bianca Salmaso, Alberto Moretti, Daniele Spiga, INAF (Italy); Giuseppe Valsecchi, Dervis Vernani, Media Lario S.r.l. (Italy); Paul Lupton, William Mundon, Gavin Phillips, Teledyne e2v UK Ltd. (United Kingdom); Jakob Schneider, Fraunhofer-Institut für Werkstoff- und Strahltechnik IWS (Germany); Tapio Korhonen, Opteon Oy (Finland); Alejandro Sanchez, Dominique Heinis, Carles Colldelram, ALBA Synchrotron (Spain); Massimiliano Tordi, EIE S.r.l. (Italy); Richard Willingale, Univ. of Leicester (United Kingdom)

18 July 2022 • 13:55 - 14:20 EDT | Room 523

12181-30

The development of the mirror for the Athena X-ray mission

Author(s): Maximilien J. Collon, Luis Abalo, Ljubiša Babic, Nicolas M. Barrière, Alex Bayerle, Luigi Castiglione, Noë Eenkhoorn, David Girou, Ramses Günther, Enrico Hauser, Roy van der Hoeven, Jasper den Hollander, Yvette Jenkins, Boris Landgraf, Laurens Keek, Ben Okma, Paulo da Silva Ribeiro, Aniket Thete, Sjoerd Verhoeckx, Mark Vervest, Roel Visser, Luc Voruz, cosine measurement systems (Netherlands); Marcos Bavdaz, Eric Wille, Ivo Ferreira, European Space Research and Technology Ctr., European Space Agency (Netherlands); Mark Olde Riekerink, Jeroen Haneveld, Arenda Koelewijn, Maurice Wijnperle, Jan-Joost Lankwarden, Bart Schurink, Ronald Start, Micronit B.V. (Netherlands); Coen van Baren, SRON Netherlands Institute for Space Research (Netherlands); Evelyn Handick, Michael Krumrey, Physikalisch-Technische Bundesanstalt (Germany); Sonny Massahi, Desiree D. M.

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18 July 2022 • 14:20 - 14:45 EDT | Room 523

12181-31

Alignment and integration of the SPO mirror modules onto the ATHENA telescope

Author(s): Giuseppe Valsecchi, Dervis Vernani, Fabio Marioni, Fabio Zocchi, Giovanni Bianucci, Media Lario S.r.l. (Italy); Marcos Bavdaz, Ivo Ferreira, European Space Research and Technology Ctr., European Space Agency (Netherlands); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Tapio Korhonen, Mikko Pasanen, Opteon Oy (Finland)

18 July 2022 • 14:45 - 15:00 EDT | Room 523

Coffee Break 15:00 - 15:30

12181-32

X-ray tests of the ATHENA mirror modules in BEaTriX: from design to reality

Author(s): Bianca Salmaso, Stefano Basso, Mauro Ghigo, Daniele Spiga, Gabriele Vecchi, Giorgia Sironi, Vincenzo Cotroneo, Paolo Conconi, Edoardo Redaelli, Andrea Bianco, Giovanni Pareschi, Gianpiero Tagliaferri, Davide Sisana, INAF - Osservatorio Astronomico di Brera (Italy); Carlo Pelliciari, Istituto d'Istruzione Superiore Bachelet (Italy); Mauro Fiorini, Salvatore Incorvaia, Michela Uslenghi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Lorenzo Paoletti, INAF - Osservatorio Astronomico di Padova (Italy); Claudio Ferrari, Andrea Zappettini, Istituto dei Materiali per l'Elettronica ed il Magnetismo, Consiglio Nazionale delle Ricerche (Italy); Manuel Sanchez del Rio, European Synchrotron Radiation Facility (France); Giancarlo Parodi, BCV Progetti S.r.l. (Italy); Vadim Burwitz, Surangkhana Rukdee, Gisela Hartner, Thomas Müller, Thomas Schmidt, Max-Planck-Institut für extraterrestrische Physik (Germany); Andreas Langmeier, Max-Planck-Institut für extraterrestrische Physik (Germany); Desiree Della Monica Ferreira, Sonny Massahi, Nis Christian Gellert, Finn Christensen, DTU Space, Technical Univ. of Denmark (Denmark); Marcos Bavdaz, Ivo Ferreira, European Space Research and Technology Ctr., European Space Agency (Netherlands); Max Collon, Giuseppe Vacanti, Nicolas M. Barriere, cosine (Netherlands)

18 July 2022 • 15:30 - 15:45 EDT | Room 523

12181-33

Athena X-ray optics testing at the MSFC XRCF: Overview

Author(s): Wayne H. Baumgartner, NASA Marshall Space Flight Ctr. (United States); Kristin K. Madsen, Univ. of Maryland, Baltimore County (United States), NASA Goddard Space Flight Ctr. (United States); Jeffrey Kegley, Ernest Wright, NASA Marshall Space Flight Ctr. (United States); Jim Tucker, Gregory Daspit, Southern Research (United States); Vadim Burwitz, Max-Planck-Institut für extraterrestrische Physik (Germany); Elias Breunig, Breunig Aerospace (Germany); Nicholas Thomas, Steven Johnson, NASA Marshall Space Flight Ctr. (United States)

18 July 2022 • 15:45 - 16:00 EDT | Room 523

12181-34

X-ray testing ATHENA optics at PANTER

Author(s): Vadim Burwitz, Max-Planck-Institut für extraterrestrische Physik (Germany); Giuseppe Vacanti, Maximilien J. Collon, cosine measurement systems (Netherlands); Ivo Ferreira, European Space Agency (Netherlands); Nicolas M. Barrière, cosine measurement systems (Netherlands); Marcos Bavdaz, Mark R. Ayre, European Space Agency (Netherlands); Josef Eder, Max-Planck-Institut für extraterrestrische Physik (Germany); Elias Breunig, Breunig Aerospace (Germany); Surangkhana Rukdee, Gisela Hartner, Thomas Müller, Thomas Schmidt, Andreas Langmeier, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 16:00 - 16:15 EDT | Room 523

12181-35

Characterisation of iridium and low-density X-ray mirror coatings for the Athena optics

Author(s): Sara Svendsen, Sonny Massahi, Desiree D. M. Ferreira, Nis C. Gellert, Arne 'S Jegers, Finn E. Christensen, DTU Space, Technical Univ. of Denmark (Denmark); Aniket Thete, Boris Landgraf, Maximilien J. Collon, cosine measurement systems (Netherlands); Evelyn Handick, Levent Cibik, Christian Gollwitzer, Michael Krumrey, Physikalisch-Technische Bundesanstalt (Germany); Ivo Ferreira, Brian Shortt, Marcos Bavdaz, European Space Research and Technology Ctr., European Space Agency (Netherlands)

18 July 2022 • 16:15 - 16:30 EDT | Room 523

Coffee Break 10:00 - 10:30

SESSION 7: OPTICS I

19 July 2022 • 10:30 - 12:10 EDT | Room 523

Session Chair: Desiree Della Monica Ferreira, DTU Space (Denmark)

12181-36

Single Crystal Silicon X-ray Optics for Astronomy: high resolution, light weight, and low cost

Author(s): William W. Zhang, NASA Goddard Space Flight Ctr. (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 523

12181-37

Fabrication of Lightweight Silicon X-ray Mirrors

Author(s): Raul E. Riveros, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland, Baltimore County (United States); Michael P. Biskach, NASA Goddard Space Flight Ctr. (United States); Kim D. Allgood, John D. Kearney, Michal Hlinka, Tabatha A. DeVita, Ai Numata, KBR, Inc. (United States); William W. Zhang, NASA Goddard Space Flight Ctr. (United States)

19 July 2022 • 10:50 - 11:10 EDT | Room 523

12181-38

Realization and test of high-resolution thin full monolithic shells

Author(s): Marta M. Civitani, Stefano Basso, Vincenzo Cotroneo, Mauro Ghigo, Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Giancarlo Parodi, BCV Progetti S.r.l. (Italy); Edoardo Redaelli, Daniele Spiga, Gabriele Vecchi, INAF - Osservatorio Astronomico di Brera (Italy)

19 July 2022 • 11:10 - 11:30 EDT | Room 523

12181-40

Versatile optics for X-ray imaging

Author(s): Suzanne Romaine, Jae Sub Hong, Martin Elvis, Harvard-Smithsonian Ctr. for Astrophysics (United States)

19 July 2022 • 11:30 - 11:50 EDT | Room 523

12181-41

Electroformed X-ray optics development for FOXSI-4

Author(s): Ikuyuki Mitsuishi, Ayumu Takigawa, Koki Sakuta, Kazuki Ampuku, Kumiko Okada, Keitoku Yoshihira, Tetsuo Kanoh, Naoki Ishida, Nagoya Univ. (Japan); Keisuke Tamura, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland (United States); Kikuko Miyata, Meijo Univ. (Japan); Gota Yamaguchi, Akinari Ito, Yoko Takeo, The Univ. of Tokyo (Japan); Takehiro Kume, Yusuke Matsuzawa, Takahiro Saito, Kentarou Hiraguri, Hirokazu Hashizume, Natsume Optical Corp. (Japan); Hidekazu Mimura, The Univ. of Tokyo (Japan)

19 July 2022 • 11:50 - 12:10 EDT | Room 523

Lunch/Exhibition Break 12:10 - 13:30

SESSION 8: OPTICS II

19 July 2022 • 13:30 - 15:10 EDT | Room 523

Session Chair: Jessica A. Gaskin, NASA Marshall Space Flight Ctr. (United States)

12181-42

Progress in nanosilicate bonding of x-ray mirrors

Author(s): Mark L. Schattenburg, Youwei Yao, MIT Kavli Institute for Astrophysics and Space Research (United States); Anjelica Molnar-Fenton, Izentis LLC (United States); Ralf K. Heilmann, MIT Kavli Institute for Astrophysics and Space Research (United States); Alexander Bruccoleri, Izentis LLC (United States)

19 July 2022 • 13:30 - 13:50 EDT | Room 523

12181-43

Flight-like critical-angle transmission grating x-ray performance for Arcus

Author(s): Ralf K. Heilmann, MIT Kavli Institute for Astrophysics and Space Research (United States); Alexander Bruccoleri, Izentis LLC (United States); Vadim Burwitz, Max-Planck-Institut für extraterrestrische Physik (Germany); Eric Gullikson, Lawrence Berkeley National Lab. (United States); Edward Hertz, Smithsonian Astrophysical Observatory (United States); Mark L. Schattenburg, MIT Kavli Institute for Astrophysics and Space Research (United States); Randall K. Smith, Smithsonian Astrophysical Observatory (United States)

19 July 2022 • 13:50 - 14:10 EDT | Room 523

12181-44

dopamine dip-liquid overcoatings for soft X-ray reflectivity enhancement

Author(s): Vincenzo Cotroneo, INAF - Osservatorio Astronomico di Brera (Italy); Ricardo Bruni, Harvard-Smithsonian Ctr. for Astrophysics (United States); Marta M. Civitani, INAF - Osservatorio Astronomico di Brera (Italy); Thorsten Döhring, Technische Hochschule Aschaffenburg (Germany); Eugenio Gibertini, Luca Magagnin, Politecnico di Milano (Italy); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Giacomo Rivolta, INAF - Osservatorio Astronomico di Brera (Italy), Univ. degli Studi di Milano (Italy); Suzanne Romaine, Leandra Sethares, Harvard-Smithsonian Ctr. for Astrophysics (United States); Giorgia Sironi, Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy); Giuseppe Valsecchi, Media Lario S.r.l. (Italy)

19 July 2022 • 14:10 - 14:30 EDT | Room 523

12181-45

Next Generation Aberration-Correcting Diffraction Gratings

Author(s): Matthew Beasley, Southwest Research Institute (United States); Randall L. McEntaffer, The Pennsylvania State Univ. (United States); Nathaniel Cunningham, Nebraska Wesleyan Univ. (United States)

19 July 2022 • 14:30 - 14:50 EDT | Room 523

12181-46

Fabrication of Custom Astronomical Gratings for the Next Decade

Author(s): Fabien Grisé, Randall L. McEntaffer, The Pennsylvania State Univ. (United States); Brian Fleming, Univ. of Colorado Boulder (United States); Casey DeRoo, The Univ. of Iowa (United States); Nick Kruczek, Univ. of Colorado Boulder (United States); Drew M. Miles, Caltech (United States); Kevin France, Univ. of Colorado Boulder (United States); Jake A. McCoy, The Pennsylvania State Univ. (United States); Cecilia R. Fasano, The Univ. of Iowa (United States); Stephan McCandliss, Johns Hopkins Univ. (United States); Chad Eichfeld, Michael Labella, The Pennsylvania State Univ. (United States); Mackenzie Carlson, Johns Hopkins Univ. (United States)

19 July 2022 • 14:50 - 15:10 EDT | Room 523

Coffee Break 15:10 - 15:40

SESSION 9: SPECTRUM-RONTGEN-GAMMA AND IXPE

19 July 2022 • 15:40 - 16:30 EDT | Room 523

Session Chair: Kirpal Nandra, Max-Planck-Institut für extraterrestrische Physik (Germany)

12181-48

Updates on SRG/eROSITA background at Sun-Earth L2

Author(s): Michael J. Freyberg, Max-Planck-Institut für extraterrestrische Physik (Germany)

19 July 2022 • 15:40 - 15:55 EDT | Room 523

12181-49

In-orbit monitoring of the imaging X-ray polarimeters on-board IXPE

Author(s): Fabio Muleri, Alessandro Di Marco, Sergio Fabiani, Fabio La Monaca, John Rankin, Paolo Soffitta, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Luca Baldini, Istituto Nazionale di Fisica Nucleare (Italy); Enrico Costa, Ettore Del Monte, Riccardo Ferrazzoli, Carlo Lefevre, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Luca Maiolo, Francesco Maita, Istituto per la Microelettronica e Microsistemi, Consiglio Nazionale delle Ricerche (Italy); Alberto Manfreda, Istituto Nazionale di Fisica Nucleare (Italy); Alfredo Morbidini, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Stephen L. O'Dell, NASA Marshall Space Flight Ctr. (United States); Carmelo Sgro', Istituto Nazionale di Fisica Nucleare (Italy); Brian D. Ramsey, NASA Marshall Space Flight Ctr. (United States); Ajay Ratheesh, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Alessio Trois, INAF - Osservatorio Astronomico di Cagliari (Italy); Allyn F. Tennant, Martin C. Weisskopf, NASA Marshall Space Flight Ctr. (United States)

19 July 2022 • 15:55 - 16:10 EDT | Room 523

12181-50

A possibility to extend the IXPE energy band

Author(s): Fabio La Monaca, Fei Xie, Paolo Soffitta, Enrico Costa, Alessandro Di Marco, Sergio Fabiani, Fabio Muleri, John Rankin, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Luca Baldini, Univ. di Pisa (Italy); Ettore Del Monte, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Alberto Manfreda, Istituto Nazionale di Fisica Nucleare (Italy); Stephen L. O'Dell, Brian D. Ramsey, NASA Marshall Space Flight Ctr. (United States); Carmelo Sgrò, Istituto Nazionale di Fisica Nucleare (Italy); Allyn F. Tennant, Martin C. Weisskopf, NASA Marshall Space Flight Ctr. (United States)

19 July 2022 • 16:10 - 16:30 EDT | Room 523

Coffee Break 10:00 - 10:30

SESSION 10: TRANSIENT AND SMALL SATELLITES I

20 July 2022 • 10:30 - 12:00 EDT | Room 523

Session Chair: Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy)

12181-51

An update on the payload for the first flight of the Rockets for Extended-Source X-ray Spectroscopy (tREXS)

Author(s): Ross C. McCurdy, The Pennsylvania State Univ. (United States); Drew M. Miles, The Pennsylvania State Univ. (United States), Caltech (United States); James H. Tutt, Tyler B. Anderson, Katherine Brooks, Fabien Grisé, Gabrielle Hernandez, Christopher Hillman, Keir Hunter, Bridget O'Meara, Nestor Pelaez, Vincent Smedile, Daniel Washington, Randall L. McEntaffer, The Pennsylvania State Univ. (United States)

20 July 2022 • 10:30 - 10:50 EDT | Room 523

12181-52

Distributed architectures for a Gamma Ray Burst all-sky monitor

Author(s): Fabrizio Fiore, INAF - Osservatorio Astronomico di Trieste (Italy); Norbert Werner, Masaryk Univ. (Czech Republic); Ehud Behar, Technion-Israel Institute of Technology (Israel); Michèle Lavagna,

Politecnico di Milano (Italy); Michele Trenti, The Univ. of Melbourne (Australia)

20 July 2022 • 10:50 - 11:05 EDT | Room 523

12181-53

Design, integration and test of the scientific payloads on-board the HERMES constellation and the SpIRIT mission

Author(s): Yuri Evangelista, Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

20 July 2022 • 11:05 - 11:20 EDT | Room 523

12181-55

3U Transat : a swarm of cubesats to survey the high-energy transient sky

Author(s): Olivier Godet, Institut de Recherche en Astrophysique et Planétologie (France)

20 July 2022 • 11:20 - 11:40 EDT | Room 523

12181-56

High-z gamma-ray bursts unraveling the dark ages and extreme space-time mission - HiZ-GUNDAM

Author(s): Daisuke Yonetoku, Kanazawa Univ. (Japan); Akihiro Doi, Institute of Space and Astronautical Science (Japan); Tatehiro Mihara, RIKEN (Japan); Takanori Sakamoto, Aoyama Gakuin Univ. (Japan); Makoto Arimoto, Kanazawa Univ. (Japan); Kohji Tsumura, Tokyo City Univ. (Japan); Tatsuya Sawano, Kanazawa Univ. (Japan); Shuichi Gunji, Yamagata Univ. (Japan)

20 July 2022 • 11:40 - 12:00 EDT | Room 523

Lunch/Exhibition Break 12:00 - 14:00

SESSION 11: TRANSIENT AND SMALL SATELLITES II

20 July 2022 • 14:00 - 15:40 EDT | Room 523

Session Chair: Tadayuki Takahashi, Institute of Space and Astronautical Science (Japan)

12181-57

Early results from GRBAlpha and VZLUSAT-2

Author(s): Jakub Rípa, Masaryk Univ. (Czech Republic); András Pál, Konkoly Observatory (Hungary); Masanori Ohno, Eötvös Loránd Univ. (Hungary); Norbert Werner, Masaryk Univ. (Czech Republic); László Mészáros, Balázs Csák, Konkoly Observatory (Hungary); Vladimír Dániel, Juraj Dudáš, Czech Aerospace Research Ctr. (Czech Republic); Marcel Frajt, Spacemanic s.r.o. (Czech Republic); Peter Hanák, Technical Univ. of Košice (Slovakia); Ján Hudec, Spacemanic s.r.o. (Czech Republic); Milan Junas, Czech Aerospace Research Ctr. (Czech Republic); Jakub Kapus, Spacemanic s.r.o. (Czech Republic); Miroslav Kasal, Brno Univ. of Technology (Czech Republic); Martin Koleda, Robert Laszlo, Needronix s.r.o. (Slovakia); Pavol Lipovsky, Technical Univ. of Košice (Slovakia); Filip Münz, Masaryk Univ. (Czech Republic); Maksim Rezenov, Spacemanic s.r.o. (Czech Republic); Miroslav Šmelko, Technical Univ. of Košice (Slovakia); Petr Svoboda, Czech Aerospace Research Ctr. (Czech Republic); Hiromitsu Takahashi, Hiroshima Univ. (Japan); Martin Topinka, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Tomáš Urbanec, Brno Univ. of Technology (Czech Republic); Jean-Paul Breuer, Masaryk Univ. (Czech Republic); Teruaki Enoto, Kyoto Univ. (Japan); Zsolt Frei, Eötvös Loránd Univ. (Hungary); Yasushi Fukazawa, Hiroshima Univ. (Japan); Gábor Galgóczi, Wigner Research Ctr. for Physics (Hungary); Filip Hroch, Masaryk Univ. (Czech Republic); Yuto Ichinohe, Rikkyo Univ. (Japan); László Kiss, Konkoly Observatory (Hungary); Hiroto Matake, Tsunefumi Mizuno, Hiroshima Univ. (Japan); Kazuhiro Nakazawa, Nagoya Univ. (Japan); Hirokazu Odaka, The Univ. of Tokyo (Japan); Helen Poon, Hiroshima Univ. (Japan); Nagomi Uchida, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Yuusuke Uchida, Hiroshima Univ. (Japan)

20 July 2022 • 14:00 - 14:20 EDT | Room 523

12181-58

Towards a GRB nanosatellite fleet CAMELOT: design concepts of 3U members based on GRBAlpha heritage

Author(s): László Mészáros, András Pál, Konkoly Observatory (Hungary); Norbert Werner, Jakub Rípa, Masaryk Univ. (Czech Republic); Masanori Ohno, Eötvös Loránd Univ. (Hungary)

20 July 2022 • 14:20 - 14:40 EDT | Room 523

12181-59

BlackCAT CubeSat: A Soft X-ray Sky Monitor, Transient Finder, and Burst Detector for High-energy and Multi-messenger Astrophysics

Author(s): Abraham D. Falcone, Tyler B. Anderson, Cole R. Armstrong, Logan D. Baker, David N. Burrows, Zachary E. Catlin, Joseph M. Colosimo, Seth K. Culbertson, Derek B. Fox, Daniel M. LaRocca, Gooderham McCormick, The Pennsylvania State Univ. (United States); David M. Palmer, Los Alamos National Lab. (United States); Mitchell Wages, The Pennsylvania State Univ. (United States)

20 July 2022 • 14:40 - 15:00 EDT | Room 523

12181-60

BurstCube: a CubeSat for Gravitational Waves

Author(s): Alyson Joens, The George Washington Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Isabella Brewer, Univ. of Delaware (United States); Michael Briggs, The Univ. of Alabama in Huntsville (United States); Alessandro Bruno, NASA Goddard Space Flight Ctr. (United States), The Catholic Univ. of America (United States); Eric Burns, Louisiana State Univ. (United States); Regina Caputo, S. B. Cenko, Georgia de Nolfo, NASA Goddard Space Flight Ctr. (United States); Adam Goldstein, Universities Space Research Association (United States); Sean Griffin, Wisconsin IceCube Particle Astrophysics Ctr., Univ. of Wisconsin-Madison (United States); Sylvain Guiriec, NASA Goddard Space Flight Ctr. (United States), The George Washington Univ. (United States); Lorraine Hanlon, Univ. College Dublin (Ireland); Dieter H. Hartmann, Clemson Univ. (United States); Boyan A. Hristov, The Univ. of Alabama in Huntsville (United States); Michelle Hui, NASA Marshall Space Flight Ctr. (United States); Carolyn A. Kierans, NASA Goddard Space Flight Ctr. (United States); R. Marc Kippen, Los Alamos National Lab. (United States); Dan Kocevski, NASA Marshall Space Flight Ctr. (United States); John Krizmanic, NASA Goddard Space Flight Ctr. (United States); Sibasish Laha, The Ctr. for Research and Exploration in Space Science and Technology, NASA Goddard Space Flight Ctr. (United States); Amy Lien, Univ. of Tampa (United States); Israel Martinez-Castellanos, The Ctr. for Research and Exploration in Space Science and Technology, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland (United States); Sheila McBreen, Univ. College Dublin (Ireland); Julie E. McEnery, NASA Goddard Space Flight Ctr. (United States); J. Grant Mitchell, The George Washington Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Lee Mitchell, U.S. Naval Research Lab. (United States); David Morris, Univ. of the Virgin Islands (Virgin Islands, British); David Murphy, Univ. College Dublin (Ireland); Pi Nuessle, The George Washington Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Jeremy Perkins, Judith L. Racusin, NASA Goddard Space Flight Ctr. (United States); Oliver Roberts, Universities Space Research Association (United States); Peter Shawhan, Univ. of Maryland (United States); Jacob R. Smith, The Ctr. for Research and Exploration in Space Science and Technology, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland, Baltimore County (United States); Teresa Tatoli, NASA Goddard Space Flight Ctr. (United States), The Catholic Univ. of America (United States); Alexey Uliyanov, Sarah Walsh, Univ. College Dublin (Ireland); Colleen Wilson-Hodge, NASA Marshall Space Flight Ctr. (United States)

20 July 2022 • 15:00 - 15:20 EDT | Room 523

12181-61

Glowbug, a telescope for gamma-ray bursts and other transients

Author(s): Richard S. Woolf, Eric Grove, Matthew Kerr, U.S. Naval Research Lab. (United States); Neil Johnson, Praxis, Inc., Technology Service Corp. (United States); Mitch Davis, Theodore Finne, U.S. Naval Research Lab. (United States); Colleen Wilson-Hodge, Daniel Kocevski, NASA Marshall Space Flight Ctr. (United States); Michael Briggs, The Univ. of Alabama in Huntsville (United States)

20 July 2022 • 15:20 - 15:40 EDT | Room 523

Coffee Break 15:40 - 16:00

SESSION 12: EINSTEIN AND SVOM

20 July 2022 • 16:00 - 17:00 EDT | Room 523

Session Chair: Taro Sakao, Institute of Space and Astronautical Science (Japan)

12181-63

Calibration of the flight model lobster eye optic for SVOM

Author(s): Charlotte F. Feldman, Richard Willingale, James F. Pearson, Gillian Butcher, Philip Peterson, Tony Crawford, Paul Houghton, Roisin Speight, Alexander Lodge, Christopher Bicknell, Julian P. Osborne, Paul O'Brien, Univ. of Leicester (United Kingdom); Miranda Bradshaw, Vadim Burwitz, Gisela Hartner, Andreas Langmeier, Thomas Müller, Surangkhana Rukdee, Thomas Schmidt, PANTER, Max-Planck-Institut für extraterrestrische Physik (Germany); Diego Götz, CEA-IRFU (France); Karine Mercier, Ctr. National d'Études Spatiales (France); Jean-Michel Le Duigou, François Gonzalez, CEA-IRFU (France); Emile Schyns, Romain Roudot, Ray Fairbend, Julien Seguy, PHOTONIS France SAS (France)

20 July 2022 • 16:00 - 16:20 EDT | Room 523

12181-64

Results of the development of the MXT X-ray telescope for the SVOM Mission

Author(s): Karine Mercier, François Gonzalez, Ctr. National d'Études Spatiales (France); Diego Götz, CEA-IRFU (France); Martin Boutelier, Narjiss Boufracha, Sebastien Clamagirand, Ctr. National d'Études Spatiales (France); Adrien Fort, Thales Services Numeriques SAS (France); Albert Gomes, Ctr. National d'Études Spatiales (France); Emmanuel Guilhem, Altran Technologies (France); Jean-Michel Le Duigou, Julien Sanisidro, Ctr. National d'Études Spatiales (France); Aline Meuris, CEA-IRFU (France); Charlotte F. Feldman, James F. Pearson, Richard Willingale, Univ. of Leicester (United Kingdom); Vadim Burwitz, Norbert Meidinger, Max-Planck-Institut für extraterrestrische Physik (Germany); Florent Robinet, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France)

20 July 2022 • 16:20 - 16:40 EDT | Room 523

12181-65

Follow-Up X-ray Telescope (FXT) Mirror Module for the Einstein Probe mission

Author(s): Dervis Vernani, Giuseppe Valsecchi, Media Lario S.r.l. (Italy); Arnoud Keerman, European Space Agency (Netherlands); Yong Chen, Min Cong, Yanji Yang, Juan Wang, Institute of High Energy Physics (China); Vadim Burwitz, Josef Eder, Peter Friedrich, Max-Planck-Institut für extraterrestrische Physik (Germany); Fabio Marioni, Gabriele Grisoni, Giovanni Bianucci, Media Lario S.r.l. (Italy); Gisela Hartner, Thomas Mueller, Surankhana Rukdee, Thomas Schmidt, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 16:40 - 17:00 EDT | Room 523

Coffee Break 10:00 - 10:30

SESSION 13: XRISM

21 July 2022 • 10:30 - 11:40 EDT | Room 523

Session Chair: Wei Cui, Tsinghua Univ. (China)

12181-66

Status of Resolve instrument onboard X-Ray Imaging and Spectroscopy Mission (XRISM)

Author(s): Yoshitaka Ishisaki, Tokyo Metropolitan Univ. (Japan); Richard L. Kelley, NASA Goddard Space Flight Ctr. (United States); Hiroki Akamatsu, SRON Netherlands Institute for Space Research (Netherlands); Hisamitsu Awaki, Ehime Univ. (Japan); Thomas G. Bialas, Rozenn Boissay-Malaquin, NASA Goddard Space Flight Ctr. (United States); Gregory V. Brown, Lawrence Livermore National Lab. (United States); Meng P. Chiao, NASA Goddard Space Flight Ctr. (United States); Elisa Costantini, Jan-Willem A. den Herder, Cor P. de Vries, SRON Netherlands Institute for Space Research (Netherlands); Michael J. DiPirro, NASA Goddard Space Flight Ctr. (United States); Megan E. Eckart, Lawrence Livermore National Lab. (United States); Yuichiro Ezoe, Tokyo Metropolitan Univ. (Japan); Carlo Ferrigno, Univ. de Genève (Switzerland); Ryuichi Fujimoto, Kanazawa Univ. (Japan); Akihiro Furuzawa, Fujita Health Univ. (Japan); Steven M. Graham, NASA Goddard Space Flight Ctr. (United States); Martin Grim, SRON Netherlands Institute for Space Research (Netherlands); Takayuki Hayashi, NASA Goddard Space Flight Ctr. (United States); Akio Hoshino, Japan Aerospace Exploration Agency (Japan); Yuto Ichinohe, Rikkyo Univ. (Japan); Ryo Iizuka, Manabu Ishida, Japan Aerospace Exploration Agency (Japan); Kumi Ishikawa, Tokyo Metropolitan Univ. (Japan); Caroline A. Kilbourne, NASA Goddard Space Flight Ctr. (United States); Shunji Kitamoto, Rikkyo Univ. (Japan); Maurice A. Leutenegger, NASA Goddard Space Flight Ctr. (United States); Yoshitomo Maeda, Japan Aerospace Exploration Agency (Japan); Dan McCammon, Univ. of Wisconsin-Madison (United States); Ikuyuki Mitsuishi, Nagoya Univ. (Japan); Misaki Mizumoto, Kyoto Univ. (Japan); Takashi Okajima, NASA Goddard Space Flight Ctr. (United States); Stephane Paltani, Univ. de Genève (Switzerland); Frederick S. Porter, NASA Goddard Space Flight Ctr. (United States); Kosuke Sato, Saitama Univ. (Japan); Toshiki Sato, Rikkyo Univ. (Japan); Makoto Sawada, RIKEN (Japan); Hiromi Seta, Tokyo Metropolitan Univ. (Japan); Peter J. Shirron, Gary A. Sneiderman, Yang Soong, NASA Goddard Space Flight Ctr. (United States); Andrew E. Szymkowiak, Yale Univ. (United States); Yoh Takei, Japan Aerospace Exploration Agency (Japan); Toru Tamagawa, RIKEN (Japan); Keisuke Tamura, NASA Goddard Space Flight Ctr. (United States); Masahiro Tsujimoto, Japan Aerospace Exploration Agency (Japan); Yuusuke Uchida, Hiroshima Univ. (Japan); Shinya Yamada, Rikkyo Univ. (Japan); Noriko Y. Yamasaki, Susumu Yasuda, Nasa Yoshioka, Japan Aerospace Exploration Agency (Japan)

21 July 2022 • 10:30 - 10:50 EDT | Room 523

12181-67

Xtend, the Soft X-ray Imaging Telescope for the X-ray Imaging and Spectroscopy Mission (XRISM)

Author(s): Koji Mori, Univ. of Miyazaki (Japan); Kiyoshi Hayashida, Osaka Univ. (Japan); Hiroshi Tomida, Japan Aerospace Exploration Agency (Japan); Hiroshi Nakajima, Kanto Gakuin Univ. (Japan); Takashi Okajima, NASA Goddard Space Flight Ctr. (United States); Hirofumi Noda, Osaka Univ. (Japan); Takaaki Tanaka, Konan Univ. (Japan); Hiroyuki Uchida, Kyoto Univ. (Japan); Tessei Yoshida, Japan Aerospace Exploration Agency (Japan); Takeshi G. Tsuru, Konan Univ. (Japan); Hironori Matsumoto, Osaka Univ. (Japan); Hiroshi Murakami, Tohoku Gakuin Univ. (Japan); Kouichi Hagino, Shogo B. Kobayashi, Tokyo Univ. of Science (Japan); Masayoshi Nobukawa, Nara Univ. of Education (Japan); Kumiko K. Nobukawa, Kindai Univ. (Japan); Hideki Uchiyama, Shizuoka Univ. (Japan); Hiromasa Suzuki, Konan Univ. (Japan); Tomokage Yoneyama, Manabu Ishida, Yoshitomo Maeda, Japan Aerospace Exploration Agency (Japan); Takayuki Hayashi, Keisuke Tamura, Rozenn Boissay-Malaquin, Univ. of Maryland (United States); Toshiki Sato, Rikkyo Univ. (Japan); Junko Hiraga, Kwansei Gakuin Univ. (Japan); Makoto Yamauchi, Isamu Hatsukade, Univ. of Miyazaki (Japan); Kazutaka Yamaoka, Nagoya Univ. (Japan); Takayoshi Kohmura, Tokyo Univ. of Science (Japan); Hiroshi Tsunemi, Osaka Univ. (Japan); Masanobu Ozaki, Tadayasu Dotani, Japan Aerospace Exploration Agency (Japan); Koki Okazaki, Kazunori Asakura, Marina Yoshimoto, Taisei Mineta, Yuichi Ode, Mio Aoyagi, Osaka Univ. (Japan); Yoshiaki Kanemaru, Keitaro Miyazaki, Kohei Kusunoki, Yuta Terada, Yoshinori Otsuka, Wakana Yonemaru, Haruhiko Yokosu, Univ. of Miyazaki (Japan); Yuki Amano, Kyoto Univ. (Japan); Yuma Aoki, Tomoya Kamatani, Kindai Univ. (Japan); Shun Tsunomachi, Tokyo Univ. of Science (Japan)

21 July 2022 • 10:50 - 11:10 EDT | Room 523

12181-68

Ground Calibration of the X-ray Mirror Assembly for the X-Ray Imaging and Spectroscopy Mission (XRISM) I – Measurement Setup and Effective Area

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21 July 2022 • 11:10 - 11:25 EDT | Room 523

12181-69

Ground calibration of the X-ray Mirror Assembly for the X-Ray Imaging and Spectroscopy Mission (XRISM) II - Imaging performance and stray light

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21 July 2022 • 11:25 - 11:40 EDT | Room 523

Lunch/Exhibition Break 11:40 - 13:00

SESSION 14: EXTP

21 July 2022 • 13:00 - 14:20 EDT | Room 523

Session Chair: Megan E. Eckart, Lawrence Livermore National Lab. (United States)

12181-70

The enhanced X-ray Timing and Polarimetry mission

Author(s): Shuang-Nan Zhang, Institute of High Energy Physics (China); Marco Feroci, INAF (Italy); Margarita Hernanz, Institut de Ciències de l'Espai (Spain); Andrea Santangelo, Eberhard Karls Univ. Tübingen (Germany); Fangjun Lu, Yupeng Xu, Yong Chen, Institute of High Energy Physics (China); Hua Feng, Tsinghua Univ. (China); Kirpal Nandra, Max-Planck-Institut für extraterrestrische Physik (Germany); Weichun Jiang, Institute of High Energy Physics (China); Jiri Svoboda, Astronomical Institute of the CAS, v.v.i. (Czech Republic); Søren Brandt, Technical Univ. of Denmark (Denmark); Stéphane Schanne, CEA (France); Jean In't Zand, SRON Netherlands Institute for Space Research (Netherlands); Malgosia Michalska, Space Research Ctr. Polish Academy of Sciences (Poland); Enrico Bozzo, Univ. de Genève (Switzerland); Emrah Kalemci, Sabanci Univ. (Turkey)

21 July 2022 • 13:00 - 13:20 EDT | Room 523

12181-71

The Large Area Detector onboard the eXTP mission

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21 July 2022 • 13:20 - 13:35 EDT | Room 523

12181-72

The Wide Field Monitor onboard the Chinese-European X-ray mission eXTP

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21 July 2022 • 13:35 - 13:50 EDT | Room 523

12181-73

The Spectroscopy Focusing Array onboard the eXTP mission

Author(s): Yusa Wang, Yong Chen, Wei Li, YanJi Yang, Zeyu Song, Jia Ma, Yupeng Xu, Fangjun Lu, ShuangNan Zhang, HuiLin He, XueLei Cao, Shu Zhang, Gang Li, Juan Zhang, Liqiang Qi, Juan Wang, Weiwei Cui, Tianxiang Chen, Ziliang Zhang, Maoshun Li, Dawei Han, Laidan Luo, Min Cong, Xiongtao Yang, Dongjie Hou, Zijian Zhao, Xiaofan Zhao, Can Chen, Zhonghua Lv, Institute of High Energy Physics (China); Bo Wang, Langping Wang, DianLong Wang, Duo Li, Harbin Institute of Technology (China); LiZhi Sheng, PengFei Qiang, Xi'an Institute of Optics and Precision Mechanics (China); Thomas Bechteler, Vadim Burwitz, Kirpal Nandra, Max-Planck-Institut für extraterrestrische Physik (Germany); Stefano Basso, Giorgia Sironi, Giovanni Pareschi, Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy); JiaWei Zhang, Institute of High Energy Physics (China), Harbin Institute of Technology (China); Yuxuan Zhu, Institute of High Energy Physics (China), Jilin Univ. (China)

21 July 2022 • 13:50 - 14:05 EDT | Room 523

12181-74

Design and progress in the development of PFA onboard eXTP

Author(s): Weichun Jiang, Institute of High Energy Physics (China)

21 July 2022 • 14:05 - 14:20 EDT | Room 523

SESSION 15: MISSIONS UNDER DEVELOPMENT/PROPOSED

21 July 2022 • 14:20 - 17:10 EDT | Room 523

Session Chair: Shuang-Nan Zhang, Institute of High Energy Physics, Chinese Academy of Sciences (China)

12181-75

Arcus - Exploring the formation and evolution of clusters, galaxies, and stars

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21 July 2022 • 14:20 - 14:35 EDT | Room 523

12181-76

A broadband X-ray imaging spectroscopy in the 2030s: the FORCE mission

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21 July 2022 • 14:35 - 14:50 EDT | Room 523

12181-78

GEO-X (GEOspace X-ray imager) mission

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21 July 2022 • 14:50 - 15:05 EDT | Room 523

Coffee Break 15:05 - 15:35

12181-79

SOlar Neutron and Gamma-ray Spectroscopy Mission (SONGS)

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21 July 2022 • 15:35 - 15:50 EDT | Room 523

12181-81

The X/Gamma-ray Imaging Spectrometer (XGIS) for THESEUS and future mission opportunities

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21 July 2022 • 15:50 - 16:10 EDT | Room 523

12181-82

STAR-X: Survey and Time-domain Astrophysical Research eXplorer

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21 July 2022 • 16:10 - 16:30 EDT | Room 523

12181-83

High resolution FOXSI: The development of FOXSI-4

Author(s): Lindsay Glesener, Univ. of Minnesota, Twin Cities (United States); Juan Camilo Buitrago-Casas, Space Sciences Lab., Univ. of California, Berkeley (United States); Jessie M. Duncan, Yixian Zhang, Univ. of Minnesota, Twin Cities (United States); Shunsaku Nagasawa, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Savannah Perez-Piel, Space Sciences Lab., Univ. of California, Berkeley (United States); Ayumu Takigawa, Koki Sakuta, Kazuki Ampuku, Nagoya Univ. (Japan); Juliana Vievering, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); Sophie Musset, European Space Agency (Netherlands); P. S. Athiray, The Univ. of Alabama in Huntsville (United States); Athanasios Pantazides, Univ. of Minnesota, Twin Cities (United States); Wayne Baumgartner, Stephen Bongiorno, Patrick Champey, NASA Marshall Space Flight Ctr. (United States); Steven Christe, NASA Goddard Space Flight Ctr. (United States); Sasha Courtade, Hunter Kanniainen, Space Sciences Lab., Univ. of California, Berkeley (United States); Säm Krucker, Space Sciences Lab., Univ. of California, Berkeley (United States), Fachhochschule NordWestschweiz (Switzerland); Juan Carlos Martinez Oliveros, Space Sciences Lab., Univ. of California, Berkeley (United States); Ikuyuki Mitsuishi, Nagoya Univ. (Japan); Noriyuki Narukage, National Astronomical Observatory of Japan (Japan); Eliad Peretz, NASA Goddard Space Flight Ctr. (United States); Tadayuki Takahashi, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Shin Watanabe, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan)

21 July 2022 • 16:30 - 16:50 EDT | Room 523

12181-84

Sub-arcsecond x-ray imaging with Multi-Image X-ray Interferometer Module (MIXIM): introduction of a periodic coded-aperture mask

Author(s): Kazunori Asakura, Kiyoshi Hayashida, Shotaro Sakuma, Ayami Ishikura, Kenmei Sawagami, Wataru Kamogawa, Osaka Univ. (Japan); Tomokage Yoneyama, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Hirofumi Noda, Koki Okazaki, Maho Hanaoka, Kengo Hattori, Yusuke Matsushita, Taisei Mineta, Marina Yoshimoto, Yuichi Ode, Tomohiko Hakamata, Hironori Matsumoto, Hiroshi Tsunemi, Osaka Univ. (Japan)

21 July 2022 • 16:50 - 17:10 EDT | Room 523

SESSION 16: DETECTORS AND MISCELLANEOUS

22 July 2022 • 09:00 - 11:30 EDT | Room 523

Session Chair: Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

12181-85

Performance of high frame-rate CCDs for future strategic missions

Author(s): Marshall W. Bautz, Richard F. Foster, Catherine E. Grant, Beverly LaMarr, Andrew Malonis, Eric D. Miller, Gregory Prigozhin, Massachusetts Institute of Technology (United States); Barry Burke, Michael Cooper, Kevan Donlon, Renee Lambert, Keith Warner, Doug Young, MIT Lincoln Lab. (United States); Tanmoy Chattopadhyay, Sven C. Herrmann, Glenn Morris, Stanford Univ. (United States); Christopher Leitz, MIT Lincoln Lab. (United States); Steven W. Allen, Stanford Univ. (United States)

22 July 2022 • 09:00 - 09:20 EDT | Room 523

12181-86

Performance of the SRON Ti/Au Transition Edge Sensor X-ray Calorimeters

Author(s): Martin de Wit, Luciano Gottardi, Kenichiro Nagayoshi, Hiroki Akamatsu, Marcel P. Bruijn, Marcel L. Ridder, Emanuele Taralli, Davide Vaccaro, Jian-Rong Gao, Jan-Willem A. den Herder, SRON Netherlands Institute for Space Research (Netherlands)

22 July 2022 • 09:20 - 09:40 EDT | Room 523

12181-87

Development of the focal-plane CMOS detector for soft x-ray imaging spectroscopic mission aboard micro satellite

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22 July 2022 • 09:40 - 10:00 EDT | Room 523

Coffee Break 10:00 - 10:30

12181-88

Position-Sensitive Transition Edge Sensor with Sub-micrometer Accuracy Developed for Future X-ray Interferometry Mission

Author(s): Hirofumi Noda, Osaka Univ. (Japan); Tasuku Hayashi, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Shinya Yamada, Rikkyo Univ. (Japan); Dai Takei, Daiphys Technologies LLC (Japan), Rikkyo Univ. (Japan), RIKEN (Japan)

22 July 2022 • 10:30 - 10:50 EDT | Room 523

12181-89

Towards precision particle background estimation for future X-ray missions: correlated variability between Chandra ACIS and AMS

Author(s): Catherine E. Grant, Eric D. Miller, Marshall W. Bautz, Richard F. Foster, MIT Kavli Institute for Astrophysics and Space Research (United States); Ralph P. Kraft, Harvard-Smithsonian Ctr. for Astrophysics (United States); Steven W. Allen, Stanford Univ. (United States); David N. Burrows, The Pennsylvania State Univ. (United States)

22 July 2022 • 10:50 - 11:10 EDT | Room 523

12181-90

XMM2ATHENA, the H2020 project to improve XMM-Newton analysis software and prepare for Athena

Author(s): Natalie Webb, Institut de Recherche en Astrophysique et Planétologie (France); Francisco Carrera, IFCA- Instituto de Física de Cantabria (Spain); Axel Schwope, Leibniz-Institut für Astrophysik Potsdam (Germany); Christian Motch, Observatoire astronomique de Strasbourg (France); Jean Ballet, CEA (France); Mike Watson, Univ. of Leicester (United Kingdom); Mat Page, Mullard Space Science Lab., Univ. College London (United Kingdom); Michael J. Freyberg, Max-Planck-Institut für extraterrestrische Physik, Max-Planck-Gesellschaft (Germany); Ioannis Georgantopoulos, National Observatory of Athens (Greece); Mickael Coriat, Didier Barret, Zoe Massida, Maitrayee Gupta, Hugo Tranin, Erwan Quintin, Institut de Recherche en Astrophysique et Planétologie (France); Maite Ceballos, Silvia Matteos, IFCA- Instituto de Física de Cantabria (Spain); Amalia Corral, Rosa Dominguez, Holger Stiele, IFCA-Instituto de Física de Cantabria (Spain); Iris Traulsen, Adriana Pires, Leibniz-Institut für Astrophysik Potsdam (Germany); Ada Nebot, Laurent Michel, Pierre Maggi, Francois-Xavier Pineau, Jere Kuuttila, Observatoire astronomique de Strasbourg (France); Keir Birchall, Univ. of Leicester (United Kingdom); Paul Kuin, Mullard Space Science Lab., Univ. College London (United Kingdom); Athanassios Akylas, Angel Ruiz, Ektoras Pouliasis, Antonis Georgakakis, National Observatory of Athens (Greece)

22 July 2022 • 11:10 - 11:30 EDT | Room 523

Lunch/Exhibition Break 11:30 - 12:30

SESSION 17: GAMMA-RAY AND POLARIZATION

22 July 2022 • 12:30 - 15:30 EDT | Room 523

Session Chair: Marshall W. Bautz, Massachusetts Institute of Technology (United States)

12181-92

Development of the ComPair gamma-ray telescope prototype

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22 July 2022 • 12:30 - 12:50 EDT | Room 523

12181-93

ASTENA: an innovative mission concept for broadband high-energy astrophysics

Author(s): Miguel Moita, Lisa Ferro, Univ. degli Studi di Ferrara (Italy); Enrico Virgilli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Filippo Frontera, Piero Rosati, Cristiano Guidorzi, Univ. degli Studi di Ferrara (Italy); Ezio Caroli, Mauro Orlandini, Loredana Bassani, John B. Stephen, Fabio Fuschino, Riccardo Campana, Claudio Labanti, Lorenzo Amati, INAF - Osservatorio di Astrofisica e Scienza

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22 July 2022 • 12:50 - 13:10 EDT | Room 523

12181-94

Using Single-Crystal Diamond Detectors as a Scattering Medium in Compton Telescopes

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22 July 2022 • 13:10 - 13:30 EDT | Room 523

12181-95

Development of the Balloon-borne Galactic Explorer Coded Aperture Mask and Compton Telescope (GECCO) Prototype

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22 July 2022 • 13:30 - 13:50 EDT | Room 523

12181-96

The TRILL project and its latest results: increasing the technological readiness of Laue lenses

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22 July 2022 • 13:50 - 14:10 EDT | Room 523

12181-97

The Mini Astrophysical MeV Background Observatory (MAMBO) CubeSat mission for gamma-ray astronomy

Author(s): Peter F. Bloser, W. Thomas Vestrand, Markus Hehlen, Kimberly Katko, Lucas Parker, Darrel Beckman, James Sedillo, Justin McGlown, John Michel, Rory Scobie, Anthony Nelson, Daniel Poulson, Los Alamos National Lab. (United States)

22 July 2022 • 14:10 - 14:30 EDT | Room 523

12181-98

The POLAR-2 large scale gamma-ray polarization mission

Author(s): Xin Wu, Univ. de Genève (Switzerland); Nicolas Produit, ISDC Data Ctr. for Astrophysics (Switzerland)

22 July 2022 • 14:30 - 14:50 EDT | Room 523

12181-99

Development of a Prototype Detector for the Gamma-Ray Polarimeter Experiment (GRAPE)

Author(s): Karla Oñate Melecio, Christopher Bancroft, The Univ. of New Hampshire (United States); Camden Ertley, Southwest Research Institute (United States); Fabian Kislat, Jason Legere, Steve Longworth, Mark McConnell, James Ryan, The Univ. of New Hampshire (United States)

22 July 2022 • 14:50 - 15:10 EDT | Room 523

12181-100

Development of Bragg reflection-type X-ray polarimeter based on a bent silicon crystal using hot plastic deformation

Author(s): Yoko Ueda, Tomoki Uchino, Daiki Ishi, Yuichiro Ezoe, Kumi Ishikawa, Masaki Numazawa, Aoto Fukushima, Sae Sakuda, Ayata Inagaki, Hiromi Morishita, Luna Sekiguchi, Takatoshi Murakawa, Yukine Tsuji, Haruyuki Hiromoto, Tokyo Metropolitan Univ. (Japan); Kazuhisa Mitsuda, National Astronomical Observatory of Japan (Japan); Kohei Morishita, Kyushu Univ. (Japan); Kazuo Nakajima, Tohoku Univ. (Japan)

22 July 2022 • 15:10 - 15:30 EDT | Room 523

SESSION PS1: POSTERS - ULTRA VIOLET

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-101

Aberration Corrected Designs for High Resolution Echelle Spectroscopy in the Far Ultraviolet

Author(s): James C. Green, Univ. of Colorado Boulder (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-102

Determining ideal grating parameters for UV blazed gratings

Author(s): Jared A. Termini, Keri Hoadley, Casey T. DeRoo, Cecilia R. Fasano, The Univ. of Iowa (United States); Erika Hamden, Jessica Li, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-103

Optical design of LUVIS for SMEX

Author(s): Robert A. Woodruff, Woodruff Consulting (United States); Stephen E. Kendrick, Kendrick Aerospace Consulting LLC (United States); Tony Hull, The Univ. of New Mexico (United States); Gopal Vasudevan, Advanced Technology Ctr., Lockheed Martin Space Systems Co. (United States); Daewook Kim, The Univ. of Arizona (United States); Sara R. Heap, Univ. of Maryland (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-104

World Space Observatory - Ultraviolet mission: status 2022

Author(s): Mikhail Sachkov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-105

Spectroscopic Investigation Of Nebular Gas (SING): status 2022 of a NUV Spectrograph

Author(s): Mikhail Sachkov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-106

Synergies between Spectrum-RG and Spectrum-UV (WSO-UV) Science Program

Author(s): Mikhail Sachkov, Institute of Astronomy (Russian Federation); Ana Inés Gómez de Castro, Univ. Complutense de Madrid (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-107

The concept of Lunar-based astrophysical telescope for international lunar research station (ILRS)

Author(s): Mikhail Sachkov, Andrey Shugarov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-108

LUVIS: An Ultraviolet SMEX mission optimized for the Lyman UV

Author(s): Stephen E. Kendrick, Kendrick Aerospace Consulting LLC (United States); Robert A. Woodruff, Woodruff Consulting (United States); Tony Hull, The Univ. of New Mexico (United States); Gopal Vasudevan, Lockheed Martin Space Systems Co. (United States); Sara R. Heap, Univ. of Maryland (United States); Daewook Kim, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-109

Design of UV CMOS sensor for the ULTRASAT space telescope

Author(s): Tuvia Liran, Yossi Shvartzvald, Ofer Lapid, Sagi Ben-Ami, Eli Waxman, Ehud Netzer, Eran Ofek, Avishay Gal-Yam, Weizmann Institute of Science (Israel); Francesco Zappon, Merlin F. Barschke, Steven Worm, Mikhail Vasilev, Rolf Bühler, David Berge, Deutsches Elektronen-Synchrotron (Germany); Vladimir Koifman, Avi Miller, Anatoli Mordakhay, Gadi Lehana, Yosef Lempel, Andrei Levi, Oshrit Ben-David, Tiberiu Galambos, Analog Value Ltd. (Israel); Adi Birman, Amos Fenigstein, Shay Alfassi, Omer Katz, Raz Reshef, Tower Semiconductor Ltd. (Israel)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-110

Opto-mechanical assembly and ground calibration of Spectroscopic Investigation of Nebular Gas (SING)

Author(s): Binukumar G. Nair, Margarita Safonova, Richa Rai, Bharat Chandra, Shubham Ghatul, Rekhesh Mohan, Shanthi Prabha, Jayant Murthy, Indian Institute of Astrophysics (India); Vladimir Shmagin, Mikhail Sachkov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-111

Optical design of the Ultraviolet Spectrograph for Exoplanets (UVSPEX) onboard WSO-UV

Author(s): Shingo Kameda, Kento Hirabayashi, Masaki Kuwabara, Rikkyo Univ. (Japan); Alexander Tavrov, Space Research Institute (Russian Federation); Go Murakami, Keigo Enya, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Mikhail Sachkov, Andrey Shugarov, Institute of Astronomy (Russian Federation); Oleg Korablev, Space Research Institute (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-112

TINI – A mission for FUV spectroscopy of extended objects

Author(s): Sebastian J. Diebold, Jürgen Barnstedt, Eberhard Karls Univ. Tübingen (Germany); Bharat Chandra, Indian Institute of Astrophysics (India); Lauro Conti, Eberhard Karls Univ. Tübingen (Germany); Shubham Ghatul, Indian Institute of Astrophysics (India); Norbert Kappelmann, Eberhard Karls Univ. Tübingen (Germany); Rekhesh Mohan, Jayant Murthy, Binukumar G. Nair, Shanti Prabha, Richa Rai, Margarita Safonova, Indian Institute of Astrophysics (India); Beate Stelzer, Klaus Werner, Eberhard Karls Univ. Tübingen (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-114

Small laboratory emulator of the far UV imager on board WSO-UV to test the optical performance of the Field Camera Unit FUV channel

Author(s): Ana Inés Gómez de Castro, Univ. Complutense de Madrid (Spain); Ernesto Sánchez-Blanco, Optical Development (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-115

An ultraviolet stellar catalog for occultation measurements, planetary illumination modeling, and spectral sky map analyses

Author(s): Michael A. Velez, The Univ. of Texas at San Antonio (United States), Southwest Research Institute (United States); Kurt D. Retherford, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Vincent Hue, Joshua A. Kammer, Southwest Research Institute (United States); G. R. Gladstone, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Michael W. Davis, Thomas K. Greathouse, Southwest Research Institute (United States); Tracy M. Becker, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Philippa M. Molyneux, Southwest Research Institute (United States); Shawn M. Brooks, Jet Propulsion Lab. (United States); Ujjwal Raut, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Andrew J. Steffl, Maarten H. Versteeg, Southwest Research Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-116

The scientific programs of the WSO-UV space telescope

Author(s): Ana Inés Gómez de Castro, Univ. Complutense de Madrid (Spain); Mikhail Sachkov, Boris Shustov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-117

Synthetic photometry in the UV range; the new IAU standards

Author(s): Ana Inés Gómez de Castro, Univ. Complutense de Madrid (Spain); Noah Brosch, Tel Aviv Univ. (Israel); Daniela Bettoni, INAF (Italy); Leire Beitia-Antero, Univ. Complutense de Madrid (Spain); Paul Scowen, NASA Goddard Space Flight Ctr. (United States); David Valls-Gabaud, Observatoire de Paris (France); Mikhail Sachkov, Institute of Astronomy (Russian Federation)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-118

Optical modeling of new lifetime positions for the Cosmic Origins Spectrograph (COS)

Author(s): David J. Sahnow, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-119

Enhanced metal fluoride films for the far-ultraviolet using reactive physical vapor deposition

Author(s): Javier G. Del Hoyo, Manuel A. Quijada, NASA Goddard Space Flight Ctr. (United States); Luis V. Rodriguez-de Marcos, The Catholic Univ. of America (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-120

Europa Clipper ultraviolet spectrograph: ground calibration results

Author(s): Michael W. Davis, Southwest Research Institute (United States); Kurt D. Retherford, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Philippa M. Molyneux, Southwest Research Institute (United States); G. R. Gladstone, Southwest Research Institute (United States), The Univ. of Texas at San Antonio (United States); Noel A. Eloriaga, Rohini S. Giles, Thomas K. Greathouse, Ujjwal Raut, Todd J. Veach, Maarten H. Versteeg,

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-121

Calibration approach for the Polstar spectropolarimeter

Author(s): Gopal Vasudevan, Lockheed Martin Space Systems Co. (United States); Robert A. Woodruff, Woodruff Consulting (United States); Kirstin Doney, Lockheed Martin Space Systems Co. (United States); Coralie Neiner, Observatoire de Paris à Meudon, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Roberto Casini, High Altitude Observatory, National Ctr. for Atmospheric Research (United States); Mark T. Sullivan, Lockheed Martin Space Systems Co. (United States); Paul Scowen, NASA Goddard Space Flight Ctr. (United States); Tony Hull, The Univ. of New Mexico (United States); Alison A. Nordt, Lockheed Martin Space Systems Co. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-122

Thin-film aluminum mirrors protected by AlF3 stored in a 327 K oven do not degrade over a period of several months.

Author(s): David D. Allred, Brigham Young Univ. (United States); Kenan Fronk, The Univ. of Alabama (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-123

UV Photocathodes for space detectors

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-124

Plasma Based Production of AlF3-passivated Aluminum mirrors for UVOIR astronomy

Author(s): David R. Boris, U.S. Naval Research Lab. (United States); Luis V. Rodriguez-de Marcos, Javier G. Del Hoyo, NASA Goddard Space Flight Ctr. (United States); Virginia D. Wheeler, Jeffrey M. Woodward, Scott G. Walton, U.S. Naval Research Lab. (United States); Edward J. Wollack, Manuel A. Quijada, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-125

Environmental studies on ALD metal fluorides for future far UV optical coatings

Author(s): Robin E. Rodríguez, John Hennessy, April D. Jewell, Shouleh Nikzad, Jet Propulsion Lab., Caltech (United States); Parker C. Hinton, Nicholas Kruczek, Brian Fleming, Kevin France, Lab. for Atmospheric and Space Physics, Univ. of Colorado Boulder (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-126

On-board automatic decision making modules on Solar Ultra-Violet Imaging Telescope (SUIT) on-board Aditya-L1 mission

Author(s): Sakya Sinha, Mahesh Burse, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Sreejith Padinhatteeri, Manipal Academy of Higher Education (India), Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Manoj Varma, Indian Institute of Astrophysics (India); A. N. Ramaprakash, D. Tripathi, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Anurag Tyagi, U R Rao Satellite Ctr., Bengaluru (India); Avyarthana Ghosh, Inter-Univ. Ctr. for Astronomy and Astrophysics (India), Tata Consultancy Services, Ltd. (India); Ghanshyam Kumar, U R Rao Satellite Ctr., Bengaluru (India); Piyali Ganguly, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Reena Yadav, Sankarasubramanian K., U R Rao Satellite Ctr., Bengaluru (India)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-127

SUAVE: A disruptive far UV solar telescope for long lasting observation performances in Space

Author(s): Luc Damé, Mustapha Meftah, Nicolas Rouanet, Pierre Gilbert, LATMOS CNRS University Paris-Saclay (France); Pierre Etcheto, Jacques Berthon, CNES (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-128

Spectroscopic observation of planetary and Moon exospheres in the ultraviolet

Author(s): Maria Guglielmina Pelizzo, Alain Jody Corso, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Giovanni Santi, Univ. degli Studi di Padova (Italy); Michela Uslenghi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Marco Faccini, INAF - Osservatorio Astronomico di Roma (Italy); Mauro Fiorini, Salvatore Incorvaia, Giorgio Toso, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Edoardo Fabbrica, Marco Carminati, Davide Butta, Carlo E. Fiorini, Politecnico di Milano (Italy); Giulio Favaro, Marco Bazzan, Univ. degli Studi di Padova (Italy); Gianluigi Maggioni, Istituto Nazionale di Fisica Nucleare (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-129

Updated data processing and analysis methods for the AstroSat UltraViolet Imaging Telescope (UVIT)

Author(s): Denis Leahy, Joseph Postma, Univ. of Calgary (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-130

New views in the ultraviolet of the Andromeda galaxy enabled by the AstroSAT UVIT telescope

Author(s): Denis Leahy, Joseph Postma, Megan Buick, Cameron Leahy, Traian Craiciu, Univ. of Calgary (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-131

Narrowband mirrors tuned at the desired far UV spectral lines

Author(s): Juan I. Larruquert, Paloma López-Reyes, Nuria Gutiérrez-Luna, Carlos Honrado-Benítez, Álvaro Ríos-Fernández, Consejo Superior de Investigaciones Científicas (Spain); Luis V. Rodriguez-de Marcos, The Catholic Univ. of America (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS2: POSTERS - SOLAR

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-170

Geant4 Modeling of a Cerium Bromide Scintillator Detector for the IMPRESS CubeSat Mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-171

Development of a FUV spectrally selective reflective coating for the SMILE UVI instrument

Author(s): Karl Fleury-Frenette, Jérémy Brisbois, Pascal Blain, Ctr. Spatial de Liège (Belgium); Jérôme Loicq, Technische Univ. Delft (Netherlands), Ctr. Spatial de Liège (Belgium); Frédéric Rabecki, Julien Rosin, Thierry Jaquemart, Fabien Schmutz, Jean-François Vandenrijt,

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-172

The Thermal Filter for the Solar Ultraviolet Imaging Telescope (SUIT) on-board Aditya-L1

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-173

Design and development of Solar Ultraviolet Imaging Telescope (SUIT) payload Electronics

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-174

Testing and characterization of the Solar Ultra-Violet Imaging Telescope (SUIT) detector system

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-175

Solar Transition Region UltraViolet Explorer (STRUVE) requirements flow down to design

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-176

Solar transition region ultraviolet explorer (STRUVE) pointing performance modeling

Author(s): Angelica Berner, Arizona State Univ. (United States); Alfred de Wijn, High Altitude Observatory, National Ctr. for Atmospheric Research (United States); Mads Krabbe Jepsen, Space Inventor (Denmark); Gopal Vasudevan, Lockheed Martin Space Systems Co. (United States); Paul Scowen, NASA Goddard Space Flight Ctr. (United States); Johnathan Gamaunt, Arizona State Univ. (United States); Robert A. Woodruff, Woodruff Consulting (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS3: POSTERS - ATHENA

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-177

Hardware development of Athena WFI Frame Processing Module

Author(s): Jonas Reiffers, Sebastian Albrecht, Olaf Hälker, Andreas Lederhuber, Benjamin Mican, Francisco Javier Veredas, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-178

Time distribution on the Athena WFI

Author(s): Francisco Javier Veredas, Sebastian Albrecht, Diogo Coutinho, Andreas Lederhuber, Jonas Reiffers, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-179

Drain current characteristics of Athena WFI flight-like DEPFETs

Author(s): Michael Bonholzer, Robert Andritschke, Valentin Emberger, Günter Hauser, Johannes Müller-Seidlitz, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-181

Spectroscopic performance of flight-like sensors for Athena's WFI

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-182

Development status of the Instrument Control Unit for the X-IFU instrument of the Athena mission

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-183

Demonstrator model of the warm front-end electronics (WFEE) for the ATHENA mission's X-IFU instrument

Author(s): Manuel Gonzalez, Damien Prêle, Si Chen, Jean Lesrel, Florence Ardellier-Desages, Alain Givaudan, Bernard Courty, Sylvie Blin, Ronan Oger, Guy Monier, Mael Le Cam, Stephane Colognes, Damien Pailot, Astroparticule et Cosmologie, Univ. de Paris, CNRS (France);

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-184

Monolithic amplifier and current biasing for SQUID readout - AwaXe_v4

Author(s): Si Chen, Damien Prêle, Manuel Gonzalez, Jean Mesquida, Bernard Courty, Astroparticule et Cosmologie (France); Didier Charrier, Lab. de Physique Subatomique et Technologies Associées (France); Jean Lesrel, Sylvie Blin, Guy Monier, Astroparticule et Cosmologie (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-185

Geant4 simulation of the residual background in the ATHENA Wide Field Imager from protons deflected by the Charged Particle Diverter

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-186

Study on the trigger logic for the X-IFU Athena anticoincidence system

Author(s): Fabio Chiarello, Guido Torrioli, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Andrea Argan, Matteo D'Andrea, Claudio Macculi, Luigi Piro, INAF (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-187

TID test with DEPFET sensors for Athena's WFI

Author(s): Valentin Emberger, Michael Bonholzer, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-188

Athena charged particle diverter simulations: effects of micro-roughness on proton scattering using Geant4

Author(s): Jean-Paul Breuer, Masaryk Univ. (Czech Republic); Gábor Galgóczi, Masaryk Univ. (Czech Republic), Eötvös Loránd Univ. (Hungary); Valentina Fioretti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Jakub Zlámal, Brno Univ. of Technology (Czech Republic); Norbert Werner, Masaryk Univ. (Czech Republic); Giovanni Santin, Nathalie Boudin, Ivo Ferreira, Matteo Guainazzi, European Space Agency (France); Andreas von Kienlin, Max-Planck-Institut für extraterrestrische Physik (Germany); Simone Lotti, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Teresa Mineo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Silvano Molendi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Emanuele Perinati, Eberhard Karls Univ. Tübingen (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-190

A 50mK test bench for the demonstration of the readout chain of Athena/X-IFU

Author(s): Florent Castellani, Institut de Recherche en Astrophysique et Planétologie (France); Sophie Beaumont, Institut de Recherche en Astrophysique et Planétologie (France), NASA Goddard Space Flight Ctr. (United States); François Pajot, Gilles Roudil, Institut de Recherche en Astrophysique et Planétologie (France); Joseph S. Adams, Simon R. Bandler, NASA Goddard Space Flight Ctr. (United States); Bernard Bertrand, Gabriele Betancourt-Martinez, Institut de Recherche en Astrophysique et Planétologie (France); James A. Chervenak, NASA Goddard Space Flight Ctr. (United States); Christophe Daniel, Ctr. National d'Études Spatiales (France); Edward V. Denison, William B. Doriese, National Institute of Standards and Technology (United States); Michel Dupieux, Institut de Recherche en Astrophysique et Planétologie (France); Malcolm S. Durkin, National Institute of Standards and Technology (United States); Hervé Geoffray, Ctr. National d'Études Spatiales (France); Gene C. Hilton, National Institute of Standards and Technology (United States); David Murat, Yann Parot, Institut de Recherche en Astrophysique et Planétologie (France); Philippe Peille, Ctr. National d'Études Spatiales (France); Damien Prêle, Astroparticule et Cosmologie (France); Carl D. Reintsema, National Institute of Standards and Technology (United States); Kazuhiro Sakai, NASA Goddard Space Flight Ctr. (United States); Robert W. Stevens, Joel N. Ullom, Leila R. Vale, National Institute of Standards and Technology (United States); Nicholas A. Wakeham, NASA Goddard Space Flight Ctr. (United States), Ctr. for Space Sciences and Technology, Univ. of Maryland, Baltimore County (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-191

When less is more: the truncation of the optimal filter to reconstruct events in X-IFU/Athena-like TES detectors

Author(s): Maria Teresa Ceballos, Instituto de Física de Cantabria, Univ. de Cantabria (Spain); Nicolás Cardiel, Univ. Complutense de Madrid (Spain); Beatriz Cobo, Instituto de Física de Cantabria, Univ. de Cantabria (Spain); Philippe Peille, Ctr. National d'Études Spatiales (France); Stephen J. Smith, NASA Goddard Space Flight Ctr. (United States); Michael C. Witthoeft, NASA Goddard Space Flight Center / ADNET Systems, Inc, Bethesda, MD (United States); Malcolm S. Durkin, National Institute of Standards and Technology (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-192

Effects of spatial inhomogeneities in Athena/X-IFU optical and thermal filters investigated by numerical analysis

Author(s): Ugo Lo Cicero, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Elena Puccio, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Teresa Mineo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Marco Barbera, Univ. degli Studi di Palermo (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-193

The X-IFU Focal Plane Assembly Development Model: thermal characterization

Author(s): Roland H. den Hartog, Damian Audley, Emanuele Taralli, Henk van Weers, SRON Netherlands Institute for Space Research (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-194

The X-IFU Focal Plane Assembly Development Model: functional and performance characterization

Author(s): Roland H. den Hartog, Emanuele Taralli, Damian Audley, Henk van Weers, SRON Netherlands Institute for Space Research (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-195

Optical on-board metrology in the Athena X-ray mission

Author(s): Manuel Adler Abreu, Alexandre Cabral, José Rebordão, Nuno M. Gonçalves, Instituto de Astrofísica e Ciências do Espaço (Portugal), Univ. de Lisboa (Portugal); Sergio Mottini, Thales Alenia Space (Italy); João Costa Pinto, EVOLEO Technologies (Portugal); David Silva, Frezite High Performance, Lda (Portugal); José Afonso, Israel Matute, Instituto de Astrofísica e Ciências do Espaço (Portugal), Univ. de Lisboa (Portugal); Davide Oddenino, European Space Research and Technology Ctr. (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS4: POSTERS - ATHENA OPTICS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-196

A fully-analytical treatment of stray light in silicon pore optics for the Athena X-ray telescope

Author(s): Daniele Spiga, Giorgia Sironi, INAF - Osservatorio Astronomico di Brera (Italy); Desiree Della Monica Ferreira, DTU Space, Technical Univ. of Denmark (Denmark); Marcos Bavdaz, European Space Research and Technology Ctr., European Space Agency (Netherlands); Erik Bergbäck Knudsen, DTU Fysik, Technical Univ. of Denmark (Denmark); Ivo Ferreira, European Space Research and Technology Ctr., European Space Agency (Netherlands); Arne S. Jegers, DTU Space, Technical Univ. of Denmark (Denmark); Alberto Moretti, INAF - Osservatorio Astronomico di Brera (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-198

The VERTical X-ray calibration facility

Author(s): Alberto Moretti, INAF (Italy); Daniele Spiga, Stefano Basso, Giorgia Sironi, Mauro Ghigo, Vincenzo Cotroneo, Giovanni Pareschi, Gianpiero Tagliaferri, Marta M. Civitani, Nicola La Palombara, Michela Uslenghi, Istituto Nazionale di Astrofisica (Italy); Giuseppe Valsecchi, Fabio Zocchi, Fabio Marioni, Dervis Vernani, Media Lario S.r.l. (Italy); Giancarlo Parodi, Matteo Ottolini, BCV Progetti S.r.l. (Italy); Massimiliano Tordi, EIE S.r.l. (Italy); Simone De Lorenzi, EIE Group S.r.l. (Italy); Franco Amisano, GP Advanced Projects S.r.l. (Italy); Marcos Bavdaz, Ivo Ferreira, Paolo Corradi, European Space Agency (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-199

Design and analysis of mechanical ground support equipment for the calibration of ATHENA at XRCF

Author(s): Elias Breunig, Shaunak Desai, Breunig Aerospace (Germany); Kristin K. Madsen, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland, Baltimore (United States); Vadim Burwitz, Josef Eder, Max-Planck-Institut für extraterrestrische Physik (Germany); Peter Burger, AlpinaTec Technical Products GmbH (Austria)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-200

The expanded, parallel and monochromatic X-ray beam of BEaTriX: alignment and characterization

Author(s): Stefano Basso, Bianca Salmaso, Mauro Ghigo, Daniele Spiga, Gabriele Vecchi, Giorgia Sironi, Vincenzo Cotroneo, Paolo Conconi, Edoardo Redaelli, Andrea Bianco, Giovanni Pareschi, Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy); Davide Sisana, Politecnico di Milano (Italy); Carlo Pelliciari, Istituto d'Istruzione Superiore Bachelet (Italy); Mauro Fiorini, Salvatore Incorvaia, Michela Uslenghi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Lorenzo Paoletti, INAF - Osservatorio Astronomico di Padova (Italy); Claudio Ferrari, Sara Beretta, Andrea Zappettini, Istituto dei Materiali per l'Elettronica ed il Magnetismo, Consiglio Nazionale delle Ricerche (Italy); Manuel S. del Rio, European Synchrotron Radiation Facility (France); Giancarlo Parodi, BCV Progetti S.r.l. (Italy); Vadim Burwitz, Surangkhana Rukdee, Gisela Hartner, Thomas Müller, Thomas Schmidt, Max-Planck-Institut für extraterrestrische Physik (Germany); Andreas Langmeier, Max-Planck-Institut für extraterrestrische Physik (Germany); Desiree D. M. Ferreira, Sonny Massahi, Nis C. Gellert, Finn E. Christensen, DTU Space, Technical Univ. of Denmark (Denmark); Marcos Bavdaz, Ivo Ferreira, European Space Research and Technology Ctr., European Space Agency (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-202

ATHENA mirror demonstrator (MAMD) simulations for testing at XRCF

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-203

Coating process parameter influence on thin films for the ATHENA X-ray optics

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-204

Determination of aluminum oxide stoichiometry and estimation of the amount of adventitious water molecules on polyimide/aluminum filters for Athena.

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-205

Carbon NanoTubes thin filters for X-ray detectors in space

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-206

An update on the effect of mirror curvature and wedging on the angular resolution of the Athena X-ray observatory

Author(s): Arne 'S Jegers, Desiree D. M. Ferreira, Erik B. Knudsen, Sonny Massahi, Sara Svendsen, Nis C. Gellert, Technical Univ. of Denmark (Denmark); Daniele Spiga, Giorgia Sironi, INAF - Osservatorio Astronomico di Brera (Italy); Ivo Ferreira, Brian Shortt, Marcos Bavdaz, European Space Agency (Netherlands); Giuseppe Vacanti, cosine measurement systems (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS5: POSTERS - OPTICS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-207

SWORDS, a simulation tool for diffraction effects in silicon pore optics mirror modules

Author(s): Daniele Spiga, Giorgia Sironi, INAF - Osservatorio Astronomico di Brera (Italy); Desiree Della Monica Ferreira, Arne S. Jegers, Erik Bergbäck Knudsen, Technical Univ. of Denmark (Denmark); Ivo Ferreira, Marcos Bavdaz, European Space Agency (Netherlands)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-208

Optimization of multilayer coatings for future high-energy focusing telescopes

Author(s): Nis Christian Gellert, Sonny Massahi, Desiree D. M. Ferreira, Finn E. Christensen, Sara Svendsen, Arne S. Jegers, Technical Univ. of Denmark (Denmark); Kristin Madsen, NASA Goddard Space Flight Center (United States), University of Maryland (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-209

Curved Customized Gratings for X-ray Spectroscopy

Author(s): Casey T. DeRoo, Cecilia R. Fasano, The Univ. of Iowa (United States); Randall L. McEntaffer, Fabien Grise, Jake A. McCoy, The Pennsylvania State Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-210

Fabricating the Next Generation of High Energy Reflection Gratings

Author(s): Cecilia R. Fasano, Casey T. DeRoo, Keri Hoadley, The Univ. of Iowa (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-211

X-ray micropore optic array preliminary calibration results for the Lunar Environment heliospheric X-ray Imager

Author(s): Catriana K. Paw U., Brian Walsh, Boston Univ. (United States); Kip Kuntz, Johns Hopkins Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Rousseau Nutter, Howard Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Samantha Busk, Boston Univ. (United States); Vadim Burwitz, Max Planck Institute for extraterrestrial Physics (Germany); Steven Sembay, Univ. of Leicester (United Kingdom); Gisela Hartner, Thomas Müller, Surangkhana Rukdee, Thomas Schmidt, Max Planck Institute for extraterrestrial Physics (Germany); Norman Dobson, NASA Goddard Space Flight Ctr. (United States); Dennis Chornay, Univ. of Maryland, College Park (United States), NASA Goddard Space Flight Ctr. (United States); Frederick S. Porter, NASA Goddard Space Flight Ctr. (United States); Kenneth M. Simms, ADNET Systems, Inc. (United States), NASA Goddard Space Flight Ctr. (United States); Van Naldoza, Boston Univ. (United States); David G. Sibeck, NASA Goddard Space Flight Ctr. (United States); Nick Thomas, NASA Marshall Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-212

Design, Analysis, and Testing of X-ray Mirror Modules

Author(s): Peter M. Solly, William W. Zhang, Michael P. Biskach, Kai-Wing Chan, James Mazzarella, Ryan McClelland, Timo T. Saha, Raul E. Riveros, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-213

Coating of Thin, Lightweight X-ray Mirrors Without Distortion

Author(s): Peter M. Solly, William W. Zhang, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-214

Mirror alignment and integration for high-resolution astronomical x-ray telescopes

Author(s): Kai-Wing Chan, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland, Baltimore County (United States); James R. Mazzarella, KBR, Inc. (United States); Michael P. Biskach, William W. Zhang, Timo T. Saha, NASA Goddard Space Flight Ctr. (United States); Peter M. Solly, KBR, Inc. (United States); Ryan S. McClelland, Raul E. Riveros, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-215

Current status of development of lightweight X-ray mirror with carbon fiber reinforced plastic (CFRP)

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-216

Upgrade of a laboratory X-ray diffractometer to extend its operating range towards soft energies

Author(s): Giacomo Rivolta, INAF - Osservatorio Astronomico di Brera (Italy), Univ. degli Studi di Milano (Italy); Vincenzo Cotroneo, Stefano Basso, Giovanni Pareschi, Daniele Spiga, INAF - Osservatorio Astronomico di Brera (Italy); Thorsten Döhring, Manfred Stollenwerk, Willy-Leopold Michler, Technische Hochschule Aschaffenburg (Germany); Marta Civitani, INAF - Osservatorio Astronomico di Brera (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-217

Development of Nickel-Based Multilayer Coatings for Extended Broadband X-ray Imaging

Author(s): Danielle N. Gurgew, Takashi Okajima, Lawrence G. Olsen, NASA Goddard Space Flight Ctr. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-219

The testing of Wolter I Gold coated Nickel Mirror Shells

Author(s): Ke Yu, Shenyang Ligong Univ. (China), Institute of High Energy Physics (China); Fengqi Li, Shenyang Ligong Univ. (China); YanJi Yang, Y. Chen, J. Ma, Zeyu Song, Weichun Jiang, Y. S. Wang, Jiawei Zhang, Shaohuai Wang, DongXu Liu, Min Cong, Institute of High Energy Physics (China); Yupeng Xu, H. L. He, Institute of High Energy Physics (China), Univ. of Chinese Academy of Sciences (China); L. Z. Sheng, Yongqing Yan, PengFei Qiang, Baosheng Zhao, Xi'an Institute of Optics and Precision Mechanics (China); Bo Wang, Langping Wang, DianLong Wang, Fei Ding, Jiadai Xue, Qiuyan Liao, Harbin Institute of Technology (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-221

Evaluating stress and reflectance of novel materials for use as reflective layers on X-ray gratings

Author(s): Taylor Wood, Fabien Grisé, Jake A. McCoy, Elias G. Papadopoulos, The Pennsylvania State Univ. (United States); Takashi Okajima, NASA Goddard Space Flight Ctr. (United States); Randall L. McEntaffer, The Pennsylvania State Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-222

Developments in the astronomical toolbox for the GPU-enabled McXtrace X-ray tracing tool.

Author(s): Erik B. Bergbäck Knudsen, Technical Univ. of Denmark (Denmark); Desiree D. M. Ferreira, Arne S. Jegers, DTU Space, Technical Univ. of Denmark (Denmark); Peter K. Willendrup, Technical Univ. of Denmark (Denmark)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-223

Axial shift mapping metrology for X-ray telescope mirrors

Author(s): Hayden J. Wisniewski, Ian J. Arnold, The Univ. of Arizona (United States); Ralf K. Heilmann, Mark L. Schattenburg, Massachusetts Institute of Technology (United States); Brandon D. Chalifoux, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-225

Adjustable height glass spacers for bonding and aligning X-ray mirror stacks

Author(s): Brandon D. Chalifoux, Ian J. Arnold, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-227

Thin polyimide film on polyimide structural mesh filters for soft X-ray detectors in astrophysics application

Author(s): Fabio D'Anca, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Marco Barbera, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Nicola Montinaro, Univ. de Genève (Switzerland), Univ. degli Studi di Palermo (Italy); Ugo Lo Cicero, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Luisa Sciortino, Univ. degli studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Michela Todaro, Elena Puccio, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Salvatore Varisco, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Pekka Törmä, Lauri Riuttanen, AMETEK Finland Oy (Finland); Seppo Nenonen, Oxford Instruments Technologies Oy (Finland); Markku Kainlauri, VTT Technical Research Ctr. of Finland Ltd. (Finland); Michael Krumrey, Christian Laubis, Physikalisch-Technische Bundesanstalt (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-228

Mesh supported optical blocking filters for soft X-ray astronomical instruments

Author(s): Tianxiang Chen, Na Gao, Jiewei Cao, Yupeng Xu, Yong Chen, Huilin He, Fangjun Lu, Institute of High Energy Physics (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-229

Multi-technique investigation of silicon nitride/aluminum membranes as optical blocking filters for high-energy missions.

Author(s): Luisa Sciortino, Univ. degli studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Marco Barbera, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Salvatore Ferruggia Bonura, Univ. degli Studi di Palermo (Italy); Michela Todaro, Elena Puccio, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Fabio D'Anca, Ugo Lo Cicero, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Pekka Törmä, Lauri Riuttanen, AMETEK Finland Oy (Finland); Elena Magnano, Istituto Officina dei Materiali, Consiglio Nazionale delle Ricerche (Italy), Univ. of Johannesburg (South Africa); Silvia Nappini, Istituto Officina dei Materiali, Consiglio Nazionale delle Ricerche (Italy); Emanuele Perinati, Sebastian J. Diebold, Alejandro Guzman, Chris Tenzer, Institut für Astronomie und Astrophysik, Eberhard Karls Univ. Tübingen (Germany); Gianpiero Buscarino, Univ. degli Studi di Palermo (Italy); Christian Gollwitzer, Evelyn Handick, Michael Krumrey, Christian Laubis, Physikalisch-Technische Bundesanstalt (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12181-230

X-ray and UV reflection grating fabrication using electron-beam lithography

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS6: POSTERS - ONGOING MISSIONS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-231

Simulation studies of the eROSITA particle-induced background using a highly detailed mass model

Author(s): Christian M. Pommranz, Chris Tenzer, Sebastian J. Diebold, Emanuele Perinati, Eberhard Karls Univ. Tübingen (Germany); Michael J. Freyberg, Max-Planck-Institut für extraterrestrische Physik (Germany); Andrea Santangelo, Eberhard Karls Univ. Tübingen (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-232

SRG/eROSITA micrometeoroid hits and effects

Author(s): Michael J. Freyberg, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-233

A pixel-by-pixel equalization method for the X-ray imaging polarimeter on board the IXPE mission

Author(s): John Rankin, Fabio Muleri, Enrico Costa, Alessandro Di Marco, Sergio Fabiani, Fabio La Monaca, Paolo Soffitta, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Luca Baldini, Univ. di Pisa (Italy); Alberto Manfreda, Istituto Nazionale di Fisica Nucleare (Italy); Stephen L. O'Dell, NASA Marshall Space Flight Ctr. (United States); Matteo Perri, INAF - Osservatorio Astronomico di Roma (Italy); Simonetta Puccetti, Agenzia Spaziale Italiana (Italy); Brian D. Ramsey, NASA Marshall Space Flight Ctr. (United States); Carmelo Sgrò, Istituto Nazionale di Fisica Nucleare (Italy); Allyn F. Tennant, Martin C. Weisskopf, NASA Marshall Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-234

Validation of Neural Network software by using IXPE ground calibration data

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS7: POSTERS - SMALL SATELLITES

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-235

Mechanical and thermal design of the BlackCAT CubeSat

Author(s): Logan D. Baker, Mitchell Wages, Abraham D. Falcone, Daniel M. LaRocca, Gooderham McCormick, Cole R. Armstrong, Tyler B. Anderson, David N. Burrows, Zachary E. Catlin, Joseph M. Colosimo, Seth K. Culbertson, Derek B. Fox, The Pennsylvania State Univ. (United States); David M. Palmer, Los Alamos National Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-236

Estimating the background of the BlackCAT CubeSat and its impact on science observations

Author(s): Joseph M. Colosimo, Abraham D. Falcone, Tyler B. Anderson, Cole R. Armstrong, Logan D. Baker, David N. Burrows, Zachary E. Catlin, Seth K. Culbertson, Derek B. Fox, Daniel M. LaRocca, Gooderham McCormick, The Pennsylvania State Univ. (United States); David M. Palmer, Los Alamos National Lab. (United States); Mitchell Wages, Daniel Washington, The Pennsylvania State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-237

Performance analysis of embedded firmware for the detection of gamma-ray bursts on a 2U CubeSat

Author(s): Joseph Mangan, David Murphy, Rachel Dunwoody, Maeve Doyle, Alexey Uliyanov, Univ. College Dublin (Ireland); Mike Hibbett, Irish Manufacturing Research (Ireland); Sai Krishna Reddy Akarapu, Jessica Erkal, Gabriel Finneran, Fergal Marshall, Jack Reilly, Lána Salmon, Eoghan Somers, Joseph Thompson, Sarah Walsh, Lorraine Hanlon, David McKeown, William O'Connor, Univ. College Dublin (Ireland); Brian Shortt, European Space Research and Technology Ctr., European Space Agency (Netherlands); Ronan Wall, Sheila McBreen, Univ. College Dublin (Ireland)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-239

Localizing cosmic explosions in hard X rays with a 2U CubeSat

Author(s): João Braga, Instituto Nacional de Pesquisas Espaciais (Brazil)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-240

Development of the grade selection of X-ray events using machine learning for a CubeSat application

Author(s): Hsien-Chieh Shen, Takanori Sakamoto, Motoko Serino, Aoyama Gakuin Univ. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-241

Star-Planet Activity Research CubeSat (SPARCS) science payload assembly, integration, and testing plan

Author(s): Logan Jensen, Johnathan Gamaunt, Arizona State Univ. (United States); Paul Scowen, NASA Goddard Space Flight Ctr. (United States); Matthew Beasley, Southwest Research Institute (United States); Jim Austin, Jim Austin Consulting, LLC (United States); Todd J. Veach, Southwest Research Institute (United States); Evgenya Shkolnik, Arizona State Univ. (United States); Nathaniel Struebel, AZ Space Technologies LLC (United States); Daniel Jacobs, Judd Bowman, Tahina Ramiaramanantsoa, Arizona State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-242

Star-Planet Activity Research CubeSat (SPARCS) instrument thermal vacuum testing setup

Author(s): Johnathan Gamaunt, Logan Jensen, Arizona State Univ. (United States); Paul Scowen, NASA Goddard Space Flight Ctr. (United States); David Ardila, Jet Propulsion Lab., NASA (United States); Nathaniel Struebel, AZ Space Technologies, LLC (United States); Tahina Ramiaramanantsoa, Daniel Jacobs, Arizona State Univ. (United States); April D. Jewell, Shouleh Nikzad, Jet Propulsion Lab., NASA (United States); Evgenya Shkolnik, Arizona State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-243

Uniformity of the GEO-X aluminum and polyimide optical blocking filter

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-244

The GEO-X optical blocking filter

Author(s): Ikuyuki Mitsuishi, Kazuto Kashiwakura, Nagoya Univ. (Japan); Yuichiro Ezoe, Kumi Ishikawa, Masaki Numazawa, Sae Sakuda, Daiki Ishi, Aoto Fukushima, Tomoki Uchino, Hiromi Morishita, Yoko Ueda, Ayata Inagaki, Tokyo Metropolitan Univ. (Japan); Benjamin R. Zeiger, Luxel Corp. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-245

Ultra-lightweight X-ray telescope fabricated with multiple MEMS technologies for GEO-X mission

Author(s): Masaki Numazawa, Yuichiro Ezoe, Kumi Ishikawa, Daiki Ishi, Aoto Fukushima, Sae Sakuda, Tomoki Uchino, Ayata Inagaki, Hiromi Morishita, Yoko Ueda, Takatoshi Murakawa, Luna Sekiguchi, Yukine Tsuji, Tokyo Metropolitan Univ. (Japan); Ikuyuki Mitsuishi, Nagoya Univ. (Japan); Hiroshi Nakajima, Kanto Gakuin Univ. (Japan); Yoshiaki Kanamori, Tohoku Univ. (Japan); Kohei Morishita, Kyushu Univ. (Japan); Kazuhisa Mitsuda, National Astronomical Observatory of Japan (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-246

tREXS focal plane camera

Author(s): James H. Tutt, Ross C. McCurdy, Randall L. McEntaffer, Bridget O'Meara, Katherine Brooks, Tyler B. Anderson, Daniel Washington, Joseph Kang, The Pennsylvania State Univ. (United States); Drew M. Miles, Caltech (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-247

A SmallSat to Study the Structure and Evolution of ExoJupiter Atmospheres (SEEJ)

Author(s): Scott J. Wolk, Jae Sub Hong, Suzanne Romaine, Edward Hertz, Harvard-Smithsonian Ctr. for Astrophysics (United States); Katja Poppenhaeger, Univ. Potsdam (Germany); Vinay Kashyap, Bradford Wargelin, Harvard-Smithsonian Ctr. for Astrophysics (United States); Althea Moorhead, Dennis Gallagher, NASA Marshall Space Flight Ctr. (United States); Lisa Kaltenegger, Cornell Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-248

Development of a method for aligning lobster eye optics onboard HiZ-GUNDAM with X-rays and visible light

Author(s): Hatsune Goto, Daisuke Yonetoku, Naoki Ogino, Shuta Takahashi, Makoto Arimoto, Tatsuya Sawano, Kanazawa Univ. (Japan); Tatehiro Mihara, RIKEN Cluster for Pioneering Research (Japan); Takanori Sakamoto, Jin Li, Aoyama Gakuin Univ. (Japan); Yoshitomo Maeda, Akihiro Doi, Institute of Space and Astronautical Science (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-249

Calibration of the first detector flight models for the HERMES constellation and the SpIRIT mission

Author(s): Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-250

Back end electronics onboard HERMES nano-satellites

Author(s): Giuseppe Sottile, Francesco Russo, Paolo Nogara, Giovanni La Rosa, Melania Del Santo, INAF - Istituto Nazionale di Astrofisica (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-252

TSO: A nUV-midIR Rapid-Response 1.5m telescope for All TDA at L2

Author(s): Jonathan E. Grindlay, Edo Berger, Harvard-Smithsonian Ctr. for Astrophysics (United States); S. B. Cenko, NASA Goddard Space Flight Ctr. (United States); Martin E. Elvis, Harvard-Smithsonian Ctr. for Astrophysics (United States); Fiona A. Harrison, Caltech (United States); Suvi T. Gezari, Columbia Univ. (United States); Paul J. Green, Harvard-Smithsonian Ctr. for Astrophysics (United States); Dieter H. Hartmann, Clemson Univ. (United States); Zeljko Ivezic, Univ. of Washington (United States); Mansi M. Kasliwal, Caltech (United States); Alexander S. Kutyrev, NASA Goddard Space Flight Ctr. (United States); Sarah J. Lipscy, Ball Aerospace (United States); Gary J. Melnick, Harvard-Smithsonian Ctr. for Astrophysics (United States); Brian Metzger, Columbia Univ. (United States); George H. Rieke, Steward Observatory (United States); Yue Shen, Univ. of Illinois (United States); Nial Tanvir, Univ. of Leicester (United Kingdom); Anthony J. Tyson, Univ. of California, Davis (United States); W. Michael Wood-Vasey, Univ. of Pittsburgh (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS8: POSTERS - MISSIONS IN DEVELOPMENT

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-253

on-ground calibration highlights for the SVOM/ECLAIRs camera

Author(s): Olivier Godet, Institut de Recherche en Astrophysique et Planétologie (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-254

Development and characterization of the microchannel X-Ray telescope camera on board the SVOM mission

Author(s): Diana Renaud, Axel Arhancet, CEA-Paris-Saclay (France); Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Eric Doumayrou, Luc Dumay, Alain Goetschy, Diego Götz, Tony Lavanant, Michel Lortholary, Isabelle Le Mer, François Nico, Frédéric P. Pinsard, Marin Prieur, Léna Provost, Nicolas Renault-Tinacci, Benjamin Schneider, Thierry Tourrette, François Visticot, CEA-Paris-Saclay (France); Norbert Meidinger, Max-Planck-Institut für extraterrestrische Physik (Germany); Karine Mercier, Ctr. National d'Études Spatiales (France); Aline Meuris, CEA-Paris-Saclay (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-259

Synthesis of technological development and AIT/AIV activities on ECLAIRs camera flight model onboard the SVOM space mission

Author(s): Vincent Waegebaert, Roger Pons, Carine Amoros, Institut de Recherche en Astrophysique et Planétologie, CNRS (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-260

The ECLAIRs/UGTS scientific trigger and data processing unit onboard the SVOM satellite: status and ground calibration results

Author(s): Stéphane Schanne, CEA-Paris-Saclay (France), CEA-IRFU (France); Nicolas Dagoneau, Pierre Kestener, Hervé Le Provost, Frédéric Château, Camille Tahoulan, François Daly, Shebli Anvar, Charles-Hubert Besson, Lioudmila Klenov, Pier-Francesco Rocci, Bertrand Cordier, Thierry Tourrette, CEA-Paris-Saclay (France); Philippe Guillemot, Marie-Claire Charmeau, Laurent Perraud, Ctr. National d'Études Spatiales (France); Jean-Luc Atteia, Olivier Godet, Institut de Recherche en Astrophysique et Planétologie (France); Hugo Allaire, Benjamin Schneider, Wenjin Xie, CEA-Paris-Saclay (France); Carine Amoros, Institut de Recherche en Astrophysique et Planétologie (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-271

The Space Weather X-Ray spectrometer for the Helianthus sub-L1 mission with solar photonic propulsion

Author(s): Vladimiro Noce, INAF - Osservatorio Astrofisico di Arcetri (Italy); Salvatore Varisco, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Federico Landini, INAF - Osservatorio Astrofisico di Torino (Italy); Roberto Candia, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Marco Barbera, Univ. degli Studi di Palermo (Italy); Luca Zangrilli, Davide Loreggia, INAF - Osservatorio Astrofisico di Torino (Italy); Alfonso Collura, Univ. degli Studi di Palermo (Italy); Silvano Fineschi, INAF - Osservatorio Astrofisico di Torino (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS9: POSTERS - XRISM

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-261

Ground test results of the electromagnetic interference in the x-ray microcalorimeter onboard XRISM

Author(s): Miki Kurihara, The Univ. of Tokyo (Japan); Masahiro Tsujimoto, Shugo Oguri, Frederick Matsuda, Institute of Space and Astronautical Science (Japan); Caroline A. Kilbourne, Brian J. McLaughlin, Frederick S. Porter, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-262

XSLIDE (X-Ray Spectral Line IDentifier and Explorer): a quick-look tool for XRISM

Author(s): Efrem Braun, NASA Goddard Space Flight Ctr. (United States), ADNET Systems, Inc. (United States); Chris Baluta, NASA Goddard Space Flight Ctr. (United States), ADNET Systems (United States); Trisha F. Doyle, Patricia L. Hall, NASA Goddard Space Flight Ctr. (United States), Innovim, LLC (United States); Robert S. Hill, NASA Goddard Space Flight Ctr. (United States), ADNET Systems, Inc. (United States); Matthew P. Holland, NASA Goddard Space Flight Ctr. (United States); Michael Loewenstein, NASA Goddard Space Flight Ctr. (United States), Center for Research and Exploration in Space Science and Technology (United States), University of Maryland, College Park (United States); Eric D. Miller, Massachusetts Institute of Technology (United States); Michael C. Witthoeft, NASA Goddard Space Flight Ctr. (United States), ADNET Systems, Inc. (United States); Tahir Yaqoob, NASA Goddard Space Flight Ctr. (United States), Center for Research and Exploration in Space Science and Technology (United States), University of Maryland, Baltimore County (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-263

Ground Calibration of the X-ray Mirror Assembly for the X-Ray Imaging and Spectroscopy Mission (XRISM) III - Performance variation across the aperture

Author(s): Takayuki Hayashi, Keisuke Tamura, Rozenn Boissay-Malaquin, Ctr. for Space Sciences and Technology, Univ. of Maryland, Baltimore County (United States), NASA Goddard Space Flight Ctr. (United States); Takashi Okajima, NASA Goddard Space Flight Ctr. (United States); Toshiki Sato, Rikkyo Univ. (Japan); Lawrence G. Olsen, Richard Koenecke, Wilson Lara, Leor Bleier, NASA Goddard Space Flight Ctr. (United States); Megan E. Eckart, Lawrence Livermore National Lab. (United States); Maurice A. Leutenegger, NASA Goddard Space Flight Ctr. (United States); Tahir Yaqoob, Ctr. for Space Sciences and Technology, Univ. of Maryland, Baltimore County (United States), NASA Goddard Space Flight Ctr. (United States); Meng Chiao, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-264

Event loss and spectral distortion of the XRISM Resolve x-ray microcalorimeter in high count rate observations

Author(s): Misaki Mizumoto, Kyoto Univ. (Japan); Masahiro Tsujimoto, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Renata Cumbee, NASA Goddard Space Flight Ctr. (United States); Megan E. Eckart, Lawrence Livermore National Laboratory (United States); Yoshitaka Ishisaki, Tokyo Metropolitan Univ. (Japan); Caroline A. Kilbourne, Edmund Hodges-Kluck, Maurice A. Leutenegger, Frederick S. Porter, NASA Goddard Space Flight Ctr. (United States); Makoto Sawada, RIKEN (Japan); Yoh Takei, ISAS/JAXA (Japan); Shinya Yamada, Rikkyo Univ. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-265

The XRISM Pipeline Software System: Connecting Continents, Processes, Testing, and Scientists

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-266

Xappl: software framework for the XRISM pre-pipeline

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-267

Relative timing calibration of the Resolve x-ray microcalorimeter onboard XRISM using the modulated x-ray source

Author(s): Tomoki Omama, Masahiro Tsujimoto, The Graduate Univ. for Advanced Studies (Japan), Japan Aerospace Exploration Agency (Japan); Makoto Sawada, RIKEN (Japan); Caroline A. Kilbourne, National Aeronautics and Space Administration (NASA) (United States); Megan E. Eckart, Lawrence Livermore National Laboratory (United States); Yoshitaka Ishisaki, Tokyo Metropolitan Univ. (Japan); Shunji Kitamoto, Rikkyo Univ. (Japan); Maurice A. Leutenegger, Frederick S. Porter, National Aeronautics and Space Administration (NASA) (United States); Rob Wolfs, SRON Netherlands Institute for Space Research (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-268

Ground test results of the micro vibration interference for the x ray microcalorimeter onboard XRISM

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-269

Pulse parameters optimization of the modulated X-ray sources for the Resolve microcalorimeter spectrometer on XRISM

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS10: POSTERS - EXTP

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-132

The mechanical design and implementation of the WFM cameras for eXTP

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-133

The Instrument Control Unit processing hardware and software of the Wide Field Monitor on eXTP

Author(s): Emrah Kalemci, Sabanci Univ. (Turkey); Onur Turhan, TÜBITAK Space Technologies Research Institute (Turkey); Irfan Kuvvetli, DTU Space, Technical Univ. of Denmark (Denmark); Stéphane Schanne, CEA-IRFU (France); Margarita Hernanz, Institut de Ciències de l'Espai (Spain); Piotr Orleanski, Space Research Ctr. Polish Academy of Sciences (Poland); Müberra Sungur, TÜBITAK Space Technologies Research Institute (Turkey); Chris Tenzer, Institut für Astronomie und Astrophysik Tübingen, Eberhard Karls Univ. Tübingen (Germany); Ahmet Onat, Istanbul Technical Univ. (Turkey); Ayhan Bozkurt, Sabanci Univ. (Turkey); José-Luis Galvez, Institut de Ciències de l'Espai (Spain); Søren Brandt, DTU Space, Technical Univ. of Denmark (Denmark); Konrad R. Skup, Malgorzata Michalska, Space Research Ctr. Polish Academy of Sciences (Poland); Denis Tcherniak, DTU Space, Technical Univ. of Denmark (Denmark)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-134

The detector/readout-electronics assembly of the eXTP Wide Field Monitor

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-136

Development of the eXTP Optics

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-137

Design and optimization of electronic deflector in eXTP SFA and PFA

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-138

Thermal analysis of the eXTP focusing mirror assembly

Author(s): Jia Ma, YanJi Yang, Yusa Wang, Yong Chen, Yupeng Xu, Weichun Jiang, Aimei Zhang, Xiaojing Liu, Zeyu Song, Min Cong, JiaWei Zhang, Zijian Zhao, Xiongtao Yang, Dongjie Hou, Can Chen, Ke Yu, HuiLin He, Institute of High Energy Physics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-139

Design and testing of the Structure of the eXTP Optics.

Author(s): Zeyu Song, Jia Ma, Aimei Zhang, Yanji Yang, Yong Chen, Ke Yu, Institute of High Energy Physics (China); Yupeng Xu, Huilin He, Institute of High Energy Physics (China), Univ. of Chinese Academy of Sciences (China); Fangjun Lu, Shuangnan Zhang, Institute of High Energy Physics (China); Stefano Basso, Marta M. Civitani, Giovanni Pareschi, Giorgia Sironi, Daniele Spiga, Vincenzo Cotroneo, Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy); Lizhi Sheng, Yongqing Yan, PengFei Qiang, Baosheng Zhao, Xi'an Institute of Optics and Precision Mechanics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-140

Improving the eXTP/LAD detector energy resolution with a refined sensor design

Author(s): Gianluigi Zampa, Istituto Nazionale di Fisica Nucleare (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-141

Development of the end-to-end simulator of the eXTP/WFM instrument

Author(s): Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Fabio Crescenti, Institut de Ciències de l'Espai, Consejo Superior de Investigaciones Científicas (Spain); Yuri Evangelista, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Margarita Hernanz, Ander Hormaetxe, Institut de Ciències de l'Espai, Consejo Superior de Investigaciones Científicas (Spain); Jean In't Zand, Lucien Kuiper, SRON Netherlands Institute for Space Research (Netherlands); Alessandro Patruno, Institut de Ciències de l'Espai, Consejo Superior de Investigaciones Científicas (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-142

The digital data processing concepts of the Large Area Detector and the Wide Field Monitor onboard eXTP

Author(s): Chris Tenzer, Eberhard Karls Univ. Tübingen (Germany); Andrea Argan, INAF (Italy); David Baudin, CEA (France); Jörg Bayer, Eberhard Karls Univ. Tübingen (Germany); Florent Bouyjou, CEA (France); Yuri Evangelista, Marco Feroci, INAF (Italy); José-Luis Galvez, Consejo Superior de Investigaciones Científicas (Spain); Paul Hedderman, Eberhard Karls Univ. Tübingen (Germany); Margarita Hernanz, Consejo Superior de Investigaciones Científicas (Spain); Aline Meuris, CEA (France); Samuel Pliego-Caballero, Andrea Santangelo, Eberhard Karls Univ. Tübingen (Germany); Alessio Trois, INAF (Italy); Xianqi Wang, Hao Xiong, Eberhard Karls Univ. Tübingen (Germany); Gianluigi Zampa, Istituto Nazionale di Fisica Nucleare (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-143

Characterization of the full-scale linear Silicon Drift Detector for eXTP/LAD

Author(s): Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Pierluigi Bellutti, Fondazione Bruno Kessler (Italy); Giuseppe Bertuccio, Politecnico di Milano (Italy); Mirko Boezio, Walter Bonvicini, Istituto Nazionale di Fisica Nucleare (Italy); Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Yuri Evangelista, Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Francesco Ficorella, Fondazione Bruno Kessler (Italy); Mauro Fiorini, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Marco Grassi, Piero Malcovati, Univ. degli Studi di Pavia (Italy); Riccardo Munini, Istituto Nazionale di Fisica Nucleare (Italy); Antonino Picciotto, Fondazione Bruno Kessler (Italy); Alexander Rashevsky, Istituto Nazionale di Fisica Nucleare (Italy); Irina Rashevskaya, Trento Institute for Fundamental Physics and Applications (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Andrea Vacchi, Univ. degli Studi di Udine (Italy); Gianluigi Zampa, Nicola Zampa, Istituto Nazionale di Fisica Nucleare (Italy); Nicola Zorzi, Fondazione Bruno Kessler (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-144

Filters design and characterization for LAD instrument onboard eXTP

Author(s): Ugo Lo Cicero, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Marco Barbera, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Nicola Montinaro, Univ. de Genève (Switzerland), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Fabio D'Anca, INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy), Univ. degli Studi di Palermo (Italy); Michela Todaro, Elena Puccio, Univ. degli Studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Luisa Sciortino, Univ. degli studi di Palermo (Italy), INAF - Osservatorio Astronomico di Palermo "Giuseppe Salvatore Vaiana" (Italy); Filippo Ambrosino, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Tianxiang Chen, Yong Chen, Institute of High Energy Physics (China); Yuri Evangelista, Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Na Gao, Institute of High Energy Physics (China); Christian Gollwitzer, Evelyn Handick, Michael Krumrey, Christian Laubis, Physikalisch-Technische Bundesanstalt (Germany); Fangjun Lu, Yupeng Xu, Institute of High Energy Physics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-146

Status of ADR Prototype for HUBS Mission

Author(s): Hai Jin, Chengzhe Li, Jiao Ding, Jiejia Liu, Wei Cui, Tsinghua Univ. (China); Jun Shen, Technical Institute of Physics and Chemistry (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-147

Discussion on HUBS Satellite Mission Architecture and the Key Technologies of Mechanical and Thermal Designs

Author(s): Wei Zhang, Jianwei Wang, Jin Yang, Guojun Xia, Yibo Cai, Xi Lu, Shanghai Institute of Satellite Engineering (China); Zhanshan Wang, Tongji Univ. (China); Wei Wang, Shanghai Institute of Satellite Engineering (China); Wei Cui, Tsinghua Univ. (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-148

design of SQUID array amplifier with low noise and high transfer function for HUBS

Author(s): Yingyu Chen, Yining Zheng, Liliang Ying, Bo Gao, Zhen Wang, Shanghai Institute of Microsystem and Information Technology (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-152

Collimator of the ultra-lightweight X-ray telescope for the GEO-X mission

Author(s): Kumi Ishikawa, Takatoshi Murakawa, Daiki Ishi, Masaki Numazawa, Aoto Fukushima, Sae Sakuda, Tomoki Uchino, Ayata Inagaki, Hiromi Morishita, Yoko Ueda, Luna Sekiguchi, Yukine Tsuji, Yuichiro Ezoe, Tokyo Metropolitan Univ. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-153

An X-ray interferometry concept for ESA's Voyage 2050 programme

Author(s): Roland H. den Hartog, SRON Netherlands Institute for Space Research (Netherlands); Phil Uttley, Univ. of Amsterdam (Netherlands); Henk Hoevers, SRON Netherlands Institute for Space Research (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-270

The thermo-mechanical design of the Module of the LAD instrument onboard the eXTP mission

Author(s): Giovanni Lombardi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Vasco Mendes, INAF - Istituto di Radioastronomia; Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS11: POSTERS - DETECTORS/OTHERS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-154

Understanding the effects of charge diffusion in next-generation soft X-ray imagers

Author(s): Eric D. Miller, Gregory Prigozhin, Beverly J. LaMarr, Marshall W. Bautz, Richard F. Foster, Catherine E. Grant, MIT Kavli Institute for Astrophysics and Space Research (United States); Craig S. Lage, Univ. of California, Davis (United States); Christopher Leitz, MIT Lincoln Lab. (United States); Andrew Malonis, MIT Kavli Institute for Astrophysics and Space Research (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-155

Reducing the background in X-ray imaging detectors via machine learning

Author(s): Daniel R. Wilkins, Steven W. Allen, Stanford Univ. (United States); Eric D. Miller, Richard F. Foster, Mark W. Bautz, Massachusetts Institute of Technology (United States); Tanmoy Chattopadhyay, Stanford Univ. (United States); Catherine E. Grant, Massachusetts Institute of Technology (United States); Sven C. Herrmann, Stanford Univ. (United States); Ralph P. Kraft, Harvard-Smithsonian Ctr. for Astrophysics (United States); Glenn Morris, Stanford Univ. (United States); Paul Nulsen, Gerrit Schellenberger, Harvard-Smithsonian Ctr. for Astrophysics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-156

effect of the earth atmosphere on the profile of pulsars

Author(s): Juan Zhang, Mingyu Ge, Youli Tuo, Shijie Zheng, Institute of High Energy Physics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-157

XGIS and WFM-IS: imaging performances above 150 keV

Author(s): Enrico Virgilli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Leo Cavazzini, Univ. degli Studi di Ferrara (Italy); Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Filippo Frontera, Cristiano Guidorzi, Lisa Ferro, Miguel Moita, Univ. degli Studi di Ferrara (Italy); Claudio Labanti, Ezequiel J. Marchesini, Fabio Fuschino, Lorenzo Amati, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Piero Rosati, Univ. degli Studi di Ferrara (Italy); Ezio Caroli, John B. Stephen, Natalia Auricchio, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-158

Frequency Domain Multiplexing readout of Transition-Edge Sensors for X-ray astronomy

Author(s): Hiroki Akamatsu, Davide Vaccaro, Luciano Gottardi, Jan van der Kuur, Cor P. de Vries, Marcel P. Bruijn, SRON Netherlands Institute for Space Research (Netherlands); Matteo D'Andrea, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Jian-Rong Gao, Jan-Willem A. den Herder, Ruud W. M. Hoogeveen, SRON Netherlands Institute for Space Research (Netherlands); Mikko Kiviranta, VTT Technical Research Ctr. of Finland Ltd. (Finland); Anton J. van der Linden, Brian D. Jackson, Kenichiro Nagayoshi, Kevin Ravensberg, Marcel L. Ridder, Emanuele Taralli, Sven Visser, Martin de Wit, SRON Netherlands Institute for Space Research (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-160

The evolution of the ACIS contamination layer on the Chandra X-ray Observatory from 2010 to 2022

Author(s): Paul P. Plucinsky, Smithsonian Astrophysical Observatory (United States); Herman Marshall, MIT Kavli Institute for Astrophysics and Space Research (United States); Akos Bogdan, Smithsonian Astrophysical Observatory (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-162

Retardation of aluminum oxide growth on aluminum thin films in cryogenic/low-oxygen environments

Author(s): S. Merlin Hart, Donovan K. Smith, Kendall Mitchell, Brigham Young Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-163

High Impedance TES microcalorimeter : a path toward breaking the power dissipation bottleneck of future X-ray space telescopes

Author(s): Benjamin Criton, Jean-Luc Sauvageot, Xavier de la Broïse, CEA (France); Stefanos Marnieros, Lab. de Physique des 2 Infinis Irène Joliot-Curie, CNRS (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS12: POSTERS - GAMMA-RAY AND POLARIZATION

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-164

Optical performance of the X-ray telescope for the XL-Calibur experiment

Author(s): Wataru Kamogawa, Hironori Matsumoto, Osaka Univ. (Japan); Quin Abarr, Washington Univ. in St. Louis (United States); Hisamitsu Awaki, Ehime Univ. (Japan); Richard Bose, Dana Braun, Washington Univ. in St. Louis (United States); Gianluigi de Geronimo, Stony Brook Univ. (United States); Paul Dowkontt, Washington Univ. in St. Louis (United States); Teruaki Enoto, Kyoto Univ. (Japan); Manel Errando, Washington Univ. in St. Louis (United States); Yasushi Fukazawa, Hiroshima Univ. (Japan); Akihiro Furuzawa, Fujita Health Univ. (Japan); Thomas Gadson, NASA Wallops Flight Facility (United States); Ephraim Gau, Washington Univ. in St. Louis (United States); Victor Guarino, Guarino Engineering (United States); Shuichi Gunji, Yamagata Univ. (Japan); Kiyoshi Hayashida, Osaka Univ. (Japan); Scott Heatwole, NASA Wallops Flight Facility (United States); Fumiya Imazato, Hiroshima Univ. (Japan); Kazunori Ishibashi, Nagoya Univ. (Japan); Manabu Ishida, Institute of Space and Astronautical Science (Japan); Nirmal Iyer, KTH Royal Institute of Technology (Sweden), The Oskar Klein Ctr. for Cosmoparticle Physics (Sweden); Keon Harmon, NASA Wallops Flight Facility (United States); Fabian Kislat, The Univ. of New Hampshire (United States); Mózsi Kiss, KTH Royal Institute of Technology (Sweden), The Oskar Klein Ctr. for Cosmoparticle Physics (Sweden); Takao Kitaguchi, RIKEN (Japan); Henric Krawczynski, Washington Univ. in St. Louis (United States); James Lanzi, NASA Wallops Flight Facility (United States); Lindsey Lisalda, Washington Univ. in St. Louis (United States); Yoshitomo Maeda, Institute of Space and Astronautical Science (Japan); Hiroto Matake, Hiroshima Univ. (Japan); Taisei Mineta, Osaka Univ. (Japan); Takuya Miyazawa, Okinawa Institute of Science and Technology Graduate Univ. (Japan); Tsunefumi Mizuno, Hiroshima Univ. (Japan); Takashi Okajima, NASA Goddard Space Flight Ctr. (United States); Mark Pearce, KTH Royal Institute of Technology (Sweden), The Oskar Klein Ctr. for Cosmoparticle Physics (Sweden); Zachary Peterson, NASA Wallops Flight Facility (United States); Brian Rauch, Nicole Cavero, Washington Univ. in St. Louis (United States); Felix Ryde, Theodor-Adrian Stana, KTH Royal Institute of Technology (Sweden), The Oskar Klein Ctr. for Cosmoparticle Physics (Sweden); Sean Spooner, The Univ. of New Hampshire (United States); David Stuchlik, NASA Wallops Flight Facility (United States); Hiromitsu Takahashi, Hiroshima Univ. (Japan); Tomoshi Takeda, Tokyo Univ. of Science (Japan); Mai Takeo, Tokyo Metropolitan Univ. (Japan); Toru Tamagawa, RIKEN (Japan); Hiroshi Tsunemi, Osaka Univ. (Japan); Nagomi Uchida, Hiroshima Univ. (Japan); Keisuke Uchiyama, Tokyo Univ. of Science (Japan); Andrew West, Washington Univ. in St. Louis (United States); Eric Wulf, U.S. Naval Research Lab. (United States); Yuto Yoshida, Tokyo Univ. of Science (Japan); Garry Simburger, Washington Univ. in St. Louis (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-165

Balloon-born narrow field of view Semiconductor Compton telescope concept - miniSGD -

Author(s): Kazuhiro Nakazawa, Kobayashi-Maskawa Institute for the Origin of Particles and the Universe, Nagoya Univ. (Japan); Yuna Tsuji, Nagoya Univ. (Japan); Shinichiro Takeda, Kavli Institute for the Physics and Mathematics of the Universe, The Univ. of Tokyo (Japan), iMAGINE-X Inc. (Japan); Keigo Okuma, Mii Ando, Nagoya Univ. (Japan); Shin Watanabe, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Masahiko Kobayashi, Kobayashi-Maskawa Institute for the Origin of Particles and the Universe, Nagoya Univ. (Japan); Naoki Ishida, Technical Ctr. of Nagoya Univ. (Japan); Tadayuki Takahashi, Kavli Institute for the Physics and Mathematics of the Universe, The Univ. of Tokyo (Japan); Mitsunobu Onishi, Toshihiko Arai, iMAGINE-X Inc. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-166

The COMCUBE CubeSat mission for gamma-ray burst polarimetry

Author(s): Vincent Tatischeff, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); Ion Cojocari, CEA-IRFU (France); Nicolas de Séréville, Jean-Jacques Dormard, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); Gonzalo Fernandez, INFN Sezione di Roma Tor Vergata (Italy); Mariya Georgieva, Clarisse Hamadache, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); Lorraine Hanlon, Univ. College Dublin (Ireland); Philippe Laurent, CEA-IRFU (France); Adrien Laviron, Christine Le Galliard, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); Jan Peter Lommler, Johannes Gutenberg Univ. Mainz (Germany); Sheila McBreen, Jim McDaid, Univ. College Dublin (Ireland); Anne Meyer, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France); Aldo Morselli, INFN Sezione di Roma Tor Vergata (Italy); David Murphy, Univ. College Dublin (Ireland); Henrique Neves, Lab. de Instrumentação e Física Experimental de Partículas (Portugal); Uwe Oberlack, Johannes Gutenberg Univ. Mainz (Germany); Rui Curado Silva, Lab. de Instrumentação e Física Experimental de Partículas (Portugal); Alexey Uliyanov, Univ. College Dublin (Ireland); Vincenzo Vitale, INFN Sezione di Roma Tor Vergata (Italy); Peter von Ballmoos, Institut de Recherche en Astrophysique et Planétologie (France); Thileli Zerrouki, Lab. de Physique des 2 Infinis Irène Joliot-Curie (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-167

The development and calibration of the Hard X-ray Photoelectric Polarimeter

Author(s): Anna Zajczyk, Univ. of Maryland, Baltimore County (United States); Kevin Black, Rock Creek Scientific (United States); Keith Jahoda, Joanne Hill-Kittle, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12181-169

A compact gamma-ray spectrometer for nuclear astrophysics and planetary science

Author(s): Zachary Hughes, Manel Errando, William Ho, Washington Univ. in St. Louis (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12181-145
Development of sensor SQUID and Zappe interferometer switch for HUBS

Contact author(s): Zheng Yining, Shanghai Institute of Microsystem and Information Technology, China

Poster

12181-149
A 4 K pulse tube cryocooler for the HUBS mission

Contact author(s): Chen Liubiao, Technical Institute of Physics and Chemistry, China

Poster

12181-150
An 800 mK helium sorption cooler for the HUBS mission

Contact author(s): Xi Xiaotong, Chinese Academy of Sciences, China

Poster

12181-159
Source detection algorithm for lobster eye telescopes with machine learning algorithms

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Poster

12181-161
AstroPix: novel monolithic active pixel silicon sensors for future gamma-ray telescopes

Contact author(s): Steinhebel Amanda, NASA Goddard Space Flight Ctr., United States

Poster

12181-172
The thermal filter for the solar ultraviolet imaging telescope (SUIT) on-board Aditya-L1

Contact author(s): Ghosh Avyarthana, Inter-Univ. Ctr. for Astronomy and Astrophysics, India

Poster

12181-238
Mission pointing optimisation of twin satellite system for all-sky burst monitoring

Contact author(s): Xingbo Han, Innovation Academy for Microsatellites, China

Poster

12181-251
The power supply unit onboard the HERMES nano-satellite constellation

Contact author(s): Nogara Paolo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo, Italy

Poster

12181-256
Scenario design and preliminary verification of SVOM operational test

Contact author(s): Su Ruifeng, Innovation Academy for Microsatellites, China

Poster

12181-257
Strategy of visible telescope on-board data processing during GRB localization in SVOM mission

Contact author(s): Su Ruifeng, Innovation Academy for Microsatellites, China

Poster

12181-47
SRG/eROSITA status and operations during the first four all-sky surveys

Contact author(s): Coutinho Diogo, Max-Planck-Institut für extraterrestrische Physik, Germany

Oral

12181-77
Super DIOS for exploring dark baryon

Contact author(s): Sato Kosuke, Saitama Univ., Japan

Oral

CONFERENCE 12182

Ground-based and Airborne Telescopes IX

17 - 22 July 2022 | Room 517 d

Conference Chairs: **Heather K. Marshall,** DKIST/National Solar Observatory (United States); **Jason Spyromilio,** European Southern Observatory (Germany); **Tomonori Usuda,** National Astronomical Observatory of Japan (Japan)

Program Committee: **Bruce C. Bigelow,** GMTO Corp. (United States); **Emanuela Ciattaglia,** European Southern Observatory (Germany); **Matthew Colless,** Research School of Astronomy & Astrophysics, The Australian National Univ. (Australia); **Jean-Gabriel Cuby,** Lab. d'Astrophysique de Marseille (France); **Frank W. Kan,** Simpson Gumpertz & Heger Inc. (United States); **Victor L. Krabbendam,** Vera C. Rubin Observatory (United States); **Jeffrey R. Kuhn,** Univ. of Hawai'i (United States); **Maria Grazia Labate,** SKA Organisation (United Kingdom); **Bernhard Lopez,** Cherenkov Telescope Array Observatory gGmbH (Germany); **Anamparambu N. Ramaprakash,** Inter-Univ. Ctr. for Astronomy and Astrophysics (India); **Trupti Ranka,** GMTO Corp. (United States); **Stephen A. Rinehart,** NASA Goddard Space Flight Ctr. (United States); **Amir Sadjadpour,** Thirty Meter Telescope (United States); **Mario Tapia,** European Southern Observatory (Chile); **Jürgen Wolf,** Deutsches SOFIA Institut (Germany); **Yongtian Zhu,** Nanjing Institute of Astronomical Optics & Technology (China)

SESSION 1: PHASING AND ALIGNMENT

17 July 2022 • 09:00 - 10:20 EDT | Room 517 d

Session Chair: Jeffrey R. Kuhn, Institute for Astronomy (United States)

12182-1

A laser-tracker-target fiducialized alignment telescope for astronomical telescope alignment

Author(s): Andrew P. Rakich, Mersenne Optical Consulting (New Zealand); Dijana Bugonovic, KiwiStar Optics (New Zealand)

17 July 2022 • 09:00 - 09:20 EDT | Room 517 d

12182-2

Solar radiation effects on the Sardinia Radio Telescope performances

Author(s): Alessandro Attoli, Franco Buffa, INAF - Osservatorio Astronomico di Cagliari (Italy); Antonio Cazzani, Univ. degli Studi di Cagliari (Italy); Antonietta Fara, INAF - Osservatorio Astronomico di Cagliari (Italy); Davide Fierro, INAF (Italy); Francesco Gaudiomonte, Pasqualino Marongiu, Mauro Pili, Tonino Pisanu, Sergio Poppi, INAF - Osservatorio Astronomico di Cagliari (Italy); Giannina Sanna, Univ. degli Studi di Cagliari (Italy); Giampaolo Serra, Agenzia Spaziale Italiana (Italy), INAF - Osservatorio Astronomico di Cagliari (Italy); Flavio Stochino, Univ. degli Studi di Cagliari (Italy); Gian Paolo Vargiu, INAF - Osservatorio Astronomico di Cagliari (Italy)

17 July 2022 • 09:20 - 09:40 EDT | Room 517 d

12182-3

Development towards an automated in-flight alignment procedure for the GigaBIT Telescope

Author(s): Lun Li, Steven Benton, William C. Jones, N. Jeremy Kasdin, Princeton Univ. (United States)

17 July 2022 • 09:40 - 10:00 EDT | Room 517 d

12182-4

The wavefront correction system of the 1m balloon-borne telescope Sunrise-III

Author(s): Thomas Berkefeld, Reiner Volkmer, Frank Heidecke, Eiji Nakai, Tobias Preis, Alexander Bell, Thomas Sonner, Leibniz-Institut für Sonnenphysik (KIS) (Germany); Sami Solanki, Achim Gandorfer, Andreas Lagg, Alex Feller, Tino Riethmüller, Max-Planck-Institut für Sonnensystemforschung (Germany); Yukio Katsukawa, National Astronomical Observatory of Japan (Japan); Pietro Bernasconi, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain)

17 July 2022 • 10:00 - 10:20 EDT | Room 517 d

Coffee Break 10:20 - 10:50

SESSION 2: ALIGNMENT AND WAVEFRONT SENSING

17 July 2022 • 10:50 - 12:50 EDT | Room 517 d

Session Chair: Jeffrey R. Kuhn, Institute for Astronomy (United States)

12182-5

The Extremely Large Telescope (ELT) M1 Local Coherencer to phase mirror segments

Author(s): Gaizka Murga, Alexander Díaz, Rubén Sanquirce, IDOM S.A. (Spain); Santiago Royo, Carles Pizarro, Ctr. de Desarrollo de Sensores, Instrumentación y Sistemas, Univ. Politècnica de Catalunya (Spain); Maialen González, Elena Lara, IDOM S.A. (Spain); Noel Rodrigo, Pau Santos, Ctr. de Desarrollo de Sensores, Instrumentación y Sistemas, Univ. Politècnica de Catalunya (Spain); Andreas Förster, Sebastian Schmid, Samuel Lévêque, Giorgio Filippi, European Southern Observatory (Germany)

17 July 2022 • 10:50 - 11:10 EDT | Room 517 d

12182-6

The GMT telescope metrology system design

Author(s): Breann N. Sitarski, GMTO Corp. (United States); Andrew P. Rakich, Mersenne Optical Consulting (New Zealand); Hugo Chiquito, Wylie Rosenthal, Priscila Pires, Bo Xin, Peter Thompson, Antonin H. Bouchez, Richard T. Demers, Glenn Brossus, GMTO Corp. (United States); Joel Nissen, Consultant (United States)

17 July 2022 • 11:10 - 11:30 EDT | Room 517 d

12182-7

The wide field phasing testbed for the Giant Magellan Telescope

Author(s): Brian A. McLeod, Harvard-Smithsonian Ctr. for Astrophysics (United States); Antonin H. Bouchez, GMTO Corp. (United States); Daniel Catropa, Peyton Benac, Daniel Durusky, Jan Kansky, Derek Kopon, Grant Meiners, Harvard-Smithsonian Ctr. for Astrophysics (United States); Stuart McMuldroch, GMTO Corp. (United States); William Podgorski, Harvard-Smithsonian Ctr. for Astrophysics (United States); Richard T. Demers, Fernando Quiros-Pacheco, William Schoenell, Patricio Schurter, Breann N. Sitarski, GMTO Corp. (United States); Guillermo Gonzalez, Bijan Nemati, The Univ. of Alabama in Huntsville (United States); Diogo Slepetys, Instituto Mauá de Tecnologia (Brazil)

17 July 2022 • 11:30 - 11:50 EDT | Room 517 d

12182-8

A Phase Retrieval Technique to Measure and Correct Residual Segment Piston Errors of Large Aperture Optical Telescopes

Author(s): Sam Ragland, W. M. Keck Observatory (United States)

17 July 2022 • 11:50 - 12:10 EDT | Room 517 d

12182-10

INO340 active optics system design and development

Author(s): Mahdi Saeidifar, Mohammadreza Rostamian, Tayebeh Shokatpour, Habib G. Khosroshahi, Ramin Shomali, Masoud Bidar, Hooshdad Jenab, Iranian National Observatory (Iran, Islamic Republic of)

17 July 2022 • 12:10 - 12:30 EDT | Room 517 d

12182-11

Mini-tracker concept development for the Southern African Large Telescope (SALT)

Author(s): John A. Booth, Large Telescope Consulting Engineering (United States); Deon Lategan, Spaceteq (South Africa); Martyn Wells, UK Astronomy Technology Ctr. (United Kingdom)

17 July 2022 • 12:30 - 12:50 EDT | Room 517 d

Lunch/Exhibition Break 12:50 - 14:10

SESSION 3: OBSERVATORY UPGRADES

17 July 2022 • 14:10 - 15:10 EDT | Room 517 d

Session Chair: Jason Spyromilio, European Southern Observatory (Germany)

12182-14

Commissioning a laser metrology truss for active optics on the Large Binocular Telescope

Author(s): Andrew P. Rakich, Mersenne Optical Consulting (New Zealand); Heejoo Choi, Wyant College of Optical Sciences (United States); John M. Hill, Matthieu Bec, Christian Veillet, Yang Zhang, Large Binocular Telescope Observatory (United States); Trenton Brendel, Wyant College of Optical Sciences (United States); Breann N. Sitarski, GMTO Corp. (United States); Olga Kuhn, Large Binocular Telescope Observatory (United States)

17 July 2022 • 14:10 - 14:30 EDT | Room 517 d

12182-12

Development of a new control system and upgradation of the 50cm IAO telescope.

