

JAHRESSTATISTIK
2021



Impressum

Herausgeber: Max-Planck-Institut für extraterrestrische Physik

Redaktion und Layout: T. Herrmann, B. Niebisch

Personal 2021

Direktoren

Prof. Dr. R. Bender, Optische und Interpretative Astronomie, gleichzeitig Lehrstuhl für Astronomie/Astrophysik an der Ludwig-Maximilians-Universität München

Prof. Dr. P. Caselli, Zentrum für Astrochemische Studien (Geschäftsführung)

Prof. Dr. R. Genzel, Infrarot- und Submillimeter-Astronomie, gleichzeitig Prof. of Physics, University of California, Berkeley (USA)

Prof. Dr. K. Nandra, Hochenergie-Astrophysik

Prof. Dr. G. Haerendel (emeritiertes wiss. Mitglied)

Prof. Dr. G. Morfill (emeritiertes wiss. Mitglied)

Prof. Dr. K. Pinkau (emeritiertes wiss. Mitglied)

Prof. Dr. J. Trümper (emeritiertes wiss. Mitglied)

Selbstständige Nachwuchsgruppen

Dr. S. Spezzano

Minerva Fast Track

Dr. E. Redaelli

Direktionsassistent

Dr. D. Lutz

Pressesprecherin

Dr. H. Hämmerle

Auswärtige wissenschaftliche Mitglieder

Prof. Dr. E. van Dishoeck, Leiden Observatory (Niederlande), MPE

Prof. Dr. John Kormendy, Univ. of Texas at Austin (USA)

Prof. Dr. R. Z. Sagdeev, Univ. of Maryland (USA)

Prof. Dr. M. Schmidt, CALTECH, Pasadena (USA)

Dr. Karl Schuster, IRAM, Grenoble (Frankreich)

Prof. Dr. A. Sternberg, Tel Aviv University (Israel)

Prof. Dr. T. de Zeeuw, Leiden Observatory (Niederlande), MPE Senior Associate Scientist

Kuratorium (gemeinsam mit dem MPI für Astrophysik)

Prof. Dr. A. Bode, Leibniz-Rechenzentrum der Bayerischen Akademie der Wissenschaften, Garching

Dr. R. Breuer, ehem. Chefredakteur Spektrum der Wissenschaft, Heidelberg

Prof. Dr. P. Ehrenfreund, Vorstandsvorsitzende, Deutsches Zentrum für Luft und Raumfahrt (DLR), Köln

MdB F. Hahn, Deutscher Bundestag, Berlin

Prof. Dr. B. Huber, Präsident der Ludwig-Maximilians-Universität, München

Dr. F. Merkle, OHB System AG, Bremen

Dr. U. von Rauchhaupt, Frankfurter Allgemeine Zeitung,

Frankfurt/Main

Prof. R. Rodenstock, Optische Werke G. Rodenstock GmbH & Co. KG, München

Dr. J. Rubner, Bayerischer Rundfunk, München

Dr. M. Wolter, Bayer. Staatsministerium für Wirtschaft, Energie und Technologie, München

Fachbeirat

Prof. Dr. C. Canizares, MIT, Kavli Institute, Cambridge (USA)

Prof. Dr. A. Celotti, SISSA, Trieste (Italien)

Prof. Dr. N. Evans, The University of Texas at Austin, Austin (USA)

Prof. Dr. K. Freeman, Mt Stromlo Observatory, Weston Creek (Australien)

Prof. Dr. A. Goodman, Harvard-Smithsonian Center for Astrophysics, Cambridge (USA)

Prof. Dr. R. C. Kennicutt, University of Arizona, Tucson (USA) & Texas A&M University, College Station (USA)

Prof. Dr. K. Kuijken, Universiteit Leiden, Leiden (Niederlande)

Prof. Dr. E. Quataert, University of California, Berkeley (USA)

Prof. Dr. G. J. Stacey, Cornell University, Ithaca (USA)

Fachübergreifende Fachbeiräte

Prof. Dr. C. Cesarsky, Commissariat à l'Énergie Atomique, France, Saclay-Paris (Frankreich)

Prof. Dr. J. Peacock, Universität Edinburgh (UK)

Wissenschaftliche Auszeichnungen, Berufungen

Eisenhauer, F.: Tycho Brahe Medal, European Astronomical Society, Genf, Switzerland, March 2021.