Author(s): Tsewang Stanzin, Sonam Jorphail, Padmakar Parihar, Dorje Angchuk, Tsewang Dorjai, Tashi Thsering, Tsewang Gyalson, Padma Dorjay, Urgain Stanzin, Phuntsok Dorjay, Tashi Pamber, Tsewang Phunchok, Indian Institute of Astrophysics (India)

17 July 2022 • 14:30 - 14:50 EDT | Room 517 d

12182-13

Errors in Deep Dish Development Array (6m) construction and metrology steps

Author(s): Mohammad Nouroz N. Islam, National Research Council Canada (Canada); Deniz Ölçek, NRC-Dominion Astrophysical Observatory (Canada); Gordon E. Lacy, National Research Council Canada (Canada); Hsin Cynthia Chiang, McGill Univ. (Canada); Richard Hellyer, National Research Council Canada (Canada)

17 July 2022 • 14:50 - 15:10 EDT | Room 517 d

Coffee Break 15:10 - 15:40

SESSION 4: FUTURE OBSERVATORIES

17 July 2022 • 15:40 - 16:20 EDT | Room 517 d

Session Chair: Jason Spyromilio, European Southern Observatory (Germany)

12182-15

The small-ELF project: toward an ultra-large coronagraphic optical receiver

Author(s): Jeffrey R. Kuhn, Institute for Astronomy (United States); Jean-Fabien Capsal, Institut National des Sciences Appliquées de Lyon (France); Ian Cunnyngham, Institute for Astronomy (United States); Maud Langlois, Observatoire de Lyon (France); Kevin Lewis, PLANETS Foundation (United States); Nicolas Lodieu, Instituto de Astrofísica de Canarias (Spain); Gil Moretto, Observatoire de Lyon (France); Rafael Rebolo, Instituto de Astrofísica de Canarias (Spain); Joe Ritter, Neoteric Advanced Technologies (United States); Ryan Swindle, Odyssey, Inc. (United States); Ye Zhou, Dynamic Intelligent Structures Ltd. (Canada); Stuart M. Jefferies, Georgia State Univ. (United States); Kritsadi Thetprapi, Observatoire de Lyon (France); David Audigier, Institut National des Sciences Appliquées de Lyon (France); Justin Fletcher, Odyssey Systems Consulting Group Ltd. (United States)

17 July 2022 • 15:40 - 16:00 EDT | Room 517 d

12182-16

Current status of MezzoCielo: a design aiming to a large aperture, extremely wide field of view telescope

Author(s): Roberto Ragazzoni, Silvio Di Rosa, Marco Dima, Carmelo Arcidiacono, Jacopo Farinato, Demetrio Magrin, Simone Zaggia, INAF - Osservatorio Astronomico di Padova (Italy)

17 July 2022 • 16:00 - 16:20 EDT | Room 517 d

SESSION 5: PATHFINDERS

17 July 2022 • 16:20 - 18:20 EDT | Room 517 d

SessionChairs: Stephen A. Rinehart, NASA (United States), Jason Spyromilio, European Southern Observatory (Germany)

12182-17

Design and Development of the CHORD 6m Composite Reflector

Author(s): Gordon E. Lacy, Mohammad Nouroz N. Islam, NRC-Herzberg Astronomy & Astrophysics (Canada); Scott Johnson, Imagination Machine Works Ltd. (Canada)

17 July 2022 • 16:20 - 16:40 EDT | Room 517 d

12182-18

The implementation of the ASTRI Mini-Array gamma-ray experiment at the Observatorio del Teide, Tenerife

Author(s): Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Saverio Lombardi, Agenzia Spaziale Italiana (Italy)

17 July 2022 • 16:40 - 17:00 EDT | Room 517 d

12182-19

The Small-Sized telescopes of the Cherenkov Telescope Array Observatory

Author(s): Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy)

17 July 2022 • 17:00 - 17:20 EDT | Room 517 d

12182-20

The Medium-Sized Telescopes of the Cherenkov Telescope Array Observatory

Author(s): Markus Garczarczyk, Deutsches Elektronen-Synchrotron (Germany), on behalf of the CTAO MST Programme (Germany)

17 July 2022 • 17:20 - 17:40 EDT | Room 517 d

12182-21

MARCOT Pathfinder at Calar Alto progress report

Author(s): Martin M. Roth, Leibniz-Institut für Astrophysik Potsdam (Germany); Jesus Aceituno, Ctr. Astronómico Hispano-Alemán (Spain); John Davenport, Kalaga Madhav, Leibniz-Institut für Astrophysik Potsdam (Germany); Jose L. Ortiz, Pedro J. Amado, Instituto de Astrofísica de Andalucía (Spain); Fran J. Pozuelos, STAR Institute (Belgium), Liège Univ. (Belgium); Rafael Luque, Nicolas Morales, Instituto de Astrofísica de Andalucía (Spain)

17 July 2022 • 17:40 - 18:00 EDT | Room 517 d

12182-22

Prototype Schwarzschild-Couder Telescope for the Medium-sized telescope of Cherenkov Telescope Array Observatory

Author(s): Vladimir V. Vassiliev, Univ. of California, Los Angeles (United States); C. B. Adams, Columbia Univ. (United States); G. Ambrosi, M. Ambrosio, C. Aramo, Istituto Nazionale di Fisica Nucleare (Italy); P. I. Batista, Deutsches Elektronen-Synchrotron (Germany); W. Benbow, Harvard-Smithsonian Ctr. for Astrophysics (United States); B. Bertucci, E. Bissaldi, M. Bitossi, A. Boiano, C. Bonavolontà, Istituto Nazionale di

Fisica Nucleare (Italy); R. Bose, Washington Univ. in St. Louis (United States); A. Brill, Columbia Univ. (United States); A. M. Brown, Ctr. for Advanced Instrumentation, Durham Univ. (United Kingdom); J. H. Buckley, Washington Univ. in St. Louis (United States); R. A. Cameron, Kavli Institute for Particle Astrophysics & Cosmology, Stanford Univ. (United States); R. Canestrari, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); M. Capasso, Columbia Univ. (United States); M. Caprai, Istituto Nazionale di Fisica Nucleare (Italy); C. E. Covault, Case Western Reserve Univ. (United States); D. De Paoli, L. Di Venere, Istituto Nazionale di Fisica Nucleare (Italy); M. Errando, Washington Univ. in St. Louis (United States); S. Fegan, Lab. Leprince-Ringuet, Ecole Polytechnique (France); Q. Feng, Barnard College (United States); E. Fiandrini, Istituto Nazionale di Fisica Nucleare (Italy); A. Furniss, California State Univ., East Bay (United States); A. Gent, Ctr. for Relativistic Astrophysics, Georgia Institute of Technology (United States); N. Giglietto, F. Giordano, Istituto Nazionale di Fisica Nucleare (Italy); E. Giro, INAF - Osservatorio Astronomico di Padova (Italy); R. Halliday, Michigan State Univ. (United States); O. Hervet, Univ. of California, Santa Cruz (United States); J. Holder, The Bartol Research Institute, Univ. of Delaware (United States); T. B. Humensky, Columbia Univ. (United States); S. Incardona, M. Ionica, Istituto Nazionale di Fisica Nucleare (Italy); W. Jin, The Univ. of Alabama (United States); D. Kieda, The Univ. of Utah (United States); S. Loporchio, G. Marsella, V. Masone, Istituto Nazionale di Fisica Nucleare (Italy); K. Meagher, Wisconsin IceCube Particle Astrophysics Ctr. (United States), Univ. of Wisconsin-Madison (United States); T. Meures, B. A. Mode, Wisconsin IceCube Particle Astrophysics Ctr. (United States); I. Mognet, The Pennsylvania State Univ. (United States); R. Mukherjee, Barnard College (United States), Columbia Univ. (United States); D. Nieto, Instituto de Física de Partículas y del Cosmos, Univ. Complutense de Madrid (Spain); A. Okumura, Kobayashi-Maskawa Institute for the Origin of Particles and the Universe, Nagoya Univ. (Japan); N. Otte, Ctr. for Relativistic Astrophysics, Georgia Institute of Technology (United States); F. R. Pantaleo, R. Paoletti, Istituto Nazionale di Fisica Nucleare (Italy); G. Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); F. Di Pierro, Istituto Nazionale di Fisica Nucleare (Italy); E. Pueschel, Deutsches Elektronen-Synchrotron (Germany); D. Ribeiro, Columbia Univ. (United States); L. Riitano, Wisconsin IceCube Particle Astrophysics Ctr. (United States); E. Roache, Harvard-Smithsonian Ctr. for Astrophysics (United States); D. Ross, Space Research Ctr., Univ. of Leicester (United Kingdom); J. Rousselle, Subaru Telescope, NAOJ (United States); A. Rugliancich, Istituto Nazionale di Fisica Nucleare (Italy); M. Santander, The Univ. of Alabama (United States); L. Stiaccini, Istituto Nazionale di Fisica Nucleare (Italy); H. Tajima, Kobayashi-Maskawa Institute for the Origin of Particles and the Universe, Nagoya Univ. (Japan); L. P. Taylor, Wisconsin IceCube Particle Astrophysics Ctr. (United States); L. Tosti, G. Tripodo, V. Vagelli, M. Valentino, Istituto Nazionale di Fisica Nucleare (Italy); J. Vandenbroucke, Wisconsin IceCube Particle Astrophysics Ctr. (United States); R. White, Max-Planck-Institut für Kernphysik (Germany); D. A. Williams, Univ. of California, Santa Cruz (United States); A. Zink, Erlangen Ctr. for Astroparticle Physics (Germany), Friedrich-Alexander-Univ. Erlangen-Nürnberg (Germany)

17 July 2022 • 18:00 - 18:20 EDT | Room 517 d

Coffee Break 10:00 - 10:30

SESSION 6: PROJECT REVIEWS: ARRAYS

18 July 2022 • 10:30 - 11:50 EDT | Room 517 d

SessionChairs: Jeffrey R. Kuhn, Institute for Astronomy (United States), Jason Spyromilio, European Southern Observatory (Germany)

12182-23

The ngVLA: A technical development update (Invited Paper)

Author(s): Robert Selina, Eric Murphy, Anthony Beasley, National Radio Astronomy Observatory (United States)

18 July 2022 • 10:30 - 11:00 EDT | Room 517 d

12182-24

Cherenkov Telescope Array Observatory (CTAO) – the world's first and largest ground-based gamma-ray observatory (Invited Paper)

Author(s): Wolfgang Wild, Federico Ferrini, Cherenkov Telescope Array Observatory gGmbH (Italy)

18 July 2022 • 11:00 - 11:30 EDT | Room 517 d

12182-171

The Square Kilometre Array Project Update

Author(s): Joseph P. McMullin, SKA Organisation (United Kingdom)

18 July 2022 • 11:30 - 11:50 EDT | Room 517 d

Lunch/Exhibition Break 11:50 - 13:20

SESSION 7: AS108 AND AS103 JOINT SESSION : MODELING AS A DRIVER OF DESIGN I

18 July 2022 • 13:20 - 15:00 EDT | Room 517 d

SessionChairs: Scott C. Roberts, NRC-Herzberg Astronomy & Astrophysics (Canada), Bruce C. Bigelow, GMTO Corp. (United States)

12187-70

Transient Wavefront Error from Cooled Air Downwind of Telescope Spiders

Author(s): Diogo Martins, Dassault Systemes 3DExcite GmbH (Germany); Ronald Holzlöhner, Christophe Vérinaud, European Southern Observatory (Germany); Christophe Kleinclaus, Dassault Systemes 3DExcite GmbH (Germany)

18 July 2022 • 13:20 - 13:40 EDT | Room 517 d

12187-71

Dynamic modeling, control and simulation of the EST telescope structure: quantifying performance during tracking operation.

Author(s): Jose M. Gonzalez-Cava, Mahy Soler, Juan Cózar-Castellano, Ángel Mato, Marta Belío-Asin, Jorge Sánchez-Capuchino, Miguel A. Núñez Cagigal, Mary Barreto, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 13:40 - 14:00 EDT | Room 517 d

12187-72

ESO ELT - vibration performance and budget verification: measured equipment data as input to telescope model

Author(s): Babak Sedghi, Pablo Zuluaga Ramirez, Dan Pilbauer, Serban Leveratto, Ulrich Lampater, Michael Müller, Gerd Jakob, Marcus Haug, Matteo Accardo, Yannick Lammen, Juan Carlos González Herrera, European Southern Observatory (Germany)

18 July 2022 • 14:00 - 14:20 EDT | Room 517 d

12187-73

Integrated Modeling based Performance Mode Compliance Analysis for the Giant Magellan Telescope

Author(s): Rodolphe Conan, George Z. Angeli, Brian Walls, Breann N. Sitarski, Rodrigo Romano, Christoph Dribusch, Henry Fitzpatrick, Konstantinos Vogiatzis, Kaushik Das, GMTO Corp. (United States)

18 July 2022 • 14:20 - 14:40 EDT | Room 517 d

12187-74

On the Relationship between Thermal Seeing and Observatory Design

Author(s): Konstantinos Vogiatzis, Hugh Thompson, John Rogers, Gelys Trancho, Thirty Meter Telescope (United States)

18 July 2022 • 14:40 - 15:00 EDT | Room 517 d

Coffee Break 15:00 - 15:30

SESSION 8: AS108 AND AS103 JOINT SESSION : MODELING AS A DRIVER OF DESIGN II

18 July 2022 • 15:30 - 17:10 EDT | Room 517 d

12182-25

The Vera C. Rubin Observatory 8.4m Telescope Calibration System Status

Author(s): Patrick J. Ingraham, Vera C. Rubin Observatory (United States); Christopher W. Stubbs, Harvard Univ. (United States); Robert H. Lupton, Princeton Univ. (United States); Ming Liang, Douglas R. Neill, Charles F. Claver, Vera C. Rubin Observatory (United States)

18 July 2022 • 15:30 - 15:50 EDT | Room 517 d

12182-26

a follow-up survey, and mitigation of the DKIST telescope mount vibrations

Author(s): Sebastien Poupar, Brialyn Onodera, Paul Jeffers, Shawn Culver, National Solar Observatory (United States)

18 July 2022 • 15:50 - 16:10 EDT | Room 517 d

12182-27

WIYN Telescope: Vibration analysis and mitigation strategies

Author(s): William R. McBride, Jayadev Rajagopal, Emily Hunting, Erik Timmermann, Sarah E. Logsdon, Mark Everett, Eli Golub, Jessica Klusmeyer, Dan Li, Wilson Liu, Susan Ridgway, Heidi Schweiker, Jesus Higuera, NOIRLab (United States)

18 July 2022 • 16:10 - 16:30 EDT | Room 517 d

12182-28

Development and testing of the wavefront sensor for the INO340 telescope

Author(s): Ramin Shomali, Habib G. Khosroshahi, Mahdi Saeidifar, Surena Fatemi, Hamed Altafi, Institute for Research in Fundamental Sciences (IPM), Iranian National Observatory (Iran, Islamic Republic of)

18 July 2022 • 16:30 - 16:50 EDT | Room 517 d

12182-29

Reverse finite element modelling and verification testing of the John A. Galt 26 m radio telescope

Author(s): Mohammad Nouroz N. Islam, Peter W. G. Byrnes, Timothy Robishaw, NRC-Herzberg Astronomy & Astrophysics (Canada); Han Qin Xin, Univ. of Victoria (Canada)

18 July 2022 • 16:50 - 17:10 EDT | Room 517 d

Coffee Break 10:00 - 10:30

SESSION 9: PROJECT REVIEWS: OBSERVATORIES COMPLETING CONSTRUCTION

19 July 2022 • 10:30 - 12:30 EDT | Room 517 d

Session Chairs: Amir Sadjadpour, Thirty Meter Telescope (United States), Heather K. Marshall, National Solar Observatory (United States)

12182-30

Rubin Observatory Simonyi Survey Telescope Status Overview (Invited Paper)

Author(s): Sandrine J. Thomas, Jeffrey D. Barr, Douglas R. Neill, Jacques Sebag, Andrew Clements, Shawn Callahan, Eduardo Serrano, Vera C. Rubin Observatory (United States)

19 July 2022 • 10:30 - 11:00 EDT | Room 517 d

12182-31

Eastern Anatolia Observatory (DAG): The Status in 2022 - Towards the First Light (Invited Paper)

Author(s): Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey); Onur Keskin, FMV Isik Univ. Ctr. for Optomechatronics Research & Application (OPAM) (Turkey); Laurent Jolissaint, Haute Ecole Spécialisée de Suisse Occidentale (Switzerland)

19 July 2022 • 11:00 - 11:30 EDT | Room 517 d

12182-32

Iranian National Observatory; project overview and achievements (Invited Paper)

Author(s): Habib G. Khosroshahi, Masoud Bidar, Hooshdad Jenab, Reza Ravanmehr, Mohammad Mohajer, Mahdi Saeidifar, Alireza Behnam, Iranian National Observatory (Iran, Islamic Republic of); Ramin Shomali, IPM (Iran, Islamic Republic of)

19 July 2022 • 11:30 - 12:00 EDT | Room 517 d

12182-172

The Daniel K. Inouye Solar Telescope: status update and first results (Invited Paper)

Author(s): Thomas R. Rimmele, National Solar Observatory (United States)

19 July 2022 • 12:00 - 12:30 EDT | Room 517 d

Lunch/Exhibition Break 12:30 - 13:30

SESSION 10: PROJECT REVIEWS: OBSERVATORIES UNDER CONSTRUCTION

19 July 2022 • 13:30 - 14:30 EDT | Room 517 d

Session Chair: Amir Sadjadpour, Thirty Meter Telescope (United States)

12182-33

CCAT-prime: a status report on the ultra-widefield submillimeter observatory on Cerro Chajnantor (Invited Paper)

Author(s): Gordon J. Stacey, Cornell Univ. (United States)

19 July 2022 • 13:30 - 14:00 EDT | Room 517 d

12182-34

The University of Tokyo Atacama Observatory 6.5m telescope : Project Status 2022 (Invited Paper)

Author(s): Takashi Miyata, The Univ. of Tokyo (Japan); Yuzuru Yoshii, The Univ. of Tokyo (Japan), The Univ. of Arizona (United States); Mamoru Doi, Kotaro Kohno, Masuo Tanaka, The Univ. of Tokyo (Japan); Kentaro Motohara, National Astronomical Observatory of Japan (Japan); Takeo Minezaki, Shigeyuki Sako, Tomoki Morokuma, Toshihiko Tanabe, Bunyo Hatsukade, Masahiro Konishi, Hidenori Takahashi, Takafumi Kamizuka, Fumi Egusa, Hiroaki Sameshima, Kentaro Asano, The Univ. of Tokyo (Japan); Atsushi Nishimura, National Astronomical Observatory of Japan (Japan); Shuhei Koyama, Natsuko Kato, Mizuki Numata, Tsutomu Aoki, The Univ. of Tokyo (Japan); Leonardo Bronfman, Maria T. Ruiz, Mario Hamuy, Rene Mendez, Guido Garay, Andres Escala, Univ. de Chile (Chile)

19 July 2022 • 14:00 - 14:30 EDT | Room 517 d

SESSION 11: OBSERVATORY OPERATIONS UPDATES

19 July 2022 • 14:30 - 15:20 EDT | Room 517 d

Session Chair: Amir Sadjadpour, Thirty Meter Telescope (United States)

12182-35

Stratospheric Observatory for Infrared Astronomy (Invited Paper)

Author(s): William Reach, Universities Space Research Association (United States)

19 July 2022 • 14:30 - 15:00 EDT | Room 517 d

12182-36

The Large Millimeter Telescope (LMT) Alfonso Serrano: Current status and telescope performance

Author(s): David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); F. Peter Schloerb, Univ. of Massachusetts Amherst (United States); Emmaly Aguilar Perez, COMIMSA - Corporación Mexicana de Investigación en Materiales S.A. de C.V (Mexico); Itziar Aretxaga, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Miguel Chávez Dagostino, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Edgar Colín, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico), Consejo Nacional de Ciencia y Tecnología (Mexico); Daniel Ferrusca Rodriguez, David M. Gale, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Víctor Gómez-Rivera, COMIMSA - Corporación Mexicana de Investigación en Materiales S.A. de C.V (Mexico); Arturo Gómez-Ruiz, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico), Consejo Nacional de Ciencia y Tecnología (Mexico); José Luis Hernández Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Alfredo Montaña, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico), Consejo Nacional de Ciencia y Tecnología (Mexico); Emir Marcos Moreno Nolasco, COMIMSA - Corporación Mexicana de Investigación en Materiales S.A. de C.V (Mexico); Lee G. Mundy, Univ. of Maryland, College Park (United States); Gopal Narayanan, Alexandra Pope, Univ. of Massachusetts Amherst (United States); Iván Rodríguez-Montoya, David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico), Consejo Nacional de Ciencia y Tecnología (Mexico); David R. Smith, MERLAB, P.C. (United States), Georgia Institute of Technology (United States); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Miguel Veláquez de la Rosa Becerra, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Grant W. Wilson, Min S. Yun, Univ. of Massachusetts Amherst (United States)

19 July 2022 • 15:00 - 15:20 EDT | Room 517 d

Coffee Break 15:20 - 15:50

SESSION 12: PROJECT REVIEWS: OBSERVATORIES IN DEVELOPMENT

19 July 2022 • 15:50 - 16:40 EDT | Room 517 d

12182-37

Maunakea Spectroscopic Explorer after the national strategic planning reviews (Invited Paper)

Author(s): Kei Szeto, Mary Beth Laychak, Canada-France-Hawaii Telescope Corp. (United States); Jennifer Marshall, Texas A&M Univ. (United States); Andy Sheinis, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 15:50 - 16:20 EDT | Room 517 d

12182-38

Overview of the status of the European Solar Telescope

Author(s): Carlos Quintero Noda, Manuel Collados, Mary Barreto Cabrera, Miguel Núñez Cagigal, Marta Belío-Asín, Jonai Bienes, Sergio Bonaque-González, Yanira Carballo-Martín, Juan Cózar-Castellano, Haresh Chulani, Noelia Feijóo Amoedo, Irene Ferro Rodríguez, Jose Manuel González-Cava, Francisco González, Ángela Hérnandez-Delgado, Roberto López López, Yolanda Martín Hernando, Ángel Mato, Antonio Matta-Gómez, Fernando Merlos García, Iciar Montilla, Luz Maria Montoya, Cristina Padilla-Hernández, Jorge Quintero Nehrkorn, Yeray Ramos Sapena, Silvia Regalado Olivares, Marcos Reyes García-Talavera, Horacio Rodríguez Delgado, Luis Fernando Rodríguez Ramos, Claudia Ruiz de Galarreta, Marco Sangiorgi, Jorge Sánchez Capuchino, María Luz Sánchez Rodríguez, Paula Sola La Serna, Mahy Soler Trujillo, Nauzet Vega Reyes, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 16:20 - 16:40 EDT | Room 517 d

SESSION 13: SEISMIC DESIGNS & WORKSHOP

19 July 2022 • 16:40 - 19:10 EDT | Room 517 d

Session Chairs: Frank W. Kan, Simpson Gumpertz & Heger Inc. (United States), Amir Sadjadpour, Thirty Meter Telescope (United States)

12182-39

Seismic isolation system design and performance of TMT telescope structure

Author(s): Masahiro Sugimoto, National Astronomical Observatory of Japan (Japan); Atsushi Kato, Junji Takaki, Masaki Tabata, Tomoya Hattori, Mitsubishi Electric Corp. (Japan); Amir Sadjadpour, Brady Espeland, Hugh A. Thompson, TMT International Observatory (United States); Satoru Sofuku, Yutaka Ezaki, Noboru Kawaguchi, Mitsubishi Electric Corp. (Japan); Tomonori Usuda, National Astronomical Observatory of Japan (United States); Hiroshi Kusumoto, Masao Saito, National Astronomical Observatory of Japan (Japan); Hiroshi Terada, National Astronomical Observatory of Japan (United States); Seiichi Tazawa, National Astronomical Observatory of Japan (Japan); Kyle Kinoshita, TMT International Observatory (United States)

19 July 2022 • 16:40 - 17:00 EDT | Room 517 d

12182-40

Earthquake acceleration control at the Giant Magellan Telescope mount

Author(s): Eberhard Sust, Joachim Hammes, Peter Eisenträger, Ulrich Weis, Lars Steurer, OHB Digital Connect GmbH (Germany)

19 July 2022 • 17:00 - 17:20 EDT | Room 517 d

12182-41

Innovative Seismic Isolation Technologies for ELT, GMT, TMT and future Giant Telescopes & Domes

Author(s): Gianpietro Marchiori, Simone De Lorenzi, Leonardo Ghedin, Riccardo Bressan, Matteo Spinola, Francesco Rampini, EIE Group S.r.l. (Italy)

19 July 2022 • 17:20 - 17:40 EDT | Room 517 d

12182-42

Seismic Workshop (Invited Paper)

Author(s): Bruce C. Bigelow, GMTO Corp. (United States); Amir Sadjadpour, TMT International Observatory (United States); Frank W. Kan, Simpson Gumpertz & Heger Inc. (United States)

19 July 2022 • 17:40 - 19:10 EDT | Room 517 d

Coffee Break 10:00 - 10:30

SESSION 14: PROJECT REVIEWS: EXTREMELY LARGE TELESCOPES

20 July 2022 • 10:30 - 12:00 EDT | Room 517 d

12182-43

Status of the ESO's ELT construction (Invited Paper)

Author(s): Roberto Tamai, Bertrand Koehler, Michele Cirasuolo, Fabio Biancat-Marchet, Juan-Carlos González Herrera, Suzanne Ramsay, Mauro Tuti, European Southern Observatory (Germany)

20 July 2022 • 10:30 - 11:00 EDT | Room 517 d

12182-44

Thirty Meter Telescope project status (Invited Paper)

Author(s): Fengchuan Liu, Thirty Meter Telescope (United States)

20 July 2022 • 11:00 - 11:30 EDT | Room 517 d

12182-45

Overview and status of the Giant Magellan Telescope project (Invited Paper)

Author(s): James L. Fanson, Rebecca Bernstein, David Ashby, Bruce C. Bigelow, Glenn Brossus, William S. Burgett, Richard T. Demers, Barbara M. Fischer, GMTO Corp. (United States); Francisco Figueroa, GMTO

Corp. (Chile); Robert Laskin, Rafael Millan-Gabet, Samuel Park, Martí Pi, Robert Turner, Brian Walls, GMTO Corp. (United States)
20 July 2022 • 11:30 - 12:00 EDT | Room 517 d

Lunch/Exhibition Break 12:00 - 13:30

SESSION 15: PROJECT REVIEWS: MULTI-MESSENGER OBSERVATORIES & COLLABORATIONS

20 July 2022 • 13:30 - 14:30 EDT | Room 517 d

Session Chair: Heather K. Marshall, National Solar Observatory (United States)

12182-46

Design, planning, and performance of the CMB-S4 experiment (Invited Paper)
Author(s): Robert W. Besuner, Lawrence Berkeley National Lab. (United States)
20 July 2022 • 13:30 - 14:00 EDT | Room 517 d

12182-47

NOIRLab US-ELTP project management update and future plans (Invited Paper)
Author(s): Marie Lemoine-Busserole, Gemini Observatory (United States), NSF's NOIRLab (United States), United States-Extremely Large Telescope Program (United States); Steven Berukoff, NSF's National Optical-Infrared Astronomy Research Lab. (United States), United States-Extremely Large Telescope Program (United States)
20 July 2022 • 14:00 - 14:30 EDT | Room 517 d

SESSION 16: OPTO-MECHANICAL SYSTEMS

20 July 2022 • 14:30 - 15:00 EDT | Room 517 d

Session Chair: Heather K. Marshall, National Solar Observatory (United States)

12182-48

Design and Development of a mirror support system for Prototype Segmented Mirror Telescope (Invited Paper)
Author(s): Govinda K.V., Padmakar Parihar, P.M.M. Kemkar, Abhishek Goudar, Sandeep D.S., R. Mohammed Muthahar, Sagayanathan K., Radhika Dharmadhikari, Divya P.H., Indian Institute of Astrophysics (India)
20 July 2022 • 14:30 - 15:00 EDT | Room 517 d

Coffee Break 15:00 - 15:30

SESSION 17: TELESCOPE MOUNTS

20 July 2022 • 15:30 - 16:50 EDT | Room 517 d

Session Chairs: Frank W. Kan, Simpson Gumpertz & Heger Inc. (United States), Amir Sadjadpour, Thirty Meter Telescope (United States)

12182-50

The Giant Magellan Telescope Mount: The core of a next generation 25.4-m aperture ELT
Author(s): William S. Burgett, Samuel Park, Keath Beifus, Christopher Echols, King-Ming Lam, GMTO Corp. (United States); Nathan Loewen, Sightline Engineering Ltd. (Canada); Byron Smith, X Double Dot, LLC (United States); David Ashby, Steward Observatory (United States); Rebecca Bernstein, GMTO Corp. (United States)
20 July 2022 • 15:30 - 15:50 EDT | Room 517 d

12182-51

The European Solar Telescope Mount Preliminary Design
Author(s): Rubén Sanquirce, Ander Urrutia, Gaizka Murga, Alexander Díaz, Adrian Ferrreiro, Xabier Ventura, IDOM S.A. (Spain); Juan Cózar-Castellano, Miguel Núñez Cagigal, Nauzet Vega Reyes, Angel Mato, Mary Barreto Cabrera, Manuel Collados, Mahy Soler Trujillo, Jose Manuel González-Cava, Cristina Padilla-Hernández, Marta Belío-Asín, Jorge Sánchez-Capuchino, Yanira Carballo-Martin, Instituto de Astrofísica de Canarias (Spain)
20 July 2022 • 15:50 - 16:10 EDT | Room 517 d

12182-52

INO340 telescope mechanical design and construction
Author(s): Masoud Bidar, Hooshdad Jenab, Mahdi Saeidifar, Habib G. Khosroshahi, Zohreh Azizi, Iranian National Observatory (Iran, Islamic Republic of)
20 July 2022 • 16:10 - 16:30 EDT | Room 517 d

12182-53

CCAT-prime: the Fred Young Submillimeter Telescope (FYST) final design and fabrication
Author(s): Stephen C. Parshley, Cornell Univ. (United States)
20 July 2022 • 16:30 - 16:50 EDT | Room 517 d

Coffee Break 10:00 - 10:30

SESSION 18: INFRASTRUCTURE, FACILITIES, AND ENCLOSURES

21 July 2022 • 10:30 - 11:50 EDT | Room 517 d

Session Chairs: Heather K. Marshall, National Solar Observatory (United States), Frank W. Kan, Simpson Gumpertz & Heger Inc. (United States)

12182-55

Vera C. Rubin Observatory. The final erection of the big and fast Rotating Enclosure
Author(s): Gianpietro Marchiori, Simone De Lorenzi, Johana Martinez, Leonardo Ghedin, Tommaso Marchiori, Cristina Battistel, Cristiana Manfrin, Riccardo Bressan, Lorenzo Vio, Matteo Faccioni, Tiziano Niero, EIE Group S.r.l. (Italy); Victor Krabbendan, Jeffrey D. Barr, Douglas R. Neill, Jacques Sebag, Eduardo Serrano, Hernan Herrera, Wouter van Reeven, German Schumacher, Oliver Wiecha, Chuck Gessner, Charles F. Claver, Vera C. Rubin Observatory (United States)
21 July 2022 • 10:30 - 10:50 EDT | Room 517 d

12182-57

INO340 enclosure design and construction
Author(s): Mohamad Mohajer, Adel Mirhaj, Habib G. Khosroshahi, Masoud Bidar, Hooshdad Jenab, Naser Noori, Mahdi Saeidifar, Zohreh Azizi, Iranian National Observatory (Iran, Islamic Republic of)
21 July 2022 • 10:50 - 11:10 EDT | Room 517 d

12182-58

Design and architectural development of the enclosure of the COLIBRI telescope
Author(s): Erica E. Lugo-Ibarra, Liliana Figueroa, Alan M. Watson, Edgar Cadena, Elena Jiménez-Bailón, William H. Lee, Eduardo López Ángeles, María H. Pedrayes-López, José L. Ochoa, Univ. Nacional Autónoma de México (Mexico); Stéphane Basa, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ., CNRS (France), Ctr. National d'Études Spatiales (France); François Dolon, Observatoire de Haute-Provence, Aix-Marseille Univ., CNRS (France); Johan Floriot, Aix-Marseille Univ. (France)
21 July 2022 • 11:10 - 11:30 EDT | Room 517 d

12182-59

New Robotic Telescope enclosure concept selection and optimisation
Author(s): Luka Gradisar, Univ. of Ljubljana (Slovenia); David Copley, Adrian McGrath, Tina Marolt Cebasek, Liverpool John Moores Univ. (United Kingdom)
21 July 2022 • 11:30 - 11:50 EDT | Room 517 d

Lunch/Exhibition Break 11:50 - 13:30

SESSION 19: PROJECT REVIEWS: EARLY OPERATIONS AND AIV

21 July 2022 • 13:30 - 14:10 EDT | Room 517 d

Session Chair: Jason Spyromilio, European Southern Observatory (Germany)

12182-60

CANCELED: The Greenland Telescope -- Thule Operations

21 July 2022 • 13:30 - 13:50 EDT | Room 517 d

12182-61

Construction, testing, and commissioning of the SDSS-V Local Volume Mapper telescope system

Author(s): Thomas M. Herbst, Peter Bizenberger, Max-Planck-Institut für Astronomie (Germany); Dmitry Bizyaev, Apache Point Observatory (United States); Pavaman Bilgi, Guillermo A. Blanc, Carnegie Institution for Science (United States); Florian Briegel, Max-Planck-Institut für Astronomie (Germany); Scott Case, Australian Astronomical Optics, Macquarie Univ. (Australia); Niv Drory, The Univ. of Texas at Austin (United States); Tobias Feger, Australian Astronomical Optics, Macquarie Univ. (Australia); Cynthia Froning, The Univ. of Texas at Austin (United States); Wolfgang Gaessler, Maximilian Häberle, Max-Planck-Institut für Astronomie (Germany); Anthony Hebert, Carnegie Institution for Science (United States); Juna Kollmeier, Canadian Institute for Theoretical Astrophysics (Canada); Nicholas Konidaris, Carnegie Institution for Science (United States); Markus Kuhlberg, Max-Planck-Institut für Astronomie (Germany); Alicia Lanz, Carnegie Institution for Science (United States); Richard Mathar, Lars Mohr, Max-Planck-Institut für Astronomie (Germany); Soojong Pak, Kyung Hee Univ. School of Space Research (Korea, Republic of); Solange Ramírez, Carnegie Institution for Science (United States); Christopher Ritz, Ralf-Rainer Rohloff, Max-Planck-Institut für Astronomie (Germany); José Sánchez-Gallego, Univ. of Washington (United States); Paula Stępień, Max-Planck-Institut für Astronomie (Germany); Stefanie Wachter, Carnegie Institution for Science (United States)

21 July 2022 • 13:50 - 14:10 EDT | Room 517 d

SESSION 20: ROBOTIC TELESCOPES & ARRAYS I

21 July 2022 • 14:10 - 15:30 EDT | Room 517 d

Session Chair: Jason Spyromilio, European Southern Observatory (Germany)

12182-62

OPA! The Original PolyOculus Array

Author(s): Christina D. Moraitis, Stephen Eikenberry, Rodrigo Amezcua-Correa, Univ. of Central Florida (United States); Misty C. Bentz, Georgia State Univ. (United States); Anthony Gonzalez, Univ. of Florida (United States); Joseph Harrington, Univ. of Central Florida (United States); Sarik Jeram, Univ. of Florida (United States); Nicholas M. Law, The Univ. of North Carolina at Chapel Hill (United States); Tom Maccarone, Texas Tech Univ. (United States); Robert Quimby, San Diego State Univ. (United States); Juan Carlos Alvarado Zacarias, Univ. of Central Florida (United States); Amanda Townsend, Apache Point Observatory (United States), New Mexico State Univ. (United States); Craig Warner, Univ. of Florida (United States); Stephanos Yerolatsitis, Univ. of Central Florida (United States)

21 July 2022 • 14:10 - 14:30 EDT | Room 517 d

12182-63

COLIBRI, a wide-field 1.3 m robotic telescope dedicated to the transient sky

Author(s): Stéphane Basa, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); William H. Lee, Univ. Nacional Autónoma de México (Mexico); François Dolon, Aix-Marseille Univ. (France), CNRS (France), Observatoire de Haute-Provence (France); Alan M. Watson, Univ. Nacional Autónoma de México (Mexico); Johan Floriot, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Jean-Luc Atteia, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Nathaniel Butler, Arizona State Univ. (United States); Damien Dornic, Aix-Marseille Univ. (France), CNRS (France), Ctr. de Physique des Particules de Marseille (France); Simona Lombardo, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Samuel Ronayette, CEA-Paris-Saclay (France), CEA-IRFU (France), AIM (France); Michel Ageron, Aix-Marseille Univ. (France), CNRS (France), Ctr. de Physique des Particules de Marseille (France); François Agneray, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Fernando Ángeles , Univ. Nacional Autónoma de México (Mexico); Ludovik Bautista, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Hafid Benamar-Aissa, Aix-Marseille Univ. (France), CNRS (France), Ctr. de Physique des Particules de Marseille (France); Cyrille Blanpain, Aix-Marseille Univ. (France), CNRS (France), OSU Institut Pythéas (France); Olivier Boulade, CEA-Paris-Saclay (France), CEA-IRFU (France), AIM (France); Jérémie Boy, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Veronique Buat, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Edgar Cadena, Salvador Cuevas, Alejandro Farah, Liliana Figueroa, Jorge Fuentes, Univ. Nacional Autónoma de México (Mexico); Carole Gaïti, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Pascal Gallais, CEA-Paris-Saclay (France), CEA-IRFU (France), AIM (France); Eric Kajfasz, Aix-Marseille Univ. (France), CNRS (France), Ctr. de Physique des Particules de Marseille (France); Rosalía Langarica, Univ. Nacional Autónoma de México (Mexico); Arthur Langlois, Marie Larrieu, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Auguste Le Van Suu, Aix-Marseille Univ. (France), CNRS (France), Observatoire de Haute-Provence (France); Julien Lecubin, Aix-Marseille Univ. (France), CNRS (France), OSU Institut Pythéas (France); Eduardo López Ángeles, Erica E. Lugo-Ibarra, Univ. Nacional Autónoma de México (Mexico); Adrien Malgoyre, Aix-Marseille Univ. (France), CNRS (France), OSU Institut Pythéas (France); Romain Mathon, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Chrystel Moreau, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Alix Nouvel-De-La-Fleche, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); José L. Ochoa, María H. Pedrayes-López, Univ. Nacional Autónoma de México (Mexico); Pascale Ramon, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Jaime Ruíz-Díaz-Soto, Silvio Tinoco, Univ. Nacional Autónoma de México (Mexico); Hervé Valentin, Institut de Recherche en Astrophysique et Planétologie, CNRS (France)

21 July 2022 • 14:30 - 14:50 EDT | Room 517 d

12182-64

The pathfinder Dragonfly Spectral Line Mapper: pushing the limits for ultra-low surface brightness imaging

Author(s): Deborah M. Lokhorst, NRC-Herzberg Astronomy & Astrophysics (Canada); Seery Chen, Univ. of Toronto (Canada); Imad Pasha, Yale Univ. (United States); Jeff Shen, Univ. of Toronto (Canada); Evgeni Malakhov, New Mexico Skies, Inc. (United States); Roberto Abraham, Univ. of Toronto (Canada); Pieter van Dokkum, Yale Univ. (United States)

21 July 2022 • 14:50 - 15:10 EDT | Room 517 d

12182-65

The Large Fiber Array Spectroscopic Telescope

Author(s): J. Roger Angel, Chad F. Bender, Joel Berkson, Peter Gray, The Univ. of Arizona (United States); Samuel Halverson, Jet Propulsion Lab. (United States); Buell Jannuzi, Hyukmo Kang, Daewook Kim, The Univ. of Arizona (United States); Andy Monson, The Pennsylvania State Univ. (United States); Chang-Jin Oh, Matthew Rademacher, The Univ. of Arizona (United States); Christian Schwab, Macquarie Univ. (Australia); Andrew J. Young, Dennis Zaritsky, The Univ. of Arizona (United States)

21 July 2022 • 15:10 - 15:30 EDT | Room 517 d

Coffee Break 15:30 - 16:00

SESSION 21: ROBOTIC TELESCOPES & ARRAYS II

21 July 2022 • 16:00 - 17:40 EDT | Room 517 d

12182-66

BlackGEM: the wide-field multi-band optical telescope array

Author(s): Paul J. Groot, Radboud Univ. Nijmegen (Netherlands), Univ. of Cape Town (South Africa), South African Astronomical Observatory (South Africa); Steven Bloemen, Paul Vreeswijk, Radboud

Univ. Nijmegen (Netherlands); Peter Jonker, Radboud Univ. Nijmegen (Netherlands), SRON Netherlands Institute for Space Research (Netherlands); Arno Engels, Jeroen Michiels, Roy Bakker, Floris Hahn, Radboud Univ. Nijmegen (Netherlands); Gert Raskin, Johan Morren, KU Leuven (Belgium); Ramon Navarro, Eddy Elswijk, Rik ter Horst, Menno Schuil, Jan Kragt, Dirk Lesman, Menno de Haan, Marielle Bekema, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Rob de Haan, SRON Netherlands Institute for Space Research (Netherlands), NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Marc Klein-Wolt, Danielle Pieterse, Radboud Univ. Nijmegen (Netherlands); Rudolf Le Poole, Leiden Observatory, Leiden Univ. (Netherlands)

21 July 2022 • 16:00 - 16:20 EDT | Room 517 d

12182-67

Distributed Aperture Telescopes and the Dragonfly Telephoto Array

Author(s): Roberto Abraham, Seery Chen, Univ. of Toronto (Canada); Deborah M. Lokhorst, NRC-Herzberg Astronomy & Astrophysics (Canada); Pieter van Dokkum, Yale Univ. (United States)

21 July 2022 • 16:20 - 16:40 EDT | Room 517 d

12182-68

Robotic Unit Multiple Lines Of View

Author(s): Alberto Riva, Mario Gai, Alberto Vecchiato, Mario G. Lattanzi, Federico Landini, Deborah Busonero, INAF - Osservatorio Astrofisico di Torino (Italy)

21 July 2022 • 16:40 - 17:00 EDT | Room 517 d

12182-69

The Gravitational-wave Optical Transient Observer (GOTO)

Author(s): Martin J. Dyer, The Univ. of Sheffield (United Kingdom); Kendall Ackley, Joe Lyman, Krzysztof Ulaczyk, Danny Steeghs, The Univ. of Warwick (United Kingdom); Duncan K. Galloway, Monash Univ. (Australia); Vik Dhillon, The Univ. of Sheffield (United Kingdom); Paul O'Brien, Univ. of Leicester (United Kingdom); Gavin Ramsay, Armagh Observatory & Planetarium (United Kingdom); Kanthanakorn Noysena, National Astronomical Research Institute of Thailand (Thailand); Rubina Kotak, Univ. of Turku (Finland); Rene P. Breton, The Univ. of Manchester (United Kingdom); Laura K. Nuttall, Univ. of Portsmouth (United Kingdom); Enric Pallé, Instituto de Astrofísica de Canarias (Spain); Don Pollacco, The Univ. of Warwick (United Kingdom)

21 July 2022 • 17:00 - 17:20 EDT | Room 517 d

12182-70

New Robotic Telescope Optical Design

Author(s): Éamonn J. Harvey, Iain A. Steele, Astrophysics Research Institute (United Kingdom), Liverpool John Moores Univ. (United Kingdom); César Rodriguez Pereira, Univ. de Oviedo (Spain); Miguel A. Torres-Gil, Maider Insausti Múgica, Instituto de Astrofísica de Canarias (Spain); Robert J. Smith, Helen E. Jermak, Ali Ranjbar, David Copley, Douglas M. Arnold, Christopher M. Copperwheat, Astrophysics Research Institute (United Kingdom), Liverpool John Moores Univ. (United Kingdom); Carlos M. Guitérrez de la Cruz, Marta Escriche, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 17:20 - 17:40 EDT | Room 517 d

SESSION P1: POSTERS - PHASING & ALIGNMENT

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-71

ELT M1 Edge Sensors in the Figure Control Loop: Simulations and Test Results

Author(s): Andreas Reinacher, Ulrich Lampater, Babak Sedghi, Martin Dimmler, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-72

Co-phasing of segmented mirrors with the LOOPS bench at LAM

Author(s): Felipe Pedreros Bustos, Lab. d'Astrophysique de Marseille (France); Ronald Holzlöhner, European Southern Observatory (Germany); Jorge Tapia, Pontificia Univ. Católica de Valparaíso (Chile); Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France), Univ. Paris-Saclay (France); Benoit Neichel, Lab. d'Astrophysique de Marseille (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-73

Active surface measurements for large aperture millimeter/submillimeter-wave telescopes using a photogrammetry technique

Author(s): Atsushi Nishimura, National Astronomical Observatory of Japan (Japan); Kengo Tachihara, Nagoya Univ. (Japan); Shimpei Nishimoto, Shinji Fujita, Osaka Prefecture Univ. (Japan); Kaoru Nishikawa, Nagoya Univ. (Japan); Ryuki Yoneda, Osaka Prefecture Univ. (Japan); Kazuyuki Handa, Tomio Kurakami, National Astronomical Observatory of Japan (Japan); Hideo Ogawa, Osaka Metropolitan University (Japan); Toshikazu Onishi, Osaka Prefecture Univ. (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-74

4MOST Guiding and Wavefront Sensing cameras - Requirements and early testing

Author(s): Olga Bellido-Tirado, Steffen Frey, Ulrike Lemke, Miklos Gäbler, Joar Brynnel, Leibniz-Institut für Astrophysik Potsdam (Germany); Gary R. Sims, Spectral Instruments, Inc. (United States); Thomas Liebner, Thomas Fechner, Thomas Hahn, Leibniz-Institut für Astrophysik Potsdam (Germany); Roger Cover, Spectral Instruments, Inc. (United States); Samuel C. Barden, Canada France Hawaii Telescope (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-75

Study on segmentation and alignment related effects in a 10m class telescope

Author(s): Annu Jacob, Inter-Univ. Ctr. for Astronomy and Astrophysics (India), Indian Institute of Astrophysics (India); Padmakar Parihar, Indian Institute of Astrophysics (India); Melvin K. James, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Radhika Dharmadhikari, Indian Institute of Astrophysics (India)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P2: POSTERS - ALIGNMENT & WAVEFRONT SENSING

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-113

Antenna characterization for the HIRAX experiment

Author(s): Emily R. Kuhn, Laura Newburgh, Yale Univ. (United States); Benjamin Saliwanchik, Brookhaven National Lab. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-115

CaNaPy facility: opto-mechanical design and requirements for optimal visible systems LGS-AO

Author(s): Petr Janout, European Southern Observatory (Germany); Noelia Martinez Rey, The Australian National Univ. (Australia); Domenico Bonaccini Calia, Renate Hinterschuster, Ralf Dieter Conzelmann, European Southern Observatory (Germany); Enrico Pinna, Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marcos Reyes García-Talavera, Instituto de Astrofísica de Canarias (Spain); Matthew Townson, James Osborn, Durham Univ. (United Kingdom); Marco Faccini, Mauro Centrone, INAF - Osservatorio Astronomico di Roma (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-116

Status of the Lowell Discovery Telescope and assessment of the image quality at the focal plane

Author(s): Stephen E. Levine, Thomas A. Bida, Timothy Ellsworth-Bowers, Ryan Hamilton, Kyler Kuehn, Lowell Observatory (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-117

Optical characterization of a 32-meter legacy telecommunications antenna in Mexico.

Author(s): David M. Gale, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Stanley E. Kurtz, Instituto de Radioastronomía y Astrofísica, Univ. Nacional Autónoma de México (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-118

Highly optimized and decentralized motion and sensing control

Author(s): Leszek Lisowski, electronics-lis (Switzerland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-119

Performance analysis of the wavefront sensor in the active correction of the INO340 telescope

Author(s): Ramin Shomali, Institute for Research in Fundamental Sciences (IPM), Iranian National Observatory (Iran, Islamic Republic of); Habib G. Khosroshahi, Institute for Research in Fundamental Sciences (IPM), Iranian National Observatory (Iran, Islamic Republic of); Mahdi Saeidifar, Surena Fatemi, Hamed Altafi, Institute for Research in Fundamental Sciences (IPM), Iranian National Observatory (Iran, Islamic Republic of)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-120

INO340 active optics algorithm

Author(s): Mahdi Saeidifar, Habib G. Khosroshahi, Masoud Bidar, Hooshdad Jenab, Tayebeh Shokatpour, Iranian National Observatory (Iran, Islamic Republic of)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-121

ESTIMATION OF THE POSITION OF THE ELT PREFOCAL STATION MAIN AXIS IN OPERATION

Author(s): Edoardo Maria Alberto Redaelli, Steffan Lewis, Carlo Zanoni, Martin Brinkmann, Ulrich Lampater, Paul Jolley, Sebastian Schmid, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-122

CGH-Assisted Metrology Testbed for the Thirty Meter Telescope Primary Mirror

Author(s): Shelby D. V. Ament, James Burge, Jake Beverage, Chunyu Zhao, Cormic Merle, Arizona Optical Metrology LLC (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P3: POSTERS - OBSERVATORY UPGRADES

18 July 2022 • 17:30 - 19:30 EDT | Room 516

12182-123

Preparing the SALT for near-infrared observations

Author(s): Janus D. Brink, Moses K. Mogotsi, Melanie Saayman, Nicolaas M. Van der Merwe, Jonathan Love, South African Astronomical Observatory (South Africa), Southern African Large Telescope (South Africa)

18 July 2022 • 17:30 - 19:30 EDT | Room 516

SESSION P4: POSTERS - PATHFINDERS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-124

Integration and alignment of KASI-deep rolling imaging fast-optics telescope (K-DRIFT) pathfinder for the detection of low surface brightness features: 300 mm off-axis freeform three-mirror system

Author(s): Yunjong Kim, Korea Astronomy and Space Science Institute (Korea, Republic of); Dohoon Kim, Green Optics Co., Ltd. (Korea, Republic of); Seunghyuk Chang, Ctr. for Integrated Smart Sensors (Korea, Republic of); Changsu Choi, Chung-Uk Lee, Eon-Chang Sung, Korea Astronomy and Space Science Institute (Korea, Republic of); Jaewon Yoo, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); Jae-Woo Kim, Korea Astronomy and Space Science Institute (Korea, Republic of); Kwangil Seon, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of); Sang-Hyun Chun, Woowon Byun, Korea Astronomy and Space Science Institute (Korea, Republic of); Yongseok Lee, Korea Astronomy and Space Science Institute (Korea, Republic of), Kyung Hee Univ. (Korea, Republic of); Youngbeom Jeon, Korea Astronomy and Space Science Institute (Korea, Republic of); Gayoung Lee, Kyungpook National Univ. (Korea, Republic of); Hyungkwon Lee, Leo Space Inc. (Korea, Republic of); Jongwan Ko, Korea Astronomy and Space Science Institute (Korea, Republic of), Univ. of Science and Technology (Korea, Republic of)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-125

QUASAR - quasi-stationary absolute radiance mission

Author(s): Eliad Peretz, NASA Goddard Space Flight Ctr. (United States); Peter Plavchan, Peter Pachowicz, George Mason Univ. (United States); Jamie Tayar, Univ. of Florida (United States); Gerard van Belle, Lowell Observatory (United States); Greg Aldering, Lawrence Berkeley National Lab. (United States); Angelle Tanner, Mississippi State Univ. (United States); Justin Albert, Univ. of Victoria (Canada); Dan Huber, Univ. of Hawai'i (United States); Leonard Hanssen, Brian Alberding, Joseph Rice, National Institute of Standards and Technology (United States); Steven West, John Mather, Allison Youngblood, NASA Goddard Space Flight Ctr. (United States); Tabetha Boyajian, Louisiana State Univ. (United States); Brian Stalder, Vera C. Rubin Observatory (United States); Jonathan Gagné, Univ. de Montréal (Canada); Susana Deustua, National Institute of Standards and Technology (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-126

RFO: A hybrid RF-Optical telescope for communications and time domain astronomy

Author(s): Makan Mohageg, Daniel J. Hoppe, Walid A. Majid, Alexander R. Abramovici, Sang K. Chung, Michael Shao, Robert A. Preston, Charles J. Naudet, Kevin G. Whipp, Salma C. Walker, Mayer Rud, Chris Shelton, Kara N. Hewson, Isaiah J. Ware, Todd Hurst, Barzia J. Tehrani, Jet Propulsion Lab. (United States); Vikram Ravi, Thomas A. Prince, Gregg W. Hallinan, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-127

Exploration of a 14-meter, 1.5-degree field of view, quad-mirror anastigmatic telescope concept for wide-field spectroscopy and imaging

Author(s): Samuel C. Barden, Marc R. Baril, Canada-France-Hawaii Telescope Corp. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-128

Small-ELF Telescope - opto-mechanical design and application of tensegrity

Author(s): Ye Zhou, Timothy K. O. Lee, Dynamic Intelligent Structures Ltd. (Canada); Jeff R. Kuhn, Ian Cunnyngham, Univ. of Hawai'i (United States); Stuart M. Jefferies, Georgia State Univ. (United States); Maud Langlois, Ctr. de Recherche Astrophysique de Lyon (France); Kevin

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P5: POSTERS - PROJECT REVIEWS: OBSERVATORIES UNDER CONSTRUCTION

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-129

The DREAMS of Siding Spring Observatory

Author(s): Jamie Soon, Tony Galla, Anna M. Moore, Tony Travouillon, The Australian National Univ. (Australia)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-130

CANCELED: CTA Large Size Telescope

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P6: POSTERS - OBSERVATORY OPERATIONS UPDATES

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-132

Status, flight preparation, and future instrument opportunities of the STUDIO balloon-borne telescope

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-133

Observing exoplanets from Antarctica in two colours: set-up and operation of ASTEP+

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-134

CANCELED: Development and qualification of the payload electronics for the STUDIO balloon astronomy mission within the ESBO initiative

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-135

Atmospheric extinction estimation using Maidanak GPS station data

Author(s): Yusufjon A. Tillayev, Husan Eshquvatov, Ulugh Beg Astronomical Institute of the Uzbek Academy of Sciences (Uzbekistan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-136

Simultaneous multi-frequency system for millimeter VLBI observations

Author(s): Taehyun Jung, Jung-Won Lee, Do-Young Byun, Seog-Tae Han, Korea Astronomy and Space Science Institute (Korea, Republic of)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-137

CANCELED: Revitalizing a high-altitude astronomical facility. The way forward to fully automatic, remotely controlled operations at Campo Imperatore Observatory, Italy

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-138

A born again 32-meter radio telescope for Mexico

Author(s): Stanley E. Kurtz, Univ. Nacional Autónoma de México (Mexico); Angela C. Taylor, Michael E. Jones, Univ. of Oxford (United Kingdom); David M. Gale, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Alexander Pollak, SETI Institute (United States); Chao Liu, Univ. of Oxford (United Kingdom); Eduardo Ibarra Medel, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-139

Optical characterization of the Tulancingo-I radio telescope and site: the potential for K-band operation

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-140

CANCELED: Las Campanas All Sky Camera

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-141

Power train overhaul of a 32-meter legacy telecommunications antenna in Mexico.

Author(s): David M. Gale, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Stanley E. Kurtz, Instituto de Radioastronomía y Astrofísica, Univ. Nacional Autónoma de México (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P7: POSTERS - PROJECT REVIEWS: OBSERVATORIES IN DEVELOPMENT

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-142

First radio telescope in Morocco: Solar Measurements for 21 cm Wavelength

Author(s): Mohammed Sabil, Univ. Cadi Ayyad (Morocco); Omar Hila, Atlas Golf Marrakech (Morocco); Zouhair Benkhaldoun, Univ. Cadi Ayyad (Morocco)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-143

The BINGO telescope: an ultra-sensitive hydrogen Intensity Mapping experiment for exploring the dark universe

Author(s): Vincenzo Liccardo, Instituto Nacional de Pesquisas Espaciais (Brazil)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P8: POSTERS - PROJECT REVIEWS: MULTI-MESSENGER OBSERVATORIES & COLLABORATIONS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-144

Citizen Science Astronomy with a Network of Small telescope. The launch and Deployment of JWST

Author(s): Franck Marchis, SETI Institute (United States); Joe Asencio, Guillaume Blaclard, Unistellar SAS (France); Tom Esposito, SETI Institute (United States), Unistellar SAS (France); Paul Dalba, Unistellar SAS (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P9: POSTERS - OPTO-MECHANICAL SYSTEMS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-145

MegaMapper: concept and optical design for a 6.5m aperture massively multiplexed spectroscopic facility.

Author(s): Guillermo A. Blanc, Carnegie Observatories (United States); Joseph H. Silber, Lawrence Berkeley National Lab. (United States); Stephen A. Smee, Robert H. Barkhouser, Johns Hopkins Univ. (United States); Robert W. Besuner, Lawrence Berkeley National Lab. (United States); Jeffrey Crane, Carnegie Observatories (United States); Juna Kollmeier, Canadian Institute for Theoretical Astrophysics (Canada); Povilas Palunas, Carnegie Observatories (United States); David Schlegel, Lawrence Berkeley National Lab. (United States); Stephen Shectman, Carnegie Observatories (United States); Ricardo Araujo, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Charlie Baltay, Yale University (United States); Mohamed Bouri, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Julien Guy, Lawrence Berkeley National Lab. (United States); Leopoldo Infante, Carnegie Observatories (United States); Jean-Paul Kneib, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Travis Mandeville, University of Washington (United States); Claire Poppett, Lawrence Berkeley National Lab. (United States); David Rabinowitz, Yale University (United States); Solange Ramirez, Carnegie Observatories (United States); Michael Schubnell, University of Michigan (United States); Joshua Simon, Carnegie Observatories (United States); Markus Thurneysen, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Sarah Tuttle, University of Washington (United States); Stefanie Wachter, Carnegie Observatories (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-146

ABORAS: polarimetric, 10cm/s RV observations of the Sun as a star

Author(s): Casper Farret Jentink, Observatoire de Genève (Switzerland); Annelies Mortier, Univ. of Cambridge (United Kingdom); Frans Snik, Patrick Dorval, Leiden Observatory (Netherlands); Samantha J. Thompson, Univ. of Cambridge (United Kingdom); Ramon Navarro, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Tim Naylor, Univ. of Exeter (United Kingdom)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-148

The Large Fiber Array Spectroscopic Telescope: optical design of the unit telescope

Author(s): Joel Berkson, J. Roger Angel, Chad F. Bender, Peter Gray, The Univ. of Arizona (United States); Samuel Halverson, Jet Propulsion Lab. (United States); Hyukmo Kang, Daewook Kim, The Univ. of Arizona (United States); Andy Monson, The Pennsylvania State Univ. (United States); Chang-Jin Oh, Matthew Rademacher, The Univ. of Arizona (United States); Christian Schwab, Macquarie Univ. (Australia); Andrew J. Young, Dennis Zaritsky, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-149

Design and analysis of the SiC solar telescope for extreme environments

Author(s): Jihun Kim, Seonghwan Choi, Jeong-Yeol Han, Yunjong Kim, Ji-Hye Baek, Jongyeob Park, Heesu Yang, Sujin Kim, Young-Soo Kim, Jaegun Yoo, Youra Jun, Bi-Ho Jang, Korea Astronomy and Space Science Institute (Korea, Republic of); Il Kweon Moon, Korea Research Institute of Standards and Science (Korea, Republic of); Dohoon Kim, Minkyum Kim, Green Optics Co., Ltd. (Korea, Republic of); Gwanghui Jeong, AntBridge Inc. (Korea, Republic of); Myung Cho, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-150

Polarimetric performance of the European Solar Telescope.

Author(s): Irene Ferro Rodríguez, Jorge Sánchez-Capuchino, Instituto de Astrofísica de Canarias (Spain); Manuel Collados, Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-151

Let's rethink OWL, ZERODUR® as mirror substrate material is available.

Author(s): Thomas Westerhoff, Ralf Jedamzik, Janina Krieg, Thomas Werner, SCHOTT AG (Germany); Anthony B. Hull, The Univ. of New Mexico (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-152

A Starbug's life: a material trade study using fatigue life criteria for high-altitude robotic fibre positioning instruments

Author(s): Ellie G. O'Brien, Jon Lawrence, Celestina S. Lacombe, Michael Thomakos, Michael Goodwin, Australian Astronomical Optics, Macquarie Univ. (Australia); James Gilbert, The Australian National Univ. (Australia); Slavko Mali, Rolf Muller, Nirmala Kunwar, Jahanzeb Zahoor, Lew Waller, Tony Farrell, Australian Astronomical Optics, Macquarie Univ. (Australia)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-153

Vacuum adhesion of Starbug fibre optic positioning robots in high-altitude ground-based astronomy instrumentation

Author(s): Ellie G. O'Brien, Jon Lawrence, Celestina Lacombe, Michael Thomakos, Michael Goodwin, Australian Astronomical Optics, Macquarie Univ. (Australia); James Gilbert, The Australian National Univ.

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-154

The manufacturing and AIV plan for the Extremely Large Telescope Prefocal Stations

Author(s): Asier Larringan, Gaizka Murga, IDOM S.A. (Spain); Steffan Lewis, Paul Jolley, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-155

Preliminary design of a Cassegrain focal station for New Robotic Telescope

Author(s): Ali Ranjbar, Éamonn J. Harvey, David Copley, Iain A. Steele, Astrophysics Research Institute (United Kingdom)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-156

Design, assembly and validation of the Filter Exchange System of LSSTCam

Author(s): Pierre Antilogus, Lab. Physique Nucléaire et Hautes Énergies (France); Eric Aubourg, Alexandre Boucaud, Astroparticule et Cosmologie (France); Patrick Breugnon, Ctr. de Physique des Particules de Marseille (France); Julien Coridian, Lab. Physique Nucléaire et Hautes Énergies (France); Hervé Croizet, Lab. de Physique de Clermont (France); Guillaume Daubard, Lab. Physique Nucléaire et Hautes Énergies (France); Fabrice Gallo, Ctr. de Physique des Particules de Marseille (France); Claire G. Juramy-Gilles, Lab. Physique Nucléaire et Hautes Énergies (France); Pierre Karst, Ctr. de Physique des Particules de Marseille (France); Mile Kusulja, Eric Lagorio, Lab. de Physique Subatomique et Cosmologie (France); Didier Laporte, Lab. Physique Nucléaire et Hautes Énergies (France); Aurélien Marini, Ctr. de Physique des Particules de Marseille (France); Pierre Verdier, Lab. de Physique de Clermont (France); Francis Vezzu, Lab. de Physique Subatomique et Cosmologie (France); Françoise Virieux, Astroparticule et Cosmologie (France); Teo Weicherding, Ctr. de Physique des Particules de Marseille (France)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-157

Performance tests of the NectarCAM qualification model

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-158

Applying augmented reality to telescope images: the IMAGO project

Author(s): Ivan Di Antonio, INAF (Italy); Mauro Dolci, Elisa Di Carlo, Matteo Di Carlo, Roberto Buonanno, Gaetano Valentini, Angelo Valentini, Francesco D'Alessio, Riccardo Leoni, INAF (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-160

Optical system design for Subaru Nasmyth Beam Switcher

Author(s): Jessica R. Zheng, Nick Binos, Peter Gillingham, Helen McGregor, Jon Lawrence, Scott Smedley, Australian Astronomical Optics, Macquarie Univ. (Australia); Takashi Hattori, Yosuke Minowa, Olivier Guyon, Subaru Telescope, NAOJ (Japan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-161

Performance test results of ELT M4U hexapod

Author(s): Pierluigi Fumi, Matteo Tintori, Omar Barachetti, Paolo Mascarello, A.D.S. International S.r.l. (Italy); Lorenzo Pettazzi, Elise Vernet, Marc Cayrel, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-162

Progress Summary of the Giant Magellan Telescope Primary Mirror Off-Axis Segment Active Optics Control System Risk Reduction Effort "The Test Cell"

Author(s): Barbara M. Fischer, Trupti Ranka, Francisco Aguayo, David Ashby, Marianne Cox, Austin Everman, GMTO Corp. (United States); John Ford, The Univ. of Arizona (United States); Tomas Krasuski, Gary Muller, Wylie Rosenthal, David Schwartz, GMTO Corp. (United States); José Soto, Hector Swett, GMTO Corp. (Chile); Divya Thanasekaran, Abhijit Wadhavkar, GMTO Corp. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-163

Preliminary optical design for the European Solar Telescope (EST)

Author(s): Jorge Sánchez-Capuchino, Manuel Collados, Paula Sola La Serna, Irene Ferro Rodríguez, Marta Belío-Asín, Sergio Bonaque-González, Noelia Feijóo Amoedo, Juan Cózar-Castellano, Ángel Mato, Nauzet Vega Reyes, Mahy Soler Trujillo, Mary Barreto Cabrera, Miguel Núñez Cagigal, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-164

Stray light analysis of SAMOS: a DMD-based multi-object spectrograph

Author(s): John J. Piotrowski, Robert H. Barkhouser, Stephen A. Smee, Albert J. Harding, Johns Hopkins Univ. (United States); Dmitry Vorobiev, Univ. of Colorado Boulder (United States); Massimo Robberto, Space Telescope Science Institute (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-165

Simulation of a digital micromirror device to characterize the contrast ratio and point spread function

Author(s): John J. Piotrowski, Johns Hopkins Univ. (United States); Dmitry Vorobiev, Univ. of Colorado Boulder (United States); Massimo Robberto, Space Telescope Science Institute (United States); Stephen A. Smee, Johns Hopkins Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-167

Balloon-borne FIREBall-2 UV spectrograph stray light control based on non-sequential reverse modeling of on-sky data

Author(s): Trenton Brendel, Wyant College of Optical Sciences (United States); Aafaque R. Khan, Steward Observatory (United States); Heejoo Choi, Dae Wook Kim, Wyant College of Optical Sciences (United States); Erika T. Hamden, Steward Observatory (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-168

Active optics system implemented in the primary mirror support of the Daniel K. Inouye Solar Telescope (DKIST) solar telescope : design, analysis and tests.

Author(s): Grégory P. Lousberg, Vincent Moreau, Jean-Marc Schumacher, Eric Gabriel, Carlo Flebus, AMOS S.A. (Belgium)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-169

Optical design for the CyroScope telescope; a wide field K-band imaging telescope

Author(s): Jason Fucik, Roger Smith, Caltech (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-170

Design of the new SDSS 2.5m telescope wide field corrector for SDSS-V

Author(s): Robert H. Barkhouser, Stephen A. Smee, Randolph P. Hammond, Albert J. Harding, Aidan C. Gray, Johns Hopkins Univ. (United States); Solange Ramirez, Stefanie Wachter, Carnegie Observatories (United States); Juna Kollmeier, Canadian Institute for Theoretical Astrophysics (Canada); Jamey E. Eriksen, Apache Point Observatory (United States); John C. Wilson, University of Virginia (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-173

Advanced active optics actuator for primary mirrors exposed to wind buffeting

Author(s): Lorenzo Zago, Evan Giavina, HEIG-VD (Switzerland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P10: POSTERS - TELESCOPE MOUNTS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-76

Advances on the Telescope Structure conceptual design of the European Solar Telescope

Author(s): Eduardo Rodriguez-Lopez, David Alonso, Fernando Rueda, ESTEYCO SAP (Spain); Juan Cózar-Castellano, Ángel Mato, Nauzet Vega Reyes, Miguel Ángel Esteves, Manuel Collados, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-77

Update and preliminary performance analysis of the NRT structure

Author(s): César Rodríguez Pereira, Fruela de la Roza, Javier Gracia Rodríguez, Fernando Sánchez Lasheras, Univ. de Oviedo (Spain); Ali Ranjbar, David Copley, Liverpool John Moores Univ. (United Kingdom); Miguel A. Torres-Gil, Instituto de Astrofísica de Canarias (Spain); Éamonn J. Harvey, Liverpool John Moores Univ. (United Kingdom); Asier Oria Carerras, Instituto de Astrofísica de Canarias (Spain); Francisco Javier de Cos Juez, Univ. de Oviedo (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-78

Finite Element Analysis of the "MezzoCielo" monocentric optical system and other mechanical issues

Author(s): Silvio Di Rosa, Roberto Ragazzoni, Demetrio Magrin, Carmelo Arcidiacono, Marco Dima, Jacopo Farinato, Simone Zaggia, INAF - Osservatorio Astronomico di Padova (Italy); Stefano Debei, University of Padua - Department of Industrial Engineering (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-79

Structure design and mechanical analysis of a large rotatable cylindrical antenna

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18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-80

Dogu Anatolu Gözlemevi (DAG) Integrated Dome & Telescope On-Site Assembly

Author(s): Gianpietro Marchiori, Francesco Rampini, Manfredi Amalfi, Massimiliano Tordi, Cristiana Manfrin, Cristina Battistel, Tiziano Niero, EIE Group S.r.l. (Italy); Olivier Pirnay, AMOS S.A. (Belgium); Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey); Onur Keskin, FMV Isik Univ. Ctr. for Optomechatronics Research & Application (OPAM) (Turkey)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-81

MTF improvement of baseline adjustable optical sparse aperture imaging system using deep CNN Prior

Author(s): Yong Wu, Mei Hui, Ming Liu, Liquan Dong, Lingqin Kong, Yuejin Zhao, Beijing Institute of Technology (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-174

The Hercules Mount: Shouldering the Weight of the Argus Optical Array

Author(s): Ramses Gonzalez, Hank Corbett, Nicholas M. Law, Nathan Galliher, Alan Vasquez Soto, Lawrence Machia, Univ of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P11: POSTERS - INFRASTRUCTURE, FACILITIES, & ENCLOSURES

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-83

Utilization of a Dynalene Chiller System to provide precision, lower risk, telescope top-end thermal control

Author(s): David Jiménez Mejías, Vera C. Rubin Observatory (Chile); Douglas R. Neill, Neill Mills, Oliver Wiecha, Jeffrey D. Barr, Bill Schoening, Edward A. Hileman, Vera C. Rubin Observatory (United States); Jordi Arellano Ballestero, Otger Ballester Basols, Institut de Física d'Altes Energies, The Barcelona Institute of Science and Technology (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-84

Evolution of electrical power provisioning for the ESO installations in Chile: a path for an astronomy with a lower CO2 footprint

Author(s): Giorgio Filippi, European Southern Observatory (Chile); Pawel Scibior, European Southern Observatory (Germany); Pierre van der Heyden, European Southern Observatory (Chile); Robin Arsenault, Roberto Tamai, European Southern Observatory (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-85

Oukaimeden Observatory: Cross-Calibration and Interoperability of permanent seeing monitor

Author(s): Mohammed Sabil, Oukaïmeden Observatory, Univ. Cadi Ayyad (Morocco), Ecole Nationale des Sciences Appliquées de Béni Mellall (Morocco), Univ. Sultan Moulay Slimane (Morocco); Abdelfettah Habib, Zouhair Benkhaldoun, Abdelhadi Jabiri, Youssef Errazzouki, Imane Bekkal, Univ. Cadi Ayyad (Morocco)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-86

Thermal control strategy of GMT elevation drive

Author(s): Aleksej Kiselev, Sebastian Lüft, Konstantinos Giannouloudis, Joachim Hammes, OHB Digital Connect GmbH (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-87

Magdalena Ridge Observatory Interferometer (MROI) Unit Telescope Enclosures: the future of integrated pocket-sized observatories

Author(s): Gianpietro Marchiori, Tommaso Marchiori, Mattia Scomparin, Cristina Battistel, Alberto Callegaro, EIE Group S.r.l. (Italy); Michelle J. Creech-Eakman, Chris Salcido, Robert Collins, John Young, New Mexico Institute of Mining and Technology (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-88

From Giant Telescopes Design: a new method of Modal Thermal Analysis for innovative Telescopes and Instrumentation

Author(s): Gianpietro Marchiori, Massimiliano Tordi, Francesco Rampini, Matteo Spinola, Riccardo Bressan, Alessandro Colovini, Matteo Faccioni, EIE Group S.r.l. (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-89

NewScaling Clamshells for distributed Astronomical Observatories

Author(s): Gianpietro Marchiori, Massimiliano Tordi, Alessandro Colovini, Matteo Spinola, Francesco Rampini, Francois Dury, Cristina Battistel, EIE Group S.r.l. (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-90

On Dogu Anatolu Gözlemevi (DAG) High-Tech Dome Final On-Site Erection

Author(s): Gianpietro Marchiori, Francesco Rampini, Manfredi Amalfi, Leonardo Ghedin, Johana Martinez, Tommaso Marchiori, Cristiana Manfrin, Cristina Battistel, Tiziano Niero, EIE Group S.r.l. (Italy); Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey); Onur Keskin, FMV Isik Univ. Ctr. for Optomechatronics Research & Application (OPAM) (Turkey)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-91

Quantum Optical Ground Station Light Pollution Survey

Author(s): Nouralhoda Bayat, Institute for Quantum Computing, Univ. of Waterloo (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-93

Design and construction of observatory azimuth rotation systems with economical construction tolerances

Author(s): Cory Lindh, Uni-Systems Engineering (United States); Eric Manuel, Eric Grigel, M3 Engineering & Technology Corp. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-94

Tools and equipment for installation, calibration and maintenance of the instruments and optics for Colibrí Telescope in SPM Observatory.

Author(s): María H. Pedrayes-López, Univ. Nacional Autónoma de México (Mexico); Stéphane Basa, Aix-Marseille Univ. (France), CNRS (France), Ctr. National d'Études Spatiales (France); Edgar Omar Cadena Zepeda, Univ. Nacional Autónoma de México (Mexico); François Dolon, Aix-Marseille Univ. (France), CNRS (France), Observatoire de Haute-Provence (France); Liliana Figueroa, Univ. Nacional Autónoma de México (Mexico); Johan Floriot, Aix-Marseille Univ. (France); Elena Jiménez-Bailón, Rosalía Langarica, Eduardo López Ángeles, Erica E. Lugo-Ibarra, José L. Ochoa, Univ. Nacional Autónoma de México (Mexico); Pierre Richaud, Aix-Marseille Univ. (France); Silvio Tinoco, Alan M. Watson, Univ. Nacional Autónoma de México (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P12: POSTERS - PROJECT REVIEWS: EARLY OPERATIONS & AIV

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-95

WMT: the Wide-field Mufara Telescope from design to commissioning.

Author(s): Paolo Spanò, Paolo Lazzarini, Massimo Riccardi, Walter Girardin, Gianluigi Corradin, Enrico Marcuzzi, Gabriele Carozzi, Alessio Galliazzo, Giuseppe Crescenzio, Abramo Carlesso, Barbara Ricciarelli, Fabio Rubeo, Giovanni Dal Lago, Gino Bucciol, Officina Stellare S.p.A. (Italy); Gary R. Sims, Spectral Instruments, Inc. (United States); Mario Di Martino, Alessandro Nastasi, GAL Hassin (Italy)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-96

DAG 4m telescope: optics completion, on-site integration and test

Author(s): Olivier Pirnay, Pierre Albart, Christian Bastin, Jonathan Deville, Eric Gabriel, Thibault Leseur, Grégory P. Lousberg, Laurence Méant, Sabrina Orban, Jean-Marc Tortolani, AMOS S.A. (Belgium); Gianpietro Marchiori, Francesco Rampini, Manfredi Amalfi, EIE Group S.r.l. (Italy); Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey); Onur Keskin, FMV Isik Univ. Ctr. for Optomechatronics Research & Application (OPAM) (Turkey)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P13: POSTERS - ROBOTIC TELESCOPES & ARRAYS

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-97

The large fiber array spectroscopic telescope: opto-mechanical design and architecture

Author(s): Andrew J. Young, J. Roger Angel, Chad F. Bender, Joel Berkson, Peter Gray, The Univ. of Arizona (United States); Samuel Halverson, Jet Propulsion Lab. (United States); Hyukmo Kang, Daewook Kim, The Univ. of Arizona (United States); Andy Monson, The Pennsylvania State Univ. (United States); Chang-Jin Oh, Matthew Rademacher, The Univ. of Arizona (United States); Christian Schwab, Macquarie Univ. (Australia); Dennis Zaritsky, The Univ. of Arizona (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-98

Commissioning of the Transneptunian Automated Occultation Survey (TAOS II)

Author(s): Matthew J. Lehner, Shiang-Yu Wang, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Joel H. Castro-Chacón, Consejo Nacional de Ciencia y Tecnología (Mexico), Univ. Nacional Autónoma de México (Mexico); Mauricio Reyes Ruíz, Liliana Figueroa, Univ. Nacional Autónoma de México (Mexico); Zhi-Wei Zhang, Wei-Ling Yen, Chung-Kai Huang, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Tomás Calvario Velasquez, Javier A. Hernández Landa, Fernando Quiros, Univ. Nacional Autónoma de México (Mexico); Timothy Norton, Andrew Szentgyorgyi, Charles Alcock, Harvard-Smithsonian Ctr. for Astrophysics (United States); Wen-Ping Chen, National Central Univ. (Taiwan); Kem H. Cook, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); John C. Geary, Harvard-Smithsonian Ctr. for Astrophysics (United States); Paula Granados Contreras, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Carlos A. Guerrero, Benjamín Hernández Valencia, Iván Zavala Ibarra, Univ. Nacional Autónoma de México (Mexico); Jennifer Karr, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); JJ Kavelaars, NRC-Herzberg Astronomy & Astrophysics (Canada); Diego Ochoa, Edilberto Sánchez, José S. Silva, Univ. Nacional Autónoma de México (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-99

The Argus Array Technology Demonstrator: Rapid prototyping of core technologies for an all-sky multiplexed survey telescope

Author(s): Henry T. Corbett, Nathan W. Galliher, Ramses Gonzalez, Lawrence Machia, Alan Vasquez Soto, Nicholas M. Law, The Univ. of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-100

The Dragonfly Spectral Line Imager: design and first light

Author(s): Seery Chen, Univ. of Toronto (Canada); Deborah M. Lokhorst, NRC-Herzberg Astronomy & Astrophysics (Canada); Jeff Shen, Univ. of Toronto (Canada); Imad Pasha, Yale Univ. (United States); Roberto Abraham, Univ. of Toronto (Canada); Eugene Malakhov, New Mexico Skies (United States); Pieter van Dokkum, Yale Univ. (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-101

A review of the atmospheric opacity at the Large Millimeter Telescope site and 210 GHz opacity measurements comparison

Author(s): Daniel Ferrusca Rodriguez, Jesús Contreras, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Jetzael Cuazoson, David Hiriart, Univ. Nacional Autónoma de México (Mexico); Eduardo Ibarra Medel, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Stanley E. Kurtz, David Rojas, Univ. Nacional Autónoma de México (Mexico); Miguel Veláquez de la Rosa Becerra, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-102

Optimising rapid autonomous transient classifications with the New Robotic Telescope.

Author(s): Helen E. Jermak, David Law, Sebastian Buntin, Joao Bento, Carl Chalmers, Christopher M. Copperwheat, Iain A. Steele, Éamonn J. Harvey, Robert J. Smith, Astrophysics Research Institute (United Kingdom); Pablo Rodríguez-Gil, Instituto de Astrofísica de Canarias (Spain), Universidad de La Laguna (Spain); Carlos M. Gutíerrez, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-103

The Argus Optical Array: low-cost access to the deep, high-cadence sky

Author(s): Nicholas M. Law, Hank Corbett, Nathan W. Galliher, Ramses Gonzalez, Lawrence Machia, Alan Vasquez Soto, Glenn Walters, The Univ. of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-104

Packing the sky: coverage optimization and evaluation for large telescope arrays

Author(s): Nathan W. Galliher, Nicholas M. Law, Henry T. Corbett, Ramses Gonzalez, Lawrence Machia, Alan Vasquez Soto, The Univ. of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-106

How to pamper your optics: environment control for Argus Optical Array

Author(s): Lawrence Machia, Nicholas Law, Henry T. Corbett, Nathan Galliher, Ramses Gonzalez, Alan Vasquez Soto, The Univ. of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-107

ESA-SSA Program – NEOSTED: the first innovative Observatory for the FlyEye Telescopes

Author(s): Gianpietro Marchiori, Massimiliano Tordi, Leonardo Ghedin, Johana Martinez, Cristiana Manfrin, Cristina Battistel, EIE Group S.r.l. (Italy); René Messing, Ernesto Doelling, European Space Operations Ctr., European Space Agency (Germany)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-108

Argus Optical Array motion control: novel pointing and tracking solutions for large array telescopes

Author(s): Alan Vasquez Soto, Nicholas M. Law, Hank Corbett, Nathan W. Galliher, Ramses Gonzalez, Lawrence Machia, The Univ. of North Carolina at Chapel Hill (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-109

The SKA Mid SPFRx receiver/digitizer qualification model testing

Author(s): Krzysztof Caputa, Stephen Harrison, Zoran Ljusic, Michael Pleasance, Erning Zhao, NRC-Herzberg Astronomy & Astrophysics (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION P14: POSTERS - SITE TESTING

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-110

Maidanak site characterization for future optical telescope installation

Author(s): Yusufjon A. Tillayev, Ulugh Beg Astronomical Institute of the Uzbek Academy of Sciences (Uzbekistan)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-111

Characterization of LBT atmospheric and turbulence conditions in the context of ALTA project

Author(s): Alessio Turchi, Elena Masciadri, INAF (Italy); Christian Veillet, Large Binocular Telescope Observatory (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12182-112

Climatology at Oukaimeden Observatory

Author(s): Mohammed Sabil, Univ. Cadi Ayyad (Morocco), Univ. Sultan Moulay Slimane (Morocco); Zouhair Benkhaldoun, Abdelfattah Habib, Abdelhadi Jabiri, Imane Bekkal, Youssef Errazzouki, Univ. Cadi Ayyad (Morocco)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

REMOTE PRESENTATIONS

12182-12
The 50cm robotic telescope: control system upgrade and automation

Contact author(s): Stanzin Tsewang, Indian Institute of Astrophysics, India

Oral

12182-166
Research on a new position actuator control technology for segmented primary mirror telescopes

Contact author(s): Li Hao A., Nanjing Institute of Astronomical Optics & Technology

China

Poster

12182-48
Design and development of a mirror support system for prototype segmented mirror telescope

Contact author(s): Parihar Padmakar, Indian Institute of Astrophysics, India

Oral

12182-75
Study on segmentation and alignment related effects in a 10m class telescope

Contact author(s): Jacob Annu, Inter-Univ. Ctr. for Astronomy and Astrophysics, India

Poster

CONFERENCE 12183

Optical and Infrared Interferometry and Imaging VIII

17 - 22 July 2022 | Room 520 b

Conference Chairs: **Antoine Mérand,** European Southern Observatory (Chile); **Stephanie Sallum,** Univ. of California, Irvine (United States); **Joel Sanchez-Bermudez,** Univ. Nacional Autónoma de México (Mexico)

Program Committee: **Fabien Baron,** Georgia State Univ. (United States); **Myriam Benisty,** Institut de Planétologie et d'Astrophysique de Grenoble (France); **Michelle J. Creech-Eakman,** New Mexico Institute of Mining and Technology (United States); **Takayuki Kotani,** National Astronomical Observatory of Japan (Japan); **Xavier Haubois,** European Southern Observatory (Chile); **Keiichi Ohnaka,** Univ. Católica del Norte (Chile); **Lucas Labadie,** Univ. zu Köln (Germany); **Sebastian F. Hönig,** Univ. of Southampton (United Kingdom); **Sylvie Robbe-Dubois,** Observatoire de la Côte d'Azur (France); **Rachael Marie Roettenbacher,** Yale Univ. (United States); **Stephen A. Rinehart,** NASA Goddard Space Flight Ctr. (United States); **Gail H. Schaefer,** CHARA (United States); **Peter G. Tuthill,** The Univ. of Sydney (Australia)

SESSION 1: CURRENT AND PLANNED FACILITIES AND INSTRUMENTS I

18 July 2022 • 10:30 - 13:00 EDT | Room 520 b

Session Chair: Antoine Mérand, European Southern Observatory (Germany)

12183-1

LBTI status - overview and updates (Invited Paper)

Author(s): Steve Ertel, The Univ. of Arizona (United States)

18 July 2022 • 10:30 - 11:00 EDT | Room 520 b

12183-2

Recent technical and scientific highlights from the CHARA Array (Invited Paper)

Author(s): Douglas R. Gies, Theo A. ten Brummelaar, Gail Schaefer, Georgia State Univ. (United States)

18 July 2022 • 11:00 - 11:30 EDT | Room 520 b

12183-3

The Navy Precision Optical Interferometer: large-aperture observations and infrastructure improvements (Invited Paper)

Author(s): Gerard T. van Belle, Lowell Observatory (United States); James H. Clark, Henrique R. Schmitt, U.S. Naval Research Lab. (United States); David Noble, Lowell Observatory (United States); Anders M. Jorgensen, New Mexico Institute of Mining and Technology (United States); David Mozurkewich, Seabrook Engineering (United States); J. Thomas Armstrong, Ellyn K. Baines, Merrick DeWitt, Ty Martinez, Sergio R. Restaino, Jordan Stone, U.S. Naval Research Lab. (United States); Thomas Coleman, Ben Hardesty, Wyatt E. Clark, Khristian Jones, Bradley Kingsley, Lowell Observatory (United States); Nicholas Green, ATA Corp. (United States); Peter Kurtz, U.S. Naval Research Lab. (United States)

18 July 2022 • 11:30 - 12:00 EDT | Room 520 b

12183-4

Magdalena Ridge Observatory Interferometer: Upcoming important milestones towards first fringes (Invited Paper)

Author(s): Michelle J. Creech-Eakman, Magdalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States); Van D. Romero, New Mexico Institute of Mining and Technology (United States); Christopher A. Haniff, David F. Buscher, John S. Young, Univ. of Cambridge (United Kingdom); Christopher Salcido, Magdalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States)

18 July 2022 • 12:00 - 12:30 EDT | Room 520 b

12183-5

VLTI Status update (Invited Paper)

Author(s): Antoine Mérand, Roberto Abuter, European Southern Observatory (Germany); Juan Pablo Araneda, Pierre Bourget, European Southern Observatory (Chile); Paul Bristow, European Southern Observatory (Germany); Pablo Burgos, European Southern Observatory (Chile); Françoise Delplancke-Ströbele, Roderick Dembet, European Southern Observatory (Germany); Juan Pablo Gil, European Southern Observatory (Chile); Andreas Glindemann, Frédéric Gonté, European Southern Observatory (Germany); Patricia Guajardo, Xavier Haubois, European Southern Observatory (Chile); Norbert Hubin, Christian Hummel, European Southern Observatory (Germany); Heidi H. Korhonen, Aaron Labdon, European Southern Observatory (Chile); Sylvestre Lacour, European Southern Observatory (Germany), Observatoire de Paris, CNRS (France); Sylvain Oberti, European Southern Observatory (Germany); Claudia Paladini, Laurent Pallanca, European Southern Observatory (Chile); Luca Pasquini, Isabelle Percheron, European Southern Observatory (Germany); Miguel Riquelme, Thomas Rivinius, Peter Scicluna, European Southern Observatory (Chile); Markus Schoeller, European Southern Observatory (Germany); Nicolas Schuhler, Konrad R. W. Tristram, European Southern Observatory (Chile); Markus Wittkowski, Julien Woillez, European Southern Observatory (Germany); Gérard Zins, European Southern Observatory (Germany), European Southern Observatory (Chile)

18 July 2022 • 12:30 - 13:00 EDT | Room 520 b

Lunch Break 13:00 - 14:00

SESSION 2: CURRENT AND PLANNED FACILITIES AND INSTRUMENTS II

18 July 2022 • 14:00 - 18:00 EDT | Room 520 b

12183-6

A New Era of Interferometry with GRAVITY+ (Invited Paper)

Author(s): Guy Perrin, Observatoire de Paris-Site de Meudon (France); GRAVITY+ Collaboration, Max-Planck-Institut für extraterrestrische Physik (Germany)

18 July 2022 • 14:00 - 14:30 EDT | Room 520 b

12183-7

CHARA/SPICA: a new 6T instrument for the CHARA Array

Author(s): Denis Mourard, Philippe Berio, Observatoire de la Côte d'Azur (France); Cyril Pannetier, Observatoire de la Côte d'Azur (France); Nicolas Nardetto, Observatoire de la Côte d'Azur (France); Simon Albrecht, Aarhus Univ. (Denmark); Fatmé Allouche, Observatoire de la Côte d'Azur (France); Christophe Bailet, Observatoire de la Côte d'Azur (France); Laurent Bourgès, Institut de Planétologie et d'Astrophysique de Grenoble, Univ. Grenoble Alpes (France); Theo A. ten Brummelaar, CHARA Array, Georgia State Univ. (United States); Orlagh Creevey, Observatoire de la Côte d'Azur (France); Sebastien Deheuvels, Institut de Recherche en Astrophysique et Planétologie (France); Julien Dejonghe, Armando Domiciano, Pierre Geneslay, Observatoire de la Côte d'Azur (France); Douglas R. Gies, CHARA Array, Georgia State Univ. (United States); Estelle Jacqmart, Stéphane Lagarde, Daniel Lecron, Roxanne Ligi, Observatoire de la Côte d'Azur (France); Guillaume Mella, Institut de Planétologie et d'Astrophysique de Grenoble, Univ. Grenoble Alpes (France); Frédéric Morand, Sylvain Rousseau, David Salabert, Observatoire de la Côte d'Azur (France); Gail Schaefer, CHARA Array, Georgia State Univ. (United States); Alain Spang, Observatoire de la Côte d'Azur (France); Markus Wittkowski, European Southern Observatory (Germany)

18 July 2022 • 14:30 - 14:50 EDT | Room 520 b

12183-8

SPICA-FT: the new fringe tracker of the CHARA array

Author(s): Cyril Pannetier, Observatoire de la Côte d'Azur (France); Philippe Bério, Denis Mourard, Sylvain Rousseau, Observatoire de la Côte d'Azur (France); Fatmé Allouche, Observatoire de la Côte

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18 July 2022 • 14:50 - 15:10 EDT | Room 520 b

12183-9

The mid-infrared spectro-interferometer MATISSE at the VLTI

Author(s): Bruno Lopez, Stéphane Lagarde, Observatoire de la Côte d'Azur (France); Romain G. Petrov, Observatoire de la Côte d'Azur (France); Walter Jaffe, Leiden Univ. (Netherlands); Fatmé Allouche, Observatoire de la Côte d'Azur (France); Julien Woillez, European Southern Observatory (Germany); Florentin Millour, James H. Leftley, Observatoire de la Côte d'Azur (France); Andreas Glindemann, Paul Bristow, Markus Schoeller, European Southern Observatory (Germany); Michael Lehmitz, Roy van Boekel, Max-Planck-Institut für Astronomie (Germany); Felix Bettonvil, ASTRON (Netherlands); Mathias Henninger, Gerd Weigelt, Max-Planck-Institut für Radioastronomie (Germany); Anthony Meilland, Alexis Matter, Sylvie Robbe-Dubois, Pierre Cruzalèbes, Observatoire de la Côte d'Azur (France); Eric Pantin, CEA-Paris-Saclay (France); Michiel Hogerheijde, Leiden Univ. (Netherlands); Jean-Charles Augereau, Observatoire des Sciences de l'Univers de Grenoble (France); Jozsef Varga, Leiden Univ. (Netherlands); William C. Danchi, NASA (United States); Claudia Paladini, European Southern Observatory (Germany); Thomas Henning, Max-Planck-Institut für Astronomie (Germany); Pierre Bourget, European Southern Observatory (Chile); Klaus Meisenheimer, Max-Planck-Institut für Astronomie (Germany); Gérard Zins, Isabelle Percheron, European Southern Observatory (Germany); Leonard Burtscher, Leiden Univ. (Netherlands); Laurens B. F. M. Waters, Radboud Univ. (Netherlands); Carsten Dominik, Univ. of Amsterdam (Netherlands); Christian Hummel, European Southern Observatory (Germany); Miguel Riquelme, European Southern Observatory (Chile); Werner Laun, Max-Planck-Institut für Astronomie (Germany); Eddy Elswijk, ASTRON (Netherlands)

18 July 2022 • 15:10 - 15:30 EDT | Room 520 b

Coffee Break 15:30 - 16:00

12183-10

MYSTIC: a high angular resolution K-band imager at CHARA

Author(s): Benjamin R. Setterholm, John D. Monnier, Univ. of Michigan (United States); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Narsireddy Anugu, CHARA Array, Georgia State Univ. (United States); Jacob Ennis, Univ. of Michigan (United States); Becky Flores, Georgia State University (United States); Tyler Gardner, Nour Ibrahim, Univ. of Michigan (United States); Laurent Jocou, Institut de Planétologie et d'Astrophysique de Grenoble (France); Stefan Kraus, Univ. of Exeter (United Kingdom); Cyprien Lanthermann, Gail Schaefer, Theo A. ten Brummelaar, CHARA Array, Georgia State Univ. (United States)

18 July 2022 • 16:00 - 16:20 EDT | Room 520 b

12183-11

First measurements and upgrade plans of the MAGIC intensity interferometer

Author(s): Juan Cortina, Ctr. de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain); Victor Acciari, Institut de Física d'Altes Energies (Spain); Adrian Biland, ETH Zurich (Switzerland); Eduardo Colombo, Institut de Física d'Altes Energies (Spain); Carlos da Costa, Univ. Complutense de Madrid (Spain); Carlos Delgado, Carlos Díaz, Ctr. de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain); Michele Fiori, INAF (Italy); David Fink, Max-Planck-Institut für Physik (Germany); Tarek Hassan, Irene Jiménez-Martínez, Ctr. de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain); Etienne Lyard, Observatoire de Genève (Switzerland); Mosè Mariotti, Univ. degli Studi di Padova (Italy); Gustavo Martínez, Ctr. de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain); Razmik Mirzoyan, Max-Planck-Institut für Physik (Germany); Giampiero Naletto, INAF (Italy); Miguel Polo, Ctr. de Investigaciones Energéticas, Medioambientales y Tecnológicas (Spain); Nicolas Produit, Observatoire de Genève (Switzerland); Juan J. Rodríguez, Ctr. de Investigaciones Energéticas (Spain); Thomas Schweizer, Max-Planck-Institut für Physik (Germany); Roland Walter, Observatoire de Genève (Switzerland); Caroline W. Wunderlich, Istituto Nazionale di Fisica Nucleare (Italy); Luca Zampieri, INAF (Italy)

18 July 2022 • 16:20 - 16:40 EDT | Room 520 b

12183-12

Performance of the upgraded VERITAS Stellar Intensity Interferometer (VSII)

Author(s): David B. Kieda, The Univ. of Utah (United States)

18 July 2022 • 16:40 - 17:00 EDT | Room 520 b

12183-13

First light of the upgraded FIRST visible fibered interferometer at the Subaru telescope (thesis)

Author(s): Kevin Barjot, Elsa Huby, Observatoire de Paris (France); Sébastien B. Vievard, National Astronomical Observatory of Japan (United States); Manon Lallement, Sylvestre Lacour, Observatoire de Paris (France); Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Vincent Deo, Olivier Guyon, Julien Lozi, National Astronomical Observatory of Japan (United States); Takayuki Kotani, Astrobiology Ctr., National Institute of Natural Sciences (Japan); Cédric Cassagnettes, Adrien Billat, Teem Photonics (France); Franck Marchis, SETI Institute (United States); Guy Perrin, Vincent Lapeyrère, Daniel Rouan, Observatoire de Paris (France)

18 July 2022 • 17:00 - 17:20 EDT | Room 520 b

12183-14

A stellar intensity interferometry instrument for the ASTRI Mini-Array telescopes

Author(s): Luca Zampieri, INAF - Osservatorio Astronomico di Padova (Italy); Giovanni Bonanno, Pietro Bruno, INAF - Osservatorio Astrofisico di Catania (Italy); Carmelo Gargano, INAF - Istituto di Astrofisica Spaziale e Fisica Cosmica di Palermo (Italy); Luigi Lessio, INAF - Osservatorio Astronomico di Padova (Italy); Giampiero Naletto, Univ. degli Studi di Padova (Italy); Lorenzo Paoletti, INAF - Osservatorio Astronomico di Padova (Italy); Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giuseppe Romeo, INAF - Osservatorio Astrofisico di Catania (Italy); Andrea Bulgarelli, Vito Conforti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Michele Fiori, Univ. degli Studi di Padova (Italy); Stefano Gallozzi, INAF - Osservatorio Astronomico di Roma (Italy); Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Alessandro Grillo, INAF - Osservatorio Astrofisico di Catania (Italy); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Saverio Lombardi, Fabrizio Lucarelli, INAF - Osservatorio Astronomico di Roma (Italy); Aldo Morselli, Istituto Nazionale di Fisica Nucleare (Italy); Giovanni Occhipinti, INAF - Osservatorio Astrofisico di Catania (Italy); Nicolò Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Claudio Pernechele, INAF - Osservatorio Astronomico di Padova (Italy); Gonzalo Rodriguez Fernandez, Istituto Nazionale di Fisica Nucleare (Italy); Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giorgia Sironi, INAF - Osservatorio Astronomico di Brera (Italy); Maria Cristina Timpanaro, Valentina Giordano, INAF - Osservatorio Astrofisico di Catania (Italy); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy)

18 July 2022 • 17:20 - 17:40 EDT | Room 520 b

12183-15

Intensity interferometry at Calern and beyond: progress report

Author(s): Nolan K. Matthews, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France); Jean-Pierre Rivet, Univ. Côte d'Azur (France), Observatoire de la Côte d'Azur (France), CNRS (France); Mathilde Hugbart, Institut de Physique de Nice (France), Institut de Physique de Nice, CNRS (France); Guillaume Labeyrie, Robin Kaiser, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France); Olivier Lai, Univ. Côte d'Azur (France), Observatoire de la Côte d'Azur (France), CNRS (France); Farrokh Vakili, David Vernet, Julien Chabé, Clémont Courde, Univ. Côte d'Azur (France), Observatoire de la Côte d'Azur (France), CNRS (France); Nicolas Schuhler, Pierre Bourget,

European Southern Observatory (Chile); William Guerin, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France)

18 July 2022 • 17:40 - 18:00 EDT | Room 520 b

Coffee Break 10:00 - 10:30

SESSION 3: CRITICAL SUBSYSTEMS I

19 July 2022 • 10:30 - 12:10 EDT | Room 520 b

Session Chair: Stephanie Sallum, Univ. of California, Irvine (United States)

12183-16

L-band nulling interferometry at the VLTI with ASGARD/Hi-5: status and plans

Author(s): Denis Defrère, KU Leuven (Belgium); Olivier Absil, Liège Univ. (Belgium); Jean-Philippe Berger, Univ. Grenoble Alpes (France); Azzurra Bigioli, KU Leuven (Belgium); Benjamin Courtney-Barrer, European Southern Observatory (Chile); Colin Dandumont, Liège Univ. (Belgium); Alexandre Emsenhuber, Ludwig-Maximilians-Univ. München (Germany); Steve Ertel, The Univ. of Arizona (United States); Jonathan Gagne, Univ. de Montréal (Canada); Germain Garreau, KU Leuven (Belgium); Adrian M. Glauser, ETH Zurich (Switzerland); Simon Gross, Macquarie Univ. (Australia); Michael J. Ireland, Harry-Dean Kenchington Goldsmith, The Australian National Univ. (Australia); Stefan Kraus, Univ. of Exeter (United Kingdom); Lucas Labadie, Univ. zu Köln (Germany); Victor Laborde, Liège Univ. (Belgium); Romain Laugier, KU Leuven (Belgium); Jarron Leisenring, The Univ. of Arizona (United States); Jérôme Loicq, Technische Univ. Delft (Netherlands); Guillermo Martin, Univ. Grenoble Alpes (France); Frantz Martinache, Observatoire de la Côte d'Azur (France); Marc-Antoine Martinod, KU Leuven (Belgium); Alexis Matter, Observatoire de la Côte d'Azur (France); Alexandra Mazzoli, Liège Univ. (Belgium); Bertrand Mennesson, Jet Propulsion Lab., NASA (United States); Salman Muhammad, Gert Raskin, Bart Vandenbussche, Simon Verlinden, KU Leuven (Belgium); Julien Woillez, European Southern Observatory (Germany)

19 July 2022 • 10:30 - 10:50 EDT | Room 520 b

12183-17

Hierarchical Fringe Tracking, Sky Coverage and AGNs with the VLTI

Author(s): Romain G. Petrov, James H. Leftley, Univ. Côte d'Azur (France); Abdelkarim Boskri, Oukaimeden Observatory, Univ. Cadi Ayyad (Morocco); Massinissa Hadjara, Chinese Academy of Science South America Ctr. for Astronomy (CASSACA) (Chile); Fatmé Allouche, Stéphane Lagarde, Bruno Lopez, Florentin Millour, Univ. Côte d'Azur (France); Xinyang Chen, Shanghai Astronomical Observatory (China); Yinlei Hao, Zhejiang Univ. (China); Jinhua He, Chinese Academy of Science South America Ctr. for Astronomy (CASSACA) (Chile); Thami El Halkouj, Zouhair Benkhaldoun, Univ. Cadi Ayyad (Morocco)

19 July 2022 • 10:50 - 11:10 EDT | Room 520 b

12183-18

CHARA MIRC-X and MYSTIC cophasing observations to enable efficient spectro-interferometry and over-resolved object imaging

Author(s): Narsireddy Anugu, CHARA Array, Georgia State Univ. (United States); John D. Monnier, Univ. of Michigan (United States); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Stefan Kraus, Univ. of Exeter (United Kingdom); Benjamin R. Setterholm, Univ. of Michigan (United States); Theo A. ten Brummelaar, Gail Schaefer, Cyprien Lanthermann, CHARA Array (United States); Jacob Ennis, Univ. of Michigan (United States)

19 July 2022 • 11:10 - 11:30 EDT | Room 520 b

12183-19

Achromatic nulling interferometry and fringe tracking with 3D-photonic tricouplers with GLINT

Author(s): Marc-Antoine Martinod, Teresa Deyi Maria Klinner-teo, Peter G. Tuthill, Sydney Institute for Astronomy (Australia), Sydney Astrophotonic Instrumentation Labs. (Australia), Australian Astronomical Observatory, The Univ. of Sydney (Australia); Simon Gross, Elizabeth Arcadi, Glen Douglass, Jacinda Webb, Macquarie Univ. (Australia); Barnaby R. M. Norris, Sydney Institute for Astronomy (Australia), Sydney Astrophotonic Instrumentation Labs. (Australia), Australian Astronomical Observatory, The Univ. of Sydney (Australia); Olivier Guyon, National Astronomical Observatory of Japan (United States), Steward Observatory (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan); Julien Lozi, National Astronomical Observatory of Japan (United States); Tiphaine Lagadec, Sydney Institute for Astronomy (Australia), Sydney Astrophotonic Instrumentation Labs. (Australia), Australian Astronomical Observatory, The Univ. of Sydney (Australia); Nemanja Jovanovic, Caltech (United States); Nick Cvetojevic, Laboratoire Lagrange, Observatoire de la Cote d'Azur (France); Alexander Arriola, Thomas Gretzinger, Michael J. Withford, Macquarie Univ. (Australia); Jon S. Lawrence, Australian Astronomical Observatory (Australia); Sergio Leon-Saval, Sydney Institute for Astronomy (Australia)

19 July 2022 • 11:30 - 11:50 EDT | Room 520 b

12183-20

Nulling Interferometry Cryogenic Experiment (NICE): First results from ambient conditions

Author(s): Mohanakrishna Ranganathan, Adrian M. Glauser, Thomas Birbacher, Sascha P. Quanz, ETH Zurich (Switzerland)

19 July 2022 • 11:50 - 12:10 EDT | Room 520 b

Lunch/Exhibition Break 12:10 - 13:40

SESSION 4: CRITICAL SUBSYSTEMS II

19 July 2022 • 13:40 - 15:00 EDT | Room 520 b

12183-22

Spectrograph design for the Asgard/BIFROST spectro-interferometric instrument for the VLTI

Author(s): Sorabh Chhabra, Univ. of Exeter (United Kingdom); Michele Frangiamore, INAF - Osservatorio Astronomico di Brera (Italy); Stefan Kraus, Univ. of Exeter (United Kingdom); Andrea Bianco, INAF Osservatorio Astronomico di Brera (Italy); Francisco Garzon, Instituto de Astrofísica de Canarias (Spain); John D. Monnier, Univ. of Michigan (United States); Daniel J. Mortimer, Univ. of Exeter (United Kingdom)

19 July 2022 • 13:40 - 14:00 EDT | Room 520 b

12183-23

Design of the new CHARA instrument SILMARIL: pushing for the sensitivity of a 3-beam combiner in the H- and K-band.

Author(s): Cyprien Lanthermann, Theo A. ten Brummelaar, CHARA Array, Georgia State Univ. (United States); Peter G. Tuthill, Marc-Antoine Martinod, Sydney Institute for Astronomy (Australia); Douglas R. Gies, Georgia State Univ. (United States); Gail Schaefer, Matthew D. Anderson, CHARA Array, Georgia State Univ. (United States)

19 July 2022 • 14:00 - 14:20 EDT | Room 520 b

12183-24

Automation Upgrades at the Navy Precision Optical Interferometer

Author(s): Anders M. Jorgensen, New Mexico Institute of Mining and Technology (United States); Khristian Jones, David Noble, Lowell Observatory (United States); James H. Clark, Henrique R. Schmitt, U.S. Naval Research Lab. (United States); Gerard T. van Belle, Lowell Observatory (United States)

19 July 2022 • 14:20 - 14:40 EDT | Room 520 b

12183-25

Factory acceptance of the Automated Alignment System for the Magdalena Ridge Observatory Interferometer (THESIS)

Author(s): James J. D. Luis, David F. Buscher, John S. Young, Christopher A. Haniff, Xiaowei Sun, Univ. of Cambridge (United Kingdom); Christopher Salcido, Madgalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States); Michelle J. Creech-Eakman, Magdalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States)

19 July 2022 • 14:40 - 15:00 EDT | Room 520 b

Coffee Break 15:00 - 15:30

SESSION 5: OBSERVING TECHNIQUES I

19 July 2022 • 15:30 - 17:40 EDT | Room 520 b

Session Chair: Joel Sanchez-Bermudez, Univ. Nacional Autónoma de México (Mexico)

12183-26

Aperture Masking Interferometry: review and prospects with JWST (Invited Paper)

Author(s): Peter G. Tuthill, The Univ. of Sydney (Australia)

19 July 2022 • 15:30 - 16:00 EDT | Room 520 b

12183-27

Interferometric wavefront sensing at FIRST/SCExAO : self-calibrated fibered pupil-remapping spectrocopy using a metrology laser source

Author(s): Sébastien B. Vievard, Vincent Deo, Subaru Telescope, NAOJ (United States); Elsa Huby, Sylvestre Lacour, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Olivier Guyon, Subaru Telescope, NAOJ (United States); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Kevin Barjot, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Guillermo Martin, Univ. Grenoble Alpes (France); Manon Lallement, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Julien Lozi, Subaru Telescope, NAOJ (United States); Takayuki Kotani, Astrobiology Ctr., National Institute of Natural Sciences (Japan); Franck Marchis, SETI Institute (United States); Daniel Rouan, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Kyohoon Ahn, Nour Skaf, Subaru Telescope, NAOJ (United States); Guy Perrin, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France)

19 July 2022 • 16:00 - 16:20 EDT | Room 520 b

12183-28

GRAVITY+ Astrometry: pushing micro-arcsecond precision with long baseline interferometry

Author(s): Guillaume Bourdarot, Felix Widmann, Frank Eisenhauer, Sebastiano von Fellenberg, Stefan Gillessen, GRAVITY+ Collaboration, Max-Planck-Institut für extraterrestrische Physik (Germany)

19 July 2022 • 16:20 - 16:40 EDT | Room 520 b

12183-29

GRAVITY+ Wide: Towards hundreds of z ~ 2 AGN

Author(s): Antonia Drescher, Maximilian Fabricius, GRAVITY+ Collaboration, Frank Haussmann, Max-Planck-Institut für extraterrestrische Physik (Germany); Christian Straubmeier, Matthew Horrobin, Univ. zu Köln (Germany); Julien Woillez, European Southern Observatory (Germany); Pierre Bourget, European Southern Observatory (Chile); Frank Eisenhauer, Felix Widmann, Jinyi Shangguan, Taro Shimizu, Stefan Gillessen, Max-Planck-Institut für extraterrestrische Physik (Germany); Jean-Baptiste Le Bouquin, Univ. Grenoble Alpes (France); Thibaut Paumard, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Paulo J. V. Garcia, Univ. do Porto (Portugal); Laura Kreidberg, Max-Planck-Institut für Astronomie (Germany)

19 July 2022 • 16:40 - 17:00 EDT | Room 520 b

12183-30

GRAVITY faint: reducing noise sources in GRAVITY+ with a fast metrology attenuation system

Author(s): Felix Widmann, Stefan Gillessen, Thomas Ott, Senol Yazici, Frank Eisenhauer, GRAVITY+ Collaboration, Max-Planck-Institut für extraterrestrische Physik (Germany)

19 July 2022 • 17:00 - 17:20 EDT | Room 520 b

12183-31

Digging a dark hole in GRAVITY: towards jupiter-like observations at the astronomical unit scale (THESIS)

Author(s): Nicolas Pourré, Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Julien Woillez, European Southern Observatory (Germany); Lucie Leboulleux, Alexis Carlotti, Institut de Planétologie et d'Astrophysique de Grenoble (France); Mathias Nowak, Institute of Astronomy, Univ. of Cambridge (United Kingdom); Sylvestre Lacour, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France)

19 July 2022 • 17:20 - 17:40 EDT | Room 520 b

Coffee Break 10:00 - 10:30

SESSION 6: OBSERVING TECHNIQUES II

20 July 2022 • 10:30 - 12:10 EDT | Room 520 b

12183-32

CANCELED: H-band polarinterferometry at VLTI and CHARA [THESIS]

20 July 2022 • 10:30 - 10:50 EDT | Room 520 b

12183-33

Evolution of VLTI science operations: Supporting imaging, astrometry, and monitoring types of interferometric observations

Author(s): Markus Wittkowski, Giacomo Beccari, Thomas Bierwirth, European Southern Observatory (Germany); Stéphane Brillant, European Southern Observatory (Chile); Paula C. Correia dos Santos, European Southern Observatory (Germany); Olivier Hainaut, Xavier Haubois, European Southern Observatory (Chile); Christian Hummel, Stéphane Marteau, Antoine Mérand, European Southern Observatory (Germany); Steffen Mieske, European Southern Observatory (Chile); Sangeeta Mysore, European Southern Observatory (Germany); Claudia Paladini, European Southern Observatory (Chile); Ferdinando Patat, John Pritchard, Michael Pruemm, Marina Rejkuba, Konrad R. W. Tristram, European Southern Observatory (Germany)

20 July 2022 • 10:50 - 11:10 EDT | Room 520 b

12183-34

Enabling exoplanets and AGNs science in the mid-infrared with MATISSE combined with GRAVITY+

Author(s): Florentin Millour, Philippe Bério, Alexis Matter, Olivier Lai, Stéphane Lagarde, Univ. Côte d'Azur (France); Julien Woillez, European Southern Observatory (Germany); Romain G. Petrov, James H. Leftley, Univ. Côte d'Azur (France); Thibaut Paumard, Observatoire de Paris (France); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Sylvestre Lacour, Observatoire de Paris (France); Abdelkarim Boskri, LPHEA (Morocco)

20 July 2022 • 11:10 - 11:30 EDT | Room 520 b

12183-35

A thesis to probe unique exoplanet regimes with micro-arcsecond astrometry and precision closure phases at CHARA and VLTI

Author(s): Tyler Gardner, John D. Monnier, Univ. of Michigan (United States); Francis C. Fekel, Tennessee State Univ. (United States); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Gail Schaefer, CHARA Array, Georgia State Univ. (United States); Stefan Kraus, Univ. of Exeter (United Kingdom); Fred C. Adams, Univ. of Michigan (United States); Narsireddy Anugu, CHARA Array, Georgia State Univ. (United States); Jean-Philippe Berger, Institut de Planétologie et d'Astrophysique de Grenoble (France); Theo A. ten Brummelaar, CHARA Array, Georgia State Univ. (United States); Claire L. Davies, Univ. of Exeter (United Kingdom); Jacob Ennis, Univ. of Michigan (United States); Douglas R. Gies, CHARA Array (United States); Keith J.C. Johnson, University of Wisconsin (United States); Pierre Kervella, LESIA, Observatoire de Paris (France); Aaron Labdon, European Southern Observatory (Chile); Cyprien Lanthermann,

CHARA Array, Georgia State Univ. (United States); Johannes Sahlmann, European Space Astronomy Centre (Spain); Benjamin R. Setterholm, Univ. of Michigan (United States)

20 July 2022 • 11:30 - 11:50 EDT | Room 520 b

12183-36

High-angular and high-contrast VLTI observations from J to M band with the Asgard instrumental suite

Author(s): Marc-Antoine Martinod, Azzurra Bigioli, KU Leuven (Belgium); Julia Bryant, Sydney Institute for Astronomy (Australia); Denis Defrère, KU Leuven (Belgium); Michael J. Ireland, The Australian National Univ. (Australia); Stefan Kraus, Univ. of Exeter (United Kingdom); Tiphaine Lagadec, Sydney Institute for Astronomy (Australia); Romain Laugier, KU Leuven (Belgium); Frantz Martinache, Observatoire de la Côte d'Azur (France); Daniel J. Mortimer, Sorabh Chhabra, Univ. of Exeter (United Kingdom)

20 July 2022 • 11:50 - 12:10 EDT | Room 520 b

Lunch/Exhibition Break 12:10 - 13:30

SESSION 7: TECHNOLOGIES

20 July 2022 • 13:30 - 17:40 EDT | Room 520 b

Session Chair: Antoine Mérand, European Southern Observatory (Germany)

12183-38

The astrophotonics perspective for optical/IR interferometry: present and future (Invited Paper)

Author(s): Lucas Labadie, Univ. zu Köln (Germany)

20 July 2022 • 13:30 - 14:00 EDT | Room 520 b

12183-39

Heterodyne infrared interferometry : review and prospects (Invited Paper)

Author(s): Guillaume Bourdarot, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 14:00 - 14:30 EDT | Room 520 b

12183-40

A complete photonics correlation scheme for future mid-infrared heterodyne interferometry instrumentation.