Redaelli, E.: Otto Hahn Medal 2020, Max Planck Society, Munich, Germany, April 2021.

Predehl, Peter: MPE shares Institutional Marcel Grossmann Award for development of eROSITA aboard SRG, International Center for Relativistic Astrophysics, Rome, Italy, July 2021.

van Dishoeck, E.: Member, Pontifical Academy of Sciences, Vatican City, Vatican, August 2021.

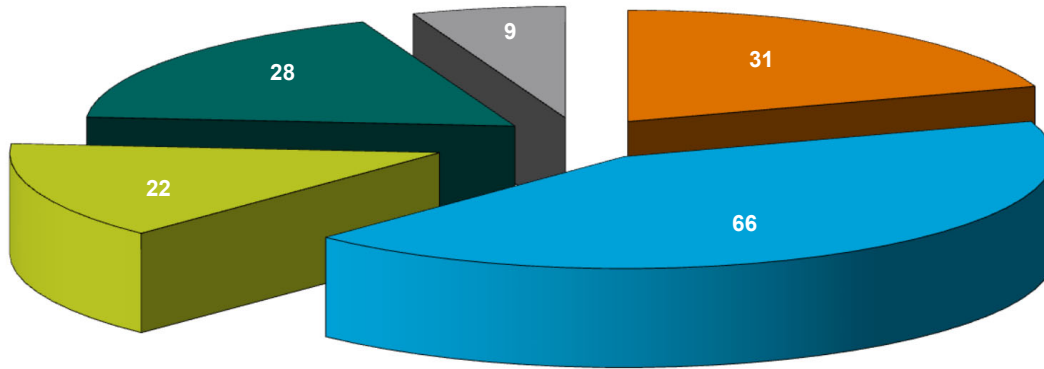
Eisenhauer, F.: Stern Gerlach Medal, Deutsche Physikalische Gesellschaft (DPG), Bad Honnef, Germany, November 2021.

Eisenhauer, F.: Foreign Associate, Académie des Sciences, Paris, France, December 2021.

Eisenhauer, F.: Jackson-Gwilt Medal, Royal Astronomical Society, London, United Kingdom, December 2021.

Wissenschaftliche Arbeitsgruppen

Mitarbeiter nach wissenschaftlichen Arbeitsgruppen



■ Infrarot
 ■ HE-Astrophysik
 ■ CAS
 ■ OPINAS
 ■ Forschungsgruppen

Infrarot- und Submillimeter-Astronomie

Sekretariat: Richter, A.

Teamassistentinnen: Dengler, S.; Hagedorn, I. (seit 01.03.); Kleiser, A.; Zanker-Smith, J.

Bauböck, Dr. M. (bis 31.07.); Biondi, Dr. F.; Bourdarot, Dr. G. (seit 01.11.); Cao, Dr. Y. (seit 01.07.); Coogan, Dr. R.; Dallilar, Dr. Y.; Davies, Dr. R.; Eisenhauer, Dr. F.; Feuchtgruber, Dipl.-Phys. H.; Förster Schreiber, Dr. N.; Gillessen, Dr. S.; Habibi, Dr. M. (bis 15.10.); Kravchenko, Dr. K.; Lee, Dr. M. (bis 15.10.); Liu, Dr. D.; Lutz, Dr. D.; More, N.; Ott, Dr. T.; Poglitsch, Dr. A. (beurlaubt); Price, Dr. S.; Rabien, Dr. S.; Schrubba, Dr. A. (bis 31.10.); Shanguan, Dr. J.; Shimizu, Dr. T.; Stadler, Dr. J. (bis 30.09.); Straub, Dr. O. (bis 30.11.); Sturm, Dr. E.; Tacconi, Dr. L.; Widmann, Dr. F. (seit 01.11.); Übler, Dr. H. (bis 15.05.); Yazici, Dr. S.

Gäste

Riccardi, Dr. A. (14.-18.06., 21.-24.6., 05.-08.10.); Puglisi, Dr. A. (14.-18.06.); Grani, Dr. P. (21.-24.06., 05.-08.10.); Gardner, T. (05.-08.10.); Selmi, Dr. C. (05.-08.10.); Briguoglio, Dr. R. (05.-08.10.); Schuster, Dr. K. (18.-22.10.); Renzini, Prof. A. (21.-30.10.); Nestor, A. (14.-22.11.); Gurman, A. (14.-22.11.); Contursi, Dr. A.; van Dishoeck, Prof. E.; Finger, Dr. Gert; Sternberg, Prof. A.; Tamburo, P.; de Zeeuw, Prof. T.