Author(s): Jean-Philippe Berger, Institut de Planétologie et d'Astrophysique de Grenoble (France), Univ. Grenoble Alpes (France), CNRS (France); Guillaume Bourdarot, Institut de Planétologie et d'Astrophysique de Grenoble (France), Max-Planck-Institut für extraterrestrische Physik (Germany); Tituan Allain, Institut de Planétologie et d'Astrophysique de Grenoble (France), Univ. Grenoble Alpes (France), CNRS (France); Hugues Guillet de Chatellus, Lab. Interdisciplinaire de Physique (France), Univ. Grenoble Alpes (France), CNRS (France)

20 July 2022 • 14:30 - 14:50 EDT | Room 520 b

12183-41

Ultrafast laser inscription of integrated optics 2-telescope beam combiners for K-band interferometry at the CHARA array

Author(s): Jacopo Siliprandi, Heriot-Watt Univ. (United Kingdom); David G. MacLachlan, Calum A. Ross, Scottish Universities Physics Alliance, Heriot-Watt Univ. (United Kingdom); Tarun K. Sharma, Lucas Labadie, Univ. zu Köln (Germany); Kalaga V. Madhav, Abani Shankar Nayak, Aline N. Dinkelaker, Martin M. Roth, Leibniz-Institut für Astrophysik Potsdam (Germany); Ettore Pedretti, UK Research and Innovation (United Kingdom), STFC Rutherford Appleton Lab. (United Kingdom); Theo A. ten Brummelaar, Nicholas Scott, CHARA Array, Georgia State Univ. (United States); Vincent Coudé du Foresto, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique, Observatoire de Paris (France), CNRS (France), Univ. Paris Diderot (France); Robert R. Thomson, Aurélien Benoît, Scottish Universities Physics Alliance, Heriot-Watt Univ (United Kingdom)

20 July 2022 • 14:50 - 15:10 EDT | Room 520 b

12183-42

Characterization of MID-Infrared QCD detectors for astronomical heterodyne interferometry

Author(s): Tituan Allain, Jean-Philippe Berger, Institut de Planétologie et d'Astrophysique de Grenoble (France); Carlo Sirtori, Lab. de Physique de l'Ecole Normale Supérieure (France)

20 July 2022 • 15:10 - 15:30 EDT | Room 520 b

Coffee Break 15:30 - 16:00

12183-43

Development of the 4-telescope photonic nuller of Hi-5 for the characterization of exoplanets in the mid-IR

Author(s): Ahmed Sanny, Univ. zu Köln (Germany), MQ Photonics Research Ctr., Macquarie Univ. (Australia); Lucas Labadie, Univ. zu Köln (Germany); Simon Gross, MQ Photonics Research Ctr., Macquarie Univ. (Australia); Denis Defrère, Azzurra Bigioli, KU Leuven (Belgium); Romain Laugier, Institute of Astronomy (Belgium); Thomas Gretzinger, Michael J. Withford, MQ Photonics Research Ctr., Macquarie Univ. (Australia)

20 July 2022 • 16:00 - 16:20 EDT | Room 520 b

12183-44

Status and applications of linear-mode HgCdTe avalanche photodiode arrays at Leonardo, UK

Author(s): Egle Zemaityte, Dan Owton, Chris Maxey, Vincent Isgar, Les Hipwood, Matthew Hicks, Keith Barnes, Peter Thorne, Ian Baker, Leonardo UK Ltd. (United Kingdom)

20 July 2022 • 16:20 - 16:40 EDT | Room 520 b

12183-45

Closed-loop on-chip phase control and fringe tracking in photonic interferometers

Author(s): Nick Cvetojevic, Frantz Martinache, Peter Marley Chingaipe, Observatoire de la Côte d'Azur (France); Romain Laugier, KU Leuven (Belgium); Mamadou N'Diaye, Roxanne Ligi, Observatoire de la Côte d'Azur (France); David Mary, Observatoire de la Côte d'Azur (France)

20 July 2022 • 16:40 - 17:00 EDT | Room 520 b

12183-46

4-input Photonic Kernel-Nulling for the VLTI

Author(s): Peter Marley Chingaipe, Frantz Martinache, Nick Cvetojevic, Observatoire de la Côte d'Azur (France)

20 July 2022 • 17:00 - 17:20 EDT | Room 520 b

12183-47

A sub-nanometer long-term stable heterodyne laser metrology system for NICE

Author(s): Thomas Birbacher, ETH Zürich (Switzerland); Adrian M. Glauser, Mohanakrishna Ranganathan, Sascha P. Quanz, ETH Zurich (Switzerland)

20 July 2022 • 17:20 - 17:40 EDT | Room 520 b

AWARD CEREMONY: MICHELSON AND FIZEAU PRIZES

20 July 2022 • 17:40 - 18:10 EDT | Room 520 b

Moderators:
Gerard van Belle, Lowell Observatory (United States)
Denis Mourard, OCA (France)

The Michelson and Fizeau Prizes are two prizes in Astronomical Interferometry, sponsored by the Observatoire de la Côte d'Azur (OCA) and the Lowell Observatory. The two prizes are similar but complementary, with the Michelson Prize emphasizing application of interferometry to astrophysical research, and the Fizeau Prize emphasizing innovative technical and theoretical work. The Prizes were first created in 2010 by the then-IAU Commission 54 for Optical and Infrared Interferometry, OCA, and the Mt. Wilson Institute (MWI). In

2018 Lowell Observatory took over stewardship of the Michelson Prize. This Session will honor the laureates of these two prizes for the 2020 and 2022 editions.

Coffee Break 10:00 - 10:30

SESSION 8: SPACE INTERFEROMETRY TECHNOLOGY

21 July 2022 • 10:30 - 12:10 EDT | Room 520 b

Session Chair: Stephanie Sallum, Univ. of California, Irvine (United States)

12183-48

The Pyxis Interferometer (I): scientific context, metrology system and optical design

Author(s): Jonah T. Hansen, Michael J. Ireland, Tony Travouillon, Samuel Wade, Michael Ellis, Shanae King, Tiphaine Lagadec, Joice Mathew, Patrick Miller, Stephanie Monty, Adam Rains, Hancheng Shao, The Australian National Univ. (Australia)

21 July 2022 • 10:30 - 10:50 EDT | Room 520 b

12183-49

The Pyxis Interferometer (II): control system, telescope and mechanical design

Author(s): Samuel Wade, Jonah T. Hansen, Michael J. Ireland, Tony Travouillon, Nicholas Bohlsen, Logan Corry, Nicholas Herrald, Weihao Luo, Stephen Madden, Joseph Mangos, Michael Polkinghorne, Kunlun Yan, The Australian National Univ. (Australia)

21 July 2022 • 10:50 - 11:10 EDT | Room 520 b

12183-50

Sub-milliarcsecond astronomical imaging: Advancing space-based astronomical optical interferometry observatories with Optimast

Author(s): Gerard T. van Belle, Lowell Observatory (United States); Daniel Hillsberry, Jessica Piness, Justin Kugler, Redwire Space, Inc. (United States)

21 July 2022 • 11:10 - 11:30 EDT | Room 520 b

12183-51

Laser-Guided Space Interferometer

Author(s): Leonid Pogorelyuk, Paul Serra, Shreeyam Kacker, Massachusetts Institute of Technology (United States); Gioia Rau, Kenneth G. Carpenter, NASA Goddard Space Flight Ctr. (United States); Laurent Pueyo, Space Telescope Science Institute (United States); John D. Monnier, Univ. of Michigan (United States); Ewen Douglas, The Univ. of Arizona (United States); Kerri Cahoy, Massachusetts Institute of Technology (United States)

21 July 2022 • 11:30 - 11:50 EDT | Room 520 b

12183-52

The Large Interferometer For Exoplanets (LIFE) space-based nulling interferometer concept: updated yield predictions based on an instrumental noise model

Author(s): Felix Dannert, ETH Zurich (Switzerland), National Ctr. of Competence in Research PlanetS (Switzerland); Sascha P. Quanz, ETH Zurich (Switzerland); Jens Kammerer, Space Telescope Science Institute (United States); Adrian M. Glauser, ETH Zurich (Switzerland); Romain Laugier, KU Leuven (Belgium); Andrea Fortier, Ctr. for Space and Habitability (CSH), Univ. Bern (Switzerland); Mohanakrishna Ranganathan, ETH Zurich (Switzerland)

21 July 2022 • 11:50 - 12:10 EDT | Room 520 b

Lunch/Exhibition Break 12:10 - 13:30

SESSION 9: DATA PROCESSING ANALYSIS ACCESS AND DISCOVERY

21 July 2022 • 13:30 - 17:30 EDT | Room 520 b

Session Chair: Joel Sanchez-Bermudez, Univ. Nacional Autónoma de México (Mexico)

12183-53

Optical interferometry image reconstruction contest IX (Invited Paper)

Author(s): Joel Sanchez-Bermudez, Univ. Nacional Autónoma de México (Mexico); Antoine Mérand, European Southern Observatory (Germany); Stephanie Sallum, Univ. of California, Irvine (United States)

21 July 2022 • 13:30 - 14:00 EDT | Room 520 b

12183-54

Benchmarking image reconstruction softwares with OImaging

Author(s): Férréol Soulez, Ctr. de Recherche Astrophysique de Lyon, Observatoire de Lyon (France); Laurent Bourgès, Univ. Grenoble Alpes (France), CNRS (France), Observatoire des Sciences de l'Univers de Grenoble (France); Antoine Kaszczyc, Ctr. de Recherche Astrophysique de Lyon, Observatoire de Lyon (France); Guillaume Mella, Univ. Grenoble Alpes (France), CNRS (France), Observatoire des Sciences de l'Univers de Grenoble (France); Martin Pratoussy, Ctr. de Recherche Astrophysique de Lyon, Observatoire de Lyon (France); Gilles Duvert, Univ. Grenoble Alpes (France), CNRS (France), Institut de Planétologie et d'Astrophysique de Grenoble (France)

21 July 2022 • 14:00 - 14:20 EDT | Room 520 b

12183-55

Deep images of the Galactic Center with GRAVITY

Author(s): Julia Stadler, GRAVITY+ Collaboration, Antonia Drescher, Felix Mang, Frank Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany)

21 July 2022 • 14:20 - 14:40 EDT | Room 520 b

12183-56

Optimal self-calibration and fringe tracking in photonic nulling interferometers using machine learning

Author(s): Barnaby R. M. Norris, Marc-Antoine Martinod, Peter G. Tuthill, The Univ. of Sydney (Australia); Simon Gross, Macquarie Univ. (Australia); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Nemanja Jovanovic, Caltech (United States); Tiphaine Lagadec, Teresa Deyi Maria Klinner-teo, The Univ. of Sydney (Australia); Olivier Guyon, Julien Lozi, Vincent Deo, Sébastien B. Vievard, National Astronomical Observatory of Japan (United States); Alex Arriola, Thomas Gretzinger, Jon S. Lawrence, Michael J. Withford, Macquarie Univ. (Australia)

21 July 2022 • 14:40 - 15:00 EDT | Room 520 b

12183-57

CASSINI - A novel software for interferometric image reconstruction

Author(s): Joel Sanchez-Bermudez, Univ. Nacional Autónoma de México (Mexico); Antxon Alberdi, Rainer Schödel, Instituto de Astrofísica de Andalucía (Spain); Anand Sivaramakrishnan, Space Telescope Science Institute (United States); Abel Rosales, Univ. Nacional Autónoma de México (Mexico)

21 July 2022 • 15:00 - 15:20 EDT | Room 520 b

Coffee Break 15:20 - 15:50

12183-59

Spectral differential imaging with SCExAO/CHARIS kernel phase

Author(s): Alexander Chaushev, Stephanie Sallum, Univ. of California, Irvine (United States); Jeffrey Chilcote, Univ. of Notre Dame (United States); Tyler Groff, NASA Goddard Space Flight Ctr. (United States); Olivier Guyon, Julien Lozi, Subaru Telescope, NAOJ (United States); Barnaby R. M. Norris, The Univ. of Sydney (Australia); Andrew Skemer, Univ. of California, Santa Cruz (United States)

21 July 2022 • 15:50 - 16:10 EDT | Room 520 b

12183-60

Statistical tests with multi-wavelength Kernel-phase analysis for the detection and characterization of planetary companions

Author(s): Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); David Mary, Observatoire de la Côte d'Azur (France); Roxanne Ligi, Frantz Martinache, Nick Cvetojevic, Peter Chingaipe, Observatoire de la Côte d'Azur (France); Romain Laugier, KU Leuven (Belgium)

21 July 2022 • 16:10 - 16:30 EDT | Room 520 b

12183-61

Flexible Spectro Interferometric modelling of OIFITS data with PMOIRED

Author(s): Antoine Mérand, European Southern Observatory (Germany)

21 July 2022 • 16:30 - 16:50 EDT | Room 520 b

12183-62

RHAPSODY: Reconstructing Hankel rAdial Profiles in centro-Symmetric Objects with Discrete rings for astrophYsics (THESIS)

Author(s): Julien Drevon, Observatoire de la Côte d'Azur (France), European Southern Observatory (France); Pierre Cruzalèbes, Florentin Millour, Observatoire de la Côte d'Azur (France), CNRS (France); Claudia Paladini, Peter Scicluna, European Southern Observatory (Chile)

21 July 2022 • 16:50 - 17:10 EDT | Room 520 b

12183-63

New algorithms for speckle imaging

Author(s): Fabien R. Baron, Elizabeth Lincoln, Georgia State Univ. (United States)

21 July 2022 • 17:10 - 17:30 EDT | Room 520 b

SESSION 10: FUTURE OF INTERFEROMETRY

22 July 2022 • 09:00 - 11:10 EDT | Room 520 b

Session Chair: Antoine Mérand, European Southern Observatory (Germany)

12183-64

In memoriam Matt Willson (Invited Paper)

Author(s): Antoine Mérand, European Southern Observatory (Germany); Stefan Kraus, Univ. of Exeter (United Kingdom); Fabien R. Baron, Georgia State Univ. (United States)

22 July 2022 • 09:00 - 09:20 EDT | Room 520 b

12183-65

User support and Expanding the Community (Invited Paper)

Author(s): Mercedes Filho, Univ. do Porto (Portugal)

22 July 2022 • 09:20 - 09:50 EDT | Room 520 b

12183-66

High spectral-resolution interferometry down to 1 micron with Asgard/BIFROST at VLTI: Science drivers and project overview

Author(s): Stefan Kraus, Daniel J. Mortimer, Sorabh Chhabra, Univ. of Exeter (United Kingdom); Michael J. Ireland, The Australian National Univ. (Australia); Frantz Martinache, Observatoire de la Côte d'Azur (France); Denis Defrère, Marc-Antoine Martinod, KU Leuven (Belgium); Tiphaine Lagadec, The Australian National Univ. (Australia); John D. Monnier, Univ. of Michigan (United States); Narsireddy Anugu, CHARA Array (United States); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Yi Lu, Isabelle Codron, Univ. of Exeter (United Kingdom)

22 July 2022 • 09:50 - 10:10 EDT | Room 520 b

12183-67

STELLIM, A Stellar Imager at VLTI

Author(s): Xavier Haubois, Nicolas Schuhler, Pierre Bourget, European Southern Observatory (Chile); Julien Woillez, European Southern Observatory (Germany)

22 July 2022 • 10:10 - 10:30 EDT | Room 520 b

12183-68

Beam combiner for the Asgard/BIFROST instrument

Author(s): Daniel J. Mortimer, Stefan Kraus, Univ. of Exeter (United Kingdom); John D. Monnier, Univ. of Michigan (United States); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Narsireddy Anugu, CHARA Array (United States); Sorabh Chhabra, Univ. of Exeter (United Kingdom)

22 July 2022 • 10:30 - 10:50 EDT | Room 520 b

12183-70

High angular resolution imaging using a single Cherenkov Telescope

Author(s): Pierre-Marie Gori, Observatoire de la Côte d'Azur (France); Farrokh Vakili, Observatoire de la Côte d'Azur (France); William Guerin, Univ. Côte d'Azur (France), Institut de Physique de Nice, CNRS (France); Andrea Chiavassa, Observatoire de la Côte d'Azur (France); Jean-Pierre Rivet, Observatoire de la Côte d'Azur (France); Nolan K. Matthews, Mathilde Hugbart, Univ. Côte d'Azur (France); Robin Kaiser, Univ. Côte d'Azur (France); Olivier Lai, Observatoire de la Côte d'Azur (France)

22 July 2022 • 10:50 - 11:10 EDT | Room 520 b

SESSION P1: POSTERS - CRITICAL SUBSYSTEMS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-71

The GRAVITY+ Adaptive Optics testbench: a laboratory adaptive optics integration bench that reproduces an UT Coudé focus.

Author(s): GRAVITY+ Collaboration, Univ. Côte d'Azur (France); Florentin Millour, Univ Côte d'Azur (France); Philippe Bério, Univ. Côte d'Azur (France); Stéphane Lagarde, Sylvie Robbe-Dubois, Carole Gouvret, Olivier Lai, Fatmé Allouche, Christophe Bailet, Olivier Boebion, Marcel Carbillet, Univ. Côte d'Azur (France); Jean-Baptiste Lebouquin, Univ. Grenoble Alpes (France); Thibaut Paumard, Observatoire de Paris (France); Férréol Soulez, Univ. de Lyon (France); Julien Woillez, European Southern Observatory (Germany); Nikhil More, Frank Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); Christian Straubmeier, Univ. zu Köln (Germany); Laura Kreidberg, Max-Planck-Institut für Astronomie (Germany); Paulo J. V. Garcia, Univ. do Porto (Portugal)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-72

Technical requirements and optical design of the Hi-5 spectrometer

Author(s): Colin Dandumont, Alexandra Mazzoli, Ctr. Spatial de Liège (Belgium); Romain Laugier, Azzurra Bigioli, Germain Garreau, KU Leuven (Belgium); Simon Gross, Macquarie Univ. (Australia); Michael J. Ireland, Harry-Dean Kenchington Goldsmith, The Australian National Univ. (Australia); Lucas Labadie, Univ. zu Köln (Germany); Victor Laborde, Ctr. Spatial de Liège (Belgium); Gert Raskin, KU Leuven (Belgium); Ahmed Sanny, KU Lueven (Belgium); Simon Verlinden, KU Leuven (Belgium); Jérôme Loicq, Liège Univ. (Belgium), Technische Univ. Delft (Netherlands); Denis Defrère, KU Leuven (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-73

Measuring and compensating vibrations at the VLTI:MANHATTAN-II self-intrinsic noise and hardware extension

Author(s): Azzurra Bigioli, KU Leuven (Belgium); Roberto Abuter, European Southern Observatory (Germany); Benjamin Courtney-Barrer,

European Southern Observatory (Chile); Denis Defrère, KU Leuven (Belgium); Frank Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); Romain Laugier, Salman Muhammad, Gert Raskin, KU Leuven (Belgium); Nicolas Schuhler, Julien Woillez, European Southern Observatory (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-74

Design of the VLTI/Hi-5 light injection system

Author(s): Germain Garreau, KU Leuven (Belgium); Jean-Philippe Berger, Institut de Planétologie et d'Astrophysique de Grenoble (France); Azzurra Bigioli, KU Leuven (Belgium); Colin Dandumont, Ctr. Spatial de Liège (Belgium); Harry-Dean Kenchington Goldsmith, The Australian National Univ. (Australia); Simon Gross, Macquarie Univ. (Australia); Michael J. Ireland, The Australian National Univ. (Australia); Lucas Labadie, Univ. zu Köln (Germany); Romain Laugier, KU Leuven (Belgium); Jérome Loicq, Liège University (Belgium), Delft University of Technology (Netherlands); Stephen Madden, The Australian National Univ. (Australia); Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alexandra Mazzoli, Ctr. Spatial de Liège (Belgium); Johan Morren, Gert Raskin, KU Leuven (Belgium); Hancheng Shao, Kunlun Yan, The Australian National Univ. (Australia); Denis Defrère, KU Leuven (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-76

The expected performance of nulling at the VLTI down to 5 mas

Author(s): Romain Laugier, Denis Defrère, KU Leuven (Belgium); Alexis Matter, Observatoire de la Côte d'Azur (France); Benjamin Courtney-Barrer, European Southern Observatory (Chile); Simon Gross, Macquarie University (Australia); Felix Dannert, ETH Zurich (Switzerland); Julien Woillez, European Southern Observatory (Germany); Azzurra Bigioli, KU Leuven (Belgium); Olivier Absil, Liège Univ. (Belgium); Colin Dandumont, STAR Institute, Liège Univ. (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-77

Focal plane detector and front-end electronics of the stellar intensity interferometry instrument for the ASTRI Mini-Array telescopes

Author(s): Giovanni Bonanno, Giuseppe Romeo, Lorenzo Paoletti, Luca Zampieri, INAF (Italy); Giampiero Naletto, Univ. degli Studi di Padova (Italy); Pietro Bruno, Alessandro Grillo, Giovanni Occhipinti, Maria Cristina Timpanaro, Giovanni Pareschi, Salvatore Scuderi, Gino Tosti, INAF (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-78

Cryogenic performance of FOURIER, the initial science combiner at the MROI

Author(s): Daniel J. Mortimer, Univ. of Exeter (United Kingdom), Univ. of Cambridge (United Kingdom); David F. Buscher, Univ. of Cambridge (United Kingdom); Michelle J. Creech-Eakman, Magdalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States); Christopher A. Haniff, Univ. of Cambridge (United Kingdom); Christopher Salcido, Magdalena Ridge Observatory, New Mexico Institute of Mining and Technology (United States); Eugene Seneta, Xiaowei Sun, John Young, Univ. of Cambridge (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-79

Prim design for improving the spectral capabilities of GRAVITY+ at the VLTI

Author(s): Joel Sanchez-Bermudez, Univ. Nacional Autónoma de México (Mexico); Rebeca García-López, Univ. College Dublin (Ireland); Salvador Cuevas, Univ. Nacional Autónoma de México (Mexico)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-80

On-sky performance of the MROI fast tip-tilt correction system

Author(s): John S. Young, Christopher A. Haniff, David F. Buscher, Eugene Seneta, Xiaowei Sun, James J. D. Luis, Martin Fisher, Donald Wilson, Univ. of Cambridge (United Kingdom); Michelle J. Creech-Eakman, New Mexico Institute of Mining and Technology (United States); Christopher Salcido, Allen Farris, Robert Collins, New Mexico Institute of Mining and Technology (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P2: POSTERS - OBSERVING TECHNIQUES

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-83

The Hi-5 instrument exoplanet detection yield and target list

Author(s): Colin Dandumont, Ctr. Spatial de Liège (Belgium); Romain Laugier, KU Leuven (Belgium); Alexandre Emsenhuber, Ludwig-Maximilians-Univ. München (Germany); Jonathan Gagne, Univ. de Montréal (Canada); Olivier Absil, Liège Univ. (Belgium); Azzurra Bigioli, Germain Garreau, KU Leuven (Belgium); Michael J. Ireland, The Australian National Univ. (Australia); Simon Verlinden, KU Leuven (Belgium); Jérôme Loicq, Liège Univ. (Belgium), Technische Univ. Delft (Netherlands); Denis Defrère, KU Leuven (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-84

Towards a better understanding of OPD contributors for higher sensitivity and contrast at the VLTI.

Author(s): Benjamin Courtney-Barrer, European Southern Observatory (Chile); Julien Woillez, European Southern Observatory (Germany); Romain Laugier, Azzurra Bigioli, KU Leuven (Belgium); Nicolas Schuhler, Patricia Guajardo, Vicente Lizana, Natalie Behara, European Southern Observatory (Chile); Frank Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); Michael J. Ireland, The Australian National Univ. (Australia); Xavier Haubois, European Southern Observatory (Chile); Denis Defrère, KU Leuven (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-86

Sensitivity of JWST's NIRISS/AMI mode to planets at small orbital separations

Author(s): Shrishmoy Ray, Sasha Hinkley, Univ. of Exeter (United Kingdom); Stephanie Sallum, Univ. of California, Irvine (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-87

How much Is enough? Using the NPOI archive to characterize stellar diameter measurements

Author(s): Ellyn K. Baines, Henrique R. Schmitt, U.S. Naval Research Lab. (United States); J. Thomas Armstrong, Computational Physics, Inc. (United States); Gerard T. van Belle, Lowell Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-88

Differential speckle polarimetry with SCExAO VAMPIRES

Author(s): Boris S. Safonov, Sternberg Astronomical Institute, M. V. Lomonosov Moscow State Univ. (Russian Federation); Maxwell Millar-Blanchaer, Rebecca Zhang, Univ. of California, Santa Barbara (United States); Barnaby R. M. Norris, The Univ. of Sydney (Australia); Olivier Guyon, National Astronomical Observatory of Japan (United States), The Univ. of Arizona (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan); Julien Lozi, National Astronomical Observatory of Japan (United States); Stephanie Sallum, Univ. of California, Irvine (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-89

Simulating the performance of aperture mask designs for SCALES

Author(s): Mackenzie R. Lach, Stephanie Sallum, Univ. of California, Irvine (United States); Andrew Skemer, Univ. of California, Santa Cruz (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P3: POSTERS - TECHNOLOGIES

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-90

Last performances improvement of the C-RED One camera using the 320x256 e-APD infrared Saphira detector

Author(s): Philippe Feautrier, Jean-Luc Gach, First Light Imaging S.A.S. (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-91

Increasing baselines and precision of optical interferometers using two-photon interference effects

Author(s): Andrei Nomerotski, Michael Keach, Brookhaven National Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-93

On-sky experiment of the discrete beam combiner: lessons learned and strategies for improved calibration of the transfer function

Author(s): Abani Shankar Nayak, Leibniz-Institut für Astrophysik Potsdam (Germany); Lucas Labadie, Tarun K. Sharma, Univ. zu Köln (Germany); Simone Piacentini, Politecnico di Milano (Italy), CNR-Istituto di Fotonica e Nanotecnologie (Italy); Giacomo Corrielli, Roberto Osellame, CNR-Istituto di Fotonica e Nanotecnologie (Italy), Politecnico di Milano (Italy); Ettore Pedretti, STFC Rutherford Appleton Lab., UK Research and Innovation (United Kingdom); Aline N. Dinkelaker, Kalaga V. Madhav, Martin M. Roth, Eloy Hernandez, Leibniz-Institut für Astrophysik Potsdam (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P4: POSTERS - DATA PROCESSING ANALYSIS ACCESS AND DISCOVERY

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-95

Binary-disk interactions at play in post-AGB binaries seen by the CHARA array

Author(s): Narsireddy Anugu, CHARA Array, Georgia State Univ. (United States); Jacques Kluska, KU Leuven (Belgium); Gail Schaefer, CHARA Array (United States); John D. Monnier, Univ. of Michigan (United States); Stefan Kraus, Univ. of Exeter (United Kingdom); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-96

Comparing the continuum and TiO diameters of giant stars observed by the NPOI

Author(s): Henrique R. Schmitt, Ellyn K. Baines, U.S. Naval Research Lab. (United States); Tom Armstrong, Computational Physics, Inc. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-97

Iterative phase retrieval algorithms: towards perfection

Author(s): Adittya Pal, National Institute of Science Education and Research (India); Sorabh Chhabra, Anamparambu N. Ramaprakash, Inter-Univ. Ctr. for Astronomy and Astrophysics (India)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-98

Single Star Scidar: Optical turbulence profiling-Simulations

Author(s): Youssef Errazzouki, Univ. Cadi Ayyad (Morocco); Abdelfettah Hbib, Ctr. Régional des Métiers de l'Education et de la Formation (Morocco); Mohammed Sabil, National School of Applied Sciences (Morocco); Abdelhadi Jabiri, Zouhair Benkhaldoun, Jamal Chafi, Univ. Cadi Ayyad (Morocco)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-99

A Fourier-plane pipeline for JWST/NIRISS aperture masking: preparations for early release science

Author(s): Stephanie Sallum, Univ. of California, Irvine (United States); Shrishmoy Ray, Sasha Hinkley, Univ. of Exeter (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P5: POSTERS - FUTURE OF INTERFEROMETRY

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12183-100

The CHARA Michelson Array Pathfinder

Author(s): E. Robert Ligon, Matthew D. Anderson, Narsireddy Anugu, Christopher D. Farrington, CHARA Array (United States); Douglas R. Gies, Georgia State Univ. (United States); Steven Golden, Rainer Koehler, CHARA Array (United States); Stephen Ridgeway, NoirLab (United States); Gail Schaefer, Laszlo Sturmann, Theo A. ten Brummelaar, Nils Turner, Craig Woods, Nic Scott, CHARA Array (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12183-69
VERMILION: Visitor Extension spectRal sub-Mid-Infrared Light InterferOmeter iNstrument

Contact author(s): Hadjara Massinissa, Chinese Academy of Sciences South America Ctr. for Astronomy (CASSACA), Chile

Oral

12183-82
Field of View and contrast limitations of stellar interferometers: a quick review

Contact author(s): Hénault François B., Institut de Planétologie et d'Astrophysique de Grenoble, France

Poster

CONFERENCE 12184

Ground-based and Airborne Instrumentation for Astronomy IX

17 - 21 July 2022 | Room 519 a

Conference Chairs: **Christopher J. Evans,** European Space Agency, STScI (United States); **Julia J. Bryant,** The Univ. of Sydney (Australia); **Kentaro Motohara,** National Astronomical Observatory of Japan (Japan)

Program Committee: **Rebecca A. Bernstein,** Carnegie Obervatories (United States), GMTO Corp. {United States); **Bruno V. Castilho Sr.,** Lab. Nacional de Astrofísica (Brazil); **Armando Gil de Paz,** Univ. Complutense de Madrid (Spain); **Livia Origlia,** Istituto Nazionale di Astrofisica (Italy); **Encarnacion Romero Colmenero,** South African Astronomical Observatory (South Africa); **Luc Simard,** NRC - Herzberg Astronomy & Astrophysics (Canada); **Erin C. Smith,** NASA Ames Research Ctr. (United States); **Naoyuki Tamura Sr.,** Kavli Institute for the Physics and Mathematics of the Universe (Japan); **Joël R. D. Vernet,** European Southern Observatory (Germany); **Friedrich Wöger,** National Solar Observatory (United States); **Shelley A. Wright,** Univ. of California, San Diego (United States)

SESSION 1: MAJOR OBSERVATORIES I

17 July 2022 • 09:00 - 10:40 EDT | Room 519 a

12184-1

Instrumentation at the Subaru Telescope

Author(s): Takashi Hattori, Yosuke Minowa, Hirofumi Okita, Julien Rousselle, Michitoshi Yoshida, Subaru Telescope, NAOJ (United States)

17 July 2022 • 09:00 - 09:20 EDT | Room 519 a

12184-2

Ten years of the ESO paranal instrumentation programme

Author(s): Luca Pasquini, Norbert Hubin, European Southern Observatory (Germany)

17 July 2022 • 09:20 - 09:40 EDT | Room 519 a

12184-3

Current Status of the Facility Instruments at the Large Binocular Telescope Observatory

Author(s): Barry Rothberg, Jennifer Power, Olga Kuhn, John M. Hill, David Thompson, R. Mark Wagner, Christian Veillet, Large Binocular Telescope Observatory (United States)

17 July 2022 • 09:40 - 10:00 EDT | Room 519 a

12184-4

Innovations and advances in instrumentation at the W. M. Keck Observatory, vol. II

Author(s): Marc Kassis, Hilton A. Lewis, John M. O'Meara, Peter Wizinowich, W. M. Keck Observatory (United States); Steve Allen, Univ. of California, Santa Cruz (United States); Carlos Alvarez, W. M. Keck Observatory (United States); Ravinder Banyal, Indian Institute of Astrophysics (India); Charles Beichman, NASA Exoplanet Science Institute (United States); Robert Bertz, Caltech (United States); Gerald Cabak, Univ. of California, Santa Cruz (United States); Aaron Brown, Univ. of California, San Diego (United States); Kevin Bundy, Univ. of California, Santa Cruz (United States); Sylvain Cetre, Jason Chin, W. M. Keck Observatory (United States); Mark Chun, Institute for Astronomy, Univ. of Hawai'i (United States); Carlos Correia, W. M. Keck Observatory (United States); Jonathan Crass, Univ. of Notre Dame (United States); Will Deich, Univ. of California, Santa Cruz (United States); Richard Dekany, Caltech (United States); Jacques-Robert Delorme, Mark Devenot, Greg Doppmann, W. M. Keck Observatory (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Jason R. Fucik, Caltech (United States); Grant Hill, W. M. Keck Observatory (United States); Philip Hinz, Bradford P. Holden, Univ. of California, Santa Cruz (United States); Andrew W. Howard, Maodong Gao, Steve Gibson, Caltech (United States); Percy Gomez, Colby Gottschalk, W. M. Keck Observatory (United States); Peter R. Gillingham, Australian Astronomical Optics, Macquarie Univ. (Australia); Timothee Greffe, Caltech (United States); Rebecca Jensen-Clem, Univ. of California, Santa Cruz (United States); Tucker Jones, Univ. of California, Davis (United States); Nemanja Jovanovic, Caltech (United States); Evan Kirby, Univ. of Notre Dame (United States); Quinn Konopacky, Univ. of California, San Diego (United States); Shanti Krishnan, Swinburne Univ. of Technology (Australia); Renate Kupke, Univ. of California, Santa Cruz (United States); James E. Larkin, Univ. of California, Los Angeles (United States); Stephanie D. Leifer, The Aerospace Corp. (United States); Scott Lilley, W. M. Keck Observatory (United States); Jessica Lu, Univ. of California, Berkeley (United States); James E. Lyke, W. M. Keck Observatory (United States); Nicholas MacDonald, Univ. of California, Santa Cruz (United States); Gregory Mace, The Univ. of Texas at Austin (United States); Eduardo Marin, W. M. Keck Observatory (United States); Matt Matuszewski, Dimitri Mawet, Caltech (United States); Rosalie McGurk, W. M. Keck Observatory (United States); Maswell Millar-Blanchaer, Univ. of California, Santa Barbara (United States); Reston Nash, Caltech (United States); Craig Nance, W. M. Keck Observatory (United States); James D. Neill, Caltech (United States); Eliad Peretz, NASA Goddard Space Flight Ctr. (United States); Claire Poppett, Space Sciences Lab., Univ. of California, Berkeley (United States); John C. Mather, NASA Goddard Space Flight Ctr. (United States); Matthew V. Radovan, Univ. of California, Santa Cruz (United States); Mitsuko K. Roberts, Caltech (United States); Sam Ragland, W. M. Keck Observatory (United States); Kodi Rider, Space Sciences Lab., Univ. of California, Berkeley (United States); Constance Rockosi, Dale Sandfor, Univ. of California, Santa Cruz (United States); Boqiang Shen, Charles C. Steidel, Caltech (United States); Sunil Simha, Andy Skemer, Univ. of California, Santa Cruz (United States); Roger Smith, Caltech (United States); James Smous, Univ. of Notre Dame (United States); Richard Stelter, Univ. of California, Santa Cruz (United States); Avinash Surendran, James Thorne, Josh Walawender, W. M. Keck Observatory (United States); Robert W. Weber, Caltech (United States); Kyle Westfall, Univ. of California, Santa Cruz (United States); Edward Wetherell, Truman Wold, W. M. Keck Observatory (United States); Shelley A. Wright, Univ. of California, San Diego (United States); Sherry Yeh, W. M. Keck Observatory (United States)

17 July 2022 • 10:00 - 10:20 EDT | Room 519 a

12184-5

Current and future instrumentation at Gemini Observatory

Author(s): Ruben Diaz, Gemini Observatory (United States), NOIRLab, The National Science Foundation (United States); Scot Kleinman, Astromanager LLC (United States); Stephen Goodsell, Paul Hirst, Hwihyun Kim, Gemini Observatory, Association of Universities for Research in Astronomy, Inc. (United States)

17 July 2022 • 10:20 - 10:40 EDT | Room 519 a

Coffee Break 10:40 - 11:00

SESSION 2: MAJOR OBSERVATORIES II

17 July 2022 • 11:00 - 12:40 EDT | Room 519 a

12184-6

Laboratory performance and commissioning status of the SALT NIR integral field spectrograph

Author(s): Marsha J. Wolf, Univ. of Wisconsin-Madison (United States); Matthew A. Bershady, Univ. of Wisconsin-Madison (United States), South African Astronomical Observatory (South Africa); Michael P. Smith, Kurt P. Jaehnig, Jeffrey W. Percival, Joshua E. Oppor, Univ. of Wisconsin-Madison (United States); Mark P. Mulligan, Space Science and Engineering Ctr., Univ. of Wisconsin-Madison (United States); Ron J. Koch, Diron Technologies, Inc. (United States)

17 July 2022 • 11:00 - 11:20 EDT | Room 519 a

12184-7

Acceptance Testing and Early On-Sky Results for MIRADAS on the Gran Telescopio Canarias

Author(s): Stephen Eikenberry, Univ. of Central Florida (United States), Univ. of Florida (United States); Sarik Jeram, Michael Estrada, Univ. of Florida (United States); Christina Moraitis, Univ. of Central Florida (United States); Kendall Ackley, The Univ. of Warwick (United Kingdom); Yigit Dallilar, Max-Planck-Institut für extraterrestrische Physik (Germany); Alan Garner, MIT Kavli Institute for Astrophysics and Space Research (United States); Amy Gottlieb, Steven N. Raines, Univ. of Florida (United States); Richard Stelter, Univ. of California, Santa Cruz (United States); Oketa Basha, Christian Carrera, Kevin Castano, Caridad Coll, Carina Diaz, Jacquelyn Linevsky, Ravina Patel, Sahil Patel, Jillian Richardson, Lora Nowicki, David R., John G. Bennett, Charles Murphey, Gabriel Fuentes, Denisse Almeida, Luke Williams, Paola Miller, David Tooke, Brian Chinn, Scott Mullin, Sidney Schofield, Craig Warner, Frank Varosi, Bo Zhao, Sophia A. Eikenberry, Claudia Vega, Hipatia V. Donoso, Univ. of Florida (United States); Josep Sabater, José María Gomez, Jordi Torra, Univ. de Barcelona (Spain); Josefina Rosich, Francisco Garzón, Pablo López, Instituto de Astrofísica de Canarias (Spain); Anthony Russo, Gran Telescopio de Canarias, S.A. (Spain); Julio Galipienzo, Miguel-Angel Carrera Astigarraga, Arkaitz Larman, AVS Added Value Solutions (Spain); Greg J. Fitzgerald, Ian Prees, Todd Stolberg, Peter Kornik, New England Optical Systems (United States); Claudia Mendes de Oliveira, Henrique Ortolan, Henrique Lupinari Volpato, Antonio Braulio, Univ. de São Paulo (Brazil); Anamparambu N. Ramaprakash, Mahesh Burse, Sujit Punnadi, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Peter Hammersley, European Southern Observatory (Germany); Denis Brousseau, Simon Thibault, Univ. Laval (Canada); Daniel Hofstadter, Hofstadter Analytical Services, LLC (United States)

17 July 2022 • 11:20 - 11:40 EDT | Room 519 a

12184-8

MAVIS: imager and spectrograph

Author(s): Simon Ellis, Christian Schwab, Anthony Horton, Australian Astronomical Optics, Macquarie Univ. (Australia); Richard McDermid, Macquarie Univ. (Australia); Will Saunders, Robert Content, Timothy Chin, Mahesh Mohanan, Scott Smedley, David Robertson, Australian Astronomical Optics, Macquarie Univ. (Australia); Giovanni Cresci, INAF - Osservatorio Astrofisico di Arcetri (Italy); François Rigaut, David Brodrick, The Australian National Univ. (Australia); Jessica Zheng, Ross Zhelem, Australian Astronomical Optics, Macquarie Univ. (Australia)

17 July 2022 • 11:40 - 12:00 EDT | Room 519 a

12184-9

CUBES, the Cassegrain U-Band Efficient Spectrograph

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17 July 2022 • 12:00 - 12:20 EDT | Room 519 a

12184-10

Liger at Keck Observatory: Overall Design Specifications and Science Drivers

Author(s): Shelley A. Wright, Univ. of California, San Diego (United States); Tucker Jones, Univ. of California, Davis (United States); James E. Larkin, Univ. of California, Los Angeles (United States); Renate Kupke, Univ. of California, Santa Cruz (United States); Marc Kassis, W. M. Keck Observatory (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Aaron Brown, Maren Cosens, James Wiley, Nils-Erik Rundquist, Univ. of California, San Diego (United States); Evan Kress, Eric Wang, Ji Man Sohn, Christopher Johnson, Kenneth Magnone, Univ. of California, Los Angeles (United States); Sherry Yeh, Rosalie McGurk, W. M. Keck Observatory (United States)

17 July 2022 • 12:20 - 12:40 EDT | Room 519 a

Lunch/Exhibition Break 12:40 - 14:00

SESSION 3: MAJOR OBSERVATORIES III

17 July 2022 • 14:00 - 15:40 EDT | Room 519 a

12184-11

The HR image slicer for GNIRS at Gemini North: optical design and performance

Author(s): Ariadna Calcines Rosario, Cornelis M. Dubbeldam, Ray Sharples, Cyril Bourgenot, Durham Univ. (United Kingdom); Ruben Diaz, Andrew W. Stephens, Gemini Observatory (United States)

17 July 2022 • 14:00 - 14:20 EDT | Room 519 a

12184-12

FRIDA: diffraction-limited imaging and integral-field spectroscopy for the GTC

Author(s): Alan M. Watson, Univ. Nacional Autónoma de México (Mexico); José A. Acosta-Pulido, Marta Aguiar, Instituto de Astrofísica de Canarias (Spain); Luis C. Álvarez-Núñez, Victor J. Sánchez Béjar, Univ. Nacional Autónoma de México (Mexico); Nicolás Cardiel, Univ. Complutense de Madrid (Spain); Oscar Chapa, Salvador Cuevas, Univ. Nacional Autónoma de México (Mexico); José J. Díaz García, Instituto de Astrofísica de Canarias (Spain); Stephen Eikenberry, Univ. of Central Florida (United States); Carlos Espejo, Rubén A. Flores-Meza, Jorge Fuentes-Fernández, Univ. Nacional Autónoma de México (Mexico); José R. Fujarte, Ctr. de Ingenieria y Desarrollo Industrial (Mexico); Jesús Gallego, Univ. Complutense de Madrid (Spain); José Leonardo Garcés Medina, Univ. Nacional Autónoma de México (Mexico); Francisco Garzón, Instituto de Astrofísica de Canarias (Spain); Peter Hammersley, European Southern Observatory (Germany); Enrique Jovén Álvarez, Instituto de Astrofísica de Canarias (Spain); Carolina Keiman, Gerardo Lara, José A. López, Univ. Nacional Autónoma de México (Mexico); Carlos A. U. Ortega, Ctr. de Ingenieria y Desarrollo Industrial (Mexico); Sergio Pascual Ramírez, Univ. Complutense de Madrid (Spain); Jesús Patrón Recio, M. Almudena Prieto, Instituto de Astrofísica de Canarias (Spain); Berenice Rodríguez, Ctr. de Ingenieria y Desarrollo Industrial (Mexico); Beatriz Sánchez Sánchez, Univ. Nacional Autónoma de México (Mexico); Eleazar Sánchez, Ctr. de Ingenieria y Desarrollo Industrial (Mexico)

17 July 2022 • 14:20 - 14:40 EDT | Room 519 a

12184-13

Construction update on the Magellan LLAMAS integral field spectrograph

Author(s): Robert A. Simcoe, Gabor Furesz, Rebecca Masterson, June Stenzel, Danielle Frostig, MIT Kavli Institute for Astrophysics and Space Research (United States); John Piortowski, Johns Hopkins Univ. (United States); Mark D. Egan, Andrew Malonis, Erik Hinrichsen, Michelle Gabutti, Cody Schneller, Sean MacBride, MIT Kavli Institute for Astrophysics and Space Research (United States); Rongmon Bordoloi, North Carolina State Univ. (United States); Michael McDonald, MIT Kavli Institute for Astrophysics and Space Research (United States)

17 July 2022 • 14:40 - 15:00 EDT | Room 519 a

12184-14

Gemini IRMOS: Performance of Preliminary Optical Design of a Multi-Object Adaptive Optics-fed Infrared Integral-Field Spectrograph (GIRMOS)

Author(s): Shaojie Chen, Univ. of Toronto (Canada); Denis Brousseau, Tristan Chabot, Univ. Laval (Canada); Suresh Sivanandam, Univ. of Toronto (Canada); Simon Thibault, Univ. Laval (Canada); Olivier Lardière, Jenny Atwood, National Research Council Canada (Canada); Joschua Hellemeier, Paul Hickson, The Univ. of British Columbia (Canada); Scott Chapman, National Research Council Canada (Canada); Saugata Dutt, Masen Lamb, Scott Christie, Mark Barnet, Univ. of Toronto (Canada); Martin Tschimmel, Gemini Observatory (Chile); Patrick Nkwari, Univ. of Toronto (Canada); Gaetano Sivo, Gemini Observatory (Chile)

17 July 2022 • 15:00 - 15:20 EDT | Room 519 a

12184-15

A near-IR imager for the Gemini InfraRed Multi-Object Spectrograph (GIRMOS)

Author(s): Jenny Atwood, Jeffrey D. Crane, Alan McConnachie, Vladimir Reshetov, Jordan Lothrop, NRC-Herzberg Astronomy & Astrophysics (Canada); Masen Lamb, Univ. of Toronto (Canada)

17 July 2022 • 15:20 - 15:40 EDT | Room 519 a

Coffee Break 15:40 - 16:00

SESSION 4: MAJOR OBSERVATORIES IV

17 July 2022 • 16:00 - 17:00 EDT | Room 519 a

12184-16

ORCAS - A Laser Guide Star on a Spacecraft

Author(s): Eliad Peretz, John C. Mather, NASA Goddard Space Flight Ctr. (United States); Peter Wizinowich, W. M. Keck Observatory (United States); Christine Hamilton, Lucas Pabarcius, Kevin Hall, NASA Goddard Space Flight Ctr. (United States)

17 July 2022 • 16:00 - 16:20 EDT | Room 519 a

12184-17

EIFIS: a modular extreme integral field spectrograph for the 10.4m GTC

Author(s): Christina C. Thöne, Instituto de Astrofísica de Andalucía (Spain); Antonio de Ugarte Postigo, Observatoire de la Côte d'Azur (France); Marísa Luisa García Vargas, FRACTAL S.L.N.E. (Spain); José Feliciano Agüí Fernández, Instituto de Astrofísica de Andalucía (Spain); Ana Pérez Calpena, Ernesto Sánchez Blanco, Manuel Maldonado Medina, FRACTAL S.L.N.E. (Spain)

17 July 2022 • 16:20 - 16:40 EDT | Room 519 a

12184-18

Design of SCALES: A 2-5 Micron Coronagraphic Integral Field Spectrograph for Keck Observatory

Author(s): Andrew J. Skemer, Richard Stelter, Univ. of California, Santa Cruz (United States); Stephanie Sallum, Univ. of California, Irvine (United States); Nicholas MacDonald, Renate Kupke, Christopher Ratliff, Univ. of California, Santa Cruz (United States); Ravinder Banyal, Thirupathi Sivarani, Indian Institute of Astrophysics (India); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Marc Kassis, W. M. Keck Observatory (United States); Olivier Absil, Liège Univ. (Belgium); Carlos Alvarez, W. M. Keck Observatory (United States); Natasha Batalha, NASA Ames Research Ctr. (United States); Marc-André Boucher, OMP Inc. (Canada); Cyril Bourgenot, Ctr. for Advanced Instrumentation, Durham Univ. (United Kingdom); Zackery Briesemeister, Univ. of California, Santa Cruz (United States); Will Deich, Univ of California, Santa Cruz (United States); Devika Divakar, Indian Institute of Astrophysics (India); Guillaume Filion, Étienne Gauvin, OMP Inc. (Canada); Michael Gonzales, Univ. of California, Santa Cruz (United States); Thomas Greene, NASA Ames Research Ctr. (United States); Amirul Hasan, Indian Institute of Astrophysics (India); Philip Hinz, Rebecca Jensen-Clem, Univ. of California, Santa Cruz (United States); Christopher Johnson, Univ. of California, Los Angeles (United States); Govinda K.V., Indian Institute of Astrophysics (India); Isabel Kain, Gabriel Kruglikov, Univ. of California, Santa Cruz (United States); Mackenzie Lach, Univ. of California, Irvine (United States); Jean-Thomas Landry, OMP Inc. (Canada); Jialin Li, Univ. of California, Santa Cruz (United States); James E. Lyke, W. M. Keck Observatory (United States); Kenneth Magnone, Univ. of California, Los Angeles (United States); Eduardo Marin, W. M. Keck Observatory (United States); Emily Martin, Univ. of California, Santa Cruz (United States); Raquel Martinez, Univ. of California, Irvine (United States); Dimitri Mawet, Caltech (United States); Brittany Miles, Univ. of California, Santa Cruz (United States); Ajin Prakaesh, Indian Institute of Astrophysics (India); Dale Sandford, Univ. of California, Santa Cruz (United States); Ramya Sethuram, Indian Institute of Astrophysics (India); Patrick Sheehan, Northwestern Univ. (United States); Ji Man Sohn, Univ. of California, Los Angeles (United States); Arun Surya, Hari Mohan Varshney, Indian Institute of Astrophysics (India); Eric Wang, Univ. of California, Los Angeles (United States)

17 July 2022 • 16:40 - 17:00 EDT | Room 519 a

Coffee Break 10:00 - 10:30

SESSION 5: WIDE-FIELD IMAGERS

18 July 2022 • 10:30 - 11:50 EDT | Room 519 a

12184-19

Rubin observatory commissioning camera: summit integration

Author(s): Brian Stalder, Vera C. Rubin Observatory (United States); Kevin Reil, SLAC National Accelerator Lab. (United States); Christian Aguilar, Claudio Araya, Anthony Borstad, Vera C. Rubin Observatory (United States); Boyd Bowdish, SLAC National Accelerator Lab. (United States); Myung Cho, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Stephen Cisneros, SLAC National Accelerator Lab. (United States); Chuck Claver, Julio Constanzo, Giovanni Corvetto, Erik Dennihy, Holger Drass, Vera C. Rubin Observatory (United States); Alan Eisner, SLAC National Accelerator Lab. (United States); Juan Fabrega, Merlin Fisher-Levine, Ivan Gonzalez, Vera C. Rubin Observatory (United States); Ronald Harris, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Diane Hascall, SLAC National Accelerator Lab. (United States); Justine Haupt, Brookhaven National Lab. (United States); Josh Hoblitt, Vera C. Rubin Observatory (United States); James Howard, Arizona Optical Systems, LLC (United States); Mike Huffer, SLAC National Accelerator Lab. (United States); David Jiménez Mejías, Brian Johnson, Vera C. Rubin Observatory (United States); Tony Johnson, SLAC National Accelerator Lab. (United States); Craig Lage, Univ. of California, Davis (United States); Travis Lange, SLAC National Accelerator Lab. (United States); Ming Liang, Juan Lopez, Vera C. Rubin Observatory (United States); Margaux Lopez, SLAC National Accelerator Lab. (United States); Robert Lupton, Princeton Univ. (United States); Guido Maulen, Vera C. Rubin Observatory (United States); Felipe Menanteau, National Ctr. for Supercomputing Applications (United States), Univ. of Illinois (United States); Neill Mills, Vera C. Rubin Observatory (United States); Glenn Morris, SLAC National Accelerator Lab. (United States); Freddy Munoz, Vera C. Rubin Observatory (United States); Homer Neal, SLAC National Accelerator Lab. (United States); Douglas R. Neill, Vera C. Rubin Observatory (United States); Scott Newbry, SLAC National Accelerator Lab. (United States); Andrei Nomerotski, Brookhaven National Lab. (United States); Dmitry Onoprienko, SLAC National Accelerator Lab. (United States); Ian Ordenes, Juan Orellana, Vera C. Rubin Observatory (United States); Shawn Osier, SLAC National Accelerator Lab. (United States); HyeYun Park, Brookhaven National Lab. (United States); Stephen Pietrowicz,

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18 July 2022 • 10:30 - 10:50 EDT | Room 519 a

12184-21

Design and Development of WALOP-South: A Wide-Field One-Shot Linear Optical Polarimeter for PASIPHAE Survey.

Author(s): Siddharth Maharana, Anamparambu N. Ramaprakash, Pravin Khodade, Nitin Mamgain, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Ramya M. Anche, Steward Observatory, The Univ. of Arizona (United States); Chaitanya Rajarshi, Deepa Modi, Bhushan Joshi, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); John Andrew Kypriotakis, Univ. of Crete (Greece); Abhay Kohok, Pravin Chordia, Sakya Sinha, Mahesh Burse, Sujit Punnadi, Kalpesh Chillal, Rani Bhandare, Vilas Mestri, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Artem Basyrov, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Dmitry Blinov, Univ. of Crete (Greece); Hans Kristian Eriksen, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Tuhin Ghosh, National Institute of Science Education and Research (India); Eirik Gjerløw, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Sebastian Kiehlmann, Nikolaos Mandarakas, Univ. of Crete (Greece); Georgia V. Panopoulou, Caltech (United States); Vasiliki Pavlidou, Univ. of Crete (Greece); Timothy J. Pearson, Caltech (United States); Vincent Pelgrims, Univ. of Crete (Greece); Stephen B. Potter, South African Astronomical Observatory (South Africa); Anthony C. S. Readhead, Caltech (United States); Raphael Skalidis, Univ. of Crete (Greece); Trygve L. Svalheim, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Konstantinos Tassis, Univ. of Crete (Greece); Ingunn Wehus, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway)

18 July 2022 • 10:50 - 11:10 EDT | Room 519 a

12184-22

Commissioning, on sky performance and first operations of JPCam, a 1.2 Gpixel camera for the wide-field 2.6m Javalambre Survey Telescope.

Author(s): Antonio Marín-Franch, Sergio Rueda-Teruel, Guillermo López-Alegre, César Íñiguez, Héctor Vázquez Ramió, Alessandro Ederoclite, Rafael Bello Ferrer, Miriam Royo-Navarro, José María Casino-Martín, David Lozano-Pérez, Enrique Luís Molina-Ibáñez, Fernando Rueda-Teruel, Axel Yanes-Díaz, Carlos López-Sanjuan, Andrés Javier Cenarro Lagunas, David Cristóbal-Hornillos, Antonio Hernán-Caballero, Mariano Moles, Jesús Varela, Samuel Bielsa, Sergio Chueca, Mikel Domínguez, David Garcés, Nuria Martínez, Jorge Muñoz-Maudos, Héctor Rueda, Ildefonso Soriano, Juan Castillo, Tamara Civera, Javier Hernández, Ángel López-Sainz, Alberto Moreno-Signes, David José Muniesa-Gallardo, Ctr. de Estudios de Física del Cosmos de Aragón (Spain); Keith Taylor, Instruments4 (United States); Fernando Santoro, Magdalena Ridge Observatory (United States); Jordi Cepa Nogue, Instituto de Astrofísica de Canarias (Spain); Carlos Fermino, EFe Tecnologias Industriais (Brazil); Matthew Bastable, Gordon Haddow, Mark Robbins, Helen Sweeney, Christophe Tatard, Marc Watkins, Teledyne e2v UK Ltd. (United Kingdom); Ulf Brauneck, SCHOTT Suisse SA (Switzerland); Joan Manel Casalta, SENER Aeroespacial (Spain); Raul Abramo, Univ. de São Paulo (Brazil); Jailson Alcaniz, Observatório Nacional (Brazil); Narciso Benítez, Instituto de Astrofísica de Andalucía (Spain); Silvia Bonoli, Donostia International Physics Ctr. (Spain); Saulo Carneiro, Univ. Federal da Bahia (Brazil); Renato Dupke, Observatório Nacional (Brazil); Claudia Mendes de Oliveira, Laerte Sodré, Univ. de São Paulo (Brazil); José Manuel Vílchez, Instituto de Astrofísica de Andalucía (Spain)

18 July 2022 • 11:10 - 11:30 EDT | Room 519 a

12184-23

Conceptual design of the Keck Wide Field Imager (KWFI)

Author(s): Matthew V. Radovan, Univ. of California Observatories (United States); Jeff Cooke, Swinburne Univ. of Technology (Australia); Peter R. Gillingham, Australian Astronomical Optics, Macquarie Univ. (Australia); Richard Dekany, Roger Smith, Alex Delacroix, Robert Bertz, Caltech Optical Observatories (United States); Shanti Krishnan, Factory of the Future, Swinburne Univ. of Technology (Australia); Ray Seikel, Ctr. for Astrophysics and Supercomputing, Swinburne Univ. of Technology (Austria); Gregory Poole, Ctr. for Astrophysics and Supercomputing, Swinburne Univ. of Technology (Australia); Nao Suzuki, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Tony Travouillon, The Australian National Univ. (Australia); Jason R. Fucik, Caltech (United States)

18 July 2022 • 11:30 - 11:50 EDT | Room 519 a

Lunch Break 11:50 - 13:30

SESSION 6: TIME DOMAIN/MULTI-MESSENGER INSTRUMENTATION

18 July 2022 • 13:30 - 15:10 EDT | Room 519 a

12184-24

Progress on the SOXS transients chaser for the ESO-NTT

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18 July 2022 • 13:30 - 13:50 EDT | Room 519 a

12184-25

The NOT Transient Explorer

Author(s): Michael I. Andersen, Niels Bohr Institute (Denmark); Jacob W. Clasen, Nordic Optical Telescope, Aarhus University (Spain); Johan U.P. Fynbo, Anton N. Sørensen, Niels Bohr Institute (Denmark)

18 July 2022 • 13:50 - 14:10 EDT | Room 519 a

12184-26

Status and commissioning of the WINTER instrument for infrared transient observation

Author(s): Nathan P. Lourie, MIT Kavli Institute for Astrophysics and Space Research (United States); John W. Baker, Caltech Optical Observatories (United States); Kevin B. Burdge, MIT Kavli Institute for Astrophysics and Space Research (United States); Richard S. Burruss, Caltech Optical Observatories (United States); Kishalay De, Mark D. Egan, Gabor Furesz, Danielle Frostig, MIT Kavli Institute for Astrophysics and Space Research (United States); Nicolae Ganciu, Caltech Optical Observatories (United States); Kari Haworth, Erik Hinrichsen, MIT Kavli Institute for Astrophysics and Space Research (United States); Viraj R. Karambelkar, Mansi M. Kasliwal, Caltech (United States); Andrew Malonis, Robert A. Simcoe, MIT Kavli Institute for Astrophysics and Space Research (United States); Robert Stein, Caltech (United States); Jeffry Zolkower, Caltech Optical Observatories (United States)

18 July 2022 • 14:10 - 14:30 EDT | Room 519 a

12184-27

Concept and Design of a Next-Generation Optical Sensor for IceCube-Gen2

Author(s): Sean C. Griffin, Wisconsin IceCube Particle Astrophysics Ctr., Univ. of Wisconsin-Madison (United States)

18 July 2022 • 14:30 - 14:50 EDT | Room 519 a

12184-28

The Mosaic CMOS Wide Field Camera for Transneptunian Automatic Occultation Survey

Author(s): Shiang-Yu Wang, Bo-Jhou Wang, Hung-Hsu Ling, Yin-Chang Chang, Shu-Fu Hsu, Hsin-Yo Chen, Pin-Jie Huang, Matthew Lehner, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Andrew Szentgyorgyi, Timothy Norton, Harvard-Smithsonian Ctr. for Astrophysics (United States)

18 July 2022 • 14:50 - 15:10 EDT | Room 519 a

Coffee Break 15:10 - 15:40

SESSION 7: AIRBORNE & SOLAR INSTRUMENTATION

18 July 2022 • 15:40 - 16:40 EDT | Room 519 a

12184-29

Enhancing polarimetric accuracy of solar polarimetry by coalescing slow and fast modulation: method description and first performance tests

Author(s): Franziska Zeuner, Daniel Gisler, Michele Bianda, Renzo Ramelli, Istituto Ricerche Solari Locarno, Univ. della Svizzera italiana (Switzerland)

18 July 2022 • 15:40 - 16:00 EDT | Room 519 a

12184-30

The upgraded GREGOR Infrared Spectrograph

Author(s): Carlos Quintero Noda, Manuel Collados Vera, Silvia Regalado Olivares, Francisco González, Jorge Quintero Nehrkorn, Horacio Rodríguez Delgado, Roberto López López, Carlos Dominguez-Tagle, Ángel Mato, Jacinto Javier Vaz-Cedillo, Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 16:00 - 16:20 EDT | Room 519 a

12184-32

CorMag - coronal magnetograph for the stratospheric Hemera mission

Author(s): Silvano Fineschi, Gerardo Capobianco, Luca Zangrilli, Donata Bonino, Federico Landini, Davide Loreggia, Maurizio Pancrazzi, Roberto Susino, Alessandro Bemporad, Valeria Caracci, Francesco Amadori, Salvatore Caschera, INAF - Osservatorio Astrofisico di Torino (Italy)

18 July 2022 • 16:20 - 16:40 EDT | Room 519 a

Coffee Break 10:00 - 10:30

SESSION 8: MOS I

19 July 2022 • 10:30 - 11:50 EDT | Room 519 a

12184-33

The DESI Instrument

Author(s): Klaus Honscheid, The Ohio State Univ. (United States); Arjun Dey, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Ann Elliott, The Ohio State Univ. (United States); Parker Fagrelius, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Kevin Fanning, The Ohio State Univ. (United States); Satya Gontcho A. Gontcho, Lawrence Berkeley National Lab. (United States); David Kirkby, Univ. of California, Irvine (United States); Michael Levi, Lawrence Berkeley National Lab. (United States); Paul Martini, The Ohio State Univ. (United States); Aaron Meisner, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Martin Landriau, Lawrence Berkeley National Lab. (United States); David Rabinowitz, Yale Univ. (United States); Eduard Schlafly, Lawrence Livermore National Lab. (United States); Michael Schubnell, Univ. of Michigan (United States); Claire Poppett, Lawrence Berkeley National Lab. (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 519 a

12184-34

TAIPAN Starbugs: Commissioning and the start of science observations

Author(s): Rebecca A. Brown, Tony Farrell, Australian Astronomical Optics, Macquarie Univ. (Australia); Nuwanthika Fernando, Australian Astronomical Optics (Australia); Michael Goodwin, Anthony Horton, Celestina Lacombe, Jon Lawrence, Nuria Lorente, Helen McGregor, Ellie O'Brien, Lew Waller, Tayyaba Zafar, Jessica Zheng, Australian Astronomical Optics, Macquarie Univ. (Australia)

19 July 2022 • 10:50 - 11:10 EDT | Room 519 a

12184-36

Prime Focus Spectrograph (PFS) for the Subaru telescope: Its start of the last development phase

Author(s): Naoyuki Tamura, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Yuki Moritani, Subaru Telescope, NAOJ (United States), Kavli Institute for the Physics and Mathematics of the Universe (Japan); Kiyoto Yabe, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Yuki Ishizuka, Yukiko Kamata, National Astronomical Observatory of Japan (Japan); Masahiro Takada, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Hitoshi Murayama, Univ. of California, Berkeley (United States), Kavli Institute for the Physics and Mathematics of the Universe (Japan), Lawrence Berkeley National Lab. (United States); Ali Allaoui, Stéphane Arnouts, Rudy Barette, Pierre-Yves Chabaud, David Le Mignant, Fabrice Madec, Kjetil Dohlen, Thibaut Crauchet, Vincent Le Brun, Romain Lhoussaine, Didier Vibert, Lab. d'Astrophysique de Marseille (France); Yin-Chang Chang, Hsin-Yo Chen, Chueh-Yi Chou, You-Hua Chu, Chi-Hung Yan, Jennifer L. Karr, Masahiko Kimura, Shiang-Yu Wang, Chih-Yi Wen, Shu-Fu Hsu, Pin Jie Huang, Yen-Ting Lin, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Ricardo L. da Costa, Lab. Nacional de Astrofisica (Brazil); Antonio Cesar de Oliveira, Ligia S. de Oliveira, Lab. Nacional de Astrofísica (Brazil); Décio Ferreira, Lab. Nacional de Astrofisica (Brazil); Leandro H. dos Santos, Lab. Nacional de Astrofísica (Brazil); Josimar A. Rosa, Lab. Nacional de Astrofisica (Brazil); Lucas S. Marrara, Lab. Nacional de Astrofísica (Brazil); Laerte Sodré, Univ. de São Paulo (Brazil); James E. Gunn, Michael A. Strauss, Robert Lupton, Hassan Siddiqui, Neven Caplar, Paul Price, Arnaud Le Fur, Craig P. Loomis, Erin Kado-Fong, Princeton Univ.

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19 July 2022 • 11:10 - 11:30 EDT | Room 519 a

12184-37

On-sky performance of the robotic Focal Plane Systems (FPS) for the Sloan Digital Sky Survey V

Author(s): Richard Pogge, Mark Derwent, Christopher Brandon, The Ohio State Univ. (United States); Colby Jurgenson, Harvard-Smithsonian Ctr. for Astrophysics (United States); Michael Engelman, Thomas P. O'Brien, Daniel Pappalardo, The Ohio State Univ. (United States); Julia Brady, Carnegie Observatories (United States); Jacob McCloskey, Jonathan Shover, Jerry A. Mason, The Ohio State Univ. (United States); Ricardo Araujo, Mohamed Bouri, Jean-Paul Kneib, Luzius Kronig, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Sarah Tuttle, Emily Farr, José Sánchez-Gallego, Conor Sayres, Univ. of Washington (United States); Juna Kollmeier, Canadian Institute for Theoretical Astrophysics (Canada); Solange Ramírez, Stefanie Wachter, Carnegie Observatories (United States); Dmitry Bizyaev, Francis Cope, Katie Grabowski, Karen Kinemuchi, Viktor Malanushenko, Audrey Oravetz, Daniel Oravetz, Kaike Pan, Muwen Shi, Dylan Gatlin, Apache Point Observatory (United States); Sophia Brunner, Lawrence Berkeley National Lab., Univ. of California, Berkeley (United States); Felipe Besser, Consuelo Gonzalez Avila, Pablo Vera, Natalie Ulloa, Las Campanas Observatory (Chile); John Wilson, Univ. of Virginia (United States)

19 July 2022 • 11:30 - 11:50 EDT | Room 519 a

Lunch/Exhibition Break 11:50 - 13:30

SESSION 9: MOS II

19 July 2022 • 13:30 - 15:30 EDT | Room 519 a

12184-38

MOONS – Multi Object spectroscopy for the VLT: overview and instrument integration update

Author(s): Oscar Gonzalez, UK Astronomy Technology Ctr. (United Kingdom); Michele Cirasuolo, European Southern Observatory (Germany); William Taylor, Martin Black, Philip Rees, Ian Bryson, Stephen Chittick, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 13:30 - 13:50 EDT | Room 519 a

12184-39

VIRUS2: a next generation replicated integral field spectrograph with wide field and broad wavelength coverage

Author(s): Gary J. Hill, Hanshin Lee, Brian L. Vattiat, John M. Good, Jason Ramsey, Niv Drory, Trent Peterson, The Univ. of Texas at Austin (United States); Briana L. Indahl, The Univ. of Texas at Austin (United States), Univ. of Colorado Boulder (United States)

19 July 2022 • 13:50 - 14:10 EDT | Room 519 a

12184-40

4MOST: the 4-metre multi-object spectroscopic telescope project in the assembly, integration and test phase

Author(s): Roelof de Jong, Olga Bellido-Tirado, Joar Brynnel, Aida Ezzati Amini, Steffen Frey, Christine Füßlein, Miklos Gäbler, Domenico Giannone, Diana Johl, Silke Kuba, Ulrike Lemke, Genoveva Micheva, Allar Saviauk, Matthias Steinmetz, Jakob C. Walcher, Roland Winkler, Leibniz-Institut für Astrophysik Potsdam (Germany); Karin Lind, Stockholm Univ. (Sweden); Jonathan Loveday, Univ. of Sussex (United Kingdom); Sofia Feltzing, Lund Observatory (Sweden); Richard McMahon, Univ. of Cambridge (United Kingdom); Vincenzo Mainieri, Jean-François Pirard, European Southern Observatory (Germany); Thomas Bensby, Lund Univ. (Sweden); Maria Bergemann, Max-Planck-Institut für Astronomie (Germany); Cristina Chiappini, Leibniz-Institut für Astrophysik Potsdam (Germany); Norbert Christlieb, Ruprecht-Karls-Univ. Heidelberg (Germany); Maria-Rosa Cioni, Leibniz-Institut für Astrophysik Potsdam (Germany); Johan Comparat, Max-Planck-Institut für extraterrestrische Physik (Germany); Simon Driver, International Ctr. for Radio Astronomy Research, The Univ. of Western Australia (Australia); Isobel Hook, Lancaster Univ. (United Kingdom); Mike Irwin, Univ. of Cambridge (United Kingdom); Jean-Paul Kneib, Ecole Polytechnique Fédérale de Lausanne (Switzerland); Jochen Liske, Univ. Hamburg (Germany); Andrea Merloni, Max-Planck-Institut für extraterrestrische Physik (Germany); Ivan Minchev, Leibniz-Institut für Astrophysik Potsdam (Germany); Johan Richard, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Else Starkenburg, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Mark Sullivan, Univ. of Southampton (United Kingdom); Wolfgang Gaessler, Max-Planck-Institut für Astronomie (Germany); Johan Pragt, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Alban Remillieux, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Florian Rothmaier, Ruprecht-Karls-Univ. Heidelberg (Germany); Scott Smedley, Australian Astronomical Optics, Macquarie Univ. (Australia); Ingo Stilz, Ruprecht-Karls-Univ. Heidelberg (Germany); Nicholas Walton, Univ. of Cambridge (United Kingdom); David M. Alexander, Durham Univ. (United Kingdom); Ross Church, Lund Observatory (Sweden); Scott Croom, The Univ. of Sydney (Australia); Luke J. Davies, International Ctr. for Radio Astronomy Research (Australia); Caroline Heneka, Univ. Hamburg (Germany); Nikolay Kacharov, Leibniz-Institut für Astrophysik Potsdam (Germany); Jörg Knoche, Univ. Hamburg (Germany); Georges Kordopatis, Observatoire de la Côte d'Azur (France); Mirko Krumpe, Leibniz-Institut für Astrophysik Potsdam (Germany); Sarah Martell, The Univ. of New South Wales (Australia); Peder Norberg, Durham Univ. (United Kingdom); Ingrid Pelisoli, The Univ. of Warwick (United Kingdom); Sanjib Sharma, The Univ. of Sydney (Australia); Jesper Storm, Leibniz-Institut für Astrophysik Potsdam (Germany); Elmo Tempel, Univ. of Tartu (Estonia); Clare Worley, Univ. of Cambridge (United Kingdom)

19 July 2022 • 14:10 - 14:30 EDT | Room 519 a

12184-41

The Magellan Infrared Multiobject Spectrograph Concept Design

Author(s): Nicholas P. Konidaris, Gwen C. Rudie, Andrew B. Newman, Tyson S. Hare, Carnegie Observatories (United States); Jason E. Williams, Carnegie Observatories (United States), The Univ. of Southern California (United States); Alicia E. Lanz, Daniel D. Kelson, Jeffrey D. Crane, Carnegie Observatories (United States)

19 July 2022 • 14:30 - 14:50 EDT | Room 519 a

12184-42

Advancing the design of the Keck-FOBOS spectroscopic facility

Author(s): Kevin Bundy, Univ. of California, Santa Cruz (United States); Kyle Westfall, Nicholas MacDonald, Univ. of California Observatories (United States); Claire Poppett, Space Sciences Lab., Univ. of California, Berkeley (United States); Renate Kupke, Univ. of California Observatories (United States); Timothy N. Miller, Space Sciences Lab., Univ. of California, Berkeley (United States); Jon Lawrence, Celestina Lacombe, Australian Astronomical Optics, Macquarie Univ. (Australia); Renbin Yan, The Chinese Univ. of Hong Kong (Hong Kong, China); Michael Goodwin, Australian Astronomical Optics, Macquarie Univ. (Australia); Marc Kassis, John M. O'Meara, W. M. Keck Observatory (United States); Daniel C. Masters, IPAC, Caltech (United States); Benjamin Williams, Univ. of Washington (United States); Robert M. Rich, Univ. of California, Los Angeles (United States); Nathan Sandford, Univ.

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19 July 2022 • 14:50 - 15:10 EDT | Room 519 a

12184-70

MANIFEST@GMT science overview: a multi-interface, multi-mode instrument science and simulations

Author(s): Tayyaba Zafar, Macquarie Univ. (Australia); Jon Lawrence, Jessica Zheng, David Adams, Australian Astronomical Optics, Macquarie Univ. (Australia); Vitor N. Hartmann, Univ. de São Paulo (Brazil); Celestina Lacombe, Michael Goodwin, Nuria Lorente, Ellie O'Brien, Will Saunders, Helen McGregor, Australian Astronomical Optics, Macquarie Univ. (Australia); Daniel M. Faes, Gemini Observatory (United States); Jennifer Marshall, Darren L. DePoy, Texas A&M Univ. (United States); Matthew Colless, The Australian National Univ. (Australia); Nirmala Kunwar, Lew Waller, Australian Astronomical Optics (Australia); Casey Papovich, Texas A&M Univ. (United States); Steven Finkelstein, University of Texas at Austin (United States); Andrew Szentgyorgyi, Harvard Smithsonian Center for Astrophysics, Cambridge (United States); Kyler Kuehn, Lowell Observatory (United States); Scott Croom, University of Sydney (Australia); Sarah Martell, University of New South Wales (Australia)

19 July 2022 • 15:10 - 15:30 EDT | Room 519 a

Coffee Break 15:30 - 16:00

SESSION 10: MOS III

19 July 2022 • 16:00 - 17:20 EDT | Room 519 a

12184-43

High-Performance Fiber-Optic Switches for Astronomical Spectroscopy

Author(s): Claire Poppett, Edward H. Wishnow, Space Sciences Lab., Univ. of California, Berkeley (United States); Nicholas MacDonald, Univ. of California Observatories (United States); Kyle Westfall, Univ. of California Observatories (United Kingdom)

19 July 2022 • 16:00 - 16:20 EDT | Room 519 a

12184-44

A high resolution multi-object spectrograph for the VLT: pre-concept design.

Author(s): Anna Brucalassi, Andrea Tozzi, Ernesto Oliva, INAF - Osservatorio Astrofisico di Arcetri (Italy); Oscar A. Gonzalez, UK Astronomy Technology Ctr. (United Kingdom); Sofia Randich, INAF - Osservatorio Astrofisico di Arcetri (Italy); Gayandhi M. de Silva, Australian Astronomical Optics, Macquarie Univ. (Australia), Macquarie Univ. Research Ctr. for Astronomy (Australia); Eline Tolstoy, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Andrea Bianco, Matteo Genoni, Giorgio Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Jon Lawrence, Australian Astronomical Optics, Macquarie Univ. (Australia)

19 July 2022 • 16:20 - 16:40 EDT | Room 519 a

12184-45

MSE: Instrumentation for a massively multiplexed spectroscopic survey facility

Author(s): Alexis Hill, National Research Council Canada (Canada), Maunakea Spectroscopic Explorer (United States); Kei Szeto, Maunakea Spectroscopic Explorer (United States), National Research Council Canada (Canada); Samuel C. Barden, Maunakea Spectroscopic Explorer (United States); Jennifer Marshall, Maunakea Spectroscopic Explorer, Canada-France-Hawaii Telescope Corp. (United States), Texas A&M Univ. (United States); Laurence Tresse, Lab. d'Astrophysique de Marseille (France); Alexandre Jeanneau, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Éric Prieto, Lab. d'Astrophysique de Marseille (France); Matthew Lehnert, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Roser Pello, Lab. d'Astrophysique de Marseille (France); Kai Zhang, Nanjing Institute of Astronomical Optics & Technology (China); Jianrong Shi, National Astronomical Observatories (China); Liang Wang, Nanjing Institute of Astronomical Optics & Technology (China); Luke Schmidt, Texas A&M Univ. (United States); Jennifer Sobeck, Maunakea Spectroscopic Explorer (United States)

19 July 2022 • 16:40 - 17:00 EDT | Room 519 a

12184-46

Multi-object spectroscopic capability at the Canada France Hawaii telescope: The MSE pathfinder

Author(s): Andrew I. Sheinis, Samuel C. Barden, Canada-France-Hawaii Telescope Corp. (United States); Adam S. Bolton, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Jennifer Marshall, Texas A&M Univ. (United States); Kei Szeto, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 17:00 - 17:20 EDT | Room 519 a

Coffee Break 10:00 - 10:30

SESSION 11: HIGH-RESOLUTION SPECTROGRAPHS I

20 July 2022 • 10:30 - 12:10 EDT | Room 519 a

12184-47

Science commissioning and first results from the next generation Gemini High Resolution Optical Spectrograph (GHOST)

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20 July 2022 • 10:30 - 10:50 EDT | Room 519 a

12184-48

Final Integration of the Gemini High-Resolution Optical SpecTrograph (GHOST) Spectrograph

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20 July 2022 • 10:50 - 11:10 EDT | Room 519 a

12184-49

CRIRES+ on sky - High spectral resolution at infrared wavelength enabling better science at the ESO VLT

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20 July 2022 • 11:10 - 11:30 EDT | Room 519 a

12184-50

MAROON-X: The first two years of EPRVs from Gemini North

Author(s): Andreas Seifahrt, Jacob L. Bean, David Kasper, The Univ. of Chicago (United States); Julian Stürmer, Zentrum für Astronomie, Landessternwarte Heidelberg (Germany); Madison T. Brady, The Univ. of Chicago (United States); Mathias Zechmeister, Georg-August-Univ. Göttingen (Germany); Gudmundur Stefansson, Princeton Univ. (United States); Ben Montet, The Univ. of New South Wales (Australia); John White, Eduardo Tapia, Gemini Observatory (United States); Christian Schwab, Macquarie Univ. (Australia)

20 July 2022 • 11:30 - 11:50 EDT | Room 519 a

12184-51

First Light of NIRPS, the Near-Infrared Adaptive-Optics assisted high resolution spectrograph for the ESO 3.6m

Author(s): François Wildi, François Bouchy, Observatoire de Genève (Switzerland); René Doyon, Univ. de Montréal (Canada); Nicolas Blind, Ludovic Genolet, Michael Sordet, Alex Segovia, Observatoire de Genève (Switzerland); Lison Malo, Jonathan St-Antoine, Philippe Vallée, Univ. de Montréal (Canada); José Luis Rasilla, Instituto de Astrofísica de Canarias (Spain); Anne-Sophie Poulin-Girard, Denis Brousseau, Univ. Laval (Canada); Danuta Sosnowska, Observatoire de Genève (Switzerland); Vladimir Reshetov, NRC-Herzberg Astronomy & Astrophysics (Canada); Frédérique Baron, Univ. de Montréal (Canada); Simon Thibault, Univ. Laval (Canada); Sébastien Bovay, Observatoire de Genève (Switzerland); Gaspare Lo Curto, European Southern Observatory (Chile); Norbert Hubin, Gérard Zins, Celine Peroux, European Southern Observatory (Germany); Alexandre Cabral, Univ. de Lisboa (Portugal)

20 July 2022 • 11:50 - 12:10 EDT | Room 519 a

Lunch/Exhibition Break 12:10 - 13:30

SESSION 12: HIGH-RESOLUTION SPECTROGRAPHS II

20 July 2022 • 13:30 - 15:10 EDT | Room 519 a

12184-52

On-sky demonstration at Mt Palomar of the near-IR, high-resolution VIPA spectrometer

Author(s): Alexis Carlotti, Alexis Bidot, Jean-Jacques Correia, Laurent Jocou, David Mouillet, Stéphane Curaba, Alain Delboulbé, Institut de Planétologie et d'Astrophysique de Grenoble (France); Dimitri Mawet, Caltech (United States); Gautam Vasisht, Jet Propulsion Lab. (United States); René Doyon, Étienne Artigau, Philippe Vallée, Univ. de Montréal (Canada)

20 July 2022 • 13:30 - 13:50 EDT | Room 519 a

12184-53

20 GHz astronomical laser frequency comb with super-broadband spectral coverage

Author(s): Yuanjie Wu, Tilo Steinmetz, Menlo Systems GmbH (Germany); Zinan Huang, Max-Planck-Institut für Quantenoptik (Germany); Klaus Stockwald, Menlo Systems GmbH (Germany); Ronald Holzwarth, Menlo Systems GmbH (Germany), Max-Planck-Institut für Quantenoptik (Germany)

20 July 2022 • 13:50 - 14:10 EDT | Room 519 a

12184-54

Astrophotonic Solutions for Spectral Cross-Correlation Techniques

Author(s): Suresh Sivanandam, Dunlap Institute for Astronomy & Astrophysics (Canada); Ross Cheriton, National Research Council Canada (Canada); Polina Zavyalova, Peter R. Herman, Univ. of Toronto (Canada); Emily Deibert, Dunlap Institute for Astronomy & Astrophysics (Canada); Erin Tonita, Advanced Electronics and Photonics Research Ctr. (Canada), SUNLAB, Univ. of Ottawa (Canada); Volodymyr Artyshchuk, National Research Council Canada (Canada), Carleton Univ. (Canada); Ernst de Mooij, Astrophysics Research Ctr., Queen's Univ. Belfast (United Kingdom); Siegfried Janz, National Research Council Canada (Canada); Adam Densmore, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 14:10 - 14:30 EDT | Room 519 a

12184-55

MARVEL: the Mercator radial-velocity facility

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20 July 2022 • 14:30 - 14:50 EDT | Room 519 a

12184-56

Overview of the NEID fiber-feed: ultrastable instrument illumination for precision doppler velocimetry

Author(s): Shubham Kanodia, Andrea Lin, The Pennsylvania State Univ. (United States); Emily Lubar, The Univ. of Texas at Austin (United States); Suvrath Mahadevan, The Pennsylvania State Univ. (United States); Samuel Halverson, Jet Propulsion Lab. (United States); Gudmundur Stefansson, Princeton Univ. (United States); Arpita Roy, Space Telescope Science Institute (United States); Joe Ninan, Tata Institute of Fundamental Research (India); Christian Schwab, Macquarie Univ. (Australia); Chad F. Bender, Steward Observatory, The Univ. of Arizona (United States); Sarah E. Logsdon, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Michael W. McElwain, NASA Goddard Space Flight Ctr. (United States); Paul Robertson, Univ. of California, Irvine (United States); Ryan C. Terrien, Carleton College (United States)

20 July 2022 • 14:50 - 15:10 EDT | Room 519 a

Coffee Break 15:10 - 15:40

SESSION 13: HIGH-RESOLUTION SPECTROGRAPHS III

20 July 2022 • 15:40 - 17:20 EDT | Room 519 a

12184-57

G@M: Design of the Giant Magellan Telescope Consortium Large Earth Finder (G-CLEF) for operations at the Magellan telescopes.

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20 July 2022 • 15:40 - 16:00 EDT | Room 519 a

12184-58

System integration of the Potsdam Arrayed Waveguide Spectrograph (PAWS)

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20 July 2022 • 16:00 - 16:20 EDT | Room 519 a

12184-59

The final design of the iLocater spectrograph: An optimized architecture for future diffraction-limited EPRV instruments

Author(s): Jonathan Crass, Univ. of Notre Dame (United States); David M. Aikens, Savvy Optics Corp. (United States); Joaquin Mason, Fathom Imaging Systems (United States); David L. King, Institute of Astronomy, Univ. of Cambridge (United Kingdom); Justin R. Crepp, Andrew Bechter, Eric B. Bechter, Univ. of Notre Dame (United States); Mahsa Farsad, KLA Corp. (United States); Christian Schwab, Macquarie Univ. (Australia); Michael VanSickle, Univ. of Notre Dame (United States)

20 July 2022 • 16:20 - 16:40 EDT | Room 519 a

12184-60

RISTRETTO: high-resolution spectroscopy at the diffraction limit of the VLT

Author(s): Christophe Lovis, Bruno Chazelas, Nicolas Blind, Jonas G. Kühn, Ludovic Genolet, Ian Hughes, Michaël Sordet, Martin Turbet, Univ. de Genève (Switzerland); Thierry Fusco, Jean-François Sauvage, Lab. d'Astrophysique de Marseille (France); Maddalena Bugatti, Nicolas Billot, Janis Hagelberg, Univ. de Genève (Switzerland)

20 July 2022 • 16:40 - 17:00 EDT | Room 519 a

12184-61

Fiber-Fed High-Resolution Infrared Spectroscopy at the diffraction limit with Keck-HISPEC and TMT-MODHIS: status update

Author(s): Dimitri Mawet, Caltech (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Quinn Konopacky, Univ. of California, San Diego (United States); Nemanja Jovanovic, Richard Dekany, Caltech (United States); Charles Beichman, Jet Propulsion Lab., Caltech (United States); Garreth Ruane, Jet Propulsion Lab. (United States); Motohide Tamura, The Univ. of Tokyo (Japan); Takayuki Kotani, National Astronomical Observatory of Japan (Japan); Bjorn Benneke, René Doyon, Univ. de Montréal (Canada); Stephanie D. Leifer, The Aerospace Corp. (United States); Marc Kassis, W. M. Keck Observatory (United States); Hiroshi Terada, Thirty Meter Telescope (United States)

20 July 2022 • 17:00 - 17:20 EDT | Room 519 a

Coffee Break 10:00 - 10:30

SESSION 14: HIGH-SPATIAL RESOLUTION INSTRUMENTS

21 July 2022 • 10:30 - 12:10 EDT | Room 519 a

12184-62

upgrading the high contrast imaging facility SPHERE: science drivers and instrument choices

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21 July 2022 • 10:30 - 10:50 EDT | Room 519 a

12184-63

GPI 2.0: Upgrade Status of the Gemini Planet Imager

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21 July 2022 • 10:50 - 11:10 EDT | Room 519 a

12184-64

MIRAC-5: A ground-based mid-IR instrument with the potential to detect ammonia in gas giants

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21 July 2022 • 11:10 - 11:30 EDT | Room 519 a

12184-65

The Programmable Liquid-crystal Active Coronagraphic Imager for the DAG telescope (PLACID) instrument: Overview at FDR ahead of first light in 2022

Author(s): Jonas G. Kühn, Univ. Bern (Switzerland); Laurent Jolissaint, Audrey Bouxin, Haute Ecole d'Ingénierie et de Gestion du Canton de Vaud (Switzerland)

21 July 2022 • 11:30 - 11:50 EDT | Room 519 a

12184-66

Phase II of the Keck Planet Imager and Characterizer: system-level laboratory characterization and preliminary on-sky commissioning

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21 July 2022 • 11:50 - 12:10 EDT | Room 519 a

Lunch/Exhibition Break 12:10 - 13:30

SESSION 15: ELT INSTRUMENTATION I

21 July 2022 • 13:30 - 15:10 EDT | Room 519 a

12184-67

The ESO ELT Armazones Instrumentation Programme

Author(s): Michele Cirasuolo, Patrick Caillier, Alain Delorme, Frédéric Dérie, Ignacio Gil, Juan-Carlos Gonzales Herrera, Vincenzo Mainieri, Antonio Ramon Manescau Hernandez, Celine Peroux, Oliver Pfuhl, Adrian Russell, Suzanne Ramsay, Christian Schmid, Mauro Tuti, European Southern Observatory (Germany)

21 July 2022 • 13:30 - 13:50 EDT | Room 519 a

12184-68

Science Instrumentation Progress at the Giant Magellan Telescope

Author(s): Rafael Millan-Gabet, GMTO Corp. (United States); Rebecca A. Bernstein, GMTO Corp. (United States), Carnegie Observatories (United States); Aline Souza, Brian Walls, Antonin Bouchez, Breann N. Sitarski, GMTO Corp. (United States)

21 July 2022 • 13:50 - 14:10 EDT | Room 519 a

12184-69

The final design of MICADO, the first light ELT camera

Author(s): Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany); João Alves, Univ. Wien (Austria); Yann Clénet, Observatoire de Paris à Meudon (France); Veronika Hörmann, Max-Planck-Institut für extraterrestrische Physik (Germany); Florian Kerber, European Southern Observatory (Germany); Florian Lang-Bardl, Univ.-Sternwarte München (Germany); Harald Nicklas, Institut für Astrophysik, Georg-August-Univ. Göttingen (Germany); Jörg-Uwe Pott, Max-Planck-Institut für Astronomie (Germany); Sebastian Rabien, Eckhard Sturm, Max-Planck-Institut für extraterrestrische Physik (Germany); Eline Tolstoy, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Benedetta Vulcani, INAF - Osservatorio Astronomico di Padova (Italy); Jari Kotilainen, Finnish Ctr. for Astronomy with ESO (Finland)

21 July 2022 • 14:10 - 14:30 EDT | Room 519 a

12184-71

HARMONI at ELT: Overview of the capabilities and expected performance of the ELT's first light, adaptive optics assisted integral field spectrograph.

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21 July 2022 • 14:30 - 14:50 EDT | Room 519 a

12184-72

Status update on the development of METIS, the mid-infrared ELT imager and spectrograph

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21 July 2022 • 14:50 - 15:10 EDT | Room 519 a

Coffee Break 15:10 - 15:40

SESSION 16: ELT INSTRUMENTATION II

21 July 2022 • 15:40 - 17:20 EDT | Room 519 a

12184-73

MOSAIC on the ELT: the multi-object spectrograph for the ESO Extremely Large Telescope

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21 July 2022 • 15:40 - 16:00 EDT | Room 519 a

12184-74

Design and Development of WFOS, the Wide-Field Optical Spectrograph for the Thirty Meter Telescope

Author(s): Charles C. Steidel, Caltech (United States); Eric W. Peng, Peking Univ. (China); Jason R. Fucik, Reston Nash, Caltech (United States); Davide Lasi, TMT International Observatory, LLC (United States); Stephen Kaye, Caltech (United States); George H. Jacoby, John Miles, Bernard Delabre, TMT International Observatory, LLC (United States); Devika Divakar, India TMT Coordination Ctr. (India); Hangxin Ji, Nanjing Institute of Astronomical Optics & Technology (China); Shinobu Ozaki, National Astronomical Observatory of Japan (Japan); Ramya Sethuram, India TMT Coordination Ctr. (India); Thirupathi Sivarani, Indian Institute of Astrophysics (India); Fumihiro Uraguchi, National Astronomical Observatory of Japan (Japan); Hari Mohan Varshney, Indian Institute of Astrophysics (India)

21 July 2022 • 16:00 - 16:20 EDT | Room 519 a

12184-75

The High Resolution Spectrograph for the ELT: science case, baseline design and path to construction

Author(s): Alessandro Marconi, INAF - Osservatorio Astrofisico di Arcetri (Italy), Univ. degli Studi di Firenze (Italy)

21 July 2022 • 16:20 - 16:40 EDT | Room 519 a

12184-76

design improvements and progress on the Giant Magellan Telescope near-infrared spectrograph

Author(s): Daniel T. Jaffe, Cynthia Brooks, The Univ. of Texas at Austin (United States); Moo-Young Chun, Korea Astronomy and Space Science Institute (Korea, Republic of); Jeffrey D. Crane, Carnegie Observatories (United States); John M. Good, Michelle Grigas, The Univ. of Texas at Austin (United States); Ueejeong Jeong, Kang-Min Kim, Sanghyuk Kim, Korea Astronomy and Space Science Institute (Korea, Republic of); Hanshin Lee, The Univ. of Texas at Austin (United States); Ho-Gyu Lee, Sungho Lee, Korea Astronomy and Space Science Institute (Korea, Republic of); Gregory Mace, The Univ. of Texas at Austin (United States); Heeyoung Oh, Chan Park, Woojin Park, Korea Astronomy and Space Science Institute (Korea, Republic of); Alycia J. Weinberger, Carnegie Institution for Science (United States)

21 July 2022 • 16:40 - 17:00 EDT | Room 519 a

12184-77

The Planetary Systems Imager for TMT: Overview and Status

Author(s): Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Nemanja Jovanovic, Caltech (United States); Benjamin A. Mazin, Univ. of California, Santa Barbara (United States); Andrew J. Skemer, Richard Stelter, Univ. of California, Santa Cruz (United States); Richard Dekany, Caltech Optical Observatories (United States); Stephanie Sallum, Univ. of California, Irvine (United States); Hajime Kawahara, The Univ. of Tokyo (Japan); Norio Narita, AstroBiology Ctr., National Institutes of Natural Sciences (Japan); Christian Marois, NRC-Herzberg Astronomy & Astrophysics (Canada); Olivier Guyon, Subaru Observatory, NAOJ (United States); Dimitri Mawet, Caltech (United States); Mark Chun, Institute for Astronomy, Univ. of Hawai'i (United States); Takayuki Kotani, AstroBiology Ctr., NINS (Japan); Rebecca Jensen-Clem, Univ. of California, Santa Cruz (United States); Maxwell Millar-Blanchaer, Univ. of California, Santa Barbara (United States); Philip Hinz, Univ. of California, Santa Cruz (United States)

21 July 2022 • 17:00 - 17:20 EDT | Room 519 a

SESSION P1: POSTERS - AIRBORNE & SOLAR INSTRUMENTATION

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-78

Optical alignment and performance evaluation of the Sunrise Chromospheric Infrared spectroPolarimeter (SCIP) for SUNRISE III

Author(s): Yusuke Kawabata, Yukio Katsukawa, Toshihiro Tsuzuki, Fumihiro Uraguchi, Kenji Mitsui, Kazuya Shinoda, Tomonori Tamura, Yoshifumi Nodomi, Hirohisa Hara, Masahito Kubo, National Astronomical Observatory of Japan (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-79

Supporting PSP mission with Goode Solar Telescope at Big Bear Solar Observatory

Author(s): Wenda Cao, Big Bear Solar Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-80

Design and testing of a low-resolution NIR spectrograph for atmosphere characterization of Hot Jupiter exoplanets.

Author(s): Lee Bernard, Logan Jensen, John Gamaunt, Nathaniel Butler, Michael Line, Jennifer Patience, Arizona State Univ. (United States); Kanchita Klangboonkrong, Annalies Kleyheeg, Tim Rehm,

Gregory Tucker, Brown Univ. (United States); Subhajit Sarkar, Cardiff Univ. (United Kingdom); Nikole Lewis, Cornell Univ. (United States); Paul Scowen, Peter Nagler, Kyle Helson, Daniel Kelly, NASA Goddard Space Flight Ctr. (United States); Stephen Maher, Science Systems and Applications, Inc. (United States); Qian Gong, Laddawan Miko, Augustyn Waczynski, NASA Goddard Space Flight Ctr. (United States); Vivien Parmentier, Univ. of Oxford (United Kingdom); Andrea Bocchieri, Azzurra D'Alessandro, Lorenzo Mugnai, Enzo Pascale, Sapienza Univ. di Roma (Italy); John Hartley, Steven Li, Javier Romualdez, StarSpec Technologies Inc. (Canada); Barth Netterfield, Univ. of Toronto (Canada); Quentin Changeat, Billy Edwards, Ingo Waldman, Univ. College London (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-81

IBIS 2.0: optical layout and polarimetric unit of the Interferometric BIdimensional Spectrometer 2.0

Author(s): Giorgio Viavattene, Ilaria Ermolli, INAF - Osservatorio Astronomico di Roma (Italy); Roberto Cirami, Giorgio Calderone, INAF - Osservatorio Astronomico di Trieste (Italy); Dario Del Moro, Univ. degli Studi di Roma "Tor Vergata" (Italy); Paolo Romano, INAF - Osservatorio Astrofisico di Catania (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Veronica Baldini, INAF - Osservatorio Astronomico di Trieste (Italy); Fabrizio Giorgi, Fernando Pedichini, INAF - Osservatorio Astronomico di Roma (Italy); Igor Coretti, Paolo Di Marcantonio, INAF - Osservatorio Astronomico di Trieste (Italy); Luca Giovannelli, Univ. degli Studi di Roma "Tor Vergata" (Italy); Salvatore Luigi Guglielmino, INAF - Osservatorio Astrofisico di Catania (Italy); Mariarita Murabito, INAF - Osservatorio Astronomico di Roma (Italy); Luca Oggioni, INAF - Osservatorio Astronomico di Brera (Italy); Maurizio Oliviero, INAF - Osservatorio Astronomico di Capodimonte (Italy); Roberto Piazzesi, INAF - Osservatorio Astronomico di Roma (Italy); Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-82

Sunrise Chromospheric Infrared spectroPolarimeter (SCIP) for SUNRISE III: thermal-vacuum test of the SCIP optical unit

Author(s): Yukio Katsukawa, Hirohisa Hara, Masahito Kubo, Yusuke Kawabata, Takayoshi Oba, National Astronomical Observatory of Japan (Japan); Javier Piqueras Carreño, Isabel Pérez Grande, Univ. Politécnica de Madrid (Spain); Kazuya Shinoda, Tomonori Tamura, Fumihiro Uraguchi, Toshihiro Tsuzuki, Yoshifumi Nodomi, National Astronomical Observatory of Japan (Japan); Toshifumi Shimizu, Japan Aerospace Exploration Agency (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-83

Design of a hyperspectral imaging instrument using a lenslet array and Fabry-Perot

Author(s): Mohanakrishna Ranganathan, ETH Zurich (Switzerland); Ramya M. Anche, Steward Observatory, The Univ. of Arizona (United States); Kasiviswanathan Sankarasubramanian, U R Rao Satellite Ctr., Bengaluru, Indian Space Research Organisation (India)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-86

Design of a Shack-Hartmann test instrument for the SOFIA telescope

Author(s): Enrico Pfüller, Manuel Wiedemann, Karsten Schindler, Deutsches SOFIA Institut, NASA Ames Research Ctr. (United States); Alfred Krabbe, Jürgen Wolf, Michael Lachenmann, Deutsches SOFIA Institut (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-87

End-to-end tests of the TuMag instrument for the SUNRISE III mission

Author(s): Alberto Álvarez Herrero, Daniel Garranzo, Armonía Núñez, Manuel Silva-López, Antonio Campos-Jara, Pilar García Parejo, INTA Instituto Nacional de Técnica Aeroespacial (Spain); María Cebollero, ISDEFE, S.A. (Spain); Julia Atiénzar, Francisco J. Bailén, Instituto de Astrofísica de Andalucía (Spain); Julian Blanco Rodríguez, Univ. de València (Spain); Pablo Santamarina, David Orozco Suárez, Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-88

TuMag for SUNRISE III mission: development of the optical unit of an imaging spectropolarimeter

Author(s): Alberto Álvarez Herrero, Ana Fernández-Medina, INTA Instituto Nacional de Técnica Aeroespacial (Spain); María Cebollero, ISDEFE, S.A. (Spain); Daniel Garranzo, Armonía Núñez, Alejandro Gonzalo, Antonio Sánchez, Javier Villanueva, Pilar García Parejo, Antonio Campos-Jara, Manuel Silva-López, Ricardo San Julián, Hugo Laguna, INTA Instituto Nacional de Técnica Aeroespacial (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-89

DKIST's Heat Stop

Author(s): Chriselle G. Nagata, Scott Gregory, National Solar Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-90

The design and development status of the cryogenic receiver for the Exoplanet Climate Infrared Telescope

Author(s): Tim Rehm, Brown Univ. (United States); Lee Bernard, Arizona State Univ. (United States); Andrea Bocchieri, Sapienza Univ. di Roma (Italy); Nat Butler, Arizona State Univ. (United States); Quentin Changeat, Univ. College London (United Kingdom); Azzurra D'Alessandro, Sapienza Univ. di Roma (Italy); Billy Edwards, Univ. College London (United Kingdom); John Gamaunt, Arizona State Univ. (United States); Qian Gong, NASA Goddard Space Flight Ctr. (United States); John Hartley, StarSpec Technologies Inc. (Canada); Kyle Helson, NASA Goddard Space Flight Ctr. (United States); Logan Jensen, Arizona State Univ. (United States); Daniel P. Kelly, NASA Goddard Space Flight Ctr. (United States); Kanchita Klangboonkrong, Annalies Kleyheeg, Brown Univ. (United States); Nikole Lewis, Cornell Univ. (United States); Steven Li, StarSpec Technologies Inc. (Canada); Michael Line, Arizona State Univ. (United States); Stephen F. Maher, Ryan McClelland, Laddawan R. Miko, NASA Goddard Space Flight Ctr. (United States); Lorenzo Mugnai, Sapienza Univ. di Roma (Italy); Peter Nagler, NASA Goddard Space Flight Ctr. (United States); Barth Netterfield, Univ. of Toronto (Canada); Vivien Parmentier, Univ. of Oxford (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy); Jennifer Patience, Arizona State Univ. (United States); Javier Romualdez, StarSpec Technologies Inc. (Canada); Subhajit Sarkar, Cardiff Univ. (United Kingdom); Paul A. Scowen, NASA Goddard Space Flight Ctr. (United States); Gregory S. Tucker, Brown Univ. (United States); Augustyn Waczynski, NASA Goddard Space Flight Ctr. (United States); Ingo Waldmann, Univ. College London (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P2: POSTERS - ELT INSTRUMENTATION

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-91

HARMONI at ELT: opto-mechanics of the IFS pre-optics at CDR

Author(s): Elvio Hernández Suárez, Alberto Hernandez Díaz, Ángel Alonso, Begoña García-Lorenzo, Instituto de Astrofísica de Canarias (Spain); Niranjan Thatte, Univ. of Oxford (United Kingdom); Hermine Schnetler, Science and Technology Facilities Council (STFC) (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-92

The final design of the cryostat for ELT/METIS

Author(s): Emilie Bouzerand, ETH Zurich (Switzerland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-93

HARMONI at ELT: mechanisms of the pre-optics at CDR

Author(s): Elvio Hernández Suárez, Alejandro Luján, Yolanda Martín, Ángel Alonso, Begoña García-Lorenzo, Instituto de Astrofísica de Canarias (Spain); Niranjan Thatte, Univ. of Oxford (United Kingdom); Hermine Schnetler, UK Astronomy Technology Ctr (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-94

HARMONI at ELT: Calibration Module functional and design description

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-95

HARMONI at ELT: cooled environment for focal plane relay optics and guide star sensors; design ahead of FDR

Author(s): Thomas Louth, David Montgomery, Stuart Watt, William Cochrane, UK Astronomy Technology Ctr. (United Kingdom); Fraser Clarke, Univ. of Oxford (United Kingdom); Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); William Humphreys, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-96

Global to Local FEA validation for complex geometries: submodeling technique applied to mechanical structures for ELT class of instrumentation

Author(s): Vincenzo Cianniello, Vincenzo De Caprio, Domenico D'Auria, Christian Eredia, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-97

Finite Element modeling technique: trade-off between two different FE models of a mechanical selector for Astronomical Instrumentation

Author(s): Vincenzo Cianniello, Vincenzo De Caprio, Domenico D'Auria, Christian Eredia, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-98

GMTNIRS: preliminary optical mount design for cryogenic spectrograph

Author(s): Woojin Park, Sanghyuk Kim, Chan Park, Sungho Lee, Korea Astronomy and Space Science Institute (Korea, Republic of); Hanshin Lee, John M. Good, The Univ. of Texas at Austin (United States); Heeyoung Oh, Korea Astronomy and Space Science Institute (Korea, Republic of); Gregory Mace, Cynthia Brooks, The Univ. of Texas at Austin (United States); Ueejeong Jeong, Moo-Young Chun, Korea Astronomy and Space Science Institute (Korea, Republic of); Alycia J. Weinberger, Carnegie Institution for Science (United States); Daniel T. Jaffe, The Univ. of Texas at Austin (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-99

Preliminary design of GMTNIRS cryostat and optical bench

Author(s): Sanghyuk Kim, Chan Park, Woojin Park, Sungho Lee, Korea Astronomy and Space Science Institute (Korea, Republic of); Hanshin Lee, McDonald Observatory, The Univ. of Texas at Austin (United States); John M. Good, Gregory Mace, The Univ. of Texas at Austin (United States); Heeyoung Oh, Ueejeong Jeong, Moo-Young Chun, Korea Astronomy and Space Science Institute (Korea, Republic of); Cynthia Brooks, The Univ. of Texas at Austin (United States); Alycia J. Weinberger, Carnegie Institution for Science (United States); Daniel T. Jaffe, The Univ. of Texas at Austin (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-100

The High Resolution Spectrograph for the ELT: updated optical design and instrument architecture

Author(s): Ernesto Oliva, Andrea Tozzi, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-102

HARMONI – the Extremely Large Telescope first light integral field spectrograph: pre-optics: stray light analysis

Author(s): Miguel Angel Cagigas Garcia, Instituto de Astrofísica de Canarias (Spain); Eva Gómez Fenés, Univ. Complutense de Madrid (Spain); Tomas Belenguer, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Begoña García-Lorenzo, Ángel Alonso, Silvia Regalado Olivares, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-103

HARMONI at ELT: electronic cabinets design

Author(s): Graciela C. Delgado-García, Enrique Joven-Álvarez, Saúl Menéndez-Mendoza, Teodora Viera-Curbelo, Yolanda Martín, Haresh M. Chulani, Luis Fernando Rodríguez-Ramos, Ángel Alonso, Begoña García-Lorenzo, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-104

MOSAIC on the ELT: optical design for the VIS spectrograph

Author(s): Wenli Xu, Wenli Xu Optical System Engineering (Germany); Walter Seifert, Andreas Quirrenbach, Zentrum für Astronomie, Landessternwarte Heidelberg (Germany); Ramón Navarro, Annemieke W. Janssen, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Myriam Rodrigues, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris (France); Ruben Sanchez-Janssen, UK Astronomy Technology Ctr. (United Kingdom); Andreas Kelz, Leibniz-Institut für Astrophysik Potsdam (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-105

The MICADO atmospheric dispersion corrector: optomechanical design, expected performance and calibration techniques

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-106

Mechanical design overview for the main structure of MAORY/ MORFEO

Author(s): Vincenzo De Caprio, Vincenzo Cianniello, Christian Eredia, Domenico D'Auria, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Edoardo Maria Alberto Redaelli, Matteo Aliverti, Giorgio Pariani, Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Jacopo Farinato, Demetrio Magrin, Luca Marafatto, Gabriele Rodeghiero, Simonetta Chinellato, INAF - Osservatorio Astronomico

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-107

The MICADO first light imager for the ELT: relay optics opto-mechanical final design

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-108

MOSAIC on the ELT : Optomechanical design of the NIR spectrograph

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-109

Mechanical and electronic design of the MORFEO (formerly known as MAORY) calibration unit selector

Author(s): Domenico D'Auria, Christian Eredia, Vincenzo Cianniello, Vincenzo De Caprio, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-110

General overview of MORFEO (formerly known as MAORY) Instrument Control Hardware design

Author(s): Enrico Cascone, Christian Eredia, Vincenzo Cianniello, Domenico D'Auria, Vincenzo De Caprio, Andrea Di Dato, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); Gianluca De Rico, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Tommaso Lapucci, INAF - Osservatorio Astrofisico di Arcetri (Italy); Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Edoardo Radaelli, Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-111

Trade-off between different PLC based architectures of instrument control hardware for ESO ELT class of instrumentation

Author(s): Christian Eredia, Vincenzo Cianniello, Domenico D'Auria, Vincenzo De Caprio, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-112

Analysis of the requirements and their impact on the design of electronic cabinets for the current generation of ESO ELT instruments

Author(s): Christian Eredia, Domenico D'Auria, Vincenzo Cianniello, Vincenzo De Caprio, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-114

The MICADO main selection mechanism: final design

Author(s): Florian Lang-Bardl, Anna Monna, Frank Grupp, Univ.-Sternwarte München (Germany); Ralf Bender, Max-Planck-Institut für extraterrestrische Physik (Germany); S. Srivalli Annadevara, Hans-Joachim Hess, Ulrich Hopp, Helmut Kravcar, Felix Kummer, Jörg Schlichter, Michael Wegner, Valentin Ziel, Claus Goessl, Univ.-Sternwarte München (Germany); Reinhard Katterloher, Max-Planck-Institut für extraterrestrische Physik (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-115

The MICADO first light imager for the ELT: a comprehensive tolerance analysis for the relay optics

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-116

Preliminary design of GMTNIRS electronics

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-117

CANCELED: UV-Blue refractive camera for Extreme Large Telescopes instrumentation

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-118

Preparing for system level AIV for METIS

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-119

ANDES, the high resolution spectrometer for the ELT: the UBV spectrograph module

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-120

The METIS warm support structure final design

Author(s): Ricardo Costa, Univ. do Porto (Portugal); Antonio Amorim, Univ. Lisboa (Portugal); André Boné, Max Planck Institute for Astronomy (Germany); Mercedes Filho, Univ. do Porto (Portugal); Frederico Carvalho, Marcelino Ngando, Univ. Lisboa (Portugal); Paulo Garcia, Univ. do Porto (Portugal)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-121

Optimising IFU design for high contrast imaging with ELT-PCS – experimental overview and preliminary characterization

Author(s): R. Elliot Meyer, Matthias Tecza, Niranjan Thatte, Univ. of Oxford (United Kingdom); Takashi Sukegawa, Canon Inc. (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-122

MOSAIC on the ELT: Planification of the instrument AITV

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-123

The Infrared Imaging Spectrograph (IRIS) for TMT: low wavefront error and highly reflective mirror

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-124

Using VLT/SINFONI to understand the impact of an under-illuminated slit for telluric correction with ELT/HARMONI

Author(s): Laurence Routledge, Niranjan Thatte, Univ. of Oxford (United Kingdom); Alain Smette, European Southern Observatory (Chile)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-125

MICADO: Final design of primary instrument support, access and supply systems

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-126

Final design and expected performance of the METIS high-contrast imaging modes

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-128

The Opto-Mechanical Design of the GMT-Consortium Large Earth Finder (G-CLEF) Spectrograph Adapted for the Magellan Telescope

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-129

GMTNIRS Optical System Design

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-130

PLC based realization of the cryogenic and cold mechanism control system for MICADO

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-131

METIS: Final design of the Imager sub-system

Author(s): Peter Bizenberger, María Concepción Cárdenas Vázquez, Harald Baumeister, Thomas Bertram, Roy van Boekel, Markus Feldt, Thomas Henning, Werner Laun, Lars Mohr, Ralf-Rainer Rohloff, Silvia Scheithauer, Max-Planck-Institut für Astronomie (Germany);

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-132

Optical design, analysis, and performances of the infrared and visible channels of the Warm Calibration Unit in METIS/ELT

Author(s): Tarun Kumar Sharma, Monika Rutowska, Michael Wiest, Sabine Graf, Lucas Labadie, Christian Straubmeier, Andreas Eckart, I. Physikalisches Institut, Univ. zu Köln (Germany); Stephen Todd, UK Astronomy Technology Ctr., Science and Technology Facilities Council, The Royal Observatory, Edinburgh (United Kingdom); Tibor Agócs, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Remko Stuik, Bernhard R. Brandl, Leiden Observatory (Netherlands); Felix C. M. Bettonvil, Leiden Observatory, Leiden Univ. (Netherlands)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-133

Warm Calibration Unit of the mid-infrared ELT instrument METIS – overview and current status towards FDR

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-134

The MICADO first light imager for the ELT: The relay optics alignment plan

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-135

The MICADO first light imager for the ELT: MICADO calibration assembly final design

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-136

ANDES, the high resolution spectrometer for the ELT: fiber link and observing modes

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P3: POSTERS - HIGH SPATIAL-RESOLUTION INSTRUMENTS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-137

CANCELED: Optical optimization and manufacturing of high precision PARAS-2 spectrograph's Camera for exoplanet detection

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-138

Structural analyses of the MAORY/MORFEO main support structure at global level for preliminary design review

Author(s): Vincenzo Cianniello, Vincenzo De Caprio, Christian Eredia, Domenico D'Auria, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio di Bologna (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-139

MAVIS: preliminary design overview of the AOM control electronics

Author(s): Mirko Colapietro, Pietro Schipani, Salvatore Savarese, Giulio Capasso, Sergio D'Orsi, Laurent Marty, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Elia Costa, Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - ADaptive Optics National Lab. (Italy); Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - ADaptive Optics National Lab. (Italy); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - ADaptive Optics National Lab. (Italy); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy), ADONI - ADaptive Optics National Lab. (Italy); Enrico Pinna, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Grani, Tommaso Lapucci, INAF - Osservatorio Astrofisico di Arcetri (Italy), ADONI - ADaptive Optics National Lab. (Italy); Annino Vaccarella, Australian Astronomical Optics-Stromlo, The Australian National Univ. (Australia); David Brodrick, Australian Astronomical Optics-Stromlo, The Australian National Univ. (Australia); Gaston Gausachs, Australian Astronomical Optics-Stromlo, The Australian National Univ. (Australia); François Rigaut, Australian Astronomical Optics-Stromlo, The Australian National Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-140

Achieving precision ground-based photometry using engineered diffusers

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-141

ELVIS: the exoplanets at LBT with a visible IFS for SHARK-VIS

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-142

SHARK-NIR on its way to LBT

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-143

Laboratory results and performance evaluation of the SPEED test-bed PIAACMC

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-144

The segmented pupil experiment for exoplanet detection. 6. From early design to first lights

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-145

The Polarization Aberrations of the Gemini Telescope as Seen by the Gemini Planet Imager

Author(s): Maxwell Millar-Blanchaer, Univ. of California, Santa Barbara (United States); Meiji Nguyen, Marshall D. Perrin, Space Telescope Science Institute (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-146

The segmented pupil experiment for exoplanet detection. 5. System control and software infrastructure

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-147

An MKID camera for use behind MagAO-X

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-149

Design of the near infrared camera DIRAC for East Anatolia Observatory

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-150

MAVIS: preliminary mechanical design overview of the adaptive optics module

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-151

On-sky performance and results of the recently upgraded ALES integral field spectrograph

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-152

GPI 2.0: Performance of upgrades to the Gemini Planet Imager CAL and IFS

Author(s): Dillon H. Peng, Jeffrey Chilcote, Univ. of Notre Dame (United States); Quinn Konopacky, Univ. of California, San Diego (United States); Joeleff Fitzsimmons, National Research Council Canada (Canada); Bruce Macintosh, Stanford Univ. (United States); Christian Marois, NRC-Herzberg Astronomy & Astrophysics (Canada); Fredrik Rantakyrö, Gemini Observatory (United States); Arlene Aleman, Stanford Univ. (United States); Robert J. De Rosa, European Southern

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-153

MAVIS: An optical design for the image slicer and spectrograph

Author(s): Will Saunders, Christian Schwab, Simon Ellis, Robert Content, Jacob Pember, Ross Zhelem, Jessica Zheng, Scott Smedley, David Robertson, Timothy Chin, Australian Astronomical Optics, Macquarie Univ. (Australia); Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); François Rigaut, The Australian National Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-154

Weighing exo-atmospheres: A novel mid-resolution spectral mode for SCALES

Author(s): Richard Stelter, Andrew J. Skemer, Renate Kupke, Univ. of California, Santa Cruz (United States); Cyril Bourgenot, Durham Univ. (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-155

The Planetary Systems Imager: driving science cases and top level requirements

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-156

Circular polarimetric imaging at planetary system scales by hacking SPHERE-IRDIS

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-157

GPI 2.0: Baseline testing of the Gemini Planet Imager before the upgrade

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-158

Spectroastrometry with photonic lanterns

Author(s): Yoo Jung Kim, Univ. of California, Los Angeles (United States); Stephanie Sallum, Univ. of California, Irvine (United States); Jonathan Lin, Univ. of California, Los Angeles (United States); Yinzi Xin, Caltech (United States); Barnaby Norris, Christopher Betters, Sergio Leon-Saval, The Univ. of Sydney (Australia); Julien Lozi, Sebastian Vievard, Subaru Telescope, NAOJ (United States); Pradip Gatkine, Caltech (United States); Olivier Guyon, Subaru Telescope, NAOJ (United States); Nemanja Jovanovic, Dimitri Mawet, Caltech (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-159

Santa Cruz Array of Lenslets for Exoplanet Spectroscopy (SCALES) on Keck: Optical design

Author(s): Renate Kupke, Richard Stelter, Univ. of California, Santa Cruz (United States); Amirul Hasan, Indian Institute of Astrophysics (India); Arun Surya, Tata Institute of Fundamental Research (India); Isabel Kain, Zackery Briesemeister, Jialin Li, Philip Hinz, Andy Skemer, Benjamin Gerard, Univ. of California, Santa Cruz (United States); Christopher Ratliff, Univ. of California Observatories (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-160

GPI 2.0: Characterizing self-luminous exoplanets through low-resolution infrared and optical spectroscopy

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-161

AIV of FRIDA optics: from the optical components manufacturing to system cryogenic qualifications

Author(s): Salvador Cuevas, Oscar Chapa, Luis C. Álvarez-Núñez, Beatriz Sánchez Sánchez, Carolina Keiman, Carlos Espejo, Rubén A. Flores-Meza, Jorge Fuentes-Fernández, Univ. Nacional Autónoma de México (Mexico); José R. Fujarte, Ctr. de Ingenieria y Desarrollo Industrial (Mexico); José Leonardo Garcés Medina, Gerardo Lara, Univ. Nacional Autónoma de México (Mexico); Berenice Rodríguez, Eleazar Sánchez, Ctr. de Ingenieria y Desarrollo Industrial (Mexico); Alan M. Watson, Univ. Nacional Autónoma de México (Mexico)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-162

MOEMS-based high spatial and spectral resolution spectro-imager: BATMAN@MAVIS

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-163

An optical Lyot coronagraph for high-contrast imaging with SCExAO/VAMPIRES

Author(s): Miles Lucas, Institute for Astronomy, Univ. of Hawai'i (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-164

MedRes: a new MEDium RESolution integral field spectrograph for SPHERE

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P4: POSTERS - HIGH-RESOLUTION SPECTROGRAPHS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-165

Externally dispersed interferometer testbed diagnosing Keck planet finder spectrograph high resolution performance

Author(s): David J. Erskine, Lawrence Livermore National Lab. (United States); Jerry Edelstein, Edward H. Wishnow, Space Sciences Lab., Univ. of California, Berkeley (United States); Erik J. Davies, Lawrence Livermore National Lab. (United States); Martin Sirk, Space Sciences Lab., Univ. of California, Berkeley (United States); Richard Ozer, Eastbay Astron. Soc. (United States); Dayne E. Fratanduono, Lawrence Livermore National Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-166

MARVEL: optical fiber link

Author(s): Gerardo Avila, Baader Planetarium GmbH (Germany); Gert Raskin, Institute of Astronomy, KU Leuven (Belgium); Christian Schwab, Macquarie Univ. (Australia); Jacob Pember, Macquarie Univ. (Australia), Institute of Astronomy, KU Leuven (Belgium); Bart Vandenbussche, Hans Van Winckel, Institute of Astronomy, KU Leuven (Belgium); Carlos Guirao, European Southern Observatory (Germany); Roman Guemperlein, Baader Planetarium GmbH (Germany); Julian Stürmer, Zentrum für Astronomie, Landessternwarte Heidelberg (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-167

NIRPS Front-End - Design & performance

Author(s): Nicolas Blind, Observatoire de Genève (Switzerland); Uriel Conod, Observatoire de Genève (Switzerland), The Univ. of British Columbia (Canada); Allan de Meideros Martins, Univ. Federal do Rio Grande do Norte (Brazil); François Wildi, Ludovic Genolet, Michael Sordet, Observatoire de Genève (Switzerland); Alexandre Cabral, Univ. de Lisboa (Portugal); Francois Bouchy, Observatoire de Genève (Switzerland); Denis Brousseau, Universite de Laval (Canada); Gerard Zins, European Southern Observatory (Germany); Bachar Wehbe, Univ. de Lisboa (Portugal); Johann Kolb, European Southern Observatory (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-168

Modal noise mitigation in few-mode fibers

Author(s): Nicolas Blind, Observatoire de Genève (Switzerland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-169

Spectrograph stabilization of 500x using a single-delay interferometer

Author(s): David J. Erskine, Lawrence Livermore National Lab. (United States); Edward H. Wishnow, Space Sciences Lab., Univ. of California, Berkeley (United States); Eric V. Linder, Lawrence Berkeley National Lab. (United States); Martin Sirk, Space Sciences Lab., Univ. of California, Berkeley (United States); Richard Ozer, Eastbay Astronomical Society (United States); Dayne E. Fratanduono, Lawrence Livermore National Lab. (United States); Jerry Edelstein, Lawrence Berkeley National Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-170

Improving SPIRou sensitivity by reducing thermal background

Author(s): Gregory A. Barrick, Greg Green, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-171

The Large Fiber Array Spectroscopic Telescope: Fiber feed and spectrometer conceptual designs

Author(s): Chad F. Bender, Steward Observatory, The Univ. of Arizona (United States); Roger Angel, Joel Berkson, The Univ. of Arizona (United States); Peter Gray, Steward Observatory, The Univ. of Arizona (United States); Samuel Halverson, Jet Propulsion Lab. (United States); Hyukmo Kang, Daewood Kim, The Univ. of Arizona (United States); Andrew Monson, The Pennsylvania State Univ. (United States); Chang Jin Oh, The Univ. of Arizona (United States); Matthew Rademacher, Steward Observatory, The Univ. of Arizona (United States); Christian Schwab, Macquarie Univ. (Australia); Andrew Young, The Univ. of Arizona (United States); Dennis Zaritsky, Steward Observatory, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-172

A fiber injection unit for the Keck Planet Finder: opto-mechanical design

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-173

SPIP @TBL: Integration and tests of the near-infrared spectrograph unit and synergy with SPIRou

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-174

NIRPS – The Near Infra-Red Planet Searcher: design, integration and tests of the Atmospheric Dispersion Corrector

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-175

The NEID Port Adapter: on-sky performance

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-176

The NEID port adapter at WIYN: on-sky fast guiding performance

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-177

MARVEL: optical design for the spectrograph

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-178

SPIP at TBL, the faithfull companion of the SPIRou Spectropolarimeter at CFHT : Integration, Tests and Performances

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-179

CANCELED: Upgrade of the Veloce high resolution spectrograph at the Anglo-Australian Telescope

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-180

Gemini high-resolution optical spectrograph (GHOST) instrument shipping reflections

Author(s): Scott MacDonald, André Anthony, Greg Burley, Adam Densmore, Jennifer Dunn, Jordan Lothrop, John Pazder, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-181

RISTRETTO: Seven Spaxel Single Mode Spectrograph Design

Author(s): Bruno Chazelas, Christophe Lovis, Ludovic Genolet, Ian Hughes, Michael Sordet, Observatoire de Genève (Switzerland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-182

A near-infrared Fabry-Pérot for Fourier-transform spectrograph calibration

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-183

Development of a laser frequency comb and precision radial velocity pipeline for SALT's HRS

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-184

The absorbing cells for the NIR Spectrograph GIANO-B@TNG.