Doktoranden (D.) / Master (M.)

Bettoni, G. (seit 04.10., D., van Dishoeck); Bolzer, M.-L., (bis 30.09., M., Eisenhauer); Drescher, A. (bis 19.05., M., seit 17.06., D., Eisenhauer); Fellenberg von, S. (bis 31.12., D., Eisenhauer/Gillessen); Lee, L. Y.-L., (D., Tacconi, Förster-Schreiber); Kaltenbrunner, D. (bis 10.08., M. Shimizu); Mang, F. (seit 15.10., M., Eisenhauer); Santos, D. (seit 01.09., D., Shimizu/Lutz); Wölfer, L. (bis 15.10., D., van Dishoeck); Young, A. (bis 31.12., M., Gillessen)

Hochenergie-Astrophysik

Sekretariat: Boller, B.

Teamassistentin: Frankenhuizen, W.

Altmann, A. (seit 01.6.); Andritschke, Dr. R.; Antonelli, V.; Arcodia, R. (seit 01.10.); Becker, Dr. W.; Behrens, Dr. A.; Beitler, C.; Berlato, F. (bis 31.12.); Boller, Prof. Dr. Th.; Bonholzer, M.; Bradshaw, Dr. M. (bis 30.04.); Brunner, Dr. H.; Buchner, Dr. J.; Bulbul, Dr. E.; Burgess, Dr. M.J.; Burkert, Dr. W.; Buron, A.; Burwitz, Dr. V.; Carpano, Dr. S. (bis 31.12.); Chitham, I. J. (seit 01.11.); Comparat, Dr., J.; Dennerl, Dr. K.; Eraerds, Dr. T. (bis 30.04.); Eder, Dipl.-Ing. J.; Emberger, V.; Frank, J.; Freyberg, Dr. M.; Friedrich, Dr. P.; Friedrich, Dr. S.; Gaida, R.; Gatuzz, Dr. E. (bis 14.07.); Ghirardini, Dr. V.; Gueguen, Dr. A.; Greiner, Dr. J.; Haberl, Dr. F.; Hartner, Dipl. Math. G.; Haase, Dr. J.; Hauser, G.; Keil, Dr. I.; Kienlin von, Dr. A.; Liu, Dr. A.; Liu, Dr. T.; Liu, Dr. Z.; Locatelli, N. (seit

01.11.); Maitra, Dr. Ch.; Malyali, A. (seit 01.10.); Meidinger, Dr. N.; Merloni, Dr. A.; Müller, T.; Müller-Seidlitz, Dr. J.; Oser, J.; Osterhage, Dr. S.; Ott, S.; Pfeffermann, Dipl.-Phys. E.; Pietschner, D.; Predehl, Dr. P.; Ramos Ceja, Dr. M.; Rau, Dr. A.; Reiffers, Dr. J.; Rukdee, Dr. S.; Salvato, Dr. M.; Sanders, Dr. J.; Schmidt, T.; Schweingruber, A.; Siegert, T. (seit 01.11.); Stieglitz, V.; Stewart, Dr. I.; Thi, Dr. W.-F.; Trümper, Prof. Dr. J.; Tsvetkova, Dr. A. (bis 31.12.); Zhang, Dr. X.-L. (bis 31.12.).)

Gäste

Bräuninger, Dr. H.; Coffey, D. (D., Salvato/ Boller); Collmar, Dr. W.; Diehl, Dr. R.; Fukuchi, H. (16.09.-10.11.); Gatuzz, Dr. E. (seit 15.07.); Ichikawa, Prof. Dr., K., (seit 15.03.); Noboriguchi, A. (16.09.-30.10.); Pfeffermann, E.; Pflugradt, J. (07.07.- 30.9.); Pietsch, W.; Scheck, D. (seit 01.10.); Strong, Dr. A.; Schröder Dr. A.;

Doktoranden (D.) / Master (M.)

Bahar, E. (seit 23.09., D., Bulbul); Baronchelli, L. (bis 31.08., D., Nandra); Biltzinger, B. (D., Greiner); Bogensberger, D. (D., Nandra); Camilloni, F. (seit 01.05., D., Becker); Fresco, A. (D., Merloni); Grau, M. (bis 31.08., M., Salvato); Grotova, I. (bis 31.12., D., A. Rau); Hecker, Y. (seit 20.10., M., Greiner); Kaltenberger, D. (seit 01.10, D., Haberl); Igo, Z. (seit 01.10., D., Merloni); Kuhn, M. (M., Greiner); Lopez, N. (seit 27.09., M., Buchner); Mayer, M. (D., Becker); Pawar, A. (seit 01.11., M., Greiner); Pleintinger, M. (D., Diehl); Scheck, D. (bis 30.09., M., Sanders); Shreeram, S., (bis 31.08., M., seit 01.10., D., Bulbul); Seppi, R. (D., Comparat); Schösser, E. (seit 01.09., M., Greiner); Trost, M. (seit 01.04., M., Greiner); Waddell, S. (D., Nandra, Boller); Weinberger, C. (bis 30.09., D., Diehl); Willer, R. (seit 01.06., D., Greiner); Wolf, J. (D., Salvato); Yeung, H.F., (seit 17.09., D., Becker); Zhang, Y., (seit 25.08., D, Ponti); Zheng, X. (D. Ponti)

Optische und Interpretative Astronomie

Sekretariat: Ingram, C.

Bodendorf, Dr. C.; Böhringer, Prof. Dr. H.; Bohnet, Dipl. Phys. A.; Escartin, J.; Fabricius, Dr. M.; Farrow, Dr. M.; Garcia Carpio, Dr. J.; Grupp, Dr. F.; Haeuser, Dr. M. (bis 31.04.); Hopp, Dr. U.; Katterloher, Dr. R.; Kluge, Dr. M.; Kruk, Dr. S. (seit 01.10.); Paech, Dr. K.; Parikh, Dr. T.; Pezzotta, Dr. A.; Pulsoni, Dr. C.; Raison, Dr. F.; Saglia, PD. Dr. R.; Sanchez, Dr. A.; Snigula, Dr. J.; Steinwagner, Dr. J.; Subramanian, Dr. S.; Thomas, Dr. J.; Varga, Dr. T (bis 30.09.); Weller, Prof. Dr. J.; Wetzstein, Dr. M.

Doktoranden (D.) / Master (M.)

Arth, A. (D., Bender); Bolze, R. (M., Bender); Clarke, J. (D., Blumhof, M. (M., Bender); Clarke, J. (D., Gerhard); DeNicola, S. (D., Saglia); Esposito, M. (D., Saglia); Fahrenscho, V. (D., Saglia); Gong, L. (D., Bender); Jouili A. (M., Saglia); Kellermann, H. (D., Grupp); Kodric, M. (D., Bender); Krecker, K. (D., Fabricius); Kuhlberg, M. (D., Saglia); Lipka, M. (D., Saglia); Lippich, M. (D., Bender); Merghan, K. (D.,

Bender); Neureither B. (D., Thomas); Piccinelli, G. (M., Saglia); Seminaite, A. (D., Sanchez); Smolla, M. (D., Bender); Steuer, J. (D., Grupp); Wylie, S. (D., Gerhard)

Zentrum für astrochemische Studien

Sekretariat: Langer, A.

de Oliveira Alves, Dr. F.; Endres, Dr. Ch.; Giuliano, Dr. B.M.; Gong, Dr. M.; Hsieh, Dr. T.-H.; Ivlev, Dr. A.; Jensen, Dr. S.; Jiménez Redondo, Dr. M.; Jusko, Dr. P.; Küffmeier, Dr. M.; Lattanzi, Dr. V.; Lin, Dr. Y.; Maureira Pinochet, Dr. M.J.; Nolan, Dr. Ch.; Pineda Fornerod, Dr. J.; Redaelli, Dr. E.; Schmiedeke Dr. A.; Segura-Cox, Dr. D. (bis 30.09.); Silsbee, Dr. K.; Sipilä, Dr. O.; Spezzano, Dr. S.; Zampetaki, Dr. A. (bis 31.05.)

Gäste

Collmar, Dr. W. (ab 01.01.); Gärtner, L. (01.04.-31.12.); Ginsburg, Prof. A. (14.07.-17.07.); Rab, Dr. Ch. (ab 06.08.)