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-185

The iLocater cryostat and thermal control system: enabling extremely precise radial velocity measurements for diffraction-limited spectrographs

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-186

On-sky performance and lessons learned from the phase I KPIC fiber injection unit

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-187

Operation mode and characterization of NEID's Exposure meter

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-188

Echelle simulation for the High-resolution Infrared Spectrograph for Exoplanet Characterization (HISPEC) at Keck

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-189

NIRPS fiber-link design, performances and modal noise mitigation performances tested on sky

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-190

First scientific results of the comb-calibrated spectrograph FOCES

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-191

Mechanical design and integration of the Gemini High-Resolution Optical Spectrograph (GHOST) lens barrels assemblies.

Author(s): Vladimir Reshetov, John Pazder, Andre Anthony, Alan McConnachie, Greg Burley, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-192

NIRPS back-end: design and performance

Author(s): Simon Thibault, Denis Brousseau, Anne-Sophie Poulin-Girard, Univ. Laval (Canada); Francois Wildi, Observatoire de Genève (Switzerland); René Doyon, Univ. de Montréal (Canada); Vladimir Reshetov, NRC-Herzberg Astronomy & Astrophysics (Canada); Lison Malo, Frédérique Baron, Philippe Vallée, Étienne Artigau, Univ. de Montréal (Canada); François Bouchy, Danuta Sosnowska, Observatoire de Genève (Switzerland); Hugues Auger, Univ. Laval (Canada); Jonathan St-Antoine, Univ. de Montréal (Canada); Alex Segovia, Observatoire de Genève (Switzerland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-195

Measuring the near-IR airglow continuum with stray light reduced spectrograph

Author(s): Joonas Viuho, Michael I. Andersen, Johan U. Fynbo, Niels Bohr Institute (Denmark)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-196

Slit sampling vs Spectral Resolution: A case study for high dispersion transmission spectroscopy

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-197

Tunable fibre Bragg grating arrays for spectral cross-correlation

Author(s): Polina Zavyalova, Suresh Sivanandam, Peter R. Herman, Ehsan Alimohammadian, Abdullah Rahnama, Univ. of Toronto (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-198

HighSpec: a novel high resolution narrow band-pass spectrograph

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-200

Pupil slicer at high throughput for the EXtreme Precision Spectrograph (EXPRES) at the Lowell Discovery Telescope

Author(s): Erik Beckert, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); Debra Fischer, Yale Univ. (United States); Oliver DeVries, Quantum Optics Jena GmbH (Germany); Ryan T. Blackman, KLA Tencor (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-201

Designs of Mt. Abu faint object spectrograph and camera: Echelle Polarimeter (M-FOSC-EP) and its prototype: spectro-polarimeters for PRL 1.2m and 2.5m Mt. Abu telescopes, India

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-326

Achieving 1 m/s instrument radial velocity stability with the Palomar Radial Velocity Instrument

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-327

The Gemini-south High-resolution Optical SpecTrograph (GHOST) data reduction system

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-328

Design and implementation of a fiber-fed Fourier transform spectrograph for astronomical applications

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P5: POSTERS - MAJOR OBSERVATORIES

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-202

Gemini infrared multi-object spectrograph: preliminary design of the calibration system

Author(s): Joschua Hellemeier, Eleanor Uyyek, Paul Hickson, The Univ. of British Columbia (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-204

SITELLE, CFHT's visible-band, wide-field imaging Fourier transform spectrometer: from the Milky way to clusters of galaxies

Author(s): Laurent Drissen, Univ. Laval (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-205

Revamping of VLT-FORS control electronics with PLC systems: the final design.

Author(s): Veronica Baldini, Antonio Sulich, Igor Coretti, Giorgio Calderone, Roberto Cirami, Paolo Di Marcantonio, Sara Bertocco, INAF - Osservatorio Astronomico di Trieste (Italy); Frédéric Dérie, Antonio Ramon Manescau Hernandez, Diego Del Valle, Pablo Gutierrez, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-206

A UV Double Pass Spectrograph for Monitoring Stellar Activity for the Keck Planet Finder

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-207

Laboratory test of the VIS detector system of SOXS for the ESO-NTT telescope

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-208

Development status of TAO/MIMIZUKU: Performance test of the near-infrared channel

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-209

GIRMOS image slicer: preliminary optical design

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-210

MAVIS Calibration Unit: Preliminary design

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-211

The on-sky performance of the IFU spectrograph ERIS/SPIFFIER during its commissioning phase

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-212

The Optical Design of the G-CLEF Front End for the Magellan Telescopes

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-213

Concept for calibration of OSIRIS with a Fabry-Pérot etalon

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-214

IFU-M: A suite of multi-mode Integral Field Units for M2FS

Author(s): Mario Mateo, Univ. of Michigan (United States); John I. Bailey, Univ. of California, Santa Barbara (United States); Jeffrey D. Crane, Carnegie Observatories (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-215

First on-sky results with the infrared imager ERIS/NIX at VLT

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-216

Ground-based support of the planned WSO-UV mission

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-217

The BlueMUSE calibration Unit: phase-A studies

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-218

The SDSS-V Local Volume Mapper objective optics

Author(s): Alicia E. Lanz, Jeffrey D. Crane, Carnegie Institution for Science (United States); Thomas M. Herbst, Peter Bizenberger, Max-Planck-Institut für Astronomie (Germany); Guillermo A. Blanc, Carnegie Institution for Science (United States), Univ. de Chile (Chile); Niv Drory, Cynthia S. Froning, The Univ. of Texas at Austin (United States); Wolfgang Gaessler, Max-Planck-Institut für Astronomie (Germany); Anthony Hebert, Charlie Hull, Nicholas P. Konidaris, Solange Ramírez, Stefanie Wachter, Carnegie Institution for Science (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-219

The guiding system for the Sloan Digital Sky Survey multi-object fibre positioner

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-220

Slit mask integral field units for the Southern African Large Telescope

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-222

The CRIRES+ calibration system and infrared Fabry-Perot Etalon

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-223

CRIRES+: Characterisation and preparation during the pandemic

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-224

Liger at Keck Observatory: Imager Detector and IFS Pick-off Mirror Assembly

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-225

Throughput Modeling of the Planet as Exoplanet Analog Spectrograph (PEAS)

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-226

Characterizing the Line Spread Function in Integral field Spectrographs from ground-based telescopes

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-227

Hydra21: modernizing a robotic multi-object spectrograph in partnership with an industrial automation firm

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-228

On-sky performance of the SDSS-V wide field corrector

Author(s): Aidan C. Gray, Robert H. Barkhouser, Stephen A. Smee, Randy P. Hammond, Al Harding, Johns Hopkins Univ. (United States); Solange Ramírez, Stefanie Wachter, Juna Kollmeier, Carnegie Observatories (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-229

Henrietta: a low-resolution, high-precision exoatmosphere spectrograph for Las Campanas Observatory

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-230

Liger at Keck Observatory: Final Design of Imager Cryogenic Dewar and Spectrograph Re-Imaging Optics

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-231

: MAAT: an Integral Field Unit on GTC that does spectrograph aberration corrections

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-232

The Development and Performance of the CFHT Astrometric Camera

Author(s): Windell Egami, Marc Baril, Tom Vermeulen, Tom Benedict, Greg Green, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-233

Imaging and SPectrograph (IMSP) for the 4m telescope: the progress of final integration testing at laboratory

Author(s): Hangxin Ji, Yi Chen, Lei Wang, Songxin Dai, Huatao Zhang, Yongtian Zhu, Zhongwen Hu, Nanjing Institute of Astronomical Optics & Technology (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-234

The SCORPIO Instrument: status update and path forward

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-235

ORCAS - Keck Instrument Development - ORKID

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-236

Study of the kinematics of HII regions in NGC 4449 with SITELLE data

Author(s): Justine Giroux, Carmelle Robert, Gabriel Savard, Sébastien Vicens, Damien Beaulieu, Étienne Massé, Laurent Drissen, Univ. Laval (Canada); Laurie Rousseau-Nepton, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-237

The Crescent Nebula and its hundreds of line-of sight stars as seen with the imaging FTS SITELLE

Author(s): Marianne Ruest, Laurent Drissen, Univ. Laval (Canada); Nicole St-Louis, Univ. de Montréal (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-238

NGC 925 with SITELLE: HII region analysis

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-239

Discovery of planetary nebulae in NGC 4214 using SITELLE

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-240

NGC7479 with SITELLE: HII regions candidates via a new detection and segmentation code

Author(s): Gabriel Savard, Carmelle Robert, Sébastien Vicens, Étienne Massé, Justine Giroux, Damien Beaulieu, Univ. Laval (Canada); Laurie Rousseau-Nepton, Canada-France-Hawaii Telescope Corp. (United States); Rene Pierre Martin, Univ. of Hawai'i at Hilo (United States); Laurent Drissen, Thomas Martin, Univ. Laval (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-241

CANCELED: Kinematics of supernova remnants in two SIGNALS galaxies - NGC 6822 and M33

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-242

Error analysis of a Stokes imaging polarimeter based on liquid crystal variable retarders.

Author(s): Ivan Montes Gonzalez, Neil Bruce, Univ. Nacional Autónoma de México (Mexico)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-325

VLT MAVIS: optical designs of the reflective IFU and transmissive spectrograph

Author(s): Robert Content, Christian Schwab, Simon Ellis, Anthony Horton, Jessica Zheng, Jacob Pember, Ross Zhelem, Scott Smedley, David Robertson, Australian Astronomical Optics, Macquarie Univ. (Australia); François Rigaut, Australian National University (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P6: POSTERS - MOS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-244

Optimisation of the WEAVE target assignment algorithm

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-245

Calibration at elevation of the WEAVE fibre positioner

Author(s): Sarah Hughes, Gavin Dalton, Univ. of Oxford (United Kingdom); Kevin Dee, Don Carlos Abrams, Isaac Newton Group of Telescopes (Spain); Ian Lewis, Univ. of Oxford (United Kingdom); David Terrett, RAL Space, Science and Technology Facilities Council (United Kingdom); Scott Trager, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); J. Alfonso L. Aguerri, Instituto de Astrofísica de Canarias (Spain); Piercarlo Bonifacio, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris (France); Antonella Vallenari, INAF - Osservatorio Astronomico di Padova (Italy); Esperanza Carrasco, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Georgia Bishop, RAL Space, Science and Technology Facilities Council (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-246

Development of the FOBOS focal plane positioner

Author(s): David Adams, Jon Lawrence, Helen McGregor, Ellie O'Brien, Celestina Lacombe, Nuria Lorente, Michael Goodwin, Rebecca A. Brown, Michael Thomakos, Australian Astronomical Optics, Macquarie Univ. (Australia); Kyle Westfall, Univ. of California Observatories (United States); Nicholas MacDonald, Univ. of California Observatories (United States); Marc Kassis, W. M. Keck Observatory (United States); Tayyaba Zafar, Australian Astronomical Optics (Australia); Renate Kupke, Kevin Bundy, Univ. of California Observatories (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-247

Mix and Match as You Go – Integration/test of the first Beam Switch Module production that splits wavelengths, scrambles beams, and switches fibers for the VIRUS2 instrument

Author(s): Hanshin Lee, Brian L. Vattiat, Gary J. Hill, Niv Drory, Jason Ramsey, John M. Good, The Univ. of Texas at Austin (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-248

Overall performance of AESOP, the 4MOST fibre positioner

Author(s): Jurek Brzeski, Timothy Chin, Australian Astronomical Optics, Macquarie Univ. (Australia); David Adams, Rebecca Brown, Tony Farrell, Peter Gillingham, Ellen Houston, Urs Klauser, Yevgen Kripak, Nirmala Kunwar, Jon Lawrence, Slavko Mali, Helen McGregor, Rolf Muller, Naveen Pai, Ellie O'brien, Will Saunders, Scott Smedley, Lew Waller, Jahanzeb Zahoor, Jessica Zheng, Scott Case, Australian Astronomical Optics (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-249

AESOP, the 4MOST fibre positioner: engineering principles

Author(s): Jurek Brzeski, Timothy Chin, Australian Astronomical Optics, Macquarie Univ. (Australia); David Adams, Rebecca Brown, Tony Farrell, Peter Gillingham, Ellen Houston, Urs Klauser, Yevgen Kripak, Nirmala Kunwar, Jon Lawrence, Slavko Mali, Helen McGregor, Rolf Muller, Naveen Pai, Ellie O'brien, Will Saunders, Scott Smedley, Lew Waller, Jahanzeb Zahoor, Jessica Zheng, Scott Case, Australian Astronomical Optics (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-250

4MOST: MAIT of the high-resolution-spectrograph

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-251

MOONS – multi object spectroscopy for the VLT: integration and tests of the field corrector and the rotating front end

Author(s): Alexandre Cabral, Manuel Abreu, João M. P. Coelho, Pedro Santos, António Oliveira, Inês Leite, José Afonso, Univ. de Lisboa (Portugal); Philip Rees, Raziye Artan, David Lee, Oscar González, Stephen Watson, William Taylor, Stephen Chittick, Ian Bryson, UK Astronomy Technology Ctr. (United Kingdom); Isabelle Guinouard, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris (France); Michele Cirasuolo, European Southern Observatory (Germany); Paolo Spanò, Officina Stellare S.p.A. (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-252

The SDSS-V local volume mapper fiber cable assembly and metrology

Author(s): Tobias Feger, Scott Case, Ross Zhelem, Yevgen Kripak, David Adams, Ellen Houston, Jon Lawrence, Australian Astronomical Optics, Macquarie Univ. (Australia); Thomas M. Herbst, Max-Planck-Institut für Astronomie (Germany); Pavan Bilgi, Nicholas P. Konidaris, Anthony Hebert, Guillermo A. Blanc, Stefanie Wachter, Solange Ramírez, Carnegie Institution for Science (United States); Niv Drory, Cynthia S. Froning, McDonald Observatory, The Univ. of Texas at Austin (United States); Juna Kollmeier, Carnegie Institution for Science (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-253

Prime Focus Spectrograph (PFS) for the Subaru telescope: the Prime Focus Instrument

Author(s): Shiang-Yu Wang, Hsin-Yo Chen, Masahiko Kimura, Pin-Jie Huang, Chi-Hung Yan, Chueh-Yi Chou, Yin-Chang Chang, Shu-Fu Hsu, Jennifer L. Karr, Chih-Yi Wen, Hung-Hsu Ling, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Craig P. Loomis, James E. Gunn, Robert Lupton, Arnaud Le Fur, Hassan Siddiqui, Neven Caplar, Princeton Univ. (United States); Yuki Moritani, Subaru Telescope, NAOJ (United States); Naoyuki Tamura, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Julien Rousselle, Hiroshige Yoshida, Subaru Telescope, NAOJ (United States); Décio Ferreira, Lab. Nacional de Astrofisica (Brazil); Ligia S. de Oliveira, Leandro H. dos Santos, Lab. Nacional de Astrofísica (Brazil); Maximilian Fabricius, Max-Planck-Institut für extraterrestrische Physik (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-254

Number and distribution of fiducial fibers in LAMOST upgrade system

Author(s): Shipeng Duan, Zengxiang Zhou, Jiadong Liang, Zeyu Cai, Mengmeng Li, Mengtao Li, Jiale Zuo, Hongzhuan Hu, Jianping Wang, Zhigang Liu, Jiaru Chu, Wei Ping Zhang, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-255

4MOST low resolution spectrograph alignment

Author(s): Florence Laurent, Didier Boudon, Diane Chapuis, Eric Daguisé, Karen Disseau, Aurélien Jarno, Jens-Kristian Krogager, Jean-Emmanuel Migniau, Matthew Lehnert, Arlette Pecontal, Emmanuel Pécontal, Alban Remillieux, Johan Richard, Ctr. de Recherche Astrophysique de Lyon (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-256

Validating the Local Volume Mapper acquisition and guiding hardware

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-257

The assembly and alignment of the 4MOST Wide Field Corrector

Author(s): Mark H. Cunningham, Peter Doel, David Brooks, Univ. College London (United Kingdom); Joar Brynnel, Steffen Frey, Roelof de Jong, Miklos Gäbler, Michael Schröck, Leibniz-Institut für Astrophysik Potsdam (Germany); Michael Lehmitz, Max-Planck-Institut für Astronomie (Germany); Daniel Sablowski, Leibniz-Institut für Astrophysik Potsdam (Germany); Samuel C. Barden, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-258

Optical performance and results from the alignment and testing of the cameras for the MOONS spectrograph.

Author(s): Martin Fisher, Cavendish Lab., Univ. of Cambridge (United Kingdom); Martin T. Black, UK Astronomy Technology Ctr. (United Kingdom); David L. King, Institute of Astronomy, Univ. of Cambridge (United Kingdom); David Lee, UK Astronomy Technology Ctr. (United Kingdom); Ian R. Parry, Institute of Astronomy, Univ. of Cambridge (United Kingdom); Xiaowei Sun, Cavendish Lab., Univ. of Cambridge (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-259

Bringing the WEAVE spectrograph to the telescope

Author(s): Remko Stuik, Leiden Observatory (Netherlands); Gavin Dalton, RAL Space, STFC Rutherford Appleton Lab. (United Kingdom), Univ. of Oxford (United Kingdom); Georgia Bishop, Ian Tosh, RAL Space, STFC Rutherford Appleton Lab. (United Kingdom); Ian Lewis, Univ. of Oxford (United Kingdom); Scott Trager, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Don Carlos Abrams, Carlos Martin, Sergio Picó, Diego Cano Infantes, Isaac Newton Group of Telescopes (Spain); Stuart Bates, Iain A. Steele, Chris Mottram, Astrophysics Research Institute, Liverpool John Moores Univ. (United Kingdom); Johan Pragt, Jan Kragt, Niels Tromp, Menno de Haan, Menno Schuil, Eddy Elswijk, Ramón Navarro, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); José Miguel Delgado , J. Alfonso L. Aguerri, Instituto de Astrofísica de Canarias (Spain); Piercarlo Bonifacio, Shan Mignot, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris (France); Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy); Antonella Vallenari, Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Esperanza Carrasco, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-260

Fabrication, integration, and alignment of the VIRUS2 instrument

Author(s): Brian L. Vattiat, Gary J. Hill, Jason Ramsey, John M. Good, Hanshin Lee, Niv Drory, The Univ. of Texas at Austin (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-261

Alignment and verification of the LVM K-mirror de-rotator and full end-to-end test of a complete LVM telescope system

Author(s): Markus Kuhlberg, Paula Stepien, Peter Bizenberger, Thomas M. Herbst, Lars Mohr, Maximilian Häberle, Wolfgang Gässler, Christopher Ritz, Florian Briegel, Ralf-Rainer Rohloff, Richard Mathar, Max-Planck-Institut für Astronomie (Germany); Michael Kautz, Ingenieurbüro Michael Kautz (Germany); Hojae Ahn, Kyung Hee Univ. School of Space Research (Korea, Republic of); Nicholas P. Konidaris, Carnegie Observatories (United States); Niv Drory, McDonald Observatory, The Univ. of Texas at Austin (United States); Solange Ramirez, Carnegie Observatories (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-262

Prime Focus Spectrograph (PFS) for the Subaru telescope: 2D modeling of the point spread function

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-263

4MOST: manufacture, assembly and test of the optical fiber system

Author(s): Andreas Kelz, Allar Saviauk, Thomas Jahn, Dennis Plüschke, Lukas Wagner, Leibniz-Institut für Astrophysik Potsdam (Germany); Walter Seifert, Zentrum für Astronomie, Landessternwarte Heidelberg (Germany); Karen Disseau, Ctr. de Recherche Astrophysique de Lyon (France); Olga Bellido-Tirado, Leibniz-Institut für Astrophysik Potsdam (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-264

Subaru Night-Sky Spectrograph (SuNSS) – Fiber cable construction

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-265

4MOST calibration system: design, assembly, and testing

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-267

Spector: integration and performance of the multi-object spectrograph for the Anglo-Australian Telescope

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-268

DESI Fiber System

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-269

The performance of the DESI fiberview camera

Author(s): David Rabinowitz, Charles Baltay, Yale Univ. (United States); Klaus Honscheid, The Ohio State Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-270

Upgrading the DESI Focal Plane after the first year of operations

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-271

SDSS-V fiber optic throughput performance evaluation in multi-fiber termination connectors

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-272

4MOST low resolution spectrograph performances

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-273

MOONS – multi object spectroscopy for the VLT: spectrograph performance

Author(s): Martin Black, Raziye Artan, Ciaran Breen, Kenny Campbell, Stephen Chittick, Lee Chapman, Mark Cliffe, George Davidson, Oscar Gonzalez, Ciaran Lawrence, David Lee, Jamie Moffat, Norman O'Malley, Phil Rees, Robyn Sharman, Jonathan Strachan, Graham Tait, William Taylor, Chris Waring, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-274

The Mayall Tracking and Guiding Performance with the DESI Instrument

Author(s): Aaron Meisner, Behzad Abareshi, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Santiago Serrano, Institut d'Estudis Espacials de Catalunya, Consejo Superior de Investigaciones Científicas (Spain); Klaus Honscheid, The Ohio State Univ. (United States); David Rabinowitz, Yale Univ. (United States); Constance Rockosi, Univ. of California, Santa Cruz (United States); Paul Martini, The Ohio State Univ. (United States); David Sprayberry, Arjun Dey, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-275

VIRUS2: IFU and mechanical interfaces to the 2.7 m Harlan J Smith telescope

Author(s): John M. Good, Gary J. Hill, Hanshin Lee, Brian L. Vattiat, Jason Ramsey, Briana L. Indahl, Niv Drory, Coyne Gibson, The Univ. of Texas at Austin (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-276

Design and fabrication of a silicon based micro fiber holder for DOTIFS Integral field unit and associated IFU tests

Author(s): Annu Jacob, Anamparambu N. Ramaprakash, Chaitanya Rajarshi, Hillol Das, Pravin Khodade, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Sabyasachi Chattopadhyay, South African Astronomical Observatory (South Africa); Amitesh Omar, Aryabhatta Research Institute of Observational Sciences (India)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-277

Overview and operation of the DESI focal plane

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-278

Results from Laboratory Integration and Testing of MIRADAS

Author(s): Sarik Jeram, Univ. of Florida (United States); Stephen Eikenberry, Univ. of Central Florida (United States), Univ. of Florida (United States); Michael Estrada, Univ. of Florida (United States); Christina Moraitis, Univ. of Central Florida (United States); Steven N. Raines, Sidney Schofield, John G. Bennett, Univ. of Florida (United States); Richard Stelter, Univ. of California, Santa Cruz (United States); Christian Carrera, Kevin Castano, Oketa Basha, Caridad Coll, Ravina Patel, Jillian Richardson, Craig Warner, Frank Varosi, Univ. of Florida (United States); José María Gomez, Univ. de Barcelona (Spain); Francisco Garzon, Pablo Lopez, Instituto de Astrofísica de Canarias (Spain); Anthony Russo, Gran Telescopio de Canarias, S.A. (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-279

Design and laboratory testing of the macroslicer optical system for MIRADAS

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-280

Maunakea Spectroscopic Explorer Low Moderate Resolution Spectrograph Delta Conceptual Design

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-282

External upgrades to improve the RV precision of the APOGEE Spectrographs

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-283

Fiber System Design for the Keck-FOBOS Spectroscopic Facility

Author(s): Claire Poppett, Space Sciences Lab., Univ. of California, Berkeley (United States); Nicholas MacDonald, Kyle Westfall, Kevin Bundy, Univ. of California Observatories (United States); Edward H. Wishnow, Space Sciences Lab., Univ. of California, Berkeley (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-285

SDSS-V focal plane system high-precision metrology

Author(s): Michael Engelman, Thomas P. O'Brien, Richard Pogge, Mark Derwent, The Ohio State Univ. (United States); Conor Sayres, Univ. of Washington (United States); Daniel Pappalardo, Christopher Brandon, Jonathan Shover, The Ohio State Univ. (United States); Solange Ramírez, Stefanie Wachter, Carnegie Institution for Science (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-286

SDSS-V robotic focal plane system: overview of coordinate systems and transforms

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-287

Performance of the near-infrared camera for the Subaru Prime Focus Spectrograph

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-288

Design and automated algorithm for a fishermen-around-the-pond type fiber positioner system for medium multiplexing

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-289

EMIR upgrade: installing a new Hawaii 2RG detector

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-291

Hector spectrograph (spector): mechanical engineering overview

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-292

Modeling the performance of the Hadamard transform spectral imaging technique with SAMOS: a ground-based MEMS spectrograph

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P7: POSTERS - TIME DOMAIN / MULTI-MESSENGER INSTRUMENTATION

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-293

NINJA : an LTAO assisted optical and near-infrared spectrograph of Subaru Telescope

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-294

SOXS NIR arm opto-mechanical integration and alignment.

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-295

Galway Liverpool Imaging Polarimeter – GLIP: design and prototype status

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-296

SiFAP4XP : time domain polarimetry with silicon photometers at the TNG

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-297

SCALA update: deci-percent laboratory spectro-radiometric NIST calibration transfer to new flux reference sensors

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-298

The design of the DDRAGO wide-field imager for the COLIBRÍ telescope

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-299

Integration and lab performance of the UV-VIS arm of SOXS

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-300

SPECTRE: a 0.4-4.2-micron IFU Spectrograph for the NASA Infrared Telescope Facility

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-301

Progress on the development of FAST: the fully automatic spectrograph for the robotic telescope PROMPT-7.

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-302

Progress on the SOXS NIR spectrograph AIT

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-303

The internal alignment and validation of a powered Atmospheric Dispersion Corrector for SOXS

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-304

SOXS mechanical integration and verification in Italy

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-305

From assembly to the complete integration and verification of the SOXS common path

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-306

The integration and alignment phase for the Acquisition and Guiding System of SOXS

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-307

SOXS AIT: a paradigm for system engineering of a medium class telescope instrument.

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-308

ArgusSpec: rapid, autonomous spectroscopic follow-up of bright transients

Author(s): Nathan W. Galliher, Nicholas M. Law, Henry T. Corbett, Amy L. Glazier, Ramses Gonzalez, The Univ. of North Carolina at Chapel Hill (United States); Ward S. Howard, Univ. of Colorado Boulder (United States); Lawrence Machia, Alan Vasquez Soto, The Univ. of North Carolina at Chapel Hill (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-309

The Exoplanet Transmission Spectroscopy Imager (ETSI), a new instrument for rapid characterization of exoplanet atmospheres

Author(s): Luke Schmidt, Mary Anne Limbach, Erika Cook, Darren L. DePoy, Ryan J. Oelkers, Jennifer Marshall, Landon Holcomb, Willians Pena, Enrique Gonzalez Vega, Texas A&M Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-310

RIMAS: grism echelle mode cross-dispersed spectra analysis

Author(s): Joseph M. Durbak, Univ. of Maryland, College Park (United States); Alexander Kutyrev, Univ. of Maryland, College Park (United States), NASA Goddard Space Flight Ctr. (United States); Nathan Miller, Johns Hopkins Univ. (United States), NASA Goddard Space Flight Ctr. (United States); Gregory Mosby, NASA Goddard Space Flight Ctr. (United States); Sylvain Veilleux, Univ. of Maryland, College Park (United States); Paul Kuzmenko, Lawrence Livermore National Lab. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-311

Structural design techniques applied in DDRAGO instrument for the COLIBRI telescope

Author(s): Alejandro Farah, Andrés Heron-Romero, Univ. Nacional Autónoma de México (Mexico); Stéphane Basa, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ., CNRS (France), Ctr. National d'Études Spatiales (France); Jérémie Boy, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Salvador Cuevas, Univ. Nacional Autónoma de México (Mexico); François Dolon, Observatoire de Haute-Provence, Aix-Marseille Univ., CNRS (France); Jorge Fuentes-Fernández, Univ. Nacional Autónoma de México (Mexico); Johan Floriot, Aix-Marseille Univ. (France); Rosalía Langarica, Univ. Nacional Autónoma de México (Mexico); Arthur Langlois, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); William H. Lee, Jaime Ruíz-Díaz-Soto, Silvio Tinoco, Alan M. Watson, Univ. Nacional Autónoma de México (Mexico)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-312

The control system of the DDRAGO imager of COLIBRÍ, a ground follow-up telescope of the SVOM mission

Author(s): Fernando Angeles, Univ. Nacional Autónoma de México (Mexico); Stéphane Basa, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ., CNRS (France), Ctr. National d'Études Spatiales (France); Jérémie Boy, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Salvador Cuevas, Univ. Nacional Autónoma de México (Mexico); François Dolon, Observatoire de Haute-Provence, Aix-Marseille Univ., CNRS (France); Alejandro Farah, Univ. Nacional Autónoma de México (Mexico); Johan Floriot, Aix-Marseille Univ. (France); Jorge Fuentes-Fernández, Rosalía Langarica, William H. Lee, Jaime Ruíz-Díaz-Soto, Silvio Tinoco, Univ. Nacional Autónoma de México (Mexico); Hervé Valentin, Institut de Recherche en Astrophysique et Planétologie, CNRS (France); Alan M. Watson, Univ. Nacional Autónoma de México (Mexico)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-313

Performance of the NUTTelA-TAO instrument system after two years of operation

Author(s): Bruce Grossan, Space Sciences Lab., Univ. of California, Berkeley (United States); Zhanat Maksut, Toktarkhan Komesh, Nazarbayev Univ. (Kazakhstan); Maxim Krugov, Fesenkov Astrophysical Institute (Kazakhstan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-314

Panoramic SETI: On-sky results and system characterization

Author(s): Jérôme Maire, James Wiley, Shelley A. Wright, Univ. of California, San Diego (United States); David P. Anderson, Space Sciences Lab., Univ. of California, Berkeley (United States); Franklin P. Antonio, Qualcomm Inc. (United States); Aaron Brown, Maren Cosens, Univ. of California, San Diego (United States); Paul Horowitz, Harvard Univ. (United States); Andrew W. Howard, Caltech (United States); Ryan Lee, Wei Liu, Univ. of California, Berkeley (United States); Rick Raffanti, Techne Instruments, Inc. (United States); Remington P. S. Stone, Univ. of California Observatories (United States); Dan Werthimer, Univ. of California, Berkeley (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION P8: POSTERS - WIDE-FIELD IMAGERS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-101

MOSAIC on the ELT: development of a camera prototype for the near-infrared spectrograph unit

Author(s): Laurent Martin, Tony Pamplona, Lab. d'Astrophysique de Marseille (France); Florian Ramage, Winlight System S.A. (France), Lab. d'Astrophysique de Marseille (France); Johan Floriot, Lab. d'Astrophysique de Marseille (France); Bernard Delabre, European Southern Observatory (Germany); Vincent Lapère, Winlight System S.A. (France); Zalpha Challita, Michael Carle, Lab. d'Astrophysique de Marseille (France); Philippe Maquet, Bertin Technologies (France); Philippe Godefroy, Winlight System S.A. (France); Kacem El Hadi, Kjetil Dohlen, Éric Prieto, Jean-Gabriel Cuby, Lab. d'Astrophysique de Marseille (France); Mathieu Puech, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris à Meudon (France); Lidia Tasca, Lab. d'Astrophysique de Marseille (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-315

Commissioning 'Opihi: a wide-angle finderscope for the NASA Infrared Telescope Facility (IRTF)

Author(s): Ellen Lee, Kenji Emerson, Institute for Astronomy, Univ. of Hawai'i (United States); Michael S. Connelley, Institute for Astronomy, Univ. of Hawai'i at Hilo (United States); Theodora Bowe, Schelte J. Bus, Charles Z. Lockhart, Institute for Astronomy, Univ. of Hawai'i (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-316

Integration/test of dual unit Arrayed Wide-Angle Camera System and its evaluation in the context of Extremely Large Telescopes

Author(s): Hanshin Lee, Brian L. Vattiat, The Univ. of Texas at Austin (United States); Uma Subash, Menelaos K. Poutous, The Univ. of North Carolina at Charlotte (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-317

Development of an infrared all-sky camera system for cloud monitoring

Author(s): Risa Tsutsuki, Shigeyuki Sako, Hidenori Takahashi, Sohei Kondo, Satoshi Takita, Ryou Ohsawa, Jin Beniyama, Takashi Miyata, Takafumi Kamizuka, The Univ. of Tokyo (Japan); Ichiro Takahashi, Tohoku Univ. (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-318

Low-resolution spectroscopy mode for CASTLE telescope with a composite grism

Author(s): Eduard R. Muslimov, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Simona Lombardo, Aix-Marseille Univ., CNRS, Ctr. National d'Études Spatiales, Lab. d'Astrophysique de Marseille (France); Emmanuel Hugot, Aix Marseille Univ., CNRS, Ctr. National d'Études Spatiales, Lab. d'Astrophysique de Marseille (France); Damir Akhmetov, Danila Kharitonov, Kazan National Research Technical Univ. named after A. N. Tupolev - KAI (Russian Federation); Jean-François Sauvage, ONERA (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-319

The Dutch Rubin Enhanced Atmospheric Monitor - DREAM

Author(s): Remko Stuik, Leiden Observatory (Netherlands); Sjoerd Timmer, Radboud Univ. Nijmegen (Netherlands); Henk Hoekstra, Leiden Observatory (Netherlands); Patrick Ingraham, Wouter van Reeven, Tiago Ribeiro, Vera C. Rubin Observatory (United States); Paul Vreeswijk, Steven Bloemen, Radboud Univ. Nijmegen (Netherlands); Koen Kuijken, Leiden Univ. (Netherlands)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-320

The WALOPNorth Instrument: Challenges and Design

Author(s): John Andrew Kypriotakis, Univ. of Crete (Greece), Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Siddharth Maharana, Nitin Mamgain, Abhay Kohok, Chaitanya Rajarshi, Anamparambu N. Ramaprakash, Kalpesh Chillal, Vilas Mestri, Pravin Khodade, Pravin Chordia, Bhushan Joshi, Ramya Manjunath Anche, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Konstantinos Tassis, Univ. of Crete (Greece), Institute of Astrophysics, Inter-Univ. Ctr. for Astronomy and Astrophysics (Greece); Dmitry Blinov, Institute of Astrophysics, Univ. of Crete (Greece); Anthony C. S. Readhead, Timothy J. Pearson, Georgia V. Panopoulou, Caltech (United States); Stephen B. Potter, South African Astronomical Observatory (South Africa)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-321

Measured spectral performance of the complete filter set for the Rubin Observatories gigapixel camera

Author(s): Robert W. Sprague, Michael Merrill, Patrick Flaherty, Michael Tatarek, Materion Precision Coatings (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-322

CANCELED: The optical design of the wide field drift scan camera for the DAO 1.8m telescope

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-323

Robotic operation of the P250 process chanel into the Observatorio Astrofísico de Javalambre (OAJ)

Author(s): Sergio Rueda-Teruel, Axel Yanes-Díaz, Antonio Marín Franch, Andrés Javier Cenarro Lagunas, Guillermo López Alegre, Rafael Bello, Míriam Royo-Navarro, Sergio Chueca, César Iñiguez, Héctor Vázquez Ramió, Jesús Varela, Ctr. de Estudios de Física del Cosmos de Aragón (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12184-324

Restoration of images with a spatially varying PSF of the T80-S telescope optical model using neural networks

Author(s): Rafael Bernardi, Leibniz-Institut für Astrophysik Potsdam (Germany), Pontificia Univ. Católica de Chile (Chile); Amokrane Berdja, Andes Scientific Instruments (Chile); Christian Dani Guzmán, Sky-Walkers SpA (Chile); Miguel Torres, Pontificia Univ. Católica de Chile (Chile); Martin Roth, Leibniz-Institut für Astrophysik Potsdam (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12184-264
Subaru Night-Sky Spectrograph (SuNSS): fiber cable construction

Contact author(s): de Oliveira Antonio Cesar, Lab. Nacional de Astrofísica, Brazil

Poster

12184-266
Prime focus spectrograph (PFS) for the Subaru Telescope: fiber optical cable and connector system (FOCCoS) – Integration

Contact author(s): de Oliveira Antonio Cesar, Lab. Nacional de Astrofísica, Brazil

Poster

12184-276
Design and fabrication of a silicon based micro fiber holder for DOTIFS Integral field unit and associated IFU tests

Contact author(s): Jacob Annu, Inter-Univ. Ctr. for Astronomy and Astrophysics, India

Poster

12184-290
Mauna Kea Spectrographic Explorer (MSE): a new optical design for the multi-object high-resolution spectrograph

Contact author(s): Zhang Kai, Nanjing Institute of Astronomical Optics & Technology, China

Poster

12184-31
The EXoplanet Climate Infrared TElescope (EXCITE)

Contact author(s): Nagler Peter C., NASA Goddard Space Flight Ctr., United States

Oral

12184-44
A high resolution multi-object spectrograph for the VLT: pre-concept design

Contact author(s): Brucalassi Anna, INAF - Osservatorio Astrofisico di Arcetri, Italy

Oral

CONFERENCE 12185

Adaptive Optics Systems VIII

17 - 22 July 2022 | Room 518 a

Conference Chairs: **Laura Schreiber,** INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); **Dirk Schmidt,** National Solar Observatory (United States); **Elise Vernet,** European Southern Observatory (Germany)

Program Committee: **Clémentine Béchet,** Pontificia Univ. Católica de Chile (Chile); **Thomas Berkefeld,** Leibniz-Institut für Sonnenphysik (KIS) (Germany); **Angela Cortes,** European Southern Observatory (Germany); **Anna Ciurlo,** Univ. of California, Los Angeles (United States); **Jennifer S. Dunn,** NRC - Herzberg Astronomy & Astrophysics (Canada); **Olivier Guyon,** The Univ. of Arizona (United States); **Kathryn J. Jackson,** NRC-Herzberg Astronomy & Astrophysics (Canada); **Miska Le Louarn,** European Southern Observatory (Germany); **Noelia Martinez-Rey,** The Australian National Univ. (Australia); **Dimitri Mawet,** California Institute of Technology (United States); **Tim J. Morris,** Durham Univ. (United Kingdom); **Mamadou N'Diaye,** Observatoire de la Côte d'Azur (France); **Benoit Neichel,** Lab. d'Astrophysique de Marseille (France); **Yoshito H. Ono,** Subaru Telescope, NAOJ (United States); **James Osborn,** Durham Univ. (United Kingdom); **Fernando Quiros-Pacheco,** GMTO Corp. (United States); **Sam Ragland,** W. M. Keck Observatory (United States); **Gaetano Sivo,** Gemini Observatory (Chile); **Valentina Viotto,** INAF - Osservatorio Astronomico di Padova (Italy)

Conference Co-Sponsors

WELCOME ADDRESS

17 July 2022 • 09:10 - 09:15 EDT

Welcome remarks by the Conference Chairs.

SESSION 1: ASTRONOMY WITH AO I

17 July 2022 • 09:15 - 10:00 EDT | Room 518 a

Session Chair: Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

12185-1

Science results from MUSE-NFM (LTAO) (Invited Paper)

Author(s): Elena Valenti, European Southern Observatory (Germany)

17 July 2022 • 09:15 - 09:45 EDT | Room 518 a

12185-2

A Technology and Science Gap List for Habitable-Zone Exoplanet Imaging with Ground-Based Extremely Large Telescopes

Author(s): Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States); Philip M. Hinz, Univ. of California Observatories (United States); Andy Skemer, Univ. of California, Santa Cruz (United States); Peter Wizinowich, W. M. Keck Observatory (United States); Nemanja Jovanovic, Caltech (United States); Benjamin A. Mazin, John I. Bailey, Univ. of California, Santa Barbara (United States); Richard A. Frazin, Univ. of Michigan (United States); Steph Sallum, Univ. of California, Irvine (United States); Jared R. Males, The Univ. of Arizona (United States); Motohide Tamura, The Univ. of Tokyo (Japan), AstroBiology Ctr., NINS (Japan)

17 July 2022 • 09:45 - 10:00 EDT | Room 518 a

Coffee Break 10:00 - 10:30

SESSION 2: ASTRONOMY WITH AO II

17 July 2022 • 10:30 - 11:15 EDT | Room 518 a

Session Chair: Gaetano Sivo, Gemini Observatory (Chile)

12185-3

ERIS first light results (Invited Paper)

Author(s): Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany); Simone Esposito, INAF (Italy); Helmut Feuchtgruber, Max-Planck-Institut für extraterrestrische Physik (Germany); Adrian M. Glauser, ETH Zurich (Switzerland); Andreas Glindemann, European Southern Observatory (Germany); Matthew A. Kenworthy, Leiden Observatory (Netherlands); Eckhard Sturm, Max-Planck-Institut für extraterrestrische Physik (Germany); William Taylor, UK Astronomy Technology Ctr. (United Kingdom)

17 July 2022 • 10:30 - 11:00 EDT | Room 518 a

12185-4

Exoplanet Imaging Data Challenge II: benchmarking the various image processing methods for circumstellar disks and exoplanets detection

Author(s): Faustine Cantalloube, Lab. d'Astrophysique de Marseille (France); Olivier Absil, Liège Univ. (Belgium); Johan Mazoyer, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Carlos A. Gomez-Gonzalez, Barcelona Supercomputing Ctr. - Ctr. Nacional de Supercomputación (Spain)

17 July 2022 • 11:00 - 11:15 EDT | Room 518 a

SESSION 3: PROJECT STATUS (ON-SKY)

17 July 2022 • 11:30 - 12:15 EDT | Room 518 a

Session Chair: Dirk Schmidt, National Solar Observatory (United States)

12185-6

Closing the loop as an inverse problem: the real-time control of THEMIS adaptive optics (Invited Paper)

Author(s): Éric M. Thiébaut, Michel Tallon, Isabelle Tallon-Bosc, Univ. de Lyon (France), Ecole Normale Supérieure de Lyon (France), CNRS (France); Bernard Gelly, THEMIS S.L. (Spain), CNRS (France); Richard Douet, Themis S.L. (Spain), CNRS (France); Maud Langlois, Gil Moretto, Univ. de Lyon (France), Ecole Normale Supérieure de Lyon (France), CNRS (France)

17 July 2022 • 11:30 - 11:45 EDT | Room 518 a

12185-7

The ERIS Adaptive Optics System: first on-sky results of the ongoing commissioning at the VLT-UT4

Author(s): Armando Riccardi, Alfio Puglisi, Paolo Grani, Runa Briguglio, Simone Esposito, Guido Agapito, Valdemaro Biliotti, Marco Bonaglia, Luca Carbonaro, Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Andrea Baruffolo, Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Gianluca Di Rico, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Helmut Feuchtgruber, Christian Rau, Yigit Dallilar, Kateryna Kravchenko, Max-Planck-Institut für extraterrestrische Physik (Germany); Johann Kolb, Pierre Haguenauer, Christian Soenke, David Barr, Markus Kasper, Javier Reyes, European Southern Observatory (Germany)

17 July 2022 • 11:45 - 12:00 EDT | Room 518 a

12185-8

MagAO-X: current status and plans for Phase II

Author(s): Jared R. Males, Laird Close, Sebastiaan Y. Haffert, Joseph D. Long, The Univ. of Arizona (United States); Lauren Schatz, Air Force Research Lab. (United States); Kyle Van Gorkom, Olivier Guyon, Alexander Hedglen, Maggie Y. Kautz, Logan Pearce, Jacob Trzaska, Jennifer Lumbres, Alex T. Rodack, Jay Kueny, Warren B. Foster, The Univ. of Arizona (United States)

17 July 2022 • 12:00 - 12:15 EDT | Room 518 a

Lunch Break 12:15 - 14:00

SESSION 4: NEW IDEAS

17 July 2022 • 14:00 - 15:00 EDT | Room 518 a

Session Chair: Timothy J. Morris, Durham Univ. (United Kingdom)

12185-9

ORCAS - a laser guide star on a spacecraft (Invited Paper)

Author(s): Eliad Peretz, John C. Mather, NASA Goddard Space Flight Ctr. (United States); Thomas R. Rimmele, National Solar Observatory (United States); Doug Rabin, NASA Goddard Space Flight Ctr. (United States); Jeff Kuhn, Institute for Astronomy, Univ. of Hawai'i (United States)

17 July 2022 • 14:00 - 14:30 EDT | Room 518 a

12185-10

High contrast and high resolution sensing and correction of atmospheric turbulence without WFSs and DMs using a digital signal modulated satellite beacon and integrated photonics devices

Author(s): Glen Herriot, Brent Carlson, NRC-Herzberg Astronomy & Astrophysics (Canada); Ross Cheriton, Siegfried Janz, NRC-Advanced Electronics and Photonics (Canada); Thushara Gunaratne, Jean-Pierre Veran, NRC-Herzberg Astronomy & Astrophysics (Canada)

17 July 2022 • 14:30 - 14:45 EDT | Room 518 a

12185-11

Absolute instruments as Laser Guide Star Adaptive Optics relays

Author(s): Andrew P. Rakich, Mersenne Optical Consulting (New Zealand)

17 July 2022 • 14:45 - 15:00 EDT | Room 518 a

Coffee Break 15:00 - 15:30

SESSION 5: POSTPROCESSING AO DATA I

17 July 2022 • 15:30 - 16:00 EDT | Room 518 a

Session Chair: Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

12185-12

LBT SOUL data as a science test bench for MICADO PSF-R tool

Author(s): Matteo Simioni, INAF - Osservatorio Astronomico di Padova (Italy)

17 July 2022 • 15:30 - 15:45 EDT | Room 518 a

12185-13

High Contrast Imaging at the Photon Noise Limit with WFS-based PSF Calibration

Author(s): Olivier Guyon, Subaru Telescope, NAOJ (United States), The Univ. of Arizona (United States); Kyohoon Ahn, Thayne Currie, Vincent Deo, Subaru Telescope, NAOJ (United States); Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Julien Lozi, Subaru Telescope, NAOJ (United States); Jared R. Males, The Univ. of Arizona (United States); Marc-Antoine Martinod, Barnaby R. M. Norris, Peter G. Tuthill, University of Sydney (Australia); Sebastien Vievard, Subaru Telescope, NAOJ (United States)

17 July 2022 • 15:45 - 16:00 EDT | Room 518 a

SESSION 6: POSTPROCESSING AO DATA II

17 July 2022 • 16:00 - 16:45 EDT | Room 518 a

Session Chair: Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

12185-15

Covariance-based analytical algorithm to predict the performance of tomographic AO systems

Author(s): Yoshito Ono, Subaru Telescope, NAOJ (United States); Masayuki Akiyama, Koki Terao, Tohoku Univ. (Japan); Yosuke Minowa, Subaru Telescope, NAOJ (United States); Hajime Ogane, Tohoku Univ. (Japan); Shin Oya, National Astronomical Observatory of Japan (Japan)

17 July 2022 • 16:00 - 16:15 EDT | Room 518 a

12185-16

PSF evaluation using tip images in a modulated pyramid wavefront sensor

Author(s): Jacob Trzaska, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Jared R. Males, Laird M. Close, Steward Observatory, The Univ. of Arizona (United States); Olivier Guyon, Steward Observatory, The Univ. of Arizona (United States), Wyant College of Optical Sciences, The Univ. of Arizona (United States), Subaru Telescope, NAOJ (United States); Sebastiaan Y. Haffert, Steward Observatory, The Univ. of Arizona (United States); Kyle van Gorkom, Jennifer Lumbres, Alex T. Rodack, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Joseph D. Long, Steward Observatory, The Univ. of Arizona (United States); Alexander Hedglen, Wyant College of Optical Sciences, the Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Maggie Y. Kautz, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Logan Pearce, Steward Observatory, The Univ. of Arizona (United States); Warren B. Foster, Jay Kueny, Wyant College of Optical Sciences, The Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Avalon McLeod, Wyant College of Optical Sciences, the Univ. of Arizona (United States), Steward Observatory, The Univ. of Arizona (United States); Meghan O'Brien, Virginia Kress, Steward Observatory, The Univ. of Arizona (United States)

17 July 2022 • 16:15 - 16:30 EDT | Room 518 a

12185-17

Towards virtual access of adaptive optics telemetry data

Author(s): Tiago Gomes, Univ. do Porto (Portugal), CENTRA - Ctr. de Astrofísica e Gravitação (Portugal); Carlos M. Correia, Space ODT (Portugal); Olivier Beltramo-Martin, Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Timothy J. Morris, James Osborn, Durham Univ. (United Kingdom); Paulo Garcia, Univ. do Porto (Portugal), CENTRA - Ctr. de Astrofísica e Gravitação (Portugal)

17 July 2022 • 16:30 - 16:45 EDT | Room 518 a

Coffee Break 10:00 - 10:30

SESSION 7: MODELING AND SIMULATION SOFTWARE

18 July 2022 • 10:30 - 11:00 EDT | Room 518 a

Session Chair: Miska Le Louarn, European Southern Observatory (Germany)

12185-19

Inverse problem approach in Extreme Adaptive Optics -- Analytical model of the fitting error and lowering of the aliasing

Author(s): Anthony Berdeu, National Astronomical Research Institute of Thailand (Thailand), Chulalongkorn Univ. (Thailand); Michel Tallon, Éric M. Thiébaut, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Mary Angelie Alagao, Sitthichat Sukpholtham, National Astronomical Research Institute of Thailand (Thailand); Maud Langlois,

Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Adithep Kawinkij, Puttiwat Kongkaew, National Astronomical Research Institute of Thailand (Thailand)

18 July 2022 • 10:30 - 10:45 EDT | Room 518 a

12185-20

AOtools: Where we are and where we're going

Author(s): Matthew J. Townson, Oliver Farley, James Osborn, Durham Univ. (United Kingdom); Andrew Reeves, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany); Gilles Orban de Xivry, Liège Univ. (Belgium)

18 July 2022 • 10:45 - 11:00 EDT | Room 518 a

SESSION 8: MODELING, SIMULATION AND ANALYSIS OF AO SYSTEMS

18 July 2022 • 11:15 - 12:15 EDT | Room 518 a

Session Chair: Miska Le Louarn, European Southern Observatory (Germany)

12185-21

Modelling the mysteries of temporal effects in deformable mirrors: Fast and accurate dynamic model

Author(s): Julien Charton, ALPAO S.A.S. (France); Stefan Ströbele, Lorenzo Pettazzi, Pierre-Yves Madec, European Southern Observatory (Germany)

18 July 2022 • 11:15 - 11:30 EDT | Room 518 a

12185-22

Aliasing effect of rolling shutter readout in laser guide star wavefront sensing

Author(s): Hajime Ogane, Masayuki Akiyama, Tohoku Univ. (Japan); Jesse Cranney, François Rigaut, Noelia Martínez Rey, Céline d'Orgeville, The Australian National Univ. (Australia); Yosuke Minowa, Yoshito Ono, Subaru Telescope, NAOJ (United States)

18 July 2022 • 11:30 - 11:45 EDT | Room 518 a

12185-23

Tip-tilt anisoplanatism in MCAO-assisted astrometric observations

Author(s): Giulia Carlà, Lorenzo Busoni, Cédric Plantet, Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Carmelo Arcidiacono, INAF - Osservatorio Astronomico di Padova (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

18 July 2022 • 11:45 - 12:00 EDT | Room 518 a

12185-103

A generalised and nonlinear wavefront estimator for Fourier-type wavefront sensors

Author(s): Victoria Hutterer, Andreas Neubauer, Johannes Kepler Univ. Linz (Austria); Andreas Obereder, MathConsult GmbH (Austria); Julia Shatokhina, Johann Radon Institute for Computational and Applied Mathematics (Austria); Ronny Ramlau, Johannes Kepler Univ. Linz (Austria)

18 July 2022 • 12:00 - 12:15 EDT | Room 518 a

Lunch Break 12:00 - 13:00

SESSION 9: PROJECT STATUS (UPGRADES)

18 July 2022 • 13:00 - 14:00 EDT | Room 518 a

Session Chair: Olivier Guyon, Steward Observatory (United States)

12185-24

SIGHT: The Palomar 5m telescope LGS AO system maximizing visible-light spectroscopic sensitivity

Author(s): Richard G. Dekany, Caltech (United States); Mitsuko K. Roberts, Lauren Fahey, Reed Riddle, Daniel L. McKenna, Jennifer E. Roberts, Alexandre Delacroix, Nemanja Jovanovic, Caltech Optical Observatories (United States); Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Christoph Baranec, Univ. of Hawai'i (United States); Rick S. Burruss, Jeffry N. Zolkower, Caltech Optical Observatories (United States)

18 July 2022 • 13:00 - 13:15 EDT | Room 518 a

12185-25

Keck all sky precision adaptive optics program overview

Author(s): Peter Wizinowich, Sylvain Cetre, Jason C. Y. Chin, Carlos M. Correia, Jacques R. Delorme, Luke Gers, Scott J. Lilley, W. M. Keck Observatory (United States); Jessica Lu, Univ. of California, Berkeley (United States); Jim E. Lyke, Eduardo Marin, Sam Ragland, Paul Richards, Avinash Surendran, Ed Wetherell, W. M. Keck Observatory (United States); Andrea Ghez, Geoff Chih-Fan Chen, Devin Chu, Tuan Do, Univ. of California, Los Angeles (United States); Matthew Freeman, Univ. of California, Berkeley (United States); Abhimat K. Gautam, Univ. of California, Los Angeles (United States); Lisa Hunter, Univ. of California, Santa Cruz (United States); Tucker A. Jones, Univ. of California, Davis (United States); Michael Liu, Univ. of Hawai'i (United States); Dimitri Mawet, Caltech (United States); Claire Max, Univ. of California, Santa Cruz (United States); Mark Morris, Univ. of California, Los Angeles (United States); Sean Terry, Univ. of California, Berkeley (United States); Tommaso Treu, Univ. of California, Los Angeles (United States); Shelley Wright, Univ. of California, San Diego (United States)

18 July 2022 • 13:15 - 13:30 EDT | Room 518 a

12185-26

On the upgrade path to GLAO and MCAO on the Daniel K. Inouye Solar Telescope

Author(s): Dirk Schmidt, Andrew Beard, Andrew Ferayorni, Bret D. Goodrich, Scott Gregory, Luke C. Johnson, Lukas Rimmele, Thomas R. Rimmele, Erik Starman, Friedrich Wöger, National Solar Observatory (United States)

18 July 2022 • 13:30 - 13:45 EDT | Room 518 a

12185-27

Connecting SPHERE and CRIRES+ for the characterisation of young exoplanets at high spectral resolution: status update of VLT/HiRISE

Author(s): Arthur Vigan, Maxime Lopez, Mona El Morsy, Eduard R. Muslimov, Alexandre Viret, Lab. d'Astrophysique de Marseille (France); Gérard Zins, European Southern Observatory (Germany); Graham J. Murray, Durham Univ. (United Kingdom); Anne Costille, Gilles P. P. L. Otten, Lab. d'Astrophysique de Marseille (France); Ulf Seemann, European Southern Observatory (Germany); Heiko Anwand-Heerwart, Georg-August-Univ. Göttingen (Germany); Kjetil Dohlen, Patrick Blanchard, José Garcia, Yannick Charles, Nicolas Tchoubaklian, Lab. d'Astrophysique de Marseille (France); Jérôme Paufique, European Southern Observatory (Germany); Jean-Luc Beuzit, Mathis Houllé, Lab. d'Astrophysique de Marseille (France); Raphaël Pourcelot, Observatoire de la Côte d'Azur, Laboratoire Lagrange (France); Isabelle Baraffe, University of Exeter (United Kingdom); Reinhold Dorn, European Southern Observatory (Germany); Marc Jaquet, Lab. d'Astrophysique de Marseille (France); Ansgar Reiners, Georg-August-Univ. Göttingen (Germany); Alain Smette, Leonardo Blanco, Laurent Pallanca, European Southern Observatory (Chile); Alexis Carlotti, David Mouillet, Institut de Planétologie et d'Astrophysique de Grenoble (France); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France)

18 July 2022 • 13:45 - 14:00 EDT | Room 518 a

SESSION 10: CONTROL SYSTEMS

18 July 2022 • 14:00 - 15:00 EDT | Room 518 a

Session Chair: Dirk Schmidt, National Solar Observatory (United States)

12185-28

MAVIS RTC: a forward looking implementation of the COSMIC platform

Author(s): Damien Gratadour, Julien Bernard, Nicolas Doucet, The Australian National Univ. (Australia); Florian Ferreira, Arnaud Sevin,

Observatoire de Paris à Meudon (France); Jesse Cranney, Hao Zhang, François Rigaut, The Australian National Univ. (Australia)

18 July 2022 • 14:00 - 14:20 EDT | Room 518 a

12185-29

Gemini North Adaptive Optics (GNAO) Real-time Controller using the Herzberg Extensible Adaptive Real-time Toolkit (HEART)

Author(s): Jennifer S. Dunn, Dan Kerley, Malcolm Smith, Jonathan Stocks, Lianne Muller, Darryl Gamroth, Jean-Pierre Véran, Kate J. Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada)

18 July 2022 • 14:20 - 14:40 EDT | Room 518 a

12185-30

Keck adaptive optics facility: real time controller upgrade

Author(s): Jason C. Y. Chin, Sylvain Cetre, Peter Wizinowich, Scott J. Lilley, Sam Ragland, Ed Wetherell, Jim Lyke, Avinash Surendran, Carlos M. Correia, W. M. Keck Observatory (United States); Roberto Biasi, Dietrich Pescoller, Christian Pataunar, Microgate S.r.l. (Italy); Karl Glazebrook, Andrew Jameson, Will Gauvin, Swinburne Univ. of Technology (Australia); François Rigaut, Damien Gratadour, Julien Bernard, The Australian National Univ. (Australia); Jacques R. Delorme, Eduardo Marin, W. M. Keck Observatory (United States)

18 July 2022 • 14:40 - 15:00 EDT | Room 518 a

Coffee Break 15:00 - 15:30

SESSION 11: SENSING AND CORRECTION OF WAVEFRONT FRAGMENTATION I

18 July 2022 • 15:30 - 16:30 EDT | Room 518 a

Session Chair: Fernando Quirós-Pacheco, GMTO Corp. (United States)

12185-31

Linearized Analytical Phase Diversity : towards lab and on-sky demonstration on the Subaru Telescope

Author(s): Sébastien Vievard, Subaru Telescope, NAOJ (United States); Aurélie Bonnefois, Frédéric Cassaing, Laurent M. Mugnier, Jean-François Sauvage, ONERA (France); Olivier Guyon, Julien Lozi, Vincent Deo, Kyohoon Ahn, Nour Skaf, Subaru Telescope, NAOJ (United States)

18 July 2022 • 15:30 - 15:45 EDT | Room 518 a

12185-32

Data fusion and machine learning used for the unmodulated pyramid wavefront sensor

Author(s): Mahawa Cisse, ONERA (France), Lab. d'Astrophysique de Marseille (France); Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Olivier Fauvarque, Ifremer (France); Nicolas Levraud, Lab. d'Astrophysique de Marseille (France); Jean-François Sauvage, ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom)

18 July 2022 • 15:45 - 16:00 EDT | Room 518 a

12185-33

Residual Wavefront Control of Segmented Mirror Telescopes

Author(s): Sam Ragland, Peter L. Wizinowich, W. M. Keck Observatory (United States); Michael Bottom, Institute for Astronomy, Univ. of Hawai'i (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Philip M. Hinz, Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States); Dimitri Mawet, Caltech (United States); Eliad Peretz, NASA Goddard Space Flight Ctr. (United States); Maaike A. M. van Kooten, Univ. of California, Santa Cruz (United States)

18 July 2022 • 16:00 - 16:15 EDT | Room 518 a

12185-34

Controlling petals using fringes: wavefront sensing through sparse aperture interferomery at Subaru/SCExAO

Author(s): Vincent Deo, Sébastien Vievard, Subaru Telescope, NAOJ (United States); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Kyohoon Ahn, Subaru Telescope, NAOJ (United States); Elsa Huby, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Olivier Guyon, Subaru Telescope, NAOJ (United States); Sylvestre Lacour, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Julien Lozi, Subaru Telescope, NAOJ (United States); Frantz Martinache, Observatoire de la Côte d'Azur (France); Barnaby Norris, Peter G. Tuthill, The Univ. of Sydney (Australia)

18 July 2022 • 16:15 - 16:30 EDT | Room 518 a

SESSION 12: WAVEFRONT SENSING AT SUPER-RESOLUTION

18 July 2022 • 16:30 - 17:30 EDT | Room 518 a

Session Chair: Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

12185-157

On-sky telescope access for instrument development

Author(s): Timothy J. Morris, Durham Univ. (United Kingdom); Éric Gendron, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Caroline Kulcsar, Institut d'Optique Graduate School (France); Domenico Bonaccini Calia, European Southern Observatory (Germany)

18 July 2022 • 16:30 - 16:45 EDT | Room 518 a

12185-35

Wavefront sensing and super-resolution with photonics interferometry (Invited Paper)

Author(s): Elsa Huby, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France)

18 July 2022 • 16:45 - 17:15 EDT | Room 518 a

12185-36

Super-resolution wavefront reconstruction in adaptive-optics with pyramid sensors

Author(s): Carlos M. Correia, Space ODT (Portugal); Jean-François Sauvage, ONERA (France); Sylvain Oberti, European Southern Observatory (Germany); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Vincent Chambouleyron, Nicolas Levraud, Lab. d'Astrophysique de Marseille (France); Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Markus Feldt, Thomas Bertram, Max-Planck-Institut für Astronomie (Germany)

18 July 2022 • 17:15 - 17:30 EDT | Room 518 a

Coffee Break 10:00 - 10:30

SESSION 13: MODELING, SIMULATION AND ANALYSIS OF AO SYSTEMS

19 July 2022 • 10:30 - 11:15 EDT | Room 518 a

Session Chair: Kathryn J. Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada)

12185-37

Impact of water vapor seeing on mid-infrared high-contrast imaging at ELT scale (Invited Paper)

Author(s): Olivier Absil, Christian Delacroix, Gilles Orban de Xivry, Prashant Pathak, Matthew Willson, Liège Univ. (Belgium); Philippe Bério, Observatoire de la Côte d'Azur (France); Roy van Boekel, Max-Planck-Institut für Astronomie (Germany); Alexis Matter, Observatoire de la Côte d'Azur (France); Denis Defrère, KU Leuven (Belgium); Leonard Burtscher, Leiden Observatory (Netherlands); Julien Woillez, European Southern Observatory (Germany); Bernhard Brandl, Leiden Observatory (Netherlands)

19 July 2022 • 10:30 - 11:00 EDT | Room 518 a

12185-38

ELT METIS wavefront control strategy

Author(s): Carlos M. Correia, Space ODT (Portugal); Markus Feldt, Horst Steuer, Max-Planck-Institut für Astronomie (Germany); Julia Shatokhina, Andreas Obereder, Johann Radon Institute for Computational and Applied Mathematics (Austria); Philip L. Neureuther, Univ. Stuttgart (Germany); Martin Kulas, Max-Planck-Institut für Astronomie (Germany); Gilles Orban de Xivry, Liège Univ. (Belgium); Thomas Bertram, Max-Planck-Institut für Astronomie (Germany)

19 July 2022 • 11:00 - 11:15 EDT | Room 518 a

SESSION 14: STATUS (ELTS)

19 July 2022 • 11:15 - 12:00 EDT | Room 518 a

Session Chair: Kathryn J. Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada)

12185-39

TMT Adaptive Optics Program: A status report

Author(s): Corinne Boyer, Thirty Meter Telescope (United States)

19 July 2022 • 11:15 - 11:30 EDT | Room 518 a

12185-40

MAORY/MORFEO@ELT: general overview up to the preliminary design and a look towards the final design

Author(s): Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Francesca Annibali, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Carmelo Arcidiacono, INAF - Osservatorio Astronomico di Padova (Italy); Nicolò Azzaroli, INAF - Osservatorio Astrofisico di Arcetri (Italy); Andrea Balestra, Ivano Baronchelli, Andrea Baruffolo, Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy); Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy); Marco Bonaglia, Runa Briguglio, Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Michele Cantiello, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Giulia Carlà, INAF - Osservatorio Astrofisico di Arcetri (Italy); Elena Carolo, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); Vincenzo Cianniello, Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Jean-Jacques Correia, Institut de Planétologie et d'Astrophysique de Grenoble (France); Giuseppe Cosentino, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Domenico D'Auria, Vincenzo De Caprio, INAF - Osservatorio Astronomico di Capodimonte (Italy); Nicholas Devaney, National Univ. of Ireland, Galway (Ireland); Amico Di Cianno, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Andrea Di Dato, INAF - Osservatorio Astronomico di Capodimonte (Italy); Ugo Di Giammatteo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Gianluca Di Rico, Mauro Dolci, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Christian Eredia, INAF - Osservatorio Astronomico di Capodimonte (Italy); Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Daniela Fantinel, Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Philippe Feautrier, Institut de Planétologie et d'Astrophysique de Grenoble (France); Italo Foppiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Enrico Giro, INAF - Osservatorio Astronomico di Padova (Italy); Laurence Gluck, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alexander Goncharov, National Univ. of Ireland, Galway (Ireland); Paolo Grani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sylvain Guieu, Institut de Planétologie et d'Astrophysique de Grenoble (France); Marco Gullieuszik, INAF - Osservatorio Astronomico di Padova (Italy); Pierre Haguenauer, European Southern Observatory (Germany); Zoltan Hubert, Institut de Planétologie et d'Astrophysique de Grenoble (France); Tommaso Lapucci, INAF - Osservatorio Astrofisico di Arcetri (Italy); Fulvio Laudisio, INAF - Osservatorio Astronomico di Padova (Italy); Miska Le Louarn, European Southern Observatory (Germany); Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); Deborah Malone, National Univ. of Ireland, Galway (Ireland); Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Sylvain Oberti, European Southern Observatory (Germany); Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Lorenzo Pettazzi, European Southern Observatory (Germany); Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Elisa Portaluri, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Patrick Rabou, Institut de Planétologie et d'Astrophysique de Grenoble (France); Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy); Edoardo Maria Alberto Redaelli, Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Sylvain Rochat, Institut de Planétologie et d'Astrophysique de Grenoble (France); Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Salvatore Savarese, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marcello Scalera, INAF - Osservatorio Astronomico di Brera (Italy); Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Marie-Hélène Sztefek, Institut de Planétologie et d'Astrophysique de Grenoble (France); Angelo Valentini, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 11:30 - 11:45 EDT | Room 518 a

12185-41

HARMONI at ELT: Getting to the Diffraction limit!

Author(s): Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Jean-François Sauvage, ONERA (France); Carlos M. Correia, Lab. d'Astrophysique de Marseille (France); Lisa Bardou, Timothy J. Morris, Durham Univ. (United Kingdom); Kjetil Dohlen, Kacem El Hadi, David Le Mignant, Anne Costille, Lab. d'Astrophysique de Marseille (France); Niranjan Thatte, Univ. of Oxford (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Dave J. Melotte, Oscar Gonzalez, UK Astronomy Technology Ctr. (United Kingdom); Matthias Tecza, Univ. of Oxford (United Kingdom); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 11:45 - 12:00 EDT | Room 518 a

Lunch/Exhibition Break 12:00 - 13:30

SESSION 15: SENSING AND CORRECTION OF WAVEFRONT FRAGMENTATION II

19 July 2022 • 13:30 - 14:15 EDT | Room 518 a

Session Chair: Sam Ragland, W. M. Keck Observatory (United States)

12185-42

First lab results of segment/petal phasing with a pyramid wavefront sensor and a novel holographic dispersed fringe sensor (HDFS) from the Giant Magellan Telescope high contrast adaptive optics phasing testbed

Author(s): Alexander Hedglen, Laird M. Close, Sebastiaan Y. Haffert, Jared R. Males, Maggie Y. Kautz, The Univ. of Arizona (United States); Antonin H. Bouchez, Richard T. Demers, Fernando Quirós-Pacheco, Breann N. Sitarski, GMTO Corp. (United States); Olivier Guyon, The Univ. of Arizona (United States), Subaru Telescope, NAOJ (United States); Kyle Van Gorkom, Joseph D. Long, Jennifer Lumbres, The Univ. of Arizona (United States); Lauren Schatz, Kelsey L. Miller, Air Force Research Lab. (United States); Alex T. Rodack, Justin M. Knight, The Univ. of Arizona (United States)

19 July 2022 • 13:30 - 13:45 EDT | Room 518 a

12185-43

The Giant Magellan Telescope natural guidestar adaptive optics system: improving the robustness of segment piston control

Author(s): Fernando Quirós-Pacheco, GMTO Corp. (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Antonin Bouchez, Rodolphe Conan, GMTO Corp. (United States); Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Richard T. Demers, GMTO Corp. (United States)

19 July 2022 • 13:45 - 14:00 EDT | Room 518 a

12185-44

Phasing the Segmented Giant Magellan Telescope: Progress in Testbeds and Prototypes

Author(s): Richard T. Demers, Antonin Bouchez, Fernando Quirós-Pacheco, Breann N. Sitarski, Patricio Schurter, GMTO Corp. (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Dan Catropa, Jan Kansky, Brian A. McLeod, Stuart McMuldroch, William A. Podgorski, Smithsonian Astrophysical Observatory (United States); Laird Close, Victor Gasho, Sebastiaan Y. Haffert, Alexander Hedglen, Maggie Y. Kautz, Jared Males, Steward Observatory (United States); Guido Agapito, Nicolò Azzaroli, Luca Carbonaro, Anne-Laure Lucie Cheffot, Simone Esposito, Tommaso Lapucci, Enrico Pinna, Cédric Plantet, INAF (Italy); Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Fabio Rossi, INAF (Italy); Guillermo Gonzalez, Bijan Nemati, The Univ. of Alabama (United States)

19 July 2022 • 14:00 - 14:15 EDT | Room 518 a

SESSION 16: SENSING AND CORRECTION OF WAVEFRONT FRAGMENTATION III

19 July 2022 • 14:15 - 15:00 EDT | Room 518 a

Session Chair: Sam Ragland, W. M. Keck Observatory (United States)

12185-45

HARMONI at ELT: Impact of Low Wind Effect on SCAO mode performance

Author(s): Jean François Sauvage, ONERA (France); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Thierry Fusco, ONERA (France); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Carlos M. Correia, Space ODT (Portugal); Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Nicolas Levraud, ONERA (France); Kjetil Dohlen, Kacem El Hadi, Lab. d'Astrophysique de Marseille (France); Mahawa Cisse, ONERA (France); Niranjan Thatte, Fraser Clarke, Univ. of Oxford (United Kingdom); David Le Mignant, Lab. d'Astrophysique de Marseille (France); Jérôme Amiaux, European Southern Observatory (Germany)

19 July 2022 • 14:15 - 14:30 EDT | Room 518 a

12185-46

Fizeau-interferometry fringe tracking solutions for giant segmented telescope petal modes

Author(s): Frantz Martinache, Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Vincent Deo, Subaru Telescope, NAOJ (United States)

19 July 2022 • 14:30 - 14:45 EDT | Room 518 a

12185-47

HARMONI at ELT: Wavefront control in SCAO mode

Author(s): Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Jean-François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Nicolas Levraud, Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Carlos M. Correia, Space ODT (Portugal); Thierry Fusco, ONERA (France), Lab. d'Astrophysique de Marseille (France); Benoit Neichel, Lab. d'Astrophysique de Marseille (France)

19 July 2022 • 14:45 - 15:00 EDT | Room 518 a

Coffee Break 15:00 - 15:30

SESSION 17: CONTROL SYSTEMS (ELTS)

19 July 2022 • 15:30 - 16:15 EDT | Room 518 a

Session Chair: Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada)

12185-48

Overview and status of the GMT wavefront control system

Author(s): Antonin H. Bouchez, Rodolphe Conan, Richard T. Demers, GMTO Corp. (United States); Brian A. McLeod, Harvard-Smithsonian Ctr. for Astrophysics (United States); Fernando Quirós-Pacheco, GMTO Corp. (United States); Rodrigo Romano, Steward Observatory, The Univ. of Arizona (United States); Patricio Schurter, Breann N. Sitarski, GMTO Corp. (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Bo Xin, GMTO Corp. (United States)

19 July 2022 • 15:30 - 15:45 EDT | Room 518 a

12185-49

The MICADO first light imager for the ELT: Final design and prototype of the MICADO SCAO RTC

Author(s): Arnaud Sevin, Florian Ferreira, Éric Gendron, Fabrice Vidal, Damien Gratadour, Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

19 July 2022 • 15:45 - 16:00 EDT | Room 518 a

12185-50

RTC Design and Performance Modelling for ELT Scale AO

Author(s): Matthew J. Townson, Durham Univ. (United Kingdom); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Carlos Correia, Univ. de Lisboa (Portugal); Sofia Dimoudi, Timothy J. Morris, Edward J. Younger, David T. Barr, Sylvain Cetre, Durham Univ. (United Kingdom)

19 July 2022 • 16:00 - 16:15 EDT | Room 518 a

SESSION 18: WAVEFRONT SENSING WITH LASER GUIDE STARS I

19 July 2022 • 16:15 - 17:00 EDT | Room 518 a

12185-51

Laser Guide star wave-front sensor optimisation for AO-assisted instruments on Extremely Large Telescopes

Author(s): Thierry Fusco, ONERA (France); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Sylvain Oberti, European Southern Observatory (Germany); Carlos M. Correia, Space ODT (Portugal); Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Pierre Haguenauer, European Southern Observatory (Germany); Felipe Pedreros, Anne Costille, Pierre Jouve, Lab. d'Astrophysique de Marseille (France); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 16:15 - 16:30 EDT | Room 518 a

12185-52

Laser modulation technique to reduce the dependence on natural guide star for focus sensing: simulations and preliminary results.

Author(s): Sowmya Hassan Krishna, Noelia Martínez Rey, François Rigaut, Lyle E. Roberts, Céline d'Orgeville, The Australian National Univ. (Australia)

19 July 2022 • 16:30 - 16:45 EDT | Room 518 a

12185-53

CANCELED: Model-Based Matched Filter Centroiding Algorithm for Elongated Shack-Hartmann Wavefront Sensor Spot Measurements

19 July 2022 • 16:45 - 17:00 EDT | Room 518 a

SESSION 19: WAVEFRONT SENSING WITH LASER GUIDE STARS II

19 July 2022 • 17:00 - 17:45 EDT | Room 518 a

12185-54

Simultaneous Sodium Profile Estimation and LGS WFS Pixel Processing Optimization Using Shack-Hartmann Subaperture Images

Author(s): Lianqi Wang, Corinne Boyer, Thirty Meter Telescope (United States); Glen Herriot, Jean-Pierre Veran, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 17:00 - 17:15 EDT | Room 518 a

12185-55

experimenting with the g-ODWFS for use in extended source LGS wavefront sensing.

Author(s): Meghan O'Brien, Sebastiaan Y. Haffert, Jennifer Lumbres, Kyle Van Gorkom, Alex T. Rodack, Joseph D. Long, Jared R. Males, The Univ. of Arizona (United States)

19 July 2022 • 17:15 - 17:30 EDT | Room 518 a

12185-56

The Ingot WFS on an ELT-like telescope: the project and simulations

Author(s): Elisa Portaluri, Valentina Viotto, INAF (Italy); Roberto Ragazzoni, INAF (Italy), Univ. degli Studi di Padova (Italy); Carmelo Arcidiacono, Davide Greggio, Kalyan K. Radhakrishnan Santhakumari, Maria Bergomi, INAF (Italy); Simone Di Filippo, INAF (Italy), Univ. degli Studi di Padova (Italy); Luca Marafatto, Marco Dima, Jacopo Farinato, Demetrio Magrin, Gianluca Di Rico, Mauro Centrone, INAF (Italy)

19 July 2022 • 17:30 - 17:45 EDT | Room 518 a

Coffee Break 10:00 - 10:30

SESSION 20: DAVID L. FRIED MEMORIAL SESSION: ATMOSPHERIC DISTURBANCES I

20 July 2022 • 10:30 - 12:00 EDT | Room 518 a

Session Chair: Angela Cortes, European Southern Observatory (Germany)

12185-335

A Tribute to the Life and Work of David L. Fried (Invited Paper)

20 July 2022 • 10:30 - 11:00 EDT | Room 518 a

12185-57

FASS results and comparison with SCIDAR and MASS (Invited Paper)

Author(s): Andrés Guesalaga, Boris Ayancan, Pontificia Univ. Católica de Chile (Chile); Marc Sarazin, European Southern Observatory (Germany); Richard W. Wilson, Saavidra Perera, Durham Univ. (United Kingdom); Miska Le Louarn, European Southern Observatory (Germany)

20 July 2022 • 11:00 - 11:30 EDT | Room 518 a

12185-58

Wavefront curvature autocovariance: its theoretical properties and potential use for Cn2 profiling

Author(s): Remy Avila, Univ. Nacional Autónoma de México (Mexico)

20 July 2022 • 11:30 - 11:45 EDT | Room 518 a

12185-59

Towards higher resolution profiling using filtered laser-based adaptive optics telemetry

Author(s): Clémentine Béchet, Pontificia Univ. Católica de Chile (Chile)

20 July 2022 • 11:45 - 12:00 EDT | Room 518 a

Lunch/Exhibition Break 12:00 - 13:25

SESSION 21: DAVID L. FRIED MEMORIAL SESSION: ATMOSPHERIC DISTURBANCES II

20 July 2022 • 13:25 - 14:40 EDT | Room 518 a

Session Chair: Angela Cortes, European Southern Observatory (Germany)

12185-60

Characterizing atmospheric turbulence over Maunakea through temporal tomography

Author(s): Ryan Dungee, Mark R. Chun, Institute for Astronomy, Univ. of Hawai'i (United States)

20 July 2022 • 13:25 - 13:40 EDT | Room 518 a

12185-61

Towards operational turbulence forecast systems at different time scales

Author(s): Elena Masciadri, Alessio Turchi, Luca Fini, INAF - Istituto Nazionale di Astrofisica (Italy)

20 July 2022 • 13:40 - 13:55 EDT | Room 518 a

12185-62

Global maps of atmospheric optical turbulence

Author(s): James Osborn, Durham Univ. (United Kingdom); Jean-Edouard Communal, Frédéric Jabet, Miratlas (France)

20 July 2022 • 13:55 - 14:10 EDT | Room 518 a

12185-63

Fighting the devil within: improving image quality by conquering local turbulence.

Author(s): Olivier Lai, Observatoire de la Côte d'Azur (France); Kanoa J. Withington, Canada-France-Hawaii Telescope Corp. (United States); Mark R. Chun, Institute for Astronomy, Univ. of Hawai'i (United States)

20 July 2022 • 14:10 - 14:25 EDT | Room 518 a

12185-64

Lessons learned from the NEAR experiment and prospects for the upcoming mid-IR HCI instruments

Author(s): Prashant Pathak, Liège Univ. (Belgium); Markus Kasper, European Southern Observatory (Germany); Olivier Absil, Liège Univ. (Belgium)

20 July 2022 • 14:25 - 14:40 EDT | Room 518 a

SESSION 22: CALIBRATION

20 July 2022 • 14:45 - 15:00 EDT | Room 518 a

Session Chair: Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

12185-65

Imaged-based adaptive optics wavefront sensor referencing for high contrast imaging

Author(s): Nour Skaf, Olivier Guyon, Subaru Telescope, NAOJ (United States); Anthony Boccaletti, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Kyohoon Ahn, Thayne Currie, Vincent Deo, Julien Lozi, Sébastien Vievard, Subaru Telescope, NAOJ (United States)

20 July 2022 • 14:45 - 15:00 EDT | Room 518 a

12185-66

Daytime calibration and testing of the Keck All sky Precision Adaptive Optics Tomography System

Author(s): Avinash Surendran, W. M. Keck Observatory (United States); Carlos M. Correia, Space ODT (Portugal), Univ. do Porto (Portugal); Jacques R. Delorme, Steve Doyle, Sam Ragland, Paul Richards, Peter

L. Wizinowich, W. M. Keck Observatory (United States); Philip M. Hinz, Daren Dillon, Cesar Laguna, Univ. of California, Santa Cruz (United States); Sylvain Cetre, W. M. Keck Observatory (United States), Univ. of California, Santa Cruz (United States); Scott J. Lilley, Ed Wetherell, Eduardo Marin, W. M. Keck Observatory (United States)

20 July 2022 • 15:00 - 15:15 EDT | Room 518 a

12185-67

SPRINT: A fast online adaptive optics calibration strategy

Author(s): Cedric Taïssir Heritier, Pierre-Yves Madec, Sylvain Oberti, Christophe Verinaud, Miska Le Louarn, European Southern Observatory (Germany); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France), Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 15:15 - 15:30 EDT | Room 518 a

Coffee Break 15:00 - 15:30

SESSION 23: STATUS I

20 July 2022 • 15:30 - 16:30 EDT | Room 518 a

Session Chair: Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

12185-68

TROIA Adaptive Optics System for DAG Telescope; Assembly and Laboratory Performance prior to On-Sky Assessment

Author(s): Onur Keskin, FMV Isik Univ. OPAM (Turkey); Laurent Jolissaint, Audrey Bouxin, Haute Ecole Spécialisée de Suisse Occidentale (Switzerland); Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey)

20 July 2022 • 15:30 - 15:45 EDT | Room 518 a

12185-69

An adaptive optics upgrade for the Automated Planet Finder Telescope using an adaptive secondary mirror

Author(s): Rachel Bowens-Rubin, Philip M. Hinz, Brad Holden, Univ. of California, Santa Cruz (United States); Arjo Bos, TNO (Netherlands)

20 July 2022 • 15:45 - 16:00 EDT | Room 518 a

12185-70

Deployment of focal plane WFS technologies on 8-m telescopes: from the Subaru SPIDERS pathfinder, to the facility-class GPI 2.0 CAL2 system

Author(s): Christian Marois, Olivier Lardière, NRC-Herzberg Astronomy & Astrophysics (Canada); William R. Thompson, Univ. of Victoria (Canada); Garima Singh, NRC-Herzberg Astronomy & Astrophysics (Canada); Adam B. Johnson, Univ. of Victoria (Canada); Tim Hardy, Joeleff Fitzsimmons, NRC-Herzberg Astronomy & Astrophysics (Canada); Benjamin L. Gerard, Univ. of California, Santa Cruz (United States); Suresh Sivanandam, Univ. of Toronto (Canada); Simon Thibault, Univ. Laval (Canada); Dmitry Savransky, Cornell Univ. (United States); Colin Bradley, Univ. of Victoria (Canada); Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States); Mathieu Demers, OMP Inc. (Canada); Qiang Fu, Wolfgang Heidrich, King Abdullah Univ. of Science and Technology (Saudi Arabia); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France)

20 July 2022 • 16:00 - 16:15 EDT | Room 518 a

12185-71

Adaptive Optics at the European Solar Telescope: status and future developments

Author(s): Bruno Femenía-Castella, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Miguel A. Núñez Cagigal, Luzma Montoya, Iciar Montilla, Mary Barreto, Marta Belío-Asin, Jonai Bienes, Sergio Bonaque-González, Instituto de Astrofísica de Canarias (Spain); Manuel Collados, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Juan Cózar-Castellano, Noelia Feijóo, José Manuel González-Cava, Haresh Mangharam Chulani, Yolanda Martín Hernando, Ángel Mato, Cristina Padilla-Hernández, Instituto de Astrofísica de Canarias (Spain); Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Jorge Sánchez-Capuchino, Mahy Soler, Nauzet Vega, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 16:15 - 16:30 EDT | Room 518 a

SESSION 24: STATUS II

20 July 2022 • 16:30 - 17:30 EDT | Room 518 a

Session Chair: Gaetano Sivo, Gemini Observatory (Chile)

12185-72

MAVIS: preliminary design of the adaptive optics module

Author(s): Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Enrico Pinna, Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Carmelo Arcidiacono, Andrea Balestra, Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Olivier A. Beltramo-Martin, Lab. d'Astrophysique de Marseille (France); Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy); Marco Bonaglia, Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Luca Carbonaro, INAF - Osservatorio Astrofisico di Arcetri (Italy); Elena Carolo, INAF - Osservatorio Astronomico di Padova (Italy); Simonetta Chinellato, INAF Direzione Scientifica (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Elia Costa, INAF - Osservatorio Astronomico di Padova (Italy); Jesse Cranney, Astralis - AITC - Stromlo (Australia); Ciro Del Vecchio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Simone Doniselli, INAF - Osservatorio Astronomico di Brera (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Daniela Fantinel, Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Thierry Fusco, Lab. d'Astrophysique de Marseille (France); Antony Galla, Gaston Gausachs, Astralis - AITC - Stromlo (Australia); Pietro Grani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Damien Gratadour, Astralis - AITC - Stromlo (Australia); Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); Pierre Haguenauer, European Southern Observatory (Germany); Nicholas Herrald, Astralis - AITC - Stromlo (Australia); Demetrio Magrin, Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Cédric Plantet, Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Kalyan Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Fabio Rossi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Salvatore Savarese, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Chiara Selmi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Stefan Ströbele, European Southern Observatory (Germany); Brian W. Taylor, Annino Vaccarella, Astralis - AITC - Stromlo (Australia); Daniele Vassallo, INAF - Osservatorio Astronomico di Padova (Italy); Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy); David Brodrick, Jennifer Burgess, François Rigaut, Astralis - AITC - Stromlo (Australia)

20 July 2022 • 16:30 - 16:45 EDT | Room 518 a

12185-73

ULTIMATE-Subaru: GLAO preliminary design overview

Author(s): Yosuke Minowa, Yusei Koyama, Ichi Tanaka, Yoshito Ono, Takashi Hattori, Hirofumi Okita, Yoko Tanaka, Hiroshige Yoshida, Sadman Ali, Yutaka Hayano, Michitoshi Yoshida, Subaru Telescope, NAOJ (United States); Kentaro Motohara, Shin Oya, National Astronomical Observatory of Japan (Japan); Kenshi Yanagisawa, Okayama Astrophysical Observatory (Japan); Masayuki Akiyama, Tadayuki Kodama, Tohoku Univ. (Japan); Masahiro Konishi, The Univ. of Tokyo (Japan); Noelia Martínez Rey, Nicholas Herrald, Céline d'Orgeville, François Rigaut, Israel Vaughn, David Chandler, Dionne Haynes, Warrick Schofield, The Australian National Univ. (Australia); Shiang-Yu Wang, Chi-Yi Chou, Masahiko Kimura, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan)

20 July 2022 • 16:45 - 17:00 EDT | Room 518 a

12185-74

SHARK-NIR, ready to “swim” in the LBT northern hemisphere “ocean”

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20 July 2022 • 17:00 - 17:15 EDT | Room 518 a

12185-75

Laboratory acceptance and telescope integration readiness of the Gran Telescopio Canarias Adaptive Optics System

Author(s): Iciar Montilla, Eduardo González, Roberto López, Manuel Luis Aznar, José Marco de la Rosa, Jesús Patrón Recio, Marta Puga, Marcos Reyes García-Talavera, Josefina Rosich, Víctor Sánchez Béjar, Roberto Simoes, Óscar Tubío Araújo, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 17:15 - 17:30 EDT | Room 518 a

SESSION 26: WAVEFRONT MODULATING DEVICES I

21 July 2022 • 10:30 - 11:15 EDT | Room 518 a

12185-76

The Optical and Mechanical Design for the 21,000 Actuator ExAO System for the Giant Magellan Telescope: GMagAO-X

Author(s): Laird M. Close, Jared R. Males, Olivier Durney, Fernando Coronado, Sebastiaan Y. Haffert, Victor Gasho, Alexander Hedglen, Maggie Y. Kautz, Tom E. Connors, Mark Sullivan, Olivier Guyon, Jamison Noenickx, The Univ. of Arizona (United States)

21 July 2022 • 10:30 - 10:45 EDT | Room 518 a

12185-77

Deformable Mirror Technology Development at ESO – From open-loop to eXtreme Adaptive Optics

Author(s): Pierre-Yves Madec, Stefan Ströbele, Markus Kasper, Norbert Hubin, European Southern Observatory (Germany); Frank Eisenhauer, Dieter Lutz, Max-Planck-Institut für extraterrestrische Physik (Germany); Jean-Baptiste Le Bouquin, Institut de Planétologie et d’Astrophysique de Grenoble (France)

21 July 2022 • 10:45 - 11:00 EDT | Room 518 a

12185-78

ESO’s Ultra-Fast Wavefront Sensor unveils the mysteries of Deformable Mirrors’ temporal behaviour

Author(s): Stefan Ströbele, European Southern Observatory (Germany); Julien Charton, ALPAO S.A.S. (France); Lorenzo Pettazzi, Pierre-Yves Madec, Markus Kasper, European Southern Observatory (Germany); Prashant Pathak, Liège Univ. (Belgium)

21 July 2022 • 11:00 - 11:15 EDT | Room 518 a

Coffee Break 10:00 - 10:30

SESSION 27: WAVEFRONT MODULATING DEVICES II

21 July 2022 • 11:15 - 12:15 EDT | Room 518 a

Session Chair: Elise Vernet, European Southern Observatory (Germany)

12185-79

Exploration of a Large-Aperture Silicon Carbide Deformable Mirror for use in DKIST MCAO

Author(s): Luke C. Johnson, Dirk Schmidt, José Marino, Friedrich Wöger, Andrew Ferayorni, Thomas R. Rimmele, National Solar Observatory (United States)

21 July 2022 • 11:15 - 11:30 EDT | Room 518 a

12185-80

Preliminary design of the Adaptive Secondary Mirror for the European Solar Telescope

Author(s): Stefan Kuiper, Arjo Bos, Jan de Vreugd, Gert Witvoet, Bert Dekker, Fred Kamphues, Geert Slegtenhorst, Wouter Jonker, Matthew Maniscalco, TNO (Netherlands); Miguel Núñez Cagigal, Juan Cózar-Castellano, Jose Manuel González-Cava, Angel Mato, Nauzet Vega Reyes, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 11:30 - 11:45 EDT | Room 518 a

12185-81

Recent progress on astronomical PZT DM of the IOE,CAS

Author(s): Xinlong Fan, Chunlin Guan, Xiaojun Zhang, Jinbo Mu, Gang He, Lin Cheng, Guoyun Long, Hong Zhou, Kai Wei, Xinyang Li, Hao Xian, Changhui Rao, Institute of Optics and Electronics (China)

21 July 2022 • 11:45 - 12:00 EDT | Room 518 a

12185-82

An ASM-based AO system for W.M. Keck Observatory

Author(s): Philip M. Hinz, Univ. of California, Santa Cruz (United States); Christoph Baranec, Univ. of Hawai’i (United States); Kevin Bundy, Rachel Bowens-Rubin, Univ. of California, Santa Cruz (United States); Mark R. Chun, Univ. of Hawai’i (United States); Richard G.

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21 July 2022 • 12:00 - 12:15 EDT | Room 518 a

SESSION 28: WAVEFRONT SENSING FOR HIGH-CONTRAST IMAGING I

21 July 2022 • 13:30 - 14:30 EDT | Room 518 a

12185-83

Laboratory demonstrations of EFC and spatial LDFC on Subaru/SCExAO

Author(s): Kyohoon Ahn, Subaru Telescope, NAOJ (United States); Olivier Guyon, Subaru Telescope, NAOJ (United States), The Univ. of Arizona (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan); Julien Lozi, Subaru Telescope, NAOJ (United States); Sébastien Vievard, Subaru Telescope, NAOJ (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan), Observatoire de Paris (France); Vincent Deo, Subaru Telescope, NAOJ (United States); Jennifer Bragg, The Univ. of Arizona (United States), Subaru Telescope (United States); Jared R. Males, Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Thayne Currie, Subaru Telescope, NAOJ (United States), NASA Ames Research Ctr. (United States)

21 July 2022 • 13:30 - 13:45 EDT | Room 518 a

12185-84

Performance of the FAST Self Coherent Camera at the NEW-EARTH Lab and a Simplified SCC Measurement Algorithm

Author(s): William R. Thompson, Univ. of Victoria (Canada); Garima Singh, Christian Marois, Olivier Lardière, NRC-Herzberg Astronomy & Astrophysics (Canada); Qiang Fu, Wolfgang Heidrich, King Abdullah Univ. of Science and Technology (Saudi Arabia); Benjamin L. Gerard, Univ. of California, Santa Cruz (United States)

21 July 2022 • 13:45 - 14:00 EDT | Room 518 a

12185-85

Experimental demonstration of a three-sided pyramid wavefront sensor on the CACTI testbed

Author(s): Lauren Schatz, Air Force Research Lab. (United States), Starfire Optical Range (United States); Johanan L. Codona, Hart Scientific Consulting International LLC (United States); Joseph D. Long, Jared R. Males, The Univ. of Arizona (United States); Weslin Pullen, Hart Scientific Consulting International LLC (United States); Kyle Van Gorkom, The Univ. of Arizona (United States); Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France), Aix-Marseille Univ. (France), CNRS (France); Laird M. Close, The Univ. of Arizona (United States); Carlos M. Correia, Lab. d'Astrophysique de Marseille (France), Aix-Marseille Univ. (France), CNRS (France); Olivier Fauvarque, Ifremer (France); Thierry Fusco, ONERA, Univ. Paris Saclay (France), Lab. d'Astrophysique de Marseille (France), Aix-Marseille Univ., CNRS, CNES (France); Olivier Guyon, Subaru Telescope, NAOJ (United States), Wyant College of Optical Sciences (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan); Michael Hart, Hart Scientific Consulting International LLC (United States); Pierre Janin-Potiron, Lab. d'Astrophysique de Marseille (France); Robert L. Johnson, Air Force Research Lab. (United States), Starfire Optical Range (United States); Nemanja Jovanovic, Caltech (United States); Jennifer Lumbres, Wyant College of Optical Sciences (United States); Mala Mateen, Air Force Research Lab. (United States); Jean-François Sauvage, ONERA (France), Aix-Marseille Univ. (France); Benoît Neichel, Aix-Marseille Univ. (France)

21 July 2022 • 14:00 - 14:15 EDT | Room 518 a

12185-86

HARMONI at ELT: A Zernike wavefront sensor for the high-contrast module - Testbed results with realistic observation conditions

Author(s): Adrien Hours, Alexis Carlotti, David Mouillet, Laurent Jocou, Thibaut Moulin, Fabrice Pancher, Sylvain Guieu, Patrick Rabou, Alain Delboulbé, Institut de Planétologie et d'Astrophysique de Grenoble (France); Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); Jean François Sauvage, ONERA (France); Élodie Choquet, Arthur Vigan, Lab. d'Astrophysique de Marseille (France); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); Niranjan Thatte, Univ. of Oxford (United Kingdom); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Dave Melotte, UK Astronomy Technology Ctr. (United Kingdom); Matthias Tecza, Univ. of Oxford (United Kingdom); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 14:15 - 14:30 EDT | Room 518 a

Lunch/Exhibition Break 12:15 - 13:30

SESSION 29: WAVEFRONT SENSING FOR HIGH-CONTRAST IMAGING II

21 July 2022 • 14:30 - 15:15 EDT | Room 518 a

Session Chair: Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada)

12185-87

Calibration and performances of a self-referenced Mach-Zehnder wavefront sensor for extreme adaptive optics

Author(s): Camille Graf, Maud Langlois, Magali Loupias, Éric M. Thiébaut, Michel Tallon, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Jérôme Degallaix, Lab. des Matériaux Avancés (France)

21 July 2022 • 14:30 - 14:45 EDT | Room 518 a

12185-88

Exoplanet Detection with Photonic Lanterns for Focal-Plane Wavefront Sensing and Control

Author(s): Yinzi Xin, Caltech (United States); Jonathan Lin, Univ. of California, Los Angeles (United States); Barnaby R. M. Norris, The Univ. of Sydney (Australia); Yoo Jung Kim, Univ. of California, Los Angeles (United States); Steph Sallum, Univ. of California, Irvine (United States); Christopher Betters, Sergio Leon-Saval, The Univ. of Sydney (Australia); Julien Lozi, Sebastian Vievard, Olivier Guyon, Subaru Telescope, NAOJ (United States); Pradip R. Gatkine, Nemanja Jovanovic, Dimitri Mawet, Caltech (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States)

21 July 2022 • 14:45 - 15:00 EDT | Room 518 a

12185-89

Various Wavefront Sensing and Control Developments on the Santa cruz Extreme AO Laboratory (SEAL) Testbed

Author(s): Benjamin L. Gerard, Daren Dillon, Maaike A. M. van Kooten, Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States)

21 July 2022 • 15:00 - 15:15 EDT | Room 518 a

Coffee Break 15:15 - 15:45

SESSION 30: WAVEFRONT SENSING

21 July 2022 • 15:45 - 17:00 EDT | Room 518 a

Session Chair: Fernando Quirós-Pacheco, GMTO Corp. (United States)

12185-90

Machine Learning for Wavefront Sensing (Invited Paper)

Author(s): Alison Wong, Barnaby R. M. Norris, Peter G. Tuthill, Richard Scalzo, The Univ. of Sydney (Australia); Olivier Guyon, Vincent Deo, Julien Lozi, Sébastien Vievard, Kyohoon Ahn, National Astronomical Observatory of Japan (United States)

21 July 2022 • 15:45 - 16:15 EDT | Room 518 a

12185-91

Solar wavefront sensing at THEMIS with self-calibrated reference image and estimation of the noise covariance

Author(s): Michel Tallon, Éric M. Thiébaut, Isabelle Tallon-Bosc, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Bernard F. Gelly, Themis S.L. (Spain), CNRS (France); Loïc Denis, Lab. Hubert Curien (France)

21 July 2022 • 16:15 - 16:30 EDT | Room 518 a

12185-92

Optimizing Wavefront Sensor Design for Partially Coherent Beacons

Author(s): Jeff Richey, Michael Hart, Wyant College of Optical Sciences (United States)

21 July 2022 • 16:30 - 16:45 EDT | Room 518 a

12185-93

Image to image translation for wavefront estimation and control applications

Author(s): Jeffrey Smith, Jesse Cranney, The Australian National Univ. (Australia); Damien Gratadour, The Australian National Univ. (Australia), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Charles Gretton, The Australian National Univ. (Australia)

21 July 2022 • 16:45 - 17:00 EDT | Room 518 a

SESSION 31: DETECTORS AND CAMERAS FOR WAVEFRONT SENSING

21 July 2022 • 17:00 - 17:30 EDT | Room 518 a

Session Chair: Fernando Quirós-Pacheco, GMTO Corp. (United States)

12185-94

MKID, an energy sensitive superconducting detector for the next generation of XAO systems

Author(s): Aurelie Magniez, Timothy J. Morris, Kieran O'Brien, Durham Univ. (United Kingdom)

21 July 2022 • 17:00 - 17:15 EDT | Room 518 a

12185-95

C-Blue One : A family of CMOS high speed cameras for wavefront sensing

Author(s): Jean-Luc Gach, David Boutolleau, Thomas Carmignani, Fabien Clop, Isaure De Kernier, Philippe Feautrier, Matthieu Florentin, Stéphane Lemarchand, Jordan Pettigiani, Theo Romano, Eric Stadler, Julien Tugnoli, Yann Wanwanscappel, First Light Imaging S.A.S. (France)

21 July 2022 • 17:15 - 17:30 EDT | Room 518 a

SESSION 32: WAVEFRONT RECONSTRUCTION AND CONTROL ALGORITHMS I

22 July 2022 • 09:00 - 10:15 EDT | Room 518 a

Session Chair: Clémentine Béchet, Pontificia Univ. Católica de Chile (France)

12185-309

The MICADO first light imager for the ELT : Windshake and vibrations: a full data-based predictive controller for the MICADO SCAO mode, including impact of M4-M5 dynamics

Author(s): Amal Zidi, Institut d'Optique Graduate School (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Henri-François Raynaud, Caroline Kulcsár, Institut d'Optique Graduate School (France); Fabrice Vidal, Éric Gendron, Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

22 July 2022 • 09:00 - 09:15 EDT | Room 518 a

12185-97

Beyond FRiM, ASAP: A family of Sparse Approximation for covariance matrices and Preconditioners

Author(s): Éric M. Thiébaut, Michel Tallon, Samuel Thé, Loïc Denis, Univ. de Lyon (France), Ecole Normale Supérieure de Lyon (France), CNRS (France)

22 July 2022 • 09:15 - 09:45 EDT | Room 518 a

12185-98

Linear-quadratic-Gaussian predictive control for the Gran Telescopio Canarias AO system: design issues and first bench results

Author(s): Lucas Marquis, Lab. Charles Fabry (France), Institut d'Optique Graduate School (France); Caroline Kulcsár, Lab. Charles Fabry (France), Institut d'Optique Graduate School (France); Iciar Montilla, Instituto de Astrofísica de Canarias (Spain); Henri-François Raynaud, Lab. Charles Fabry (France), Institut d'Optique Graduate School (France); José Marco de la Rosa, Óscar Tubío Araújo, Instituto de Astrofísica de Canarias (Spain); Alastair Basden, Durham Univ. (United Kingdom); Marcos Reyes García-Talavera, Instituto de Astrofísica de Canarias (Spain)

22 July 2022 • 09:45 - 10:00 EDT | Room 518 a

12185-99

Predictive adaptive optics for satellite tracking applications: optical communications and satellite observation

Author(s): Pablo Rodríguez Robles, Cyril Petit, Jean-Marc Conan, ONERA (France); Bouchra Benammar, Ctr. National d'Études Spatiales (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

22 July 2022 • 10:00 - 10:15 EDT | Room 518 a

SESSION 33: WAVEFRONT RECONSTRUCTION AND CONTROL ALGORITHMS II

22 July 2022 • 10:30 - 11:45 EDT | Room 518 a

Session Chair: Olivier Guyon, Steward Observatory (United States)

12185-100

Fourier-filtering wavefront sensing design optimization for different applications (Invited Paper)

Author(s): Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Olivier Fauvarque, Ifremer (France); Nicolas Levraud, Mahawa Cissé, Lab. d'Astrophysique de Marseille (France); Jean-François Sauvage, Lab. d'Astrophysique de Marseille (France), ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France)

22 July 2022 • 10:30 - 11:00 EDT | Room 518 a

12185-101

Multi-agent reinforcement learning with a generative adversarial network reconstructor for closed-loop AO control with pyramid wavefront sensors

Author(s): Bartomeu Pou Mulet, Barcelona Supercomputing Ctr. - Ctr. Nacional de Supercomputación (Spain), Univ. Politècnica de Catalunya (Spain); Jeffrey Smith, The Australian National Univ. (Australia); Eduardo Quiñones, Barcelona Supercomputing Ctr. - Ctr. Nacional de Supercomputación (Spain); Mario Martin, Univ. Politècnica de Catalunya (Spain); Damien Gratadour, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (Australia), The Australian National Univ. (Australia)

22 July 2022 • 11:00 - 11:15 EDT | Room 518 a

12185-102

Bench Results With Supervised Predictive Control for Adaptive Optics Systems

Author(s): Robin Swanson, Univ. of Toronto (Canada); Jacob Taylor, Masen Lamb, Dunlap Institute for Astronomy & Astrophysics (Canada); Carlos M. Correia, Space ODT (Portugal); Suresh Sivanandam, Dunlap Institute for Astronomy & Astrophysics (Canada), Univ. of Toronto (Canada); Kiriakos Kutulakos, Univ. of Toronto (Canada)

22 July 2022 • 11:15 - 11:30 EDT | Room 518 a

12185-104

An iterative, wavelet based real-time reconstructor for MAORY

Author(s): Bernadett Stadler, Ronny Ramlau, Johannes Kepler Univ. Linz (Austria); Daniel Jodlbauer, Johann Radon Institute for Computational and Applied Mathematics (Austria)

22 July 2022 • 11:30 - 11:45 EDT | Room 518 a

Coffee Break 10:15 - 10:30

SESSION 34: LASER GUIDE STARS

22 July 2022 • 13:00 - 14:00 EDT | Room 518 a

Session Chair: Timothy J. Morris, Durham Univ. (United Kingdom)

12185-105

Novel 63W CW 589nm chirped laser for Laser Guide Star Adaptive Optics (Invited Paper)

Author(s): Domenico Bonaccini Calia, Wolfgang K. Hackenberg, European Southern Observatory (Germany); Daoping Wei, MPB Communications Inc. (Canada); Martin Enderlein, Sebastian Hepp, TOPTICA Projects GmbH (Germany); Wallace R. L. Clements, MPB Communications Inc. (Canada); Frank Lison, TOPTICA Projects GmbH (Germany); Renate Hinterschuster, European Southern Observatory (Germany)

22 July 2022 • 13:00 - 13:30 EDT | Room 518 a

12185-106

Simulating CaNaPy performance with PASSATA: bistatic versus monostatic laser propagation.

Author(s): Noelia Martínez Rey, The Australian National Univ. (Australia); Guido Agapito, Alfio Puglisi, INAF (Italy); Domenico Bonaccini Calia, Pierre Haguenauer, European Southern Observatory (Germany); James Osborn, Matthew J. Townson, Durham Univ. (United Kingdom); Mauro Centrone, Marco Faccini, INAF (Italy); David Alaluf, European Space Agency (Netherlands); Marcos Reyes García-Talavera, Luis Fernando Rodríguez Ramos, Instituto de Astrofísica de Canarias (Spain)

22 July 2022 • 13:30 - 13:45 EDT | Room 518 a

12185-107

A brief history of flux: the ups and downs of Sodium layer density

Author(s): Pierre Haguenauer, European Southern Observatory (Germany)

22 July 2022 • 13:45 - 14:00 EDT | Room 518 a

Lunch Break 12:00 - 13:00

SESSION 35: WAVEFRONT SENSING IN FOCAL PLANES

22 July 2022 • 14:00 - 14:45 EDT | Room 518 a

12185-108

Demonstration of a photonic-lantern focal-plane wavefront sensor using fibre mode conversion and deep learning

Author(s): Barnaby R. M. Norris, Jin Wei, Christopher Betters, Sergio Leon-Saval, The Univ. of Sydney (Australia); Yinzi Xin, Jonathan Lin, Caltech (United States); Yoo Jung Kim, Univ. of California, Los Angeles (United States); Steph Sallum, Univ. of California, Irvine (United States); Julien Lozi, Sébastien Vievard, Olivier Guyon, National Astronomical Observatory of Japan (United States); Pradip R. Gatkine, Nemanja Jovanovic, Dimitri Mawet, Caltech (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States)

22 July 2022 • 14:00 - 14:15 EDT | Room 518 a

12185-109

Study of the LIFT focal-plane wavefront sensor for GALACSI NFM

Author(s): Arseniy Kuznetsov, European Southern Observatory (Germany), Lab. d'Astrophysique de Marseille (France); Sylvain Oberti, European Southern Observatory (Germany); Cedric T. Heritier, ESO (Germany); Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Benoit Neichel, Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Stefan Ströbele, European Southern Observatory (Germany); Carlos M. Correia, Space ODT (Portugal)

22 July 2022 • 14:15 - 14:30 EDT | Room 518 a

12185-110

A physics-based deep learning approach for focal-plane wavefront sensing

Author(s): Maxime Quesnel, Gilles Orban de Xivry, Gilles Louppe, Olivier Absil, Liège Univ. (Belgium)

22 July 2022 • 14:30 - 14:45 EDT | Room 518 a

SESSION 36: STATUS (ON-SKY)

22 July 2022 • 14:45 - 15:30 EDT | Room 518 a

12185-111

AO3000 at Subaru: Combining for the first time a NIR WFS using First Light's C-RED ONE and ALPAO's 64x64 DM

Author(s): Julien Lozi, Kyohoon Ahn, Subaru Telescope, NAOJ (United States); Christophe Clergeon, Subaru Telescope, NAOJ (United States), Gemini Observatory (United States), NOIRLab (United States); Vincent Deo, Subaru Telescope, NAOJ (United States); Olivier Guyon, Subaru Telescope, NAOJ (United States), The Univ. of Arizona (United States); Takashi Hattori, Yosuke Minowa, Subaru Telescope, NAOJ (United States); Shogo Nishiyama, Miyagi Univ. of Education (Japan); Yoshito Ono, Sebastien Vievard, Subaru Telescope, NAOJ (United States)

22 July 2022 • 14:45 - 15:00 EDT | Room 518 a

12185-112

Sharpening the future of medium size telescopes: First on-sky results of the SALTO demonstrator

Author(s): Gilles Orban de Xivry, Jyotirmay Paul, Olivier Absil, Liège Univ. (Belgium); Cédric Adam, Pierre Albart, Christian Bastin, Alice Boulanger, Jonathan de Ville, Eric Gabriel, Laurence Meant, Vincent Moreau, Sabrina Orban, Pierre Remacle, AMOS Ltd. (Belgium)

22 July 2022 • 15:00 - 15:15 EDT | Room 518 a

12185-113

Laser Tomography AO at the VLT: Enabling high spatial resolution for extra-galactic science

Author(s): Sylvain Oberti, Johann Kolb, European Southern Observatory (Germany); Fernando Selman, European Southern Observatory (Chile); Matteo Accardo, Emmanuel Aller-Carpentier, European Southern Observatory (Germany); Fuyan Bian, Pierre Bourget, Eduardo Garces, Johanna Hartke, European Southern Observatory (Chile); Renate Hinterschuster, Jean-Paul Kirchbauer, Barbara Klein, Arseniy Kuznetsov, Paolo La Penna, Pierre-Yves Madec, Leander Mehrgan, European Southern Observatory (Germany); Claudio Reinero, Chester Rojas, European Southern Observatory (Chile); Pavel Shchekaturov, Stefan Ströbele, Christian Soenke, European Southern Observatory (Germany); Javier Valenzuela, European Southern Observatory (Chile); Arno van Kesteren, European Southern Observatory (Germany); Thomas Wevers, European Southern Observatory (Chile); Gérard Zins, European Southern Observatory (Germany); Thierry Fusco, ONERA (France); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Carlos M. Correia, Space ODT (Portugal)

22 July 2022 • 15:15 - 15:30 EDT | Room 518 a

SESSION PS1: POSTERS: ASTRONOMY WITH AO

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-114

Optimal multi-epoch combination of direct imaging observations for improved exoplanet detection

Author(s): Jules Dallant, Maud Langlois, Éric M. Thiébaut, Ctr. de

Recherche Astrophysique de Lyon, CNRS (France); Olivier Flasseur, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: MODELING AND SIMULATION SOFTWARE

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-117

DEEP Learning for an Optimized adaptive Optics Psf estimation

Author(s): Morgan Gray, Lab. d'Astrophysique de Marseille (France); Olivier Beltramo-Martin, Lab. d'Astrophysique de Marseille (France), SpaceAble (France); Maxime Dumont, Lab. d'Astrophysique de Marseille (France), ONERA / DOTA (France); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA / DOTA (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-118

FitAO: a reinforcement learning interface and toolkit for AO

Author(s): Tomi Krokberg, Jalo Nousiainen, Lappeenranta-Lahti Univ. of Technology (Finland); Jonatan Lehtonen, University of Helsinki (Finland); Tapio Helin, Lappeenranta-Lahti Univ. of Technology (Finland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-119

Connecting the astronomical testbed community - the CAOTIC project I: Optimized teaching methods for software version control concepts

Author(s): Iva Laginja, Ctr. National d'Études Spatiales (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Lucie Leboulleux, Univ. Grenoble Alpes (France), CNRS (France), Institut de Planétologie et d'Astrophysique de Grenoble (France); Keira J. Brooks, Space Telescope Science Institute (United States); Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States); Kevin Barjot, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Pablo Rodríguez Robles, ONERA (France); Christopher Moriarty, Harvard-Smithsonian Ctr. for Astrophysics (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: MODELING, SIMULATION AND ANALYSIS OF AO SYSTEMS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-122

Visible extreme adaptive optics for GMagAO-X with the triple-stage AO architecture (TSAO).

Author(s): Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Jared R. Males, Laird Close, Univ. of Arizona (United States); Olivier Guyon, The Univ. of Arizona (United States), Subaru Telescope, NAOJ (United States), National Institutes of Natural Sciences (Japan); Alexander Hedglen, Maggie Y. Kautz, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-123

The Cumulative Effect of Low-Order Aberrations in the MagAO-X Science Path

Author(s): Richard A. Frazin, Univ. of Michigan (United States); Alexander Hedglen, Alex T. Rodack, Jared R. Males, Laird M. Close, Olivier Guyon, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-124

The multi-object adaptive optics system for the Gemini infrared multi-object spectrograph

Author(s): Scott C. Chapman, Dalhousie Univ. (Canada); Uriel Conod, Paolo Turri, The Univ. of British Columbia (Canada); Suresh Sivanandam, Masen Lamb, Univ. of Toronto (Canada); Kate J. Jackson, National Research Council Canada (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-125

ULTIMATE-Subaru : Requirement analysis of the WFS system for GLAO

Author(s): Yoshito Ono, Yosuke Minowa, Yoko Tanaka, Subaru Telescope, NAOJ (United States); Noelia Martínez Rey, Nicholas Herrald, Céline d'Orgeville, François Rigaut, Israel Vaughn, David Chandler, The Australian National Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-126

Probing the performance of Lucky Imaging with the AO system on the Gran Telescopio CANARIAS

Author(s): Bruno Femenía-Castella, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Francisco Prada, Instituto de Astrofísica de Andalucía, Consejo Superior de Investigaciones Científicas (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-127

Prediction of AO corrected PSF for AOF NFM/SPHERE

Author(s): Arseniy Kuznetsov, European Southern Observatory (Germany), Lab. d'Astrophysique de Marseille (France); Sylvain Oberti, European Southern Observatory (Germany); Benoit Neichel, Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Olivier Beltramo-Martin, SpaceAble (France), Lab. d'Astrophysique de Marseille (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-128

Modeling the noise of an AO Chain: Application to the determination of the Sky coverage and the limiting magnitude

Author(s): Imane Bekkal, Univ. Cadi Ayyad (Morocco)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-129

Study of the response of three wavefront sensors for astronomical proposals.