Doktoranden (D.) / Master (M.)

Alberton, D. (D., Caselli); Carl, T. (bis 31.03., M., Pineda Fornerod, Schmiedeke), Choudhury, S. (D., Caselli, Pineda Fornerod); Ferrer Asensio, J., (D., Caselli, Spezzano); Giers, K. (bis 30.09., M., Spezzano); Giers, K. (ab 01.11., D., Caselli, Spezzano); Kruczkiewicz, F. (ab 01.02., D., Caselli); Müller, B. (D., Caselli, Giuliano); Riedel, W. (ab 01.06., D., Caselli, Redaelli); Tabatabaei Mazraeh No, F.S. (ab 19.04., D., Caselli, Redaelli); Valdivia Mena, M. T. (D., Caselli, Pineda Fornerod); Zamponi Fuentealba, J. (D., Caselli, Maureira Pinochet)

Working Groups

Working Group Gerhard

Gerhard, Dr. O.; Pulsoni, Dr. C.

PhD Students: Clarke, J.; Wylie, S.

Master Student: Almanstoetter, P.

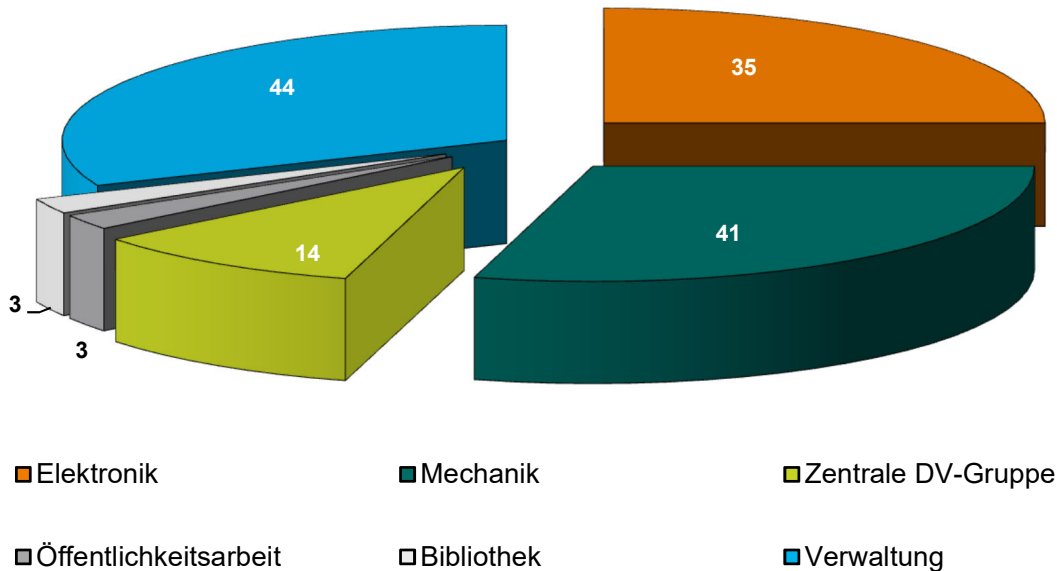
Working Group van Dishoeck

van Dishoeck, Prof. Dr. E.; Cridland, Dr. A. (bis 15.10.); Hu, Dr. C.-Y.; Grant, Dr. S. (seit 13.09.)

PhD Students: Wölfer, L. (bis 14.10.); Bettoni, G. (seit 04.10.)

Ingenieurbereich und Werkstätten

Ingenieurbereich, Werkstätten und Zentrale Bereiche



Elektronische Entwicklung

Plattner, Dr. M. (Leitung bis 30.06.); Albrecht, Dipl.-Ing. S. (Leitung seit 01.09.)

Barl, Dipl.-Ing. (FH) L.; Bechteler, Dr. T.; Besendörfer, A.; Bornemann, Dipl.-Ing. (FH) W.; Burghardt, Dipl.-Ing. (FH) T.; Buron, M.Sc. A.; Erhart, M.Sc.M.; Grabichler, M.Sc. J.; Hälker, Dipl.-Ing. (FH) O.; Hans, O.; Hartmann, K.; Kink, Dipl.-Ing. (FH) W.; Kshirsagar, M.Sc. T.; Mandla, M.Sc. C.; Müller, Dipl.-Ing. (FH) S.; Neumeier, M.Sc. L.; Rau, M.Sc. C.; Skvarc Bozic, M.Sc. G.; Schulte, Dr. W.; Uysal, S. Yaroshenko, V.; Zanker-Smith, J.; Ziegleder, Dipl.-Ing. (FH) J.

Elektronische Werkstatt und Haustechnik

Oberauer, F. (Leitung)

Bachhuber, M.; Berger A.; Cibooglu, H.; Greßmann, R.; Kreibich, I.; Langer, P.; Özdemir, H.; Rupprecht, T.; Schneider, M.; Schneider R.

Doktoranden (D.) / Master (M.)

Alexander, B. (M., Plattner); Annadevara, S. (M., Plattner)

Mechanik und Testlabor

Schubert, Dr. J. (Leitung)

Antonelli, Dr.-Ing. V.; Bräuninger, M.Sc. K. (bis 31.6.); Deysenroth, C.; Deysenroth, M.; Dittrich, Dipl.-Ing. (FH) K.; Emslander, A.; Geis, Dr. N.; Gemperlein, Dipl.-Phys. H.; Hartl, Dr. M.; Haußmann, F.; Hörmann, M.Sc. V.; Huber, Dipl.-Ing. H.; Mican, Dipl.-Ing. B.; Paßlack, Dipl.-Ing. (FH) S.; Pflüger, Dipl.-Ing. (FH) A.; Pietschner, Dipl.-Ing. (FH) D.; Rohe, C.; Strecker, R.; Frank, M.Sc. J.

Mechanische Werkstatt

Czempiel, S. (Leitung)

Bayer, R.; Berger, K. (seit 01.02.); Brara, A.; Budau, B.; Eibl, J.; Feldmeier, P.; Folek L. (seit 13.09.); Furchtsam, C.; Goldbrunner, A.; Hartwig, J.; Honsberg, M.; Huber, D.; Huber, F.-X.; Kestler, H.-J.; Knapp, S.; Krautz, C. (bis 31.07.); Reinold, A. (bis 15.10.); Sandmair, R.; Schunn, W.; Schuppe, D.; Soller, F.; Waldhör, F. (seit 01.02.)

Auszubildende

Beck, A. (seit 01.09.); Furchtsam, S.; Heckmair, S.; Lindemüller C. Loichinger, L.; Schaefer T. (seit 01.09.); Stadler, B.; Stübig, M.

Werkstudenten und Praktikanten

Studentische Arbeiten/Werkstudenten

Daniels, B.; El Mallah, A.; Faehling, M.; Farhan, M.;
Haase, M.; Hannemann, L.; Hinderberger, P.; Huang, Q.;
Kulashekara, S.; Paulus, S.; Saam, B.; Spagnolli, M.

Hochschulpraktikum

Glindemann, J. (14.07.-13.08.); Kirchhoff, T. (19.07.-
06.08.); Marek, N. (bis 28.02.); Reithmeier, J. (02.08.-
13.08.)

Schülerpraktikum

Augustin, N.

Zentrale Bereiche

Zentrale IT-Gruppe

Bohnet, Dipl. Phys. A. (Leitung)

Agudo Berbel, A.; Baumgartner, H.; Kleiser, A.; Klose, L.; Kollmer, C.; Oberauer, A.; Ott, Dr. T.; Paul, J. (bis 31.05.2021); Piemonte, A.; Elsner, C.; Snigula, Dr. J.; Wieprecht, Dipl.-Ing. E.; Wiezorrek, Dipl.-Ing. (FH) E.

Öffentlichkeitsarbeit

Hämmerle, Dr. H.; (Leitung)

Herrmann, T. (seit 11.01.); Niebisch, B.

Bibliothek

Bartels, C. (Leitung)

Blank, E., Balicevic, M.

IMPRS

Hilbert, A.