Author(s): Esther Soria Hernández, Roberto López López, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-130

MAVIS: performance estimation of the adaptive optics module

Author(s): Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Daniele Vassallo, INAF - Osservatorio Astronomico di Padova (Italy); Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Jesse Cranney, Hao Zhang, The Australian National Univ. (Australia); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Pinna, INAF - Osservatorio Astrofisico di Arcetri (Italy); François Rigaut, The Australian National Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-131

GPI 2.0: End-to-end simulations of the AO-coronagraph system

Author(s): Jayke S. Nguyen, Jérôme Maire, Saavidra Perera, Daniel M. Levinstein, Clarissa R. Do Ó, Quinn M. Konopacky, Univ. of California, San Diego (United States); Jeffrey K. Chilcote, Univ. of Notre Dame (United States); Joeleff Fitzsimmons, NRC-Herzberg Astronomy & Astrophysics (Canada); Randall Hamper, Univ. of Notre Dame (United States); Dan Kerley, NRC-Herzberg Astronomy

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-134

The AO simulation and the improvement plan of CRAO attached to the 1.3m Araki telescope

Author(s): Kenta Sakabe, Kyoto Sangyo Univ. (Japan); Yuji Ikeda, Kyoto Sangyo Univ. (Japan), Photocoding (Japan); Shin Oya, National Astronomical Observatory of Japan (Japan); Taiki Bessho, Photocross (Japan), Kyoto Sangyo Univ. (Japan); Reiki Kojima, Taruta Jun, Hideyo Kawakita, Kyoto Sangyo Univ. (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-135

Comparative performance analysis for double-roof pyramid wavefront sensor

Author(s): Tiago Giorgetti, Oswaldo Horikawa, Univ. de São Paulo (Brazil); Alexandre J. T. S. Mello, Univ. Tecnológica Federal do Paraná (Brazil); Rodrigo L. Stoetereau, Univ. de São Paulo (Brazil)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: POSTPROCESSING AO DATA

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-136

XPipeline: Starlight Subtraction at Scale for MagAO-X

Author(s): Joseph D. Long, Jared R. Males, Laird M. Close, Sebastiaan Y. Haffert, Katie M. Morzinski, Kyle Van Gorkom, The Univ. of Arizona (United States); Jennifer Lumbres, Warren B. Foster, Alexander D. Hedglen, Maggie Y. Kautz, Alex T. Rodack, Wyant College of Optical Sciences (United States); Lauren Schatz, Air Force Research Lab. (United States), Starfire Optical Range (United States); Kelsey L. Miller, Air Force Research Lab. (United States); David Doelman, Steven P. Bos, Frans Snik, Matthew A. Kenworthy, Leiden Observatory (Netherlands); Gilles P. P. L. Otten, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-137

Long-slit spectroscopy characterization of substellar objects with the EXOSPEC algorithm

Author(s): Samuel Thé, Éric M. Thiébaut, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Loïc Denis, Lab. Hubert Curien (France); Férréol Soulez, Maud Langlois, Ctr. de Recherche Astrophysique de Lyon, CNRS (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-138

An optical distortion solution for the Keck1 OSIRIS Imager

Author(s): Matthew Freeman, Jessica Lu, Univ. of California, Berkeley (United States); Jacques R. Delorme, Jim E. Lyke, W. M. Keck Observatory (United States); Emily Ramey, Grace Jung, Univ. of California, Berkeley (United States); Sylvain Cetre, Paul Richards, Scott J. Lilley, Ed Wetherell, Avinash Surendran, W. M. Keck Observatory (United States); Anna Coerver, Univ. of California, Berkeley (United States); Peter L. Wizinowich, W. M. Keck Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-139

Exoplanet detection in angular differential imaging: combining a statistics-based learning with a deep-based learning for improved detections

Author(s): Olivier Flasseur, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Univ. PSL (France), Institut National de Recherche en Informatique et en Automatique (France); Théo Bodrito, Institut National de Recherche en Informatique et en Automatique (France), Ecole Normale Supérieure (France), Univ. Grenoble Alpes (France); Julien Mairal, Univ. Grenoble Alpes (France), Grenoble INP (France), CNRS (France); Jean Ponce, Institut National de Recherche en Informatique et en Automatique (France), Ecole Normale Supérieure (France), CNRS (France); Maud Langlois, Ctr. de Recherche Astrophysique de Lyon, CNRS (France), Univ. de Lyon, Univ. Claud Bernard Lyon 1 (France), Ecole Normale Supérieure de Lyon (France); Anne-Marie Lagrange, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Univ. PSL (France), Univ. Grenoble Alpes, Institut de Planétologie et d'Astrophysique de Grenoble (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-140

Towards robust deconvolution of hyperspectral data cubes

Author(s): Alexis Lau, Romain Fétick, Benoit Neichel, Thierry Fusco, Olivier A. Beltramo-Martin, Lab. d'Astrophysique de Marseille (France); Andrea Hidalgo Valadez, Fraser Clarke, Univ. of Oxford (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-141

Multispectral image reconstruction of faint circumstellar environments from high contrast angular spectral differential imaging (ASDI) data

Author(s): Olivier Flasseur, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France), Univ. PSL (France); Samuel Thé, Univ. de Lyon (France), Ecole Normale Supérieure de Lyon (France), CNRS (France); Loïc Denis, Univ. de Lyon (France), Univ. Jean Monnet Saint-Etienne (France), CNRS (France); Éric M. Thiébaut, Maud Langlois, Univ. de Lyon (France), Ecole Normale Supérieure de Lyon (France), CNRS (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS5: POSTERS: POSTPROCESSING AO DATA (PSF RECONSTRUCTION)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-142

Extending AMIRAL's blind deconvolution of adaptive optics corrected images with Markov chain Monte Carlo methods

Author(s): Alix Yan, Laurent M. Mugnier, ONERA (France); Jean-François Giovannelli, Lab. d'Intégration du Matériau au Système (France), Univ. de Bordeaux (France), CNRS, BINP (France); Romain Fétick, Cyril Petit, ONERA (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-143

Unsupervised blind-deconvolution with optimal scaling applied to astronomical data

Author(s): Samuel Thé, Éric M. Thiébaut, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Loïc Denis, Lab. Hubert Curien (France); Férréol Soulez, Ctr. de Recherche Astrophysique de Lyon, CNRS (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-144

Precision speckle pattern reconstruction for high contrast imaging

Author(s): Dotan Gazith, Barak Zackay, Weizmann Institute of Science (Israel)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-145

AIROPA: Off-axis adaptive optics PSF reconstruction in simulation, on-bench, and on-sky.

Author(s): Jessica Lu, Sean Terry, Univ. of California, Berkeley (United States); Paolo Turri, University of British Columbia (Canada); Anna Ciurlo, Abhimat Gautam, Tuan Do, Andrea Ghez, University of California, Los Angeles (United States); Gunther Witzel, Max Planck Institute for Radio Astronomy (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-147

Off-axis PSF reconstruction for SCAO and MCAO systems

Author(s): Roland Wagner, Johannes Kepler Univ. Linz (Austria); Simon Hubmer, Jenny Niebsch, Johann Radon Institute for Computational and Applied Mathematics (Austria); Ronny Ramlau, Johannes Kepler Univ. Linz (Austria), Johann Radon Institute for Computational and Applied Mathematics (Austria); Bernadett Stadler, Johannes Kepler Univ. Linz (Austria)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-148

PSF Reconstruction for the SOUL pyramid-based Single Conjugate Adaptive Optics facility of the LBT

Author(s): Carmelo Arcidiacono, Andrea Grazian, Anita Zanella, Benedetta Vulcani, Elisa Portaluri, Fernando Pedichini, Marco Gullieuszik, Matteo Simioni, Roberto Piazzesi, INAF (Italy); Roland Wagner, Johann Radon Institute for Computational and Applied Mathematics (Austria); Enrico Pinna, Guido Agapito, Cédric Plantet, INAF (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-149

Status of the PSF Reconstruction Work Package for MICADO@ ELT

Author(s): Andrea Grazian, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS6: POSTERS: PROJECT STATUS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-150

Laboratory results of SCAO: getting ready for the EST MCAO.

Author(s): José Manuel González-Cava, Haresh Chulani, Yolanda Martín, Noelia Feijóo, Luzma Montoya, Horacio Rodríguez Delgado, Jorge Quintero, Francisco González, Miguel A. Núñez Cagigal, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-151

Final design of the GTC Laser Guide Star Wavefront Sensor

Author(s): Roberto Simoes, Marta Puga, Marcos Reyes García-Talavera, Jesús Patrón, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-152

On-sky performance of KalAO

Author(s): Janis Hagelberg, Nathanaël Restori, François Wildi, Bruno Chazelas, Observatoire de Genève (Switzerland), Univ. de Genève (Switzerland); Christoph Baranec, Univ. of Hawai'i at Manoa (United States); Olivier Guyon, Subaru Telescope, NAOJ (United States), AstroBiology Ctr., NINS (Japan), Steward Observatory (United States); Nicolas Buchschacher, Observatoire de Genève (Switzerland); Ludovic Genolet, Michael Sordet, Observatoire de Genève (Switzerland), Univ. de Genève (Switzerland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-154

Evaluating the performance of the Keck Observatory adaptive optics systems on crowded field data using different adaptive optics configurations

Author(s): Devin Chu, Wenmeng Ning, Tuan Do, Andrea Ghez, Univ. of California, Los Angeles (United States); Jessica Lu, Univ. of California, Berkeley (United States); Peter Wizinowich, W. M. Keck Observatory (United States); Anna Ciurlo, Abhimat K. Gautam, Univ. of California, Los Angeles (United States); Jim E. Lyke, W. M. Keck Observatory (United States); Sean Terry, Univ. of California, Berkeley (United States); Jacques R. Delorme, W. M. Keck Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-155

An Updated Preliminary Optical Design and Performance analysis of the Planetary Systems Imager Adaptive Optics System

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-156

Optical design of SPIDERS, a Subaru Pathfinder Instrument for Detecting Exoplanets & Retrieving Spectra

Author(s): Olivier Lardière, Christian Marois, Garima Singh, NRC-Herzberg Astronomy & Astrophysics (Canada); William R. Thompson, Univ. of Victoria (Canada); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); Wolfgang Heidrich, Qiang Fu, King Abdullah Univ. of Science and Technology (Saudi Arabia); Adam Johnson, Univ. of Victoria (Canada); Tim Hardy, Joeleff Fitzsimmons, NRC-Herzberg Astronomy & Astrophysics (Canada); Denis Brousseau, COPL, University Laval (Canada); Simon Thibault, COPL (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-158

A pyramid-based adaptive optics for the high-resolution echelle spectrograph at SAO RAS 6-m telescope

Author(s): Eduard R. Muslimov, ASTRON (Netherlands); Gennady Valyavin, Special Astrophysical Observatory (Russian Federation); Vincent Chambouleyron, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNES (France); Felipe Pedreros Bustos, Idir Boudjema, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNRS (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-159

The evolution of the ALIOLI instrument

Author(s): Esther Soria Hernández, Roberto López López, Alejandro Oscoz Abad, David Lopez Fernandez-Nespral, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS7: POSTERS: PROJECT STATUS (GEMINI)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-160

Status of the GIRMOS MOAO demonstrator

Author(s): Uriel Conod, The Univ. of British Columbia (Canada); Olivier Lardière, Kate Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada); Paolo Turri, Scott C. Chapman, The Univ. of British Columbia (Canada); Masen Lamb, Suresh Sivanandam, The David Dunlap Observatory (Canada); Glen Herriot, Jean-Pierre Véran, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-161

An on-sky test bench for the GIRMOS open-loop calibration procedures

Author(s): Paolo Turri, The Univ. of British Columbia (Canada); Scott C. Chapman, NRC-Herzberg Astronomy & Astrophysics (Canada); Uriel Conod, The Univ. of British Columbia (Canada); Olivier Lardière, Kate J. Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada); Tarun Kumar, Univ. of Victoria (Canada); David R. Andersen, Jean-Pierre Véran, Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-162

Gemini North Adaptive Optics facility overview and status updates

Author(s): Gaetano Sivo, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Julia Scharwächter, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Manuel Lazo, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Célia Blain, Stephen Goodsell, Stephen Smee, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Martin Tschimmel, Henry Roe, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Jennifer Lotz, Kim Tomasino-Reed, William N. Rambold, Courtney Raich, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Ricardo Cardenes, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Angelic Ebbers, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Tim Gaggstatter, Pedro Gigoux, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Thomas Schneider, Charles Cavedoni, Stacy Kang, Stanislas Karewicz, Heather Carr, Jesse Ball, Paul Hirst, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Emmanuel Chirre, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); John White, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Lindsay Magill, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Molly Grogan, Anne Jordan, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Suresh Sivanandam, Masen Lamb, Univ. of Toronto (Canada); Adam Muzzin, York Univ. (Canada); Eduardo Marin, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (United States), W. M. Keck Observatory (United States); Scott C. Chapman, Dalhousie Univ. (Canada); Jennifer S. Dunn, Dan Kerley, Jean-Pierre Véran, NRC-Herzberg Astronomy & Astrophysics (Canada); Morten Andersen, European Southern Observatory (Germany); Franck Marchis, SETI Institute (United States); Ruben Diaz, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); John P. Blakeslee, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Michael J. Pierce, Univ. of Wyoming (United States); Rodrigo Carrasco, Hwihyun Kim, NSF's National Optical-Infrared Astronomy Research Lab. (Chile), Gemini Observatory (Chile); Anja Feldmeier-Krause, The Univ. of Chicago (United States), Max-Planck-Institut für Astronomie (Germany); Alan McConnachie, NRC-Herzberg Astronomy & Astrophysics (Canada); James Jee, Yonsei Univ. (Korea, Republic of); Wesley Fraser, NRC-Herzberg Astronomy & Astrophysics (Canada); S. Mark Ammons, Lawrence Livermore National Lab. (United States); Christopher Packham, The Univ. of Texas at San Antonio (United States); John Bally, Univ. of Colorado Boulder (United States); Trent J. Dupuy, The Univ. of Edinburgh (United Kingdom); Daniel Huber, Univ. of Hawai'i (United States); Marie Lemoine-Busserolle, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States); Thomas Puzia, Pontificia Univ. Católica de Chile (Chile); Paolo Turri, The Univ. of British Columbia (Canada); Chadwick Trujillo, Northern Arizona Univ. (United States); Janice Lee, NSF's National Optical-Infrared Astronomy Research Lab. (United States), Gemini Observatory (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-163

GPI 2.0: performance evaluation of the pyramid wavefront sensor

Author(s): Saavidra Perera, Jérôme Maire, Clarissa R. Do Ó, Jayke S. Nguyen, Daniel M. Levinstein, Quinn M. Konopacky, Univ. of California, San Diego (United States); Jeffrey K. Chilcote, Univ. of Notre Dame (United States); Joeleff Fitzsimmons, NRC-Herzberg Astronomy & Astrophysics (Canada); Randall Hamper, Univ. of Notre Dame (United States); Dan Kerley, NRC-Herzberg Astronomy & Astrophysics (Canada); Bruce Macintosh, Stanford Univ. (United States); Christian Marois, NRC-Herzberg Astronomy & Astrophysics (Canada); Fredrik T. Rantakyrö, Gemini Observatory (Chile); Dmitry Savransky, Cornell Univ. (United States); Jean-Pierre Véran, NRC-Herzberg Astronomy & Astrophysics (Canada); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); S. Mark Ammons, Lawrence Livermore National Lab. (United States); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marc-André Boucher, OMP inc. (Canada); Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada); Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Guillaume Filion, Jean-Thomas Landry, OMP inc. (Canada); Olivier Lardière, NRC-Herzberg Astronomy & Astrophysics (Canada); Duan Li, Cornell Univ. (United States); Alex Madurowicz, Stanford Univ. (United States); Dillon H. Peng, Univ. of Notre Dame (United States); Lisa Poyneer, Lawrence Livermore National Lab. (United States); Eckhart Spalding, Univ. of Notre Dame (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS8: POSTERS: PROJECT STATUS (VLT)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-164

SAXO+ upgrade: system choices & numerical simulations

Author(s): Charles Goulas, Observatoire de Paris (France); Fabrice Vidal, Raphaël Galicher, Anthony Boccaletti, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Faustine Cantalloube, Lab. d'Astrophysique de Marseille (France); Éric Gendron, Arnaud Sevin, Florian Ferreira, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Gaël Chauvin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Maud Langlois, Ctr. de Recherche Astrophysique de Lyon (France); Julien Milli, Institut de Planétologie et d'Astrophysique de Grenoble (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-165

SAXO+, a second-stage adaptive optics for SPHERE on VLT: optical and mechanical design concept

Author(s): Eric Stadler, Institut de Planétologie et d'Astrophysique de Grenoble (France); Emiliano Diolaiti, Laura Schreiber, Fausto Cortecchia, Matteo Lombini, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Magali Loupias, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Yves Magnard, Institut de Planétologie et d'Astrophysique de Grenoble (France); Adriano De Rosa, Giuseppe Malaguti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Didier Maurel, Institut de Planétologie et d'Astrophysique de Grenoble (France); Gianluca Morgante, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Patrick Rabou, Sylvain Rochat, Institut de Planétologie et d'Astrophysique de Grenoble (France); Fabrice Vidal, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Faustine Cantalloube, Lab. d'Astrophysique de Marseille (France); Éric Gendron, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Raffaele Gratton, INAF - Osservatorio Astronomico di Padova (Italy); Julien Milli, David Mouillet,

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-166

SPHERE adaptive optics performance for faint targets

Author(s): Matias Jones, European Southern Observatory (Chile); Julien Milli, Institut de Planétologie et d'Astrophysique de Grenoble (France); Zahed Wahhaj, Cristian M. Romero, Benjamin Courtney-Barrer, Robert J. De Rosa, Israel Blanchard, European Southern Observatory (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS9: POSTERS: PROJECT STATUS (GMT)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-167

A novel hexpyramid pupil slicer for an ExAO Parallel DM for the Giant Magellan Telescope

Author(s): Maggie Y. Kautz, Wyant College of Optical Sciences (United States); Laird Close, Jared R. Males, The Univ. of Arizona (United States); Alexander Hedglen, Wyant College of Optical Sciences (United States); Sebastiaan Y. Haffert, Fernando Coronado, The Univ. of Arizona (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-168

NGWS-P: the Natural Guide Star Wavefront Sensor Prototype of the GMT single-conjugate AO system NGAO.

Author(s): Cédric Plantet, Anne-Laure Lucie Cheffot, Enrico Pinna, Simone Esposito, Nicolò Azzaroli, Fabio Rossi, Marco Bonaglia, Alfio Puglisi, Tommaso Lapucci, Luca Carbonaro, INAF - Osservatorio Astrofisico di Arcetri (Italy); Fernando Quirós-Pacheco, GMTO Corp. (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Antonin Bouchez, Richard T. Demers, GMTO Corp. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-169

piston-tip-tilt mirror array in the wide field phasing testbed for the giant Magellan telescope

Author(s): Daniel J. Catropa, Harvard-Smithsonian Ctr. for Astrophysics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-170

The conceptual design of GMagAO-X: visible wavelength high contrast imaging with GMT

Author(s): Jared R. Males, Laird Close, Sebastiaan Y. Haffert, Olivier Guyon, Fernando Coronado, Victor Gasho, Jamison Noenickx, John Ford, Doug M. Kelly, Olivier Durney, The Univ. of Arizona (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS10: POSTERS: PROJECT STATUS (ELT)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-171

HARMONI at ELT: development of the High Contrast module

Author(s): Laurent Jocou, Patrick Rabou, Thibaut Moulin, Yves Magnard, Adrien Hours, Fabrice Pancher, Sylvain Guieu, Alexis Carlotti, Alain Delboulbé, Maxime Vérove, Eric Stadler, Didier Maurel, Sylvain Rochat, François Hénault, Institut de Planétologie et d'Astrophysique de Grenoble (France); Kjetil Dohlen, Lab. d'Astrophysique de Marseille, CNRS (France); Niranjan Thatte, Univ. of Oxford (United Kingdom); Benoit Neichel, Pascal Vola, Lab. d'Astrophysique de Marseille, CNRS (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Dave Melotte, UK Astronomy Technology Ctr. (United Kingdom); Matthias Tecza, Univ. of Oxford (United Kingdom); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-172

HARMONI at ELT: designing a laser guide star wavefront sensors for the ELT

Author(s): Anne Costille, Anne Bonnefoi, Edgard Renault, William Ceria, Kjetil Dohlen, Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Zoltán Hubert, Institut de Planétologie et d'Astrophysique de Grenoble (France), Univ. Grenoble Alpes (France); Thibaut Moulin, Patrick Rabou, Jean-Jacques Correia, Institut de Planétologie et d'Astrophysique de Grenoble (France); Saul Menendez Mendoza, Instituto de Astrofísica de Canarias (Spain); Thierry Fusco, ONERA (France); Felipe Pedreros Bustos, Pierre Jouve, Kacem El Hadi, Lab. d'Astrophysique de Marseille (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Hermine Schnetler, Dave Melotte, UK Astronomy Technology Ctr. (United Kingdom); Niranjan Thatte, Univ. of Oxford (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-173

HARMONI at ELT: Full scale prototype of the LGS WFS.

Author(s): Pierre Jouve, Felipe Pedreros Bustos, Anne Costille, Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Kjetil Dolhen, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-174

MORFEO (formerly known as MAORY) LOR WFS module preliminary electronics design

Author(s): Tommaso Lapucci, Marco Bonaglia, Lorenzo Busoni, Paolo Grani, Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Julian Ziegleder, Max-Planck-Institut für extraterrestrische Physik (Germany); Christian Eredia, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-175

MAORY/MORFEO Low-Order and Reference WFS module preliminary design

Author(s): Marco Bonaglia, Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Nicolò Azzaroli, Lorenzo Busoni, Runa Briguglio, Giulia Carlà, Simone Esposito, Paolo Grani, Tommaso Lapucci, Cédric Plantet, Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Edoardo Maria Alberto Redaelli, Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-176

MAORY@ELT: Thermal Control System preliminary design

Author(s): Matteo Aliverti, Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); Edoardo Maria Alberto Redaelli, Simone Doniselli, INAF - Osservatorio Astronomico di Brera (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Vincenzo De Caprio, Vincenzo Cianniello, Christian Eredia, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-177

MAORY@ELT: Optomechanical preliminary design

Author(s): Edoardo Maria Alberto Redaelli, Matteo Aliverti, Marco Riva, Giorgio M. Pariani, Marcello Scalera, Simone Doniselli, INAF - Osservatorio Astronomico di Brera (Italy); Vincenzo De Caprio, Vincenzo Cianniello, Christian Eredia, Enrico Cascone, Domenico D'Auria, INAF - Osservatorio Astronomico di Capodimonte (Italy); Ivan Di Antonio, Gianluca Di Rico, Gabriele Rodeghiero, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Jacopo Farinato, Demetrio Magrin, Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Italo Foppiani, Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-178

MAORY @ ELT: preliminary design of the adaptive optics subsystem

Author(s): Lorenzo Busoni, Guido Agapito, Cédric Plantet, Giulia Carlà, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sylvain Oberti, European Southern Observatory (Germany); Marco Bonaglia, Tommaso Lapucci, Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Carmelo Arcidiacono, INAF - Osservatorio Astronomico di Padova (Italy); Zoltan Hubert, Patrick Rabou, Institut de Planétologie et d'Astrophysique de Grenoble (France); Bernardo Salasnich, Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Italo Foppiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-180

The MICADO first light imager for the ELT: overview of the SCAO module at its final design review

Author(s): Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris à Meudon (France); Jean-Tristan Buey, Éric Gendron, Sonia Karkar, Fabrice Vidal, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Mathieu Cohen, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris (France); Frédéric Chapron, Arnaud Sevin, Simone Thijs, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Sylvestre Taburet, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris (France); Bruno Borgo, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Jean-Michel Huet, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris (France); Alexandre Blin, Division technique de l'INSU (France); Olivier Dupuis, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Julien Gaudemard, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris (France); Florian Ferreira, Jordan Raffard, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Fanny Chemla, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris (France); Vincent Lapeyrère, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Vincent Deo, Subaru Telescope, NAOJ (United States); Arielle Bertrou-Cantou, Nicolas Galland, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Sylvain Guieu, Institut de Planétologie et d'Astrophysique de Grenoble (France); Eric Meyer, Nicolas Gautheros, Emmanuel Tisserand, Hervé Locatelli, François Meyer, Institut UTINAM (France); Bertrand Le Ruyet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Amal Zidi, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France), Institut d'Optique Graduate School (France); Caroline Kulcsár, Henri-François Raynaud, Institut d'Optique Graduate School (France); Damien Gratadour, Roderick Dembet, Manuel Ortiz, Claude Collin, Vartan Arslanyan, Lahoucine Ghouchou, Ihsan Ibn Taïeb, Pierre Baudoz, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Johann Gironnet, Division technique de l'INSU (France); Gérard Rousset, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Sebastian Rabien, Veronika Hörmann, Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-181

MICADO - first light imager for the ELT: FDR optical design for the SCAO WFS

Author(s): Mathieu Cohen, Fanny Chemla, Observatoire de Paris à Meudon (France), Galaxies Etoiles Physique Instrumentation (France); Éric Gendron, Observatoire de Paris (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Fabrice Vidal, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Olivier Dupuis, Simone Thijs, Vincent Lapeyrère, Jordan Raffard, Jean-Tristan Buey, Sonia Karkar, Yann Clénet, Observatoire de Paris (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-182

The MICADO first light imager for the ELT: design and performance of the high contrast mode

Author(s): Pierre Baudoz, Elsa Huby, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); David Doelman, Leiden Univ. (Netherlands); Frans Snik, Leiden Observatory (Netherlands); Yann Clenet, Olivier Dupuis, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS11: POSTERS: WAVEFRONT SENSING WITH LASER GUIDE STARS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-183

Laboratory testing of the Ingot WFS

Author(s): Simone Di Filippo, Davide Greggio, Maria Bergomi, Kalyan Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Elisa Portaluri, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Carmelo Arcidiacono, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); Roberto Ragazzoni, Univ. degli Studi di Padova (Italy); Marco Dima, Luca Marafatto, Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-184

Fourier filter LGS wavefront sensing for ELT size telescopes

Author(s): Francisco Oyarzun, Pontificia Univ. Católica de Chile (Chile); Vincent Chambouleyron, Aix-Marseille Univ. (France); Benoît Neichel, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNRS (France); Thierry Fusco, Aix-Marseille Univ. (France), ONERA (France), Univ. Paris-Saclay (France); Andrés Guesalaga, Pontificia Univ. Católica de Chile (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-186

LaserOptical DifferentiationWFSdesign and lab characterization forSIGHT

Author(s): Mitsuko K. Roberts, Richard G. Dekany, Caltech (United States); Sebastiaan Y. Haffert, The Univ. of Arizona (United States); Daniel L. McKenna, Lauren Fahey, Caltech (United States); Julian Hovanec, Westridge School (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS12: POSTERS: WAVEFRONT SENSING (ELTS)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-187

HARMONI at ELT: Prototyping for Single-Conjugate AO Sensor subsystem

Author(s): Kacem El Hadi, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNRS (France); Jean-François Sauvage, ONERA (France), Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, CNRS, CNES (France); Kjetil Dohlen, Edgard Renault, William Bon, Pascal Vola, Fabrice Madec, Thibaut Crauchet, David Le Mignant, Benoit Neichel, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNRS (France); Thierry Fusco, ONERA (France), Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseill, CNRS, CNES (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Dave J. Melotte, UK Astronomy Technology Ctr. (United Kingdom); Matthias Tecza, Niranjan Thatte, Univ. of Oxford (United Kingdom); Jérôme Amiaux, Jérôme Paufique, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-188

The MAORY fine optical alignment and recollimation strategy, preliminary simulations from 'out of focus' PSF images

Author(s): Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy), INAF - Osservatorio Astronomico d'Abruzzo (Italy); Jacopo Farinato, Demetrio Magrin, Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giorgio Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Elena Carolo, Daniele Vassallo, Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); Vincenzo Cianniello, Vincenzo De Caprio, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco Riva, Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-189

Managing NFIRAOS optical enclosure environmental conditions from a high level software system

Author(s): Jonathan Stocks, Glen Herriot, David R. Andersen, Adam Densmore, Malcolm Smith, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-190

HARMONI at ELT: SCAO optical design

Author(s): Edgard Renault, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-191

HARMONI at ELT: LGSS optical design

Author(s): Edgard Renault, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-192

Pupil-plane LLOWFS simulation and laboratory results from NEW-EARTH's high-contrast imaging testbed.

Author(s): Garima Singh, NRC-Herzberg Astronomy & Astrophysics (Canada); William R. Thompson, Univ. of Victoria (Canada); Olivier Lardière, Christian Marois, NRC-Herzberg Astronomy & Astrophysics (Canada); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); Adam B. Johnson, Univ. of Victoria (Canada); Jean-Pierre Véran, Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada); Qiang Fu, Wolfgang Heidrich, King Abdullah Univ. of Science and Technology (Saudi Arabia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-193

HARMONI at ELT - The Low Order Bench: natural guide star wavefront sensors to support LTAO mode

Author(s): Lisa F. Bardou, Timothy J. Morris, Marc Dubbeldam, David Little, Joss Guy, Rishi Deshmukh, Andrew Dunn, Durham Univ. (United Kingdom); David King, Harston Optical Services (United Kingdom); Javier Piqueras López, Alberto Estrada Piqueras, Ctr. de Astrobiología (Spain); Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS13: POSTERS: SENSING AND CORRECTION OF WAVEFRONT FRAGMENTATION

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-194

HARMONI at ELT: using a 2x2 Shack Hartmann to sense petalling

Author(s): Lisa F. Bardou, Timothy J. Morris, Durham Univ. (United Kingdom); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Jean-François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Manal Chebbo, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-195

MAORY/MORFEO and LIFT: can the low order wavefront sensors become phasing sensors?

Author(s): Guido Agapito, Cédric Plantet, Giulia Carlà, Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-196

Differential piston sensing with LIFT: application to the GMT

Author(s): Cédric Plantet, Anne-Laure Lucie Cheffot, Enrico Pinna, Simone Esposito, Nicolò Azzaroli, Fabio Rossi, Marco Bonaglia, Alfio Puglisi, Tommaso Lapucci, Luca Carbonaro, INAF - Osservatorio Astrofisico di Arcetri (Italy); Fernando Quirós-Pacheco, GMTO Corp. (United States); Marcos A. van Dam, Flat Wavefronts (New Zealand); Antonin Bouchez, Richard T. Demers, GMTO Corp. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-197

GPU-based High-order adaptive OpticS Testbench

Author(s): Byron Engler, Markus Kasper, Paul Bristow, Cedric Taissir Heritier, Serban Leveratto, Christophe Verinaud, Miska Le Louarn, European Southern Observatory (Germany); Jalo Nousiainen, Tapio Helin, LUT Lappeenranta (Finland); Markus Bonse, Sascha Quanz, Adrian Glauser, ETHZ (Switzerland); Julien Bernard, ANU (Australia); Damien Gratadour, LESIA (France); Richard Clare, Univ. of Canterbury (New Zealand)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-198

Adapting the pyramid wavefront sensor for pupil fragmentation of the ELT class telescopes

Author(s): Nicolas Levraud, Lab. d'Astrophysique de Marseille (France), ONERA (France); Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Olivier Fauvarque, Ifremer (France); Mahawa Cissé, Jean-François Sauvage, Thierry Fusco, ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Enrico Pinna, Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-199

Segment phasing for giant telescopes using Moving Horizon Estimation

Author(s): Jesse Cranney, François Rigaut, Robert Sharp, The Australian National Univ. (Australia); José De Doná, The Univ. of Newcastle (Australia); Ryan McCloy, The Univ. of New South Wales (Australia); Marcos A. van Dam, Flat Wavefronts (New Zealand)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-200

Detection of discontinuous phase steps with a pyramid wavefront sensor

Author(s): Deborah Malone, National Univ. of Ireland, Galway (Ireland), European Southern Observatory (Germany); Petr Janout, Samuel Lévêque, Ronald Holzlöhner, Byron Engler, Markus Kasper, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-201

Understand and correct for the low wind effect on the SPHERE and GRAVITY+ adaptive optics

Author(s): Nicolas Pourré, Jean-Baptiste Le Bouquin, Julien Milli, Institut de Planétologie et d'Astrophysique de Grenoble (France); Jean-François Sauvage, Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Carlos M. Correia, Space ODT (Portugal); Sylvain Oberti, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-202

Machine learning techniques for piston sensing

Author(s): Fabio Rossi, Cédric Plantet, Anne-Laure Lucie Ceffot, Guido Agapito, Enrico Pinna, Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS14: POSTERS: CALIBRATION (ELTS)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-203

HARMONI at ELT: Adaptive Optics Calibration Unit from design to prototyping

Author(s): Noah Schwartz, UK Astronomy Technology Ctr. (United Kingdom); Kjetil Dohlen, Kacem El Hadi, Lab. d'Astrophysique de Marseille (France); Jean François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Lisa F. Bardou, Timothy J. Morris, Durham Univ. (United Kingdom); Martin Black, UK Astronomy Technology Ctr. (United Kingdom); Benoit Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, ONERA (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Dave Melotte, UK Astronomy Technology Ctr. (United Kingdom); Niranjan Thatte, Univ. of Oxford (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-204

MAORY@ELT: Calibration unit overview

Author(s): Gianluca Di Rico, Gabriele Rodeghiero, Angelo Valentini, Mauro Dolci, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Alexander Goncharov, Nicholas Devaney, National Univ. of Ireland, Galway (Ireland); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sylvain Oberti, European Southern Observatory (Germany); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); Vincenzo Cianniello, Domenico D'Auria, Vincenzo De Caprio, INAF - Osservatorio Astronomico di Capodimonte (Italy); Amico Di Cianno, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Christian Eredia, INAF - Osservatorio Astronomico di Capodimonte (Italy); Enrico Giro, Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); Elisa Portaluri, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, Ugo Di Giammatteo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-205

The Calibration and Test Unit of MAORY/MORFEO: analyses and performance evaluation

Author(s): Ivan Di Antonio, Gabriele Rodeghiero, Gianluca Di Rico, Mauro Dolci, Angelo Valentini, INAF (Italy); Alexander Goncharov, Nicholas Devaney, National Univ. of Ireland, Galway (Ireland); Guido Agapito, Vincenzo Cianniello, Edoardo Redaelli, INAF (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-206

Optical characterisation of the optical test tower for M4, the E-ELT adaptive mirror.

Author(s): Nicolò Azzaroli, INAF (Italy); Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marco Xompero, Armando Riccardi, Chiara Selmi, Giorgio M. Pariani, Luca Oggioni, INAF (Italy); Roberto Biasi, Microgate S.r.l. (Italy); Daniele Gallieni, Matteo Tintori, A.D.S. International S.r.l. (Italy); Elise Vernet, Aglaé Kellerer, European Southern Observatory (Germany); Omar Baracchini, A.D.S. International S.r.l. (Italy); Marc Cayrel, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-207

MORFEO (formerly known as MAORY) @ ELT: concept for the deformable mirrors test facility

Author(s): Nicolò Azzaroli, Marco Xompero, Giorgio M. Pariani, Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS15: POSTERS: CONTROL SYSTEMS (ELTS)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-208

HARMONI at ELT: Adaptive Optics Control System design and prototyping status

Author(s): Sofia Dimoudi, David Barr, Sylvain Cetre, Matthew J. Townson, Edward J. Younger, Timothy J. Morris, Durham Univ. (United Kingdom); Asim Yaqoob, Hermine Schnetler, STFC Rutherford Appleton Lab. (United Kingdom), UK Astronomy Technology Ctr. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-209

MAORY@ELT: Preliminary Design of the Real-Time Computer

Author(s): Andrea Baruffolo, Ivano Baronchelli, INAF - Osservatorio Astronomico di Padova (Italy); Salvatore Savarese, INAF - Osservatorio Astronomico di Capodimonte (Italy); Italo Foppiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giulio Capasso, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Amedeo Petrella, Danilo Selvestrel, INAF - Osservatorio Astronomico di Padova (Italy); Lorenzo Busoni, Guido Agapito, Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marcos Suárez Valles, Sylvain Oberti, Lorenzo Pettazzi, Pierre Haguenauer, European Southern Observatory (Germany); Roberto Biasi, Mauro Manetti, Microgate S.r.l. (Italy); Damien Gratadour, François Rigaut, Astralis - AITC (Australia); Jean-Pierre Véran, Dan Kerley, Malcom Smith, Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada); Enrico Giro, Rosanna Sordo, Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS16: POSTERS: MODELING, SIMULATION AND ANALYSIS OF AO SYSTEMS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-211

HARMONI at ELT: System analysis and performance estimation of the high-contrast module

Author(s): Alexis Carlotti, Laurent Jocou, Thibaut Moulin, Adrien Hours, Alexis Bidot, Patrick Rabou, Yves Magnard, Alain Delboulbé, Fabrice Pancher, Institut de Planétologie et d'Astrophysique de Grenoble (France); Élodie Choquet, Lab. Astrophysique de Marseille (France); Arthur Vigan, Mathis Houllé, Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); Jean-François Sauvage, Lab. Astrophysique de Marseille (France), ONERA (France); Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Niranjan Thatte, Univ. of Oxford (United Kingdom); Fraser Clarke, Univ. of Oxford (France); Dave Melotte, UK Astronomy Technology Ctr. (United Kingdom); Matthias Tecza, Univ. of Oxford (United Kingdom); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-212

MAORY optical design and performances: status at preliminary design review

Author(s): Giorgio Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Andrew P. Rakich, Mersenne Optical Consulting (New Zealand); Bernard-Alexis Delabre, Johan Kosmalski, European Southern Observatory (Germany); Patrick Rabou, Institut de Planétologie et d'Astrophysique de Grenoble (France); Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy); Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy); Edoardo Maria Alberto Redaelli, Matteo Aliverti, Luca Oggioni, INAF - Osservatorio Astronomico di Brera (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy), INAF - Osservatorio Astronomico d'Abruzzo (Italy); Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Vincenzo Cianniello, Vincenzo De Caprio, INAF - Osservatorio Astronomico di Capodimonte (Italy); Italo Foppiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Ugo Di Giammatteo, Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-213

Chromaticity in Solar Adaptive Optics: a case study for the European Solar Telescope

Author(s): Bruno Femenía-Castella, Miguel A. Núñez Cagigal, Sergio Bonaque-González, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-214

MICADO: first light imager for the ELT: FDR Numerical simulations for the SCAO mode

Author(s): Fabrice Vidal, Nicolas Galland, Arielle Bertrou-Cantou, Éric Gendron, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Vincent Deo, Subaru Telescope, NAOJ (United States); Amal Zidi, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Institut d'Optique Graduate School (France); Florian Ferreira, Arnaud Sevin, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Caroline Kulcsár, Henri-François Raynaud, Institut d'Optique Graduate School (France); Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-215

A Preliminary Design Review study of the scientific performance of MAORY

Author(s): Carmelo Arcidiacono, Paolo Ciliegi, Elisa Portaluri, Marco Gullieuszik, Michele Cantiello, Francesca Annibali, Guido Agapito, Cédric Plantet, Lorenzo Busoni, INAF (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-216

HARMONI at ELT: SCAO simulations for the High-Contrast Module of ELT-HARMONI

Author(s): Élodie Choquet, Mathis Houllé, Lab. d'Astrophysique de Marseille (France); Jean-François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Alexis Carlotti, Institut de Planétologie et d'Astrophysique de Grenoble (France); Arthur Vigan, Lab. d'Astrophysique de Marseille (France); Noah Schwartz, Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom); Thierry Fusco, ONERA (France), Lab. d'Astrophysique de Marseille (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-217

The Infrared Imaging Spectrograph (IRIS) for TMT: achieving high sky coverage through the On-Instrument Wavefront Sensor design

Author(s): David R. Andersen, Thirty Meter Telescope (Canada), NRC-Herzberg Astronomy & Astrophysics (Canada); Jenny Atwood, Jeff Crane, Jennifer S. Dunn, Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada); Lianqi Wang, Thirty Meter Telescope (United States); James Larkin, Univ. of California, Los Angeles (United States); Shelley Wright, Univ. of California, San Diego (United States); Ryuji Suzuki, National Astronomical Observatory of Japan (Japan); Robert Weber, Caltech (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-218

Effects of wind velocity profiles on turbulence-induced quasi-static aberrations

Author(s): Polly Gill, Tim Butterley, Timothy J. Morris, Durham Univ. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS17: POSTERS: ATMOSPHERIC DISTURBANCES

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-219

Turbulence profiling neural networks using imaging Shack-Hartmann data for wide-field image correction

Author(s): Ryan J. Hamilton, Michael Hart, Wyant College of Optical Sciences (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-222

Optical turbulence profiling through ground layer AO telemetry

Author(s): Eden McEwen, Univ. of California, Berkeley (United States); Mark R. Chun, Ryan Dungee, Institute for Astronomy, Univ. of Hawai'i (United States); Jessica Lu, Univ. of California, Berkeley (United States); Olivier Lai, Observatoire de la Côte d'Azur (France); Christoph Baranec, Institute for Astronomy, Univ. of Hawai'i (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-223

PSF nowcast using PASSATA simulations - Towards a PSF forecast

Author(s): Alessio Turchi, Guido Agapito, Elena Masciadri, INAF (Italy); Olivier A. Beltramo-Martin, Lab. d'Astrophysique de Marseille (France); Cédric Plantet, Enrico Pinna, INAF (Italy); Jean-François Sauvage,

Thierry Fusco, ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Julien Milli, Univ. Grenoble Alpes (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-224

Optical turbulence forecast over short timescales using machine learning techniques

Author(s): Alessio Turchi, Elena Masciadri, Luca Fini, INAF (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-225

Estimating coherence time from Gemini Planet Imager's adaptive optics data

Author(s): Daniel M. Levinstein, Saavidra Perera, Quinn M. Konopacky, Univ. of California, San Diego (United States); Bruce Macintosh, Alex Madurowicz, Stanford Univ. (United States); Lisa Poyneer, Lawrence Livermore National Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-226

The Generalized Turbulence Monitor to upgrade the CATS station

Author(s): Christophe Giordano, Aziz Ziad, Eric Aristidi, Lab. J.L. Lagrange (France), Observatoire de la Côte d'Azur (France); Julien Chabé, Lab. Géoazur (France), Observatoire de la Côte d'Azur (France); Yan Fantéï-Caujolle, Christophe Bailet, Thibaud Charbonnel, Adrien Gillioën, Estelle Jacqmart, Alohotsy Rafalimanana, Lab. J.L. Lagrange (France), Observatoire de la Côte d'Azur (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-227

ANAtOLIA : a new mobile site-testing station for Astronomy and Optical Communications

Author(s): Aziz Ziad, Christophe Giordano, Observatoire de la Côte d'Azur (France); Alessandro Aresta, Airbus Defence and Space (France); Eric Aristidi, Observatoire de la Côte d'Azur (France); Christophe Bailet, Observatoire de la Côte d'Azur (France); Stefano Cavazzani, Chiara Bertolin, Filippo Berto, Norwegian Univ. of Science and Technology (Norway); Marcel Carbillet, Observatoire de la Côte d'Azur (France); Damien Ceus, Reuniwatt (France); Thibaud Charbonnel, Observatoire de la Côte d'Azur (France); Julien Delanoë, Lab. Atmosphères, Milieux, Observations Spatiales (France), Univ. de Versailles Saint-Quentin-en Yvelines (France); Jacques Descloitres, Institut de Combustion, Aérothermique, Réactivité et Environnement, CNRS (France); Yan Fantéï-Caujolle, Adrien Gillioën, Observatoire de la Côte d'Azur (France); Yenny Gonzalez-Ramos, CIMEL Electronique (France); Abdanour Irbah, Lab. Atmosphères, Milieux, Observations Spatiales (France); Estelle Jacqmart, Observatoire de la Côte d'Azur (France); Arnaud Le Kernec, Thales Alenia Space (France); Olivier Liandrat, Reuniwatt (France); Sylvain Poulenard, Airbus Defence and Space SAS (France); Jérôme Riedi, Institut de Combustion, Aérothermique, Réactivité et Environnement, CNRS (France); Nicolas Schmutz, Reuniwatt (France); Stephane Victori, CIMEL Electronique (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-228

Towards an optimal prediction of the optical turbulence in the ground layer by means of an instrumented drone

Author(s): Alohotsy Rafalimanana, Christophe Giordano, Aziz Ziad, Eric Aristidi, Yan Fanteï-Caujolle, Christophe Bailet, Observatoire de la Côte d'Azur (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-229

Combined Weather and Atmospheric Turbulence Measuring Station at DAG

Author(s): Cihan Tugrul Tezcan, Recep Balbay, Onur Şatır, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey); Onur Keskin, Isik Üniv. (Turkey); Cahit Yesilyaprak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-230

Methods for revealing strong turbulent layers in atmosphere

Author(s): Artem Y. Shikhovtsev, Institute of Solar-Terrestrial Physics (Russian Federation); Vladimir Lukin, V.E. Zuev Institute of Atmospheric Optics (Russian Federation); Pavel Kovadlo, Alexander Kiselev, Dmitrii Kolobov, Institute of Solar-Terrestrial Physics (Russian Federation); Ivan V. Russkih, Institute of Solar-Terrestrial Physics of the SB RAS (Russian Federation)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-231

Astroclimate at the Large Solar Telescope site. Meteorological parameters and optical turbulence

Author(s): Artem Y. Shikhovtsev, Pavel Kovadlo, Institute of Solar-Terrestrial Physics (Russian Federation); Anatoly Lezhenin, Institute of Computational Mathematics and Mathematical Geophysics (Russian Federation)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-232

Monitoring the surface-layer turbulence at the Calern observatory with a sonic anemometer

Author(s): Eric Aristidi, Yan Fantéï-Caujolle, Christophe Giordano, Aziz Ziad, Julien Chabé, Observatoire de la Côte d'Azur (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-233

Knowing your atmosphere, key to optimised and faithful AO simulations

Author(s): Pierre Haguenauer, European Southern Observatory (Germany); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Benoit Neichel, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille (France), CNRS (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-234

SIMULATOR - A speckle simulation tool for automated modelling of a large range of D/r_0 ratios

Author(s): Sorabh Chhabra, Abhay Kohok, Bhushan S. Joshi, Anamparambu N. Ramaprakash, Chaitanya V. Rajarshi, Rani S. Bhandare, Inter-Univ. Ctr. for Astronomy and Astrophysics (India)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS18: POSTERS: CALIBRATION

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-235

MAVIS: astrometric calibration technique

Author(s): Jesse Cranney, Israel Vaughn, Dionne Haynes, Trevor Mendel, Stephanie Monty, The Australian National Univ. (Australia); Davide Greggio, INAF (Italy); David Brodrick, François Rigaut, The Australian National Univ. (Australia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-236

Improving VLT/SPHERE without additional hardware: First on-sky calibration of the quasi-static aberrations with the dark hole technique.

Author(s): Axel Potier, Jet Propulsion Lab. (United States); Zahed Wahhaj, European Southern Observatory (Chile); Raphaël Galicher, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Johan Mazoyer, Pierre Baudoz, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Gaël Chauvin, Univ. Grenoble Alpes (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-237

Plans for lab calibration and testing of adaptive secondary mirrors using phase measuring deflectometry

Author(s): Ruihan Zhang, Mark R. Chun, Institute for Astronomy, Univ. of Hawai'i (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-238

The simulator of the VLT Deformable Secondary Mirror: a test tool for adaptive optics instruments for the Yepun-UT4 telescope

Author(s): Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy); Armando Riccardi, Luca Carbonaro, Chiara Selmi, Paolo Grani, Enrico Pinna, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-239

Automated identification of the status of deformable mirror actuators with machine learning

Author(s): Leonardo Blanco, Natalie T. Behara, Javier Valenzuela, European Southern Observatory (Chile); Markus Kasper, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-240

Optomechanical integration of the MCAO prototype testbed for European Solar Telescope (EST)

Author(s): Noelia Feijóo Amoedo, Francisco González, Luzma Montoya, Yolanda Martín-Hernando, Jorge Quintero Nehrkorn, Horacio Rodríguez Delgado, Instituto de Astrofísica de Canarias (Spain); Bruno Femenía-Castella, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Miguel A. Núñez Cagigal, José Manuel González-Cava, Haresh Mangharam Chulani, Ángel Mato Martínez, Félix Gracia Témich, Instituto de Astrofísica de Canarias (Spain); Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-241

WIVERN, a laboratory experiment for testing novel laser-based wavefront sensing techniques

Author(s): Nazim A. Bharmal, David Bramall, Ariadna Z. Calcines Rosario, Timothy J. Morris, Lazar Staykov, Durham Univ. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-242

HARMONI at ELT: A telescope simulator for laser tomographic AO

Author(s): Ghislain de Saint Salvy, Kjetil Dohlen, Pierre Jouve, Anne Costille, Kacem El Hadi, Benoît Neichel, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS19: POSTERS: CONTROL SYSTEMS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-243

The real time computing and instrument control software for CaNaPy

Author(s): David R. Jenkins, European Southern Observatory (Germany); Mauro Centrone, Alfio Puglisi, INAF (Italy); Pierre Haguenauer, Domenico Bonaccini Calia, European Southern Observatory (Germany); Matthew J. Townson, James Osborn, Durham Univ. (United Kingdom); Marcos Reyes García-Talavera, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-244

GRAVITY+ AO: modern interfaces for ESO SPARTA

Author(s): Clémence Edouard, Roderick Dembet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Julien Woillez, Pavel Shchekaturov, European Southern Observatory (Germany); Thibaut Paumard, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris (France); Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Frank Eisenhauer, Max-Planck-Institut für extraterrestrische Physik (Germany); Christian Straubmeier, Univ. zu Köln (Germany); Laura Kreidberg, Max-Planck-Institut für Astronomie (Germany); Paulo J. V. Garcia, CENTRA - Ctr. de Astrofísica e Gravitação (Portugal); Sebastian F. Hoenig, Univ. of Southampton (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-245

Gemini Planet Imager upgrade and Calibration System Real-time Controller using the Herzberg Extensible Adaptive Real-time Toolkit (HEART)

Author(s): Jennifer S. Dunn, Dan Kerley, Lianne Muller, Jean-Pierre Veran, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-247

HEART: REVOLT RTC using Herzberg Extensible Adaptive Real-time Toolkit (HEART)

Author(s): Darryl Gamroth, Jennifer S. Dunn, Dan Kerley, Lianne Mueller, Jonathan Stocks, Malcolm Smith, Jean-Pierre Véran, Tarun Kumar, Kate J. Jackson, National Research Council Canada (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS20: POSTERS: PROJECT STATUS (SUBARU)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-248

High Contrast and High Angular Resolution Imaging at Subaru Telescope

Author(s): Olivier Guyon, Subaru Telescope, NAOJ (United States), The Univ. of Arizona (United States); Kyohoon Ahn, Subaru Telescope, NAOJ (United States); Masayuki Akiyama, Tohoku Univ. (Japan); Thayne Currie, Vincent Deo, Takashi Hattori, Tomoyuki Kudo, Julien Lozi, Yosuke Minowa, Yoshito Ono, Subaru Telescope, NAOJ (United States); Motohide Tamura, The Univ. of Tokyo (Japan); Sebastien Vievard, Subaru Telescope, NAOJ (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-249

Wavefront sensing over a 20-arcmin field in the ULTIMATE-Subaru Ground Layer Adaptive Optics system.

Author(s): Noelia Martínez Rey, Nicholas Herrald, Warrick Schofield, David Chandler, Israel J. Vaughn, Dionne Haynes, François Rigaut, The Australian National Univ. (Australia); Yosuke Minowa, Yoshito Ono, Yoko Tanaka, Subaru Telescope, NAOJ (United States); Céline d'Orgeville, The Australian National Univ. (Australia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-250

ULTIMATE-START: current status of the Subaru Tomography Adaptive optics Research experimenT project

Author(s): Koki Terao, Masayuki Akiyama, Tohoku Univ. (Japan); Yosuke Minowa, Yoshito Ono, Subaru Telescope, NAOJ (United States); Hajime Ogane, Takumi Akasawa, Tohoku Univ. (Japan); Shin Oya, National Astronomical Observatory of Japan (Japan); Tomoyasu Yamamuro, OptCraft (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-251

Optical design of the Wavefront sensing in the ULTIMATE-Subaru Ground Layer Adaptive Optics system

Author(s): Yoko Tanaka, Yosuke Minowa, Yoshito Ono, Subaru Telescope, NAOJ (United States); Noelia Martínez Rey, Nicholas Herrald, Céline d'Orgeville, François Rigaut, Israel Vaughn, David Chandler, Dionne Haynes, Warrick Schofield, The Australian National Univ. (Australia); Koki Terao, Hiroshige Yoshida, Subaru Telescope (United States); Masayuki Akiyama, Tohoku University (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS21: POSTERS: PROJECT STATUS (VLT)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-252

MAVIS: preliminary design overview of the natural guide star wavefront sensor submodule

Author(s): Marco Bonaglia, Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Runa Briguglio, Lorenzo Busoni, Giulio Capasso, Luca Carbonaro, INAF - Osservatorio Astrofisico di Arcetri (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Ciro Del Vecchio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Simone Doniselli, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Grani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); Tommaso Lapucci, Cédric Plantet, Enrico Pinna, Alfio Puglisi, Fabio Rossi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Salvatore Savarese, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Chiara Selmi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); François Rigaut, The Australian National Univ. (Australia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-253

CANCELED: MAVIS: preliminary optical and mechanical design overview of the LGS WFS carousel

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-254

MAVIS Adaptive Optics Module: optical configuration and expected performance

Author(s): Davide Greggio, INAF - Osservatorio Astronomico di Padova (Italy); Brian W. Taylor, The Australian National Univ. (Australia); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Valentina Viotto, Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Pinna, Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Stefan Ströbele, European Southern Observatory (Germany); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Kalyan Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Christian Schwab, Macquarie Univ. (Australia); Jesse Cranney, Israel Vaughn, The Australian National Univ. (Australia); Luca Marafatto, Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy); David Brodrick, The Australian National Univ. (Australia); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); François Rigaut, The Australian National Univ. (Australia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS22: POSTERS: PROJECT STATUS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-255

SHARK-VIS ready for the stars: instrument description and final laboratory performance test.

Author(s): Fernando Pedichini, Simone Antoniucci, Manuele Gangi, INAF - Osservatorio Astronomico di Roma (Italy); Gianluca Licausi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Roberto Piazzesi, Alessandro Terreri, Vincenzo Testa, Giorgio Viavattene, INAF - Osservatorio Astronomico di Roma (Italy); Jacopo Farinato, Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Pinna, Guido Agapito, Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marco Stangalini, Agenzia Spaziale Italiana (Italy); Massimiliano Mattioli, Arpsoft s.r.l. (Italy); Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-256

A Near-Infrared Pyramid Wavefront Sensor for the MMT

Author(s): Jacob Taylor, Suresh Sivanandam, Shaojie Chen, Dunlap Institute for Astronomy & Astrophysics (Canada); Olivier Durney, The Univ. of Arizona (United States); Tim Hardy, NRC-Herzberg Astronomy & Astrophysics (Canada); Masen Lamb, Robin Swanson, Dunlap Institute for Astronomy & Astrophysics (Canada); Manny Montoya, Katie M. Morzinski, The Univ. of Arizona (United States); Narsireddy Anugu, Ctr. for High Angular Resolution Astronomy (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-257

Status update for MAPS, the MMT AO exoPlanet characterization System

Author(s): Katie M. Morzinski, The Univ. of Arizona (United States); Jenny Patience, Arizona State Univ. (United States); Manny Montoya, Buell T. Jannuzi, Jared Carlson, The Univ. of Arizona (United States); Shaojie Chen, Dunlap Institute for Astronomy & Astrophysics (Canada), Univ. of Toronto (Canada); Olivier Durney, Chuck Fellows, Andrew K. Gardner, Lori Harrison, The Univ. of Arizona (United States); Terry Jones, Minnesota Institute for Astrophysics (United States); Craig Kulesa, The Univ. of Arizona (United States); Masen Lamb, Siqi Liu, Dunlap Institute for Astronomy & Astrophysics (Canada); Emily A. Mailhot, Don W. McCarthy, The Univ. of Arizona (United States); Suresh Sivanandam, Jacob Taylor, Dunlap Institute for Astronomy & Astrophysics (Canada); Diana Vargas, Amali Vaz, Grant West, The Univ. of Arizona (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-258

First light for PAPYRUS, the pyramid based adaptive optics system at LAM/OHP

Author(s): Vincent Chambouleyron, Lab. d'Astrophysique de Marseille (France); Idir Boudjema, Lab. d'Astrophysique de Marseille (France), ALPAO S.A.S. (France); Romain Fétick, Lab. d'Astrophysique de Marseille (France), ONERA (France); Eduard R. Muslimov, NOVA Optical IR Instrumentation Group (Netherlands); Felipe Pedreros Bustos, Lab. d'Astrophysique de Marseille (France); Nicolas Levraud, Lab. d'Astrophysique de Marseille (France), ONERA (France); Esther Soria Hernandez, Instituto de Astrofísica de Canarias (Spain); Amandine Caillat, Lab. d'Astrophysique de Marseille (France); Jérôme Schmitt, Observatoire de Haute-Provence (France); Jean-François Sauvage, Lab. d'Astrophysique de Marseille (France), ONERA (France); Benoît Neichel, Lab. d'Astrophysique de Marseille (France); Thierry Fusco, Lab. d'Astrophysique de Marseille (France), ONERA (France); Mahawa Cissé, Fabrice Madec, Lab. d'Astrophysique de Marseille (France); Sonia Karkar, LESIA - Observatoire de Paris (France); Kacem El-Hadi, Alexis Lau, Romain Lhoussaine, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-260

Research, experiment, and validation of adaptive optics with a legacy telescope (REVOLT)

Author(s): Tarun Kumar, Univ. of Victoria (Canada), NRC-Herzberg Astronomy & Astrophysics (Canada); Olivier Lardière, David R. Andersen, Jean-Pierre Véran, Kate J. Jackson, Dmitry Monin, Tim Hardy, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS23: POSTERS: PROTOTYPING, PATHFINDERS AND CONSTRUCTION PROJECTS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-261

Spatial light modulator on Santa cruz Extreme AO Laboratory (SEAL) testbed

Author(s): Maaike A. M. van Kooten, Julia Fowler, Rebecca M. Jensen-Clem, Benjamin L. Gerard, Daren Dillon, Maissa Salama, Univ. of California, Santa Cruz (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-262

Deformable lens for testing the performance of focal-plane wavefront sensing using phase diversity

Author(s): Gabriele Umbriaco, Univ. degli Studi di Padova (Italy), INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy); Daniele Vassallo, Jacopo Farinato, Luca Marafatto, Elena Carolo, Maria Bergomi, Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy); Simone Di Filippo, Univ. degli Studi di Padova (Italy), INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy); Stefano Bonora, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Jacopo Mocci, Dynamic Optics S.r.l. (Italy); Roberto Ragazzoni, Univ. degli Studi di Padova (Italy), INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale di Ottica Adattiva (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-263

Direct expansion gas cooling system for the ESO's ELT M4 adaptive mirror

Author(s): Roberto Biasi, Gerald Angerer, Dietrich Pescoller, Maurizio Groppi, Microgate S.r.l. (Italy); Matteo Tintori, A.D.S. International S.r.l. (Italy); Jose Antonio Abad, Elise Vernet, Marc Cayrel, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-264

Interferometry at the pillars of Hercules: or measurements in high holes density, low reflectivity, low modulation regime.

Author(s): Runa Briguglio, Nicolò Azzaroli, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Luca Oggioni, Chiara Selmi, INAF - Osservatorio Astronomico di Brera (Italy); Armando Riccardi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Tintori, Daniele Gallieni, A.D.S. International S.r.l. (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-265

Characterization of sensitivity and responses of a 2-element prototype wavefront sensor for millimeter-wave adaptive optics attached to the Nobeyama 45 m telescope

Author(s): Satoya Nakano, Yoichi Tamura, Akio Taniguchi, Nagoya Univ. (Japan); Sachiko K. Okumura, Japan Women's Univ. (Japan); Ryohei Kawabe, National Astronomical Observatory of Japan (Japan); Nozomi Okada, Ibaraki Univ. (Japan); Tomoko Nakamura, Japan Women's Univ. (Japan); Yuhei Fukasaku, Univ. of Tsukuba (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-266

Adaptive Optics system of the Evanescent Wave Coronagraph (EvWaCo) -- optimised phase plate and DM characterisation

Author(s): Anthony Berdeu, National Astronomical Research Institute of Thailand (Thailand), Chulalongkorn Univ. (Thailand); Sitthichat Sukpholtham, Puttiwat Kongkaew, Adithep Kawinkij, National Astronomical Research Institute of Thailand (Thailand); Michel Tallon, Éric M. Thiébaut, Maud Langlois, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Mary Angelie Alagao, National Astronomical Research Institute of Thailand (Thailand)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-267

The MAORY MAIT strategy in Europe

Author(s): Jacopo Farinato, Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Gabriele Rodeghiero, INAF - Osservatorio Astronomico d'Abruzzo (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Marco Riva, Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Demetrio Magrin, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Vincenzo De Caprio, Vincenzo Cianniello, INAF - Osservatorio Astronomico di Capodimonte (Italy); Elena Carolo, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Carmelo Arcidiacono, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Maria Bergomi, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Marco Bonaglia, Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Domenico D'Auria, INAF - Osservatorio Astronomico di Capodimonte (Italy); Nicholas Devaney, National Univ. of Ireland, Galway (Ireland); Ugo Di Giammatteo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Gianluca Di Rico, Mauro Dolci, Simone Doniselli, INAF - Osservatorio Astronomico d'Abruzzo (Italy), ADONI - Lab. Nazionale Ottica Adattiva (Italy); Christian Eredia, INAF - Osservatorio Astronomico di Capodimonte (Italy); Italo Foppiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Enrico Giro, INAF - Osservatorio Astronomico di Padova (Italy); Alexander Goncharov, National Univ. of Ireland, Galway (Ireland); Zoltan Hubert, Thibaut Moulin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Sylvain Oberti, European Southern Observatory (Germany); Bernardo Salasnich, Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Angelo Valentini, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-268

Prescription switching of active X-ray optics

Author(s): Jacqueline M. Davis, Srikanth Singam, Stephen D. Bongiorno, Patrick R. Champey, NASA Marshall Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-269

RISTRETTO: reaching 1E-4 fiber contrast at 2lbd/D in the visible

Author(s): Nicolas Blind, Jonas Kühn, Bruno Chazelas, Christophe Lovis, Observatoire de Genève (Switzerland)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-270

PULPOS: A multi-purpose adaptive optics test bench in Chile

Author(s): Jorge Tapia, Pontificia Univ. Católica de Valparaíso (Chile); Felipe Pedreros Bustos, Lab. d'Astrophysique de Marseille (France); Camilo Weinberger, Bastián Romero, Esteban Vera, Pontificia Univ. Católica de Valparaíso (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-271

Blinking the fringes, initial development and results of the Ultra-Low Speed Optical Chopper for the Self-Coherent Camera

Author(s): Adam B. Johnson, Univ. of Victoria (Canada); Christian Marois, Olivier Lardière, Garima Singh, NRC-Herzberg Astronomy & Astrophysics (Canada); William R. Thompson, Univ. of Victoria (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-272

Making adaptive optics available to all: a concept for 1m class telescopes.

Author(s): Olivier Lai, Observatoire de la Côte d'Azur (France); Stefan Kuiper, TNO (Netherlands); Niek J. Doelman, TNO (Netherlands), Leiden Observatory (Netherlands); Mark R. Chun, Institute for Astronomy, Univ. of Hawai'i (United States); Dirk Schmidt, National Solar Observatory (United States); Frantz Martinache, Observatoire de la Côte d'Azur (France); Marcel Carbillet, Observatoire de la Côte d'Azur (France); Mamadou N'Diaye, Jean-Pierre Rivet, Observatoire de la Côte d'Azur (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-273

Optical component only adaptive optics improved setup

Author(s): Miguel Angel Cagigas Garcia, Instituto de Astrofísica de Canarias (Spain); Manuel Perez Cagigal, Pedro Valle Herrero, Vidal Fernandez Canales, Univ. de Cantabria (Spain); Iciar Montilla Garcia, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-311

Laboratory demonstrations of optimal identification and control of tip-tilt systems

Author(s): Aditya Sengupta, Univ. of Cambridge (United Kingdom); Benjamin L. Gerard, Darren Dillon, Maaike A. M. van Kooten, Donald Gavel, Rebecca M. Jensen-Clem, Univ. of California, Santa Cruz (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS24: POSTERS: DETECTORS AND CAMERAS FOR WAVEFRONT SENSING

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-274

GPI 2.0: performance evaluation of the wavefront sensor's EMCCD

Author(s): Clarissa R. Do Ó, Saavidra Perera, Jérôme Maire, Jayke S. Nguyen, Daniel M. Levinstein, Quinn M. Konopacky, Univ. of California, San Diego (United States); Jeffrey K. Chilcote, Univ. of Notre Dame (United States); Joeleff Fitzsimmons, NRC-Herzberg Astronomy & Astrophysics (Canada); Randall Hamper, Univ. of Notre Dame (United States); Dan Kerley, NRC-Herzberg Astronomy & Astrophysics (Canada); Bruce Macintosh, Stanford Univ. (United States); Christian Marois, NRC-Herzberg Astronomy & Astrophysics (Canada); Fredrik T. Rantakyrö, Gemini Observatory (United States); Dmitry Savransky, Cornell Univ. (United States); Jean-Pierre Véran, NRC-Herzberg Astronomy & Astrophysics (Canada); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); S. Mark Ammons, Lawrence Livermore National Lab. (United States); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marc-André Boucher, OMP inc. (Canada); Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada); Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Guillaume Filion, Jean-Thomas Landry, OMP inc. (Canada); Olivier Lardière, NRC-Herzberg Astronomy & Astrophysics (Canada); Duan Li, Cornell Univ. (United States); Alex Madurowicz, Stanford Univ. (United States); Dillon H. Peng, Univ. of Notre Dame (United States); Lisa Poyneer, Lawrence Livermore National Lab. (United States); Eckhart Spalding, Univ. of Notre Dame (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-275

Electron multiplying CCDs for sensitive wavefront sensing at 3k frames per second

Author(s): Olivier Daigle, Jérémy Turcotte, Abtin Ghodoussi, Arnaud Symon, Yoann Gosselin, Nüvü Cameras Inc. (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-276

Final performance of the ESO's ALICE and LISA wavefront sensor cameras

Author(s): Enrico Marchetti, Paola Amico, Martin Brinkmann, Ralf D. Conzelmann, Diego Del Valle, Nicola Di Lieto, Max Engelhardt, Christoph Geimer, Josh Hopgood, Ignacio Molina, Eric Mueller, Jutta Quentin, Javier Reyes, Mathias Richerzhagen, Matthias Seidel, Joerg Stegmeier, Mirko Todorovic, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS25: POSTERS: LASER GUIDE STARS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-277

The new Laser Launch Telescopes for Gemini North AO: design and status update.

Author(s): Sara Zuccon, Emanuele Piersanti, Marco Girardini, Enrico Marcuzzi, Paolo Spanò, Officina Stellare S.p.A. (Italy); Gaetano Sivo, Gemini Observatory (Chile)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-278

Design of the laser beam transfer system for the new Gemini North adaptive optics laser guide star

Author(s): Thomas Schneider, Gemini Observatory (United States); Eduardo Marin, W. M. Keck Observatory (United States); Charles Cavedoni, Gemini Observatory (United States); Gaetano Sivo, Gemini Observatory (Chile); Heather Carr, Kimberly Tomasino-Reed, Stacy Kang, Gemini Observatory (United States); Brian Chinn, Gemini Observatory (Chile); Celia Blain, Gemini Observatory (United States); Manuel Lazo, Gemini Observatory (Chile); Joseph A. D'Amato, William N. Rambold, Gemini Observatory (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-279

GTC Laser Guide Star Facility Thermal design

Author(s): Roberto Simoes, Marcos Reyes García-Talavera, J. Sánchez-Capuchino, F. Tenegi, Marta Puga, J. Patrón, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-280

An asterism generator for Keck all-sky precision adaptive optics

Author(s): Scott J. Lilley, Peter Wizinowich, Ed Wetherell, Eduardo Marin, Jason Chin, W. M. Keck Observatory (United States); Thomas Michaud-Baeyens, OMP inc. (Canada); Jean-Thomas Landry, Marc-André Boucher, OMP Inc. (Canada); Denis Brousseau, Univ. Laval (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-281

Preliminary design of the Laser Guide Star Facility for the ULTIMATE-Subaru Ground Layer Adaptive Optics system.

Author(s): Noelia Martínez Rey, Nicholas Herrald, Andrew W. Kruse, Israel Vaughn, David Chandler, Dionne Haynes, François Rigaut, The Australian National Univ. (Australia); Yosuke Minowa, Yoshito Ono, Yoko Tanaka, Subaru Telescope, NAOJ (United States); Céline d'Orgeville, The Australian National Univ. (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-282

TMT Laser Guide Star Facility Preliminary Design

Author(s): Melissa Trubey, Corinne Boyer, Bernard Delabre, John W. Miles, Konstantinos Vogiatzis, Lianqi Wang, TMT International Observatory (United States); Changchun Jiang, Institute of Optics and Electronics (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-283

MAVIS: Two for One, the art of LGS multiplication

Author(s): Pierre Haguenauer, Thomas Pfrommer, Johann Kolb, Domenico Bonaccini Calia, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-284

CANCELED: MAVIS: laser guide star dichroic and 589nm suppression

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-285

Development of a beam conditioning and diagnostics system for the Laser Guide Star Facility of the ELT

Author(s): Ralph Pohl, DEMCON Focal B.V. (Netherlands); Coen Blok, DEMCON Advanced Mechatronics B.V. (Netherlands); Kevin Simmelink, Ruben Biesheuvel, Steffen Resink, DEMCON Focal B.V. (Netherlands); Jan Nijenhuis, Martijn van Riel, Fred Kamphues, TNO (Netherlands); Wolfgang K. Hackenberg, Domenico Bonaccini Calia, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-286

The CaNaPy experimental facility for visible wavelengths laser guide star adaptive optics

Author(s): Domenico Bonaccini Calia, European Southern Observatory (Germany); James Osborn, Durham Univ. (United Kingdom); Enrico Pinna, INAF - Osservatorio Astrofisico di Arcetri (Italy); Pierre Haguenauer, European Southern Observatory (Germany); Marcos Reyes García-Talavera, Instituto de Astrofísica de Canarias (Spain); David Alaluf, European Space Agency (Netherlands); Mauro Centrone, INAF - Osservatorio Astronomico di Roma (Italy); Noelia Martínez Rey, The Australian National Univ. (Australia); David R. Jenkins, Durham Univ. (United Kingdom); Petr Janout, European Southern Observatory (Germany); Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Andreas Jost, European Southern Observatory (Germany); Marco Faccini, INAF - Osservatorio Astronomico di Roma (Italy); Guido Agapito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Renate Hinterschuster, Ralf D. Conzelmann, Ivan M. Guidolin, European Southern Observatory (Germany); Matthew J. Townson, Durham Univ. (United Kingdom); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Filippo Ambrosino, INAF - Osservatorio Astronomico di Roma (Italy); Luis Fernando Rodríguez Ramos, Instituto de Astrofísica de Canarias (Spain); Wolfgang K. Hackenberg, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS26: POSTERS: WAVEFRONT MODULATING DEVICES

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-287

Impact of local turbulence on high-order adaptive optics

Author(s): Hugo Nowacki, Jean-Baptiste Le Bouquin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Carole Gouvret, Aurélie Marcotto, Université Côte d'Azur (France); Yves Magnard, Alain Delboulbé, Eric Stadler, Sylvain Doute, Sylvain Rochat, Didier Maurel, Institut de Planétologie et d'Astrophysique de Grenoble (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-288

MORFEO (formerly known as MAORY) @ ELT: deformable mirror WFE stability strategy for SCAO operations

Author(s): Nicolò Azzaroli, Marco Xompero, Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giorgio M. Pariani, INAF - Osservatorio Astronomico di Brera (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-289

On-Orbit Operations Summary for the Deformable Mirror Demonstration Mission (DeMi) CubeSat

Author(s): Rachel E. Morgan, Sophia K. Vlahakis, Greg Allan, Paula do Vale Pereira, Jennifer Gubner, Christian Haughwout, Bobby Holden, Thomas Murphy, Yinzi Xin, Massachusetts Institute of Technology (United States); John Merk, Danilo Roascio, Aurora Flight Sciences, A Boeing Co. (United States); Mark Egan, Gabor Furesz, Massachusetts Institute of Technology (United States); Ewan Douglas, The Univ. of Arizona (United States); Kerri Cahoy, Massachusetts Institute of Technology (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-291

High density, low power, contactless VCM-based adaptive mirror prototype

Author(s): Roberto Biasi, Microgate S.r.l. (Italy); Matteo Tintori, A.D.S. International S.r.l. (Italy); Mauro Manetti, Gerald Angerer, Microgate S.r.l. (Italy); Daniele Gallieni, A.D.S. International S.r.l. (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS27: POSTERS: WAVEFRONT MODULATING DEVICES (PROJECT STATUS)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-292

Deformable mirrors for the EST testbed: testing and characterization

Author(s): José Manuel González-Cava, Yolanda Martín-Hernando, Miguel A. Núñez Cagigal, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-294

MORFEO (formely known as MAORY) @ELT: preliminary design of the adaptive mirrors

Author(s): Marco Xompero, Runa Antonio Briguglio, Nicolò Azzaroli, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giorgio Pariani, Ossrvatorio di Brera-Merate (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Matteo Tintori, Lorenzo Crimella, ADS International (Italy); Roberto Biasi, Microgate SRL (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-295

ULTIMATE-Subaru: adaptive secondary mirror system

Author(s): Shin Oya, National Astronomical Observatory of Japan (Japan); Yosuke Minowa, Hirofumi Okita, Yoshito Ono, Christophe Clergeon, Subaru Telescope, NAOJ (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-296

Progress on the University of Hawaii 2.2-meter adaptive secondary mirror

Author(s): Mark R. Chun, Institute for Astronomy, Univ. of Hawai'i (United States); Stefan Kuiper, TNO (Netherlands); Gilles Ackaert, Hyperion Technologies B.V. (Netherlands); Christoph Baranec, Institute for Astronomy, Univ. of Hawai'i (United States); Arjo Bos, TNO (Netherlands); Rachel Bowens-Rubin, Univ. of California, Santa Cruz (United States); Bert Dekker, TNO (Netherlands); Ryan Dungee, Institute for Astronomy, Univ. of Hawai'i (United States); Taavishe Gupta, Hyperion Technologies B.V. (Netherlands); Philip M. Hinz, Univ. of California, Santa Cruz (United States); Wouter Jonker, Fred Kamphues, TNO (Netherlands); Olivier Lai, Observatoire de la Côte d'Azur (France); Jessica Lu, Univ. of California, Berkeley (United States); Matthew Maniscalco, TNO (Netherlands); Bert Monna, Manav Nair, Hyperion Technologies B.V. (Netherlands); Jan Nijenhuis, TNO (Netherlands); Hans Priem, VDL ETG Technology & Development bv (Netherlands); Alan Ryan, Institute for Astronomy, Univ. of Hawai'i (United States); Paul-Alexander Vogel, Fraunhofer-Institut für Produktionstechnologie

IPT (Germany); Ruihan Zhang, Institute for Astronomy, Univ. of Hawai'i (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-297

GMT ASM co-phasing numerical simulation and experimental results

Author(s): Mauro Manetti, Microgate S.r.l. (Italy); Matteo Tintori, A.D.S. International S.r.l. (Italy); Peter M. Thompson, GMTO Corp. (United States); Roberto Biasi, Microgate S.r.l. (Italy); John Spanos, Konstantinos Vogiatzis, Rodolphe Conan, GMTO Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-298

Status of the upgraded MMT adaptive secondary mirror: preparing for telescope integration

Author(s): Amali Vaz, Katie M. Morzinski, Manny Montoya, Olivier Durney, Andrew K. Gardner, Grant West, Emily A. Mailhot, Jesus D. Vargas Lopez, The Univ. of Arizona (United States); Suresh Sivanandam, Masen Lamb, Jacob Taylor, Univ. of Toronto (Canada); Jared Carlson, John Ford, Frank Gacon, Lori Harrison, Buell Jannuzi, The Univ. of Arizona (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS28: POSTERS: WAVEFRONT MODULATING DEVICES (CONTROL)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-300

GMT ASM prototype dynamic and optical tests results

Author(s): Mario Andrighettoni, Roberto Biasi, Mauro Manetti, Microgate S.r.l. (Italy); Matteo Tintori, A.D.S. International S.r.l. (Italy); Peter M. Thompson, John Spanos, Antonin Bouchet, GMTO Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-301

ESO's ELT M4 dynamic control and computational performance

Author(s): Roberto Biasi, Mario Andrighettoni, Mauro Manetti, Dietrich Pescoller, Gerald Angerer, Microgate S.r.l. (Italy); Lorenzo Pettazzi, Elise Vernet, Marc Cayrel, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS29: POSTERS: WAVEFRONT RECONSTRUCTION AND CONTROL ALGORITHMS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-302

Advances in model-based reinforcement learning for AO control

Author(s): Jalo Nousiainen, Lappeenranta-Lahti Univ. of Technology (Finland); Byron Engler, Markus Kasper, European Southern Observatory (Germany); Tapio Helin, Lappeenranta-Lahti Univ. of Technology (Finland); Cedric Taissir Heritier, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-303

Comparison of Adaptive Data-Driven Algorithms for Control of Deformable Mirrors

Author(s): Aleksandar Haber, Rochester Institute of Technology (United States); Alberto Dall'Ora, Pieter van Velde, Shih-Te Kung, Carlas Smith, Technische Univ. Delft (Netherlands)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-304

Performance Analysis and Comparison of Predictive Controllers applied to Adaptive Optics Systems

Author(s): Jonas Xavier, Alexandre J. T. S. Mello, Elder Oroski, Univ. Tecnológica Federal do Paraná (Brazil)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-305

Advanced wavefront sensing and control demonstration with MagAO-X

Author(s): Sebastiaan Y. Haffert, Jared Males, Kyle Van Gorkom, The Univ. of Arizona (United States); Laird Close, Steward Observatory (United States); Joseph D. Long, Alexander Hedglen, The Univ. of Arizona (United States); Olivier Guyon, The Univ. of Arizona (United States), Subaru Telescope, NAOJ (United States), National Institutes of Natural Sciences (Japan); Lauren Schatz, Air Force Research Lab. (United States); Maggie Y. Kautz, Jennifer Lumbres, Alex T. Rodack, Justin M. Knight, The Univ. of Arizona (United States); He Sun, Caltech (United States); Kevin Fogarty, NASA Ames Research Ctr. (United States); Kelsey L. Miller, Air Force Research Lab. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-306

Battle of the Predictive Wavefront Controls: Comparing Data and Model-Driven Predictive Control for High Contrast Imaging

Author(s): Julia Fowler, Rebecca M. Jensen-Clem, Maaike A. M. van Kooten, Univ. of California, Santa Cruz (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-307

The use of spatial-temporal correlations to identify dynamic environmental changes affecting adaptive optics system performance

Author(s): Benjamin Calvin, Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); Maaike A. M. van Kooten, Julia Fowler, Rebecca M. Jensen-Clem, Benjamin L. Gerard, Univ. of California, Santa Cruz (United States); Sam Ragland, W. M. Keck Observatory (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-308

High-bandwidth tip-tilt compensation for small telescope systems

Author(s): Andreas Sinn, Christian Schwaer, Peter Kremsner, Georg Schitter, Technische Univ. Wien (Austria)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-310

Adaptive optics disturbance modelling based on discrete time data

Author(s): Pedro Escárate, Univ. Austral de Chile (Chile), Pontificia Univ. Católica de Valparaíso (Chile); María Coronel, Juan Carlos Agüero, Univ. Técnica Federico Santa María (Chile); Rodrigo Carvajal, Pontificia Univ. Católica de Valparaíso (Chile)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-312

Improved Learn and Apply reconstruction with generalized tomography: MAVIS application

Author(s): Hao Zhang, Jesse Cranney, The Australian National Univ. (Australia); Damien Gratadour, The Australian National Univ. (Australia), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Univ. PSL (France); Nicolas Doucet, François Rigaut, The Australian National Univ. (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS30: POSTERS: WAVEFRONT SENSING

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-314

Experimental verification of a Neural Network and PCA approach for NCPA mitigation.

Author(s): Alessandro Terreri, Fernando Pedichini, INAF - Osservatorio Astronomico di Roma (Italy); Markus Kasper, Byron Engler, ESO (Germany); Dario Del Moro, Univ. degli Studi di Roma "Tor Vergata" (Italy); Marco Stangalini, Agenzia Spaziale Italiana (Italy); Massimiliano Mattioli, INAF - Osservatorio Astronomico di Roma (Italy); Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Gianluca Li Causi, Roberto Piazzesi, Simone Antoniucci, Giorgio Viavattene, Manuele Gangi, Vincenzo Testa, INAF - Osservatorio Astronomico di Roma (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-315

Exploration of Convolutional Neural Networks to handle non-linearity estimation issues in pyramid wavefront sensors.

Author(s): Camilo Weinberger, Esteban Vera, Pontificia Univ. Católica de Valparaíso (Chile); Benoît Neichel, Olivier A. Beltramo-Martin, Jean-François Sauvage, Felipe Pedreros Bustos, Thierry Fusco, Lab. d'Astrophysique de Marseille (France); Felipe Guzmán, Pontificia Univ. Católica de Valparaíso (Chile)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-316

Joint optimization of nonlinear wavefront sensing and reconstruction using automatic differentiation

Author(s): Rico Landman, Christoph Keller, Thijs Stockmans, David Doelman, Leiden Observatory (Netherlands)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-317

Adaptive Optics Hardware Mediated Sub-Pixel Super Resolution

Author(s): Robin Swanson, Univ. of Toronto (Canada); Suresh Sivanandam, Univ. of Toronto (Canada), Dunlap Institute for Astronomy & Astrophysics (Canada); Kiriakos Kutulakos, Univ. of Toronto (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-318

Wavefront sensing with amplitude masked phase retrieval approach

Author(s): Sergejs Fomins, Varis Karitans, Maris Ozolinsh, Davis Zagers, Institute of Solid State Physics, Univ. of Latvia (Latvia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-320

MAORY/MORFEO and rolling shutter induced aberrations in laser guide star wavefront sensing

Author(s): Guido Agapito, Lorenzo Busoni, Giulia Carlà, Cédric Plantet, Simone Esposito, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-321

Design and fabrication of a low-cost very high-order Shack-Hartmann sensor to study TMT deformable mirror prototypes

Author(s): Mojtaba Taheri nieh, David R. Andersen, Univ. of Victoria (Canada), NRC-Herzberg Astronomy & Astrophysics (Canada); Jean-Pierre Véran, Olivier Lardière, Kate J. Jackson, NRC-Herzberg Astronomy & Astrophysics (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-322

Preliminary lab demonstration of a 3-sided reflective pyramid wavefront sensor for Shane AO using SEAL testbed

Author(s): Dominic F. Sanchez, Philip M. Hinz, Univ. of California, Santa Cruz (United States); Mark R. Chun, Univ. of Hawai'i (United States), Institute for Astronomy (United States); Charlotte Z. Bond, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-323

A new wavefront sensing technique for satellite-ground laser communication

Author(s): Zhenyu Zhang, National Univ. of Defense Technology (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-324

Spatial frequency response and sensitivity of the non-linear curvature wavefront sensor

Author(s): Stanimir Letchev, Jonathan Crass, Justin R. Crepp, Sam Potier, Univ. of Notre Dame (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-325

Laboratory demonstration of focal plane wavefront sensing using phase diversity: a way to tackle the problem of NCPA in SHARK-NIR. Part II: New characterization tests and alternative wavefront sensing strategies

Author(s): Daniele Vassallo, Maria Bergomi, Elena Carolo, Davide Greggio, Luca Marafatto, Gabriele Umbriaco, Jacopo Farinato, Andrea Baruffolo, Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); Jean-François Sauvage, Thierry Fusco, ONERA (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-326

Correction of photometric scintillation noise via tomographic wavefront sensing: simulation and on-sky demonstration

Author(s): Kathryn Hartley, Richard W. Wilson, James Osborn, Matthew J. Townson, Oliver Farley, Durham Univ. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS31: POSTERS: WAVEFRONT SENSING FOR HIGH-CONTRAST IMAGING

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-327

Small-ELF project: Performance of an extreme adaptive optics system compensating for atmospheric turbulence, cophasing a diluted pupil and performing dark hole coronography in order to reach high contrast exoplanet direct detection

Author(s): Maud Langlois, Camille Graf, Gil Moretto, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Jeff Kuhn, Ian Cunnyngham, Univ. of Hawai'i (United States); Stuart Jefferies, Georgia State Univ. (United States); Kevin Lewis, PLANETS Foundation (United States); Magali Loupias, Ctr. de Recherche Astrophysique de Lyon, CNRS (France); Rafael Rebolo-López, Instituto de Astrofísica de Canarias (Spain); Ryan Swindle, Air Force Research Lab. (United States); Ye Zhou, Dynamic Intelligent Structures, Ltd. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-329

The MICADO first light imager for the ELT: STARLOC, the star tracking algorithm for the Lyot coronagraphs

Author(s): Elsa Huby, Pierre Baudoz, Fabrice Vidal, Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-331

Vector Zernike wavefront sensor on the Santa Cruz Extreme AO Lab (SEAL) testbed

Author(s): Maissa Salama, Rebecca M. Jensen-Clem, Maaike A. M. van Kooten, Daren Dillon, Benjamin L. Gerard, Julia Fowler, Univ. of California, Santa Cruz (United States); Frans Snik, David Doelman, Leiden Observatory (Netherlands)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-332

Lyot Stop Design with HCIPY for a New Infrared Exoplanet Imager at Keck Observatory

Author(s): Jialin Li, Andrew Skemer, Univ. of California, Santa Cruz (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-333

Experimental validation of exoplanet centring strategies for high dispersion coronagraphy

Author(s): Mona El Morsy, Arthur Vigan, Maxime Lopez, Lab. d'Astrophysique de Marseille (France); Gilles P. P. L. Otten, Lab. d'Astrophysique de Marseille (France), Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Élodie Choquet, Fabrice Madec, Anne Costille, Lab. d'Astrophysique de Marseille (France); Raphaël Pourcelot, Observatoire de la Côte d'Azur (France), Lab. d'Astrophysique de Marseille (France); Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); Jean-François Sauvage, ONERA (France), Lab. d'Astrophysique de Marseille (France); Johan Floriot, Jean-Antoine Benedetti, Patrick Blanchard, Philippe Balard, Lab. d'Astrophysique de Marseille (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12185-334

Nulling interferometry: high contrast science for single large apertures

Author(s): Peter G. Tuthill, Marc-Antoine Martinod, The Univ. of Sydney (Australia); Simon Gross, Macquarie Univ. (Australia); Olivier Guyon, Subaru Telescope, NAOJ (United States); Sergio Leon-Saval, Barnaby R. M. Norris, The Univ. of Sydney (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12185-120
Surrogate model-based wavefront sensorless adaptive optics system for correcting atmospheric distorted images

Contact author(s): Taghinia Parham, Univ. of Canterbury, New Zealand

Poster

12185-121
A method to build digital twin of atmospheric turbulence phase screens with comprehensible deep neural networks

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Poster

12185-319
Open-loop wavefront sensing of multiple laser sources using the geometric wavefront sensor on an optical test-bench

Contact author(s): Hickman Sierra, Univ. of Canterbury, New Zealand

Poster

12185-5
Towards the development of the Infrared Guide Star Catalogue for the adaptive optics observations by the Thirty Meter Telescope

Contact author(s): Shah Sarang, India TMT Coordination Ctr., India

Oral

CONFERENCE 12186

Observatory Operations: Strategies, Processes, and Systems IX

19 - 21 July 2022 | Room 520 a

Conference Chairs: **David S. Adler,** Space Telescope Science Institute (United States); **Robert L. Seaman,** Lunar and Planetary Lab., The Univ. of Arizona (United States); **Chris R. Benn,** Isaac Newton Group of Telescopes (Spain)

Program Committee: **Rachel Akeson,** IPAC, Caltech (United States); **Antonio Chrysostomou,** SKA Organisation (United Kingdom); **Claire J. Chandler,** National Radio Astronomy Observatory (United States); **Raffaele D'Abrusco,** Smithsonian Astrophysical Observatory/Chandra X-ray Ctr. (United States); **Daisuke Iono,** National Astronomical Observatory of Japan (Japan); **Alison B. Peck,** Gemini Observatory (United States); **Lisa J. Storrie-Lombardi,** Las Cumbres Observatory (United States); **Christian Veillet,** Large Binocular Telescope Observatory (United States)

SESSION 1: DIVERSITY

19 July 2022 • 10:30 - 12:10 EDT | Room 520 a

Session Chair: David S. Adler, Space Telescope Science Institute (United States)

12186-1

Building the infrastructure for diversity, equity, and inclusion in observatory operations: Strategic programming and ongoing practices

Author(s): Alysha Shugart, Vera C. Rubin Observatory (Chile); Jocelyn Ferrara, Gemini Observatory (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 520 a

12186-2

Creating an Inclusive and Diverse Environment at Vera C. Rubin Observatory

Author(s): Sandrine J. Thomas, Ranpal Gill, Alysha Shugart, Vera C. Rubin Observatory (United States)

19 July 2022 • 10:50 - 11:10 EDT | Room 520 a

12186-3

Diversity, Equity and Inclusion (DEI) at ESO : updates on the current practices and strategies for the future.

Author(s): Pascale Hibon, European Southern Observatory (Chile); Michèle Péron, Francesca Primas, European Southern Observatory (Germany); Maxime Boccas, European Southern Observatory (Chile); Claudio Cumani, European Southern Observatory (Germany); Marcia Saavedra, Maria Francisca Labayru, European Southern Observatory (Chile); Enikő Patkós, Mariya Lyubenova, Mylène François, European Southern Observatory (Germany)

19 July 2022 • 11:10 - 11:30 EDT | Room 520 a

12186-4

The US-ELTP Research Inclusion Collaboration Toolkit

Author(s): Timothy Sacco, Dara J. Norman, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

19 July 2022 • 11:30 - 11:50 EDT | Room 520 a

12186-5

The Kama'aina Connections Program

Author(s): Richard H. Matsuda, W. M. Keck Observatory (United States); Leinani Lozi, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Leslie Kissner, Retired (United States)

19 July 2022 • 11:50 - 12:10 EDT | Room 520 a

Lunch/Exhibition Break 12:10 - 13:20

SESSION 2: OPERATIONS BENCHMARKS AND METRICS

19 July 2022 • 13:20 - 15:00 EDT | Room 520 a

Session Chair: David S. Adler, Space Telescope Science Institute (United States)

12186-6

Towards a greener W. M. Keck Observatory

Author(s): Kevin L. McCann, Craig E. Nance, Gavin Sebastian, W. M. Keck Observatory (United States)

19 July 2022 • 13:20 - 13:40 EDT | Room 520 a

12186-7

Planning scientific operations for the Maunakea Spectroscopic Explorer

Author(s): Jennifer L. Marshall, Texas A&M Univ. (United States); Andreea O. Petric, Space Telescope Science Institute (United States); Jennifer Sobeck, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 13:40 - 14:00 EDT | Room 520 a

12186-8

Results of the dome turbulence sensor at the Anglo-Australian Telescope

Author(s): Josephine Munro, Jonah Hansen, Doris Grosse, Tony D. Travouillon, The Australian National Univ. (Australia)

19 July 2022 • 14:00 - 14:20 EDT | Room 520 a

12186-9

Astronomy operations with the Southern African Large Telescope - it's all happening!

Author(s): Encarnacion Romero Colmenero, Petri Vaisanen, Alexei Y. Kniazev, Lisa A. Crause, Rosalind E. Skelton, South African Astronomical Observatory (South Africa); Lee Townsend, South African Astronomical Observatory (South Africa); Danièl Groenewald, Moses K. Mogotsi, Rudolph Kuhn, Enrico J. Kotze, Solohery Randriamampandry, Elizabeth Naluminsa, Christian Hettlage, Nhlavutelo Macebele, Chaka Mofokeng, Thea Koen, Veronica Van Wyk, Xola Ndaliso, Anja Schroeder, South African Astronomical Observatory (South Africa)

19 July 2022 • 14:20 - 14:40 EDT | Room 520 a

12186-10

Improving the Telescope guiding with Field Stabilization on the VLT/UTs.

Author(s): Pascale Hibon, European Southern Observatory (Chile); Philippe R. Duhoux, European Southern Observatory (Germany)

19 July 2022 • 14:40 - 15:00 EDT | Room 520 a

Coffee Break 15:00 - 15:30

SESSION 3: DATA FLOW AND MANAGEMENT

19 July 2022 • 15:30 - 17:10 EDT | Room 520 a

Session Chair: Alison B. Peck, The National Science Foundation (United States)

12186-11

The ESO Science Archive

Author(s): Martino Romaniello, European Southern Observatory (Germany)

19 July 2022 • 15:30 - 15:50 EDT | Room 520 a

12186-12

The ESO Data Processing System (EDPS): A unified system for science data processing

Author(s): Wolfram Freudling, European Southern Observatory (Germany)

19 July 2022 • 15:50 - 16:10 EDT | Room 520 a

12186-13

DRAW in the US Extremely Large Telescope Program Platform

Author(s): Marie Lemoine-Busserolle, Mark E. Dickinson, Adam S. Bolton, Beth Willman, Dara J. Norman, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Christophe Dumas, TMT International Observatory (United States); Robert W. Goodrich, GMTO Corp. (United States); Gelys Trancho, Thirty Meter Telescope (United States); Andrew W. Serio, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

19 July 2022 • 16:10 - 16:30 EDT | Room 520 a

12186-14

The W.M. Keck Observatory Data Services Initiative: Creating data that is useful, usable, and quick

Author(s): John O'Meara, Matthew K. Brown, Jeffrey A. Mader, Max N. Brodheim, Tyler Tucker, Josh Walawender, Lucas Fuhrman, Michael Lundquist, Luca Rizzi, Marc F. Kassis, W. M. Keck Observatory (United States); Charles A. Beichman, Sean J. Carey, G. Bruce Berriman, Meca S. Lynn, NASA Exoplanet Science Institute (United States)

19 July 2022 • 16:30 - 16:50 EDT | Room 520 a

12186-15

Integration of Data Reduction and Near Real-Time Archiving into the Keck Observing Model

Author(s): Max N. Brodheim, John O'Meara, Jeffrey A. Mader, W. M. Keck Observatory (United States); G. Bruce Berriman, Caltech (United States); Matthew Brown, Lucas Fuhrman, W. M. Keck Observatory (United States); Christopher R. Gelino, Meca S. Lynn, Melanie A. Swain, Caltech (United States); Tyler Tucker, W. M. Keck Observatory (United States)

19 July 2022 • 16:50 - 17:10 EDT | Room 520 a

SESSION 4: TIME DOMAIN/TRANSIENTS

19 July 2022 • 17:10 - 18:30 EDT | Room 520 a

Session Chair: Alison B. Peck, The National Science Foundation (United States)

12186-16

Las Cumbres Observatory: Preparing for Second Decade Operations

Author(s): Lisa J. Storrie-Lombardi, Mark Bowman, Daniel R. Harbeck, Brian Haworth, Annie Kirby, William M. Lindstrom, Curtis McCully, Jon Nation, Rachel A. Street, Nikolaus H. Volgenau, Las Cumbres Observatory (United States)

19 July 2022 • 17:10 - 17:30 EDT | Room 520 a

12186-17

Searching for time-domain anomalies in high energy catalogs

Author(s): Rafael Martínez-Galarza, Harvard-Smithsonian Ctr. for Astrophysics (United States); Timothy L. Makinen, Harvard-Smithsonian Ctr. for Astrophysics (United States), Imperial College London (United Kingdom)

19 July 2022 • 17:30 - 17:50 EDT | Room 520 a

12186-18

Exploring the nature of sub-second optical flashes in the night sky

Author(s): W. Thomas Vestrand, Los Alamos National Lab. (United States)

19 July 2022 • 17:50 - 18:10 EDT | Room 520 a

12186-19

The Transients Handler System for the Cherenkov Telescope Array Observatory

Author(s): Kathrin Egberts, Clemens Hoischen, Univ. Potsdam (Germany); Matthias Füßling, Cherenkov Telescope Array Observatory gGmbH (Germany); Emma de Ona Wilhelmi, Deutsches Elektronen-Synchrotron (Germany); Igor Oya, Cherenkov Telescope Array Observatory gGmbH (Germany)

19 July 2022 • 18:10 - 18:30 EDT | Room 520 a

Coffee Break 10:00 - 10:30

SESSION 5: OPERATIONS PLANNING I

20 July 2022 • 10:30 - 11:30 EDT | Room 520 a

Session Chair: David S. Adler, Space Telescope Science Institute (United States)

12186-20

The new ESO Phase1 system: from the Call for Proposals to the OPC review process.

Author(s): Francesca Primas, Ferdinando Patat, Thomas Bierwirth, Dario Dorigo, Stanislaw Podgorski, Fabio Sogni, European Southern Observatory (Germany); Lucas Astolfi, Global Testing (Spain)

20 July 2022 • 10:30 - 10:50 EDT | Room 520 a

12186-21

Preparing observations for ESO telescopes: a versatile approach

Author(s): Giacomo Beccari, Thomas Bierwirth, Michael Pruemm, Paula Cristina Correia dos Santos, Vincenzo Forchì, Stéphane Brillant, Olivier R. Hainaut, Stéphane Marteau, Andrea Mehner, Steffen Mieske, Sangeeta Mysore, Monika Petr-Gotzens, John Pritchard, Marina Rejkuba, Lowell E. Tacconi-Garman, Markus Wittkowski, European Southern Observatory (Germany)

20 July 2022 • 10:50 - 11:10 EDT | Room 520 a

12186-23

Accessing SALT proposals in a browser and with an API

Author(s): Christian Hettlage, Nhlavutelo Macebele, Chaka Mofokeng, Danièl Groenewald, Encarnacion Romero Colmenero, South African Astronomical Observatory (South Africa)

20 July 2022 • 11:10 - 11:30 EDT | Room 520 a

SESSION 6: OPERATIONS PLANNING II

20 July 2022 • 11:30 - 12:30 EDT | Room 520 a

Session Chair: David S. Adler, Space Telescope Science Institute (United States)

12186-24

Toward the remotization and robotization of the OARPAF telescope

Author(s): Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Lorenzo Cabona, INAF - Osservatorio Astronomico di Brera (Italy); Silvano Tosi, Sandro Zappatore, Univ. degli Studi di Genova (Italy)

20 July 2022 • 11:30 - 11:50 EDT | Room 520 a

12186-25

The Observatory Control System (OCS): open-source applications for managing the users, proposals, observation requests, scheduling and science data for an observatory

Author(s): Jon Nation, Matt Daily, Mark Bowman, Timothy A. Lister, Jashandeep Sohi, Lisa J. Storrie-Lombardi, Rachel A. Street, Las Cumbres Observatory (United States)

20 July 2022 • 11:50 - 12:10 EDT | Room 520 a

12186-26

Mitigating the detrimental effects of satellites in optical astronomy using Astrosat

Author(s): James Osborn, Durham Univ. (United Kingdom); Laurence Blacketer, Northern Space & Security, Ltd. (United Kingdom); Matthew J. Townson, Ollie J. D. Farley, Durham Univ. (United Kingdom)

20 July 2022 • 12:10 - 12:30 EDT | Room 520 a

Lunch/Exhibition Break 12:30 - 13:30

SESSION 7: SITE AND FACILITIES OPERATIONS: CALIBRATION/PERFORMANCE

20 July 2022 • 13:30 - 15:10 EDT | Room 520 a

Session Chair: Lisa J. Storrie-Lombardi, Las Cumbres Observatory (United States)

12186-28

Performance characterization and monitoring of MUSE adaptive optics modes at Paranal

Author(s): Fernando J. Selman, Thomas Wevers, Fuyan Bian, Johanna Hartke, European Southern Observatory (Chile); Johann Kolb, Sylvain Oberti, European Southern Observatory (Germany); Olivier A. Beltramo-Martin, Lab. d'Astrophysique de Marseille (France); Axel Reyes, Univ. Técnica Federico Santa María (Chile); Macarena Vega Pallauta, Univ. Católica del Norte (Chile); Arseniy Kuznetsov, European Southern Observatory (Germany)

20 July 2022 • 13:30 - 13:50 EDT | Room 520 a

12186-29

Moving beyond traditional KPIs: an end-to-end data driven approach for improved system understanding and performance

Author(s): Natalie Behara, Christian Stephan, European Southern Observatory (Chile)

20 July 2022 • 13:50 - 14:10 EDT | Room 520 a

12186-30

The 4MOST calibration plan

Author(s): Genoveva Micheva, Roelof S. de Jong, Leibniz-Institut für Astrophysik Potsdam (Germany); Michael J. Irwin, Institute of Astronomy, Univ. of Cambridge (United Kingdom); Roland Winkler, Joar G. Brynnel, Olga Bellido-Tirado, Jakob C. Walcher, Leibniz-Institut für Astrophysik Potsdam (Germany); Olivier Schnurr, CTAO (Germany); Marica Valentini, Leibniz-Institut für Astrophysik Potsdam (Germany)

20 July 2022 • 14:10 - 14:30 EDT | Room 520 a

12186-31

Calibration-TOM: Managing calibration observations for a global network of telescopes

Author(s): Nikolaus H. Volgenau, Daniel R. Harbeck, William M. Lindstrom, Las Cumbres Observatory (United States); David M. Collom, AppFolio, Inc. (United States); Rachel A. Street, Las Cumbres Observatory (United States); Marshall C. Johnson, The Ohio State Univ. (United States)

20 July 2022 • 14:30 - 14:50 EDT | Room 520 a

12186-32

New pointing calibration technique using star signals in the ASTRI Cherenkov camera and the Variance method

Author(s): Simone Iovenitti, INAF - Osservatorio Astronomico di Brera (Italy), Univ. degli Studi di Milano (Italy); Giorgia Sironi, INAF - Osservatorio Astronomico di Brera (Italy); Teresa Mineo, Milvia Capalbi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Osvaldo Catalano, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Saverio Lombardi, INAF (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Alberto Segreto, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Giuseppe Sottile, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Gino Tosti, INAF (Italy)

20 July 2022 • 14:50 - 15:10 EDT | Room 520 a

Coffee Break 15:10 - 15:40

SESSION 8: SITE AND FACILITIES OPERATIONS: AUTOMATION/ACCESIBILITY

20 July 2022 • 15:40 - 16:40 EDT | Room 520 a

Session Chair: Lisa J. Storrie-Lombardi, Las Cumbres Observatory (United States)

12186-33

Costs and benefits of automation for astronomical facilities

Author(s): Axel Yanes Díaz, Sergio Rueda-Teruel, Fernando Rueda-Teruel, Guillermo López-Alegre, Javier Cenarro Lagunas, Antonio Marín Franch, Ctr. de Estudios de Física del Cosmos de Aragón (Spain)

20 July 2022 • 15:40 - 16:00 EDT | Room 520 a

12186-34

broadening access to remote observing at keck

Author(s): Josh Walawender, Josh Riley, Jeffrey A. Mader, Matthew K. Brown, Kyle Lanclos, W. M. Keck Observatory (United States)

20 July 2022 • 16:00 - 16:20 EDT | Room 520 a

12186-36

Informing Observatory Operations with Accessible Telemetry and Automated Performance Metrics

Author(s): Daniel R. Harbeck, Nikolaus H. Volgenau, Annie Kirby, William M. Lindstrom, Mark Bowman, Las Cumbres Observatory (United States)

20 July 2022 • 16:20 - 16:40 EDT | Room 520 a

Coffee Break 10:00 - 10:30

SESSION 9: SITE AND FACILITIES OPERATIONS: INFRASTRUCTURE/EXTERNAL IMPACTS

21 July 2022 • 10:30 - 12:50 EDT | Room 520 a

Session Chair: Christian Veillet, Large Binocular Telescope Observatory (United States)

12186-38

ALMA Recovers from COVID

Author(s): Stuartt A. Corder, National Radio Astronomy Observatory (Chile); Norikazu Mizuno, National Astronomical Observatory of Japan (Chile); Ivan Lopez, Associated Universities, Inc. (Chile); Elizabeth Humphreys, Jorge Ibsen, European Southern Observatory (Chile); Rafael Mena, Associated Universities, Inc. (Chile); Frank Ruseler, European Southern Observatory (Chile)

21 July 2022 • 10:30 - 10:50 EDT | Room 520 a

12186-39

Improving SALT operations resource planning and collaboration in COVID-19 times

Author(s): Paul Rabe, Southern African Large Telescope (South Africa); Encarnacion Romero-Colmenero, Lisa A. Crause, Petri Vaisanen, South African Astronomical Observatory (South Africa)

21 July 2022 • 10:50 - 11:10 EDT | Room 520 a

12186-40

CANCELED: Impact of climate change in astronomy: evolution of the humidity at the ELT site.

Author(s): Faustine Cantalloube, Lab. d'Astrophysique de Marseille (France); Olivier Absil, Liège Univ. (Belgium)

21 July 2022 • 11:10 - 11:30 EDT | Room 520 a

12186-41

Weather at selected astronomical sites at MENA region

Author(s): Imane Bekkal, Univ. Cadi Ayyad (Morocco)

21 July 2022 • 11:30 - 11:50 EDT | Room 520 a

12186-42

On the importance of the electrical grid power quality for astronomical observatories

Author(s): Michael Mann, Thorsten Döhring, Manfred Stollenwerk, Technische Hochschule Aschaffenburg (Germany); Theodor Pribulla, Richard M. Komžík, Peter Sivanic, Slovak Academy of Sciences (Slovakia)

21 July 2022 • 11:50 - 12:10 EDT | Room 520 a

12186-43

How we completed major maintenance and new installations at Las Cumbres Observatory during the COVID-19 Pandemic

Author(s): Daniel R. Harbeck, Annie Kirby, Nikolaus H. Volgenau, Mark Elphick, Lisa J. Storrie-Lombardi, Todd Henderson, Brook Taylor, Patrick B. Conway, Mark Bowman, Las Cumbres Observatory (United States); Norio Narita, Komaba Institute for Science, The University of Tokyo (Japan)

21 July 2022 • 12:10 - 12:30 EDT | Room 520 a

12186-44

A laser cleaning system for astronomical mirrors

Author(s): Antonio Marzoa, SENER Aeroespacial S.A. (Spain), Univ. Politècnica de Catalunya (Spain); Albert Tomàs, SENER Ingeniería y Sistemas S.A. (Spain); Joan Manel Casalta, SENER Aeroespacial S.A. (Spain); Javier Solis, Jose Gonzalo, Instituto de Óptica "Daza de Valdés" (Spain)

21 July 2022 • 12:30 - 12:50 EDT | Room 520 a

Lunch/Exhibition Break 12:50 - 13:50

SESSION 10: SITE AND FACILITIES OPERATIONS: INSTRUMENTS/OPERATIONS I

21 July 2022 • 13:50 - 15:30 EDT | Room 520 a

Session Chair: Christian Veillet, Large Binocular Telescope Observatory (United States)

12186-45

The Large Binocular Telescope fifteen years after first light

Author(s): Christian Veillet, John M. Hill, Large Binocular Telescope Observatory (United States)

21 July 2022 • 13:50 - 14:10 EDT | Room 520 a

12186-46

Validation of the operations manual for EIRSAT-1, a 2U CubeSat with a novel gamma-ray burst detector

Author(s): Rachel Dunwoody, Maeve Doyle, David Murphy, Gabriel Finneran, Derek O'Callaghan, Jack Reilly, Joseph Thompson, Sai Krishna Reddy Akarapu, Jessica Erkal, Joseph Mangan, Lána Salmon, Sarah Walsh, Lorraine Hanlon, David McKeown, William O'Connor, Alexey Uliyanov, Ronan Wall, Sheila McBreen, Univ. College Dublin (Ireland); Brian Shortt, European Space Agency, ESTEC (Netherlands)

21 July 2022 • 14:10 - 14:30 EDT | Room 520 a

12186-47

Gemini Visiting Instrument Program

Author(s): Hwihyun Kim, Gemini Observatory (Chile); Alison B. Peck, Scot J. Kleinman, Gemini Observatory (United States); Ruben J. Diaz, Gemini Observatory (Chile)

21 July 2022 • 14:30 - 14:50 EDT | Room 520 a

12186-48

The Mexico UK Sub-mm Camera for Astronomy (MUSCAT): Conceptual design and strategy to build and operate a versatile scientific instrument and technology test-bed for the Large Millimeter Telescope

Author(s): Víctor Gómez-Rivera, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter Ade, Peter Barry, Thomas L. R. Brien, Cardiff Univ. (United Kingdom); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Chris M. Dodd, Christopher J. Dunscombe, Stephen Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca Rodriguez, José Miguel Jáuregui-García, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter C. Hargrave, Amber L. Hornsby, Julian S. House, Cardiff Univ. (United Kingdom); Philip D. Mauskopf, Arizona State Univ. (United States); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez, José Luis Hernández Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Samuel Rowe, Cardiff Univ. (United Kingdom); David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Matthew L. Smith, Cardiff Univ. (United Kingdom); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Marcial Becerril Tapia, Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Carole E. Tucker, Cardiff Univ. (United Kingdom); Miguel V. de la Rosa Becerra, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Salvador Ventura-González, Univ. of Hawai'i at Manoa (United States); Ian K. Walker, Cardiff Univ. (United Kingdom); Emmaly Aguilar Pérez, Corporación Mexicana de Investigación en Materiales S.A. de C.V. (Mexico)

21 July 2022 • 14:50 - 15:10 EDT | Room 520 a

12186-49

Las Campanas operations: current scheme and future challenges

Author(s): Francesco Di Mille, Guillermo A. Blanc, Konstantina Boutsia, Leopold Infante, David J. Osip, Povilas Palunas, Mark Phillips, Lionel Zumaran, Las Campanas Observatory (Chile)

21 July 2022 • 15:10 - 15:30 EDT | Room 520 a

Coffee Break 15:30 - 16:00

SESSION 11: SITE AND FACILITIES OPERATIONS: INSTRUMENTS/OPERATIONS II

21 July 2022 • 16:00 - 17:20 EDT | Room 520 a

Session Chair: Alison B. Peck, The National Science Foundation (United States)

12186-50

Observation Scheduling and Automatic Data Reduction for the Antarctic telescope, ASTEP+

Author(s): Georgina Dransfield, Univ. of Birmingham (United Kingdom); Djamel Mekarnia, Observatoire de la Côte d'Azur (France); Amaury Triaud, Univ. of Birmingham (United Kingdom); Tristan Guillot, Observatoire de la Côte d'Azur (France); Lyu Abe, Observatoire de la Côte d'Azur (France); Lionel J. García, Université de Liège (Belgium); Nicolas Crouzet, European Space Agency (Netherlands); François-Xavier Schmider, Observatoire de la Côte d'Azur (France); Abdelkarim Agabi, Olga Suarez, Philippe Bendjoya, Observatoire de la Côte d'Azur (France); Maximilian N. Guenther, European Space Agency (Netherlands); Olivier Lai, Observatoire de la Côte d'Azur (France); Bruno M. Martin, European Space Agency (Netherlands); Philippe Stee, Observatoire de la Côte d'Azur (France)

21 July 2022 • 16:00 - 16:20 EDT | Room 520 a

12186-51

Lessons learned from the Arecibo Observatory auxiliary M4N socket analysis and implications for future observatory designs

Author(s): Pavel Babuska, Vinay Goyal, The Aerospace Corp. (United States); Gregory Harrigan, Azita Valinia, NASA Engineering & Safety Center (United States)

21 July 2022 • 16:20 - 16:40 EDT | Room 520 a

12186-52

The GRANDMA telescope network in preparation for O4

Author(s): Antonio de Ugarte Postigo, Observatoire de la Côte D'Azur (France); Sarah Antier, Observatoire de la Côte d'Azur (France)

21 July 2022 • 16:40 - 17:00 EDT | Room 520 a

12186-54

Operations of the HESS array of imaging atmospheric Cerenkov telescopes:

Author(s): Stefan J. Wagner, Ruprecht-Karls-Univ. Heidelberg (Germany); Stefan Ohm, Deutsches Elektronen-Synchrotron (Germany)

21 July 2022 • 17:00 - 17:20 EDT | Room 520 a

SESSION PS1: POSTERS: DATA FLOW

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-55

The ESO Science Archive Experience in Adopting VO Technologies

Author(s): Alberto Micol, Magda Arnaboldi, Daniel Brandt, Nausicaa Delmotte, Vincenzo Forchì, Nathalie Fourniol, Ahmed Mubashir Kahn, European Southern Observatory (Germany); Laura Mascetti, Terma GmbH (Germany); Stanislaw Podgorski, Jörg Retzlaff, Martino Romaniello, European Southern Observatory (Germany); Malgorzata Stellert, etamax space Gmbh (Germany); Stefano Zampieri, Olivier R. Hainaut, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-56

EP-FXT Science Data Center

Author(s): Shumei Jia, Institute of High Energy Physics (China); Liming Song, Chengkui Li, Institute of High Energy Physics (China); Haisheng Zhao, Juan Zhang, Ju Guan, Ge Ou, Institute of High Energy Physics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-57

The GECAM science operations

Author(s): Xiang Ma, Institute of High Energy Physics (China)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: OBSERVATION PLANNING AND SCHEDULING

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-22

Observation Planning to better track Solar instrument degradation

Author(s): Stéphane Béland, Univ. of Colorado Boulder (United States); Jerald W. Harder, Steven V. Penton, Erik C. Richard, Univ. of Colorado at Boulder (United States); Martin Snow, South African National Space Agency (SANSA) (South Africa)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-59

ExoTOM -- a target-observation-manager automating exoplanet transit follow-up

Author(s): Tilman Masur, Sebastian Schäfer, Georg-August-Univ. Göttingen (Germany); Rachel A. Street, Las Cumbres Observatory (United States); Stefan Dreizler, Tim-Oliver Husser, Georg-August-Univ. Göttingen (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-60

DESI remote observing

Author(s): Parker Fagrelius, Arjun Dey, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Claire L. Poppett, Lawrence Berkeley National Lab. (United States); Klaus Honscheid, The Ohio State Univ. (United States); Martin Landriau, Satya Gontcho A. Gontcho, Lawrence Berkeley National Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: OPERATIONS BENCHMARKS AND METRICS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-61

The conceptual design of SCal: A facility calibration system for the Maunakea Spectroscopic Explorer

Author(s): Luke M. Schmidt, Jennifer L. Marshall, Darren L. DePoy, Texas A&M Univ. (United States); Samuel C. Barden, Canada-France-Hawaii Telescope Corp. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-62

Joint ALMA Observatory data science exploration on the cloud

Author(s): Sergio Pavez, Ignacio Toledo, Tomas Staig, Nicolás Ovando, ALMA (Chile); Gastón Vélez, Jorge Ibsen, Joint ALMA Observatory (Chile); Jorge Sierra, Agustin Grangetto, Amazon Web Services, Inc. (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: SITE AND FACILITIES OPERATIONS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-63

LoRaWAN usage for remote telescope operations

Author(s): Ronan Higgins, Univ. zu Köln (Germany); Ralf A. Timmermann, Rheinische Friedrich-Wilhelms-Univ. Bonn (Germany); Mike R. Nolta, Univ. of Toronto (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-64

Rubin Observatory LSST Camera Shipping Container testing and analysis

Author(s): Margaux Lopez, Diane Hascall, SLAC National Accelerator Lab. (United States); Guillem Megias Homar, Stanford Univ. (United States); Kevin A. Reil, SLAC National Accelerator Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-65

Taking SO/PHI to the diffraction limit using focus scans and phase diversity techniques

Author(s): Julian Blanco Rodríguez, Univ. de València (Spain); David Orozco Suárez, Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain); Johann Hirzberger, Kinga Albert, Nestor Albelo Jorge, Max-Planck-Institut für Sonnensystemforschung (Germany); Thierry Appourchaux, Institut d'Astrophysique Spatiale (France); Alberto Álvarez-Herrero, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Achim M. Gandorfer, Dietmar Germerott, Lucas Guerrero, Pablo Gutierrez-Marques, Fatima Kahil, Martin Kolleck, Sami K. Solanki, Max-Planck-Institut für Sonnensystemforschung (Germany); Reiner Volkmer, Kiepenheuer-Institut für Sonnenphysik (Germany); Joachim Woch, Max-Planck-Institut für Sonnensystemforschung (Germany); Björn Fiethe, Technische Univ. Braunschweig (Germany); José María Gómez Cama, Univ. de Barcelona (Spain); Isabel Perez Grande, Univ. Politécnica de Madrid (Spain); Esteban Sanchis Kilders, Univ. de València (Spain); María Balaguer Jiménez, Luis R. Bellot Rubio, Instituto de Astrofísica de Andalucía (Spain); Daniele Calchetti, Max-Planck-Institut für Sonnensystemforschung (Germany); Manuel Carmona, Univ. de Barcelona (Spain); Werner Deutsch, German Fernandez Rico, Max-Planck-Institut für Sonnensystemforschung (Germany); Ana B. Fernández-Medina, Pilar García Parejo, INTA Instituto Nacional de Técnica Aeroespacial (Spain); José Luis Gasent-Blesa, Univ. de Valencia (Spain); Laurent Gizon, Bianca Grauf, Klaus Heerlein, Andreas Lagg, Max-Planck-Institut für Sonnensystemforschung (Germany); Tobias Lange, Technische Univ. Braunschweig (Germany); Antonio C. López Jiménez, Instituto de Astrofísica de Andalucía (Spain); Thorsten Maue, Kiepenheuer-Institut für Sonnenphysik (Germany); Reinhard Müller, Max-Planck-Institut für Sonnensystemforschung (Germany); Harald Michalik, Technische

Univ. Braunschweig (Germany); Alejandro Moreno Vacas, Instituto de Astrofísica de Andalucía (Spain); Reinhard Müller, Max-Planck-Institut für Sonnensystemforschung (Germany); Eiji Nakai, Leibniz-Institut für Sonnenphysik (Germany); Wolfgang Schmidt, Kiepenheuer-Institut für Sonnenphysik (Germany); Jesper Schou, Udo H. Schühle, Jonas Sinjan, Jan Michael Staub, Max-Planck-Institut für Sonnensystemforschung (Germany); Hanna Strecker, Instituto de Astrofísica de Andalucía (Spain); Ignacio Torralbo, Univ. Politécnica de Madrid (Spain); Gherardo Valori, Max-Planck-Institut für Sonnensystemforschung (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-67

MARVEL: extracting high-precision radial velocities of exoplanet hosts

Author(s): Joris De Ridder, Nicholas Jannsen, Dries Seynaeve, KU Leuven (Belgium); Julian Stürmer, Landessternwarte Heidelberg (Germany); Lars A. Buchhave, Technical Univ. of Denmark (Denmark); Pierre Royer, Hugues Sana, Andrew Tkachenko, Wim De Meester, Hans Van Winckel, Bart Vandenbussche, KU Leuven (Belgium); Ignasi Ribas, Institut de Ciències de l'Espai (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS5: POSTERS: TIME DOMAIN

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12186-70

Astronomical seeing at Maidanak observatory with DIMM

Author(s): Azimjon Azimov, Yusufjon A. Tillayev, Shuhrat Ehgamberdiev, Sabit P. Ilyasov, Ulugh Beg Astronomical Institute of the Uzbek Academy of Sciences (Uzbekistan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12186-10
Improving the telescope guiding with field stabilization on the VLT/UTs

Contact author(s): Hibon, Pascale, European Southern Observatory, Chile

Oral

12186-21
Preparing observations for ESO telescopes: a versatile approach

Contact author(s): Beccari, Giacomo, European Southern Observatory, Germany

Oral

12186-27
Optimal control of wide field small aperture telescope arrays with reinforcement learning

Contact author(s): Jia, Peng, Taiyuan Univ. of Technology, China

Oral

12186-3
Equity, diversity, and inclusion (EDI) at ESO: updates on the current practices and strategies for the future

Contact author(s): Hibon, Pascale, European Southern Observatory, Chile

Oral

12186-37
Design of an operational control system for a telescope system based on RACS2

Contact author(s): Wang, Jian, Univ. of Science and Technology of China, China

Oral

12186-71
A low cost and automatic meteorites detection system with commercial camera and neural networks

Contact author(s): Jia, Peng, Taiyuan Univ of Technology, China

Poster

CONFERENCE 12187

Modeling, Systems Engineering, and Project Management for Astronomy X

17 - 19 July 2022 | Room 520 d

Conference Chairs: **George Z. Angeli,** GAAS Analytical (United States); **Philippe Dierickx,** European Southern Observatory (Germany)

Program Committee: **Sébastien Elias Egner,** European Southern Observatory (Germany); **Sebastian G. Els,** Gulf Solutions (United Arab Emirates); **Takeshi Okuda,** National Astronomical Observatory of Japan (Japan); **Scott Roberts,** NRC-Herzberg Astronomy & Astrophysics (Canada); **Hermine Schnetler,** UK Astronomy Technology Ctr. (United Kingdom); **Robert Selina,** National Radio Astronomy Observatory (United States); **Masahiro Sugimoto,** National Astronomical Observatory of Japan (Japan); **Gerhard Pieter Swart,** SKA Organisation (United Kingdom); **Mitchell Troy,** Jet Propulsion Lab. (United States)

SESSION 1: SYSTEMS ENGINEERING AND PROJECT MANAGEMENT FOR INSTRUMENTATION I

17 July 2022 • 09:00 - 10:40 EDT | Room 520 d

Session Chair: Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

12187-1

ANDES, the high resolution spectrograph for the ELT: project management and system engineering approaches for mastering its preliminary design phase

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17 July 2022 • 09:00 - 09:20 EDT | Room 520 d

12187-2

GMT-MANIFEST project cost estimate case – Applying the PMBoK Guide to the costing of instrumentation for ELTs

Author(s): Celestina S. Lacombe, Jon Lawrence, Scott Smedley, Macquarie Univ. (Australia); Rebecca Brown, Australian Astronomical Optics, Macquarie Univ. (Australia); Ellie O'Brien, Lew Waller, Michael Goodwin, Jessica Zheng, Scott Case, Macquarie Univ. (Australia); Vitor N. Hartmann, Instituto de Astronomia (Brazil); David Adams, Australian Astronomical Optics (Australia)

17 July 2022 • 09:20 - 09:40 EDT | Room 520 d

12187-3

Application of model-based systems engineering to MANIFEST conceptual design

Author(s): Michael Goodwin, David Adams, Celestina S. Lacombe, Australian Astronomical Optics, Macquarie Univ. (Australia); Vitor N. Hartmann, Univ. de São Paulo (Brazil)

17 July 2022 • 09:40 - 10:00 EDT | Room 520 d

12187-4

Pyxel 1.0: an open source Python framework for detector and end-to-end instrument simulation

Author(s): Matej Arko, Thibaut Prod'homme, Frederic Lemmel, European Space Agency (Netherlands); Benoit Serra, Elizabeth George, European Southern Observatory (Germany); Bradley Kelman, The Open Univ. (United Kingdom); Enrico Biancalani, Leiden Univ. (Netherlands); Hans Smit, European Space Agency (Netherlands); David Lucsanyi, CERN (Switzerland)

17 July 2022 • 10:00 - 10:20 EDT | Room 520 d

12187-5

Rehearsing the complex data flow of Multi-Object Spectrograph Survey projects

Author(s): Clare Worley, Nic Walton, David Murphy, Francisco Paz-Chinchón, Mike Irwin, Alireza Molaeinezhad, Institute of Astronomy (United Kingdom); Anais Gonneau, Institute of Astronomy (United Kingdom)

17 July 2022 • 10:20 - 10:40 EDT | Room 520 d

Coffee Break 10:40 - 11:00

SESSION 2: SYSTEMS ENGINEERING AND PROJECT MANAGEMENT FOR INSTRUMENTATION II

17 July 2022 • 11:00 - 12:40 EDT | Room 520 d

Session Chair: Gerhard Pieter Swart, SKA Organisation (United Kingdom)

12187-6

HARMONI – the Extremely Large Telescope first light integral field spectrograph: A novel functional model based system engineering methodology for the design of an integrated instrument control system architecture

Author(s): Hermine Schnetler, Asim Yaqoob, Charlotte Bond, UK Astronomy Technology Ctr. (United Kingdom); Haresh Chulani, Instituto de Astrofísica de Canarias (Spain); Fraser Clarke, Univ. of Oxford (United Kingdom); Anne Costille, Lab. d'Astrophysique de Marseille (France); Graciela Delgado Garcia, Jose Miguel Delgado, Instituto de Astrofísica de Canarias (Spain); Sofia Dimoudi, Andrew Dunn, Durham Univ. (United Kingdom); Elizabeth George, European Southern Observatory (Germany); Alberto Estrada Piqueras, Ctr. de Astrobiología (Spain); Sylvain Guieu, Institut de Planétologie et d'Astrophysique de Grenoble (France); Enrique Joven, Instituto de Astrofísica de Canarias (Spain); Marie Larrieu, Institut de Recherche en Astrophysique et Planétologie (France); Yolanda Martín Hernando, Instituto de Astrofísica de Canarias (Spain); Cecilia Martínez Martín, Ctr. de Astrobiología (Spain); Saul Menéndez Mendoza, Instituto de Astrofísica de Canarias

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17 July 2022 • 11:00 - 11:20 EDT | Room 520 d

12187-7

An overview of the Gemini Infrared Multi-Object Spectrograph performance budgets

Author(s): Masen P. Lamb, Dunlap Institute for Astronomy & Astrophysics (Canada); Suresh Sivanandam, Univ. of Toronto (Canada); Martin Tschimmel, Gemini Observatory (Chile); Adam Muzzin, York Univ. (Canada); Alan W. McConnachie, NRC-Herzberg Astronomy & Astrophysics (Canada); Julia Scharwächter, Gemini Observatory (United States); Gaetano Sivo, Gemini Observatory (Chile); Jenny Atwood, NRC-Herzberg Astronomy & Astrophysics (Canada); Scott C. Chapman, Dalhousie Univ. (Canada); Scott Christie, Mark Barnet, Univ. of Toronto (Canada); Paul Hickson, The Univ. of British Columbia (Canada); Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada)

17 July 2022 • 11:20 - 11:40 EDT | Room 520 d

12187-8

SHARK-NIR: from design to installation, ready to dive into first light

Author(s): Maria Bergomi, INAF Osservatorio Astronomico di Padova (Italy); Luca Marafatto, Elena Carolo, Davide Ricci, Daniele Vassallo, Luigi Lessio, Valentina D'Orazi, Davide Greggio, Dino Mesa, Kalyan Kumar Radhakrishnan Santhakumari, Gabriele Umbriaco, Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); Oscar M. Montoya, Steward Observatory (United States); Lars Mohr, Max-Planck-Institut für Astronomie (Germany); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Federico Biondi, INAF - Osservatorio Astronomico di Padova (Italy), Max-Planck-Institut für extraterrestrische Physik (Germany); Sona Chavan, Marco De Pascale, INAF - Osservatorio Astronomico di Padova (Italy); Paul Grenz, Steward Observatory (United States); Fulvio Laudisio, INAF - Osservatorio Astronomico di Padova (Italy); Jarron M. Leisenring, Steward Observatory (United States); Fernando Pedichini, Roberto Piazzesi, INAF - Osservatorio Astronomico di Roma (Italy); Enrico Pinna, Alfio Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Simonetta Chinellato, Marco Dima, Simone Di Filippo, Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy); Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy); Alexis Carlotti, Institut de Planétologie et d'Astrophysique de Grenoble (France); Cristina Knapic, Martina Vicinanza, INAF - Osservatorio Astronomico di Trieste (Italy); Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy); Julian Christou, Laura Funk, Large Binocular Telescope Observatory (United States); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy)

17 July 2022 • 11:40 - 12:00 EDT | Room 520 d

12187-9

MAORY: the RAM analysis approach for preliminary design

Author(s): Simonetta Chinellato, Enrico Giro, Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Marco Bonaglia, INAF - Osservatorio Astrofisico di Arcetri (Italy); Enrico Cascone, Vincenzo Cianniello, Domenico D'Auria, Vincenzo De Caprio, INAF - Osservatorio Astronomico di Capodimonte (Italy); Gianluca Di Rico, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Christian Eredia, INAF - Osservatorio Astronomico di Capodimonte (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Zoltan Hubert, Institut de Planétologie et d'Astrophysique de Grenoble (France); Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

17 July 2022 • 12:00 - 12:20 EDT | Room 520 d

12187-10

PORIS Toolkit DSL applied to instrument development and implementation

Author(s): Jacinto Javier Vaz-Cedillo, Gran Telescopio de Canarias, S.A. (Spain), cosmoBots.eu (Spain); José Antonio Rodríguez-Losada, Gran Telescopio de Canarias, S.A. (Spain); Patricia Fernández-Izquierdo, Miguel Ángel Torres-Gil, Jorge Quintero-Nehrkorn, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Roberto González-Rocha, Noé Rodríguez-González, cosmoBots.eu (Spain)

17 July 2022 • 12:20 - 12:40 EDT | Room 520 d

Lunch Break 12:40 - 14:00

SESSION 3: INSTRUMENT MODELING

17 July 2022 • 14:00 - 15:40 EDT | Room 520 d

Session Chair: Mitchell Troy, Jet Propulsion Lab. (United States)

12187-11

Progress on the simulation tools for SOXS instrument: Exposure time calculator and End-to-End simulator.

Author(s): Matteo Genoni, Andrea Scaudo, INAF - Osservatorio Astronomico di Brera (Italy); Gianluca Li Causi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Lorenzo Cabona, Marco Landoni, Sergio Campana, INAF - Osservatorio Astronomico di Brera (Italy); Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Riccardo Claudi, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Sagi Ben-Ami, Weizmann Institute of Science (Israel); Federico Biondi, Max-Planck-Institut für extraterrestrische Physik (Germany); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Cosentino, Fundación Galileo Galilei - INAF (Spain); Francesco D'Alessio, INAF - Osservatorio Astronomico di Roma (Italy); Paolo D'Avanzo, INAF - Osservatorio Astronomico di Brera (Italy); Ofir Hershko, Weizmann Institute of Science (Israel); Hanindyo Kuncarayakti, Univ. of Turku (Finland); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Giuliano Pignata, Univ. Andres Bello (Chile); Kalyan Kumar Radhakrishnan Santhakumari, INAF - Osservatorio Astronomico di Padova (Italy); Adam Rubin, European Southern Observatory (Germany); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Fabrizio Vitali, INAF - Osservatorio Astronomico di Roma (Italy); David Young, Queen's Univ. Belfast (United Kingdom); Jani Achrén, Incident Angle Oy (Finland); José Antonio Araiza-Duran, Centro de Investigaciones en Óptica, A.C. (Mexico); Iair Arcavi, Tel Aviv Univ. (Israel); Federico Battaini, INAF - Osservatorio Astronomico di Padova (Italy); Anna Brucalassi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Rachel Bruch, Weizmann Institute of Science (Israel); Enrico Cappellaro, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, Massimo Della Valle, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco De Pascale, INAF - Osservatorio Astronomico di Padova (Italy); Rosario Di Benedetto, INAF - Osservatorio Astrofisico di Catania (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Avishay Gal-Yam, Weizmann Institute of Science (Israel); Marcos Hernandez, Fundación Galileo Galilei - INAF (Spain); Jari Kotilainen, Finnish Ctr. for Astronomy with ESO (Finland); Laurent Marty, INAF - Osservatorio Astronomico di Capodimonte (Italy); Seppo Mattila, Univ. of Turku (Finland); Michael Rappaport, Weizmann Institute of Science (Israel); Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Stephen Smartt, Queen's Univ. Belfast (United Kingdom); Ricardo Zanmar Sanchez, INAF - Osservatorio Astrofisico di Catania (Italy); Maximilian Stritzinger, Aarhus Univ. (Denmark); Héctor Ventura, Fundación Galileo Galilei - INAF (Spain)

17 July 2022 • 14:00 - 14:20 EDT | Room 520 d

12187-12

What could KIDSpec, a new MKID spectrograph, do on the ELT?

Author(s): Volkan Benedict Hofmann, Kieran O'Brien, Deli Geng, Durham Univ. (United Kingdom)

17 July 2022 • 14:20 - 14:40 EDT | Room 520 d

12187-13

Optical ghost modeling of the Maunakea Spectroscopic Explorer wide field corrector

Author(s): Marc R. Baril, Samuel C. Barden, Canada-France-Hawaii Telescope Corp. (United States); Damien J. Jones, Prime Optics (Australia); Will Saunders, Australian Astronomical Optics, Macquarie Univ. (Australia); Jessica Zheng, Australian Astronomical Optics (Australia)

17 July 2022 • 14:40 - 15:00 EDT | Room 520 d

12187-14

Modeling the vortex center glow in the ELT/METIS vortex coronagraph

Author(s): Muskan Shinde, Indian Institute of Science Education and Research Pune (India); Christian Delacroix, Gilles Orban de Xivry, Olivier Absil, Liège Univ. (Belgium)

17 July 2022 • 15:00 - 15:20 EDT | Room 520 d

12187-15

The High-contrast End-to-End Performance Simulator (HEEPS)

Author(s): Christian Delacroix, Liège Univ. (Belgium); Muskan Shinde, Indian Institute of Science Education and Research Pune (India); Gilles Orban de Xivry, Prashant Pathak, Liège Univ. (Belgium); Faustine Cantalloube, Lab. d'Astrophysique de Marseille (France); Brunella Carlomagno, Valentin Christiaens, Matthiew Willson, Liège Univ. (Belgium); Matthew Kenworthy, David Doelman, Leiden Observatory (Netherlands); Olivier Absil, Liège Univ. (Belgium)

17 July 2022 • 15:20 - 15:40 EDT | Room 520 d

Coffee Break 15:40 - 15:50

SESSION 4: ASSEMBLY, INTEGRATION, AND VERIFICATION

17 July 2022 • 15:50 - 16:50 EDT | Room 520 d

Session Chair: Sebastian G. Els, Gulf Solutions (United Arab Emirates)

12187-18

Overview and status of Vera C Rubin Observatory system integration, test and commissioning

Author(s): Charles F. Claver, Sandrine Thomas, Vera C. Rubin Observatory (United States); Kevin Reil, SLAC National Accelerator Lab. (United States); Keith Bechtol, Univ. of Wisconsin-Madison (United States); Holger Drass, Leanne P. Guy, Patrick Ingraham, Vera C. Rubin Observatory (United States); Robert H. Lupton, Princeton Univ. (United States); Austin Roberts, Brian Stalder, Vera C. Rubin Observatory (United States)

17 July 2022 • 15:50 - 16:10 EDT | Room 520 d

12187-19

Mount Abu 2.5m telescope: first light and performance assessment

Author(s): Christian Bastin, Gregory P. Lousberg, Olivier Pirnay, Cédric Adam, Pierre Albart, Jonathan de Ville, Alexis Feutry, Nicolas Fontana, Eric Gabriel, Audrey A. Lanotte, Fabien Lemagne, Thibault Leseur, Laurence Méant, Sabrina Orban, Jean-Marc Tortolani, Jonathan Verspecht, Carlo Flebus, Nathalie Ninane, AMOS Ltd. (Belgium)

17 July 2022 • 16:10 - 16:30 EDT | Room 520 d

12187-20

stability and assembly precision of MXT line of sight

Author(s): Jean-Michel Le Duigou, Narjiss Boufracha, Ctr. National d'Études Spatiales (France); Vadim Burwitz, Max-Planck-Institut für extraterrestrische Physik (Germany); Sebastien Clamagirand, Ctr. National d'Études Spatiales (France); Charlotte F. Feldman, Univ. of Leicester (United Kingdom); Albert Gomes, François Gonzalez, Ctr. National d'Études Spatiales (France); Diego Götz, Aline Meuris, CEA-IRFU (France); Karine Mercier, Pierre Pasquier, Ctr. National d'Études Spatiales (France); Nicolas Renault-Tinacci, CEA-IRFU (France); James F. Pearson, Univ. of Leicester (United Kingdom); Thierry Tourrette, CEA-IRFU (France); Lionel Roucayrol, Ctr. National d'Études Spatiales (France); Richard Willingale, Univ. of Leicester (United Kingdom)

17 July 2022 • 16:30 - 16:50 EDT | Room 520 d

Coffee Break 10:00 - 10:30

SESSION 5: EXTREMELY LARGE TELESCOPES (ELT)

18 July 2022 • 10:30 - 12:10 EDT | Room 520 d

Session Chair: Philippe Dierickx, European Southern Observatory (Germany)

12187-21

Key performance parameter thresholds for the Giant Magellan Telescope

Author(s): Breann N. Sitarski, George Z. Angeli, GMTO Corp. (United States); Sarah Gajadhar, SG Consulting, Inc. (Canada); Rodolphe Conan, Antonin H. Bouchez, Robert Goodrich, Brian Walls, GMTO Corp. (United States)

18 July 2022 • 10:30 - 10:50 EDT | Room 520 d

12187-22

Aerothermal Modeling for Design Support, Requirement Validation and Performance Assessment for Giant Magellan Telescope Subsystems

Author(s): Konstantinos Vogiatzis, Henry Fitzpatrick, Kaushik Das, Rodolphe Conan, George Z. Angeli, Breann N. Sitarski, Rodrigo Romano, Cristoph Dribusch, Brian Walls, GMTO Corp. (United States)

18 July 2022 • 10:50 - 11:10 EDT | Room 520 d

12187-23

TMT Systems Engineering evolution in the last decade

Author(s): Gelys Trancho, Kayla Hardie, John Rogers, Bart Fordham, Thirty Meter Telescope (United States); Sarah Gajadhar, SG Consulting, Inc. (Canada); Jamie Nakawatase, Thirty Meter Telescope (United States)

18 July 2022 • 11:10 - 11:30 EDT | Room 520 d

12187-24

Reliability Estimate for the Thirty Meter Telescope

Author(s): John Rogers, Thirty Meter Telescope (Canada); Frank Thede, Hessam Khodabakhsh, Acclaro Corp. (Canada); Bart Fordham, Gelys Trancho, Thirty Meter Telescope (United States)

18 July 2022 • 11:30 - 11:50 EDT | Room 520 d

12187-63

NOIRLab's US-ELTP's novel approach to requirements management using Jira's Requirements 4 Jira add-on

Author(s): Andrew W. Serio, NOIRLab (United States); Marie Lemoine-Busserolle, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Carl Stubens, Brian Selvy, NOIRLab (United States)

18 July 2022 • 11:50 - 12:10 EDT | Room 520 d

Lunch Break 12:10 - 13:20

SESSION 00: AS108 AND AS103 JOINT SESSION: MODELING AS A DRIVER OF DESIGN I

18 July 2022 • 13:20 - 15:00 EDT | Room 517 d

12187-70

Transient Wavefront Error from Cooled Air Downwind of Telescope Spiders

Author(s): Diogo Martins, Dassault Systemes 3DExcite GmbH (Germany); Ronald Holzlöhner, Christophe Vérinaud, European Southern Observatory (Germany); Christophe Kleinclaus, Dassault Systemes 3DExcite GmbH (Germany)

18 July 2022 • 13:20 - 13:40 EDT | Room 517 d

12187-71

Dynamic modeling, control and simulation of the EST telescope structure: quantifying performance during tracking operation.

Author(s): Jose M. Gonzalez-Cava, Mahy Soler, Juan Cózar-Castellano, Ángel Mato, Marta Belío-Asin, Jorge Sánchez-Capuchino, Miguel A. Núñez Cagigal, Mary Barreto, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 13:40 - 14:00 EDT | Room 517 d

12187-72

ESO ELT - vibration performance and budget verification: measured equipment data as input to telescope model

Author(s): Babak Sedghi, Pablo Zuluaga Ramirez, Dan Pilbauer, Ulrich Lampater, Michael Müller, Gerd Jakob, Serban Leveratto, Marcus Haug, Matteo Accardo, Yannick Lammen, Juan Carlos González Herrera, European Southern Observatory (Germany)

18 July 2022 • 14:00 - 14:20 EDT | Room 517 d

12187-73

Integrated Modeling based Performance Mode Compliance Analysis for the Giant Magellan Telescope

Author(s): Rodolphe Conan, George Z. Angeli, Brian Walls, Breann N. Sitarski, Rodrigo Romano, Christoph Dribusch, Henry Fitzpatrick, Konstantinos Vogiatzis, Kaushik Das, GMTO Corp. (United States)

18 July 2022 • 14:20 - 14:40 EDT | Room 517 d

12187-74

On the Relationship between Thermal Seeing and Observatory Design

Author(s): Konstantinos Vogiatzis, Hugh Thompson, John Rogers, Gelys Trancho, Thirty Meter Telescope (United States)

18 July 2022 • 14:40 - 15:00 EDT | Room 517 d

Coffee Break 15:00 - 15:30

SESSION 00: AS108 AND AS103 JOINT SESSION: MODELING AS A DRIVER OF DESIGN II

18 July 2022 • 15:30 - 17:10 EDT | Room 517 d

12182-25

The Vera C. Rubin Observatory 8.4m Telescope Calibration System Status

Author(s): Patrick J. Ingraham, Vera C. Rubin Observatory (United States); Christopher W. Stubbs, Harvard Univ. (United States); Robert H. Lupton, Princeton Univ. (United States); Ming Liang, Douglas R. Neill, Charles F. Claver, Vera C. Rubin Observatory (United States)

18 July 2022 • 15:30 - 15:50 EDT | Room 517 d

12182-26

a follow-up survey, and mitigation of the DKIST telescope mount vibrations

Author(s): Sebastien Poupar, Brialyn Onodera, Paul Jeffers, Shawn Culver, National Solar Observatory (United States)

18 July 2022 • 15:50 - 16:10 EDT | Room 517 d

12182-27

WIYN Telescope: Vibration analysis and mitigation strategies

Author(s): William R. McBride, Jayadev Rajagopal, Emily Hunting, Erik Timmermann, Sarah E. Logsdon, Mark Everett, Eli Golub, Jessica Klusmeyer, Dan Li, Wilson Liu, Susan Ridgway, Heidi Schweiker, Jesus Higuera, NOIRLab (United States)

18 July 2022 • 16:10 - 16:30 EDT | Room 517 d

12182-28

Development and testing of the wavefront sensor for the INO340 telescope

Author(s): Ramin Shomali, Habib G. Khosroshahi, Mahdi Saeidifar, Surena Fatemi, Hamed Altafi, Institute for Research in Fundamental Sciences (IPM), Iranian National Observatory (Iran, Islamic Republic of)

18 July 2022 • 16:30 - 16:50 EDT | Room 517 d

12182-29

Reverse finite element modelling and verification testing of the John A. Galt 26 m radio telescope

Author(s): Mohammad Nouroz N. Islam, Peter W. G. Byrnes, Timothy Robishaw, NRC-Herzberg Astronomy & Astrophysics (Canada); Han Qin Xin, Univ. of Victoria (Canada)

18 July 2022 • 16:50 - 17:10 EDT | Room 517 d

Coffee Break 10:00 - 10:30

SESSION 6: PROJECT MANAGEMENT

19 July 2022 • 10:30 - 12:10 EDT | Room 520 d

Session Chair: Robert Selina, National Radio Astronomy Observatory (United States)

12187-26

NASA Intentional Technology Development

Author(s): Mario R. Perez, NASA (United States); H. P. Stahl, NASA Marshall Space Flight Ctr. (United States); Lee Feinberg, NASA Goddard Space Flight Ctr. (United States); David Redding, Jet Propulsion Lab. (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 520 d

12187-27

Through fires, smoke, hail, austerities and COVID-19: The successful operation of the ANU's Advanced Instrumentation Technology Centre (AITC).

Author(s): Roger Haynes, Anna Moore, Celine D'Orgeville, François Rigaut, Matthew Colless, Mingming Li, Rob Sharp, The Australian National Univ. (Australia)

19 July 2022 • 10:50 - 11:10 EDT | Room 520 d

12187-28

Maunakea Spectroscopic Explorer: A unified approach for delivering project objectives

Author(s): Barbara Small, Kei Szeto, Laurie A. Dale, Lisa A. Wells, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 11:10 - 11:30 EDT | Room 520 d

12187-29

Be social, be agile: team engagement with Redmine

Author(s): Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Andrea Balestra, INAF - Osservatorio Astronomico di Padova (Italy); Marco Xompero, Nicolò Azzaroli, INAF - Osservatorio Astrofisico

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19 July 2022 • 11:30 - 11:50 EDT | Room 520 d

12187-30

Uncertainty in the time to complete a complex manufacturing campaign

Author(s): Jonathan W. Arenberg, Michael J. Kantner, Northrop Grumman Corp. (United States)

19 July 2022 • 11:50 - 12:10 EDT | Room 520 d

Lunch/Exhibition Break 12:10 - 13:30

SESSION 7: INTEGRATED MODELING

19 July 2022 • 13:30 - 15:10 EDT | Room 520 d

Session Chair: Masahiro Sugimoto, National Astronomical Observatory of Japan (Japan)

12187-31

Robust control of the servo system of Leighton Chajnantor Telescope under high wind speed

Author(s): Zheng Wang, Southeast Univ. (China)

19 July 2022 • 13:30 - 13:50 EDT | Room 520 d

12187-32

INO340 Telescope End-to-End Simulations and Performance Analysis

Author(s): Asghar Jafarzadeh, Ruhollah Sadeghi-Amin, Iranian National Observatory (Iran, Islamic Republic of); Lorenzo Zago, Univ. of Applied Sciences of Western Switzerland (Switzerland); Reza Ravanmehr, Habib G. Khosroshahi, Mohammadreza Rostamian, Iranian National Observatory (Iran, Islamic Republic of)

19 July 2022 • 13:50 - 14:10 EDT | Room 520 d

12187-33

Integrated Modeling Activities for NASA's Roman Space Telescope

Author(s): Joseph M. Howard, Kuo-Chia (Alice) Liu, Michael Akkerman, Martina I. Atanassova, Carl Blaurock, Kong Ha, NASA Goddard Space Flight Ctr. (United States); Gregory Michels, Sigmadyne, Inc. (United States); Carson McDonald, NASA Goddard Space Flight Ctr. (United States)

19 July 2022 • 14:10 - 14:30 EDT | Room 520 d

12187-34

A systems framework for space-based telescope design trade space exploration under uncertainty

Author(s): Rosemary Davidson, David W. Miller, Massachusetts Institute of Technology (United States)

19 July 2022 • 14:30 - 14:50 EDT | Room 520 d

12187-35

Model-based optics and optomechanics for the New Robotic Telescope (NRT) design

Author(s): Miguel Àngel Torres-Gil, Juan José Fernández Valdivia, Asier Sebastián Oria Carreras, Maider Insausti, C. M. Gutiérrez de la Cruz, Instituto de Astrofísica de Canarias (Spain); Éamonn J. Harvey, Liverpool John Moores Univ. (United Kingdom); Pablo A. Fuerte Rodríguez, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 14:50 - 15:10 EDT | Room 520 d

Coffee Break 15:10 - 15:40

SESSION 8: SYSTEMS ENGINEERING

19 July 2022 • 15:40 - 17:00 EDT | Room 520 d

Session Chair: Takeshi Okuda, Joint ALMA Observatory (Chile)

12187-36

Goals of JWST S&OC systems engineering

Author(s): Daryl A. Swade, Andy Groebner, Irv Gutman, Margaret Jordan, Bernard Kulp, Maria A. Nieto-Santisteban, Modhumita Sabata, Ryan Schwab, Alan Welty , William Whitman, Space Telescope Science Institute (United States)

19 July 2022 • 15:40 - 16:00 EDT | Room 520 d

12187-37

The impact of satellite constellations on ground-based astronomy

Author(s): Sarah Marie Bruno, Johns Hopkins Univ. (United States)

19 July 2022 • 16:00 - 16:20 EDT | Room 520 d

12187-38

The construction method of large antenna system models based on MBSE

Author(s): Chunguang Li, Zhiping Chen, Hangzhou Dianzi Univ. (China); Xahe He, CAST-Xi'an Institute of Space Radio Technology (China); Yongwei Wang, Juyong Zhang, Chunhua Zhang, Hangzhou Dianzi Univ. (China)

19 July 2022 • 16:20 - 16:40 EDT | Room 520 d

12187-39

The TOU of the PLATO mission from a Product Assurance point of view

Author(s): Simonetta Chinellato, INAF - Osservatorio Astronomico di Padova (Italy); Timothy Bandy, Univ. Bern (Switzerland); Francesco Borsa, INAF - Osservatorio Astronomico di Brera (Italy); Flavia Calderone, INAF - Osservatorio Astrofisico di Catania (Italy); Virginie Cessa, Univ. Bern (Switzerland); Jacopo Farinato, Demetrio Magrin, Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Munari, Isabella Pagano, INAF - Osservatorio Astrofisico di Catania (Italy); Daniele Piazza, Univ. Bern (Switzerland); Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy); Mario Salatti, Agenzia Spaziale Italiana (Italy); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 16:40 - 17:00 EDT | Room 520 d

SESSION PS1: POSTERS: INTEGRATED MODELING

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-41

Structural analysis for the EST preliminary design specifications

Author(s): Mahy Soler, Juan Cózar-Castellano, Ángel Mato, Irene Ferro, Jorge Sánchez-Capuchino, Miguel A. Núñez-Cagigal, Mary Barreto, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: PERFORMANCE MODELING

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-43

Image performance error budgets for the European Solar Telescope

Author(s): Sergio Bonaque-González, Jorge Sánchez-Capuchino, Ángel Mato, Miguel A. Nuñez Cagigal, Juan Cozar-Castellano, Mahy Soler, Nauzet Vega, José M. González-Cava, Jonai Bienes, Instituto de Astrofísica de Canarias (Spain); Bruno Femenía Castellá, Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Univ. de La

Laguna (Spain); Marta Belío-Asin, Irene Ferro Rodríguez, Noelia Feijóo Amoedo, Paula Sola La Serna, Silvia Regalado, Luz Montoya, Haresh Chulani, Yolanda Martín Hernando, Instituto de Astrofísica de Canarias (Spain); Manuel Collados Vera, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Maria Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-44

Modeling wide-field telescopes in presence of misalignments: an application to the Vera C. Rubin Observatory

Author(s): Salvatore Savarese, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Giuliana Fiorentino, INAF - Osservatorio Astronomico di Roma (Italy); Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giacomo Basile, Giulio Capasso, Mirko Colapietro, Sergio D'Orsi, Laurent Marty, Francesco Perrotta, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-47

The PyEchelle simulation tool

Author(s): Julian Stürmer, Landessternwarte Heidelberg (Germany); Andreas Seifahrt, The Univ. of Chicago (United States); Christian Schwab, Jacob Pember, Macquarie Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-48

Crosschecking the Maunakea Spectroscopic Explorer performance budgets and science requirements compliance

Author(s): Samuel C. Barden, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: PROJECT MANAGEMENT

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-49

Manufacturing, Assembly and Integration of the WSS for METIS

Author(s): Mercedes Filho, Univ. do Porto (Portugal); António Amorim, Univ. de Lisboa (Portugal); Paulo Garcia, Univ. do Porto (Portugal); Frederico Carvalho, Univ. de Lisboa (Portugal); Ricardo Lopes, Univ. do Porto (Portugal); Marcelino Ngando, Univ. de Lisboa (Portugal)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-50

HARMONI at ELT: Towards a final design for the natural guide star sensors (NGSS) system

Author(s): Kjetil Dohlen, Lab. d'Astrophysique de Marseille, Aix-Marseille Univ., CNRS (France), Ctr. National d'Études Spatiales (France); Pascal Vola, Zalpha Challita, Aix-Marseille Univ. (France); Tim Morris, Durham Univ. (United Kingdom); Jean-Francois Sauvage, Aix-Marseille Univ. (France), ONERA (France); Laurent Jocou, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alberto Estrada Piqueras, Instituto Nacional de Técnica Aeroespacial (Spain); Thomas Louth, David Montgomery, UK Astronomy Technology Ctr. (United Kingdom); William Bon, Aix-Marseille Univ. (France); Teodora Viera Cuberlo, Instituto de Astrofísica de Canarias (Spain); David Le Mignant, Aix-Marseille Univ. (France); Alexis Carlotti, Institut de Planétologie et d'Astrophysique de Grenoble (France); Javier Piqueras López, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Kacem El Hadi, Aix-Marseille Univ. (France); William Humphreys, UK Astronomy Technology Ctr. (United Kingdom); Benoit Neichel, Aix-Marseille Univ. (France); Thierry Fusco, Aix-Marseille Univ. (France), ONERA (France); Fraser Clarke, Univ. of Oxford (United Kingdom); David Melotte, UK Astronomy Technology Ctr. (United Kingdom); Niranjan Thatte, Univ. of Oxford (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: SYSTEMS ENGINEERING

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-25

NSF's NOIRLab's US-ELTP Verification & Validation Process - Part 1 of 3:PDR Stage

Author(s): Andrew W. Serio, NOIRLab (United States); Marie Lemoine-Busserolle, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-51

RAMS analysis of the ERIS AO Module and lesson learned before commissioning

Author(s): Marco Xompero, Paolo Grani, Runa Briguglio, Nicolò Azzaroli, Armando Riccardi, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-52

Planning Software Quality Assurance using MBSE and SysML

Author(s): Andrea Balestra, Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-53

Hazard and failure modes analysis of the Instrument Control Hardware design for ELT class of instrumentation

Author(s): Domenico D'Auria, Christian Eredia, Vincenzo Cianniello, Vincenzo De Caprio, Enrico Cascone, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-54

The Product Assurance programme of the ASTRI Mini-Array project

Author(s): Nicola La Palombara, Vito Conforti, INAF - Istituto Nazionale di Astrofisica (Italy); Valentina Giordano, INAF - Osservatorio Astrofisico di Catania (Italy); Giorgia Sironi, Andrea Giuliani, INAF - Istituto Nazionale di Astrofisica (Italy); Christine Grivel, Instituto de Astrofísica de Canarias (Spain); Rachele Millul, Giovanni Pareschi, Salvatore Scuderi, INAF - Istituto Nazionale di Astrofisica (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-55

The open-source path to model-based enterprise: proof of concept

Author(s): Jacinto Javier Vaz-Cedillo, Gran Telescopio de Canarias, S.A. (Spain), cosmoBots.eu (Spain); Patricia Fernández-Izquierdo, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Roberto González-Rocha, cosmoBots.eu (Spain); Miguel Ángel Torres-Gil, Jorge Quintero-Nehrkorn, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Noé Rodríguez-González, cosmoBots.eu (Spain); Fernando Merlos García, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-56

cosmoSys-Req: A free open-source requirements management tool

Author(s): Jacinto Javier Vaz-Cedillo, Gran Telescopio de Canarias, S.A. (Spain), cosmoBots.eu (Spain); Miguel Àngel Torres-Gil, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Noé Rodríguez-González, cosmoBots.eu (Spain); Jorge Quintero-Nehrkorn, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Roberto González-Rocha, cosmoBots.eu (Spain); Patricia Fernández-Izquierdo, cosmoBots.eu (Spain), Instituto de Astrofísica de Canarias (Spain); Fernando Merlos García, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-57

Overview of telescope structure, enclosure and pier preliminary design of the European Solar Telescope

Author(s): Juan Cózar-Castellano, Miguel A. Núñez Cagigal, Nauzet Vega Reyes, Ángel Mato Martínez, Mary Barreto, Marta Belío-Asin, Maria Yanira Carballo Martin, Instituto de Astrofísica de Canarias (Spain); Manuel Collados Vera, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Alexander Díaz, IDOM S.A. (Spain); Noelia Feijóo Amoedo, Bruno Femenía-Castella, Instituto de Astrofísica de Canarias (Spain); Adrian Ferreiro, IDOM S.A. (Spain); Jose M. González-Cava, Instituto de Astrofísica de Canarias (Spain); Gaizka Murga-Llano, IDOM S.A. (Spain); Cristina Padilla-Hernández, Jorge Sánchez-Capuchino, Instituto de Astrofísica de Canarias (Spain); Rubén Sanquirce-Garcia, IDOM S.A. (Spain); Mahy Soler, Instituto de Astrofísica de Canarias (Spain); Ander Urrutia, Xabier Ventura, IDOM S.A. (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-58

MAVIS: model-based systems engineering and product assurance processes for the win

Author(s): David Brodrick, The Australian National Univ. (Australia); Valentina Viotto, INAF - Osservatorio Astronomico di Padova (Italy); Anthony J. Horton, Macquarie Univ. (Australia); Antony Galla, The Australian National Univ. (Australia); Simonetta Chinellato, Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Gaston Gausachs, The Australian National Univ. (Australia); Andrea Balestra, INAF - Osservatorio Astronomico di Padova (Italy); Pierre Haguenauer, Ulf Seemann, European Southern Observatory (Germany); Roger Haynes, Dionne M. Haynes, David Chandler, François Rigaut, The Australian National Univ. (Australia)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-59

Test management and reporting using DOORS

Author(s): Michael J. MacIntosh, Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-60

MAORY@ELT: System Engineering activity up to preliminary design review

Author(s): Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Lorenzo Busoni, INAF - Osservatorio Astrofisico di Arcetri (Italy); Demetrio Magrin, Andrea Balestra, Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Enrico Cascone, Christian Eredia, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Gianluca Di Rico, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Vincenzo De Caprio, Vincenzo Cianniello, Domenico D'Auria, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco Bonaglia, Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Zoltan Hubert, Institut de Planétologie et d'Astrophysique de Grenoble (France); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Matteo Genoni, Marcello Agostino Scalera, Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy); Gabriele Rodeghiero, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Luca Marafatto, INAF - Osservatorio Astronomico di Padova (Italy); Guido Agapito, Cédric Plantet, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sylvain Oberti, European Southern Observatory (Germany); Simonetta Chinellato, Rosanna Sordo, Enrico Giro, Carmelo Arcidiacono, INAF - Osservatorio Astronomico di Padova (Italy); Italo Foppiani, Ugo Di Gianmatteo, Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-61

Astro MBSE: Model BAsed System Engineering synthesized for the Italian Astronomical Community

Author(s): Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Balestra, INAF - Osservatorio Astronomico di Padova (Italy); Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Marcello Agostino Scalera, INAF - Osservatorio Astronomico di Brera (Italy); Giacomo Dinuzzi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Davide Fierro, INAF - Osservatorio Astronomico di Capodimonte (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-62

Astro MBSE: overview on requirement management approaches for astronomical instrumentation

Author(s): Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Balestra, INAF - Osservatorio Astronomico di Padova (Italy); Marco Xompero, INAF - Osservatorio Astrofisico di Arcetri (Italy); Alessio Zanutta, Matteo Genoni, Marcello Agostino Scalera, INAF - Osservatorio Astronomico di Brera (Italy); Runa Briguglio, INAF - Osservatorio Astrofisico di Arcetri (Italy); Giacomo Dinuzzi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-64

TMT CAD Methodology: Adapting New Tools, Processes, and Technology

Author(s): Josh Church, Gelys Trancho, Fernando Santoro, Thirty Meter Telescope (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12187-68

Simulation and analysis of the typical faults of the drive system of large telescope in extreme environment

Author(s): Shihai Yang, Xiaojie Gu, Yun Li, Jin Xu, Nanjing Institute of Astronomical Optics & Technology (China); Zhuangzhuang Deng, Zhiwen Gao, Nanjing Univ. of Information Science & Technology (China)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12187-31
Robust control of the servo system of Leighton Chajnantor Telescope under high wind speed

Contact author(s): Wang Zheng, Southeast Univ., China

Oral

12187-32
INO340 Telescope end-to-end simulations and performance analysis

Contact author(s): Khosroshahi Habib G., Iranian National Observatory, Iran, Islamic Republic of

Oral

12187-65
Database design for digital twin of optical telescopes

Contact author(s): Jia Peng, Taiyuan Univ of Technology, China

Poster

12187-66
An automatic cost optimization method for wide field small aperture telescope arrays

Contact author(s): Jia Peng, Taiyuan Univ of Technology, China

Poster

12187-67
Digital twin technology improves the visualization of telescope drive system

Contact author(s): Yang Shihai, National Astronomical Observatories / Nanjing Institute of Astronomical Optics & Technology, Chinese, China

Poster

12187-69
SDG-based fault sample selection for telescope drive control system

Contact author(s): Shihai Yang, Nanjing Institute of Astronomical Optics & Technology, China

Poster

CONFERENCE 12188

Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation V

17 - 22 July 2022 | Room 518 c

Conference Chairs: **Ramón Navarro,** NOVA Optical & Infrared Instrumentation Group at ASTRON (Netherlands); **Roland Geyl,** Safran Reosc (France)

Program Committee: **Magomed A. Abdulkadyrov,** JSC Lytkarino Optical Glass Factory (Russian Federation); **Marc Cayrel,** European Southern Observatory (Germany); **Myung Kyu Cho,** National Optical Astronomy Observatory (United States); **Camille Frapolli,** Safran Reosc (France); **Eric R. Hansen,** Thirty Meter Telescope (United States); **Roger Haynes,** Leibniz-Institut für Astrophysik Potsdam (Germany); **Emmanuel Hugot,** Lab. d'Astrophysique de Marseille (France); **Huub Janssen,** Janssen Precision Engineering B.V. (Netherlands); **Ralf Jedamzik,** SCHOTT AG (Germany); **Matthew A. Kenworthy,** Leiden Observatory (Netherlands); **Dae Wook Kim,** College of Optical Sciences, The Univ. of Arizona (United States); **Hélène T. Krol,** CILAS (France); **David M. Montgomery,** UK Astronomy Technology Ctr. (United Kingdom); **Douglas R. Neill,** Large Synoptic Survey Telescope (United States); **Andrew T. Sarawit,** Simpson Gumpertz & Heger Inc. (United States); **Predrag Sekulic,** NASA (United States); **Yoshinori Suematsu,** National Astronomical Observatory of Japan (Japan); **Robert R. Thomson,** Heriot-Watt Univ. (United Kingdom); **Yongtian Zhu,** Nanjing Institute of Astronomical Optics & Technology (China)

SESSION 1: MATERIALS

17 July 2022 • 13:30 - 15:10 EDT | Room 518 c

Session Chair: Ralf Jedamzik, SCHOTT AG (Germany)

12188-1

Optimized fused silica used in new astronomical applications

Author(s): Wolfgang Schlichting, Heraeus Quartz North America LLC (United States); Bodo Kühn, Frank Nürnberg, Heraeus Conamic (Germany)

17 July 2022 • 13:30 - 13:50 EDT | Room 518 c

12188-2

The role of residual stress in the optical quality and stability of replicated composite optics

Author(s): Geena L. Ferrelli, Hyun I. Kim, Rafael J. Zaldivar, The Aerospace Corp. (United States)

17 July 2022 • 13:50 - 14:10 EDT | Room 518 c

12188-3

Resilience of ZERODUR® glass ceramic under ionizing radiations

Author(s): Antoine Carre, Rule Kirchhoff, Janina Krieg, SCHOTT AG (Germany); Tony B. Hull, The Univ. of New Mexico (United States); Thomas Westerhoff, SCHOTT AG (Germany)

17 July 2022 • 14:10 - 14:30 EDT | Room 518 c

12188-4

Low thermal expansion at cryogenic temperature in Fe39-xCo49+xCr10Ni2 alloy used for astronomical telescopes

Author(s): Hiromichi T. Fujii, Naoki Sakaguchi, Kotaro Ona, Shinhokoku Material Corp. (Japan); Fumihiro Uraguchi, Yutaka Hayano, National Astronomical Observatory of Japan (Japan); Toshihiko Yokoyama, Institute for Molecular Science (Japan)

17 July 2022 • 14:30 - 14:50 EDT | Room 518 c

12188-5

Assessment of optical surfaces deterioration due to dust and ice impact and deposition

Author(s): Leonardo Barilaro, Univ. of Malta (Malta); Gabriele Rodeghiero, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy), INAF Astronomical Observatory of Abruzzo (Italy); Lorenzo Olivieri, Cesare Barbieri, Univ. degli Studi di Padova (Italy)

17 July 2022 • 14:50 - 15:10 EDT | Room 518 c

Coffee Break 15:10 - 15:40

SESSION 2: NOVEL AND DISRUPTIVE CONCEPTS

17 July 2022 • 15:40 - 17:40 EDT | Room 518 c

Session Chair: Myung K. Cho, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

12188-6

NASA strategic astrophysics technology investments: a decade of benefits, outlook informed by the 2020 Decadal Survey

Author(s): Opher Ganel, Knowledge Web, LLC (United States); Rachel B. Rivera, John M. Falker, NASA Goddard Space Flight Ctr. (United States); Nicholas Siegler, Brendan P. Crill, Jet Propulsion Lab., NASA (United States); Mario R. Perez, NASA (United States)

17 July 2022 • 15:40 - 16:00 EDT | Room 518 c

12188-7

The Integral-Field Imager and Spectrometer for planetary exploration (*f*ISPEx)

Author(s): Gianrico Filacchione, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Marco Tarabini, Politecnico di Milano (Italy); Elena Mazzotta Epifani, INAF - Osservatorio Astronomico di Roma (Italy); Mauro Ciarniello, Giuseppe Piccioni, Andrea Raponi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Bortolino Saggin, Politecnico di Milano (Italy); Zuzana Kanuchova, INAF - Osservatorio Astronomico di Roma (Italy); Pasquale Palumbo, Univ. degli Studi di Napoli Parthenope (Italy); Irene Guerri, Leonardo (Italy); Alessio Taiti, Iacopo Ficai-Veltroni, Marco Barilli, Leonardo S.p.A. (Italy); Stefano Pelli, Istituto di Fisica Applicata "Nello Carrara" (Italy); Franco Cosi, Istituto di Fisica Applicata (Italy); Anna Galiano, Massimo Zambelli, David Biondi, Angelo Boccaccini, Fabrizio Nuccilli, Manuela Giusti, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

17 July 2022 • 16:00 - 16:20 EDT | Room 518 c

12188-8

Disturbance Free Payload (DFP) Control Flight Software Architecture and Implementation for a CubeSat Mission

Author(s): Dennis G. Wong, Lockheed Martin Corp. (United States); Alain C. Carrier, Kiarash Tajdaran, Noelle Nguyen-Phuc, Larry D. Dewell, Lockheed Martin Space Systems Co. (United States)

17 July 2022 • 16:20 - 16:40 EDT | Room 518 c

12188-9

Metasurface-based image slicers for integral field spectroscopy

Author(s): Tristan Chabot, Jeck Borne, Simon Thibault, Ctr. d'optique, photonique et laser, Univ. Laval (Canada)

17 July 2022 • 16:40 - 17:00 EDT | Room 518 c

12188-10

M1 Assembly for EST: selection of the most promising baseline configuration for the preliminary design

Author(s): Ángel Mato Martínez, Nauzet Vega, Mahy Soler, Juan Cozar-Castellano, Jose M. Gonzalez-Cava, Miguel A. Núñez Cagigal, Jorge Sánchez-Capuchino, Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain); Albert Tomàs, Marc Crusells, Erik Escalera, Miguel Redondo, Joan Manel Casalta, SENER Aeroespacial S.A. (Spain)

17 July 2022 • 17:00 - 17:20 EDT | Room 518 c

12188-11

An Emerging Hybrid Technology Toward Ultra-light & Self-correcting, "Live" Mirrors.

Author(s): Gil Moretto, Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France); Foamie K. Thetpraphi, Jean-Fabien Capsal, Institut National des Sciences Appliquées de Lyon (France); Jeff R. Kuhn, Institute for Astronomy, Univ. of Hawai'i (United States); David Audgier, Institut National des Sciences Appliquées de Lyon (France); Maud Langlois, Camille Graf, Ctr. de Recherche Astrophysique de Lyon (France); Joe Ritter, Neoteric Advanced Technologies (United States); Rafael Rebolo-López, Nicolas Lodieu, Instituto de Astrofísica de Canarias (Spain); Ye Zhou, Dynamic Intelligent Structures Ltd. (Canada); Kevin Lewis, Institute for Astronomy (United States)

17 July 2022 • 17:20 - 17:40 EDT | Room 518 c

Coffee Break 10:00 - 10:30

SESSION 3: ELT OPTO-MECHANICS

18 July 2022 • 10:30 - 12:10 EDT | Room 518 c

Session Chair: Marc Cayrel, European Southern Observatory (Germany)

12188-12

Half time on the production of 949 ZERODUR® ELT M1 segment blanks

Author(s): Thomas Werner, Ralf Jedamzik, Thomas Westerhoff, SCHOTT AG (Germany)

18 July 2022 • 10:30 - 10:50 EDT | Room 518 c

12188-13

Key challenges for the production of ELT M1 segments at Safran Reosc

Author(s): Camille Frapolli, Dominique Bardon, Nicolas Ferachoglou, Justine Hatzigeorgopoulos, Pauline Lesongeur, Gilles Chaussat, Safran Reosc (France)

18 July 2022 • 10:50 - 11:10 EDT | Room 518 c

12188-14

The ELT M1 support structure - from prototype into volume manufacturing: an industrial perspective

Author(s): Michael Evers, Hans Priem, VDL ETG Technology & Development bv (Netherlands)

18 July 2022 • 11:10 - 11:30 EDT | Room 518 c

12188-15

The design of the M1 segments Manipulator for the Extremely Large Telescope

Author(s): Albert Tomàs, Fernando del Campo, Manuel Canchado, Raül González, Joan-Manel Casalta, SENER Aeroespacial S.A. (Spain); Patrick Caillier, Lluis Cavaller, European Southern Observatory (Germany)

18 July 2022 • 11:30 - 11:50 EDT | Room 518 c

12188-16

ELT mirrors (M2, M3, M4, M5) production challenges & status at Safran Reosc

Author(s): Renaud Mercier-Ythier, Emmanuelle Harel, Dominique Bardon, Claire lamour, Christophe Couteret, Safran Reosc (France)

18 July 2022 • 11:50 - 12:10 EDT | Room 518 c

Lunch/Exhibition Break 12:10 - 13:30

SESSION 4: LARGE OPTICS AND SUPPORT SYSTEMS I

18 July 2022 • 13:30 - 15:10 EDT | Room 518 c

Session Chair: Magomed A. Abdulkadyrov, Lytkarinsky Optical Glass Factory (Russian Federation)

12188-17

Production of 8.4 m primary mirror segments for GMT

Author(s): Hubert M. Martin, Roger Ceragioli, Victor Gasho, Buell T. Jannuzi, Daewook Kim, Jeffrey S. Kingsley, Kevin Law, Adrian R. Loeff, Randall Lutz, Stephanie Meyen, Chang Jin Oh, Michael T. Tuell, Stuart Weinberger, Steve C. West, Rebecca Whitsitt, Richard W. Wortley, The Univ. of Arizona (United States)

18 July 2022 • 13:30 - 13:50 EDT | Room 518 c

12188-131

The design and development of the M2, M3 and M5 Cells for the Extremely Large Telescope

Author(s): Albert Tomàs, Jose Angel Andion, Manuel Canchado, Joan-Manel Casalta, SENER Aeroespacial S.A. (Spain); Michael Mueller, European Southern Observatory (Germany); Antonio Marzoa, SENER Aeroespacial (Spain)

18 July 2022 • 13:50 - 14:10 EDT | Room 518 c

12188-18

Development of an instrument that measures the mechanical loads on the support points of the TMT primary mirror segments.

Author(s): Jan Nijenhuis, Nico van der Heiden, TNO (Netherlands); Ben B. Gallagher, TMT International Observatory LLC (United States)

18 July 2022 • 14:10 - 14:30 EDT | Room 518 c

12188-19

Manufacturing and testing of the large lenses for the SDSS-V wide field corrector

Author(s): Helene DUCOLLET, Matthieu GILLES, Thales SESO S.A.S. (France); Stephen SMEE, Johns Hopkins University (United States); Cedric CAMMARATA, Thales SESO S.A.S. (France); Robert BARKHOUSER, Aidan GRAY, Johns Hopkins University (United States)

18 July 2022 • 14:30 - 14:50 EDT | Room 518 c

12188-20

Curved primary aperture segmentation enabling a robust quasi-Airy pattern point spread function

Author(s): Kevin Z. Derby, Jaren N. Ashcraft, James B. Breckinridge, Heejoo Choi, Ewan S. Douglas, The Univ. of Arizona (United States); James E. Harvey, Photon Engineering LLC (United States); Tony B. Hull, The Univ. of New Mexico (United States); Charles F. Lillie, Lillie Consulting LLC (United States); Daewook Kim, The Univ. of Arizona (United States)

18 July 2022 • 14:50 - 15:10 EDT | Room 518 c

Coffee Break 15:10 - 15:40

SESSION 5: LARGE OPTICS AND SUPPORT SYSTEMS II

18 July 2022 • 15:40 - 17:20 EDT | Room 518 c

12188-21

In-vacuum bonding of X-ray optics by means of laser-based soldering

Author(s): Erik Beckert, Florian Mueller, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); Eric Wille, Pol Ribes, European Space Agency (Netherlands)

18 July 2022 • 15:40 - 16:00 EDT | Room 518 c

12188-22

Force Controlled Mid-Spatial Frequency Error Smoothing using Machine Learning

Author(s): Jennifer Coniglio, Josh Beck, Jacob Odle, Steve Murty, Daniel R. Brooks, Jessica DeGroote Nelson, Optimax Systems, Inc. (United States)

18 July 2022 • 16:00 - 16:20 EDT | Room 518 c

12188-24

The innovative capabilities of machined free-form mirror for IFU (Integral Field Unit)

Author(s): Takashi Sukegawa, Yukinobu Okura, Masatsugu Koyama, Tomonao Nakayasu, Yukimasa Suyama, Canon Inc. (Japan)

18 July 2022 • 16:20 - 16:40 EDT | Room 518 c

12188-25

Hot forming of a large deformable mirror facesheet

Author(s): Wouter A. Jonker, TNO (Netherlands); Paul-Alexander Vogel, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Rik ter Horst, NOVA Optical IR Instrumentation Group (Netherlands); Ahn Tuan Vu, Fraunhofer-Institut für Produktionstechnologie IPT (Germany); Stefan Kuiper, Fred Kamphues, TNO (Netherlands)

18 July 2022 • 16:40 - 17:00 EDT | Room 518 c

12188-26

Generating curved deformable facesheets via free form slumping

Author(s): Philip M. Hinz, Matthew V. Radovan, Daren Dillon, Univ. of California, Santa Cruz (United States)

18 July 2022 • 17:00 - 17:20 EDT | Room 518 c

Coffee Break 10:00 - 10:30

SESSION 6: STRUCTURES AND ADDITIVE MANUFACTURING I

19 July 2022 • 10:30 - 12:10 EDT | Room 518 c

Session Chair: David M. Montgomery, UK Astronomy Technology Ctr. (United Kingdom)

12188-27

Lightweight, aluminium, mirror design optimization for conventional and additive manufacturing processes

Author(s): Jitsupa Paenoi, Pearachad Chartsiriwattana, National Astronomical Research Institute of Thailand (Thailand); Cyril J. Bourgenot, Durham Univ. (United Kingdom); Carolyn Atkins, UK Astronomy Technology Ctr. (United Kingdom); Robert M. Snell, The Univ. of Sheffield (United Kingdom); Christophe Buisset, Saran Poshyachinda, National Astronomical Research Institute of Thailand (Thailand)

19 July 2022 • 10:30 - 10:50 EDT | Room 518 c

12188-28

Towards understanding and eliminating defects in additively manufactured CubeSat mirrors

Author(s): Robert M. Snell, The Univ. of Sheffield (United Kingdom); Carolyn Atkins, Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom); Henry Saunders, The Univ. of Sheffield (United Kingdom); Mat Beardsley, Michael Harris, STFC Rutherford Appleton Lab. (United Kingdom); Iain Todd, The Univ. of Sheffield (United Kingdom)

19 July 2022 • 10:50 - 11:10 EDT | Room 518 c

12188-29

The OPTICON A2IM Cookbook: an introduction to additive manufacture for astronomy

Author(s): Carolyn Atkins, UK Astronomy Technology Ctr. (United Kingdom); Bart van de Vorst, Solliance | TNO (Netherlands); Szigfrid Farkas, Konkoly Observatory (Hungary); Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France); György Mező, Konkoly Observatory (Hungary); Katherine Morris, UK Astronomy Technology Ctr. (United Kingdom); Mélanie Roulet, Lab. d'Astrophysique de Marseille (France); Robert M. Snell, The Univ. of Sheffield (United Kingdom); Fabio Tenegi Sanginés, Instituto de Astrofísica de Canarias (Spain); Iain Todd, The Univ. of Sheffield (United Kingdom); Afrodisio Vega-Moreno, Instituto de Astrofísica de Canarias (Spain); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 11:10 - 11:30 EDT | Room 518 c

12188-30

Validation of compliant mechanisms made by metallic Additive Manufacturing

Author(s): Lionel Kiener, Hervé Saudan, Florent Cosandier, Gérald Perruchoud, Vaclav Pejchal, Julien Rouvinet, Florent Boudoire, CSEM SA (Switzerland)

19 July 2022 • 11:30 - 11:50 EDT | Room 518 c

12188-31

Optical housing made by Additive Manufacturing

Author(s): Johannes Frasch, Enrico Hilpert, Johannes Hartung, Christoph Damm, Nils Heidler, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

19 July 2022 • 11:50 - 12:10 EDT | Room 518 c

Lunch/Exhibition Break 12:10 - 13:30

SESSION 7: STRUCTURES AND ADDITIVE MANUFACTURING II

19 July 2022 • 13:30 - 14:50 EDT | Room 518 c

Session Chairs: Ramón Navarro, ASTRON (Netherlands), Roland Geyl, Safran Reosc (France)

12188-32

Additively manufactured flexure for astronomy instrumentation

Author(s): Katherine Morris, Carolyn Atkins, Lucy Reynolds, James Walpole, UK Astronomy Technology Ctr. (United Kingdom); Bart van de Vorst, TNO (Netherlands); Robert M. Snell, The Univ. of Sheffield (United Kingdom); Chris Miller, UK Astronomy Technology Ctr. (United Kingdom); Szigfrid Farkas, György Mező, Konkoly Observatory (Hungary); Mélanie Roulet, Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France); Fabio Tenegi Sanginés, Instituto de Astrofísica de Canarias (Spain); Hermine Schnetler, UK Astronomy Technology Ctr. (United Kingdom)

19 July 2022 • 13:30 - 13:50 EDT | Room 518 c

12188-33

The preliminary design of the M1 Assembly for the European Solar Telescope

Author(s): Albert Tomàs, Marc Crusellas, Erik Escalera, Miguel Redondo, Joan Manel Casalta, SENER Aeroespacial S.A. (Spain); Ángel Mato Martínez, Nauzet Vega, Mahy Soler, Juan Cozar-Castellano, Jose M. Gonzalez-Cava, Miguel A. Núñez Cagigal, Jorge Sánchez-Capuchino, Mary Barreto, Instituto de Astrofísica de Canarias (Spain)

19 July 2022 • 13:50 - 14:10 EDT | Room 518 c

12188-35

HARMONI at ELT: Design and testing of the focal plane relay window flusher

Author(s): William A. Cochrane, David M. Montgomery, Patrick Smith, Norman O'Malley, William Humphreys, UK Astronomy Technology Ctr. (United Kingdom); Fraser Clarke, Univ. of Oxford (United Kingdom)

19 July 2022 • 14:10 - 14:30 EDT | Room 518 c

12188-36

Development of a Wide Field Telescope for the NSOS-μ

Author(s): Myung K. Cho, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Hong-Suh Yim, Jaemann Kyeong, Korea

Astronomy and Space Science Institute (Korea, Republic of); Gary A. Poczulp, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Jung Hyun Jo, Myung-Jin Kim, Korea Astronomy and Space Science Institute (Korea, Republic of); Ming Liang, Ellie Hileman, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Sungki Cho, Korea Astronomy and Space Science Institute (Korea, Republic of)

19 July 2022 • 14:30 - 14:50 EDT | Room 518 c

Coffee Break 15:10 - 15:40

SESSION 8: ACTIVE INSTRUMENTS

19 July 2022 • 15:40 - 18:00 EDT | Room 518 c

Session Chair: Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France)

12188-37

Continuous photo-controlled deformable mirror

Author(s): Lorenzo Cabona, Edoardo Maria Alberto Redaelli, INAF - Osservatorio Astronomico di Brera (Italy); Frédéric Zamkotsian, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France); Giorgio M. Pariani, Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy); Patrick Lanzoni, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France)

19 July 2022 • 16:00 - 16:20 EDT | Room 518 c

12188-38

CANCELED: Testbed development for non-contact vibration isolation CubeSat demonstration mission

19 July 2022 • 16:20 - 16:40 EDT | Room 518 c

12188-39

Rubin Observatory hexapods: issues and upgrades

Author(s): Douglas R. Neill, Brian Johnson, Myung Cho, Vera C. Rubin Observatory (United States); Felipe Daruich, Holger Drass, Vera C. Rubin Observatory (Chile); Roberto Tighe, Te-Wei Tsai, Oliver Wiecha, Vera C. Rubin Observatory (United States)

19 July 2022 • 16:40 - 17:00 EDT | Room 518 c

12188-40

Active Optics Upgrade of the 4-meter VISTA Telescope for 4MOST Using Curvature Wavefront Sensing

Author(s): Ronald Holzlöhner, Dionisio Garcia-Herreros, Johann Kolb, Jean-François Pirard, Stefan Sandrock, European Southern Observatory (Germany); William Sutherland , Queen Mary Univ. of London (United Kingdom); Thomas Szeifert, Gerard Zins, European Southern Observatory (Germany)

19 July 2022 • 17:00 - 17:20 EDT | Room 518 c

12188-41

LASERS: a real time antenna metrology system for the Large Millimeter Telescope

Author(s): F. Peter Schloerb, Kamal Souccar, Grant W. Wilson, Univ. of Massachusetts Amherst (United States); David M. Gale, David H. Hughes, Andrea Huerta, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

19 July 2022 • 17:20 - 17:40 EDT | Room 518 c

12188-42

A mass and vibration optimised solution for 6D precision heavy instrument alignment and its application to METIS

Author(s): Antonio Amorim, Univ. de Lisboa (Portugal); Mercedes Filho, Paulo Garcia, Frederico Carvalho, Ricardo Costa, Univ. do Porto (Portugal)

19 July 2022 • 17:40 - 18:00 EDT | Room 518 c

Coffee Break 10:00 - 10:30

SESSION 9: TEST AND METROLOGY OF COMPONENTS

20 July 2022 • 10:30 - 12:10 EDT | Room 518 c

Session Chair: Camille Frapolli, Safran Reosc (France)

12188-43

Zernike modes of the D3A6 composite reflector surface distortions and their effects on the telescope performance

Author(s): Deniz Ölçek, Mohammad Nouroz Islam, Bruce Veidt, Gordon E. Lacy, NRC-Dominion Astrophysical Observatory (Canada)

20 July 2022 • 10:30 - 10:50 EDT | Room 518 c

12188-44

A new class of optical tests for large convex secondary mirrors

Author(s): Paolo Spanò, Officina Stellare S.p.A. (Italy)

20 July 2022 • 10:50 - 11:10 EDT | Room 518 c

12188-45

Curved and freeform Sensors for Astronomy: manufacturing and characterisation of large size CMOS aspherical sensors

Author(s): Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France), Curve-One (France); Manal Chebbo, Simona Lombardo, Jiawei Liu, Eduard R. Muslimov, Lab. d'Astrophysique de Marseille (France); Marc Ferrari, Lab d'Astrophysique de Marseille (France)

20 July 2022 • 11:10 - 11:30 EDT | Room 518 c

12188-46

Versatile, fast, non-contact and accurate characterization of form and mid-spatial errors on large freeform surfaces

Author(s): Rens Henselmans, Gerard van den Eijkel, Dutch United Instruments (Netherlands)

20 July 2022 • 11:30 - 11:50 EDT | Room 518 c

12188-47

Low coherence interferometry to characterize the induced vibrations and topology change of the cryogenic mirror of the Einstein Telescope prototype

Author(s): Jesús Vilaboa Pérez, Marc Georges, Cédric Lenaerts, Ctr. Spatial de Liège (Belgium); Jérôme Loicq, Technische Univ. Delft (Netherlands), Ctr. Spatial de Liège (Belgium)

20 July 2022 • 11:50 - 12:10 EDT | Room 518 c

Lunch/Exhibition Break 12:10 - 13:30

SESSION 10: TEST AND METROLOGY OF (SUB-)SYSTEMS

20 July 2022 • 13:30 - 16:40 EDT | Room 518 c

Session Chair: Douglas R. Neill, Vera C. Rubin Observatory (United States)

12188-48

A new paradigm in the field of stray light control and characterization enabled by ultrafast time-of-flight imaging

Author(s): Lionel Clermont, Ctr. Spatial de Liège (Belgium); Wilfried Uhring, Univ. de Strasbourg (France); Marc P. Georges, Ctr. Spatial de Liège (Belgium)

20 July 2022 • 13:30 - 13:50 EDT | Room 518 c

12188-49

A new generation of SHWFS with dramatically improved spatial resolution dedicated to high performance optical metrology

Author(s): Jerôme Ballesta, Imagine Optic Inc. (United States); Xavier Levecq, Imagine Optic SA (France)

20 July 2022 • 13:50 - 14:10 EDT | Room 518 c

12188-50

HARMONI ELT instrument : Integral Field Unit cryogenic engineering models results

Author(s): Matthieu Guibert, Ctr. de Recherche Astrophysique de Lyon (France); Jean-Emmanuel Migniau, Magali Loupias, Alexandre Jeanneau, Alban Remillieux, Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France), Observatoire de Lyon (France); Karen Disseau, Eric Daguisé, Diane Chapuis, Didier Boudon, Univ. de Lyon (France), Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France); Nicolas Bouché, Univ. de Lyon (France), Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France); Johan Richard, Univ. de Lyon (France), Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France); Hermine Schnetler, Dave J. Melotte, UK Astronomy Technology Ctr., The Royal Observatory, Edinburgh (United Kingdom); Niranjan A. Thatte, Fraser Clarke, Matthias Tecza, Univ. of Oxford (United Kingdom)

20 July 2022 • 14:10 - 14:30 EDT | Room 518 c

12188-51

Multi-directional, Multi-polarization, Multi-spectral Imager (3MI) Engineering Model (EM) on-ground calibration

Author(s): Yvan G. Stockman, Céline Michel, Lionel Clermont, Sara Marcotte, Fabien Schmutz, Emmanuel Mazy, Ctr. Spatial de Liège (Belgium); Massimiliano Porciani, ESTEC – European Space Research and Technology Center (Netherlands)

20 July 2022 • 14:30 - 14:50 EDT | Room 518 c

12188-52

Astronomical-driven based TSC project for conceptual design and demonstration of star tracker by using 0.7-meter optical telescope system

Author(s): Kanatip Anuchit, Kritsada Palee, National Astronomical Research Institute of Thailand (Thailand); Peerapong Torteeka, National Astronomical Research Institute of Thailand (Public Organization) (Thailand); Shariff Manuthasna, Pakawat Prasit, National Astronomical Research Institute of Thailand (Thailand); Suwat Kuntanapreeda, King Mongkut's Univ. of Technology Thonburi (Thailand)

20 July 2022 • 14:50 - 15:10 EDT | Room 518 c

Coffee Breaks 15:10 - 15:40

12188-53

Gravitational wave observatory metrology laser development and characterization

Author(s): Lauriane Karlen, Stefan Kundermann, Steve Lecomte, CSEM SA (Switzerland); Anatoliy Savchenkov, Danny Eliyahu, Andrey Matsko, OEwaves Inc (United States); Brian Shortt, European Space Agency (Netherlands)

20 July 2022 • 15:40 - 16:00 EDT | Room 518 c

12188-54

Nancy Grace Roman Space Telescope (RST) – Demonstration of integrated thermal control system test for the optical telescope assembly

Author(s): Peter Miller, Nicholas Ferry, Brian Martens, Perry Voyer, Tony Whitman, Dave A. Smith, L3Harris Technologies, Inc. (United States)

20 July 2022 • 16:00 - 16:20 EDT | Room 518 c

12188-55

Separation of astigmatic figure error from misalignments in nodal aberration theory with a Cassegrain telescope

Author(s): Özgür Karci, Meltem Yeşiltepe, Eray Arpa, Mustafa Ekinci, TÜBITAK Space Technologies Research Institute (Turkey); Jannick P. Rolland-Thompson, Univ. of Rochester (United States)

20 July 2022 • 16:20 - 16:40 EDT | Room 518 c

Coffee Break 10:00 - 10:30

SESSION 11: TECHNOLOGIES FOR CRYOGENIC INSTRUMENTS

21 July 2022 • 10:30 - 11:50 EDT | Room 518 c

Session Chair: Huub Janssen, Janssen Precision Engineering B.V. (Netherlands)

12188-57

Characterization of multilayer piezoelectric stacks down to 100K for surface parallel mirror actuation

Author(s): Stewart Sherrit, Jet Propulsion Lab. (United States), Caltech (United States); Carey L. Weisberg, Jet Propulsion Lab. (United States); Erkin Sidick, Jet Propulsion Laboratory CALTECH (United States); William E. Krieger, Carlos Gross Jones, Jet Propulsion Lab. (United States); Scott A. Basinger, Jet Propulsion Laboratory , CALTECH (United States); Clifford A. Klein, Mircea Badescu, Joseph E. Sauvageau, Keith Coste, Jet Propulsion Lab. (United States)

21 July 2022 • 10:30 - 10:50 EDT | Room 518 c

12188-58

Development of an aluminium mirror with a novel integrated flexure-based mount for cryogenic environment of METIS

Author(s): Daan Zaalberg, Mirka Maresca, Erik Ruinemans, Dennis Dolkens, Niels Tromp, Ivan Lloro, Menno Schuil, Menno de Haan, Rik ter Horst, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Eddy Elswijk, NOVA Optical IR Instrumentation Group (Netherlands)

21 July 2022 • 10:50 - 11:10 EDT | Room 518 c

12188-59

Development and verification of the largest cryogenic mid IR aluminium concave mirror for METIS showing excellent wavefront performance

Author(s): Mirka Maresca, Netherlands Foundation for Research in Astronomy (Netherlands); Daan Zaalberg, NOVA Optical IR Instrumentation Group (Netherlands); Niels Tromp, Erik Tabak, Dennis Dolkens, Tibor Agocs, Jeff Lynn, Ivan Lloro, Menno Schuil, Menno de Haan, Rik ter Horst, Martin Lemmen, Eddy Elswijk, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands)

21 July 2022 • 11:10 - 11:30 EDT | Room 518 c

12188-60

GRANCAIN. The first light infrared camera for the Adaptive Optics of GTC. Optical and mechanical design status

Author(s): Eduardo David González Carretero, Verónica Canto Caño, Antonio Félix Moreno Martín, Instituto de Astrofísica de Canarias (Spain); José Miguel Delgado Hernández, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Marcos Reyes García-Talavera, Patricia Fernández Izquierdo, Enrique Joven Álvarez, Roberto López López, Heidy Moreno Arce, Jesús Patrón Recio, Instituto de Astrofísica de Canarias (Spain); Victor Javier Sánchez Béjar, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Fabio Tenegi Sangines, Instituto de Astrofísica de Canarias (Spain); Chris Foster, Tim Keller, Infrared Labs., Inc. (United States); Jake Roberts, Infrared Labs. (United States)

21 July 2022 • 11:30 - 11:50 EDT | Room 518 c

Lunch/Exhibition Break 11:50 - 13:30

SESSION 12: HIGH CONTRAST IMAGING AND POLARIMETRY

21 July 2022 • 13:30 - 15:10 EDT | Room 518 c

Session Chair: Ramón Navarro, ASTRON (Netherlands)

12188-61

Understanding polarization accuracy: the effect of mirror coating non-uniformity on instrument polarization

Author(s): Amanda J. White, National Solar Observatory (United States), Univ. of Colorado Boulder (United States); David M. Harrington, National Solar Observatory (United States)

21 July 2022 • 13:30 - 13:50 EDT | Room 518 c

12188-62

Stress-induced birefringence in the lenses of Wide Area Linear Optical Polarimeter-South

Author(s): Ramya M. Anche, The Univ. of Arizona (United States), Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Siddharth Maharana, Anamparambu N. Ramaprakash, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); John A. Kypriotakis, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); Dmitry Blinov, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece), V. V. Sobolev Astronomical Institute, St. Petersburg State Univ. (Russian Federation); Hans K. Eriksen, Univ. of Oslo (Norway); Tuhin Ghosh, National Institute of Science Education and Research (India); Eirik Gjerløw, Univ. of Oslo (Norway); Nikolaos Mandarakas, Univ. of Crete (Greece), Foundation for Research and Technology-Hellas (Greece); Georgia V. Panopoulou, Caltech (United States); Vasiliki Pavlidou, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); Timothy J. Pearson, Caltech (United States); Vincent Pelgrims, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); Stephen B. Potter, South African Astronomical Observatory (South Africa); Anthony C. S. Readhead, Caltech (United States); Raphael Skalidis, Konstantinos Tassis, Foundation for Research and Technology-Hellas (Greece), Univ. of Crete (Greece); Ingunn K. Wehus, Univ. of Oslo (Norway)

21 July 2022 • 13:50 - 14:10 EDT | Room 518 c

12188-63

Redundant Apodized Pupils (RAP) for high-contrast imagers robust to segmentation-due aberrations and island effect

Author(s): Lucie Leboulleux, Institut de Planétologie et d'Astrophysique de Grenoble, Ctr. National de la Recherche Scientifique (France); Alexis Carlotti, Institut de Planétologie et d'Astrophysique de Grenoble (France); Mamadou N'Diaye, Observatoire de la Côte d'Azur (France); David Mouillet, Institut de Planétologie et d'Astrophysique de Grenoble (France)

21 July 2022 • 14:10 - 14:30 EDT | Room 518 c

12188-64

RISTRETTO: A high-throughput high-contrast coronagraphic IFU at two diffraction beam widths

Author(s): Jonas G. Kühn, Univ. Bern (Switzerland); Nicolas Blind, Bruno Chazelas, Eddy Hocini, Christophe Lovis, Univ. de Genève (Switzerland)

21 July 2022 • 14:30 - 14:50 EDT | Room 518 c

12188-65

Design of an IR Imaging Channel for the Keck Observatory SCALES Instrument

Author(s): Ravinder K. Banyal, Armirul Hasan, Indian Institute of Astrophysics (India); Reni Kupke, Univ. of California Observatories (United States); Thirupathi Sivarani, Indian Institute of Astrophysics (India); Andy J. Skemer, Univ. of California Observatories (United States); Nick MacDonald, Univ. of California Observatories (United States), Univ. of California, Santa Cruz (United States); Steph Sallum, Univ. of California, Irvine (United States); Will Deich, Univ. of California Observatories (United States); Devika K. Divakar, Indian Institute of Astrophysics (India); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States); K. V. Govinda, Ajin Prakaesh, Indian Institute of Astrophysics (India); Christopher T. Ratliff, Univ. of California Observatories (United States); Ramya Sethuram, S. Sriram, Indian Institute of Astrophysics (India); Deno Stelter, Univ. of California Observatories (United States); Arun Surya, Tata Institute of Fundamental Research (India); Hari Mohan Varshney, Indian Institute of Astrophysics (India); Eric Wang, Univ. of California, Los Angeles (United States)

21 July 2022 • 14:50 - 15:10 EDT | Room 518 c

Coffee Break 15:10 - 15:40

SESSION 13: COATING AND FILTERS

21 July 2022 • 15:40 - 17:40 EDT | Room 518 c

Session Chair: Hélène T. Krol, CILAS (France)

12188-66

Advanced Al mirrors protected with LiF overcoat to realize stable mirror coatings for Astronomical Telescopes

Author(s): Manuel A. Quijada, Javier G. Del Hoyo, NASA Goddard Space Flight Ctr. (United States); Luis V. Rodriguez de Marcos, The Catholic Univ. of America (United States); Edward J. Wollack, NASA Goddard Space Flight Ctr. (United States)

21 July 2022 • 15:40 - 16:00 EDT | Room 518 c

12188-67

Development of advanced silver coatings for telescope mirrors

Author(s): Stefan Schwinde, Svetlana Shestaeva, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); Ronald Holzlöhner, European Southern Observatory (Germany); Guido Willers, Fraunhofer-Ctr. für Silizium-Photovoltaik CSP (Germany); Andreas Förster, Ricardo A. Parra, Stéphane Guisard, Omar Sqalli, European Southern Observatory (Germany); Ralph Schlegel, Sven Schroeder, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

21 July 2022 • 16:00 - 16:20 EDT | Room 518 c

12188-68

Variable composition in NiCrNx adhesion layers for protected silver mirrors and the effect on mirror durability

Author(s): Kelsey A. Folgner, Samuel L. Dunscombe, The Aerospace Corp. (United States); Nicolas B. Liang, Stanford Univ. (United States); Chung-Tse Chu, Diana R. Alaan, Christopher J. Panetta, James D. Barrie, The Aerospace Corp. (United States)

21 July 2022 • 16:20 - 16:40 EDT | Room 518 c

12188-69

Electron microscopy studies of contaminated telescope mirror samples exposed at Paranal

Author(s): Guido Willers, Fraunhofer-Ctr. für Silizium-Photovoltaik CSP (Germany); Ronald Holzlöhner, European Southern Observatory (Germany); Volker Naumann, Fraunhofer-Ctr. für Silizium-Photovoltaik CSP (Germany); Stefan Schwinde, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); Stéphane Guisard, European Southern Observatory (Germany)

21 July 2022 • 16:40 - 17:00 EDT | Room 518 c

12188-70

Advanced Al/eLiF mirrors for the SPRITE CubeSat

Author(s): Luis V. Rodríguez-de Marcos, The Catholic Univ. of America (United States), NASA Goddard Space Flight Ctr. (United States); Brian T. Fleming, Univ. of Colorado Boulder (United States); John J. Hennessy, Jet Propulsion Lab. (United States); Dana Chafetz, Univ. of Colorado Boulder (United States); Javier G. Del Hoyo, Manuel A. Quijada, NASA Goddard Space Flight Ctr. (United States); Maitland Bowen, Dmitry Vorobiev, Briana L. Indahl, Univ. of Colorado Boulder (United States)

21 July 2022 • 17:00 - 17:20 EDT | Room 518 c

12188-71

Transmission curves of narrow band filters in large FoV and fast astronomical instruments

Author(s): Federico Battaini, Roberto Ragazzoni, INAF - Osservatorio Astronomico di Padova (Italy); Antonino Milone, Univ. degli Studi di Padova (Italy); Gabriele Cremonese, INAF - Osservatorio Astronomico di Padova (Italy)

21 July 2022 • 17:20 - 17:40 EDT | Room 518 c

SESSION 14: GRATINGS AND IMAGE SLICERS FOR SPECTROSCOPY

22 July 2022 • 09:00 - 11:50 EDT | Room 518 c

Session Chair: Yongtian Zhu, Nanjing Institute of Astronomical Optics & Technology (China)

12188-72

VPH Transmission Grating Design Considerations for Spectrograph Designers

Author(s): Elroy Pearson, Cicely Rathmell, Wasatch Photonics, Inc. (United States)

22 July 2022 • 09:00 - 09:20 EDT | Room 518 c

12188-73

VPHGs for astronomy: what we learnt in OPTICON EU and manufacturing perspectives

Author(s): Andrea Bianco, Michele Frangiamore, Alessio Zanutta, Paola Galli, INAF - Osservatorio Astronomico di Brera (Italy); Francisco Garzón, Maider Insausti, Instituto de Astrofísica de Canarias (Spain)

22 July 2022 • 09:20 - 09:40 EDT | Room 518 c

12188-74

Blazed gratings on convex substrates for high throughput spectrographs

Author(s): Frédéric Zamkotsian, Lab. d'Astrophysique de Marseille (France); Roger Krähenbühl, Ctr. Suisse d'Electronique et de Microtechnique SA (Switzerland); Patrick Lanzoni, Nicolas Tchoubaklian, Lab. d'Astrophysique de Marseille (France); Fabian Lutolf, Christian Schneider, Soren Fricke, Ctr. Suisse d'Electronique et de Microtechnique SA (Switzerland); Rolando Ferrini, CSEM SA (Switzerland); Marin Fouchier, Myriam Zerrad, Claude Amra, Institut Fresnel (France); Vincent Costes, Jacques Loesel, Ctr. National d'Études Spatiales (France)

22 July 2022 • 09:40 - 10:00 EDT | Room 518 c

Coffee Break 10:00 - 10:30

12188-75

Development of diffraction gratings and grisms engraved by photolithography for NIR space instruments

Author(s): Johan D. Floriot, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France); Laurent Martin, Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France), Aix-Marseille Univ. (France); Tony Pamplona, Stéphane Basa, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France)

22 July 2022 • 10:30 - 10:50 EDT | Room 518 c

12188-76

Fabrication and Evaluation of Reactive Ion-plasma Etched Astronomical Diffraction Grating with Anti-reflective Surface Nanostructures

Author(s): Hanshin Lee, The Univ. of Texas at Austin (United States); Uma Subash, Menelaos K. Poutous, The Univ. of North Carolina at Charlotte (United States)

22 July 2022 • 10:50 - 11:10 EDT | Room 518 c

12188-77

CUBES: application of image slicers to reformat the field for two spectral resolving powers

Author(s): Ariadna Z. Calcines Rosario, Durham Univ. (United Kingdom); Martyn Wells, UK Astronomy Technology Ctr. (United Kingdom); Kieran S. O'Brien, Simon L. Morris, Durham Univ. (United Kingdom); Walter Seifert, Landessternwarte Heidelberg, Zentrum für Astronomie der Univ. Heidelberg (Germany); Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy); Chris Evans, European Space Agency (ESA), ESA Office, Space Telescope Science Institute (United States); Paolo Di Marcantonio, INAF - Osservatorio Astronomico di Trieste (Italy)

22 July 2022 • 11:10 - 11:30 EDT | Room 518 c

12188-78

MISI-36: Machined image slicer integral field units for the Diffraction-Limited Near-IR Spectropolarimeter

Author(s): Haosheng Lin, Univ. of Hawai'i (United States); Takashi Sukegawa, Canon Inc. (Japan); Morgan B. Bonnet, Univ. of Hawai'i (United States); Yukinobu Okura, Tomonao Nakayasu, Yukimasa Suyama, Canon Inc. (Japan)

22 July 2022 • 11:30 - 11:50 EDT | Room 518 c

SESSION 15: OPTICAL FIBERS, POSITIONERS, PHOTONIC TECHNIQUES I

22 July 2022 • 11:50 - 12:20 EDT | Room 518 c

Session Chair: Yoshinori Suematsu, National Astronomical Observatory of Japan (Japan)

12188-79

MOONS fibre positioning module: instrument build overview

Author(s): Steve Watson, Raziye B. Artan, David C. Atkinson, Steven M. Beard, Martin T. Black, Ciaran Breen, Ian Bryson, Lee Chapman, William A. Cochrane, Miriam Colling, Oscar Gonzalez, Ciaran Lawrence, Alexander Lay, Alan O'Brien, Phil Rees, William D. Taylor, Bart Willemse, UK Astronomy Technology Ctr. (United Kingdom)

22 July 2022 • 11:50 - 12:10 EDT | Room 518 c

12188-80

4MOST Metrology System Lab Calibration and Performance

Author(s): Roland Winkler, Thomas Liebner, Leibniz-Institut für Astrophysik Potsdam (Germany); Alexander Pramskiy, Florian M. Rothmaier, Ingo D. Stilz, Landessternwarte Heidelberg (Germany); Deborah Sobiella, Carlos Rodriguez, Leibniz-Institut für Astrophysik Potsdam (Germany); Scott Smedley, Australian Astronomical Optics, Macquarie Univ. (Australia); Thomas Fechner, Thomas Hahn, Leibniz-Institut für Astrophysik Potsdam (Germany); Michael Lehmitz, Max-Planck-Institut für Astronomie (Germany); Wilbert Bittner, Dietrich Feuerstein, Bjorn Leseberg, Lea Rektorschrek, Ulrike Lemke, Daniel P. Sablowski, Hakan Onel, Steffen Frey, Leibniz-Institut für Astrophysik Potsdam (Germany)

22 July 2022 • 12:10 - 12:30 EDT | Room 518 c

12188-81

CANCELED: Four-year results from the NAIR astrophotonics project and future prospects

22 July 2022 • 12:30 - 12:50 EDT | Room 518 c

Lunch Break 12:20 - 13:20

SESSION 16: OPTICAL FIBERS, POSITIONERS, PHOTONIC TECHNIQUES II

22 July 2022 • 13:20 - 14:40 EDT | Room 518 c

Session Chair: Robert R. Thomson, Heriot-Watt Univ. (United Kingdom)

12188-82

Demonstration of a continuously-sampled high-resolution astrophotonic spectrograph

Author(s): Pradip R. Gatkine, Nemanja Jovanovic, Caltech (United States); James K. Wallace, Jeffrey B. Jewell, Jet Propulsion Lab. (United States); Dimitri P. Mawet, Caltech (United States)

22 July 2022 • 13:20 - 13:40 EDT | Room 518 c

12188-83

Experimental Measurements of AO-Fed Photonic Lantern Coupling Efficiencies

Author(s): Jonathan Lin, Univ. of California, Los Angeles (United States); Julien Lozi, Sébastien B. Vievard, Olivier Guyon, Barnaby R. M. Norris, Subaru Telescope, NAOJ (United States); Christopher H. Betters, Sergio G. Leon-Saval, The Univ. of Sydney (Australia); Yinzi Xin, Caltech

(United States); Yoo Jung Kim, Univ. of California, Los Angeles (United States); Steph Sallum, Univ. of California, Irvine (United States); Pradip R. Gatkine, Nemanja Jovanovic, Dimitri P. Mawet, Caltech (United States); Michael P. Fitzgerald, Univ. of California, Los Angeles (United States)

22 July 2022 • 13:40 - 14:00 EDT | Room 518 c

12188-84

photonic chip for visible interferometry: laboratory characterization and comparison with the theoretical model

Author(s): Manon Lallement, Observatoire de Paris (France); Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Elsa Huby, Sylvestre Lacour, Kévin Barjot, Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Sébastien B. Viévard, Olivier Guyon, Subaru Telescope, NAOJ (United States); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Vincent Déo, Subaru Telescope, NAOJ (United States); Guy S. Perrin, Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France)

22 July 2022 • 14:00 - 14:20 EDT | Room 518 c

12188-85

Research on collision of fiber positioners in LAMOST closed-loop system

Author(s): Zeyu Cai, Zengxiang Zhou, Jiadong Liang, Mengmeng Li, Shipeng Duan, Mengtao Li, Jiale Zuo, Zhigang Liu, Jiangpang Wang, Hongzhuan Hu, Jiaru Chu, Ping Zhang, Univ. of Science and Technology of China (China)

22 July 2022 • 14:20 - 14:40 EDT | Room 518 c

SESSION PS1: POSTERS: MATERIALS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-86

Thermal-optical characterization anlysis and verification of the capillary plat collimator for LAD on eXTP

Author(s): Xiaojing Liu, Tao Luo, Tianxiang Chen, Jia Ma, Yupeng Xu, Huilin He, Institute of High Energy Physics, Chinese Academy of Sciences (China); Hanqi Mao, North Night Vision Technology Co., Ltd. (China); Yuanzheng Lu, Nanjing Branch of North Night Vision Technology Co., LTD (China); Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-87

Outgassing properties of additively manufactured aluminium

Author(s): Steve Watson, Carolyn Atkins, Maisie Edwards-Mowforth, Lucy Reynolds, James Walpole, UK Astronomy Technology Ctr. (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-88

New heavy metal oxide glasses as nonlinear photonic materials

Author(s): Rochdi El Abdi, Univ. de Rennes 1 (France); Djamel Yezli, Univ. August 20, 1955 Skikda (Algeria); Marcel Poulain, Lab. des Matériaux Photoniques (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-89

New measurements of MWIR cryogenic refractive indices for silicon and germanium from CHARMS

Author(s): Douglas B. Leviton, Leviton Metrology Solutions, Inc. (United States); Manuel Quijada, Kevin H. Miller, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: NOVEL AND DISRUPTIVE CONCEPTS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-90

Development of a novel optical camera subsystem onboard Sharjah-Sat-1 CubeSat

Author(s): Onur Oztekin, Istanbul Technical Univ. (Turkey); Tarifa AlKaabi, Yousuf Faroukh, Ibrahim Al-Sabt, Mohammed BinAshour, Maryam Alansaari, Fatima Alketbi, Amel Alhammadi, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates); Bogac Karabulut, Istanbul Technical Univ. (Turkey); Ilias Fernini, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates), Univ. of Sharjah (United Arab Emirates); Alim R. Aslan, Istanbul Technical Univ. (Turkey); Hamid Al-Naimiy, Univ. of Sharjah (United Arab Emirates)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-92

Innovative optical design combining freeform optics and curved-freeform sensors

Author(s): Jiawei Liu, Simona Lombardo, Eduard R. Muslimov, Manal Chebbo, Emmanuel Hugot, Lab. d'Astrophysique de Marseille (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-93

A Langsdorf cloud chamber as a complementary educational material to Cherenkov telescopes for the observation of cosmic rays

Author(s): Sébastien Croce, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France); Jean-Laurent R. Dournaux, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris (France); Antoine Gusdorf, Lab. de Physique de l'Ecole Normale Supérieure, Ecole Normale Supérieure (France), Sorbonne Univ., Ctr. National de la Recherche Scientifique (France), Univ. PSL (France); Philippe Paris, Lycée René Descartes (France); Emma Rébert, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris (France); Hélène Sol, Observatoire de Paris (France), Univ. PSL (France); Frédéric Bouley, Galaxies Etoiles Physique Instrumentation (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: LARGE OPTICS AND SUPPORT SYSTEMS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

Session Chair: Roland Geyl, Safran Reosc (France)

12188-97

CCAT-prime: mirror panel manufacture for FYST

Author(s): Ronan Higgins, Univ. zu Köln (Germany); Stephen C. Parshley, Cornell Univ. (United States); Xiaodong Ren, Univ. zu Köln (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: OPTICAL FABRICATION

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-98

Image slicing with a twist: design and manufacturing of a prototype image slicer for ELT-PCS.

Author(s): Matthias Tecza, Elliot Meyer, Univ. of Oxford (United Kingdom); Takashi Sukegawa, Canon Inc. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-99

FIRST 5T 3D: A laser written device for FIRST/SUBARU reducing crosstalk and propagation losses

Author(s): Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Kevin Barjot, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Sylvestre Lacour, Manon Lallement, Nick Cvetojevic, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Sébastien B. Vievard, Vincent Deo, Olivier Guyon, Subaru Telescope, NAOJ (United States); Elsa Huby, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Guanghua Cheng, Guodong Zhang, State Key Lab. of Transient Optics and Photonics (China); Razvan Stoian, Ciro d'Amico, Lab. Hubert Curien (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-100

Optical parameter optimization during fabrication of a 1-meter wide-field astronomical imaging system

Author(s): James Mulherin, QED Optics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-101

Development status of a near-infrared integral field unit SWIMS-IFU

Author(s): Kosuke Kushibiki, The Univ. of Tokyo (Japan); Shinobu Ozaki, National Astronomical Observatory of Japan (Japan); Masahiro Takeda, Takuya Hosobata, Yutaka Yamagata, RIKEN (Japan); Shinya Morita, Tokyo Denki Univ. (Japan); Keiichi Nakagawa, Takao Saiki, Yutaka Ohtake, The Univ. of Tokyo (Japan); Toshihiro Tsuzuki, Kenji Mitsui, National Astronomical Observatory of Japan (Japan); Hirofumi Okita, Subaru Telescope, National Astronomical Observatory of Japan (United States); Kentaro Motohara, National Astronomical Observatory of Japan (Japan), The Univ. of Tokyo (Japan); Hidenori Takahashi, Masahiro Konishi, Natsuko M. Kato, Shuhei Koyama, Nuo Chen, Shogo Homan, The Univ. of Tokyo (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-103

Diamond machining of two-in-one optical element including slice mirror array for near-infrared Integral-field Spectrograph

Author(s): Masahiro Takeda, RIKEN (Japan); Kousuke Kushibiki, The Univ. of Tokyo (Japan); Takuya Hosobata, Yutaka Yamagata, RIKEN (Japan); Shin-ya Morita, Tokyo Denki Univ. (Japan); Takao Saiki, Keiichi Nakagawa, Yutaka Ohtake, The Univ. of Tokyo (Japan); Kentaro Motohara, Shinobu Ozaki, Toshihiro Tsuzuki, National Astronomical Observatory of Japan (Japan); Hidenori Takahashi, Masahiro Konishi, The Univ. of Tokyo (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-104

On the use of resin in the improvement of high-fidelity surface replication.

Author(s): Claudio Lobos, Pedro Mardones, Sebastian Castillo, Nicolás Soto, Amelia Bayo, Núcleo Milenio de Formación Planetaria (NPF) (Chile); Leslie Pedrero Bernales, Ctr. Científico Tecnológico de Valparaíso, Univ. Técnica Federico Santa María (Chile); Cristopher Rozas, Núcleo Milenio de Formación Planetaria (NPF) (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS5: POSTERS: STRUCTURES AND ADDITIVE MANUFACTURING

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-105

Design and testing of an on-sky astrophotonic telescope platform for on-chip instrumentation

Author(s): Erin M. Tonita, National Research Council Canada (Canada), Univ. of Ottawa (Canada); Volodymyr Artyshchuk, National Research Council Canada (Canada), Carleton Univ. (Canada); John Weber, Siegfried Janz, National Research Council of Canada (Canada); Adam Densmore, National Research Council Canada (Canada); Suresh Sivanandam, Univ. of Toronto (Canada); Ernst de Mooij, Queen's Univ. Belfast (United Kingdom); Jens H. Schmid, Pavel Cheben, National Research Council Canada (Canada); DanXia Xu, National Research Council of Canada (Canada); Karin Hinzer, Univ. of Ottawa (Canada); Ross Cheriton, National Research Council Canada (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-106

ASTRI-Horn Cherenkov camera: improvements on the hardware and software components

Author(s): Giuseppe Sottile, Pierluca Sangiorgi, Carmelo Gargano, Fabio Paolo Lo Gerfo, Mattia Corpora, Osvaldo Catalano, Milvia Capalbi, Teresa Mineo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Giovanni Contino, Istituto Nazionale di Astrofisica IASF PA (Italy); Benedetto Biondo, Renato Gimenes, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Giuseppe Leto, Salvatore Garozzo, Davide Marano, Alessandro Grillo, INAF - Osservatorio Astrofisico di Catania (Italy); Fabio D'Anca, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Vito Conforti, Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-107

Mechanical optimisation of the M1 Dish of the Small-Sized Telescope of the future Cherenkov Telescope Array

Author(s): Frédéric Bouley, Jean-Laurent R. Dournaux, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris (France); Fatima De Frondat Laadim, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris à Meudon (France); Jean-Michel Huet, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris (France); Emma Rebert, Galaxies Etoiles Physique Instrumentation, Ctr. National de la Recherche Scientifique (France), Observatoire de Paris à Meudon (France); Hélène Sol, Observatoire de Paris à Meudon (France); Primo Attinà, INAF - Osservatorio Astronomico di Brera (Italy); Carmelo Gargano, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Gianpietro Marchiori, EIE S.r.l. (Italy); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Matteo Spinola, EIE Group S.r.l. (Italy); Gianpiero Tagliaferri, INAF - Osservatorio Astronomico di Brera (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Alessio Trois, INAF - Osservatorio Astronomico di Cagliari (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-108

Trade-offs in baffles design for infrared instrumentation: case study for ELT METIS

Author(s): Eduard R. Muslimov, Ivan Lloro, Niels Tromp, Daan Zaalberg, ASTRON (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-109

Vera C. Rubin Observatory Telescope Hydraulic and Control Systems Integration and Testing

Author(s): Freddy Munoz Arancibia, Association of Universities for Research in Astronomy, Inc. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-110

ANDES, the high resolution spectrograph for the ELT: Visible Arm Optical Bench and Opto-mechanics Phase-A status and update to Phase-B

Author(s): Fabio Tenegi Sanginés, Instituto de Astrofísica de Canarias (Spain); Bruno Chazelas, Observatoire de Genève (Switzerland); Jonay I. González-Hernández, Rafael Rebolo-López, Manuel Amate Plasencia, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS6: POSTERS: ACTIVE INSTRUMENTS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-111

The pointing monitoring camera hardware and software systems for the ASTRI Mini-Array project

Author(s): Stefano Germani, Univ. degli Studi di Perugia (Italy); Simone Iovenitti, Univ. degli Studi di Milano (Italy); Pietro Bruno, INAF - Osservatorio Astrofisico di Catania (Italy); Gino Tosti, Giuliano Nucciarelli, Univ. degli Studi di Perugia (Italy); Dino P. Fugazza, INAF - Osservatorio Astronomico di Brera (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-112

CubeSpec: mechanical design optimization of the fine steering mirror mechanism

Author(s): Filip Heylen, KU Leuven (Belgium)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-113

Development of a Laser Projection system for the ELT

Author(s): Jan Nijenhuis, Martijn M.C.J. M. van Riel, Fred Kamphues, Geerten F. I. J. Kramer, David Nijkerk, TNO (Netherlands); Ralph Pohl, DEMCON Focal B.V. (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-114

Photonic lanterns and adaptive mode selection

Author(s): Matthew Demartino, Kevin A. Bundy, Holger Schmidt, Md Nafiz Amin, Zoe Weber, Rebecca M. Jensen-Clem, Philip M. Hinz, Univ. of California, Santa Cruz (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-115

Design of a thermally balanced entrance window for the Narrow Field Infrared Adaptive Optics System (NFIRAOS) thermal enclosure

Author(s): Jeffrey Crane, NRC-Herzberg Astronomy & Astrophysics (Canada); Guillaume Filion, OMP inc. (Canada); David R. Andersen, Thirty Meter Telescope (United States); Jenny Atwood, Tim Hardy, Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-116

High precision and thermally controlled filter wheel

Author(s): Antonio Sánchez, Alejandro Gonzalo, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Daniel Garranzo, INTA Instituto Nacional de Tecnica Aerospacial (Spain); Manuel Silva-López, Armonía Núñez, Hugo Laguna Hernandez, María Cebollero, Ana B. Fernández-Medina, Alberto Álvarez Herrero, INTA Instituto Nacional de Técnica Aeroespacial (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-117

Piezo actuators for telescope active optics

Author(s): Alexandre Pages, Thomas Maillard, Jocelyn Rebufa, CEDRAT TECHNOLOGIES SA (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-118

Development of active optics for thin meniscus mirrors in 1-meter-class telescopes

Author(s): Christian Schwaer, Andreas Sinn, Georg Schitter, Technische Univ. Wien (Austria)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-119

SAWLIS - Smart Adaptive Wavelength Lighting System (Patented)

Author(s): Murat Kocak, Ataturk Univ. Astrophysics Research & Application Ctr. (ATASAM) (Turkey)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-120

Active optics strategy for the alignment and operation of the European Solar Telescope

Author(s): Marta Belío-Asin, Jorge Sánchez-Capuchino, Ángel Mato Martínez, Jose M. González-Cava, Juan Cozar-Castellano, Mahy Soler, Irene M. Ferro Rodríguez, Miguel A. Núñez Cagigal, Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-121

Design and evaluation of an active secondary mirror positioning system for a small telescope

Author(s): Christian Schwaer, Patrik Prager, Andreas Sinn, Georg Schitter, Technische Univ. Wien (Austria)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-122

Development of a cold chopper for TAO/MIMIZUKU: Cryogenic test

Author(s): Tsubasa Michifuji, Takafumi Kamizuka, Takashi Miyata, The Univ. of Tokyo (Japan); Ichiro Jikuya, Daichi Uchida, Tomoya Kondo, Kanazawa Univ. (Japan); Katsuhiko Yamada, Osaka Univ. (Japan); Mitsuhiko Honda, Okayama Univ. of Science (Japan); Shigeyuki Sako, Ryou Ohsawa, Kentaro Asano, Kengo Tachibana, Hirokazu Iida, Akira C. Naruse, Itsuki Sakon, The Univ. of Tokyo (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-123

Feed-forward vibration compensation for small telescopes

Author(s): Andreas Sinn, Stephan Schachner, Thomas Riel, Christian Schwaer, Georg Schitter, Technische Univ. Wien (Austria)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS7: POSTERS: TEST AND METROLOGY OF COMPONENTS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-125

The crossed-sine wavefront sensor: first tests and results

Author(s): Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Yan Feng, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alain Spang, Observatoire de la Côte d'Azur (France); François B. Hénault, Jean-Jacques Correia, Eric Stadler, David Mouillet, Institut de Planétologie et d'Astrophysique de Grenoble (France); Stéphan Pédèche, SATT Linksium Grenoble Alpes (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-126

Integrated astrophotonic phase control for high resolution optical interferometry

Author(s): Ross Cheriton, Siegfried Janz, Glen Herriot, Jean-Pierre Véran, Brent Carlson, National Research Council Canada (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-127

The Star Generator: A novel device for optical characterization of large-area primary objective gratings

Author(s): Leaf A. Swordy, Heidi J. Newberg, Rensselaer Polytechnic Institute (United States); Thomas D. Ditto, 3DeWitt, LLC (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-128

Simulations of a deflectometry setup for spheric convex surfaces

Author(s): Nicolás Soto-Muñoz, Yoryan Rocha, Pedro Mardones, Claudio Lobos, Sebastián Castillo, Amelia Bayo, Núcleo Milenio de Formación Planetaria (NPF) (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-130

The crossed-sine wavefront sensor: the opto-mechanical implementation

Author(s): Yan Feng, Jean-Jacques Correia, François B. Hénault, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alain Spang, Observatoire de la Côte d'Azur (France); Laura Schreiber, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Eric Stadler, David Mouillet, Institut de Planétologie et d'Astrophysique de Grenoble (France); Stéphan Pédèche, SATT Linksium Grenoble Alpes (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-131

HARMONI – the Extremely Large Telescope first light integral field spectrograph: Analysis of toroidal mirrors in Pre-Optics. Tolerance analysis and manufacturing error compensation.

Author(s): Miguel Angel Cagigas Garcia, Instituto de Astrofísica de Canarias (Spain); Hermine Schnetler, Martyn Wells, UK Astronomy Technology Ctr., The Royal Observatory, Edinburgh (United Kingdom); Begoña García-Lorenzo, Angel Alonso, Instituto de Astrofísica de Canarias (Spain); Adrien Girardot, Centre de Recherche Astrophysique de Lyon (France); Silvia Regalado Olivares, Instituto de Astrofísica de Canarias (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS8: POSTERS: TEST AND METROLOGY OF (SUB-) SYSTEMS

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-132

New testing phase for CASTLE: curved-sensor-based wide-field telescope

Author(s): Simona Lombardo, Jiawei Liu, Manal Chebbo, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France), Ctr. National d'Études Spatiales (France); Eduard R. Muslimov, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands); Emmanuel Hugot, Gerard R. Lemaitre, Ali Fahad, Konstantin Plyushchev, Aix-Marseille Univ. (France), Lab. d'Astrophysique de Marseille, Ctr. National de la Recherche Scientifique (France), Ctr. National d'Études Spatiales (France); Eulalia Gallego Cano, Francisco Prada, Enrique Perez, Instituto de Astrofísica de Andalucía (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-133

HARMONI at ELT: Pick-Off Arm module design status and prototype results

Author(s): Alberto Estrada, Javier Piqueras López, Heribert Argelaguet, Ctr. de Astrobiología, Consejo Superior de Investigaciones Científicas (Spain), INTA Instituto Nacional de Técnica Aeroespacial (Spain); Timothy J. Morris, Marc Dubbeldam, Lisa F. Bardou, Andrew Dunn, Rishi Deshmukh, Durham Univ. (United Kingdom); David Le Mignant, Kjetil Dohlen, Lab. d'Astrophysique de Marseille (France); Fraser Clarke, Univ. of Oxford (United Kingdom); Santiago Arribas, Miguel Pereira-Santaella, Ctr. de Astrobiología, Consejo Superior de Investigaciones Científicas (Spain), INTA Instituto Nacional de Técnica Aeroespacial (Spain)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-134

Verification strategy for the MICADO Cold Optics

Author(s): Federico Biondi, Michael Hartl, Norbert Geis, Max-Planck-Institut für extraterrestrische Physik (Germany); Andreas Emslander, Max Planck Institute for Extraterrestrial Physics (Germany); Kateryna Kravchenko, Sebastian Rabien, Lothar Barl, Max-Planck-Institut für extraterrestrische Physik (Germany); Jan Kinast, Thomas Peschel, Andreas Gebhardt, Sandra Müller, Mathias Rohde, Christoph Damm, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany); Dirk Kampf, Kampf Telescope Optics GmbH (Germany); Eckhard Sturm, Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-135

Calibration and performance of the MeerLICHT-BlackGEM Atmospheric Dispersion Corrector

Author(s): Maaike Pierik, Steven Bloemen, Paul M. Vreeswijk, Radboud Univ. Nijmegen (Netherlands); Paul J. Groot, Radboud Univ. Nijmegen (Netherlands), Univ. of Cape Town (South Africa), South African Astronomical Observatory (South Africa); Rik ter Horst, NOVA Optical IR Instrumentation Group, ASTRON (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-136

Not to take into account anymore

Author(s): Jordan Raffard, Olivier Dupuis, Vincent Lapeyrere, Éric Gendron, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Sorbonne Univ. (France); Alexandre Blin, Division technique de l'INSU (France); Bruno Borgo, Frédéric Chapron, Arnaud Sevin, Sonia Karkar, Tristan M. Buey, Yann Clénet, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Sorbonne Univ. (France); Richard Davies, Max-Planck-Institut für extraterrestrische Physik (Germany); Simone Thijs, LESIA Paris Observatory (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-138

MOONS – Multi Object spectroscopy for the VLT: Design and testing of the MOONS metrology system

Author(s): Oscar Gonzalez, Ciaran Breen, UK Astronomy Technology Ctr. (United Kingdom); Jorge Sepulveda, Tzu-Chiang Shen, BlueShadows Ltda. (Chile); Phil Rees, UK Astronomy Technology Ctr. (United Kingdom); Alexandre Cabral, Instituto de Astrofísica e Ciências do Espaço, Univ. de Lisboa (Portugal); Martin T. Black, Ian Bryson, UK Astronomy Technology Ctr. (United Kingdom); Michele Cirasuolo, European Southern Observatory (Germany); Steven M. Beard, Stephen Chittick, UK Astronomy Technology Ctr. (United Kingdom); Manuel Parra, Alexis Tejeda, BlueShadows Ltda. (Chile); Leonardo Vanzi, Pontificia Univ. Católica de Chile (Chile); Stephen Watson, UK Astronomy Technology Ctr. (United Kingdom); Manuela Zoccali, Pontificia Univ. Católica de Chile (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-139

The MICADO first light imager for the ELT : positioning strategy of the SCAO subsystems with FaroArm®

Author(s): Simone Thijs, Olivier Dupuis, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Sorbonne Univ. (France); Fanny Chemla, Mathieu Cohen, Jean-Michel Huet, Galaxies Etoiles Physique Instrumentation (France), Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Univ. PSL (France); Frédéric Chapron, Éric Gendron, Sonia Karkar, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris, Ctr. National de la Recherche Scientifique (France), Sorbonne Univ. (France); Tristan Buey, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France), Observatoire de Paris, Ctr. National de la

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-140

Development of a Flat Calibration Unit for TAO/MIMIZUKU

Author(s): Akira C. Naruse, Takafumi Kamizuka, Takashi Miyata, Shigeyuki Sako, The Univ. of Tokyo (Japan); Atsushi Nishimura, National Astronomical Observatory of Japan (Japan); Itsuki Sakon, Ryou Ohsawa, Kentaro Asano, Kengo Tachibana, Tsubasa Michifuji, Hirokazu Iida, The Univ. of Tokyo (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-141

Alignment of large telescope instruments using advanced metrology

Author(s): Edoardo Maria Alberto Redaelli, Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Bortolino Saggin, Politecnico di Milano (Italy); Jacopo Farinato, INAF - Osservatorio Astronomico di Padova (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-142

Accurately measuring hyperspectral imaging distortion in grating spectrographs using a clustering algorithm

Author(s): Matthew Ching Ho Leung, Shaojie Chen, Univ. of Toronto (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-143

Mounting of large optical elements

Author(s): Jean-Louis Lizon, Christophe Dupuy, European Southern Observatory (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-144

Precise metrology for focal plane astronomical instruments

Author(s): Leonardo Vanzi, Clementine Bechet, Mauricio Flores, Rolando Dunner, Tzu-Chiang Shen, Manuel Parra, Mario Castro, Abner Zapata, Pontificia Univ. Católica de Chile (Chile)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-145

Usage of a Diffractive Optical Element (DOE) for best focal plane estimation of a camera during the integration process

Author(s): Martin Pertenais, Conor Ryan, Selene Routley, Denis Griessbach, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-146

Aligning the GMT wide field phasing testbed optical system using a laser tracker and an interferometer

Author(s): Brian A. McLeod, Peyton Benac, Grant Meiners, Daniel J. Catropa, Jan E. Kansky, William A. Podgorski, Derek Kopon, Harvard-Smithsonian Ctr. for Astrophysics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-147

The Camera Calibration System for the first Large-Sized Telescope designed for the Cherenkov Telescope Array Observatory

Author(s): Michele Palatiello, Univ. degli Studi di Udine (Italy), Univ. degli Studi di Trieste (Italy); Diego Cauz, INFN Trieste, Università degli Studi di Udine (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS9: POSTERS: TECHNOLOGIES FOR CRYOGENIC INSTRUMENTS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-148

Mechanical Designs of SCALES: Optical Mechanisms for Use in a Cryogenic IR Spectrograph

Author(s): Christopher T. Ratliff, Andy J. Skemer, Deno Stelter, Jerry Cabak, Reni Kupke, Dale Sandford, Michael Gonzales, Will Deich, Nick MacDonald, Univ. of California Observatories (United States); Steph Sallum, Univ. of California, Irvine (United States); Phil Hinz, Maureen L. Savage, Univ. of California Observatories (United States); Marc F. Kassis, Jim Lyke, W. M. Keck Observatory (United States); Eric Wang, Ken G. Magnone, Univ. of California, Los Angeles (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-149

The vacuum and cryogenics system of the SOXS spectrograph

Author(s): Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Antonio Micciché, Rosario Di Benedetto, Eugenio Martinetti, INAF - Osservatorio Astrofisico di Catania (Italy); Carmelo Nicotra, INAF - Istituto di Radiastronomia (Italy); Giancarlo Bellassai, Giovanni Occhipinti, Carlotta Sciré, INAF - Osservatorio Astrofisico di Catania (Italy); Matteo Aliverti, Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Fabrizio Vitali, INAF - Osservatorio Astronomico di Roma (Italy); Sergio Campana, INAF - Osservatorio Astronomico di Brera (Italy); Riccardo Claudi, INAF - Osservatorio Astronomico di Padova (Italy); Pietro Schipani, INAF Osservatorio Astronomico di Capodimonte (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Sagi Ben-Ami, Weizmann Institute of Science (Israel); Giulio Capasso, INAF Osservatorio Astronomico di Capodimonte (Italy); Rosario Cosentino, INAF - Fundación Galileo Galilei (Spain); Francesco D'Alessio, INAF - Osservatorio Astronomico di Roma (Italy); Paolo D'Avanzo, INAF - Osservatorio Astronomico di Brera (Italy); Ofir Hershko, Weizmann Institute of Science (Israel); Hanindyo Kuncarayakti, Tuorla Observatory, Department of Physics and Astronomy, University of Turku (Finland); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Giuliano Pignata, Universidad Andres Bello (Chile); Kalyan Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Adam Rubin, European Southern Observatory (Germany); David Young, Queen's University Belfast, School of Mathematics and Physics (United Kingdom); Jani Achrén, Incident Angle Oy (Finland); José A. Araiza-Durán, INAF-Osservatorio Astrofisico di Arcetri (Italy); Iair Arcavi, Tel Aviv University (Israel); Federico Battaini, INAF - Osservatorio Astronomico di Padova (Italy); Anna Brucalassi, INAF-Osservatorio Astrofisico di Arcetri (Italy); Rachel Bruch, Weizmann Institute of Science (Israel); Enrico Cappellaro, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, Massimo Della Valle, Sergio D'Orsi, INAF Osservatorio Astronomico di Capodimonte (Italy); Avishay Gal-Yam, Weizmann Institute of Science (Israel); Marcos Hernandez Díaz, INAF - Fundación Galileo Galilei (Spain); Jari Kotilainen, FINCA - Finnish Centre for Astronomy with ESO (Finland); Gianluca Li Causi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Laurent Marty, INAF Osservatorio Astronomico di Capodimonte (Italy); Seppo Mattila, Tuorla Observatory, Department of Physics and Astronomy, University of Turku (Finland); Michael Rappaport, Weizmann Institute of Science (Israel); Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Marco Riva, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Stephen Smartt, Queen's University Belfast (United Kingdom); Ricardo Zanmar Sanchez, INAF - Osservatorio Astrofisico di Catania (Italy); Maximilian Stritzinger, Aarhus University (Denmark); Hector Pérez Ventura, INAF - Fundación Galileo Galilei (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-150

High thermal conductivity ball bearings for cryogenic applications

Author(s): Jean-Louis Lizon, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-151

Performance optimization of a 4K hybrid JT cooler for the HUBS mission

Author(s): Yuexue Ma, Jia Quan, Yanjie Liu, Juan Wang, Jianguo Li, Guopeng Wang, Ziyao Liu, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences (China); Hai Jin, Tsinghua Univ. (China); Jingtao Liang, Technical Institute of Physics and Chemistry, Chinese Academy of Sciences (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-152

FIRST ATTEMPTS TO PUSH LN2 CONTINUOUS FLOW CRYOSTAT BELLOW 77K

Author(s): Patricia Fernández-Izquierdo, Instituto de Astrofísica de Canarias (Spain); Jean Louis Lizon, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-153

Performance of LN2 transfer lines

Author(s): Jean-Louis Lizon, European Southern Observatory (Germany); Roberto Castillo, European Southern Observatory (Chile); Patricia Fernandez Izquierdo, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-154

Planetary roller screw for cryogenic applications

Author(s): Jean-Louis Lizon, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-155

Connection of cryogenic fluid transfer lines

Author(s): Jean-Louis Lizon, European Southern Observatory (Germany); Patricia Fernandez Izquierdo, Instituto de Astrofísica de Canarias (Spain); Renate Hinterschuster, Barbara Klein, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-156

Implementation of sorption pumps in cryostats

Author(s): Jean-Louis Lizon, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-157

The MICADO first light imager for ELT: cold optics optical design

Author(s): Michael Hartl, Richard Davies, Norbert Geis, Veronika Hörmann, Max-Planck-Institut für extraterrestrische Physik (Germany); Dirk Kampf, Kampf Telescope Optics GmbH (Germany); Sebastian Rabien, Josef Schubert, Eckhard Sturm, Max-Planck-Institut für extraterrestrische Physik (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS10: POSTERS: HIGH CONTRAST IMAGING AND POLARIMETRY

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-159

Correcting the non-common path aberrations in the Evanescent Wave Coronagraph - First Results

Author(s): Mary Angelie M. Alagao, Anthony Berdeu, Pimnipa Pongam, Sittichat Sukpholtham, National Astronomical Research Institute of Thailand (Thailand); Michel Tallon, Maud Langlois, Éric M. Thiébaut, Univ. de Lyon (France), Ctr. de Recherche Astrophysique de Lyon, Ctr. National de la Recherche Scientifique (France), Ecole Normale Supérieure de Lyon (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-160

Fiber based Fabry-Pérot etalons for precise wavelength calibration of scanning lasers

Author(s): Xinyue Lei, Jacob Pember, Christian Schwab, Macquarie Univ. (Australia); Julian Stürmer, Ruprecht-Karls-Univ. Heidelberg (Germany); Gert Raskin, Job Schuermans, KU Leuven (Belgium); Andreas Seifahrt, The Univ. of Chicago (United States); Yulia Gurevich, David Coutts, Macquarie Univ. (Australia)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-161

Absolute flux calibrations for the Nancy Grace Roman Space Telescope Coronagraph Instrument

Author(s): Robert T. Zellem, Marie Ygouf, Jet Propulsion Lab., NASA (United States); Bruce Macintosh, Stanford Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-162

Frontier in lens design: superachromatic assembly to provide the Science Focus of EST

Author(s): Paula Sola La Serna, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Jorge Sánchez-Capuchino Revuelta, Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-163

High-contrast imaging data processing for SHARK-VIS

Author(s): Gianluca Li Causi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Douglas Hope, Stuart M. Jefferies, Georgia State Univ. (United States); Jakob Roth, Torsten Ensslin, Max-Planck-Institut für Astrophysik (Germany); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Vincenzo Testa, INAF - Osservatorio Astronomico di Roma (Italy); Alessandro Terreri, Univ. degli Studi di Roma "Tor Vergata" (Italy); Manuele Gangi, Martina Vicinanza, INAF - Osservatorio Astronomico di Roma (Italy); Marco Stangalini, Agenzia Spaziale Italiana (Italy); Roberto Piazzesi, INAF - Osservatorio Astronomico di Roma (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-165

Coronagraphy for DiRect Imaging of Exoplanets (CIDRE) testbed 1: concept, optical set up, and experimental results of adaptive amplitude apodization

Author(s): Lucie Leboulleux, Institut de Planétologie et d'Astrophysique de Grenoble, Ctr. National de la Recherche Scientifique (France); Alexis Carlotti, Stéphane Curaba, Alain Delboubé, Laurent Jocou, Thibaut Moulin, Laurence Gluck, Adrien Hours, Marie-Hélène Sztefek, Institut de Planétologie et d'Astrophysique de Grenoble (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-166

GPI 2.0: optical designs for the upgrade of the Gemini Planet Imager coronagraphic system

Author(s): Meiji M. Nguyen, Bryony Nickson, Emiel H. Por, Remi Soummer, Laurent A. Pueyo, Marshall D. Perrin, Space Telescope Science Institute (United States); Bruce A. Macintosh, Stanford Univ. (United States); Jeffrey K. Chilcote, Univ. of Notre Dame (United States); Quinn M. Konopacky, Jerome Maire, Univ. of California, San Diego (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-221

Modeling mode frequency shifts in astro-etalons for high precision spectrographic calibration

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS11: POSTERS: COATING AND FILTERS

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-207

Stability of lithium fluoride thin films as a function of humidity and temperature

Author(s): Tanner Rydalch, Devin M. Lewis, David D. Allred, Brigham Young Univ. (United States)

21 July 2022 • 18:00 - 18:20 EDT | Room 516

12188-169

Design of the light distribution system for the European Solar Telescope

Author(s): Noelia Feijóo, Instituto de Astrofísica de Canarias (Spain); Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Jorge Sánchez-Capuchino, Juan Cozar-Castellano, Irene M. Ferro Rodríguez, Instituto de Astrofísica de Canarias (Spain); Paula Sola La Serna, Instituto de Astrofísica de Canarias (Spain), Univ. de La Laguna (Spain); Miguel A. Nuñez Cagigal, Mary Barreto Cabrera, Sergio Bonaque-González, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-170

Spectral Characterization of the RST Prism Optics Bandpass Filters

Author(s): Jessica B. Patel, Manuel Quijada, Bente Eegholm, Catherine T. Marx, Victor Chambers, NASA Goddard Space Flight Ctr. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-171

ASTRI-Horn Cherenkov gamma-ray telescope: the average reflectivity of the primary mirror based on and "ad hoc" multilayer coating

Author(s): Antonio Alessio Compagnino, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Giuseppe Leto, INAF - Osservatorio Astrofisico di Catania (Italy); Teresa Mineo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Giorgia Sironi, Simone Iovenitti, INAF - Osservatorio Astronomico di Brera (Italy); Giancarlo Bellassai, INAF - Osservatorio Astrofisico di Catania (Italy); Antonio Distefano, INAF Osservatorio Astrofisico di Catania (Italy); Eugenio Martinetti, Antonio Miccichè, Gaetano Nicotra, INAF - Osservatorio Astrofisico di Catania (Italy); Riccardo Zanmar Sanchez, INAF Osservatorio Astrofisico di Catania (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-172

A dry air purge and condensation monitor for the CFHT primary mirror

Author(s): Marc R. Baril, Tom Vermeulen, Thomas Benedict, Greg Green, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-173

NOIRLab coating capabilities overview and collaboration

Author(s): Emmanuel Chirre, NSF's National Optical-Infrared Astronomy Research Lab. (Chile); Michiel van der Hoeven, Slawomir Bucki, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-174

Much-needed improvements to the 4m CFHT mirror coating facility

Author(s): Thomas Benedict, Marc R. Baril, Gregory A. Barrick, Greg Green, Grant Matsushige, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-175

Modeling the polarization behavior of multi-layered mirror coatings for system-level polarization predictions of DKIST

Author(s): Amanda J. White, National Solar Observatory (United States), Univ. of Colorado Boulder (United States); David M. Harrington, National Solar Observatory (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-176

Optical coatings interaction with low energy particles: stability issue

Author(s): Alain Jody Corso, Giovanni Santi, CNR-Istituto di Fotonica e Nanotecnologie (Italy); Dominic Doyle, European Space Research and Technology Ctr., European Space Agency (Netherlands); Maria Guglielmina Pelizzo, Istituto di Elettronica e di Ingegneria dell'Informazione e delle Telecomunicazioni, Consiglio Nazionale delle Ricerche (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-177

Reflectivity characterization of various black and white materials

Author(s): Luke M. Schmidt, Darren L. DePoy, Jennifer L. Marshall, Ryan J. Oelkers, Texas A&M Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS12: POSTERS: GRATINGS AND IMAGE SLICERS FOR SPECTROSCOPY

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-178

THE LR-IFU FOR GNIRS AT GEMINI NORTH: OPTICAL COMPONENT MANUFACTURING AND METROLOGY

Author(s): Cyril J. Bourgenot, Ariadna Z. Calcines-Rosario, Cornelis M. DubbelDam, Ray M. Sharples, Durham Univ. (United Kingdom); Ruben Diaz, Andrew W. Stephens, Gemini Observatory (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-179

CUBES: Prototyping the high efficiency UV transmission grating

Author(s): Uwe D. Zeitner, Thomas Fluegel-Paul, Marcus Trost, Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-180

The MKID Multi-Object Echelle Spectrographic Testbench

Author(s): John I. Bailey, Benjamin A. Mazin, Nicholas Zobrist, Jennifer P. Smith, Univ. of California, Santa Barbara (United States); Christian Schwab, Jacob Pember, Macquarie Univ. (Australia); Crystal S. Kim, W. Hawkins Clay, Noah J. Swimmer, Sarah Steiger, Miguel Daal, Nastazia Moshirfatemi, Univ. of California, Santa Barbara (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-182

MOONS – multi-object spectroscopy for the VLT: DMD based instrument calibration system

Author(s): David Lee, Martin T. Black, Xiaofeng Gao, Steven M. Beard, Alan O'Brien, Alistair Macleod, Jamie Moffat, Kenny Campbell, William D. Taylor, David C. Atkinson, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-184

VPHGs for FORS UP at VLT

Author(s): Michele Frangiamore, Andrea Bianco, Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy); Frédéric Derie, Antonio Ramon Manescau Hernandez, Johan Kosmalski, European Southern Observatory (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-185

New VPH based GRISMs for AFOSC

Author(s): Andrea Bianco, Michele Frangiamore, INAF - Osservatorio Astronomico di Brera (Italy); Lina Tomasella, Stefano Benetti, INAF - Osservatorio Astronomico di Padova (Italy); Giorgio M. Pariani, Luca Oggioni, Alessio Zanutta, INAF - Osservatorio Astronomico di Brera (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-186

Steps forward to SST applications of slit-less multi-object spectroscopy with the SuperFOSC camera at the Loiano astronomical observatory

Author(s): Matteo Lombini, Laura Schreiber, Alberto Buzzoni, Albino Carbognani, Fausto Cortecchia, Roberto Di Luca, Emiliano Diolaiti, Silvia Galleti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Enrico Mannocci, Univ. degli Studi di Bologna (Italy); Giovanna Stirpe, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-187

Development of a 35-micron slicer-based Integral Field Unit for high-resolution 2D solar spectroscopy

Author(s): Silvia Regalado Olivares, Roberto López López, Álvaro Pérez-García, Instituto de Astrofísica de Canarias (Spain); Yoshinori Suematsu, National Astronomical Observatory of Japan (Japan); Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain); Manuel Collados Vera, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica, Univ. de La Laguna (Spain); Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-188

Optical design and wavelength calibration of a DMD-based multi-object spectrograph

Author(s): Shaojie Chen, Matthew Ching Ho Leung, Suresh Sivanandam, Univ. of Toronto (Canada); Xuefeng Yao, Chinese Academy of Sciences (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-189

Optical design of an image slicer-based Integral Field Unit for the THEMIS solar telescope

Author(s): Silvia Regalado Olivares, Roberto López López, María Jesús Martínez González, Instituto de Astrofísica de Canarias (Spain); Bernard F. Gelly, Ctr. National de la Recherche Scientifique (France); Manuel Collados Vera, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica, Univ. de La Laguna (Spain); Carlos Quintero Noda, Sara Esteban Pozuelo, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-190

Machined InP immersion grating available in Y-band

Author(s): Takashi Sukegawa, Yukinobu Okura, Canon Inc. (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-191

A second set of ZnSe grisms for the Rapid Infrared Imager/ Spectrograph (RIMAS)

Author(s): Paul J. Kuzmenko, Steve L. Little, Lawrence Livermore National Lab. (United States); Alexander S. Kutyrev, NASA Goddard Space Flight Ctr. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-192

Updated Methods for Precise Blaze Angle Measurements of Lithographically Fabricated Silicon Immersion Gratings

Author(s): Emily G. Lubar, Daniel T. Jaffe, Gregory N. Mace, Cynthia B. Brooks, Matthew N. Jacobs, Erica Sawczynec, The Univ. of Texas at Austin (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-193

Optical and mechanical updates in the GREGOR Infrared Spectrograph for simultaneous spectral observations

Author(s): Silvia Regalado Olivares, Roberto López López, Francisco González, Jorge Quintero Nehrkorn, Horacio Rodríguez Delgado, Ángel Mato Martínez, Mary Barreto Cabrera, Instituto de Astrofísica de Canarias (Spain); Jacinto Javier Vaz Cedillo, GRANTECAN S.A (Spain); Manuel Collados Vera, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica, Univ. de La Laguna (Spain); Carlos Quintero Noda, Instituto de Astrofísica de Canarias (Spain), Departamento de Astrofísica (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-194

The OPTICON H2020 technology roadmap for optical and infrared astronomy

Author(s): Ruben Sanchez-Janssen, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS13: POSTERS: OPTICAL FIBERS, POSITIONERS, PHOTONIC TECHNIQUES

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-196

An all-photonic, dynamic device for flattening the spectrum of a laser frequency comb to maximize the precision of calibration for radial velocity applications

Author(s): Nemanja Jovanovic, Boqiang Shen, Pradip R. Gatkine, Caltech (United States); Nick Cvetojevic, Observatoire de la Côte d'Azur (France); Gautam Vasisht, Jet Propulsion Lab. (United States); Charles A. Beichman, Caltech (United States); Jeffrey B. Jewell, Jet Propulsion Lab. (United States); Stephanie D. Leifer, Dimitri P. Mawet, Maodong Gao, Caltech (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-198

Demonstration of high-efficiency photonic lantern couplers for PolyOculus

Author(s): Christina D. Moraitis, Stephen S. Eikenberry, Univ. of Central Florida (United States), Univ. of Florida (United States); Rodrigo Amezcua-Correa, Juan Carlos Alvarado-Zacarias, Stephanos Yerolatsitis, Univ. of Central Florida (United States); Sarik Jeram, Univ. of Florida (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-199

On-sky demonstration of astrophotonic fiber Fabry-Pérot correlation spectroscopy

Author(s): Ross Cheriton, National Research Council Canada (Canada); Erin M. Tonita, Univ. of Ottawa (Canada), National Research Council Canada (Canada); Volodymyr Artyshchuk, Carleton Univ. (Canada), National Research Council Canada (Canada); Adam Densmore, National Research Council Canada (Canada); Suresh Sivanandam, Univ. of Toronto (Canada); Ernst de Mooij, Queen's Univ. Belfast (United Kingdom); Pavel Cheben, Dan-Xia Xu, Jens H. Schmid, National Research Council Canada (Canada); Karin Hinzer, Univ. of Ottawa (Canada); Siegfried Janz, National Research Council Canada (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-200

Femtosecond precision optical frequency and timing distribution for radio astronomy

Author(s): Kemal Shafak, Anan Dai, Michael Hagemann, Cycle GmbH (Germany); Franz X. Kärtner, Deutsches Elektronen-Synchrotron (Germany)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-201

A Proposted Method for Evaluating Survey Coordinates of Fiducial for LAMOST

Author(s): Mengtao Li, Zengxiang Zhou, Jiale Zuo, Univ. of Science and Technology of China (China); Zeyu Cai, Univ. of Science And Technology of China (China); Mengmeng Li, Jiadong Liang, Shipeng Duan, Jianping Wang, Hongzhuan Hu, Zhigang Liu, Jiaru Chu, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-202

Fault diagnosis of LAMOST fiber positioner based on deep learning

Author(s): Yihu Tang, Zengxiang Zhou, Shipeng Duan, Zeyu Cai, Jiadong Liang, Mengmeng Li, Ping Zhang, Hongzhuan Hu, Jianping Wang, Jiaru Chu, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-203

Laser frequency comb system for the InfraRed Doppler spectrograph on the Subaru Telescope

Author(s): Takuma Serizawa, Tokyo Univ. of Agriculture and Technology (Japan), National Astronomical Observatory of Japan (Japan); Takashi Kurokawa, Astrobiology Center, NINS (Japan), Tokyo Univ. of Agriculture and Technology (Japan); Yosuke Tanaka, Tokyo Univ. of Agriculture and Technology (Japan), Astrobiology Center, NINS (Japan); Jun Nishikawa, National Astronomical Observatory of Japan (Japan), Astrobiology Center, NINS (Japan), The Graduate Univ. for Advanced Studies (Japan); Takayuki Kotani, Astrobiology Center, NINS (Japan), National Astronomical Observatory of Japan (Japan), The Graduate Univ. for Advanced Studies (Japan); Motohide Tamura, Department of Astronomy, University of Tokyo (Japan), Astrobiology Center, NINS (Japan), National Astronomical Observatory of Japan (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-204

Research on operation accuracy compensation of LAMOST fiber positioner

Author(s): Mengmeng Li, Zengxiang Zhou, Jiale Zuo, Jiadong Liang, Zeye Cai, Mengtao Li, Shipeng Duan, Ping Zhang, Zhigang Liu, Jianping Wang, Hongzhuan Hu, Jiaru Chu, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-205

Advancing photonic technologies for ground-based infrared astronomy

Author(s): Kyler Kuehn, Lowell Observatory (United States); Steve E. Kuhlmann, Argonne National Lab. (United States); Robert Kehoe, Southern Methodist Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-206

ETFP: a new fibre positioner concept for future Multi-Object Spectrographs

Author(s): Tom Louth, Stephen Watson, Oscar Gonzalez, UK Astronomy Technology Ctr. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-207

The Design and Construction of the Fiber Instrument Feed for the SALT NIR Integral Field Spectrograph

Author(s): Michael P. Smith, Univ. of Wisconsin-Madison (United States); Matthew A. Bershady, Univ. of Wisconsin-Madison (United States), South African Astronomical Observatory (South Africa), Univ. of Cape Town (South Africa); Marsha J. Wolf, Joshua E. Oppor, Univ. of Wisconsin-Madison (United States); Sabyasachi Chattopadhyay, South African Astronomical Observatory (South Africa); Kurt P. Jaehnig, Jeffrey W. Percival, Mark P. Mulligan, Kathleen M. Jurgella, Jacob Schaafsma, Andromeda Q. Swissdorf, Briana Wirag, Univ. of Wisconsin-Madison (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-209

Performance testing and end-to-end mapping of the fiber bundle on the SALT NIR integral field spectrograph

Author(s): Joshua E. Oppor, Univ. of Wisconsin-Madison (United States); Matthew A. Bershady, Univ. of Wisconsin-Madison (United States), South African Astronomical Observatory (South Africa), Univ. of Cape Town (South Africa); Marsha J. Wolf, Michael P. Smith, Univ. of Wisconsin-Madison (United States); Sabyasachi Chattopadhyay, Univ. of Wisconsin-Madison (United States), South African Astronomical Observatory (South Africa); Kurt P. Jaehnig, Jeffrey W. Percival, Mark P. Mulligan, Kathleen M. Jurgella, Briana Wirag, Univ. of Wisconsin-Madison (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-210

The future of MOS technologies

Author(s): Ruben Sanchez-Janssen, UK Astronomy Technology Ctr. (United Kingdom); Francisco Prada, Instituto de Astrofísica de Andalucía (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-211

Development of Mid-IR waveguides to implement spectrometers in integrated optics (Thesis)

Author(s): Myriam Bonduelle, Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alain Morand, IMEP-LAHC (France); Javier R. Vazquez de Aldana, Grupo de Investigación en Aplicaciones del Láser y Fotónica (ALF-USAL), Universidad de Salamanca (Spain); Nadège Courjal, FEMTO-ST - FRANCHE-COMTÉ Électronique Mécanique, Thermique et Optique - Sciences et Technologies (France); Antoine Coste, FEMTO-ST - FRANCHE-COMTÉ Électronique Mécanique Thermique et Optique - Sciences et Technologies (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-212

MOONS - Multi Object Spectroscopy for the VLT: Final performances and integration of the fibres

Author(s): Isabelle Guinouard, Philippe Laporte, Jean-Philippe Amans, Observatoire de Paris (France); David Lee, Phil Rees, Martin T. Black, Stephen Watson, UK Astronomy Technology Ctr. (United Kingdom); Hector Flores, Observatoire de Paris (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-213

Design and Optimization of the New Generation of LAMOST Fiber Positioning Unit Control System

Author(s): Menghao Wang, Zhen Zhang, Chengyuan Yu, Yonggang Gu, Chao Zhai, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-214

Algorithm Research on Fast Focusing Based on Convolutional Neural Network

Author(s): Hao Xu, Jinxin Zhou, Feifan Zhang, Zengxiang Zhou, Hongzhuan Hu, Zhigang Liu, Ping Zhang, Jianping Wang, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-216

A test system of LAMOST optical fiber positioner drive board

Author(s): Chengyuan Yu, Yonggang Gu, Zhen Zhang, Menghao Wang, Chao Zhai, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-217

Field retermination of APOGEE Spectrograph MTP fiber connectors

Author(s): John C. Wilson, Univ. of Virginia (United States); Dan Rocheleau, Fiber Optic Ctr., Inc. (United States); John Fox, Louis Green, Donald Harkins, Computer Crafts Inc. (United States); Dirk E. Schoellner, Stuart Melton, Lori Seagle, US Conec Ltd. (United States); Zane Fitzgerald, Fiber Optic Ctr., Inc. (United States); David Nidever, Montana State Univ. (United States); Nathan De Lee, Northern Kentucky Univ. (United States); Jon Holtzman, New Mexico State Univ. (United States); Emily Farr, Sarah E. Tuttle, Univ. of Washington (United States); Audrey Oravetz, Katie Grabowski, Kaike Pan, Dmitry Bizyaev, Jamey Eriksen, Apache Point Observatory (United States); Stefanie Wachter, Solange Ramirez, Juna A. Kollmeier, Carnegie Observatories (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-218

CFRP sandwich optical bench with embedded optical fiber sensors for monitoring temperature and thermo-elastic deformations

Author(s): Ana B. Fernández-Medina, Malte Frövel, Raquel L. Heredero, Antonia de la Torre, Ricardo San Julián, Alejandro Gonzalo, INTA Instituto Nacional de Técnica Aeroespacial (Spain); María Cebollero, ISDEFE, S.A. (Spain); Alberto Álvarez Herrero, INTA Instituto Nacional de Técnica Aeroespacial (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-219

Hybrid electro-optic visible multi-telescope beam combiner for next generation FIRST/SUBARU instruments

Author(s): Guillermo Martin, Institut de Planétologie et d'Astrophysique de Grenoble (France); Kevin Barjot, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Adrien Billat, Cedric Cassagnettes, Teem Photonics (France); Nadège Courjal, FEMTO-ST (France); Manon Lallement, Nick Cvetojevic, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Sébastien B. Vievard, Vincent Deo, Olivier Guyon, Subaru Telescope, NAOJ (United States); Elsa Huby, Sylvestre Lacour, Lab. d'Etudes Spatiales et d'Instrumentation en Astrophysique (France); Antoine Coste, FEMTO-ST (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12188-220

The fiducial fibers coding design of LAMOST Closed-loop Detection System

Author(s): Jiadong Liang, Zengxiang Zhou, Mengtao Li, Jiale Zuo, Zeyu Cai, Mengmeng Li, Hongzhuan Hu, Jianping Wang, Zhigang Liu, Jiaru Chu, Univ. of Science and Technology of China (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12188-102
Methods of manufacturing and certification of high-aperture aspherical matrices for forming of off-axis panels of "Millimetron" space telescope 10-m mirror

Contact author(s): Semenov Aleksandr P., Lytkarinsky Optical Glass Factory, Russian Federation

Poster

12188-158
Development progress of diffraction-limited coronagraphs with moderate spectral bandwidths

Contact author(s): Itoh Satoshi, Nagoya Univ., Japan

Poster

12188-168
Characterization of coatings for straylight and photoluminescence suppression in the Raman Spectrometer for MMX (RAX)

Contact author(s): Ryan Conor, Deutsches Zentrum für Luft- und Raumfahrt e.V., Germany

Poster

12188-183
Development of a high-precision spectrograph for diffraction-limited coronagraphs

Contact author(s): Ota Shunsuke, Nagoya Univ., Japan

Poster

12188-23
Design, build, and test of the next generation wide field of view spaceborne optical assemblies

Contact author(s): Bronson Ryan S, Collins Aerospace, United States

Oral

12188-250
Uniformity analysis of focal plane efficiency for the Multi-Channel Photometric Survey Telescope (Mephisto)

Contact author(s): Yuan Xiangyan, National Astronomical Observatories / Nanjing Institute of Astronomical Optics & Technology, Chinese Academy of Sciences, China

Poster

12188-251
Telescope alignment based on the structured lighting of collimated laser beam bundles

Contact author(s): wu zhixu, Nanchang University, China

Oral

12188-34
EvWaCo prototype athermal mechanical design

Contact author(s): Alagao Mary Angelie M, Thailand

Oral

12188-62
Stress-induced birefringence in the lenses of Wide-Area Linear Optical Polarimeter-South

Contact author(s): Anche Ramya M., The Univ. of Arizona, United States

Oral

12188-91
Wide field of view optical assemblies for severe environments in space

Contact author(s): Bronson Ryan S, Collins Aerospace, United States

Poster

12188-96
Methods of testing of optical parameters of large-sized mirrors off-axial surfaces at the stage of figuring and certification

Contact author(s): Abdulkadyrov Magomed A., Lytkarinsky Optical Glass Factory, Russian Federation

Poster

CONFERENCE 12189

Software and Cyberinfrastructure for Astronomy VII

17 - 21 July 2022 | Room 520 e

Conference Chairs: **Jorge Ibsen,** European Southern Observatory appointed to Atacama Large MIllimiter/Submillimiter Array (Chile); **Gianluca Chiozzi,** European Southern Observatory (Germany)

Program Committee: **Alan Bridger,** UK Astronomy Technology Ctr. (United Kingdom); **Tom Donaldson,** Space Telescope Science Institute (United States); **Frossie Economou,** Large Synoptic Survey Telescope (United States); **Kim Gillies,** Thirty Meter Telescope Observatory Corp. (United States); **Juan C. Guzman,** Commonwealth Scientific and Industrial Research Organisation (Australia); **José M. Filgueira,** GMTO Corp. (United States); **George Kosugi,** Subaru Telescope, NAOJ (Japan); **Shui Hung Kwok,** W. M. Keck Observatory (United States); **Nuria P. F. Lorente,** Australian Astronomical Optics, Macquarie Univ. (Australia)

SESSION 1: PROJECT MANAGEMENT/WEB TECHNOLOGIES

17 July 2022 • 11:00 - 11:40 EDT | Room 520 e

Session Chair: Jorge Ibsen, Joint ALMA Observatory (Chile)

12189-1

Inspecting and Adapting via problem-solving workshops: the SKA experience

Author(s): Valentina Alberti, INAF - Osservatorio Astronomico di Trieste (Italy); Snehal Valame, Persistent Systems Ltd. (India)

17 July 2022 • 11:00 - 11:20 EDT | Room 520 e

12189-2

Managing an Agile Build Phase while keeping the client informed with your progress

Author(s): Jennifer S. Dunn, NRC-Herzberg Astronomy & Astrophysics (Canada)

17 July 2022 • 11:20 - 11:40 EDT | Room 520 e

Lunch Break 11:40 - 13:30

SESSION 2: SOFTWARE ENGINEERING

17 July 2022 • 13:30 - 14:30 EDT | Room 520 e

Session Chair: Gianluca Chiozzi, European Southern Observatory (Germany)

12189-4

CI-CD practices at SKA

Author(s): Matteo Di Carlo, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Piers Harding, Ugur Ylmaz, SKA Observatory (United Kingdom); Dalmiro Maia, CICGE (Portugal); Bruno Ribeiro, Domingos Nunes, Diogo Regateiro, Atlar innovation (Portugal); Bruno J. Morgado, CICGE, Faculdade de Ciências da Universidade do Porto (Portugal); Mariana Paulo, Miguel Santos, Critical software (Portugal); Gianluca Marotta, INAF - Osservatorio Astrofisico di Arcetri (Italy); Mauro Dolci, INAF - Osservatorio Astronomico d'Abruzzo (Italy)

17 July 2022 • 13:30 - 13:50 EDT | Room 520 e

12189-5

A middleware to confine obsolescence

Author(s): Marco Buttu, Sergio Poppi, Carlo Migoni, Giuseppe Carboni, Antonietta Fara, INAF - Osservatorio Astronomico di Cagliari (Italy); Andrea Orlati, Simona Righini, Fabio R. Vitello, INAF - Istituto di Radioastronomia (Italy); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy)

17 July 2022 • 13:50 - 14:10 EDT | Room 520 e

12189-6

Experience of utilising CI/CD practices in the development of software for a modern astronomical observatory

Author(s): Joao Bento, Liverpool John Moores University (United Kingdom); Doug M. Arnold, Robert J. Smith, Liverpool John Moores Univ. (United Kingdom); Juan J. Fernández-Valdivia, Javier León Gil, Josué Barrera, Miguel A. Torres-Gil, Instituto de Astrofísica de Canarias (Spain)

17 July 2022 • 14:10 - 14:30 EDT | Room 520 e

SESSION 3: CYBERINFRASTRUCTURE

17 July 2022 • 14:30 - 15:30 EDT | Room 520 e

Session Chair: Jorge Ibsen, Joint ALMA Observatory (Chile)

12189-7

The Sloan Digital Sky Survey Cyberinfrastructure

Author(s): José Sánchez-Gallego, Univ. of Washington (United States); Brian Cherinka, Space Telescope Science Institute (United States); Joel Brownstein, The Univ. of Utah (United States); John Donor, Texas Christian Univ. (United States); Conor Sayres, Univ. of Washington (United States); Lionel Zumaran, Carnegie Observatories (United States); Shane Thomas, New Mexico State Univ. (United States); Nicholas P. Konidaris, Stefanie Wachter, Juna A. Kollmeier, Solange Ramírez, Carnegie Observatories (United States); Soojong Pak, Changgon Kim, Hojae Ahn, Mingyeong Yang, Kyung Hee Univ. (Korea, Republic of)

17 July 2022 • 14:30 - 14:50 EDT | Room 520 e

12189-8

The Quality Check system architecture for SOXS

Author(s): Laurent Marty, INAF - Osservatorio Astronomico di Capodimonte (Italy); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); David Young, Queen's Univ. Belfast (United Kingdom); Sergio Campana, INAF - Osservatorio Astronomico di Brera (Italy); Riccardo Claudi, INAF - Osservatorio Astronomico di Padova (Italy); Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Sagi Ben-Ami, Weizmann Institute of Science (Israel); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Cosentino, INAF - Fundación Galileo Galilei (Spain); Francesco D'Alessio, INAF - Osservatorio Astronomico di Roma (Italy); Paolo D'Avanzo, INAF - Osservatorio Astronomico di Brera (Italy); Ofir Hershko, Weizmann Institute of Science (Israel); Hanindyo Kuncarayakti, Tuorla Observatory, Univ. of Turku (Finland); Matteo Munari, INAF - Osservatorio Astronomico di Padova (Italy); Giuliano Pignata, Univ. Andrés Bello (Chile); Kalyan K. Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Adam Rubin, European Southern Observatory (Germany); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Fabrizio Vitali, INAF - Osservatorio Astronomico di Roma (Italy); Jani Achrèn, Incident Angle Oy (Finland); Josè Antonio Araiza-Duràn, Tel Aviv Univ. (Israel); Federico Battaini, INAF - Osservatorio Astronomico di Padova (Italy); Anna Brucalassi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Rachel Bruch, Weizmann Institute of Science (Israel); Enrico Cappellaro, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, Massimo Della Valle, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Di Benedetto, INAF - Osservatorio Astrofisico di Catania (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Avishay Gal-Yam, Weizmann Institute of Science (Israel); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Marcos Hernandez-Diaz, INAF - Fundación Galileo Galilei (Spain); Jari Kotilainen, Finnish Ctr. for Astronomy with ESO (Finland); Gianluca Li Causi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Seppo Mattila, Tuorla Observatory, Univ. of Turku (Finland); Micheal Rappaport, Weizmann Institute of Science (Israel); Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salsanich, INAF - Osservatorio Astronomico di Padova (Italy); Stephen Smartt, Queen's Univ. Belfast (United Kingdom); Ricardo Sanchez, Ricardo Zanmar Sanchez, INAF - Osservatorio Astrofisico di Catania (Italy); Maximilian Stritzinger, Aarhus Univ. (Denmark); Héctor Perez Ventura, INAF -

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17 July 2022 • 14:50 - 15:10 EDT | Room 520 e

12189-9

Unifying the deployment of ALMA's end user applications at its Regional Centers using a distributed infrastructure.

Author(s): Alvaro Aguirre, Víctor González, ALMA (Chile); Lidia Dominguez, Stewart Mclay, Alisdair Manning, European Southern Observatory (Germany); Eisuke Morita, Yohei Hayashi, National Astronomical Observatory of Japan (Japan); Tom Booth, CJ Allen, National Radio Astronomy Observatory (United States)

17 July 2022 • 15:10 - 15:30 EDT | Room 520 e

Coffee Break 10:00 - 10:30

SESSION 4: OBSERVATORY/TELESCOPE CONTROL I

18 July 2022 • 10:30 - 12:10 EDT | Room 520 e

Session Chair: Kim K. Gillies, Thirty Meter Telescope (United States)

12189-10

Creating a highly flexible and autonomous stratospheric observatory: The essential elements of the European Stratospheric Balloon Observatory payload control software

Author(s): Mahsa Taheran Vernoosfaderani, Philipp Maier, Andreas Pahler, Sarah Bougueroua, Sabine Klinkner, Alfred Krabbe, Tibor Völker, Justin Ackermann, Univ. Stuttgart (Germany)

18 July 2022 • 10:30 - 10:50 EDT | Room 520 e

12189-11

A graph database solution for tracking the deployment and layout of a large radio interferometer

Author(s): Adam D. Hincks, Anatoly Zavyalov, Univ. of Toronto (Canada)

18 July 2022 • 10:50 - 11:10 EDT | Room 520 e

12189-12

The SOXS Scheduling system

Author(s): Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); David Young, Queen's Univ. Belfast (United Kingdom); Laurent Marty, INAF - Osservatorio Astronomico di Capodimonte (Italy); Laura Asquini, Sergio Campana, INAF - Osservatorio Astronomico di Brera (Italy); Riccardo Claudi, INAF - Osservatorio Astronomico di Padova (Italy); Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Sagi Ben-Ami, Weizmann Institute of Science (Israel); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Cosentino, Fundación Galileo Galilei - INAF (Spain); Francesco D'Alessio, INAF - Osservatorio Astronomico di Roma (Italy); Paolo d'Avanzo, INAF - Osservatorio Astronomico di Brera (Italy); Ofir Hershko, Weizmann Institute of Science (Israel); Hanindyo Kuncarayakti, Tuorla Observatory, Univ. of Turku (Finland); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Giuliano Pignata, Univ. Andres Bello (Chile); Kalyan K. Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Adam Rubin, European Southern Observatory (Germany); Fabrizio Vitali, INAF - Osservatorio Astronomico di Roma (Italy); Jani Achrèn, Incident Angle Oy (Finland); Josè Antonio Araiza-Duràn, INAF - Osservatorio Astrofisico di Arcetri (Italy); Iair Arcavi, Tel Aviv Univ. (Israel); Federico Battaini, INAF - Osservatorio Astronomico di Padova (Italy); Anna Brucalassi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Rachel Bruch, Weizmann Institute of Science (Israel); Enrico Cappellaro, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, Massimo Della Valle, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Di Benedetto, INAF - Osservatorio Astrofisico di Catania (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Avishay Gal-Yam, Weizmann Institute of Science (Israel); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Marcos Hernandez Díaz, Fundación Galileo Galilei - INAF (Spain); Jari Kotilainen, Finnish Ctr. for Astronomy with ESO (Finland); Gianluca Li Causi, INAF - Osservatorio Astronomico di Roma (Italy); Seppo Mattila, Tuorla Observatory, Univ. of Turku (Finland); Micheal Rappaport, Weizmann Institute of Science (Israel); Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Stephen Smartt, Queen's Univ. Belfast (United Kingdom); Ricardo Zanmar Sanchez, INAF - Osservatorio Astrofisico di Catania (Italy); Maximilian Stritzinger, Aarhus Univ. (Denmark); Héctor Pérez Ventura, Fundación Galileo Galilei - INAF (Spain); Giorgio Pariani, Andrea Bianco, INAF - Osservatorio Astronomico di Brera (Italy)

18 July 2022 • 11:10 - 11:30 EDT | Room 520 e

12189-13

A metaheuristic approach for INO340 telescope flexible scheduling

Author(s): Hengameh Shalchian, Mohammad-Hadi Sotoudeh, Habib G. Khosroshahi, Reza Ravanmehr, Surena Fatemi, Hamed Altafi, Iranian National Observatory (Iran, Islamic Republic of)

18 July 2022 • 11:30 - 11:50 EDT | Room 520 e

12189-14

Software architecture and development plan for a 4m fully autonomous observatory (New Robotic Telescope)

Author(s): Joao Bento, Robert J. Smith, Doug M. Arnold, Liverpool John Moores Univ. (United Kingdom); Juan J. Fernandez-Valdivia, Javier León Gil, Josué Barrera, Miguel A. Torres-Gil, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 11:50 - 12:10 EDT | Room 520 e

Lunch Break 12:10 - 13:30

SESSION 5: OBSERVATORY AND TELESCOPE CONTROL II

18 July 2022 • 13:30 - 15:10 EDT | Room 520 e

Session Chair: Shui Hung Kwok, W. M. Keck Observatory (United States)

12189-15

The Software Architecture and development approach for the ASTRI Mini-Array gamma-ray air-Cherenkov experiment at the Observatorio del Teide

Author(s): Andrea A. Bulgarelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Fabrizio Lucarelli, INAF - Osservatorio Astronomico di Roma (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Vito Conforti, Nicolò Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Joseph H. Schwarz, INAF - Osservatorio Astronomico di Brera (Italy); Lucio Angelo Antonelli, INAF - Osservatorio Astronomico di Roma (Italy); Leonardo Baroncelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Ciro Bigongiari, INAF - Osservatorio Astronomico di Roma (Italy); Milvia Capalbi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Martina Cardillo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Guillermo Andres Rodriguez Castillo, Osvaldo Catalano, Antonio Alessio Compagnino, Mattia Corpora, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Alessandro Costa, INAF - Osservatorio Astrofisico di Catania (Italy); Silvia Crestan, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Giancarlo Cusumano, Antonino D'Ai', INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Valentina Fioretti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Stefano Gallozzi, INAF - Osservatorio Astronomico di Roma (Italy); Stefano Germani, Univ. degli Studi di Perugia (Italy); Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Valentina Giordano, INAF - Osservatorio Astrofisico di Catania (Italy); Andrea Giuliani, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Pietro Giuseppe Bruno, INAF - Osservatorio Astrofisico di Catania (Italy); Jarred Gershon Green, INAF - Osservatorio Astronomico di Roma (Italy); Alessandro Grillo, Federico Incardona, INAF - Osservatorio Astrofisico di Catania (Italy); Simone Iovenitti, INAF - Osservatorio Astronomico di Brera (Italy); Nicola La Palombara, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Valentina La Parola, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Saverio Lombardi, INAF - Osservatorio Astronomico di Roma (Italy); Maria Concetta Maccarone, INAF - Istituto di Astrofisica Spaziale e Fisica Cosmica di Palermo (Italy); Rachele Millul, INAF - Osservatorio

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18 July 2022 • 13:30 - 13:50 EDT | Room 520 e

12189-16

EtherCAT as an alternative of the next generation real-time control system for telescopes

Author(s): Tzu-Chiang Shen, ALMA (Chile); Patricio Galeas, Jorge Sepulveda, Fernando Huenupan, Sebastian Carrasco, Rodrigo Augsburger, Rodrigo Seguel, Univ. de la Frontera (Chile)

18 July 2022 • 13:50 - 14:10 EDT | Room 520 e

12189-17

New electronic brains for Halfmann telescopes

Author(s): Jörg Weingrill, Thomas Granzer, Michael Weber, Wilbert Bittner, Leibniz-Institut für Astrophysik Potsdam (Germany); Carlo Seehaus, Jan Mettke, Technische Hochschule Brandenburg (Germany)

18 July 2022 • 14:10 - 14:30 EDT | Room 520 e

12189-18

The ELT Sequencer

Author(s): Ivan Munoz, European Southern Observatory (Chile)

18 July 2022 • 14:30 - 14:50 EDT | Room 520 e

12189-19

Simonyi Survey Telescope M1M3 Control System

Author(s): Petr Kubánek, Vera C. Rubin Observatory (Chile); Doug Neil, Dave Mills, Te-Wei Tsai, Vera C. Rubin Observatory (United States); Felipe Daruich, Tiago Ribeiro, Vera C. Rubin Observatory (Chile); Oliver Wiecha, Vera C. Rubin Observatory (United States)

18 July 2022 • 14:50 - 15:10 EDT | Room 520 e

Coffee Break 15:10 - 15:40

SESSION 6: DATA SCIENCE/ENGINEERING AND HPC

18 July 2022 • 15:40 - 16:20 EDT | Room 520 e

Session Chair: Tom Donaldson, Space Telescope Science Institute (United States)

12189-22

Real-time inversion of solar spectropolarimetric data at high spatial and temporal resolution: HPC and GPU implementations

Author(s): Luis R. Bellot Rubio, Manuel Cabrera, Juan Pedro Cobos Carrascosa, Instituto de Astrofísica de Andalucía (Spain)

18 July 2022 • 15:40 - 16:00 EDT | Room 520 e

12189-23

Towards a data cyberinfrastructure for collecting, storing, processing, and visualizing technical data in Paranal observatory.

Author(s): Eduardo Peña, European Southern Observatory (Chile)

18 July 2022 • 16:00 - 16:20 EDT | Room 520 e

Coffee Break 10:00 - 10:30

SESSION 7: DATA MANAGEMENT, PROCESSING AND PIPELINES I

19 July 2022 • 10:30 - 12:10 EDT | Room 520 e

Session Chair: Tom Donaldson, Space Telescope Science Institute (United States)

12189-24

Faro: A framework for measuring the scientific performance of petascale Rubin Observatory data products

Author(s): Leanne P. Guy, Vera C. Rubin Observatory (United States); Keith Bechtol, Univ. of Wisconsin-Madison (United States), Vera C. Rubin Observatory (United States); Jeffrey L. Carlin, Erik Dennihy, Vera C. Rubin Observatory (United States); Peter S. Ferguson, Univ. of Wisconsin-Madison (United States); Robert H. Lupton, Princeton Univ. (United States); Colin T. Slater, Krzysztof P. Findeisen, Univ. of Washington (United States); Arun Kannawadi, Lauren A. MacArthur, Sophie L. Reed, Dan S. Taranu, Princeton Univ. (United States); W. Michael Wood-Vasey, Univ. of Pittsburgh (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 520 e

12189-25

The Array Data Acquisition System software architecture of the ASTRI Mini-Array Project

Author(s): Vito Conforti, Fulvio Gianotti, Valerio Pastore, Massimo Trifoglio, Andrea A. Bulgarelli, Antonio Addis, Leonardo Baroncelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Milvia Capalbi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Valentina Fioretti, Nicolò Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Pierluca Sangiorgi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Mattia Corpora, Osvaldo Catalano, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Alessandro Costa, Federico Incardona, INAF - Osservatorio Astrofisico di Catania (Italy); Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 10:50 - 11:10 EDT | Room 520 e

12189-26

The on-ground SO/PHI FDT data reduction pipeline

Author(s): David Orozco Suarez, Hanna Strecker, Alejandro M. Moreno Vacas, Jose Carlos del Toro Iniesta, Instituto de Astrofísica de Andalucía (Spain); Johann Hirzberger, Kinga Albert, Nestor Albelo Jorge, Max-Planck-Institut für Sonnensystemforschung (Germany); Thierry Appourchaux, Institut d'Astrophysique Spatiale (France); Alberto Alvarez-Herrero, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Julian Blanco Rodriguez, Univ. de València (Spain); Achim M. Gandorfer, Dietmar Germerott, Lucas Guerrero, Pablo Gutierrez Marquez, Fatima Kahil, Martin Kolleck, Sami K. Solanki, Max-Planck-Institut für Sonnensystemforschung (Germany); Reiner Volkmer, Leibniz-Institut für Sonnenphysik (Germany); Joachim Woch, Max-Planck-Institut für Sonnensystemforschung (Germany); Björn Fiethe, Technische Univ. Braunschweig (Germany); José María Gómez Cama, Univ. de Barcelona (Spain); Isabel Pérez-Grande, Univ. Politécnica de Madrid (Spain); Esteban Sanchis Kilders, Univ. de València (Spain); María Balaguer Jiménez, Luis Ramón Bellot Rubio, Instituto de Astrofísica de Andalucía (Spain); Daniele Calchetti, Max-Planck-Institut für Sonnensystemforschung (Germany); Manuel Carmona, Univ. de Barcelona (Spain); Werner Deutsch, German Fernandez-Rico, Max-Planck-Institut für Sonnensystemforschung (Germany); Ana B. Fernández-Medina, Pilar García Parejo, INTA Instituto Nacional de Técnica Aeroespacial (Spain); Jose Luis Gasent Blesa, Univ. de València (Spain); Laurent Gizon, Bianca Grauf, Klaus Heerlein, Andreas Lagg, Max-Planck-Institut für Sonnensystemforschung (Germany); Tobias Lange, Technische Univ. Braunschweig (Germany); Antonio C. López Jiménez, Instituto de Astrofísica de Andalucía (Spain); Thorsten Maue, Leibniz-Institut für Sonnenphysik (Germany); Reinhard Meller, Max-Planck-Institut für Sonnensystemforschung (Germany); Harald Michalik, Technische Univ. Braunschweig (Germany); Reinhard Mueller, Max-Planck-Institut für Sonnensystemforschung (Germany); Eiji Nakai, Wolfgang Schmidt, Leibniz-Institut für Sonnenphysik (Germany); Jesper Schou, Udo H. Schühle, Jonas Sinjan, Max-Planck-Institut für Sonnensystemforschung (Germany); Ignacio Torralbo, Univ. Politécnica

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19 July 2022 • 11:10 - 11:30 EDT | Room 520 e

12189-27

The Data Processing, Simulation, and Archive Systems of the ASTRI Mini-Array Project

Author(s): Saverio Lombardi, Istituto Nazionale di Astrofisica (Italy), Agenzia Spaziale Italiana (Italy); Fabrizio Lucarelli, Ciro Bigongiari, Stefano Gallozzi, Martina Cardillo, Francesco G. Saturni, Lucio Angelo Antonelli, Andrea A. Bulgarelli, Milvia Capalbi, Osvaldo Catalano, Antonio Alessio Compagnino, Vito Conforti, Silvia Crestan, Giancarlo Cusumano, Antonino D'aì, Istituto Nazionale di Astrofisica (Italy); Stefano Germani, Univ. degli Studi di Perugia (Italy); Andrea Giuliani, Simone Iovenitti, Valentina La Parola, Maria Concetta Maccarone, Teresa Mineo, Davide Mollica, Antonio Pagliaro, Nicolò Parmiggiani, Matteo Perri, Fabio Pintore, Salvatore Scuderi, Istituto Nazionale di Astrofisica (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Stefano Vercellone, Luca Zampieri, Michele Mastropietro, Francesco Visconti, Istituto Nazionale di Astrofisica (Italy)

19 July 2022 • 11:30 - 11:50 EDT | Room 520 e

12189-28

High-volume spectral data processing pipeline at the Dominion Radio Astrophysical Observatory

Author(s): Dustin Lagoy, Michael Smith, Dominion Radio Astrophysical Observatory (Canada); Stephen T. Harrison, Dominion Radio Astrophysical Observatory, National Research Council Canada (Canada); David Del Rizzo, Tim Robishaw, Trey V. Wenger, Dominion Radio Astrophysical Observatory (Canada)

19 July 2022 • 11:50 - 12:10 EDT | Room 520 e

Lunch/Exhibition Break 12:10 - 14:00

SESSION 8: OBSERVATORY AND TELESCOPE CONTROL III

19 July 2022 • 14:00 - 15:20 EDT | Room 520 e

Session Chair: Kim K. Gillies, Thirty Meter Telescope (United States)

12189-29

Software Architecture of the Intelligent Observatory Local Control Unit

Author(s): Carel H. D. R. van Gend, South African Astronomical Observatory (South Africa); Stephen Potter, South African Astronomical Observatory (South Africa), Univ. of Johannesburg (South Africa); Roufurd Julie, Paul Swart, South African Radio Astronomy Observatory (South Africa); Nicolas Erasmus, Hannah L. Worters, South African Astronomical Observatory (South Africa); Sunil Chandra, South African Astronomical Observatory (South Africa), North-West Univ. (South Africa)

19 July 2022 • 14:00 - 14:20 EDT | Room 520 e

12189-30

Challenges of containerization and robotization the telescope control system for large robotic telescope

Author(s): Juan Jose Fernandez Valdivia, Instituto de Astrofísica de Canarias (Spain); Josué Barrera Martín, Instituto de Astrofisica de Canarias (Spain); Miguel A. Torres-Gil, Javier León Gil, Instituto de Astrofísica de Canarias (Spain); Doug M. Arnold, Robert J. J. Smith, Liverpool John Moores Univ. (United Kingdom); Víctor Rodríguez Herreros, Gran Telescopio de Canarias, S.A. (Spain)

19 July 2022 • 14:20 - 14:40 EDT | Room 520 e

12189-32

Modernizing Observation Planning For Accessible, Science-Ready Data

Author(s): Matthew Brown, Max Broadheim, John O'Meara, Jeff A. Mader, Lucas Furhman, Michael Lundquist, Josh Walawender, Tyler Tucker, W. M. Keck Observatory (United States)

19 July 2022 • 14:40 - 15:00 EDT | Room 520 e

12189-34

A high performance data acquisition on COTS hardware for astronomical instrumentation

Author(s): Julien Plante, Damien Gratadour, Observatoire de Paris (France)

19 July 2022 • 15:00 - 15:20 EDT | Room 520 e

Coffee Break 15:20 - 15:50

Coffee Break 10:00 - 10:30

SESSION 9: INSTRUMENTATION CONTROL

20 July 2022 • 10:30 - 12:10 EDT | Room 520 e

Session Chair: Gianluca Chiozzi, European Southern Observatory (Germany)

12189-35

MOONS fibre positioner control and path planning software

Author(s): Steven M. Beard, Bart Willemse, Stephen Watson, David Atkinson, UK Astronomy Technology Ctr. (United Kingdom); Pablo Gutierrez Cheetham, European Southern Observatory (Germany); Johannes Nix, Institut für Robotik und Mechatronik, Deutsches Zentrum für Luft- und Raumfahrt e.V. (Germany)

20 July 2022 • 10:30 - 10:50 EDT | Room 520 e

12189-3

How Taranta provides tools to build user interfaces for TANGO devices in the SKA integration environment without writing a line of code.

Author(s): Matteo Canzari, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Valentina Alberti, INAF - Osservatorio Astronomico di Trieste (Italy); Hèlder Ribeiro, Atlar Innovation (Portugal); Ajaykumar Dubey, Persistent Systems Ltd. (India); Vincent Hardion, Mikel Eguiraun, Max IV Institute (Sweden)

20 July 2022 • 10:50 - 11:10 EDT | Room 520 e

12189-37

MAVIS Instrument Control Software: toward the preliminary design.

Author(s): Elia Costa, Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Nicolas Doucet, Research School of Astronomy and Astrophysics, The Australian National Univ. (Australia); Daniela Fantinel, INAF - Osservatorio Astronomico di Padova (Italy); Fabio Rossi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Salvatore Savarese, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Francois Rigaut, Research School of Astronomy and Astrophysics, The Australian National Univ. (Australia); Alfio Timothy Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy)

20 July 2022 • 11:10 - 11:30 EDT | Room 520 e

12189-38

The control software of the BEaTriX X-ray beam calibration facility: problems and solutions

Author(s): Mauro Ghigo, Bianca Salmaso, Stefano Basso, Daniele Spiga, INAF - Osservatorio Astronomico di Brera (Italy); Lorenzo Paoletti, INAF - Osservatorio Astronomico di Padova (Italy)

20 July 2022 • 11:30 - 11:50 EDT | Room 520 e

12189-68

Development of the spectrograph control software package for SDSS-μ Local Volume Mapper Instrument

Author(s): Changgon Kim, Kyung Hee Univ. (Korea, Republic of); José Sanchez-Gallego, Univ. of Washington (United States); Pavan Bilgi, Carnegie Institution for Science (United States); Mingyeong Yang, Kyung Hee Univ. (Korea, Republic of); Florian Briegel, Max-Planck-Institut für Astronomie (Germany); Tae-Geun Ji, Kyung Hee Univ. (Korea, Republic of); Nicholas P. Konidaris, Carnegie Institution for

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20 July 2022 • 11:50 - 12:10 EDT | Room 520 e

Lunch/Exhibition Break 12:10 - 13:50

SESSION 10: DATA MANAGEMENT, PROCESSING, PIPELINES II

20 July 2022 • 13:50 - 15:30 EDT | Room 520 e

Session Chair: Shui Hung Kwok, W. M. Keck Observatory (United States)

12189-39

The sky at 1 terabit per second: Architecture and implementation of the Argus Array Hierarchical Data Processing System

Author(s): Henry T. Corbett, Alan Vasquez Soto, Lawrence Machia, Nathan Galliher, Ramses Gonzalez, Nicholas M. Law, The Univ. of North Carolina at Chapel Hill (United States)

20 July 2022 • 13:50 - 14:10 EDT | Room 520 e

12189-40

The Vera C. Rubin Observatory Data Butler and Pipeline Execution System

Author(s): Timothy Jenness, Vera C. Rubin Observatory (United States); James Bosch, Princeton Univ. (United States); Andrei Salnikov, SLAC National Accelerator Lab. (United States); Nate B. Lust, Princeton Univ. (United States); Nate Pease, SLAC National Accelerator Lab. (United States); Michelle Gower, Univ. of Illinois (United States); Gregory P. Dubois-Felsmann, IPAC, California Institute of Technology (United States); Fritz Mueller, SLAC National Accelerator Lab. (United States); Pim Schellart, Princeton Univ. (United States)

20 July 2022 • 14:10 - 14:30 EDT | Room 520 e

12189-41

The BlueMUSE data reduction pipeline: lessons learned from MUSE and first design choices

Author(s): Peter Weilbacher, Leibniz-Institut für Astrophysik Potsdam (Germany); Sven Martens, Institut für Astrophysik, Georg-August-Univ. Göttingen (Germany); Martin Wendt, Institut für Physik und Astronomie, Univ. Potsdam (Germany); Martin M. Roth, Leibniz-Institut für Astrophysik Potsdam (Germany); Stefan Dreizler, Institut für Astrophysik, Georg-August-Univ. Göttingen (Germany); Andreas Kelz, Leibniz-Institut für Astrophysik Potsdam (Germany); Roland Bacon, Johan Richard, Centre de Recherche Astrophysique de Lyon (CRAL) (France)

20 July 2022 • 14:30 - 14:50 EDT | Room 520 e

12189-42

The spectroscopic pipeline design of the ELT METIS

Author(s): Nadeen B. Sabha, Wolfgang Kausch, Norbert Przybilla, Univ. Innsbruck (Austria)

20 July 2022 • 14:50 - 15:10 EDT | Room 520 e

12189-43

Automatic Spectroscopic Data Reduction using BANZAI

Author(s): Curtis McCully, Matthew Daily, G. Mirek Brandt, Las Cumbres Observatory (United States); Marshall C. Johnson, The Ohio State Univ. (United States); Mark Bowman, Daniel-Rolf Harbeck, Las Cumbres Observatory (United States)

20 July 2022 • 15:10 - 15:30 EDT | Room 520 e

Coffee Break 15:30 - 16:00

Coffee Break 10:00 - 10:30

SESSION 11: PROJECT OVERVIEWS AND PROGRESS

21 July 2022 • 10:30 - 12:30 EDT | Room 520 e

Session Chair: Jorge Ibsen, Joint ALMA Observatory (Chile)

12189-44

Design, development and testing of reliable flight software for EIRSAT-1: a university-class CubeSat enabling astronomical research

Author(s): Maeve Doyle, School of Physics, Univ. College Dublin (Ireland); Mike Hibbett, Irish Manufacturing Research (Ireland); Joseph Mangan, David Murphy, Sai Krishna Reddy Akarapu, Rachel Dunwoody, Jessica Erkal, Gabriel Finneran, Jack Reilly, Lána Salmon, School of Physics, Univ. College Dublin (Ireland); Joseph Thompson, School of Mechanical and Materials Engineering (Ireland); Sarah Walsh, School of Physics (Ireland); Brian Shortt, Future Missions Department, Directorate of Science, European Space Agency, ESTEC (Netherlands); Antonio Martin-Carrillo, Sheila McBreen, School of Physics, Univ. College Dublin (Ireland); David McKeown, School of Mechanical and Materials Engineering (Ireland); William O'Connor, School of Mechanical and Materials Engineering, University College Dublin (Ireland); Alexei Ulyanov, Ronan Wall, Lorraine Hanlon, School of Physics, Univ. College Dublin (Ireland)

21 July 2022 • 10:30 - 10:50 EDT | Room 520 e

12189-45

Development of the Program Execution System Architecture (PESA) for MSE.

Author(s): Christian Surace, Lab. d'Astrophysique de Marseille (France); Jennifer L. Marshall, Mitchell Institute, Texas A&M Univ. (United States); Jennifer Sobeck, Kei Szeto, Canada-France-Hawaii Telescope Corp. (United States)

21 July 2022 • 10:50 - 11:10 EDT | Room 520 e

12189-46

Latest developments for the Giant Magellan Telescope (GMT) control system

Author(s): Martí Pi, Marianne Cox, Josema Filgueira, Jordi Molgó, Divya Thanasekaran, William Schoenell, Hector Swett, Jose Soto, Chien Y. Peng, Chris Contaxis, GMTO Corp. (United States)

21 July 2022 • 11:10 - 11:30 EDT | Room 520 e

12189-47

TMT observatory software construction update

Author(s): Jason L. Weiss, Thirty Meter Telescope International Observatory (United States); Smitha Subramanian, Indian Institute of Astrophyics (India); Mushtaq Ahmed, ThoughtWorks Technologies Pvt. Ltd. (India); Kim K. Gillies, Thirty Meter Telescope International Observatory (United States)

21 July 2022 • 11:30 - 11:50 EDT | Room 520 e

12189-48

The ELT high level coordination and control

Author(s): Gianluca Chiozzi, Nick C. Kornweibel, Ulrich Lampater, Babak Sedghi, Heiko Sommer, European Southern Observatory (Germany)

21 July 2022 • 11:50 - 12:10 EDT | Room 520 e

12189-49

Software design for CSP.LMC in SKA

Author(s): Gianluca Marotta, Elisabetta Giani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Ivana Novak, Alexander Söderqvist, Cosylab Switzerland GmbH (Switzerland); Carlo Baffa, INAF - Osservatorio Astrofisico di Arcetri (Italy)

21 July 2022 • 12:10 - 12:30 EDT | Room 520 e

SESSION PS1: POSTERS: CYBERINFRASTRUCTURE

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-50

Containerizing the telemetry data pipeline for MMTO subsystems

Author(s): J. Duane Gibson, Carlos Burguillo-Rodriguez, Timothy E. Pickering, Dallan Porter, Scott Swindell, Will Goble, MMT Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-52

assembling and integration of the ALMA hardware in the loop simulation environment

Author(s): Tzu-Chiang Shen, Alejandro Saez, Mark Gallilee, Rodrigo Cabezas, José Ortíz, Carlos Boza, Norikazu Mizuno, Martin Tourneboeuf, Soledad Fuica, Ruben Soto, Johnny W. Reveco, Claudio Follert, Stuartt Corder, ALMA (Chile)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-53

ASTRI Mini-Array On-Site Information and Communication Technology infrastructure

Author(s): Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Marcello Lodi, Telescopio Nazionale Galileo (Spain); Vito Conforti, Alessandro Tacchini, Andrea A. Bulgarelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Pietro Giuseppe Bruno, Alessandro Costa, INAF - Osservatorio Astrofisico di Catania (Italy); Adriano De Rosa, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Stefano Gallozzi, INAF - Osservatorio Astronomico di Roma (Italy); Stefano Germani, Univ. degli Studi di Perugia (Italy); Giuseppe Leto, INAF - Osservatorio Astrofisico di Catania (Italy); Fabrizio Lucarelli, INAF - Osservatorio Astronomico di Roma (Italy); Giuseppe Malaspina, INAF - Osservatorio Astronomico di Brera (Italy); Nicolò Parmiggiani, Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Salvo Scuderi, INAF - Osservatorio Astronomico di Brera (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Kevin Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Valerio Pastore, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Federico Incardona, INAF - Osservatorio Astrofisico di Catania (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-54

The monitoring, logging, and alarm system of the ASTRI mini-array gamma-ray air-Cherenkov experiment at the Observatorio del Teide

Author(s): Federico Incardona, Alessandro Costa, Kevin Munari, Salvatore Gambadoro, INAF - Osservatorio Astrofisico di Catania (Italy); Stefano Germani, Univ. degli Studi di Perugia (Italy); Pietro Giuseppe Bruno, INAF - Osservatorio Astrofisico di Catania (Italy); Andrea A. Bulgarelli, Vito Conforti, Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Alessandro Grillo, INAF - Osservatorio Astrofisico di Catania (Italy); Valerio Pastore, Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Joseph H. Schwarz, INAF - Osservatorio Astronomico di Brera (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Salvatore Cavalieri, Univ. degli Studi di Catania (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-55

Extending the life of MegaCam – Redesign of the data link

Author(s): Kevin K. Y. Ho, Sidik Isani, Simon Prunet, Canada-France-Hawaii Telescope Corp. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: DATA MANAGEMENT, PROCESSING AND PIPELINES

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-56

The Gamma-Flash real-time data pipeline for ground observation of terrestrial gamma-ray flashes

Author(s): Antonio Addis, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Alessio Aboudan, Univ. degli Studi di Padova (Italy); Andrea A. Bulgarelli, Leonardo Baroncelli, Riccardo Campana, Adriano De Rosa, Ambra Di Piano, Fabio Fuschino, Nicoló Parmiggiani, Enrico Virgilli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-57

the TolTEC camera: the citlali data reduction pipeline engine

Author(s): Michael McCrackan, Zhiyuan Ma, Nat S. DeNigris, Kamal Souccar, Grant W. Wilson, Univ. of Massachusetts Amherst (United States); Itziar Aretxaga, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Akanksha Bij, Laura Fissel, Queen's Univ. (Canada); Robert Gutermuth, Univ. of Massachusetts Amherst (United States); Dennis Lee, Giles Novak, Northwestern Univ. (United States); Felix Thiel, Queen's Univ. (Canada); Samantha Walker, Univ. of Colorado Boulder (United States); Javier Zaragoza-Cardiel, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-58

The SOXS Data Reduction Pipeline

Author(s): David Young, Queen's Univ. Belfast (United Kingdom); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Stephen Smartt, Queen's Univ. Belfast (United Kingdom); Sergio Campana, Paolo D'Avanzo, INAF - Osservatorio Astronomico di Brera (Italy); Riccardo Claudi, INAF - Osservatorio Astronomico di Padova (Italy); Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Matteo Aliverti, INAF - Osservatorio Astronomico di Brera (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Sagi Ben-Ami, Weizmann Institute of Science (Israel); Giulio Capasso, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Cosentino, INAF - Fundación Galileo Galilei (Spain); Francesco D'Alessio, INAF - Osservatorio Astronomico di Roma (Italy); Ofir Hershko, Weizmann Institute of Science (Israel); Hanindyo Kuncarayakti, Tuorla Observatory, Univ. of Turku (Finland); Matteo Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Giuliano Pignata, Univ. Andrés Bello (Chile); Kalyan K. Radhakrishnan, INAF - Osservatorio Astronomico di Padova (Italy); Adam Rubin, European Southern Observatory (Germany); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Fabrizio Vitali, INAF - Osservatorio Astronomico di Roma (Italy); Jani Achrén, Incident Angle Oy (Finland); José Antonio Araiza-Durán, INAF - Osservatorio Astrofisico di Arcetri (Italy); Iair Arcavi, Tel Aviv Univ. (Israel); Federico Battaini, INAF - Osservatorio Astronomico di Padova (Italy); Anna Brucalassi, INAF-Osservatorio Astrofisico Arcetri (Italy); Rachel Bruch, Weizmann Institute of Science (Israel); Enrico Cappellaro, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, Massimo Della Valle, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosario Di Benedetto, INAF - Osservatorio Astrofisico di Catania (Italy); Sergio D'Orsi, INAF - Osservatorio Astronomico di Capodimonte (Italy); Avishay Gal-Yam, Weizmann Institute of Science (Israel); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Marcos Hernandez Díaz, INAF - Fundación Galileo Galilei (Spain); Jari Kotilainen, Finnish Ctr. for Astronomy with ESO (Finland); Gianluca Li Causi, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Laurent Marty, INAF - Osservatorio Astronomico di Capodimonte (Italy); Seppo Mattila, Tuorla Observatory, Dept. of Physics and Astronomy, Univ. of Turku (Finland); Michael Rappaport, Weizmann Institute of Science (Israel); Davide Ricci, INAF - Osservatorio Astronomico di Padova (Italy); Marco M. Riva, INAF - Osservatorio Astronomico di Brera (Italy); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Ricardo Zanmar Sanchez, INAF - Osservatorio Astrofisico di Catania (Italy); Maximilian Stritzinger, Aarhus Univ. (Denmark); Héctor Pérez Ventura, INAF - Fundación Galileo Galilei (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-59

The on-ground data reduction and calibration pipeline for SO/PHI-HRT

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19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-60

The TolTEC Camera: Software Stack and Data management

Author(s): Zhiyuan Ma, Michael McCrackan, Nat S. DeNigris, Kamal Souccar, Grant W. Wilson, Univ. of Massachusetts (United States); Akanksha Bij, Laura Fissel, Queen's Univ. (Canada); Robert Gutermuth, Univ. of Massachusetts (United States); Paul A. Horton, Arizona State Univ. (United States); Dennis Lee, Northwestern Univ. (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Giles Novak, Northwestern Univ. (United States); Ivan Rodríguez-Montoya, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Felix Thiel, Queen's Univ. (Canada); Javier Zaragoza-Cardiel, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Samantha Walker, Univ. of Colorado Boulder (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-61

Final pipeline design of the MICADO spectroscopic mode

Author(s): Wolfgang Kausch, Nadeen B. Sabha, Norbert Przybilla, Univ. Innsbruck (Austria)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-62

Liger at Keck Observatory: design of the data reduction system and software interfaces

Author(s): Nils-Erik Rundquist, Shelley A. Wright, Univ. of California, San Diego (United States); Arun Surya, Indian Institute of Astrophysics (India); Aaron Brown, Maren Cosens, Univ. of California, San Diego (United States); Michael Fitzgerald, Chris Johnson, Univ. of California, Los Angeles (United States); Marc Kassis, W. M. Keck Observatory (United States); Renate Kupke, Univ. of California, Santa Cruz (United States); Kyle Lanclos, W. M. Keck Observatory (United States); James E. Larkin, Univ. of California, Los Angeles (United States); Rosalie C. McGurk, W. M. Keck Observatory (United States); Ji Man Sohn, Univ. of California, Los Angeles (United States); Gregory Walth, Carnegie Observatories (United States); James H. Wiley, Univ. of California, San Diego (United States); Sherry Yeh, W. M. Keck Observatory (United States); Andrea Zonca, Univ. of California, San Diego (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: DATA

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-20

Log Analysis as an Operational Tool at Paranal Observatory

Author(s): Juan Pablo Gil, European Southern Observatory (Chile); Camilo Carvajal, Univ. de Chile (Chile); Eduardo Peña, European Southern Observatory (Chile)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-63

Monitoring the performance of the SKA CICD infrastructure

Author(s): Matteo Di Carlo, Mauro Dolci, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Piers Harding, Ugur Ylmaz, SKA Observatory (United Kingdom); Dalmiro Maia, CICGE, Faculdade de Ciências da Universidade do Porto (Portugal); Bruno J. Morgado, CICGE (Portugal); Bruno Ribeiro, Domingos Nunes, Diogo Regateiro, Atlar Innovation (Portugal); Mariana Paulo, Miguel Santos, Critical software (Portugal)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-64

Using elasticsearch for archiving with TANGO-controls framework

Author(s): Matteo Di Carlo, Mauro Dolci, INAF - Osservatorio Astronomico d'Abruzzo (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-65

Development of a high-speed identification model for infrared-ring structures using deep learning

Author(s): Shimpei Nishimoto, Shota Ueda, Shinji Fujita, Osaka Prefecture Univ. (Japan); Atsushi Nishimura, National Astronomical Observatory of Japan (Japan); Toshikazu Onishi, Kazuki Tokuda, Osaka Prefecture Univ. (Japan); Yoshito Shimajiri, Yusuke Miyamoto, National Astronomical Observatory of Japan (Japan); Yasutomo Kawanishi, Institute of Physical and Chemical Research (Japan); Atsushi M. Ito, National Institute for Fusion Science (Japan); Kaoru Nishikawa, Daisuke Yoshida, Nagoya Univ. (Japan); Hiroyuki Kaneko, Joetsu Univ. of Education (Japan); Tsuyoshi Inoue, Konan Univ. (Japan); Shunya Takekawa, Kanagawa Univ. (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-66

The Stereo Event Builder software system of the ASTRI Mini-Array project

Author(s): Stefano Germani, Univ. degli Studi di Perugia (Italy); Valentina La Parola, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Saverio Lombardi, Fabrizio Lucarelli, Francesco G. Saturni, Ciro Bigongiari, INAF - Osservatorio Astronomico di Roma (Italy), Space Science Data Ctr., Agenzia Spaziale Italiana (Italy); Martina Cardillo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Teresa Mineo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-67

EFTE-Rocks, a framework to discriminate fast optical transient phenomena from orbital debris

Author(s): Alan Vasquez Soto, Hank Corbett, Nicholas M. Law, Nathan Galliher, Amy L. Glazier, Ramses Gonzalez, Lawrence Machia, The Univ. of North Carolina at Chapel Hill (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: INSTRUMENTATION CONTROL

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-36

MORFEO (formerly known as MAORY) instrument control software: toward a consolidated design.

Author(s): Bernardo Salasnich, Andrea Baruffolo, Fulvio Laudisio, INAF - Osservatorio Astronomico di Padova (Italy); Mirko Colapietro, INAF - Osservatorio Astronomico di Capodimonte (Italy); Andrea Balestra, INAF - Osservatorio Astronomico di Padova (Italy); Gianluca Di Rico, INAF - Osservatorio Astronomico d'Abruzzo (Italy); Daniela Fantinel, INAF - Osservatorio Astronomico di Padova (Italy); Paolo Grani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Sylvain Guieu, Fabrice Pancher, Institut de Planétologie et d'Astrophysique de Grenoble (France); Alfio T. Puglisi, INAF - Osservatorio Astrofisico di Arcetri (Italy); Salvatore Savarese, Pietro Schipani, INAF - Osservatorio Astronomico di Capodimonte (Italy); Rosanna Sordo, INAF - Osservatorio Astronomico di Padova (Italy); Paolo Ciliegi, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-71

Design and development of the IGRINS-2 control software as a facility instrument of the Gemini observatory

Author(s): Hye-In Lee, Korea Astronomy and Space Science Institute (Korea, Republic of); Francisco Ramos, Hwihyun Kim, Gemini Observatory (Chile); Heeyoung Oh, Chan Park, Ueejeong Jeong, Moo-Young Chun, Jae-Joon Lee, Young Sam Yu, Sungho Lee, Sanghyuk Kim, Jae Sok Oh, Yunjong Kim, In-Soo Yuk, Korea Astronomy and Space Science Institute (Korea, Republic of)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-72

Design and development of the Supervisor software component for the ASTRI Mini-Array Cherenkov Camera

Author(s): Mattia Corpora, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Alessandro Grillo, INAF - Osservatorio Astrofisico di Catania (Italy); Pierluca Sangiorgi, Milvia Capalbi, Osvaldo Catalano, Giuseppe Sottile, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Andrea A. Bulgarelli, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Fabrizio Lucarelli, INAF - Osservatorio Astronomico di Roma (Italy); Nicolò Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Joseph H. Schwarz, INAF - Osservatorio Astronomico di Brera (Italy); Federico Russo, Vito Conforti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-73

Improvements to SHINS, the SHARK-NIR instrument software, during the AIT phase

Author(s): Davide Ricci, Fulvio Laudisio, Sona Chavan, INAF - Osservatorio Astronomico di Padova (Italy); Marco De Pascale, CINECA (Italy); Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-74

Synchronized observations with multiple cameras in GRIS: A demonstrator of an instrument for the European Solar Telescope (EST)

Author(s): Jorge Quintero Nehrkorn, Horacio Rodriguez Delgado, Antonio Matta Gómez, Carlos Quintero Noda, Manuel Collados, Carlos Dominguez Tagle, Instituto de Astrofísica de Canarias (Spain); Jacinto Javier Vaz-Cedillo, Gran Telescopio de Canarias, S.A. (Spain)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-75

HEART: Gemini Infrared Multi-Object Spectrograph (GIRMOS) Real-time Controller using Herzberg Extensible Adaptive Real-time Toolkit (HEART)

Author(s): Lianne Mueller, Jennifer S. Dunn, Dan A. Kerley, Malcolm Smith, Darryl Gamroth, Jonathan Stocks, Kathryn J. Jackson, Glen Herriot, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-76

Commissioning of ERIS Instrument Software

Author(s): Andrea Baruffolo, INAF - Osservatorio Astronomico di Padova (Italy); Alfio T. Puglisi, Paolo Grani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Erich Wiezorrek, Max-Planck-Institut für extraterrestrische Physik (Germany); Xiaofeng Gao, UK Astronomy Technology Ctr. (United Kingdom); Bernardo Salasnich, INAF - Osservatorio Astronomico di Padova (Italy); Christophe Moins, Christian Sönke, David Barr, Pavel Shchekaturov, European Southern Observatory (Germany); Christian Rau, Max-Planck-Institut für extraterrestrische Physik (Germany); Alexander Buron, European Southern Observatory (Germany); Chris Waring, UK Astronomy Technology Ctr. (United Kingdom); Dan Popovic, European Southern Observatory (Germany); Matthew A. Kenworthy, Leiden Observatory, Leiden Univ. (Netherlands); Elsa Huby, LESIA, Observatoire de Paris, PSL Research Univ. (France); Olivier Absil, STAR Institute, Liège Univ. (Belgium)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-77

Array data acquisition system interface for online distribution of acquired data in the ASTRI Mini-Array project

Author(s): Valerio Pastore, Vito Conforti, Fulvio Gianotti, Andrea A. Bulgarelli, Nicolò Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Federico Incardona, Alessandro Costa, INAF - Osservatorio Astrofisico di Catania (Italy); Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-78

Real-time exposure control and instrument operation with the NEID spectrograph GUI

Author(s): Arvind F. Gupta, The Pennsylvania State Univ. (United States); Chad F. Bender, The Univ. of Arizona (United States); Joe P. Ninan, Tata Institute of Fundamental Research (India); Sarah E. Logsdon, Eli Golub, Jesus Higuera, Jessica Klusmeyer, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Jason T. Wright, Shubham Kanodia, Eric B. Ford, The Pennsylvania State Univ. (United States); Samuel P. Halverson, Jet Propulsion Lab. (United States); Suvrath Mahadevan, The Pennsylvania State Univ. (United States); Paul M. Robertson, Univ. of California, Irvine (United States); Gudmundur Stefansson, Princeton Univ. (United States); Arpita Roy, Space Telescope Science Institute (United States); Ryan C. Terrien, Carleton College (United States); Christian Schwab, Macquarie Univ. (Australia); Michael W. McElwain, NASA Goddard Space Flight Ctr. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-79

HEART: Herzberg Extensible Adaptive Real-time Toolkit (HEART): Internal structure: Blocks, Pipes, and composition of a new RTC

Author(s): Malcolm Smith, Jennifer S. Dunn, Dan A. Kerley, Jonathan Stocks, Darryl Gamroth, Lianne Mueller, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-80

A flexible automation solution for the Gemini North Adaptive Optics Facility

Author(s): Ricardo Cardenes, NSF's National Optical-Infrared Astronomy Research Lab. (Chile); Angelic W. Ebbers, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Tim D. Gaggstatter, Pedro Gigoux, NSF's National Optical-Infrared Astronomy Research Lab. (Chile); William N. Rambold, NSF's National Optical-Infrared Astronomy Research Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-81

CUBES and its software ecosystem: instrument simulation, control, and data processing.

Author(s): Giorgio Calderone, Roberto Cirami, Guido Cupani, Paolo Di Marcantonio, Mariagrazia Franchini, INAF - Osservatorio Astronomico di Trieste (Italy); Matteo Genoni, INAF - Osservatorio Astronomico di Brera (Italy); Mikołaj Kałuszyński, Nicolaus Copernicus Astronomical Ctr. (Poland); Marco Landoni, INAF - Osservatorio Astronomico di Brera (Italy); Florian M. Rothmaier, Zentrum für Astronomie der Univ. Heidelberg (Germany); Andrea Scaudo, INAF - Osservatorio Astronomico di Brera (Italy); Rodolfo Smiljanic, Nicolaus Copernicus Astronomical Ctr. (Poland); Ingo D. Stilz, Julian Stürmer, Zentrum für Astronomie der Univ. Heidelberg (Germany); Orlando Verducci, Lab. Nacional de Astrofísica (Brazil)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-82

Employing ELT software technologies for the upgrade of the FORS instrument at ESO VLT

Author(s): Roberto Cirami, Veronica Baldini, Giorgio Calderone, Igor Coretti, Paolo Di Marcantonio, Antonio Sulich, INAF - Osservatorio Astronomico di Trieste (Italy); Henri M. J. Boffin, Diego Del Valle, Frédéric Derie, Antonio Ramon Manescau Hernandez, Ralf Siebenmorgen, European Southern Observatory (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-83

The 4MOST facility control software on its way to a fully fledged subsystem

Author(s): Florian M. Rothmaier, Alexander Pramskiy, Ingo D. Stilz, Landessternwarte Heidelberg (Germany); Roland Winkler, Thomas Hahn, Genoveva Micheva, Leibniz-Institut für Astrophysik Potsdam (Germany); Andreas Quirrenbach, Holger G. Mandel, Landessternwarte Heidelberg (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-84

the development of the new digital back-end system (OCTAVE-DAS) and correlator system for VERA, JVN and EAVN

Author(s): Tomoaki Oyama, National Astronomical Observatory of Japan (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-85

Status of the Automated Data Extraction, Processing, and Tracking System (ADEPTS) for CHARIS/SCExAO

Author(s): Taylor Tobin, Jonathan Pal, Jeffrey Chilcote, Univ. of Notre Dame (United States); Timothy Brandt, Univ. of California, Santa Barbara (United States); Thayne Currie, NASA Ames Research Ctr. (United States), Subaru Telescope, NOAJ (United States), Eureka Scientific (United States); Tyler Groff, NASA Goddard Space Flight Ctr. (United States); Julien Lozi, Subaru Telescope, NAOJ (United States); Olivier Guyon, Subaru Telescope, NOAJ (United States), Astrobiology Ctr., National Institutes of Natural Sciences (Japan), Steward Observatory, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS5: POSTERS: OBSERVATORY/TELESCOPE CONTROL

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-86

LVMECP: SDSS-V Local Volume Mapper Enclosure control package

Author(s): Mingyeong Yang, Kyung Hee Univ. (Korea, Republic of); Felipe Besser, Las Campanas Observatory (Chile); José Sánchez-Gallego, Univ. of Washington (United States); Gyoik Kim, Changgon Kim, Hojae Ahn, Tae-Geun Ji, Kyung Hee Univ. (Korea, Republic of); Nicholas P. Konidaris, Guillermo A. Blanc, Carnegie Institution for Science (United States); Erika Cook, Texas A&M Univ. (United States); Cynthia S. Froning, The Univ. of Texas at Austin (United States); Solange Ramirez, Carnegie Institution for Science (United States); Niv Drory, The Univ. of Texas at Austin (United States); Juna A. Kollmeier, Carnegie Institution for Science (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-87

LVMAGP: SDSS-V local volume mapper acquisition and guiding package

Author(s): Hojae Ahn, Kyung Hee Univ. (Korea, Republic of); Florian Briegel, Max-Planck-Institut für Astronomie (Germany); Mingyu Jeon, Kyung Hee Univ. (Korea, Republic of); Tom M. Herbst, Max-Planck-Institut für Astronomie (Germany); Sumin Lee, Inhwan Jung, Changgon Kim, Jimin Han, Kyung Hee Univ. (Korea, Republic of); Geon Hee Kim, Hanbat National Univ. (Korea, Republic of); Wolfgang Gaessler, Markus Kuhlberg, Max-Planck-Institut für Astronomie (Germany); Tae-Geun Ji, Kyung Hee Univ. (Korea, Republic of); Hyun Chul Park, Konkuk Univ. (Korea, Republic of); Soojong Pak, Kyung Hee Univ. (Korea, Republic of); Nicholas P. Konidaris, Carnegie Institution for Science (United States); Niv Drory, The Univ. of Texas at Austin (United States); José Sanchez-Gallego, Univ. of Washington (United States); Cynthia S. Froning, The Univ. of Texas at Austin (United States); Solange Ramirez, Juna A. Kollmeier, Carnegie Institution for Science (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-88

INO340 telescope interlock, safety and alarm management systems

Author(s): Tayebeh Shokatpour, Armin Gholami, Asghar Jafarzadeh, Reza Ravanmehr, Habib G. Khosroshahi, Iranian National Observatory (Iran, Islamic Republic of)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-89

HARMONI at ELT: an evolvable software architecture for the instrument pointing model

Author(s): Gonzalo José Carracedo Carballal, Javier Piqueras López, Ctr. de Astrobiología (CSIC-INTA) (Spain); Fraser Clarke, Univ. of Oxford (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-90

The online observation quality system software architecture for the ASTRI Mini-Array project

Author(s): Nicolò Parmiggiani, Andrea A. Bulgarelli, Leonardo Baroncelli, Antonio Addis, Valentina Fioretti, Ambra Di Piano, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Milvia Capalbi, Osvaldo Catalano, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Vito Conforti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Michele Fiori, INAF - Osservatorio Astronomico di Padova (Italy); Fulvio Gianotti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Simone Iovenitti, INAF - Osservatorio Astronomico di Brera (Italy); Saverio Lombardi, Fabrizio Lucarelli, INAF - Osservatorio Astronomico di Roma (Italy); Maria Concetta Maccarone, Teresa Mineo, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Valerio Pastore, Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Pierluca Sangiorgi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Massimo Trifoglio, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Luca Zampieri, INAF - Osservatorio Astronomico di Padova (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-91

The telescope control system for the ASTRI mini-array of imaging atmospheric Cherenkov telescopes

Author(s): Federico Russo, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy); Pietro Giuseppe Bruno, INAF - Osservatorio Astrofisico di Catania (Italy); Andrea A. Bulgarelli, Fulvio Gianotti, Nicoló Parmiggiani, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Milvia Capalbi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Vito Conforti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Mattia Corpora, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Alessandro Costa, INAF - Osservatorio Astrofisico di Catania (Italy); Michele Fiori, INAF - Osservatorio Astronomico di Padova (Italy); Stefano Germani, Univ. degli Studi di Perugia (Italy); Alessandro Grillo, INAF - Osservatorio Astrofisico di Catania (Italy); Pierluca Sangiorgi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Joseph H. Schwarz, INAF - Osservatorio Astronomico di Brera (Italy); Salvatore Scuderi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Luca Zampieri, INAF - Osservatorio Astronomico di Padova (Italy); Federico Incardona, Kevin Munari, INAF - Osservatorio Astrofisico di Catania (Italy); Valerio Pastore, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-92

CCAT-prime: Observatory control software for FYST

Author(s): Reinhold Schaaf, Argelander-Institut für Astronomie (Germany); Mike R. Nolta, Univ. of Toronto (Canada); Ronan Higgins, Univ. zu Köln (Germany); Thomas Nikola, Cornell Ctr for Astrophysics & Planetary Science, Cornell Univ. (United States); Ralf A. Timmermann, Argelander-Institut für Astronomie (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-95

PyTelPoint, an open-source package for modeling and assessing telescope pointing performance

Author(s): Timothy E. Pickering, MMT Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS7: POSTERS: SOFTWARE ENGINEERING

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-97

SciDevOps: Accelerating scientific software delivery under a continuous integration model

Author(s): Alvaro Aguirre, Víctor González, ALMA (Chile); Lidia Dominguez, European Southern Observatory (Germany); Bill Dent, European Southern Observatory (Chile)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS8: POSTERS: SOFTWARE QUALITY AND TESTING

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-98

An exposure time calculator for the Maunakea Spectroscopic Explorer

Author(s): Tae-Geun Ji, School of Space Research, Kyung Hee Univ. (Korea, Republic of); Taeeun Kim, Kyung Hee Univ. (Korea, Republic of); Changgon Kim, Hojae Ahn, Mingyeong Yang, Soojong Pak, School of Space Research, Kyung Hee Univ. (Korea, Republic of); Sungwook E. Hong, Korea Astronomy and Space Science Institute (Korea, Republic of), Astronomy Campus, Univ. of Science & Technology (Korea, Republic of); Jennifer Sobeck, Canada-France-Hawaii Telescope Corp. (United States); Kei Szeto, Canada-France-Hawaii Telescope Corp. (United States), National Research Council Canada (Canada); Jennifer L. Marshall, Texas A&M Univ. (United States); Christian Surace, Lab. d'Astrophysique de Marseille, Aix Marseille Univ. (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-99

Testing strategy for CSP.LMC in SKA

Author(s): Gianluca Marotta, Elisabetta Giani, INAF - Osservatorio Astrofisico di Arcetri (Italy); Ivana Novak, Alexander Söderqvist, Cosylab Switzerland GmbH (Switzerland); Carlo Baffa, INAF - Osservatorio Astrofisico di Arcetri (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS9: POSTERS: UI/WEB TECHNOLOGIES

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-102

Designing the MICADO observation preparation software for a distributed architecture

Author(s): Michael Wegner, Jörg Schlichter, Valentin Ziel, Univ.-Sternwarte München (Germany)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12189-103

Rapid and painless development of python INDI drivers to gorgeous and responsive web GUIs

Author(s): Scott Swindell, The Univ. of Arizona (United States); Dan Avner, IPAC, Caltech (United States); Timothy E. Pickering, Chris Johnson, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS10: POSTERS

19 July 2022 • 18:00 - 20:00 EDT

12189-107

2dFdr Pipeline As a Web Service (PAWS): On Demand Reduction of Archival 2dF-AAOmega Observations

Author(s): Brent Miszalski, Simon J. O'Toole, Kate Sheng, James Tocknell, AAO Macquarie University (Australia), Astralis Instrumentation Consortium (Australia)

19 July 2022 • 18:00 - 20:00 EDT

12189-108

Data Central's Data Aggregation Service

Author(s): Brent Miszalski, Simon J. O'Toole, James Tocknell, AAO Macquarie University (Australia), Astralis Instrumentation Consortium (Australia); Lachlan Marnoch, School of Mathematical and Physical Sciences, Macquarie University (Australia); Stuart D. Ryder, School of Mathematical and Physical Sciences (Australia)

19 July 2022 • 18:00 - 20:00 EDT

REMOTE PRESENTATIONS

12189-104
Data processing pipeline for photo plates digital archives with deep neural networks

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Poster

12189-105
Image quality evaluation and fast masking with deep neural networks

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Oral

12189-106 A general purpose image restoration method with deep neural network and active learning

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Poster

12189-69 Scientific camera driver and application software based on ASCOM

Contact author(s): Zhang Yuheng, National Astronomical Observatories, China

Poster

12189-70 Design of a remote control system for a Camera System Based on EPICS and web technology

Contact author(s): Wang Jian, Univ. of Science and Technology of China, China

Poster

12189-93 ZeroMQ-based control system for optical telescope

Contact author(s): Sun Jian, National Astronomical Observatories, China

Poster

CONFERENCE 12190

Millimeter, Submillimeter, and Far-Infrared Detectors and Instrumentation for Astronomy XI

19 - 22 July 2022 | Room 524 a

Conference Chairs: **Jonas Zmuidzinas,** California Institute of Technology (United States); **Jian-Rong Gao,** SRON Netherlands Institute for Space Research (Netherlands), Delft Univ. of Technology {Netherlands)

Program Committee: **Masashi Hazumi,** High Energy Accelerator Research Organization, KEK (Japan); **Jason E. Austermann,** National Institute of Standards and Technology (United States); **Jochem J. A. Baselmans,** SRON Netherlands Institute for Space Research (Netherlands); **Christopher E. Groppi,** Arizona State Univ. (United States); **Karl Schuster,** IRAM-Domaine Univ. de Grenoble (France); **Erik Shirokoff,** The Univ. of Chicago (United States); **Gordon J. Stacey,** Cornell Univ. (United States); **Johannes G. Staguhn,** NASA Goddard Space Flight Ctr. (United States), Johns Hopkins Univ. {United States); **Neil A. Trappe,** National Univ. of Ireland, Maynooth (Ireland); **Carole E. Tucker,** Cardiff Univ. (United Kingdom); **Yoshinori Uzawa,** National Astronomical Observatory of Japan (Japan); **Martina C. Wiedner,** Observatoire de Paris (France)

SESSION 1: CMB INSTRUMENTS I

19 July 2022 • 10:30 - 11:50 EDT | Room 524 a

12190-1

Assessing potential impacts of radio frequency interference on the CMB-S4 cosmic microwave background survey

Author(s): Darcy Barron, Ian Birdwell, The Univ. of New Mexico (United States); John Carlstrom, The Univ. of Chicago (United States); Jacques Delabrouille, Astroparticule et Cosmologie (France); Sam T. Guns, Anna Ho, Univ. of California, Berkeley (United States); John M. Kovac, Harvard Univ. (United States); Scott N. Paine, Harvard-Smithsonian Ctr. for Astrophysics (United States); Nathan Whitehorn, Michigan State Univ. (United States)

19 July 2022 • 10:30 - 10:50 EDT | Room 524 a

12190-2

SPT-3G+: High-Frequency CMB Measurements and Microwave Spectroscopy with Kinetic Inductance Detectors on the South Pole Telescope

Author(s): Adam J. Anderson, Fermi National Accelerator Lab. (United States)

19 July 2022 • 10:50 - 11:10 EDT | Room 524 a

12190-3

The Simons Observatory: Development and validation of the first Small Aperture Telescope, SAT-MF1

Author(s): Nicholas B. Galitzki, Univ. of California, San Diego (United States)

19 July 2022 • 11:10 - 11:30 EDT | Room 524 a

12190-4

CCAT-prime: Design and testing of the Mod-Cam receiver and 280 GHz MKID instrument module

Author(s): Eve M. Vavagiakis, Cody J. Duell, Cornell Univ. (United States)

19 July 2022 • 11:30 - 11:50 EDT | Room 524 a

Lunch/Exhibition Break 11:50 - 13:40

SESSION 2: IMAGERS AND POLARIMETERS I

19 July 2022 • 13:40 - 15:00 EDT | Room 524 a

12190-5

The TolTEC Camera: Calibration and On-site Performance at the Large Millimeter Telescope

Author(s): Nat S. DeNigris, Univ. of Massachusetts Amherst (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Jason E. Austermann, National Institute of Standards and Technology (United States); Itziar Aretxaga, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Sean A. Bryan, Arizona State Univ. (United States); Reid Contente, Univ. of Massachusetts Amherst (United States), Universities Space Research Association (United States); Daniel Ferrusca, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Laura M. Fissel, Queen's Univ. (Canada); Jiansong Gao, National Institute of Standards and Technology (United States); Joseph E. Golec, The Univ. of Chicago (United States); Arturo Gómez-Ruiz, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Sam B. Gordon, Arizona State Univ. (United States); Robert Gutermuth, Univ. of Massachusetts Amherst (United States); Gene C. Hilton, National Institute of Standards and Technology (United States); Mohsen Hosseini, Univ. of Massachusetts Amherst (United States); Johannes Hubmayr, National Institute of Standards and Technology (United States); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Stephen W. Kuczarski, Univ. of Massachusetts Amherst (United States); Dennis Lee, Northwestern Univ. (United States); Emily L. Lunde, Arizona State Univ. (United States); Zhiyuan Ma, Emily S. Martsen, Univ. of Massachusetts Amherst (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Michael McCrackan, Univ. of Massachusetts Amherst (United States); Jeffrey J. McMahon, The Univ. of Chicago (United States); Giles A. Novak, Ctr. for Interdisciplinary Exploration and Research in Astrophysics, Northwestern Univ. (United States); Giampaolo Pisano, Sapienza Univ. di Roma (Italy); Alexandra Pope, Univ. of Massachusetts Amherst (United States); Iván Rodríguez Montoya, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Caleigh Ryan, Univ. of Massachusetts Amherst (United States); David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); F. Peter Schloerb, Univ. of Massachusetts Amherst (United States); Sara M. Simon, Fermi National Accelerator Lab. (United States); Adrian K. Sinclair, Arizona State Univ. (United States), The Univ. of British Colombia (Canada); Jack Slater, William & Mary (United States); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Carole E. Tucker, Cardiff Univ. (United Kingdom); Eric Van Camp, Northwestern Univ. (United States), The Univ. of Chicago (United States); Samantha Walker, Univ. of Colorado Boulder (United States); Grant W. Wilson, Univ. of Massachusetts Amherst (United States); Eric Weeks, Arizona State Univ. (United States); Min S. Yun, Univ. of Massachusetts Amherst (United States)

19 July 2022 • 13:40 - 14:00 EDT | Room 524 a

12190-6

The Mexico UK sub-mm camera for astronomy (MUSCAT) on-sky commissioning: Instrument overview and performance

Author(s): Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Peter S. Barry, Cardiff Univ. (United Kingdom), Argonne National Lab. (United States); Thomas L. R. Brien, Cardiff Univ. (United Kingdom); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Chris Dodd, Chris J. Dunscombe, Stephen A. Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca, José Miguel Jáuregui-García, Víctor Goméz-Rivera, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter C. Hargrave, Amber L. Hornsby, Julian S. House, Cardiff Univ. (United Kingdom); Philip D. Mauskopf, Arizona State Univ. (United States); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy), Cardiff Univ. (United Kingdom); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez-Fajardo, José Luis Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Sam Rowe, Cardiff Univ. (United

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19 July 2022 • 14:00 - 14:20 EDT | Room 524 a

12190-7

CCAT-prime: The 850GHz camera for Prime-Cam on FYST

Author(s): Scott C. Chapman, Dalhousie Univ. (Canada); Adrian K. Sinclair, The Univ. of British Columbia (Canada); Anthony I. Huber, Univ. of Victoria (Canada); Mike Niemack, Steve K. Choi, Eve M. Vavagiakis, Cody J. Duell, Cornell Univ. (United States); Michel Fich, Univ. of Waterloo (Canada); Gordon J. Stacey, Cornell Univ. (United States); Jordan D. Wheeler, Jason E. Austermann, National Institute of Standards and Technology (United States); James Burgoyne, The Univ. of British Columbia (Canada)

19 July 2022 • 14:20 - 14:40 EDT | Room 524 a

12190-8

Broadband kinetic inductance detectors for far-IR observations

Author(s): Jordan D. Wheeler, Jason E. Austermann, National Institute of Standards and Technology (United States); Jiansong Gao, Univ. of Colorado Boulder (United States), National Institute of Standards and Technology (United States); Michael R. Vissers, James A. Beall, Douglas Bennett, Johnathon D. Gard, National Institute of Standards and Technology (United States); Jozsef Imrek, Univ. of Colorado Boulder (United States), National Institute of Standards and Technology (United States); Edwin J. Heilweil, National Institute of Standards and Technology (United States)

19 July 2022 • 14:40 - 15:00 EDT | Room 524 a

Coffee Break 15:00 - 15:30

SESSION 3: NEW INSTRUMENTS AND CONCEPTS I

19 July 2022 • 15:30 - 16:50 EDT | Room 524 a

12190-9

The Atacama Large Aperture Submillimetre Telescope: key science drivers

Author(s): Joanna Ramasawmy, Pamela D. Klaassen, UK Astronomy Technology Ctr. (United Kingdom); Claudia Cicone, Univ. of Oslo (Norway); Tony K. Mroczkowski, European Southern Observatory (Germany); Chian-Chou Chen, Institute of Astronomy and Astrophysics, Academia Sinica (ASIAA) (Taiwan); Evanthia Hatziminaoglou, European Southern Observatory (Germany); Doug Johnstone, National Research Council of Canada (Canada)

19 July 2022 • 15:30 - 15:50 EDT | Room 524 a

12190-10

The Terahertz Intensity Mapper: A balloon-borne imaging spectrometer for galaxy evolution

Author(s): Daniel P. Marrone, The Univ. of Arizona (United States); James E. Aguirre, Justin S. Bracks, Univ. of Pennsylvania (United States); Charles M. Bradford, Jet Propulsion Lab. (United States), Caltech (United States); Bruce Bumble, Jet Propulsion Lab. (United States); Anthony J. Corso, Univ. of Pennsylvania (United States); Nick Emerson, The Univ. of Arizona (United States); Jeffrey P. Filippini, Jianyang Fu, Univ. of Illinois (United States); Victor Gasho, The Univ. of Arizona (United States); Christopher E. Groppi, Arizona State Univ. (United States); Steven Hailey-Dunsheath, Caltech (United States); Jonathan R. Hoh, Arizona State Univ. (United States); Reinier M. J. Janssen, Jet Propulsion Lab. (United States), Caltech (United States); Ryan P. Keenan, The Univ. of Arizona (United States); Lun-Jun Liu, Caltech (United States); Ian N. Lowe, The Univ. of Arizona (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Rong Nie, Univ. of Illinois (United States); Joseph G. Redford, Caltech (United States); Isaac L. Trumper, Intuitive Optical Design Lab., LLC (United States); Joaquin D. Vieira, Univ. of Illinois (United States)

19 July 2022 • 15:50 - 16:10 EDT | Room 524 a

12190-11

EXCLAIM: The EXperiment for Cryogenic Large-Aperture Intensity Mapping

Author(s): Thomas M. Essinger-Hileman, NASA Goddard Space Flight Ctr. (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Christopher J. Anderson, Alyssa Barlis, Emily M. Barrentine, NASA Goddard Space Flight Ctr. (United States); Jeffrey W. Beeman, Lawrence Berkeley National Lab. (United States); Nicholas G. Bellis, NASA Goddard Space Flight Ctr. (United States); Alberto D. Bolatto, Univ. of Maryland, College Park (United States); Patrick Breysse, Canadian Institute for Theoretical Astrophysics (Canada); Berhanu Bulcha, Giuseppe Cataldo, NASA Goddard Space Flight Ctr. (United States); Lee Roger Chevres Fernandez, Caltech (United States); Chullhee Cho, NASA Goddard Space Flight Ctr. (United States); Jake A. Connors, National Institute of Standards and Technology (United States); Negar Ehsan, Jason Glenn, NASA Goddard Space Flight Ctr. (United States); Joseph E. Golec, The Univ. of Chicago (United States); James Hays-Wehle, Larry A. Hess, Amir E. Jahromi, Trevian Jenkins, Mark Kimball, Alan J. Kogut, Luke N. Lowe, NASA Goddard Space Flight Ctr. (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Jeffrey J. McMahon, The Univ. of Chicago (United States); Mona Mirzaei, NASA Goddard Space Flight Ctr. (United States); Samuel H. Moseley, Quantum Circuit, Inc. (United States); Jonas W. Mugge-Durum, Omid Noroozian, NASA Goddard Space Flight Ctr. (United States); Trevor M. Oxholm, Univ. of Wisconsin-Madison (United States); Tatsat Parekh, NASA Goddard Space Flight Ctr. (United States); Ue-Li Pen, Canadian Institute for Theoretical Astrophysics (Canada); Anthony R. Pullen, New York Univ. (United States); Maryam Rahmani, Mathias Ramirez, Florian Roselli, Konrad Shire, NASA Goddard Space Flight Ctr. (United States); Gage L. Siebert, Univ. of Wisconsin-Madison (United States); Adrian K. Sinclair, Arizona State Univ. (United States); Rachel Somerville, Rutgers Univ. (United States); Ryan C. Stephenson, Arizona State Univ. (United States); Thomas R. Stevenson, Eric R. Switzer, NASA Goddard Space Flight Ctr. (United States); Peter T. Timbie, Univ. of Wisconsin-Madison (United States); Jared Termini, Justin Trenkamp, NASA Goddard Space Flight Ctr. (United States); Carole E. Tucker, Cardiff Univ. (United Kingdom); Elijah Visbal, The Univ. of Toledo (United States); Carolyn Volpert, Univ. of Maryland, College Park (United States); Joseph Watson, Edward Wollack, NASA Goddard Space Flight Ctr. (United States); Shengqi Yang, New York Univ. (United States); L. Y. Aaron Yung, NASA Goddard Space Flight Ctr. (United States)

19 July 2022 • 16:10 - 16:30 EDT | Room 524 a

12190-12

BISOU: a balloon project phase 0 study for spectral observations of the early Universe.

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19 July 2022 • 16:30 - 16:50 EDT | Room 524 a

Coffee Break 10:00 - 10:30

SESSION 4: CMB INSTRUMENTS II

20 July 2022 • 10:30 - 11:50 EDT | Room 524 a

12190-13

Cosmology Large Angular Scale Surveyor (CLASS): 5-year survey review

Author(s): Ivan L. Padilla, Johns Hopkins Univ. (United States)

20 July 2022 • 10:30 - 10:50 EDT | Room 524 a

12190-14

The Simons Observatory: Integration and Testing of the Large Aperture Telescope

Author(s): Kathleen Harrington, The Univ. of Chicago (United States)

20 July 2022 • 10:50 - 11:10 EDT | Room 524 a

12190-15

BICEP ARRAY 150 GHz design development and progress

Author(s): Silvia Zhang, Caltech (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Zeeshan Ahmed, Kavli Institute for Particle Astrophysics & Cosmology, SLAC National Accelerator Lab. (United States); Mandana Amiri, The Univ. of British Columbia (Canada); Denis Barkats, Harvard-Smithsonian Ctr. for Astrophysics (United States); Ritoban Basu Thakur, Caltech (United States); Colin A. Bischoff, Univ. of Cincinnati (United States); Dominic Beck, Stanford Univ. (United States); James J. Bock, Caltech (United States); Victor Buza, Harvard-Smithsonian Ctr. for Astrophysics (United States); James R. Cheshire, Univ. of Minnesota, Twin Cities (United States); Jake A. Connors, National Institute of Standards and Technology (United States); James Cornelison, Harvard-Smithsonian Ctr. for Astrophysics (United States); Michael Crumine, Minnesota Institute for Astrophysics, Univ. of Minnesota (United States); Ari J. Cukierman, Stanford Univ. (United States); Edward V. 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20 July 2022 • 11:10 - 11:30 EDT | Room 524 a

12190-16

Conceptual Design of the Modular Detector and Readout System for the CMB-S4 survey experiment

Author(s): Zeeshan Ahmed, SLAC National Accelerator Lab. (United States)

20 July 2022 • 11:30 - 11:50 EDT | Room 524 a

Lunch/Exhibition Break 11:50 - 13:40

SESSION 5: OPTICS AND COMPONENTS I

20 July 2022 • 13:40 - 15:00 EDT | Room 524 a

12190-17

Optical design of the CMB-S4 large aperture telescopes and camera optics

Author(s): Patricio A. Gallardo, Kavli Institute for Cosmological Physics, The Univ. of Chicago (United States); Patricio A. Gallardo, CMB-S4 collaboration (United States)

20 July 2022 • 13:40 - 14:00 EDT | Room 524 a

12190-18

A metamaterial refractive telescope for sub-THz frequencies.

Author(s): Giorgio Savini, Univ. College London (United Kingdom); Peter C. Hargrave, Peter A. R. Ade, Carole E. Tucker, Cardiff Univ. (United Kingdom); Alexey Shitvov, Univ. College London (United Kingdom); Ian K. Walker, Cardiff Univ. (United Kingdom); Giampaolo Pisano, Sapienza Univ. di Roma (Italy); Jin Zhang, Anglia Ruskin Univ. (United Kingdom); Janet E. Charlton, JCR Systems Ltd. (United Kingdom)

20 July 2022 • 14:00 - 14:20 EDT | Room 524 a

12190-19

Broadband coated lens solutions for FIR-mm-wave instruments

Author(s): Peter C. Hargrave, Cardiff Univ. (United Kingdom); Giorgio Savini, Alexey Shitvov, Univ. College London (United Kingdom); Jin Zhang, Anglia Ruskin Univ. (United Kingdom); Jon E. Gudmundsson, Stockholm Univ. (Sweden); Peter A. R. Ade, Carole E. Tucker, Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Berend Winter, Univ. College London (United Kingdom); Giampaolo Pisano, Sapienza Univ. di Roma (Italy); Maarten van der Vorst, European Space Research and Technology Ctr., European Space Agency (Netherlands)

20 July 2022 • 14:20 - 14:40 EDT | Room 524 a

12190-20

The Simons Observatory: Characterization of absorbing Neutral Density Filters

Author(s): Shreya Sutariya, Kathleen Harrington, Thomas Alford, Carlos E. Sierra, Jeffrey J. McMahon, The Univ. of Chicago (United States)

20 July 2022 • 14:40 - 15:00 EDT | Room 524 a

Coffee Break 15:00 - 15:30

SESSION 6: COHERENT RECEIVER TECHNOLOGY I

20 July 2022 • 15:30 - 16:50 EDT | Room 524 a

12190-21

Millimeter-wave superconducting parametric amplifiers based on kinetic inductance

Author(s): Peter K. Day, Jet Propulsion Lab. (United States); Nikita Klimovich, Shibo Shu, Caltech (United States); ByeongHo Eom, Henry G. LeDuc, Jet Propulsion Lab. (United States)

20 July 2022 • 15:30 - 15:50 EDT | Room 524 a

12190-22

GUSTO Payload Design and Performance

Author(s): Christopher K. Walker, Craig A. Kulesa, Abram Young, The Univ. of Arizona (United States); Jian-Rong Gao, SRON Netherlands Institute for Space Research (Netherlands); Qing Hu, Massachusetts Institute of Technology (United States); Paul F. Goldsmith, Jet Propulsion Lab. (United States); Gary J, Melnick, Antony A. Stark, Volker Tolls, Harvard-Smithsonian Ctr. for Astrophysics (United States); Youngmin Seo, Jet Propulsion Lab. (United States); William L. Peters, The Univ. of Arizona (United States); Jeffrey L. Hesler, Virginia Diodes, Inc. (United States); Jose R. Silva, Behnam Mirzaei, SRON Netherlands Institute for Space Research (Netherlands); Delbert Spangler, The Univ. of Arizona (United States)

20 July 2022 • 15:50 - 16:10 EDT | Room 524 a

12190-23

5.3 THz MgB2 hot electron bolometer mixer operated at 20 K

Author(s): Jian-Rong Gao, SRON Netherlands Institute for Space Research (Netherlands), Technische Univ. Delft (Netherlands); Yuner Gan, SRON Netherlands Institute for Space Research (Netherlands); Behnam Mirzaei, Technische Univ. Delft (Netherlands); Jose R.G. Silva, SRON Netherlands Institute for Space Research (Netherlands), Univ. of Groningen (Netherlands); S Cherednichenko, Chalmers Univ. of Technology (Sweden)

20 July 2022 • 16:10 - 16:30 EDT | Room 524 a

12190-24

Terahertz quantum-cascade VECSELs local oscillators for heterodyne receivers

Author(s): Christopher A. Curwen, Jonathan H. Kawamura, Darren J. Hayton, Jet Propulsion Lab. (United States); Yu Wu, Univ. of California, Los Angeles (United States); Sadhvikas J. Addamane, John L. Reno, Sandia National Labs. (United States); Benjamin S. Williams, Univ. of California, Los Angeles (United States); Boris S. Karasik, Jet Propulsion Lab. (United States)

20 July 2022 • 16:30 - 16:50 EDT | Room 524 a

Coffee Break 10:00 - 10:30

SESSION 7: SPECTROMETERS I

21 July 2022 • 10:30 - 11:50 EDT | Room 524 a

12190-25

First demonstration of the SuperSpec on-chip spectrometer at the Large Millimeter Telescope

Author(s): Kirit S. Karkare, The Univ. of Chicago (United States); Pete S. Barry, Argonne National Lab. (United States); Charles M. Bradford, Jet Propulsion Lab. (United States); Scott C. Chapman, The Univ. of British Columbia (Canada); Jason Glenn, NASA Goddard Space Flight Ctr. (United States); Steven Hailey-Dunsheath, Caltech (United States); Reinier M. J. Janssen, Jet Propulsion Lab. (United States); Elijah Kane, Caltech (United States); Henry G. LeDuc, Jet Propulsion Lab. (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Ryan McGeehan, Erik Shirokoff, The Univ. of Chicago (United States); Jordan D. Wheeler, National Institute of Standards and Technology (United States); Jonas Zmuidzinas, Caltech (United States)

21 July 2022 • 10:30 - 10:50 EDT | Room 524 a

12190-26

CCAT-prime: The Epoch of Reionization Spectrometer for Prime-Cam on FYST

Author(s): Thomas Nikola, Steve K. Choi, Cody J. Duell, Zachary B. Huber, Yaqiong Li, Michael D. Niemack, Kayla M. Rossi, Rodrigo Freundt Ruedo, Gordon J. Stacey, Eve M. Vavagiakis, Bugao Zou, Cornell Univ. (United States); Nicholas F. Cothard, NASA Goddard Space Flight Ctr. (United States), Cornell Univ. (United States); Jason E. Austermann, Jordan D. Wheeler, National Institute of Standards and Technology (United States)

21 July 2022 • 10:50 - 11:10 EDT | Room 524 a

12190-27

DESHIMA 2.0: Laboratory demonstration of the ultra-wideband integrated superconducting spectrometer

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21 July 2022 • 11:10 - 11:30 EDT | Room 524 a

12190-28

On-chip spectroscopic solutions for polarimetric bolometers arrays in submillimeter astronomy

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21 July 2022 • 11:30 - 11:50 EDT | Room 524 a

Lunch/Exhibition Break 11:50 - 13:40

SESSION 8: DETECTORS I

21 July 2022 • 13:40 - 15:20 EDT | Room 524 a

12190-29

Development of an Architecture for Multi-Band Mm/Submm Imaging and Polarimetry [using Hierarchical, Phased-Array Antennas, Photolithographic Bandpass Filters, Lumped-Element KIDs, and Low-Loss, Low-Noise Hydrogenated Amorphous Silicon]

Author(s): Fabien Defrance, Shibo Shu, Caltech (United States); Andrew D. Beyer, Jet Propulsion Lab. (United States); Jenny Wan, Jack Sayers, Sunil R. Golwala, Caltech (United States)

21 July 2022 • 13:40 - 14:00 EDT | Room 524 a

12190-30

Development of the Low Frequency Telescope Focal Plane Detector Arrays for LiteBIRD

Author(s): Benjamin Westbrook, Univ. of California, Berkeley (United States)

21 July 2022 • 14:00 - 14:20 EDT | Room 524 a

12190-31

A Route to Large-Scale Ultra-Low Noise Detector Arrays for Far-Infrared Space Applications

Author(s): David J. Goldie, Stafford Withington, Christopher N. Thomas, Univ. of Cambridge (United Kingdom); Peter A. R. Ade, Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom)

21 July 2022 • 14:20 - 14:40 EDT | Room 524 a

12190-32

Ultra-sensitive super-THz microwave kinetic inductance detectors for future space-based observatories

Author(s): Jochem J. A. Baselmans, SRON Netherlands Institute for Space Research (Netherlands); Federica Facchin, Juan Bueno, Nuria Llombart, David J. Thoen, Technische Univ. Delft (Netherlands); Vignesh Murugesan, Steven de Rooij, Pieter J. de Visser, SRON Netherlands Institute for Space Research (Netherlands)

21 July 2022 • 14:40 - 15:00 EDT | Room 524 a

12190-33

Towards 100% array yield: understanding and fixing the frequency scatter of large kinetic inductance detector arrays

Author(s): Eduard F. C. Driessen, Shibo Shu, Institut de Radioastronomie Millimétrique, Univ. de Grenoble (France); Johannes Goupy, Institut de Radioastronomie Millimétrique, Univ. Grenoble-Alpes (France), Institut Néel, CNRS (France); Alessandro Monfardini, Martino Calvo, Institut Néel, CNRS (France), Univ. Grenoble-Alpes (France); Samuel Leclercq, Institut de Radioastronomie Millimétrique (France); Andrea Catalano, Lab. de Physique Subatomique et Cosmologie, CNRS (France), Univ. Grenoble-Alpes (France)

21 July 2022 • 15:00 - 15:20 EDT | Room 524 a

Coffee Break 15:20 - 15:50

Coffee Break 15:00 - 15:30

SESSION 9: COHERENT RECEIVER TECHNOLOGY II

21 July 2022 • 15:50 - 17:10 EDT | Room 524 a

12190-34

ALPACA: a fully cryogenic L-band phased array feed for radio astronomy

Author(s): Amit Vishwas, Cornell Ctr. for Astrophysics and Planetary Sciences, Cornell Univ. (United States); Stephen C. Parshley, George E. Gull, German Cortes-Medellin, Kayla M. Rossi, Terry L. Herter, Donald B. Campbell, Cornell Univ. (United States); Mitchell C. Burnett, Spencer M. Ammermon, Nathaniel Ashcraft, Erich Nygaard, Karl F. Warnick, Brian D. Jeffs, Brigham Young Univ. (United States); Hamdi Mani, Christopher E. Groppi, Arizona State Univ. (United States); Phil Perillat, Arecibo Observatory (United States)

21 July 2022 • 15:50 - 16:10 EDT | Room 524 a

12190-35

ALMA Band-1 Receiver — First Light, Performance, and Road to Completion

Author(s): Yau De Huang, Chau-Ching Chiong, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan)

21 July 2022 • 16:10 - 16:30 EDT | Room 524 a

12190-36

Design and analysis of the NRC Q-Band receiver for the ngVLA band-5

Author(s): Sara Salem Hesari, NRC-Herzberg Astronomy & Astrophysics (Canada); Doug W. Henke, NRC Herzberg Astronomy and Astrophysics Research Centre (Canada); Vladimir Reshetov, Bruce Veidt, Alireza Seyfollahi, Nianhua Jiang, Lewis B. G. Knee, NRC-Herzberg Astronomy & Astrophysics (Canada)

21 July 2022 • 16:30 - 16:50 EDT | Room 524 a

12190-37

Extended Q-band (eQ) receiver for Nobeyama 45-m telescope

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21 July 2022 • 16:50 - 17:10 EDT | Room 524 a

SESSION 10: NEW INSTRUMENTS AND CONCEPTS II

22 July 2022 • 09:00 - 10:20 EDT | Room 524 a

12190-38

Taurus: a balloon-borne polarimeter for cosmic reionization and galactic dust

Author(s): Steven J. Benton, Princeton Univ. (United States)

22 July 2022 • 09:00 - 09:20 EDT | Room 524 a

12190-39

TIME, the Tomographic Ionized Carbon Intensity Mapping Experiment: an update on design, characterization, and data from the 2022 commissioning observations

Author(s): Abigail T. Crites, Cornell Univ. (United States), Caltech (United States)

22 July 2022 • 09:20 - 09:40 EDT | Room 524 a

12190-40

The Mexico UK Sub-mm Camera for Astronomy (MUSCAT) on-sky commissioning: detector readout and tuning system performance.

Author(s): Sam Rowe, Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Peter S. Barry, Cardiff Univ. (United Kingdom), Argonne National Lab. (United States); Thomas L. R. Brien, Cardiff Univ. (United Kingdom); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Chris Dodd, Chris J. Dunscombe, Stephen A. Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca, Víctor Goméz-Rivera, José Miguel Jáuregui-García, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter C. Hargrave, Amber L. Hornsby, Julian S. House, Cardiff Univ. (United Kingdom); Philip D. Mauskopf, Arizona State Univ. (United States), Cardiff Univ. (United Kingdom); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy), Cardiff Univ. (United Kingdom); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez-Fajardo, José Luis Rebollar, David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Matthew W. L. Smith, Cardiff Univ. (United Kingdom); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Marcial Tapia, Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Carole E. Tucker, Cardiff Univ. (United Kingdom); Miguel Veláquez de la Rosa Becerra, Salvador Ventura-González, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Ian K. Walker, Cardiff Univ. (United Kingdom)

22 July 2022 • 09:40 - 10:00 EDT | Room 524 a

12190-41

Hybrid TiN-Al MKIDs

Author(s): Michael R. Vissers, Jordan D. Wheeler, James A. Beall, Jason E. Austermann, Johannes Hubmayr, Jiansong Gao, National Institute of Standards and Technology (United States)

22 July 2022 • 10:00 - 10:20 EDT | Room 524 a

Coffee Break 10:20 - 10:50

SESSION 11: MULTIPLEXING AND READOUT I

22 July 2022 • 10:50 - 12:10 EDT | Room 524 a

12190-42

Chirped pulse readout of kinetic inductance detectors

Author(s): Bryan Steinbach, Caltech (United States)

22 July 2022 • 10:50 - 11:10 EDT | Room 524 a

12190-43

RFSoC-based warm electronics for microwave resonator read out

Author(s): Shawn W. Henderson, Zeeshan Ahmed, SLAC National Accelerator Lab. (United States), Kavli Institute for Particle Astrophysics & Cosmology (United States); Josef C. Frisch, SLAC National Accelerator Lab. (United States); Cyndia Yu, Kavli Institute for Particle Astrophysics & Cosmology (United States), Stanford Univ. (United States); John M. D'Ewart, Daniel D. Van Winkle, Ryan Herbst, Larry Ruckman, Lili Ma, SLAC National Accelerator Lab. (United States)

22 July 2022 • 11:10 - 11:30 EDT | Room 524 a

12190-44

Recent progress on digital frequency-domain multiplexed readout of transition edge sensors using sub-kelvin SQUIDs

Author(s): Tucker Elleflot, Aritoki Suzuki, Lawrence Berkeley National Lab. (United States); Kam S. Arnold, Univ. of California, San Diego (United States); Stephen T. Boyd, The Univ. of New Mexico (United States); Robin Cantor, STAR Cryoelectronics (United States); Tijmen de Haan, High Energy Accelerator Research Organization, KEK (Japan); Amber L. Hornsby, Univ. of California, Berkeley (United States); John M. Joseph, Lawrence Berkeley National Lab. (United States); Adrian T. Lee, Univ. of California, Berkeley (United States); Joshua Montgomery, McGill Univ. (Canada); Megan Russell, Univ. of California, San Diego (United States)

22 July 2022 • 11:30 - 11:50 EDT | Room 524 a

12190-45

A modular package for microwave SQUID multiplexing of TES arrays

Author(s): Cyndia Yu, Stanford Univ. (United States); Zeeshan Ahmed, SLAC National Accelerator Lab. (United States); Ari J. Cukierman, Stanford Univ. (United States); Shawn W. Henderson, SLAC National Accelerator Lab. (United States); Chao-Lin Kuo, Stanford Univ. (United States); Josef C. Frisch, Daniel D. Van Winkle, SLAC National Accelerator Lab. (United States)

22 July 2022 • 11:50 - 12:10 EDT | Room 524 a

Lunch Break 12:10 - 13:40

SESSION 12: DETECTORS II

22 July 2022 • 13:40 - 15:00 EDT | Room 524 a

12190-46

MKID array development for the SPT-3G+ focal plane

Author(s): Karia Dibert, The Univ. of Chicago (United States); Peter S. Barry, Argonne National Lab. (United States); Adam J. Anderson, Fermi National Accelerator Lab. (United States); Bradford A. Benson, The Univ. of Chicago (United States); Thomas W. Cecil, Clarence L. Chang, Juliang Li, Zhaodi Pan, Argonne National Lab. (United States); Maclean Rouble, McGill Univ. (Canada)

22 July 2022 • 13:40 - 14:00 EDT | Room 524 a

12190-47

A Robust, Efficient Process to Produce Scalable, Superconducting Kilopixel Far-IR Detector Arrays

Author(s): Johannes G. Staguhn, Elmer H. Sharp, NASA Goddard Space Flight Ctr. (United States); Shannon M. Duff, Gene C. Hilton, National Institute of Standards and Technology (United States); Ari D. Brown, Felipe A. Colazo, Nicholas P. Costen, Samuel H. Moseley, Frederick H. Wang, Edward J. Wollack, Sang H. Yoon, NASA Goddard Space Flight Ctr. (United States)

22 July 2022 • 14:00 - 14:20 EDT | Room 524 a

12190-48

Highly sensitive and wide dynamic range polarimetric detectors arrays in the submillimeter domain

Author(s): Louis R. Rodriguez, CEA-IRFU (France); Obaid A. Adami, CEA-IRFU (France), Ctr. de Nanosciences et de Nanotechnologies, CNRS (France); Abdelkader Aliane, CEA-LETI-DOPT (France); Xavier De la Broise, Sebastien Dubos, CEA-IRFU (France); Laurent Dussopt, CEA-LETI-DOPT (France); Camille Gennet, Olivier Gevin, CEA-IRFU (France); Valérie Goudon, CEA-LETI (France); Xavier-François Navick, CEA-IRFU (France); Albrecht Poglitsch, Max-Planck-Institut für extraterrestrische Physik (Germany); Vincent Revéret, Marc Sauvage, Amala Demonti, Cyrille Delisle, Timothée Tollet, CEA-IRFU (France); Hacile Kaya, Gilles Lasfargues, CEA-LETI-DOPT (France)

22 July 2022 • 14:20 - 14:40 EDT | Room 524 a

12190-49

Kinetic inductance detectors for the Terahertz Intensity Mapper balloon mission: optical sensitivity and performance of kilopixel arrays.

Author(s): Reinier M. J. Janssen, Jet Propulsion Lab. (United States); Rong Nie, Univ. of Illinois (United States); Bruce Bumble, Jet Propulsion Lab. (United States); Lun-Jun Liu, Joseph G. Redford, Caltech (United States); Jeffrey P. Filippini, Univ. of Illinois (United States); Charles M. Bradford, Jet Propulsion Lab. (United States); Steven Hailey-Dunsheath, Caltech (United States); James E. Aguirre, Justin S. Bracks, Anthony J. Corso, Univ. of Pennsylvania (United States); Jianyang Fu, Univ. of Illinois (United States); Christopher E. Groppi, Jonathan R. Hoh,

Arizona State Univ. (United States); Ryan P. Keenan, Ian N. Lowe, Daniel P. Marrone, The Univ. of Arizona (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Isaac L. Trumper, Intuitive Optical Design Lab, LLC (United States); Joaquin D. Vieira, Univ. of Illinois (United States)

22 July 2022 • 14:40 - 15:00 EDT | Room 524 a

SESSION 13: SPECTROMETERS II

22 July 2022 • 15:30 - 16:50 EDT | Room 524 a

12190-50

SPT-SLIM focal plane design and prototype superconducting mm-wave filter-bank spectrometer performance.

Author(s): Gethin Robson, Cardiff Univ. (United Kingdom)

22 July 2022 • 15:30 - 15:50 EDT | Room 524 a

12190-51

CONCERTO: a breakthrough in wide field-of-view spectroscopy at millimeter wavelengths

Author(s): Alessandro Fasano, Lab. d'Astrophysique de Marseille (France); Peter Ade, University of Cardiff (United Kingdom); Manuel Aravena, Universidad Diego Portales (Chile); Emilio Barria, Institut Néel (France); Alexandre Beelen, Lab. d'Astrophysique de Marseille (France); Alain Benoit, Institut Néel (France); Matthieu Béthermin, Lab. d'Astrophysique de Marseille (France); Julien Boumy, Olivier Bourrion, Guillaume Bres, LPSC (France); Carlos De Breuck, ESO (Germany); Martino Calvo, Institut Néel (France); Yixian Cao, Lab. d'Astrophysique de Marseille (France); Andrea Catalano, LPSC (France); François-Xavier Désert, IPAG (France); Carlos Duran, ESO (Chile); Thomas Fenouillet, Jose Garcia, Lab. d'Astrophysique de Marseille (France); Johannes Goupy, Institut Néel (France); Christian Groppi, Arizona States University (United States); Christophe Hoarau, LPSC (France); Guilaine Lagache, Jean-Charles Lambert, Lab. d'Astrophysique de Marseille (France); Jean-Paul Leggeri, Florence Levy-Bertrand, Institut Néel (France); Juan Macias-Perez, Julien Marpaud, LPSC (France); Philip Mauskopf, Arizona States University (United States); Alessandro Monfardini, Institut Néel (France); Giampaolo Pisano, University of Cardiff (United Kingdom); Nicola Ponthieu, IPAG (France); Sebastien Roudier, Samuel Roni, Damien Tourres, LPSC (France); Carol Tucker, University of Cardiff (United Kingdom)

22 July 2022 • 15:50 - 16:10 EDT | Room 524 a

12190-52

Designing far-IR grating spectrometers: spectral and spatial response considerations

Author(s): Willem Jellema, Bram N R. Lap, SRON Netherlands Institute for Space Research (Netherlands), Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Mathijn Lensen, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Diana D. Kozlova, SRON Netherlands Institute for Space Research (Netherlands), Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands)

22 July 2022 • 16:10 - 16:30 EDT | Room 524 a

12190-53

Recent developments with Cornell's ZEUS-2 spectrometer at APEX

Author(s): Christopher Rooney, Gordon J. Stacey, Thomas Nikola, Amit Vishwas, Catie Ball, Bo Peng, Cornell Univ. (United States); Carl Ferkinhoff, Winona State Univ. (United States); Cody Lamarche, The Univ. of Toledo (United States); James L. Higdon, Sarah J. U. Higdon, Georgia Southern Univ. (United States)

22 July 2022 • 16:30 - 16:50 EDT | Room 524 a

SESSION PS1: POSTERS: DETECTORS I

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-56

Preliminary Characterization of the first 2000-pixel MKIDs array for SPIAKID

Author(s): Jie Hu, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris, PSL Univ. (France), Astroparticule et Cosmologie, Univ. de Paris (France), CNRS (France); Faouzi M. Boussaha, Jean-Marc Martin, Paul Nicaise, Florent Reix, Shan B. Mignot, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris, PSL Univ. (France), CNRS (France); Thibaut Vacelet, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères, Observatoire de Paris, PSL Univ. (France), CNRS (France); Michel R. Piat, Univ. de Paris, CNRS (France), Astroparticule et Cosmologie, CNRS (France); Samir Beldi, ESME Research Lab. (France); Elisabetta Caffau, Piercarlo Bonifacio, Galaxies Etoiles Physique Instrumentation, Observatoire de Paris, PSL Univ. (France), CNRS (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-59

A review of OMT-coupled TES polarimeters at NIST

Author(s): Shannon M. Duff, National Institute of Standards and Technology (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-60

Low-loss a-SiC:H for superconducting microstrip lines for (sub-)millimeter astronomy

Author(s): Bruno T. Buijtendorp, Akira Endo, Technische Univ. Delft (Netherlands); Kenichi Karatsu, Technische Univ. Delft (Netherlands), SRON Netherlands Institute for Space Research (Netherlands); David J. Thoen, Technische Univ. Delft (Netherlands); Vignesh Murugesan, SRON Netherlands Institute for Space Research (Netherlands); Kevin Kouwenhoven, Sebastian Hähnle, Jochem J. A. Baselmans, Technische Univ. Delft (Netherlands), SRON Netherlands Institute for Space Research (Netherlands); Sten Vollebregt, Technische Univ. Delft (Netherlands)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-61

Aluminum-based millimeter-wave kinetic inductance detectors on 150~mm diameter substrates

Author(s): Jason E. Austermann, James A. Beall, Jiansong Gao, Johannes Hubmayr, Joel N. Ullom, Michael R. Vissers, Jordan D. Wheeler, National Institute of Standards and Technology (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-62

LiteBIRD Low- and Mid-Frequency Detectors: Design and Status

Author(s): Gregory Jaehnig, Univ. of Colorado Boulder (United States); Kam S. Arnold, Univ. of California, San Diego (United States); Jason E. Austermann, James A. Beall, Dan T. Becker, Jake A. Connors, Shannon M. Duff, National Institute of Standards and Technology (United States); Nils W. Halverson, Univ. of Colorado Boulder (United States); Masashi Hazumi, Institute of Particle and Nuclear Studies, KEK (Japan); Gene C. Hilton, Johannes Hubmayr, National Institute of Standards and Technology (United States); Chao-Lin Kuo, Stanford Univ. (United States); Adrian T. Lee, Univ. of California, Berkeley (United States); Michael J. Link, National Institute of Standards and Technology (United States); Christopher R. Raum, Univ. of California, Berkeley (United States); Sarah A. Stevenson, Univ. of Colorado Boulder (United States); Aritoki Suzuki, Lawrence Berkeley National Lab. (United States); Keith L. Thompson, Stanford Univ. (United States); Jeff Van Lanen, Michael R. Vissers, National Institute of Standards and Technology (United States); Benjamin Westbrook, Univ. of California, Berkeley (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS2: POSTERS: MULTIPLEXING AND READOUT I

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-63

Performance of a 176-pixel TES bolometer array under frequency domain multiplexed readout

Author(s): Michael D. Audley, Angiola Orlando, Gert de Lange, Pourya Khosropanah, Amin Aminaei, Qian Wang, Jan van der Kuur, SRON Netherlands Institute for Space Research (Netherlands)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-64

Phase Feedback for Tone Tracking Readout of Superconducting Microwave Resonators

Author(s): Maximiliano Silva-Feaver, Univ. of California, San Diego (United States); Zeeshan Ahmed, SLAC National Accelerator Lab. (United States); Cyndia Yu, Stanford Univ. (United States); Kam S. Arnold, Univ. of California, San Diego (United States); Josef C. Frisch, Shawn W. Henderson, SLAC National Accelerator Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-65

A simulation suite for readout with SMuRF tone-tracking electronics

Author(s): Cyndia Yu, Stanford Univ. (United States); Maximiliano Silva-Feaver, Univ. of California, San Diego (United States); Zeeshan Ahmed, John M. D'Ewart, Josef C. Frisch, Shawn W. Henderson, SLAC National Accelerator Lab. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-66

CCAT-prime: RFSoC based readout for frequency multiplexed kinetic inductance detectors

Author(s): Adrian K. Sinclair, The Univ. of British Columbia (Canada); Ryan C. Stephenson, Cody Roberson, Arizona State Univ. (United States); James Burgoyne, The Univ. of British Columbia (Canada); Anthony I. Huber, Univ. of Victoria (Canada); Philip D. Mauskopf, Arizona State Univ. (United States); Scott C. Chapman, Dalhousie Univ. (Canada), The Univ. of British Columbia (Canada), NRC-Herzberg Astronomy & Astrophysics (Canada); Christopher E. Groppi, Arizona State Univ. (United States); Cody J. Duell, Steve K. Choi, Zachary Huber, Kayla M. Rossi, Cornell Univ. (United States); Jordan D. Wheeler, Jason E. Austermann, National Institute of Standards and Technology (United States); Eve M. Vavagiakis, Michael D. Niemack, Thomas Nikola, Cornell Univ. (United States); Michel Fich, Univ. of Waterloo (Canada); Gordon J. Stacey, Cornell Univ. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-67

Frequency division multiplexing (FDM) readout of a microstrip wired, slow TES bolometer array

Author(s): Pourya Khosropanah, Q. Wang, Michael D. Audley, Jan van der Kuur, S. Ilyas, Marcel L. Ridder, Amin Aminaei, Gert de Lange, Jian-Rong Gao, SRON Netherlands Institute for Space Research (Netherlands)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-68

Development of TRL5 Hardware for Tuning, Biasing, and Readout of Kilopixel TES Bolometer Arrays

Author(s): Graeme M. Smecher, Three-Speed Logic, Inc. (Canada); Jean-François Cliche, Matt Dobbs, Joshua Montgomery, McGill Univ. (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-70

Complex Impedance Measurements for a Full Simons Observatory Focal-Plane Module

Author(s): Jack Lashner, The Univ. of Southern California (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-72

Design and Initial Performance of the HARDWARE.astronomy Housekeeping (H.aHk) Box

Author(s): Stephen Shaw, Larry Vettleson-Trutza, Carl Ferkinhoff, Adam Stammer, Bryce Dummer, Aubrey Kovacevich, Alex Franta, Winona State Univ. (United States); Gordon J. Stacey, Thomas Nikola, Christopher Rooney, Amit Vishwas, Cornell Univ. (United States); Sarah J. U. Higdon, James L. Higdon, Georgia Southern Univ. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS: CMB INSTRUMENTS I

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-73

Deployment of POLARBEAR-2b, the second receiver of the Simons Array

Author(s): Lindsay N. Lowry, Univ. of California, Berkeley (United States); Jennifer Ito, Univ. of California, San Diego (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-74

Development and Validation of the Simons Observatory Large Aperture Telescope Receiver

Author(s): Tanay Bhandarkar, Saianeesh Haridas, Anna M. Kofman, John L. Orlowski-Scherer, Jeffrey Iuliano, Karen Perez Sarmiento, Mark J. Devlin, Robert J. Thornton, Univ. of Pennsylvania (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-75

BICEP Array: Performance of the First Receiver at 30/40 GHz and Outlook

Author(s): Cheng Zhang, Caltech (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-76

Design and performance of the AliCPT detector and readout module

Author(s): John C. Groh, Jason E. Austermann, Jake A. Connors, James A. Beall, Shannon M. Duff, Johannes Hubmayr, Jeff Van Lanen, Leila R. Vale, Michael J. Link, Tammy J. Lucas, John A. B. Mates, Zachary Whipps, National Institute of Standards and Technology (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-77

The Simons Observatory: Mechanical and electrical robustness of the universal focal-plane modules

Author(s): Erin E. Healy, Princeton Univ. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-78

Testing of the radio frequency and magnetic shielding implementation of the first Simons Observatory Small Aperture Telescope, SAT-MF1

Author(s): Michael Randall, Nicholas B. Galitzki, Brian G. Keating, Univ. of California, San Diego (United States); Jacob Lashner, The Univ. of Southern California (United States); Joseph Seibert, Maximiliano Silva-Feaver, Jacob Spisak, Akshay Yeddanapudi, Univ. of California, San Diego (United States); Aamir M. Ali, Univ. of California, Berkeley (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-79

The Simons Observatory Large Aperture Telescope Optics Tubes: design and performance status

Author(s): Anna M. Kofman, Univ. of Pennsylvania (United States); Robert J. Thornton, West Chester Univ. (United States), Univ. of Pennsylvania (United States); Saianeesh Haridas, Karen Perez

Sarmiento, Tanay Bhandarkar, Ningfeng Zhu, Jeffrey Iuliano, John L. Orlowski-Scherer, Mark J. Devlin, Univ. of Pennsylvania (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-80

Development and Status of Small Aperture Telescope Cryogenic Half Wave Plate Polarization Modulators for Simons Observatory

Author(s): Bryce O. Bixler, Univ. of California, San Diego (United States); Junna Sugiyama, Kyohei Yamada, The Univ. of Tokyo (Japan); Peter C. Ashton, Akito Kusaka, Lawrence Berkeley National Lab. (United States); Kam S. Arnold, Univ. of California, San Diego (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-81

The design and improved performance of low frequency BICEP Array detectors for CMB observation at the South Pole

Author(s): Ahmed Soliman, Caltech (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-82

PROTOCALC: an artificial calibrator source for CMB telescopes

Author(s): Gabriele Coppi, Simons Observatory Collaboration, Univ. degli Studi di Milano-Bicocca (Italy)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS4: POSTERS: IMAGERS AND POLARIMETERS

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-83

the TolTEC camera: optical alignment and characterization

Author(s): Emily L. Lunde, Arizona State Univ. (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Marc Berthoud, Northwestern Univ. (United States); Nat S. DeNigris, Univ. of Massachusetts Amherst (United States); Simon M. Doyle, Cardiff Univ. (United Kingdom); Daniel Ferrusca, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Joseph E. Golec, Univ. of Michigan (United States); Stephen W. Kuczarski, Univ. of Massachusetts Amherst (United States); Dennis Lee, Northwestern Univ. (United States); Zhiyuan Ma, Univ. of Massachusetts Amherst (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Michael McCrackan, Univ. of Massachusetts Amherst (United States); Jeffrey J. McMahon, Univ. of Michigan (United States); Giles A. Novak, Ctr. for Interdisciplinary Exploration and Research in Astrophysics, Northwestern Univ. (United States); Giampaolo Pisano, Cardiff Univ. (United Kingdom); Sara M. Simon, Univ. of Michigan (United States); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Carole E. Tucker, Cardiff Univ. (United Kingdom); Matthew Underhill, Arizona State Univ. (United States); Eric Van Camp, Northwestern Univ. (United States); Grant W. Wilson, Univ. of Massachusetts Amherst (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-84

The Mexico UK Sub-mm Camera for Astronomy (MUSCAT) on-sky commissioning: focal plane performance.

Author(s): Marcial Tapia, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Emmaly Aguilar Pérez, Corporación Mexicana de Investigación en Materiales S. A. de C. V. (Mexico); Peter S. Barry, Cardiff Univ. (United Kingdom), Argonne National Lab. (United States), The Univ. of Chicago (United States); Thomas L. R. Brien, Cardiff Univ. (United Kingdom); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Chris Dodd, Chris J. Dunscombe, Stephen A. Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca, Víctor Goméz-Rivera, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter C. Hargrave, Cardiff Univ. (United Kingdom); José Luis Hernández-Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Amber Hornsby, Julian S. House, Cardiff Univ. (United Kingdom); José Miguel Jáuregui-García, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Philip D. Mauskopf, Arizona State Univ. (United States); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez-Fajardo, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Samuel Rowe, Cardiff Univ. (United Kingdom); David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Matthew W. L. Smith, Cardiff Univ. (United Kingdom); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Carole E. Tucker, Cardiff Univ. (United Kingdom); Miguel Veláquez de la Rosa Becerra, Salvador Ventura-González, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Ian K. Walker, Cardiff Univ. (United Kingdom)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-85

Investigating external vibration effects on SCUBA-2 performance

Author(s): Jamie L. Cookson, Shaoliang Li, Daniel Bintley, East Asian Observatory (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-86

The Mexico UK Sub-mm Camera for Astronomy (MUSCAT) on-sky commissioning: performance of the cryogenic systems

Author(s): Thomas L. R. Brien, Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Peter S. Barry, Cardiff Univ. (United Kingdom), Argonne National Lab. (United States), The Univ. of Chicago (United States); Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Chris Dodd, Chris J. Dunscombe, Stephen A. Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca, José Miguel Jáuregui-García, Víctor Goméz-Rivera, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter C. Hargrave, Amber L. Hornsby, Julian S. House, Cardiff Univ. (United Kingdom); Philip D. Mauskopf, Arizona State Univ. (United States), Cardiff Univ. (United Kingdom); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy), Cardiff Univ. (United Kingdom); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez-Fajardo, José Luis Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Sam Rowe, Cardiff Univ. (United Kingdom); David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Matthew W. L. Smith, Cardiff Univ. (United Kingdom); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Marcial Tapia, Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Carole E. Tucker, Cardiff Univ. (United Kingdom); Miguel Veláquez de la Rosa Becerra, Salvador Ventura-González, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Ian K. Walker, Cardiff Univ. (United Kingdom)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-88

SCUBA-2 legacy: A decade of science and operations at JCMT

Author(s): Daniel Bintley, Jamie L. Cookson, Shaoliang Li, East Asian Observatory (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-89

Correlating Visual Characteristics and Cryogenic Performance of Superconducting Detectors

Author(s): Kyle Ferguson, Univ. of California, Los Angeles (United States), Argonne National Lab. (United States); Amy N. Bender, Thomas W. Cecil, Argonne National Lab. (United States); Nathan Whitehorn, Michigan State Univ. (United States)
19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-90

Kinetic Inductance Detectors readout for COSMO

Author(s): Giulia Conenna, Andrea Limonta, Univ. degli Studi di Milano-Bicocca (Italy); Mario Zannoni, Univ degli Studi di Milano-Bicocca (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-91

CCAT-prime: Prototype Submillimeter-wave Aluminum Kinetic Inductance Detectors Fabricated with Electron-beam Lithography

Author(s): Yaqiong Li, Cornell Univ. (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-92

Proper evaluation of spatially correlated noise in interferometric images

Author(s): Takafumi Tsukui, Satoru Iguchi, The Graduate Univ. for Advanced Studies (Japan), National Astronomical Observatory of Japan (Japan); Ikki Mitsuhashi, The Univ. of Tokyo (Japan); Kenichi Tadaki, The Graduate Univ. for Advanced Studies (Japan), National Astronomical Observatory of Japan (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-93

CCAT-prime: optical and cryogenic design of the 850 GHz module for Prime-Cam

Author(s): Anthony I. Huber, Univ. of Victoria (Canada); Scott C. Chapman, Dalhousie Univ. (Canada), The Univ. of British Columbia (Canada), NRC-Herzberg Astronomy & Astrophysics (Canada); Adrian K. Sinclair, The Univ. of British Columbia (Canada); Locke D. Spencer, University of Lethbridge (Canada); Doug Henke, NRC-Herzberg Astronomy & Astrophysics (Canada)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS5: POSTERS: NEW INSTRUMENTS AND CONCEPTS I

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-94

Evolution of key components of the payload module for the Millimetron Space Observatory

Author(s): Andrei V. Smirnov, Astro Space Ctr. of the Lebedev Physical Institute (Russian Federation); Evgeniy Golubev, Roman Cherny, Mikhail Arkhipov, Victor Pyshnov, Sergey Fedorchuk, Nelly V. Myshonkova, Igor S. Vinogradov, Andrey Khudchenko, Alexey Rudnitskiy, P. N. Lebedev Physical Institute of the RAS (Russian Federation); Andrey M. Baryshev, Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Mattheus W. M. de Graauw, Sergey F. Likhachev, P. N. Lebedev Physical Institute of the RAS (Russian Federation); Vladislav Evdokimov, P. N. Lebedev Physical Institute (Russian Federation)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-95

Integrated Lens-Fabry Perot module for the COPILOT stratospheric balloon mission

Author(s): Willem Jellema, SRON Netherlands Institute for Space Research (Netherlands), Kapteyn Astronomical Institute, Univ. of Groningen (Netherlands); Martin J. Eggens, Marcel L. Ridder, SRON Netherlands Institute for Space Research (Netherlands); Mariya Krasteva, Leiden Observatory, Leiden Univ. (Netherlands), European Space Research and Technology Ctr. (Netherlands); Jean-Philippe Bernard, Institut de Recherche en Astrophysique et Planétologie (France); Annie Hughes, Institut de Recherche en Astrophysique et Planétologie (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-96

Novel nulling spectropolarimeter design for polarization measurement of the cosmic microwave background

Author(s): Giuseppe D'Alessandro, Paolo de Bernardis, Aurora Carbone, Elisa Cataldi, Alessandro Coppolecchia, Silvia Masi, Lorenzo Mele, Silvia Micheli, Benedetta Kalemi, Francesco Piacentini, Giuseppe Presta, Sapienza Univ. di Roma (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-97

Pixel design for FIR/mm/submm astronomy constituted of a set of antenna-coupled superconducting detectors feeding a metamaterial-based lenslet.

Author(s): Thomas Gascard, Simon M. Doyle, Cardiff Univ. (United Kingdom); Giampaolo Pisano, Sapienza Univ. di Roma (Italy); Alexey Shitvov, Univ. College London (United Kingdom); Peter Barry, Thomas L. R. Brien, Christopher Dunscombe, Cardiff Univ. (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-98

The proposed Japan-United States Infrared Interferometry Experiment (JUStIInE): balloon-borne pathfinder for a space-based far-IR interferometer

Author(s): David T. Leisawitz, NASA Goddard Space Flight Ctr. (United States); Taro Matsuo, Nagoya Univ. (Japan); Gregory Mosby, NASA Goddard Space Flight Ctr. (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Rachel Akeson, Caltech (United States); Dale J. Fixsen, NASA Goddard Space Flight Ctr. (United States), Univ. of Maryland (United States); Qian Gong, NASA Goddard Space Flight Ctr. (United States); Hidehiro Kaneda, Nagoya Univ. (Japan); Stephen F. Maher, NASA Goddard Space Flight Ctr. (United States), Science Systems and Applications, Inc. (United States); Lee G. Mundy, Univ. of Maryland, College Park (United States); Shunsuke Ota, Nagoya Univ. (Japan); Gioia Rau, NASA Goddard Space Flight Ctr. (United States), Catholic Univ. of America (United States); Elmer H. Sharp, NASA Goddard Space Flight Ctr. (United States), Global Science & Technology, Inc. (United States); Toru Shimokawa, Nagoya Univ. (Japan); Johannes G. Staguhn, NASA Goddard Space Flight Ctr. (United States), Johns Hopkins Univ. (United States); Carole E. Tucker, Cardiff Univ. (United Kingdom); Gerard T. van Belle, Lowell Observatory (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS6: POSTERS: DETECTORS II

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-100

Development of large-format arrays of superconducting resonators for future mm-wave cosmology experiments

Author(s): Peter S. Barry, Argonne National Lab. (United States); Christopher Albert, The Univ. of Chicago (United States); Thomas W. Cecil, Clarence L. Chang, Argonne National Lab. (United States); Karia Dibert, The Univ. of Chicago (United States); Juliang Li, Zhaodi Pan, Marharyta Lisovenko, Gensheng Wang, Volodymyr G. Yefremenko, Jianjie Zhang, Argonne National Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-101

Parallel plate capacitor TiN KID array development for the Balloon Experiment for Galactic Infrared Science

Author(s): Nicholas F. Cothard, NASA Goddard Space Flight Ctr. (United States); Peter K. Day, Byeong Ho Eom, Jet Propulsion Lab., NASA (United States); Jason Glenn, NASA Goddard Space Flight Ctr. (United States); Henry G. LeDuc, Jet Propulsion Lab., NASA (United States); Joanna Perido, Univ. of Colorado Boulder (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-102

characterisation and radiation response of prospective TES detectors for the LiteBIRD space mission

Author(s): Samantha L. Stever, Okayama Univ. (Japan); Tommaso Ghigna, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Shawn M. Beckman, Benjamin Westbrook, Adrian T. Lee, Univ. of California, Berkeley (United States); Tomotake Matsumura, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Hirokazu Ishino, Okayama Univ. (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-103

Simons Observatory focal-plane module: detector re-biasing with bias-step measurements

Author(s): Yuhan Wang, Princeton Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-104

Design and characterization of new 90 GHz detectors for the Cosmology Large Angular Scale Surveyor (CLASS)

Author(s): Carolina Nunez, Johns Hopkins Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-105

Tolerance analysis of millimeter-wave planar orthomode transducers

Author(s): Johannes Hubmayr, National Institute of Standards and Technology (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-106

laboratory measurements of horn-coupled and antenna-coupled microwave kinetic inductance detector (MKID) arrays

Author(s): Jordan E. Shroyer, Univ. of Virginia (United States); Jeremy Meinke, Arizona State Univ. (United States); Bradley R. Johnson, Univ. of Virginia (United States); Philip D. Mauskopf, Arizona State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-107

CCAT-prime: Optical Characterization of MKID Arrays for Prime-Cam

Author(s): Steve K. Choi, Cornell Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-108

Optical measurements of ultra-sensitive far-infrared TES bolometers with FDM readout.

Author(s): Michael D. Audley, SRON Netherlands Institute for Space Research (Netherlands); Glenn F. Huijser, Univ. of Groningen (Netherlands); Gert de Lange, Angiola Orlando, SRON Netherlands Institute for Space Research (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-109

Superconducting resonators & kinetic inductance detectors: A practical introduction using Jupyter notebooks

Author(s): Cody J. Duell, Cornell Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS7: POSTERS: OPTICS AND COMPONENTS I

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-110

Simons Observatory: Metamaterial Anti-Reflection Coatings for Silicon and Alumina Optics

Author(s): Joseph E. Golec, Shreya Sutariya, Rebecca Jackson, The Univ. of Chicago (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-111

Silicon-Substrate Metal-Mesh Linear Variable Filters for Infrared Astronomy

Author(s): Joanna Perido, Univ. of Colorado Boulder (United States); Kevin L. Denis, Jason Glenn, Nicholas F. Cothard, Manuel A. Quijada, Jessica Patel, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-112

Construction of a large diameter reflective half-wave plate for millimeter wave applications.

Author(s): Joseph R. Eimer, Tobias A. Marriage, Charles L. Bennett, Rahul Datta, Jullianna D. Denes Couto, John W. Appel, Ivan L. Padilla, Sarah Marie Bruno, Johns Hopkins Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-113

The TolTEC Camera: Polarimetric Commissioning and Performance of the Continuously Rotating Half-wave Plate

Author(s): Dennis Lee, Northwestern Univ. (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Itziar Aretxaga, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Jason E. Austermann, James A. Beall, National Institute of Standards and Technology (United States); Marc Berthoud, The Univ. of Chicago (United States); Akanksha Bij, Queen's Univ. (Canada); John Bussan, Northwestern Univ. (United States); Carlos Carrasco-Gonzalez, Univ. Nacional Autónoma de México (Mexico); Erin G. Cox, Northwestern Univ. (United States); Nat S. DeNigris, Univ. of Massachusetts Amherst (United States); Daniel Ferrusca, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Laura M. Fissel, Queen's Univ. (Canada); Jiansong Gao, National Institute of Standards and Technology (United States); Robert Golenia, Northwestern Univ. (United States); Arturo Gómez-Ruiz, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Chat Hull, National Astronomical Observatory of Japan (Chile); Emily L. Lunde, Arizona State Univ. (United States); Zhiyuan Ma, Univ. of Massachusetts Amherst (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Michael McCrackan, Univ. of Massachusetts Amherst (United States); Giles A. Novak, Ctr. for Interdisciplinary Exploration and Research in Astrophysics, Northwestern Univ. (United States); Alice Pasetto, Univ. Nacional Autónoma de México (Mexico); Giampaolo Pisano, Sapienza Univ. di Roma (Italy); Laurence Sabin, Univ. Nacional Autónoma de México (Mexico); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Felix Thiel, Queen's Univ. (Canada); Carole E. Tucker, Cardiff Univ. (United Kingdom); Eric Van Camp, The Univ. of Chicago (United States); Michael R. Vissers, National Institute of Standards and Technology (United States); Grant W. Wilson, Univ. of Massachusetts Amherst (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-114

Novel infrared-blocking aerogel scattering filters and their applications in astrophysical and planetary science observations

Author(s): Kyle R. Helson, Univ. of Maryland, Baltimore County (United States), NASA Goddard Space Flight Ctr. (United States); Stefan Arseneau, Johns Hopkins Univ. (United States); Alyssa Barlis, NASA Goddard Space Flight Ctr. (United States); Charles L. Bennett, Johns Hopkins Univ. (United States); Thomas M. Essinger-Hileman, NASA Goddard Space Flight Ctr. (United States); Haiquan Guo, Universities Space Research Association (United States); Tobias A. Marriage, Johns Hopkins Univ. (United States); Manuel A. Quijada, NASA Goddard Space Flight Ctr. (United States); Ariel E. Tokarz, Stephanie L. Vivod, NASA

Glenn Research Ctr. (United States); Edward J. Wollack, NASA Goddard Space Flight Ctr. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-115

Optical analysis of BISOU: a balloon project to measure the CMB spectral distortions

Author(s): Neal A. Trappe, Créidhe M. M. O'Sullivan, National Univ. of Ireland, Maynooth (Ireland); Bruno Maffei, Institut d'Astrophysique Spatiale, CNRS (France), Univ. Paris-Saclay (France); Nabila Aghanim, Institut d'Astrophysique Spatiale (France); Maximilian Abitol, Univ. of Oxford (United Kingdom); Elia S. Battistelli, Sapienza Univ. di Roma (Italy); Jens Chluba, The Univ. of Manchester (United Kingdom); Xavier Coulon, Institut d'Astrophysique Spatiale (France); Paolo de Bernardis, Sapienza Univ. di Roma (Italy); James C. Hill, Columbia Univ. (United States); Alan J. Kogut, NASA Goddard Space Flight Ctr. (United States); Silvia Masi, Sapienza Univ. di Roma (Italy); Luca Pagano, Univ. degli Studi di Ferrara (Italy); Aditya Rotti, The Univ. of Manchester (United Kingdom); Giorgio Savini, Univ. College London (United Kingdom); Andrea Tartari, Univ. di Pisa (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-116

Broadband plasma sprayed anti-reflection coating of the POLARBEAR-2b alumina refractive elements

Author(s): Oliver B. Jeong, Univ. of California, Berkeley (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-117

Optical modeling for the LiteBIRD Medium & High Frequency Telescope

Author(s): Luca Lamagna, Sapienza Univ. di Roma (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Cristian Franceschet, Univ. degli Studi di Milano (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Marco De Petris, Sapienza Univ. di Roma (Italy), INFN Sezione di Roma1 (Italy); Jon E. Gudmundsson, The Oskar Klein Ctr. for Cosmoparticle Physics, Stockholm Univ (Sweden); Peter C. Hargrave, Cardiff Univ. (United Kingdom); Bruno Maffei, Institut d'Astrophysique Spatiale (France), Univ. Paris-Saclay (France); Fabio Noviello, Cardiff Univ. (United Kingdom); Creidhe O'Sullivan, Maynooth University (Ireland); Alessandro Paiella, Fabio Columbro, Sapienza Univ. di Roma (Italy), INFN Sezione di Roma1 (Italy); Jason E. Austermann, National Institute of Standards and Technology (United States); Marco Bersanelli, Univ. degli Studi di Milano (Italy); Sophie Bounissou, Institut d'Astrophysique Spatiale (France); Matteo Cicuttin, Montefiore Institute of Electrical Engineering and Computer Science, Université de Liège (Belgium); Lionel Clermont, Centre Spatial de Liège (Belgium); Paolo De Bernardis, Sapienza Univ. di Roma (Italy), INFN Sezione di Roma1 (Italy); Karl Fleury-Frenette, Centre Spatial de Liège (Belgium); Marc P. Georges, Centre Spatial de Liège, Université de Liège (Belgium); Christophe Geuzaine, Montefiore Institute of Electrical Engineering and Computer Science, Université de Liège (Belgium); Sophie Henrot-Versillé, Université Paris-Saclay, CNRS/IN2P3, IJCLab (France); Greg Jaehnig, Center for Astrophysics and Space Astronomy, University of Colorado Boulder (United States); Reijo Keskitalo, Computational Cosmology Center, Lawrence Berkeley National Lab (United States); Silvia Masi, Sapienza Univ. di Roma (Italy), INFN Sezione di Roma1 (Italy); Frederick Matsuda, ISAS, JAXA (Japan); Tomotake Matsumura, Kavli IPMU (Japan); Ludovic Montier, Baptiste Mot, Institut de Recherche en Astrophysique et Planétologie (IRAP) (France); Francesco Piacentini, Sapienza Univ. di Roma (Italy), INFN Sezione di Roma1 (Italy); Jean Yves Plesseria, Centre Spatial de Liège (Belgium); Sabrina Realini, Univ. degli Studi di Milano (Italy); Alessia Ritacco, INAF - Osservatorio Astronomico di Cagliari (Italy); Giorgio Savini, Physics and Astronomy Department, University College London (United Kingdom); Alexei Shitvov, Physics and Astronomy Department (United Kingdom); Aritoki Suzuki, Physics Division, Lawrence Berkeley National Lab (United States); Neil Trappe, Maynooth University (Ireland); Berend Winter, Dept of Space & Climate Physics, University College London (United Kingdom); Yuchen Zhao, Centre Spatial de Liège (Belgium)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-118

A holographic phase-retrieval method of aperture-field evaluation for bolometer-array-equipped radio telescopes

Author(s): Ryo Nakano, Hayato Takakura, Yutaro Sekimoto, The Univ. of Tokyo (Japan), Japan Aerospace Exploration Agency (Japan); Junji Inatani, Japan Aerospace Exploration Agency (Japan); Masahiro Sugimoto, National Astronomical Observatory of Japan (Japan); Shugo Oguri, Japan Aerospace Exploration Agency (Japan), The Univ. of Tokyo (Japan); Frederick T. Matsuda, Japan Aerospace Exploration Agency (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-119

Modal simulation framework for the design and verification of future few-mode far-infrared spectrometers

Author(s): Bram N. R. Lap, Willem Jellema, SRON Netherlands Institute for Space Research (Netherlands); Stafford Withington, Univ. of Cambridge (United Kingdom); David A. Naylor, Univ. of Lethbridge (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS8: POSTERS: CMB INSTRUMENTS II

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-120

The Simons Observatory: Band-Pass calibration using a Fancy Laser Source (FLS)

Author(s): Shreya Sutariya, Kathleen Harrington, Thomas Alford, Carlos E. Sierra, Grace Chesmore, Jeffrey J. McMahon, The Univ. of Chicago (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-121

On-site detector noise characterization of the POLARBEAR-2a receiver

Author(s): Nicole Farias, Univ. of California, Berkeley (United States); Daisuke Kaneko, High Energy Accelerator Research Organization, KEK (Japan); Sayuri Takatori, High Energy Accelerator Research Organization, KEK (Japan), The Graduate Univ. for Advanced Studies (Japan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-122

Beam calibration campaign requirements to control temperature-to-polarisation leakage for CMB-Stage 4

Author(s): Clara Verges, Harvard-Smithsonian Ctr. for Astrophysics (United States); Kirit S. Karkare, Kavli Institute for Cosmological Physics (United States); Tyler St. Germaine, Harvard-Smithsonian Ctr. for Astrophysics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-123

In-lab performance validation of the Simons Observatory Large Aperture Telescope optics tubes

Author(s): Carlos E. Sierra, Kathleen Harrington, Thomas Alford, Grace Chesmore, Shreya Sutariya, Jeffrey J. McMahon, The Univ. of Chicago (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-124

The Simons Observatory: Receiver Characterization with Radio Holography

Author(s): Grace Chesmore, Kathleen Harrington, Tommy Alford, Carlos E. Sierra, Shreya Sutariya, Jeffrey J. McMahon, The Univ. of Chicago (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-125

Cryogenic performance of the Ali CMB Polarization Telescope receiver

Author(s): Maria Salatino, Chao-Lin Kuo, Keith L. Thompson, Stanford Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-126

Thermal testing for cryogenic CMB instrument design

Author(s): David C. Goldfinger, Harvard Univ. (United States); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Zeeshan Ahmed, Kavli Institute for Particle Astrophysics & Cosmology (United States), Stanford Univ. (United States); Mandana Amiri, The Univ. of British Columbia (Canada); Denis Barkats, Harvard Univ. (United States); Ritoban Basu Thakur, Caltech (United States); Colin A. Bischoff, Univ. of Cincinnati (United States); Dominic Beck, Stanford Univ. (United States); James J. Bock, Caltech (United States), Jet Propulsion Lab. (United States); Victor Buza, The Univ. of Chicago (United States), Kavli Institute for Cosmological Physics (United States); James R. Cheshire, Univ. of Minnesota, Twin Cities (United States); Jake A. Connors, Harvard Univ. (United States), National Institute of Standards and Technology (United States); James Cornelison, Harvard Univ. (United States); Michael Crumrine, Univ. of Minnesota, Twin Cities (United States); Ari J. Cukierman, Stanford Univ. (United States); Edward V. Denison, National Institute of Standards and Technology (United States); Marion I. Dierickx, Harvard Univ. (United States); Lionel Duband, CEA (France); Miranda Eiben, Harvard Univ. (United States); Sofia Fatigoni, The Univ. of British Columbia (Canada); Jeff P. Filippini, Univ. of Illinois (United States); Christos Giannakopoulos, Univ. of Cincinnati (United States); Neil Goeckner-Wald, James A. Grayson, Stanford Univ. (United States); Paul K. Grimes, Harvard Univ. (United States); Grantland Hall, Univ. of Minnesota (United States); George Halal, Stanford Univ. (United States); Mark Halpern, The Univ. of British Columbia (Canada); Emma Hand, Univ. of Cincinnati (United States); Sam A. Harrison, Harvard Univ. (United States); Shawn W. Henderson, Kavli Institute for Particle Astrophysics & Cosmology (United States), Stanford Univ. (United States); Sergi R. Hildebrandt, Jet Propulsion Lab. (United States), Caltech (United States); Gene C. Hilton, Johannes Hubmayr, National Institute of Standards and Technology (United States); Howard Hui, Caltech (United States); Kent D. Irwin, Jae Hwan Kang, Stanford Univ. (United States); Kirit S. Karkare, The Univ. of Chicago (United States); Sinan Kefeli, Caltech (United States); John M. Kovac, Harvard Univ. (United States); Chao-Lin Kuo, Stanford Univ. (United States), Kavli Institute for Particle Astrophysics & Cosmology (United States); Kenny Lau, Univ. of Minnesota, Twin Cities (United States); Amber Lennox, Univ. of Illinois (United States); Krikor G. Megerian, Jet Propulsion Lab. (United States); Lorenzo Minutolo, Lorenzo Moncelsi, Caltech (United States); Yuka Nakato, Toshiya Namikawa, Stanford Univ. (United States); Hien T. Nguyen, Jet Propulsion Lab. (United States); Roger O'Brient, Jet Propulsion Lab. (United States), Caltech (United States); Steven M. Palladino, Univ. of Cincinnati (United States); Matthew Petroff, Harvard Univ. (United States); Nathan Precup, Univ. of Minnesota, Twin Cities (United States); Thomas Prouvé, CEA (France); Benjamin Racine, Harvard Univ. (United States); Carl D. Reintsema, National Institute of Standards and Technology (United States); Alessandro Schillaci, Caltech (United States); Benjamin L. Schmitt, Harvard Univ. (United States); Baibhav Singari, Univ. of Minnesota, Twin Cities (United States); Ahmed Soliman, Caltech (United States); Tyler St. Germaine, Harvard Univ. (United States); Bryan Steinbach, Caltech (United States); Rashmi V. Sudiwala, Cardiff Univ. (United Kingdom); Keith L. Thompson, Stanford Univ. (United States); Carole E. Tucker, Cardiff Univ. (United Kingdom); Anthony D. Turner, Jet Propulsion Lab. (United States); Caterina Umiltà, Univ. of Illinois (United States); Clara Verges, Harvard Univ. (United States); Abigail G. Vieregg, The Univ. of Chicago (United States); Albert K. Wandui, Caltech (United States); Alexis C. Weber, Jet Propulsion Lab. (United States); Don V. Wiebe, The Univ. of British Columbia (Canada); Justin Willmert, Univ. of Minnesota, Twin Cities (United States); Wai Ling K. Wu, The Univ. of Chicago (United States); Eric Yang, Stanford Univ. (United States); Clement L. Pryke, Univ. of Minnesota, Twin Cities (United States); Ki Won Yoon, Edward Y. Young, Cyndia Yu, Stanford Univ. (United States); Lingzhen Zeng, Harvard Univ. (United States); Cheng Zhang, Silvia Zhang, Caltech (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-127

The optical bread-board models of the LiteBIRD Medium & High Frequency Telescope

Author(s): Cristian Franceschet, Univ. degli Studi di Milano (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Marco De Petris, Sapienza Univ. di Roma (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Bruno Maffei, Univ. Paris-Saclay (France), Institut d'Astrophysique Spatiale, CNRS (France); Sophie Bounissou, Univ. Paris-Saclay (France); Luca Cintura, Univ. degli Studi di Milano (Italy); Marco Bersanelli, Univ. degli Studi di Milano (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Jon E. Gudmundsson, Stockholm Univ. (Sweden); Peter C. Hargrave, Cardiff Univ. (United Kingdom); Luca Lamagna, Sapienza Univ. di Roma (Italy), Istituto Nazionale di Fisica Nucleare (Italy); Sabrina Realini, Univ. degli Studi di Milano (Italy); Alessia Ritacco, INAF - Osservatorio Astronomico di Cagliari (Italy), Univ. Paris-Saclay, CNRS, Institut d'Astrophysique Spatiale (France), Lab. de Physique de l'Ecole Normale Supérieure (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-128

Improved polarization characterization of the BICEP3 CMB polarimeter at the South Pole.

Author(s): James Cornelison, Harvard Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS9: POSTERS: COHERENT RECEIVER TECHNOLOGY I

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-129

Octave bandwidth receiver technology for radio and millimetre-wave telescopes

Author(s): Doug W. Henke, Sara Salem Hesari, Nianhua Jiang, Alireza Seyfollahi, Bruce Veidt, Lewis B. G. Knee, NRC-Herzberg Astronomy & Astrophysics (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-130

An update on the commissioning and early science with ʻŪʻū and ʻAweoweo on JCMT

Author(s): Izumi Mizuno, Harriet Parsons, Kuan-Yu Liu, Ryan Berthold, Daniel Bintley, Per Friberg, Graham S. Bell, Sarah F. Graves, Steve Mairs, David S. Berry, Alex J. Tetarenko, Mark G. Rawlings, Maren Hauschildt-Purves, Shaoliang Li, Xue-Jian Jiang, Junhao Liu, Harold Pena, East Asian Observatory (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-131

Terahertz heterodyne detector based on intersubband transitions of single quantum wells

Author(s): Changyun Yoo, Institute for Terahertz Science and Technology, Univ. of California, Santa Barbara (United States); Jonathan H. Kawamura, Jet Propulsion Lab. (United States); Kenneth W. West, Loren N. Pfeiffer, Princeton Univ. (United States); Boris S. Karasik, Jet Propulsion Lab. (United States); Mark S. Sherwin, Institute for Terahertz Science and Technology, Univ. of California Santa Barbara (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-132

THz heterodyne receiver for astrophysics using MgB2 HEB mixer

Author(s): Boris S. Karasik, Christopher A. Curwen, Daniel P. Cunnane, Jonathan H. Kawamura, Jet Propulsion Lab. (United States); Weibing Yang, Ke Chen, Xioaxing Xi, Temple Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-133

Implementation of low phase noise millimeter wave local oscillator system with diagnostic feedback for the Greenland telescope.

Author(s): Derek Y. Kubo, Institute of Astronomy and Astrophysics, Academia Sinica (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-134

Electromagnetic performance comparisons of 0.85 THz integrated bias-tee SIS mixers with twin-junction and end-loaded tuning schemes

Author(s): Boon-Kok Tan, Univ. of Oxford (United Kingdom); Kirill Rudakov, Kapteyn Astronomical Institute (Netherlands); Valery P. Koshelets, Kotelnikov Institute of Radio Engineering and Electronics of RAS (Russian Federation); Andrey Khudchenko, Astro Space Center of Lebedev Physical Institute RAS (Russian Federation); Andrey M. Baryshev, Kapteyn Astronomical Institute (Netherlands); Ghassan Yassin, Jakob Wenninger, Univ. of Oxford (United Kingdom)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-135

Wideband cryogenic LNA design for the ngVLA band-1 receiver

Author(s): Nianhua Jiang, Lewis B. G. Knee, Dominic Garcia, Pat Niranjanan, Ivan Wevers, National Research Council Canada (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-136

Exhaustive qualification and endurance testing of the 300 GHz Frequency Doubler of the Sub-Millimeter Instrument of the Jupiter Icy Moon Explorer Mission

Author(s): Lina Gatilova, Jérome Valentin, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères, Observatoire de Paris (France); Jeanne M. Treuttel, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères, Observatoire de Paris (France); Alexandre Feret, Gregory Gay, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères, Observatoire de Paris (France); Sylvain Caroopen, AB Millimeter (France); Thibaut Vacelet, Sabrina Mignoni, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères, Observatoire de Paris (France); Jean-Michel Krieg, Lab. d'Étude du Rayonnement et de la Matière en Astrophysique et Atmosphères (France); Yong Jin, Ctr. de Nanosciences et de Nanotechnologies, CNRS (France); Jean-Luc Roux, Ctr. National d'Études Spatiales (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-137

Atmospheric Phase Monitoring System Evolution for the NOEMA Interferometer

Author(s): Sylvain Mahieu, Michael Bremer, Christophe Risacher, Institut de Radioastronomie Millimétrique (France); Raymond Blundell, Robert Kimberk, John Test, Harvard-Smithsonian Center for Astrophysics (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-187

Tracking ALMA System Temperature with Water Vapor Data at High Frequency

Author(s): Hao He, McMaster Univ (Canada); William R.F. Dent, Joint ALMA Observatory (Chile); Christine Wilson, McMaster Univ (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS10: POSTERS: MULTIPLEXING AND READOUT II

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-139

RF-ICE: large-scale gigahertz readout of frequency-multiplexed microwave kinetic inductance detectors

Author(s): Maclean Rouble, McGill Space Institute (Canada); Graeme M. Smecher, Three-Speed Logic, Inc. (Canada); Adam J. Anderson, Fermi National Accelerator Lab. (United States); Peter S. Barry, Argonne National Lab. (United States); Karia Dibert, The Univ. of Chicago (United States); Matt Dobbs, McGill Univ. (Canada); Kirit S. Karkare, The Univ. of Chicago (United States); Joshua Montgomery, McGill Univ. (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-140

Development and performance of Universal Readout Harnesses for the Simons Observatory

Author(s): Jenna Moore, Arizona State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-141

Development of TRL5 Firmware for Tuning, Biasing, and Readout of Kilopixel TES Bolometer Arrays

Author(s): Graeme M. Smecher, Three-Speed Logic, Inc. (Canada); Jean-François Cliche, Matt Dobbs, Joshua Montgomery, McGill Univ. (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-142

Evaluation of Microwave Kinetic Inductance Detectors Electronic Readout Systems

Author(s): Mehdi Shafiee, Dimitry Fedorov, Aliya Nurmukhanbetova, Nazarbayev Univ. (Kazakhstan); Albert Wai Kit Lau, Hong Kong Univ. of Science and Technology (Hong Kong, China); Bruce Grossan, Space Sciences Lab. (United States); Ernazar Abdikamalov, George Smoot, Nazarbayev Univ. (Kazakhstan)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-143

Development of frequency domain multiplexing readout using sub-kelvin SQUIDs for LiteBIRD

Author(s): Megan Russell, Univ. of California, San Diego (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-144

Digital Active Nulling for Frequency-Multiplexed Bolometer Readout: Performance and Latency

Author(s): Graeme M. Smecher, Three-Speed Logic, Inc. (Canada); Matt Dobbs, McGill Univ. (Canada); Tijmen de Haan, High Energy Accelerator Research Organization, KEK (Japan); Joshua Montgomery, McGill Univ. (Canada)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-146

Study and development of programming topologies in FPGA for the reduction and analysis of data from heterodyne instruments for radio astronomy.

Author(s): Jael Rojas Miguel, Eduardo Ibarra-Medel, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Arturo Gomez-Ruiz, Instituto Nacional de Astrofísica (Mexico); Daniel Ferrusca Rodriguez, INAOE (Mexico)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS11: POSTERS: SPECTROMETERS I

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-147

SuperSpec: On-Chip Spectrometer Design, Characterization, and Performance

Author(s): Joseph G. Redford, Caltech (United States); Peter S. Barry, Argonne National Lab. (United States); Charles M. Bradford, Jet Propulsion Lab., NASA (United States); Scott C. Chapman, The Univ. of British Columbia (Canada); Jason Glenn, NASA Goddard Space Flight Ctr. (United States); Steven Hailey-Dunsheath, Reinier M. J. Janssen, Jet Propulsion Lab., NASA (United States); Elijah Kane, Caltech (United States); Kirit S. Karkare, The Univ. of Chicago (United States); Henry G. LeDuc, Jet Propulsion Lab., NASA (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Ryan McGeehan, Erik Shirokoff, The Univ. of Chicago (United States); Jordan D. Wheeler, National Institute of Standards and Technology (United States); Jonas Zmuidzinas, Caltech (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-148

The design and characterization of the silicon mirrors for the Fabry-Perot interferometer in the Epoch of Reionization Spectrometer

Author(s): Bugao Zou, Cornell Univ. (United States); Nicholas F. Cothard, NASA Goddard Space Flight Ctr. (United States); Rodrigo Freundt Ruedo, Michael D. Niemack, Thomas Nikola, Kayla M. Rossi, Gordon J. Stacey, Cornell Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-149

Determining the efficiency of a cryogenic far-infrared diffraction grating spectrometer used as a post-dispersing module for a high-resolution spectrometer

Author(s): Alicia M. Anderson, Univ. of Lethbridge (Canada), Blue Sky Spectroscopy Inc. (Canada); David A. Naylor, Brad G. Gom, Univ. of Lethbridge (Canada); Ian T. Veenendaal, SRON Netherlands Institute for Space Research (Netherlands); Adam J. Christiansen, Univ. of Lethbridge (Canada), Blue Sky Spectroscopy Inc. (Canada); Willem Jellema, Univ. of Groningen (Netherlands); Peter A. R. Ade, Cardiff Univ. (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-150

Development of a fourier transform spectrometer for the calibration of THz on-chip spectrometers

Author(s): Dale Mercado, Michael Zemcov, Serena Tramm, Rochester Institute of Technology (United States); Rong Nie, Jeffrey P. Filippini, Univ. of Illinois (United States); Peter S. Barry, Argonne National Lab. (United States), Cardiff Univ. (United Kingdom); Erik Shirokoff, The Univ. of Chicago (United States); Neal A. Trappe, Marcin L. Gradziel, National Univ. of Ireland, Maynooth (Ireland); Cory Cotter, The Univ. of Chicago (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-151

Cryogenic testing towards TRL-5 demonstration of a novel stiffness-compensated, reactionless scan mechanism for the Fourier transform spectrometer of SPICA SAFARI instrument

Author(s): Alain Cournoyer, Éric Carbonneau, Patrick Gilbert, ABB Inc. (Canada); Ian Silversides, ABB inc. (Canada); Simon Houle, ABB Inc. (Canada); Martin Larouche, Hugo A. Bourque, Geneviève Delisle, ABB inc. (Canada); Frédéric J. Grandmont, ABB Inc. (Canada); David A. Naylor, Brad G. Gom, Univ. of Lethbridge (Canada); Ben Louwerse, Blue Sky Spectroscopy Inc. (Canada)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-152

Development of a cryogenic far-infrared post-dispersed polarizing Fourier transform spectrometer

Author(s): David A. Naylor, Brad G. Gom, Univ. of Lethbridge (Canada); Alicia M. Anderson, Univ. of Lethbridge (Canada), Blue Sky Spectroscopy Inc. (Canada); Anthony I. Huber, Univ. of Lethbridge (Canada); Adam J. Christiansen, Univ. of Lethbridge (Canada), Blue Sky Spectroscopy Inc. (Canada); Alain Cournoyer, Frédéric J. Grandmont, ABB Inc. (Canada); Ben Louwerse, Blue Sky Spectroscopy Inc. (Canada); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Willem Jellema, Bram N. R. Lap, Univ. of Groningen (Netherlands); Stafford Withington, Univ. of Cambridge (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-153

Design and testing of Kinetic Inductance Detector package for the Terahertz Intensity Mapper

Author(s): Lun-Jun Liu, Caltech (United States); Reinier M. J. Janssen, Charles M. Bradford, Jet Propulsion Lab., NASA (United States), Caltech (United States); Steven Hailey-Dunsheath, Caltech (United States); Jeffrey P. Filippini, Univ. of Illinois (United States); James E. Aguirre, Justin S. Bracks, Anthony J. Corso, Univ. of Pennsylvania (United States); Jianyang Fu, Univ. of Illinois (United States); Christopher E. Groppi, Jonathan R. Hoh, Arizona State Univ. (United States); Ryan P. Keenan, The Univ. of Arizona (United States); Ian N. Lowe, The Univ. of Arizona (United States); Daniel P. Marrone, The Univ. of Arizona (United States); Philip D. Mauskopf, Arizona State Univ. (United States); Rong Nie, Univ. of Illinois (United States); Joseph G. Redford, Caltech (United States); Isaac L. Trumper, Intuitive Optical Design Lab., LLC (United States); Joaquin D. Vieira, Univ. of Illinois (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-154

CCAT-prime: the Design of the Epoch of Reionization Spectrometer Detector Arrays

Author(s): Yaqiong Li, Cornell Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-155

On-sky calibration and standards for JCMT's new 230GHz and 345GHz receivers

Author(s): Shaoliang Li, Daniel Bintley, Per Friberg, Izumi Mizuno, Graham S. Bell, Ryan Berthold, Junhao Liu, Harold Pena, Kuan-Yu Liu, Sarha F. Graves, Harriet Parsons, David S. Berry, East Asian Observatory (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS12: POSTERS: OPTICS AND COMPONENTS II

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-157

CCAT-prime: The Optical Design for the Epoch of Reionization Spectrometer

Author(s): Zachary B. Huber, Michael D. Niemack, Cornell Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-158

Characterization of aerogel scattering filters for astronomical telescopes

Author(s): Alyssa Barlis, NASA Goddard Space Flight Ctr. (United States); Stefan Arseneau, Charles L. Bennett, Johns Hopkins Univ. (United States); Thomas M. Essinger-Hileman, NASA Goddard Space Flight Ctr. (United States); Haiquan Guo, Universities Space Research Association (United States); Kyle R. Helson, Univ. of Maryland, Baltimore (United States), NASA Goddard Space Flight Ctr. (United States); Tobias A. Marriage, Johns Hopkins Univ. (United States); Manuel A. Quijada, NASA Goddard Space Flight Ctr. (United States); Ariel E.

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-159

A new thermo-mechanical structure design for space qualified close-cycle dilution refrigerator

Author(s): Valentin Sauvage, Clémence De Jabrun, Mehdi Bouzit, Rasul Gazizulin, Bruno Maffei, Anne Philippon, Institut d'Astrophysique Spatiale (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-160

Development of the Calibration System with a sparse wire grid for Small Aperture Telescope of Simons Observatory

Author(s): Masaaki Murata, The Univ. of Tokyo (Japan); Hironobu Nakata, Kyoto Univ. (Japan); Kengo Iijima, The Univ. of Tokyo (Japan); Shunsuke Adachi, Yudai Seino, Kyoto Univ. (Japan); Kenji Kiuchi, The Univ. of Tokyo (Japan); Frederick T. Matsuda, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Akito Kusaka, The Univ. of Tokyo (Japan), Lawrence Berkeley National Lab. (United States), Kavli Institute for the Physics and Mathematics of the Universe (Japan); Osamu Tajima, Kyoto Univ. (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-161

The Mexico UK Sub-mm Camera for Astronomy (MUSCAT) on-sky commissioning: optics design and installation

Author(s): Edgar Castillo-Domínguez, SRON Netherlands Institute for Space Research (Netherlands); Peter C. Hargrave, Simon M. Doyle, Cardiff Univ. (United Kingdom); David H. Hughes, Víctor Goméz-Rivera, Marcial Tapia, José Luis Hernández Rebollar, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Peter A. R. Ade, Cardiff Univ. (United Kingdom); Peter S. Barry, Cardiff Univ. (United Kingdom), Argonne National Lab. (United States), The Univ. of Chicago (United States); Thomas L. R. Brien, Julian S. House, Chris J. Dunscombe, Stephen A. Eales, Cardiff Univ. (United Kingdom); Daniel Ferrusca, José Miguel Jáuregui-García, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Amber L. Hornsby, Chris Dodd, Philip D. Mauskopf, Cardiff Univ. (United Kingdom); Dulce Murias, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Andreas Papageorgiou, Cardiff Univ. (United Kingdom); Enzo Pascale, Sapienza Univ. di Roma (Italy); Nicolas Peretto, Cardiff Univ. (United Kingdom); Abel Perez-Fajardo, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Samuel Rowe, Cardiff Univ. (United Kingdom); David Sánchez-Argüelles, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Matthew W. L. Smith, Cardiff Univ. (United Kingdom); Kamal Souccar, Univ. of Massachusetts Amherst (United States); Rashmi V. Sudiwala, Carole E. Tucker, Cardiff Univ. (United Kingdom); Miguel Veláquez de la Rosa Becerra, Salvador Ventura-González, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico); Ian K. Walker, Cardiff Univ. (United Kingdom); Ana Torres Campos, Instituto Nacional de Astrofísica, Óptica y Electrónica (Mexico)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-162

Impact of the effective thickness from anti-reflective sub-wavelength structures in achromatic half-wave plate design

Author(s): Ryota Takaku, The Univ. of Tokyo (Japan); Susanna Azzoni, Univ. of Oxford (United Kingdom); Tommaso Ghigna, Takashi Hasebe, Thuong D. Hoang, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Yurika Hoshino, Saitama Univ. (Japan); Nobuhiko Katayama, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Kunimoto Komatsu, Okayama Univ. (Japan); Kuniaki Konishi, Makoto Gonokami, The Univ. of Tokyo (Japan); Tomotake Matsumura, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Haruyuki Sakurai, The Institute for Solid State Physics, The Univ. of Tokyo (Japan); Yuki Sakurai, Okayama Univ. (Japan); Junji Yumoto, The Univ. of Tokyo (Japan); Shinya Sugiyama, Saitama Univ. (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-163

Sidelobe modeling and mitigation for a three mirror anastigmat cosmic microwave background telescope.

Author(s): Ian Gullett, Case Western Reserve Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-164

Laminate polyethylene window development for large aperture millimeter receivers

Author(s): Miranda Eiben, John M. Kovac, Marion I. Dierickx, Harvard-Smithsonian Ctr. for Astrophysics (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-165

Modelling ground pickup for microwave telescopes

Author(s): Alexandre E. Adler, Stockholm Univ. (Sweden); Adriaan J. Duivenvoorden, Princeton Univ. (United States); Jon E. Gudmundsson, Stockholm Univ. (Sweden)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS13: POSTERS: CMB INSTRUMENTS III

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-166

Instrumental Performance and Scientific Requirements of Polarization Modulation Unit for LiteBIRD low frequency telescope

Author(s): Yuki Sakurai, Okayama Univ. (Japan); Tomotake Matsumura, Nobuhiko Katayama, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Kunimoto Komatsu, Okayama Univ. (Japan); Ryota Takaku, The Univ. of Tokyo (Japan); Shinya Sugiyama, Yurika Hoshino, Saitama Univ. (Japan); Takashi Hasebe, Tommaso Ghigna, Thuong D. Hoang, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Teruhito Iida, ispace, inc. (Japan); Yusuke Takase, Hirokazu Ishino, Okayama Univ. (Japan); Masashi Hazumi, High Energy Accelerator Research Organization, KEK (Japan), Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan), Kavli Institute for the Physics and Mathematics of the Universe, The Univ. of Tokyo (Japan); Hiroyuki Ohsaki, Yutaka Terao, Takemi Onoue, Satsuki Okumura, Kuniaki Konishi, Junji Yumoto, The Univ. of Tokyo (Japan); Haruyuki Sakurai, The Institute for Solid State Physics, The Univ. of Tokyo (Japan); Makoto K. Gonokami, The Univ. of Tokyo (Japan); Akito Kusaka, The Univ. of Tokyo (Japan), Lawrence Berkeley National Lab. (United States), Kavli Institute for the Physics and Mathematics of the Universe (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-167

Testing magnetic interference between TES detectors and the telescope environment for future CMB satellite missions

Author(s): Tommaso Ghigna, Thuong D. Hoang, Takashi Hasebe, The Univ. of Tokyo (Japan); Yurika Hoshino, Saitama Univ. (Japan); Nobuhiko Katayama, The Univ. of Tokyo (Japan); Kunimoto Komatsu, Okayama Univ. (Japan); Adrian T. Lee, Univ. of California, Berkeley (United States); Tomotake Matsumura, The Univ. of Tokyo (Japan); Shinya Sugiyama, Saitama Univ. (Japan); Aritoki Suzuki, Lawrence Berkeley National Lab. (United States); Christopher R. Raum, Univ. of California, Berkeley (United States); Ryota Takaku, The Univ. of Tokyo (Japan); Benjamin Westbrook, Univ. of California, Berkeley (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-168

CANCELED: Development of Low Frequency Universal Focal Plane Module for The Simons Observatory

Author(s): Shawn M. Beckman, Univ. of California, Berkeley (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-169

Testbed preparation of a small prototype polarization modulator for LiteBIRD low-frequency telescope

Author(s): Thuong D. Hoang, Tomotake Matsumura, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Ryota Takaku, The Univ. of Tokyo (Japan); Takashi Hasebe, Tommaso Ghigna, Nobuhiko Katayama, Kavli Institute for the Physics and Mathematics of the Universe (Japan), The Univ. of Tokyo (Japan); Yuki Sakurai, Kunimoto Komatsu, Okayama Univ. (Japan); Yurika Hoshino, Shinya Sugiyama, Saitama Univ. (Japan); Hirokazu Ishino, Okayama Univ. (Japan)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-170

Antenna control software integration and implementation for the Simons Observatory

Author(s): Lauren J. Saunders, Yale Univ. (United States); Matthew Hasselfield, Center for Computational Astrophysics, Flatiron Institute (United States); Brian J. Koopman, Laura Newburgh, Yale Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-171

Long-timescale stability in CMB observations at multiple frequencies using front-end polarization modulation

Author(s): Joseph Cleary, Johns Hopkins Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-172

Wide Field High Cadence CMB Survey Designs for Chilean Telescopes

Author(s): Haruki Ebina, Cornell Univ. (United States); Reijo Keskitalo, Julian Borrill, Lawrence Berkeley National Lab. (United States), Univ. of California, Berkeley (United States); Steve K. Choi, Cornell Univ. (United States); Theodore Kisner, Lawrence Berkeley National Lab. (United States), Univ. of California, Berkeley (United States); Sigurd K. Næss, Univ. of Oslo (Norway); Michael D. Niemack, Cornell Univ. (United States); Jason R. Stevens, Univ. of Colorado, Boulder (United States), National Institute of Standards and Technology (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-173

On-sky optical characterization of the Cosmology Large Angular Scale Surveyor (CLASS) telescopes at 90, 150, and 220 GHz

Author(s): Rahul Datta, Jullianna D. Denes Couto, Michael K. Brewer, Johns Hopkins Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-174

AdvancedACT: Calibrating Fourier-Transform Spectrometer Bandpass Measurements

Author(s): Thomas Alford, Grace Chesmore, Shreya Sutariya, Carlos E. Sierra, Kathleen Harrington, Jeffrey J. McMahon, The Univ. of Chicago (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-186

QUBIC - The Q & U Bolometric Interferometer for Cosmology

Author(s): Michel R. Piat, Astroparticule et Cosmologie (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS14: POSTERS: COHERENT RECEIVER TECHNOLOGY II

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-175

Design of an on-chip integrated 230 GHz dual-polarization balanced SIS receiver for multi-pixel array applications

Author(s): Jakob Wenninger, Univ. of Oxford (United Kingdom); Christine Chaumont, Faouzi Boussaha, GEPI, Observatoire de Paris, PSL Universite, CNRS (France); Boon-Kok Tan, Univ. of Oxford (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-176

Characterization of the John A. Galt telescope for radio holography with CHIME

Author(s): Alex Reda, Yale Univ. (United States)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-177

Overview of VLBI instrument for Millimetron space mission.

Author(s): Andrey Khudchenko, Andrei V. Smirnov, P. N. Lebedev Physical Institute of the RAS (Russian Federation); Andrey M. Baryshev, Kapteyn Astronomical Institute (Netherlands); Sergey Turygin, Kotelnikov Institute of Radio Engineering and Electronics of RAS (Russian Federation); Vladimir Kostenko, Evgeniy Golubev, Roman Cherny, Andrey Andrianov, Andrey Ozolin, P. N. Lebedev Physical Institute of the RAS (Russian Federation); Valery P. Koshelets, Kotelnikov Institute of Radio Engineering and Electronics of RAS (Russian Federation); Mikhail Arkhipov, P. N. Lebedev Physical Institute of the RAS (Russian Federation); Ronald Hesper, Univ. of Groningen (Netherlands), Netherlands Research School for Astronomy (Netherlands); Jung-Won Lee, Korea Astronomy and Space Science Institute (Kenya); Seog-Tae Han, Taehyun Jung, Korea Astronomy and Space Science Institute (Korea, Republic of); Alexey Rudnitskiy, Sergey F. Likhachev, P. N. Lebedev Physical Institute of the RAS (Russian Federation)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-178

A compact kinetic inductance travelling wave parametric amplifier with continuous periodic loading structure

Author(s): Joseph C. Longden, Univ. of Oxford (United Kingdom); Christine Chaumont, Faouzi Boussaha, GEPI (CNRS UMR 8111), Observatoire de Paris, PSL Universite (France); Boon-Kok Tan, Univ. of Oxford (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-179

Demonstration of a 25 % bandwidth 520-680 GHz Schottky receiver front-end for Planetary Science and Remote Sensing

Author(s): Jeanne M. Treuttel, Alexandre Feret, Gregory Gay, Lina Gatilova, Thibaut Vacelet, Christine Chaumont, Estelle Sernoux, Priyanka Mondal, Observatoire de Paris (France); Jerome Puech, Ctr. National d'Études Spatiales (France)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-180

Further optical analysis of the ALMA Band 9 front end for a possible upgrade

Author(s): Sabrina Realini, Ronald Hesper, Andrey M. Baryshev, Jan Barkhof, Joost Adema, Univ. of Groningen (Netherlands)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-181

Heterodyne Instrument for Millimetron Space Mission.

Author(s): Andrey M. Baryshev, Kapteyn Astronomical Institute (Netherlands); Willem Jellema, SRON Netherlands Institute for Space Research (Netherlands), Kapteyn Astronomical Institute, Univ. of

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21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-182

Design of high compression point Josephson junction travelling wave parametric amplifier for readout of millimetre/sub-millimetre astronomical receivers

Author(s): Javier Navarro Montilla, Boon-Kok Tan, Joseph C. Longden, Univ. of Oxford (United Kingdom)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-183

The repair work and future plan for the Auto-Correlation Spectral Imaging System (ACSIS) at the James Clerk Maxwell Telescope (JCMT)

Author(s): Kuan-Yu Liu, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Daniel Bintley, Ryan Berthold, Graham S. Bell, East Asian Observatory (United States); Ming-Jye Wang, Ming-Tang Chen, Yau De Huang, Chih-Chiang Han, Chau-Ching Chiong, Chao-Te Li, Homin Jiang, Institute of Astronomy and Astrophysics, Academia Sinica (Taiwan); Derek Kubo, Institute of Astronomy and Astrophysics, Academia Sinica (United States); Gary A. Fuller, The Univ. of Manchester (United Kingdom); Weiye Zhong, Shanghai Astronomical Observatory (China); Junhao Liu, Harriet Parsons, Jessica Dempsey, Per Friberg, Maren Purves, Sarah F. Graves, Jamie L. Cookson, Ed Sison, Xue-Jian Jiang, Izumi Mizuno, Shaoliang Li, William G. Stahm, Craig A. Walther, East Asian Observatory (United States); Wei Yu, Harvard-Smithsonian Ctr. for Astrophysics (United States); Ran Duan, Univ. of Chinese Academy of Sciences (China)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

12190-185

The new Multi-Frequency Instrument (MFI2) for the QUIJOTE facility in Tenerife

Author(s): Roger J. Hoyland, José A. Rubiño-Martín, Marta Aguiar-Gonzalez, Instituto de Astrofísica de Canarias (Spain); Eduardo Artal, DICOM (Spain); Belén Barreiro, Francisco J. Casas, IFCA (Spain); Carlos Colodro-Conde, Instituto de Astrofísica de Canarias (Spain); Elena de la Hoz, IFCA (Spain); Mateo Fernández-Torreiro, Ricardo T. Génova-Santos, Maria F. Gómez-Reñasco, Eduardo D. González-Carretero, Carlos Hernández-Monteagudo, Instituto de Astrofísica de Canarias (Spain); Diego Herranz, Enríque Martínez-Gonzalez, IFCA (Spain); Michael W. Peel, Angeles Pérez de Taoro, Instituto de Astrofísica de Canarias (Spain); Cristina Pérez-Lemus, UPCT (Spain); Lucio Piccirillo, Jodrell Bank (United Kingdom); Rafael Rebolo, Instituto de Astrofísica de Canarias (Spain); Rafael Toledo-Moreo, UPCT (Spain); Afrodisio Vega-Moreno, Instituto de Astrofísica de Canarias (Spain); Patricio Vielva, IFCA (Spain); Robert A. Watson, Jodrell Bank (United Kingdom); Antonio Zamora-Jimenez, Instituto de Astrofísica de Canarias (Spain)

21 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12190-145 DAC clipping buffer and data processing for TES readout

Contact author(s): Duan Ran, National Astronomical Observatories, China

Poster

12190-17 Optical design concept of the CMB-S4 large-aperture telescopes and cameras

Contact author(s): Gallardo Patricio A., Kavli Institute for Cosmological Physics, The Univ. of Chicago, United States

Oral

12190-184 Development of key technologies of the radio astronomy phased array feed digital backend

Contact author(s): Duan Ran, National Astronomical Observatories, China

Poster

12190-36 Design and analysis of the NRC Q-band receiver for ngVLA band-5

Contact author(s): Salem Hesari Sara, NRC-Herzberg Astronomy & Astrophysics, Canada

Oral

12190-69 Heterogeneous readout for large superconducting arrays

Contact author(s): Duan Ran, National Astronomical Observatories, China

Poster

12190-71 Research on ZCU111 firmware algorithm for multi-science targets

Contact author(s): Duan Ran, National Astronomical Observatories, Chinese Academy of Sciences, China

Poster

12190-87 Design of microstrip-line coupled kinetic inductance detectors for near infrared astronomy

Contact author(s): Duan Ran, National Astronomical Observatories, China

Poster

12190-99 wSMA superconducting diplexer development

Contact author(s): Li Chao-Te, Academia Sinica, Taiwan

Poster

CONFERENCE 12191

X-Ray, Optical, and Infrared Detectors for Astronomy X

17 - 20 July 2022 | Room 519 b

Conference Chairs: **Andrew D. Holland,** Ctr. for Electronic Imaging (United Kingdom); **James Beletic,** Teledyne Imaging Sensors (United States)

Program Committee: **Alessandra Ciapponi,** European Space Research and Technology Ctr. (Netherlands); **Chiaki Crews,** The Open Univ. (United Kingdom); **Elizabeth M. George,** European Southern Observatory (Germany); **Michael E. Hoenk,** Jet Propulsion Lab. (United States); **Alex Harwit,** Ball Aerospace (United States); **Douglas Jordan,** e2v scientific instruments Ltd. (United States); **Ralf Kohley,** European Space Astronomy Ctr. (Spain); **Gregory Mosby Jr.,** NASA Goddard Space Flight Ctr. (United States); **Brian Shortt,** European Space Research and Technology Ctr. (Netherlands); **Roger M. Smith,** Caltech (United States); **Takeshi Go Tsuru,** Kyoto Univ. (Japan)

SESSION 1: INDUSTRY INTRODUCTORY PRESENTATIONS

17 July 2022 • 09:00 - 10:00 EDT | Room 519 b

12191-1
Silicon sensor capabilities at Teledyne e2v for visible, NIR, UV & X-ray applications (Invited Paper)
Author(s): Katherine Lawrie, Gabriela Druitt, Paul Jerram, Jérôme Pratlong, Teledyne e2v UK Ltd. (United Kingdom)
17 July 2022 • 09:00 - 09:20 EDT | Room 519 b

12191-2
To be announced (IR)
17 July 2022 • 09:20 - 09:40 EDT | Room 519 b

12191-3
To be announced (Cryo)
17 July 2022 • 09:40 - 10:00 EDT | Room 519 b

Coffee Break 10:00 - 10:30

SESSION 2: CRYOGENIC DETECTORS I

17 July 2022 • 10:30 - 12:10 EDT | Room 519 b

12191-4
Highly uniform superconducting Titanium Nitride – Titanium multilayers for MKIDs arrays for astronomical applications.
Author(s): Mario De Lucia, Eoin Baldwin, Gerhard Ulbricht, Jack Piercy, Oisin Creaner, Dublin Institute for Advanced Studies (Ireland); Colm Bracken, National Univ. of Ireland, Maynooth (Ireland); Tom Ray, Dublin Institute for Advanced Studies (Ireland)
17 July 2022 • 10:30 - 10:50 EDT | Room 519 b

12191-5
Performance of photon counting, optical to near-IR Microwave Kinetic Inductance Detectors utilizing proximity effects in Ti / TiN multilayers
Author(s): Gerhard Ulbricht, Mario De Lucia, Eoin Baldwin, Jack D. Piercy, Oisin Creaner, Dublin Institute for Advanced Studies (Ireland); Colm Bracken, National Univ. of Ireland, Maynooth (Ireland); Tom Ray, Dublin Institute for Advanced Studies (Ireland)
17 July 2022 • 10:50 - 11:10 EDT | Room 519 b

12191-6
Analysis of visible to near-infrared hybrid NbTiN/beta-Ta LEKIDs
Author(s): Kevin Kouwenhoven, Steven A. H. de Rooij, SRON Netherlands Institute for Space Research (Netherlands), Technische Univ. Delft (Netherlands); Enrico Biancalani, SRON Netherlands Institute for Space Research (Netherlands); Daniel Fan, Carlas S. Smith, Technische Univ. Delft (Netherlands); Vignesh Murugesan, SRON Netherlands Institute for Space Research (Netherlands); David J. Thoen, Technische Univ. Delft (Netherlands); Jochem J. A. Baselmans, SRON Netherlands Institute for Space Research (Netherlands), Technische Univ. Delft (Netherlands); Pieter J. de Visser, SRON Netherlands Institute for Space Research (Netherlands)
17 July 2022 • 11:10 - 11:30 EDT | Room 519 b

12191-7
Development of Near Infrared and Visible Kinetic Inductance Detectors
Author(s): Faouzi M. Boussaha, Observatoire de Paris (France)
17 July 2022 • 11:30 - 11:50 EDT | Room 519 b

12191-8
Progress toward optimizing energy and arrival-time resolution with a transition-edge sensor
Author(s): Paul Ripoche, Jeremy Heyl, The Univ. of British Columbia (Canada)
17 July 2022 • 11:50 - 12:10 EDT | Room 519 b

Lunch Break 12:10 - 13:40

SESSION 3: SIMULATION RADIATION DAMAGE

17 July 2022 • 13:40 - 15:00 EDT | Room 519 b

12191-9
Comparison of Trap pumping and EPER data
Author(s): Jesper M. Skottfelt, Zoe Lee-Payne, David J. Hall, Ben Dryer, Ctr for Electronic Imaging (United Kingdom)
17 July 2022 • 13:40 - 14:00 EDT | Room 519 b

12191-10
Proton induced damage after laboratory cold irradiation in CCD47-20 CCDs for CHEOPS
Author(s): Peter Verhoeve, Sander Blommaert, Dennis Breeveld, Joerg ter Haar, Kate Isaak, Frederic Lemmel, Cornelis van der Luijt, Thibaut Prod'homme, Hans Smit, Brian Shortt, Ivo Visser, European Space Research and Technology Ctr., European Space Agency (Netherlands); Andrea Fortier, Physikalisches Institut, University of Bern (Switzerland), Center for Space and Habitability (Switzerland)
17 July 2022 • 14:00 - 14:20 EDT | Room 519 b

12191-11
Proton radiation damage tolerance of wide dynamic range SOI pixel detectors
Author(s): Shun Tsunomachi, Takayoshi Kohmura, Kouichi Hagino, Masatoshi Kitajima, Toshiki Doi, Asuka Ohira, Daiki Aoki, Yasuyuki Shimizu, Kaito Fujisawa, Shizusa Yamazaki, Tokyo Univ. of Science (Japan); Yasuo Arai, Toshinobu Miyoshi, Ryutaro Nishimura, High Energy Accelerator Research Organization, KEK (Japan); Takeshi Go Tsuru, Kyoto Univ. (Japan); Ikuo Kurachi, D&S Inc. (Japan)
17 July 2022 • 14:20 - 14:40 EDT | Room 519 b

12191-12
Long term effects of Irradiation on CCDs under mission representative conditions
Author(s): Zoe Lee-Payne, Jesper Skottfelt, Open Univ (United Kingdom)
17 July 2022 • 14:40 - 15:00 EDT | Room 519 b

Coffee Break 15:00 - 15:30

SESSION 4: VISIBLE SENSORS I (CMOS)

17 July 2022 • 15:30 - 17:10 EDT | Room 519 b

12191-13
Characterization of Low Light Performance of a CMOS Sensor for Ultraviolet Astronomical Applications
Author(s): Timothee Greffe, Roger Smith, Myles Sherman, Fiona Harrison, Hannah Earnshaw, Brian Grefenstette, Caltech (United States); John Hennessy, Shouleh Nikzad, Jet Propulsion Lab. (United States)
17 July 2022 • 15:30 - 15:50 EDT | Room 519 b

12191-14
Thick silicon Hi-Rho CMOS with high red response
Author(s): Douglas Jordan, Ross Mackie, Teledyne e2v UK Ltd. (United Kingdom)
17 July 2022 • 15:50 - 16:10 EDT | Room 519 b

12191-15
High Dynamic Range techniques for astronomical applications of CMOS devices
Author(s): Hannah P. Earnshaw, Timothee Greffe, Roger M. Smith, Brian W. Grefenstette, Fiona A. Harrison, Caltech (United States); John J. Hennessy, Shouleh Nikzad, Charles A. Shapiro, Jet Propulsion Lab. (United States)
17 July 2022 • 16:10 - 16:30 EDT | Room 519 b

12191-16
Curved CMOS imaging sensors for enhanced astronomical optical instruments
Author(s): Kelly Joaquina, Louis Calvinhac, Quentin Struss, Sabri Lemared, Wilfried Jahn, SILINA (France)
17 July 2022 • 16:30 - 16:50 EDT | Room 519 b

12191-17
COSMOS large format 64Mpixel CMOS camera for ground-based astronomy
Author(s): Jason P. McClure, Teledyne Princeton Instruments (United States); Jason Nottingham, Teledyne Photometrics (United States); Jose Segovia, Teledyne AnaFocus (Spain)
17 July 2022 • 16:50 - 17:10 EDT | Room 519 b

Coffee Break 10:00 - 10:30

SESSION 5: X-RAY SENSORS I

18 July 2022 • 10:30 - 11:50 EDT | Room 519 b

12191-18
Design, testing, and validation of a space-based Improved X-Ray Detector onboard Sharjah-Sat-1
Author(s): Yousuf Faroukh, Tarifa Alkaabi, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates); Emrah Kalemci, Sabanci Univ. (Turkey); Ibrahim Al-Sabt, Mohamed BinAshour, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates); Ali Murteza Altingun, Kaya Gokalp, Refik Yalcin, Sabanci Univ. (Turkey); Fatima Alketbi, Amel Alhammadi, Maryam Alansaari, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates); Bogac Karabulut, Istanbul Technical Univ. (Turkey); Ilias Fernini, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates), Univ. of Sharjah (United Arab Emirates); Alim R. Aslan, Istanbul Technical Univ. (Turkey); Hamid M. K. Al-Naimiy, Sharjah Academy for Astronomy, Space Sciences & Technology (United Arab Emirates), Univ. of Sharjah (United Arab Emirates)
18 July 2022 • 10:30 - 10:50 EDT | Room 519 b

12191-19
Recent Progress in Development of Trigger-Output Event-Driven X-ray astronomy SOI pixel sensors
Author(s): Takeshi Go Tsuru, Hiroyuki Uchida, Kazuho Kayama, Yuki Amano, Kyoto Univ. (Japan); Koji Mori, Ayaki Takeda, Yusuke Nishioka, Masataka Yukumoto, Kira Mieda, Shuto Yonemura, Tatsunori Ishida, Daisuke Izumi, Uzuki Iwakiri, Towa Umeno, Rikuto Kawashima, Koyo Magata, Univ. of Miyazaki (Japan); Takaaki Tanaka, Hiromasa Suzuki, Konan Univ. (Japan); Takayoshi Kohmura, Kouichi Hagino, Masatoshi Kitajima, Toshiki Doi, Tokyo Univ. of Science (Japan); Kumiko K. Nobukawa, Kindai Univ. (Japan); Yasuo Arai, High Energy Accelerator Research Organization, KEK (Japan); Ikuo Kurachi, D&S Inc. (Japan); Kenji Shimazoe, The Univ. of Tokyo (Japan); Shoji Kawahito, Keita Yasutomi, Shizuoka Univ. (Japan)
18 July 2022 • 10:50 - 11:10 EDT | Room 519 b

12191-21
Evaluation of X-ray response properties of X-ray SOI pixel detector with PDD structure
Author(s): Toshiki Doi, Takayoshi Kohmura, Kouichi Hagino, Masatoshi Kitajima, Shun Tsunomachi, Mitsuki Hayashida, Daiki Aoki, Asuka Ohira, Yasuyuki Shimizu, Kaito Fujisawa, Shizusa Yamazaki, Tokyo Univ. of Science (Japan); Takeshi G. Tsuru, Hiroyuki Uchida, Kazuho Kayama, Yuki Amano, Masamune Matsuda, Kyoto Univ. (Japan); Koji Mori, Ayaki Takeda, Yusuke Nishioka, Masataka Yukumoto, Kira Mieda, Shuto Yonemura, Tatsunori Ishida, Daisuke Izumi, Uzuki Iwakiri, Towa Umeno, Rikuto Kawashima, Koyo Magata, Univ. of Miyazaki (Japan); Takaaki Tanaka, Hiromasa Suzuki, Konan Univ. (Japan); Kumiko K. Nobukawa, Kindai Univ. (Japan); Yasuo Arai, High Energy Accelerator Research Organization, KEK (Japan); Ikuo Kurachi, D&S Inc. (Japan); Shoji Kawahito, Keita Yasutomi, Shizuoka Univ. (Japan)
18 July 2022 • 11:10 - 11:30 EDT | Room 519 b

12191-22
A CMOS image sensor for soft X-ray astronomy
Author(s): Konstantin D. Stefanov, Julian Heymes, Thomas Buggey, James Ivory, Oliver Hetherington, Andrew D. Holland, The Open Univ. (United Kingdom); Jérôme Pratlong, Georgios Tsiolis, David Morris, Teledyne e2v UK Ltd. (United Kingdom); Kyriaki Minoglou, European Space Research and Technology Ctr., European Space Agency (Netherlands); Thibaut Prod'homme, European Space Research and Technology Ctr. (Netherlands); Matthew Soman, European Space Research and Technology Ctr., European Space Agency (Netherlands)
18 July 2022 • 11:30 - 11:50 EDT | Room 519 b

Lunch/Exhibition Break 11:50 - 13:30

SESSION 6: INFRARED SENSORS I

18 July 2022 • 13:30 - 15:10 EDT | Room 519 b

12191-23
Optical characterization of a low f-number cryogenic spot scan objective for infrared detectors
Author(s): Joris Goree, Sophie Derelle, Edouard Huard de Verneuil, Julien Jaeck, ONERA (France); Olivier Gravrand, CEA-LETI (France); Salima Mouzali, CEA-IRFU (France); Jérome Primot, ONERA (France)
18 July 2022 • 13:30 - 13:50 EDT | Room 519 b

12191-24
The SATIN Infrared Detector Development Program and the Road to HELLSTAR
Author(s): Donald F. Figer, Justin P. Gallagher, Lazar Buntic, Rochester Institute of Technology (United States); Jonathan Getty, Raytheon Technologies Corp. (United States); Stefan Lauxtermann, Sensor Creations, Inc. (United States)
18 July 2022 • 13:50 - 14:10 EDT | Room 519 b

12191-25
Flux reconstruction for the NIR camera CAGIRE at the focus of the telescope Colibrí
Author(s): Alix Nouvel de la Fleche, Jean-Luc Atteia, Hervé Valentin, Marie Larrieu, Jérémie Boy, Institut de Recherche en Astrophysique et Planétologie (France); Olivier Gravrand, CEA-LETI (France); Olivier Boulade, CEA-IRFU (France); Jean-Claude Clemens, Aix Marseille Univ, CNRS/IN2P3, CPPM, (France); Aurélia Secroun, Aix Marseille Univ, CNRS/IN2P3, CPPM (France); Eric Kajfasz, Aix-Marseille Univ., CNRS (France), Ctr. de Physique des Particules de Marseille, Institut National de Physique Nucléaire et de Physique des Particules du CNRS (France), Institut Physique de l'Univers (France); Olivier Llido, Aix Marseille ,CNRS/IN2P3, CPPM (France); Stéphane Basa, Aix Marseille Univ, CNRS, CNES, LAM (France); François Dolon, Aix Marseille Univ,CNRS, CNES, LAM (France); Johan Floriot, Aix Marseille Univ,CNRS,CNES,LAM (France); Simona Lombardo, Aix Marseille Univ, CNRS, CNES, LAM (France); Adrien Lamoure, Laurent Rubaldo, Bruno Fieque, Julien Roumegoux, LYNRED (France); Hervé Geoffray, Ctr. National d'Études Spatiales (France); Alan M. Watson, Instituto de Astronomia, Universidad National Autonoma de Mexico (Mexico); William H. Lee, Instituto de Astronomıa, Universidad Nacional Autonoma de Mexico (Mexico); Nathaniel Butler, School of Earth and Space Exploration, Arizona State University (United States)
18 July 2022 • 14:10 - 14:30 EDT | Room 519 b

12191-26
InfraRed On-Detector Guide-Windows in the era of Extremely Large Telescopes
Author(s): Edward L. Chapin, Tim Hardy, Jennifer Dunn, Owen Hubner, NRC-Herzberg Astronomy & Astrophysics (Canada)
18 July 2022 • 14:30 - 14:50 EDT | Room 519 b

12191-27
Laboratory and telescope characterization of HAWAII-4RG-15 detector arrays.
Author(s): Klaus W. Hodapp, Shane Jacobson, Institute for Astronomy (United States)
18 July 2022 • 14:50 - 15:10 EDT | Room 519 b

Coffee Break 15:10 - 15:40

SESSION 7: PHOTON COUNTING SENSORS

18 July 2022 • 15:40 - 17:40 EDT | Room 519 b

12191-28
Characterization of single-photon sensing and photon-number resolving CMOS image sensors
Author(s): Justin P. Gallagher, Lazar Buntic, Donald F. Figer, Rochester Institute of Technology (United States)
18 July 2022 • 15:40 - 16:00 EDT | Room 519 b

12191-29
Design of a Skipper CCD Focal Plane for the SOAR Integral Field Spectrograph
Author(s): Edgar Marrufo Villalpando, The Univ. of Chicago (United States), Fermi National Accelerator Lab. (United States); Alex Drlica-Wagner, Fermi National Accelerator Lab. (United States), Kavli Institute for Cosmological Physics, The Univ. of Chicago (United States); Marco Bonati, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Abhishek Bakshi, Gregory E. E. Derylo, Juan Estrada, Fermi National Accelerator Lab. (United States); Luciano Fraga, Laboratório Nacional de Astrofisica - MCTI (Brazil); Stephen Holland, Lawrence Berkeley National Laboratory (United States); Michelle J. J. Jonas, Fermi National Accelerator Lab. (United States); Agustin Lapi, Departamento de Ingenieria Electronica y de Computadoras-Universidad Nacional del Sur (Argentina), Fermi National Accelerator Lab. (United States); Peter Moore, NSF's National Optical-Infrared Astronomy Research Lab. (United States); Andrés A. Plazas Malagón, Princeton Univ. (United States); Javier Tiffenberg, Fermi National Accelerator Lab. (United States)
18 July 2022 • 16:00 - 16:20 EDT | Room 519 b

12191-31
Single electron Sensitive Readout (SiSeRO) X-ray detectors: Technological progress and characterization
Author(s): Tanmoy Chattopadhyay, Sven Herrmann, Peter Orel, Glenn Morris, Dan Wilkins, Steven W. Allen, Stanford Univ. (United States); Gregory Prigozhin, Andrew Malonis, Richard F. Foster, Mark Bautz, Massachusetts Institute of Technology (United States); Kevan Donlon, Michael Cooper, Chris Leitz, MIT Lincoln Lab. (United States)
18 July 2022 • 16:20 - 16:40 EDT | Room 519 b

12191-32
UVSiPM: a light auxiliary detector to measure the night sky background seen by the ASTRI Mini-Array Cherenkov telescopes at the Observatorio del Teide.
Author(s): Domenico Impiombato, Giuseppe Sottile, Fabio Paolo Lo Gerfo, Benedetto Biondo, Osvaldo Catalano, Antonio Alessio Compagnino, Giovanni Contino, Mattia Corpora, Carmelo Gargano, Salvatore Giarrusso, Maria Concetta Maccarone, Teresa Mineo, Giovanni La Rosa, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Giuseppe Leto, INAF - Osservatorio Astrofisico di Catania (Italy); Giovanni Pareschi, INAF - Osservatorio Astronomico di Brera (Italy); Francesco Russo, Pierluca Sangiorgi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Palermo (Italy); Salvatore Scuderi, INAF - Osservatorio Astrofisico di Catania (Italy); Gino Tosti, Univ. degli Studi di Perugia (Italy)
18 July 2022 • 16:40 - 17:00 EDT | Room 519 b

12191-33
Development of position-sensitive photon-counting imager for Ultra-Fast-Astronomy
Author(s): Albert Wai Kit Lau, Yan Yan Chan, George Smoot, Hong Kong Univ. of Science and Technology (Hong Kong, China); Bruce Grossan, Space Sciences Lab., Univ. of California, Berkeley (United States); Mehdi Shafiee, Nazarbayev Univ. (Kazakhstan)
18 July 2022 • 17:00 - 17:20 EDT | Room 519 b

12191-34
First tests of a 1 Megapixel Avalanche Photodiode Array for Ultra-low Background space astronomy
Author(s): Charles-Antoine Claveau, Institute for Astronomy, Univ. of Hawai'i at Manoa (United States); Michael Bottom, Univ. of Hawai'i (United States); Shane Jacobson, Institute for Astronomy, Univ. of Hawai'i at Manoa (United States); Klaus Hodapp, Aidan Walk, Univ. of Hawai'i (United States); Markus Loose, Markury Scientific, Inc. (United States); Ian Baker, Egle Zemaityte, Matthew Hicks, Keith Barnes, Richard Powell, Leonardo UK Ltd. (United Kingdom); Ryan Bradley, Eric Moore, Hawaii Aerospace Corp. (United States)
18 July 2022 • 17:20 - 17:40 EDT | Room 519 b

Coffee Break 10:00 - 10:30

SESSION 8: CRYOGENIC DETECTORS II

19 July 2022 • 10:30 - 11:30 EDT | Room 519 b

12191-35
MKIDS readout implementation with RFSOC
Author(s): Deli Geng, Kieran O'Brien, Tim Morris, Aurelie Magniez, Benedict Hofmann, Benjamin J. Shaw, Durham Univ. (United Kingdom)
19 July 2022 • 10:30 - 10:50 EDT | Room 519 b

12191-36
The anomalous response of photon counting MKIDs made from disordered superconductors
Author(s): Steven de Rooij, Kevin Kouwenhoven, SRON Netherlands Institute for Space Research (Netherlands), Technische Univ. Delft (Netherlands); Vignesh Murugesan, SRON Netherlands Institute for Space Research (Netherlands); David J. Thoen, Technische Univ. Delft (Netherlands); Jochem J. A. Baselmans, SRON Netherlands Institute for Space Research (Netherlands), Technische Univ. Delft (Netherlands); Pieter J. de Visser, SRON Netherlands Institute for Space Research (Netherlands)
19 July 2022 • 10:50 - 11:10 EDT | Room 519 b

12191-37
Repurposing ROACH-1 boards for prototyping of readout systems for optical-NIR MKIDs
Author(s): Oisin Creaner, Dublin Institute for Advanced Studies (Ireland); Colm Bracken, National Univ. of Ireland, Maynooth (Ireland), Dublin Institute for Advanced Studies (Ireland); Jack Piercy, Gerhard Ulbricht, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland); Eoin Baldwin, Mario De Lucia, Trinity College Dublin (Ireland), Dublin Institute for Advanced Studies (Ireland); Tom Ray, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland)
19 July 2022 • 11:10 - 11:30 EDT | Room 519 b

SESSION 9: QE IMPROVEMENT AND TEST

19 July 2022 • 11:30 - 12:10 EDT | Room 519 b

12191-38
2D-doped silicon detectors for UV/optical/NIR and X-ray astronomy
Author(s): Michael E. Hoenk, April D. Jewell, Gillian Kyne, John J. Hennessy, Todd J. Jones, Samuel R. Cheng, Shouleh Nikzad, Jet Propulsion Lab. (United States), Caltech (United States)
19 July 2022 • 11:30 - 11:50 EDT | Room 519 b

12191-39
A low-cost ultraviolet-to-infrared absolute quantum efficiency characterization system of detectors

Author(s): Ajay S. Gill, Univ. of Toronto (Canada), Dunlap Institute for Astronomy & Astrophysics (Canada); Mohamed M. Shaaban, Dunlap Institute for Astronomy & Astrophysics (Canada), Univ. of Toronto (Canada); Aaron Tohuvavohu, Suresh Sivanandam, Roberto G. Abraham, Seery Chen, Maria R. Drout, Deborah Lokhorst, Univ. of Toronto (Canada), Dunlap Institute for Astronomy & Astrophysics (Canada); Christopher D. Matzner, Stefan W. Mochnacki, Univ. of Toronto (Canada); Calvin B. Netterfield, Univ. of Toronto (Canada), Dunlap Institute for Astronomy & Astrophysics (Canada)

19 July 2022 • 11:50 - 12:10 EDT | Room 519 b

Lunch/Exhibition Break 12:10 - 13:30

SESSION 10: X-RAY SENSORS II

19 July 2022 • 13:30 - 15:10 EDT | Room 519 b

12191-40
The focal plane camera for the Off-Plane Grating Rocket Experiment

Author(s): Daniel A. Evan, Andrew Holland, James Endicott, Open University (United Kingdom); Karen Holland, David Gopinath, XCAM Ltd. (United Kingdom); James H. Tutt, Randall L. McEntaffer, The Pennsylvania State University (United States)

19 July 2022 • 13:30 - 13:50 EDT | Room 519 b

12191-41
PixDD: a multi-pixel Silicon Drift Detector for high-throughput spectral-timing studies

Author(s): Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Filippo Ambrosino, INAF - Osservatorio Astronomico di Roma (Italy); Pierluigi Bellutti, Fondazione Bruno Kessler (Italy); Giuseppe Bertuccio, Politecnico di Milano (Italy); Giacomo Borghi, Fondazione Bruno Kessler (Italy); Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Michele Caselle, Karlsruher Institut für Technologie (Germany); Daniela Cirrincione, Istituto Nazionale di Fisica Nucleare (Italy); Irisa Dedolli, Politecnico di Milano (Italy); Ettore Del Monte, Yuri Evangelista, Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Mauro Fiorini, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Fabio Fuschino, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Marco Grassi, Univ. degli Studi di Pavia (Italy); Claudio Labanti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Piero Malcovati, Univ. degli Studi di Pavia (Italy); Filippo Mele, Politecnico di Milano (Italy); Alexandre Rachevski, Istituto Nazionale di Fisica Nucleare (Italy); Irina Rashevskaya, Trento Institute for Fundamental Physics and Applications (Italy), Istituto Nazionale di Fisica Nucleare (Italy); José Suarez, Istituto Nazionale di Fisica Nucleare (Italy); Andrea Vacchi, Univ. degli Studi di Udine (Italy); Gianluigi Zampa, Nicola Zampa, Istituto Nazionale di Fisica Nucleare (Italy)

19 July 2022 • 13:50 - 14:10 EDT | Room 519 b

12191-42
X-ray speed reading: enabling fast, low noise readout for next-generation CCDs

Author(s): Sven C. Herrmann, Peter Orel, Tanmoy Chattopadhyay, Glenn Morris, Stanford Univ. (United States); Gregory Prigozhin, Massachusetts Institute of Technology (United States); Kevan Donlon, MIT Lincoln Lab. (United States); Richard Foster, Massachusetts Institute of Technology (United States); Steve W. Allen, Stanford Univ. (United States); Marshall W. Bautz, Massachusetts Institute of Technology (United States); Christopher W. Leitz, MIT Lincoln Lab. (United States)

19 July 2022 • 14:10 - 14:30 EDT | Room 519 b

12191-43
Evaluation of sensors for the detection of energy resolved very soft X-ray fluorescence

Author(s): Lawrence S. Jones, Chiaki Crews, Matthew Soman, The Open Univ. (United Kingdom); James Ivory, The Open University (United Kingdom); Andrew D. Holland, The Open Univ. (United Kingdom)

19 July 2022 • 14:30 - 14:50 EDT | Room 519 b

12191-44
Performance of a kilo-pixel RNDR-DePFET sensor

Author(s): Wolfgang Treberspurg, Institute of High Energy Physics (Austria), Univ. of Applied Sciences Wiener Neustadt (Austria)

19 July 2022 • 14:50 - 15:10 EDT | Room 519 b

Coffee Break 15:10 - 15:40

SESSION 11: VISIBLE SENSORS II

19 July 2022 • 15:40 - 17:00 EDT | Room 519 b

12191-45
High precision ground-based CCD photometry from the Next Generation Transit Survey

Author(s): Daniel Bayliss, The Univ. of Warwick (United Kingdom); Adam Wise, Andor Technology Ltd. (United Kingdom); Peter Wheatley, Richard West, The Univ. of Warwick (United Kingdom); Ines Juvan-Beaulieu, Colin Coates, Andor Technology Ltd. (United Kingdom); Paul Chote, The Univ. of Warwick (United Kingdom); Matthew R. Burleigh, University of Leicester (United Kingdom)

19 July 2022 • 15:40 - 16:00 EDT | Room 519 b

12191-46
C-Blue 3 PC: a photon counting multimegapixel visible CMOS camera

Author(s): Jean-Luc Gach, Isaure De Kernier, Philippe Feautrier, First Light Imaging S.A.S. (France)

19 July 2022 • 16:00 - 16:20 EDT | Room 519 b

12191-47
Characterization of the CCD detectors and developing an Exposure time estimator for Wide Area Linear Optical Polarimeters

Author(s): Ramya M. Anche, Steward Observatory, The Univ. of Arizona (United States), Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Bhushan Joshi, Pravin Chordia, Sakya Sinha, Mahesh Burse, Sujit Punnadi, Siddharth Maharana, A. N. Ramaprakash, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); Georgia V. Panopoulou, Caltech (United States); Dmitry Blinov, Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Kalpesh Chillal, Vilas Mestry, Rani S. Bhandare, Inter-Univ. Ctr. for Astronomy and Astrophysics (India); John. A. Kypriotakis, Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Hans Kristian Eriksen, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Nikolaos Mandarakas, Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Eirik Gjerløw, Institute of Theoretical Astrophysics, Univ. of Oslo (Norway); Vasiliki Pavlidou, Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Timothy J. Pearson, The Cahill Ctr. for Astronomy and Astrophysics, Caltech (United States); Vincent Pelgrims, Univ. of Crete (Greece); Stephen B. Potter, South African Astronomical Observatory (South Africa); Anthony C. S. Readhead, The Cahill Ctr. for Astronomy and Astrophysics, Caltech (United States); Raphael Skalidis, Konstantinos Tassis, Institute of Astrophysics, Foundation for Research and Technology-Hellas (Greece); Ingunn K. Wehus, Institute of Theoretical Astrophysics, Univ. of Oslo (United States)

19 July 2022 • 16:20 - 16:40 EDT | Room 519 b

12191-48
Latest results for a fast low noise CCD readout based on pJFET

Author(s): Gregory Y. Prigozhin, Beverly J. LaMarr, MIT Kavli Institute for Astrophysics and Space Research (United States); Kevan Donlon, Michael J. Cooper, Christopher W. Leitz, MIT Lincoln Lab. (United States); Andrew Malonis, Richard Foster, Marshall W. Bautz, MIT Kavli Institute for Astrophysics and Space Research (United States)

19 July 2022 • 16:40 - 17:00 EDT | Room 519 b

SESSION 12: PERFORMANCE SIMULATIONS

19 July 2022 • 17:00 - 18:00 EDT | Room 519 b

12191-49
Modeling Effects of Charge Sharing on the Response of the FOXSI Sounding Rockets
Author(s): Jessie Duncan, Lindsay Glesener, Univ. of Minnesota, Twin Cities (United States); P. Subramania Athiray, NASA Marshall Space Flight Ctr. (United States); Juan Camilo Buitrago Casas, Univ. of California, Berkeley (United States); Steven Christe, NASA Goddard Space Flight Ctr. (United States); Sam Krucker, Fachhochschule NordWestschweiz (Switzerland); Sophie Musset, European Space Research and Technology Ctr. (Netherlands); Shunsaku Nagasawa, Tadayuki Takahashi, Kavli Institute for the Physics and Mathematics of the Universe (Japan); Shin Watanabe, Institute of Space and Astronautical Science (Japan); Juliana Vievering, Johns Hopkins Univ. Applied Physics Lab., LLC (United States); Yixian Zhang, Univ. of Minnesota, Twin Cities (United States)
19 July 2022 • 17:00 - 17:20 EDT | Room 519 b

12191-50
Calibrating and correcting Charge Transfer Inefficiency in CCDs using the Pyxel framework
Author(s): Bradley Kelman, The Open Univ. (United Kingdom); Thibaut Prod'homme, European Space Research and Technology Ctr. (Netherlands); Jesper Skottfelt, The Open Univ. (United Kingdom); Frederic Lemmel, Matej Arko, Peter Verhoeve, European Space Research and Technology Ctr. (Netherlands); Patricia Liebing, Mullard Space Science Lab., Univ. College London (United Kingdom); Henk Hoekstra, Leiden Observatory (Netherlands)
19 July 2022 • 17:20 - 17:40 EDT | Room 519 b

12191-51
Modelling charge transfer inefficiency in Gaia CCDs with in-flight and on-ground data
Author(s): Saad Ahmed, David Hall, Jesper Skottfelt, Ben Dryer, Andrew Holland, The Open Univ. (United Kingdom); Cian Crowley, Jose Hernandez, European Space Astronomy Ctr. (Spain)
19 July 2022 • 17:40 - 18:00 EDT | Room 519 b

Coffee Break 10:00 - 10:30

SESSION 13: TEST

20 July 2022 • 10:30 - 11:10 EDT | Room 519 b

12191-52
ESA's Science next generation detector characterization bench
Author(s): Thibaut Prod'homme, Sander Blommaert, Alessandro Meoli, Ivo Visser, Frederic Lemmel, Brian Shortt, James Etchells, Joerg Ter Haar, Conor Robinson, Peter Verhoeve, Dennis Breeveld, European Space Research and Technology Ctr. (Netherlands)
20 July 2022 • 10:30 - 10:50 EDT | Room 519 b

12191-54
Predicting the performance benefit of tri-level clocking in CCDs using the Active Trap Model
Author(s): Thomas W. Buggey, David Hall, The Open Univ. (United Kingdom); Matthew Soman, European Space Research and Technology Ctr. (Netherlands); Andrew Holland, The Open Univ. (United Kingdom); Peter Verhoeve, European Space Research and Technology Ctr. (Netherlands)
20 July 2022 • 10:50 - 11:10 EDT | Room 519 b

SESSION 14: UV DETECTORS

20 July 2022 • 11:20 - 12:00 EDT | Room 519 b

12191-55
UV Photon Counting Detectors with Cross Strip Readouts and Atomic Layer MCPs
Author(s): Oswald H. W. Siegmund, Jason B. Mcphate, Travis Curtis, John V. Vallerga, Space Sciences Lab. (United States)
20 July 2022 • 11:20 - 11:40 EDT | Room 519 b

12191-56
Evaluating detector requirements for the next UV/O/IR flagship observatory
Author(s): Lazar Buntic, Donald F. Figer, Justin P. Gallagher, Rochester Institute of Technology (United States)
20 July 2022 • 11:40 - 12:00 EDT | Room 519 b

Lunch/Exhibition Break 12:00 - 13:40

SESSION 15: INFRARED DETECTORS II

20 July 2022 • 13:40 - 15:00 EDT | Room 519 b

12191-79
ALFA and Asteroid programs: status of development of high-performance IR detectors for space applications
Author(s): Thibault Pichon, Olivier Boulade, Salima Mouzali, Cyrille Delisle, Patrick Mulet, Léna Provost, Benoit Horeau, Ayoub Bounab, CEA-IRFU (France); Adrien Lamoure, Bruno Fièque, Diane Sam-Giao, LYNRED (France); Giacomo Badano, Olivier Gravrand, Sylvette Bisotto, Clément Lobre, CEA-LETI (France)
20 July 2022 • 13:40 - 14:00 EDT | Room 519 b

12191-68
A systematic study of persistence characterization protocols on SWIR HgCdTe detectors for astronomy applications
Author(s): Titouan LeGoff, Nicolas Baier, Olivier Gravrand, CEA-LETI (France); Olivier Boulade, Thibault Pichon, CEA-IRFU (France)
20 July 2022 • 14:00 - 14:20 EDT | Room 519 b

12191-81
ARIEL early engineering model H1RG IR detectors: first characterization results
Author(s): Thibault Pichon, Victor Schwartz, Christophe Cara, Vincent Moreau, Léna Provost, Patrick Mulet, François Visticot, Jérome Marignac, Michel Berthé, CEA-IRFU (France)
20 July 2022 • 14:20 - 14:40 EDT | Room 519 b

12191-83
Cryogenic test setup and performance characterization of the HAWAII-4RG sensor for GIRMOS
Author(s): Patrick Kibambe Mashoko Nkwari, Suresh Sivanandam, Saugata Dutt, Lee Sikstrom, Univ. of Toronto (Canada)
20 July 2022 • 14:40 - 15:00 EDT | Room 519 b

Coffee Break 15:00 - 15:30

SESSION 16: INFRARED DETECTORS III

20 July 2022 • 15:30 - 17:30 EDT | Room 519 b

12191-57
improving the photometric accuracy of JWST by limiting the dynamic range of integrations
Author(s): Michael W. Regan, Louis E. Bergeron, Space Telescope Science Institute (United States)
20 July 2022 • 15:30 - 15:50 EDT | Room 519 b

12191-58
Sub-electron noise infrared camera development using Leonardo large format 2Kx2K SWIR APD array
Author(s): Philippe Feautrier, First Light Imaging S.A.S. (France); Ian Baker, Matthew Hicks, Leonardo UK Ltd. (United Kingdom); Jean-Luc Gach, First Light Imaging S.A.S. (France); Keith Barnes, Leonardo UK Ltd. (United Kingdom); David Boutolleau, First Light Imaging S.A.S. (France)
20 July 2022 • 15:50 - 16:10 EDT | Room 519 b

12191-60
Initial characterization of the 512 x 512 pixel SAPHIRA infrared APD array
Author(s): Tim Hardy, Greg Burley, NRC-Herzberg Astronomy & Astrophysics (Canada)
20 July 2022 • 16:10 - 16:30 EDT | Room 519 b

12191-61
Performance of a ground and space-based MCT detector stressed at low temperature

Author(s): Jorge Jiménez, Cristobal Padilla, Institut de Física d'Altes Energies (Spain); Antoni Grau, Univ. Politècnica de Catalunya (Spain)

20 July 2022 • 16:30 - 16:50 EDT | Room 519 b

12191-62
Packaging design and test of cryogenic readout electronics for the Euclid Near Infrared Spectrophotometer

Author(s): Warren A. Holmes, Hamlet Aghakians, Sam Avasapian, Ali Bahraman, Andrew Berg, Andrew Beyer, Robert Calvet, Hyung Cho, Linda DelCastillo, Matt Dickie, Ned Ferraro, Narineh Hambarsoumian, Bruce Krohn, Don Lewis, Donna Markley, Kristen MacNeal, Gustavo Maldonado, Jitendra Mehta, Johnny Melendez, Ronald Morgan, Jerry Mulder, Manh Nguyen, Nazia Ovee, Steven Pravdo, David Randall, Joseph Riendeau, Allan Runkle, Marcus Runyan, Anders Skalare, Patricia Tan, Anthony Turner, Jay Wu, Jet Propulsion Lab. (United States); Stephanie Cheung, Analia Cillis, Ben Cho, Greg Delo, Ali Feizi, Roger Foltz, Tsuwei Huang, Eric Kan, Murzy Jhabvala, Steven Van Nostrand, Augustyn Waczynski, Device Characterization Lab., NASA Goddard Space Flight Ctr. (United States); Ellen Boehmer, Mark Farris, Lisa Fischer, Keith Hong, Robert Kopp, Jessica Maiten, Teledyne Imaging Sensors (United States); Markus Loose, Markury Scientific, Inc. (United States); Michael Seiffert, Jet Propulsion Lab. (United States)

20 July 2022 • 16:50 - 17:10 EDT | Room 519 b

12191-63
Status update on the NEO Surveyor detector development

Author(s): Gregory R. Zengilowski, Andre F. Wong, Selmer Wong, Amy K. Mainzer, The Univ. of Arizona (United States); Sean Carey, IPAC (United States); Ian Diaz Vachier, The Univ. of Arizona (United States); Meghan Dorn, Teledyne Imaging Sensors (United States); Peter R. Eisenhardt, Jet Propulsion Lab. (United States); Mark Farris, Teledyne Imaging Sensors (United States); Christopher T. Horne, Molly Janasik, The Univ. of Arizona (United States); Donald Lee, Jessica Maiten, Teledyne Imaging Sensors (United States); Franco Masci, IPAC (United States); Craig McMurtry, Univ. of Rochester (United States); Jianmei Pan, Teledyne Imaging Sensors (United States); James Peterson, Space Dynamics Lab. (United States); Judith Pipher, Nick Reilly, Univ. of Rochester (United States); Lennon Reinhart, Space Dynamics Lab. (United States); Michael E. Ressler, Jet Propulsion Lab. (United States); Kristin Ringhand, Univ. of Rochester (United States); Jason Surace, IPAC (United States)

20 July 2022 • 17:10 - 17:30 EDT | Room 519 b

SESSION PS1: POSTERS-MONDAY

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-64
Frequency Domain Multiplexing for Microwave Kinetic Inductance Detectors Using the Xilinx ZCU111 and 2x2 Radio Frequency System on Chip (RFSoC) Boards

Author(s): Eoin Baldwin, Mario De Lucia, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland); Colm Bracken, National Univ. of Ireland, Maynooth (Ireland), Dublin Institute for Advanced Studies (Ireland); Gerhard Ulbricht, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland); Oisin Creaner, Dublin Institute for Advanced Studies (Ireland); Jack Piercy, Tom Ray, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-66
Noise Analysis in Titanium Nitride Microwave Kinetic Inductance Detectors

Author(s): Jack D. Piercy, Gerhard Ulbricht, Mario De Lucia, Eoin Baldwin, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland); Oisin Creaner, Dublin Institute for Advanced Studies (Ireland); Colm Bracken, National Univ. of Ireland, Maynooth (Ireland), Dublin Institute for Advanced Studies (Ireland); Tom Ray, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-69
High-speed array controller (HIAC) for multi-channel imaging detectors

Author(s): Tim Hardy, Greg Burley, Erning Zhao, NRC-Herzberg Astronomy & Astrophysics (Canada)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-70
Design of Temperature Control System of Scientific Imaging Prototype Camera for WFST

Author(s): Feng Zeng, Hong-fei Zhang, Jun Zhang, Cheng Chen, Hui Wang, Yi-hao Zhang, Qi Feng, Jiang-yuan Wei, Jian Wang, Univ. of Science and Technology of China (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-71
New channel for the GREGOR infrared spectrograph: sensor characterization and synch

Author(s): Horacio Rodriguez Delgado, Carlos Dominguez Tagle, Jorge Quintero Nehrkorn, Jacinto Javier Vaz Cedillo, Carlos Quintero Noda, Silvia Regalado Olivares, Francisco González Pérez, Manuel Collados, Instituto de Astrofísica de Canarias (Spain)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-73
X-ray speed reading with the MCRC: a low noise CCD readout ASIC enabling readout speeds of 5 Mpixel/s/channel

Author(s): Peter Orel, Sven Herrmann, Tanmoy Chattopadhyay, Glenn Morris, Stanford Univ. (United States); Gregory Y. Prigozhin, MIT Kavli Institute for Astrophysics and Space Research (United States); Michael J. Cooper, Kevan Donlon, MIT Lincoln Lab. (United States); Richard Foster, Andrew Malonis, MIT Kavli Institute for Astrophysics and Space Research (United States); Steven W. Allen, Stanford Univ. (United States); Marshall W. Bautz, MIT Kavli Institute for Astrophysics and Space Research (United States)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-74
Design of a web-based operational software for a CCD test platform

Author(s): Zhen-hao Zheng, Hong-fei Zhang, Zhi-yue Wang, Qian Zhang, Ze-yu Zhu, Hui Wang, Cheng Chen, Lu-cheng Zhu, Kun Ge, Hao Liu, Jian Wang, Univ. of Science and Technology of China (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

12191-75
Design of a scientific CMOS camera for astronomical observation

Author(s): Jie Zhu, Hong-Fei Zhang, Yihao Zhang, Yujing Tang, Zeyu Zhu, Jun Zhang, Feng Zeng, Hao Liu, Jian Wang, Univ. of Science and Technology of China (China); Jian Ge, Shanghai Astronomical Observatory, Chinese Academy of Sciences (China)

18 July 2022 • 17:30 - 19:00 EDT | Room 516

SESSION PS2: POSTERS-TUESDAY

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-76
Automation of electromagnetic simulation tools, parameter value extraction, and time-efficient design techniques for MKIDs and other devices

Author(s): Colm P. Bracken, Dublin Institute for Advanced Studies (Ireland); Cathal McAleer, National Univ. of Ireland, Maynooth (Ireland); Mario deLucia, Eoin Baldwin, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland); Jack Piercy, Dublin Institute for Advanced Studies (Ireland); Oisin Creaner, Gerhard Ulbricht, Tom Ray, Dublin Institute for Advanced Studies (Ireland), Trinity College Dublin (Ireland)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-78
Testing results from pathfinder HgCdTe infrared detectors for the Near-Earth Object Surveyor mission

Author(s): Nick S. Reilly, Univ. of Rochester (United States); Gregory Zengilowski, The Univ. of Arizona (United States); Sean Carey, IPAC, Caltech (United States); Meghan Dorn, Teledyne Imaging Sensors (United States); Peter Eisenhardt, Jet Propulsion Lab. (United States); Mark Farris, Donald Lee, Teledyne Imaging Sensors (United States); Amy Mainzer, The Univ. of Arizona (United States); Frank Masci, IPAC, Caltech (United States); Craig McMurtry, Univ. of Rochester (United States); Jainmei Pan, Teledyne Imaging Sensors (United States); Judith Pipher, Univ. of Rochester (United States); Lennon Reinhart, Space Dynamics Lab. (United States); Michael Ressler, Jet Propulsion Lab. (United States); Kristin Ringhand, Univ. of Rochester (United States); Jason Surace, IPAC, Caltech (United States); James Peterson, Space Dynamics Lab. (United States); Andre Wong, The Univ. of Arizona (United States)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-79
Design of a scientific CCD camera based on CCD driving and readout ASIC chips

Author(s): Wei-jie Jiang, Hong-fei Zhang, Jie Gao, Wen-qing Qu, Hui Wang, Cheng Chen, Jun Zhang, Feng Zeng, Jian Wang, Univ. of Science and Technology of China (China)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-80
Results of accelerometer monitor in the ground testing of Resolve x-ray microcalorimeter instrument onboard XRISM

Author(s): Ryuta Imamura, Ehime Univ. (Japan); Masahiro Tsujimoto, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency (Japan); Hisamitsu Awaki, Ehime Univ. (Japan); Meng P. Chiao, NASA Goddard Space Flight Ctr. (United States); Yoshitaka Ishisaki, ToTokyo Metropolitan University (Japan); Richard L. Kelley, Caroline A. Kilbourne, Frederick S. Porter, NASA Goddard Space Flight Ctr. (United States); Makoto Sawada, RIKEN (Japan); Gary A. Sneiderman, NASA Goddard Space Flight Ctr. (United States); Yoh Takei, Japan Aerospace Exploration Agency (Japan); Shinya Yamada, Rikkyo Univ. (Japan)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-81
Design and manufacture of the carrier an flex cable for the Leonardo 1K.

Author(s): Annino Vaccarella, Michael Ellis, James Gilbert, Nicholas Herrald, Robert Sharp, The Australian National Univ. (Australia); Egle Zemaityte, Matthew Hicks, Leonardo (United Kingdom)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-82
Development of polarization-sensitive imaging detectors based on organic nanostructured coatings

Author(s): Michela C. Uslenghi, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Chiara Botta, Istituto di Scienze e Tecnologie Chimiche 'Giulio Natta' (Italy); Daniele Faccini, Mauro Fiorini, Salvatore Incorvaia, Giorgio Toso, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Mariacecilia Pasini, Benedetta Squeo, Istituto di Scienze e Tecnologie Chimiche 'Giulio Natta' (Italy)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-83
ADR Control electronics for Athena-X-IFU instrument, status and perspectives

Author(s): Ayoub Bounab, Eric Doumayrou, Jean-Paul Charrier, Tony Lavanant, Michel Lortholary, Frédéric P. Pinsard, CEA-Paris-Saclay (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-84
general purpose controller for CMOS detector validation

Author(s): Alessandro Meoli, European Space Research and Technology Ctr., European Space Agency (Netherlands); Joerg ter Haar, Frederic Lemmel, Conor Robinson, Ivo Visser, Cornelis Van Der Luijt, Thibaut Prod'homme, Sander Blommaert, Brian Shortt, European Space Agency (Netherlands)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-86
Cryogenic low noise amplifier using cryoHEMTs + SiGe ASICs for the readout of high impedance bolometers

Author(s): Ayoub Bounab, Xavier de la Broïse, Benjamin Criton, CEA-Paris-Saclay (France); Alexandre Juillard, Institut de Physique des 2 Infinis de Lyon (France); Claudia Nones, Jean-Luc Sauvageot, CEA-Paris-Saclay (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-87
Quantix and Intrapix test benches dedicated to quantum efficiency measurement and intra-pixel response of detectors from VIS to LWIR

Author(s): Thibault Pichon, Olivier Boulade, Cyrille Delisle, Patrick Mulet, Léna Provost, Olivier Tellier, Thierry Orduna, Benoit Horeau, Ayoub Bounab, Didier Dubreuil, Samuel Ronayette, CEA-IRFU (France); Cyril Cervera, CEA-LETI (France); Michel Lortholary, CEA-IRFU (France); Sophie Derelle, Eduard Huard, ONERA (France); Christian Ketchazo, Vincent Moreau, CEA-IRFU (France)

19 July 2022 • 18:00 - 20:00 EDT | Room 516

SESSION PS3: POSTERS-WEDNESDAY

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-88
Characterization of the response to spot illumination of the PLATO CCD

Author(s): Peter Verhoeve, Sander Blommaert, Dennis Breeveld, Joerg ter Haar, Frederic lemmel, Yves Levillain, Cornelis van der Luijt, Thibaut Prod'homme, Hans Smit, Brian Shortt, Ivo Visser, European Space Research and Technology Ctr., European Space Agency (Netherlands)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-89
Charge transfer efficiency of CCDs with a single-polysilicon gate structure

Author(s): Beverly J. LaMarr, Marshall W. Bautz, Eric D. Miller, Gregory Y. Prigozhin, Massachusetts Institute of Technology (United States); Michael J. Cooper, Kevan Donlon, MIT Lincoln Lab. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-91
Study of radiation-induced effects on the RIGEL ASIC

Author(s): Francesco Ceraudo, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Filippo Ambrosino, INAF - Osservatorio Astronomico di Roma (Italy); Pierluigi Bellutti, Fondazione Bruno Kessler (Italy); Giuseppe Bertuccio, Politecnico di Milano (Italy); Giacomo Borghi, Fondazione Bruno Kessler (Italy); Riccardo Campana, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Michele Caselle, Karlsruher Institut für Technologie (Germany); Daniela Cirrincione, Istituto Nazionale di Fisica Nucleare (Italy); Irisa Dedolli, Politecnico di Milano (Italy); Ettore Del Monte, Yuri Evangelista, Marco Feroci, INAF - Istituto di Astrofisica e Planetologia Spaziali (Italy); Mauro Fiorini, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Fabio Fuschino, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Marco Grassi, Univ. degli Studi di Pavia (Italy); Claudio Labanti, INAF - Osservatorio di Astrofisica e Scienza dello Spazio (Italy); Piero Malcovati, Univ. degli Studi di Pavia (Italy); Filippo Mele, Politecnico di Milano (Italy); Alexandre Rachevski, Istituto Nazionale di Fisica Nucleare (Italy); Irina Rashevskaya, Trento Institute for Fundamental Physics and Applications (Italy), Istituto Nazionale di Fisica Nucleare (Italy); José Suarez, Istituto Nazionale di Fisica Nucleare (Italy); Andrea Vacchi, Univ. degli Studi di Udine (Italy); Gianluigi Zampa, Nicola Zampa, Istituto Nazionale di Fisica Nucleare (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-92
C-RED 2 ER : high speed extended InGaAs cameras for infrared imaging

Author(s): Isaure De Kernier, Yann Wanwanscappel, David Boutolleau, Thomas Carmignani, Fabien Clop, Philippe Feautrier, Jean-Luc Gach, Stephane Lemarchand, Eric Stadler, First Light Imaging S.A.S. (France)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-93
Readout and cooling of the WINTER InGaAs camera

Author(s): Danielle Frostig, Andrew C. Malonis, Mark D. Egan, Gábor Fűrész, MIT Kavli Institute for Astrophysics and Space Research (United States); Kari Haworth, Harvard-Smithsonian Ctr. for Astrophysics (United States); Erik Hinrichsen, MIT Kavli Institute for Astrophysics and Space Research (United States); Mansi M. Kasliwal, Caltech (United States); Nathan P. Lourie, MIT Kavli Institute for Astrophysics and Space Research (United States); Robert A. Simcoe, MIT Kavli Institute for Astrophysics and Space Research (United States), Massachusetts Institute of Technology (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-94
Development of a novel photon counting detector for UV spectrographs

Author(s): Michela C. Uslenghi, Daniele Faccini, Mauro Fiorini, Giorgio Toso, INAF - Istituto di Astrofisica Spaziale e Fisica cosmica Milano (Italy); Carlo Fiorini, Marco Carminati, Edoardo Fabbrica, Politecnico di Milano (Italy); Maria G. Pelizzo, Istituto di Elettronica e di Ingegneria dell'Informazione e delle Telecomunicazioni, Consiglio Nazionale delle Ricerche (Italy); Alain J. Corso, CNR-Istituto di Fotonica e Nanotecnologie (Italy)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-95
A Detailed Analysis of the Guidance System Development for tREXS

Author(s): Keir Hunter, James Tutt, The Pennsylvania State Univ. (United States); Drew Miles, California Institute of Technology (United States); Ross McCurdy, Randall McEntaffer, The Pennsylvania State Univ. (United States); Bailey Myers, Lockheed Martin (United States); Logan Baker, Christopher Hillman, Bridget O'Meara, Natalie Zinski, The Pennsylvania State Univ. (United States)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-96
Detector package for the DIRAC infra-red camera

Author(s): Annino Vaccarella, The Australian National Univ. (Australia); David Adams, Australian Astronomical Optics, Macquarie Univ. (Australia); Michael Ellis, James Gilbert, Alexey Grigoriev, Dionne Haynes, Ian Price, Warrick Schofield, Brian Taylor, The Australian National Univ. (Australia)

20 July 2022 • 18:00 - 20:00 EDT | Room 516

12191-98
Euclid Near Infrared Spectro-Photometer: spatial considerations on H2RG detectors interpixel capacitance and IPC corrected conversion gain from on-ground characterization

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20 July 2022 • 18:00 - 20:00 EDT | Room 516

REMOTE PRESENTATIONS

12191-20 Design and test results of scientific x-ray CMOS cameras

Contact author(s): Wang Wenxin, National Astronomical Observatories, China

Oral

12191-30 Fast readout of the Skipper CCD for astronomy and quantum imaging

Contact author(s): Lapi Agustin, Fermi National Accelerator Lab., United States

Oral

12191-40 The focal plane camera for the Off-plane Grating Rocket Experiment

Contact author(s): Evan Daniel A, Open University, United Kingdom

Oral

12191-53 Bad pixel recognition and dark current modelling for CMOS with machine learning algorithm

Contact author(s): Jia Peng, Taiyuan Univ. of Technology, China

Oral

12191-65 Optimal design and method of Cassegrain instrument unit for 1.2 m Sun Yat-sen University telescope

Contact author(s): Ren Changzhi, Nanjing Institute of Technology, China

Poster

12191-67 The Signal Processing ASIC for astronomical CCD controller

Contact author(s): Zhang Yuheng, National Astronomical Observatories, China

Poster

12191-68 Design of the electronic system for a mini single CCD camera based on ASIC

Contact author(s): Zhang Yuheng, National Astronomical Observatories, China

Poster

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