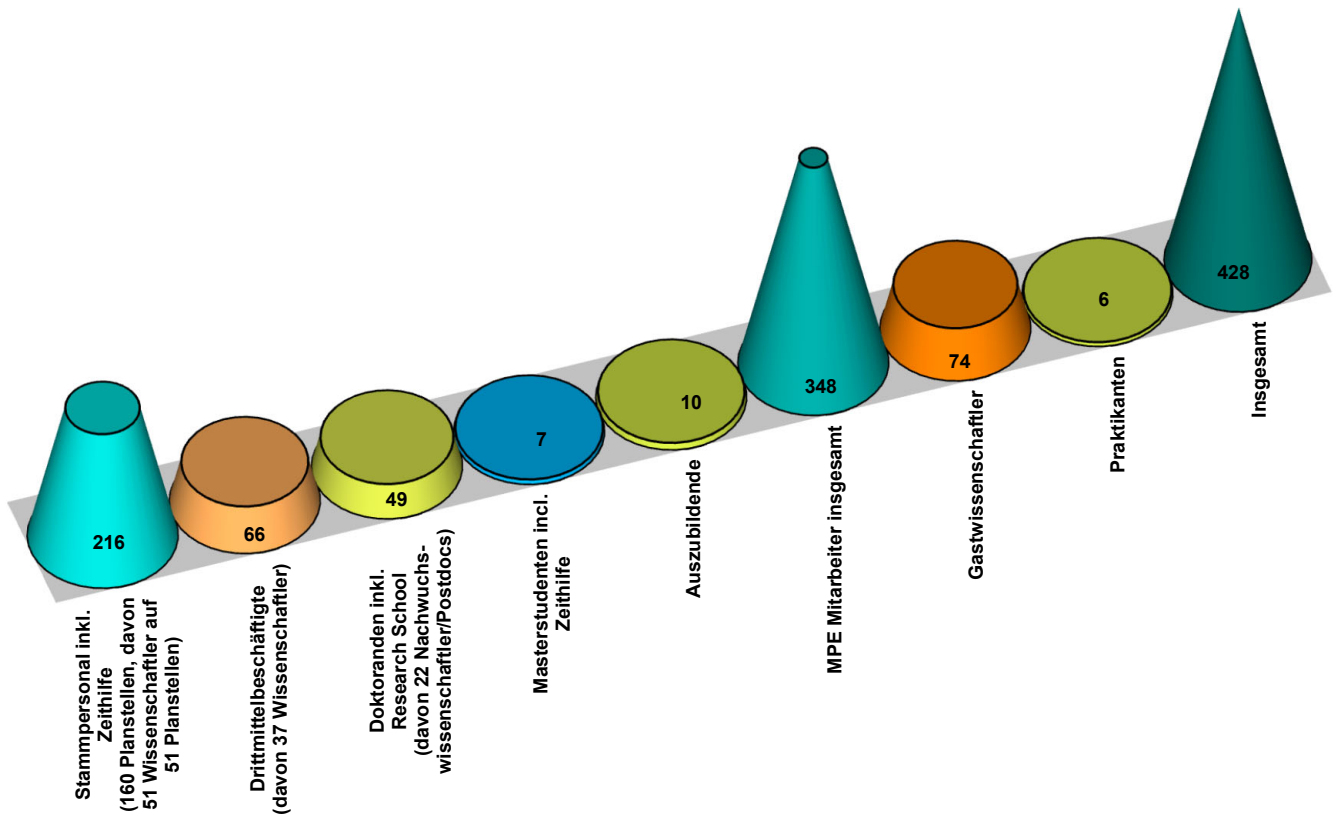
Verwaltung

Wanger, H. (Leitung VAD)

Sekretariat: Hesseler, G.

Apold, G.(bis 31.12.); Arturo, A.; Ayari, S.; Bauer, T.; Belscak, L. (bis 31.12.); Cziasto, U.; Eder, A.; Eicher, C.; Faust, T.; Gareva, L.; Goldbrunner, S.; Grohmann, M.; Hartung, I.; Hausmann, S.; Hidas, R.; Jäkel, T.; Jirsch, Y.; Kaps, S.; Keil, M.; Kestler, L.; Krapivina, A.; Kuhwald, E.; Maier, E.; Nagy, A.; Neun, A. (BR); Paschou, J.; Preisler, C.; Rochner, R. (bis 28.02.); Rosenberger, S.; Sacher, A.; Schmidt, A.; Schwaiger, S.; Seyfarth, B.; Stock, C.; Stöckl, D.; Stricker, C.; Studier, S.; Thiess, F.; Thiess, L.; Üblacker, K.; Vogt, J.P (bis 31.05.); Zubanova, E. (seit 12.04.)

Personalstatistik

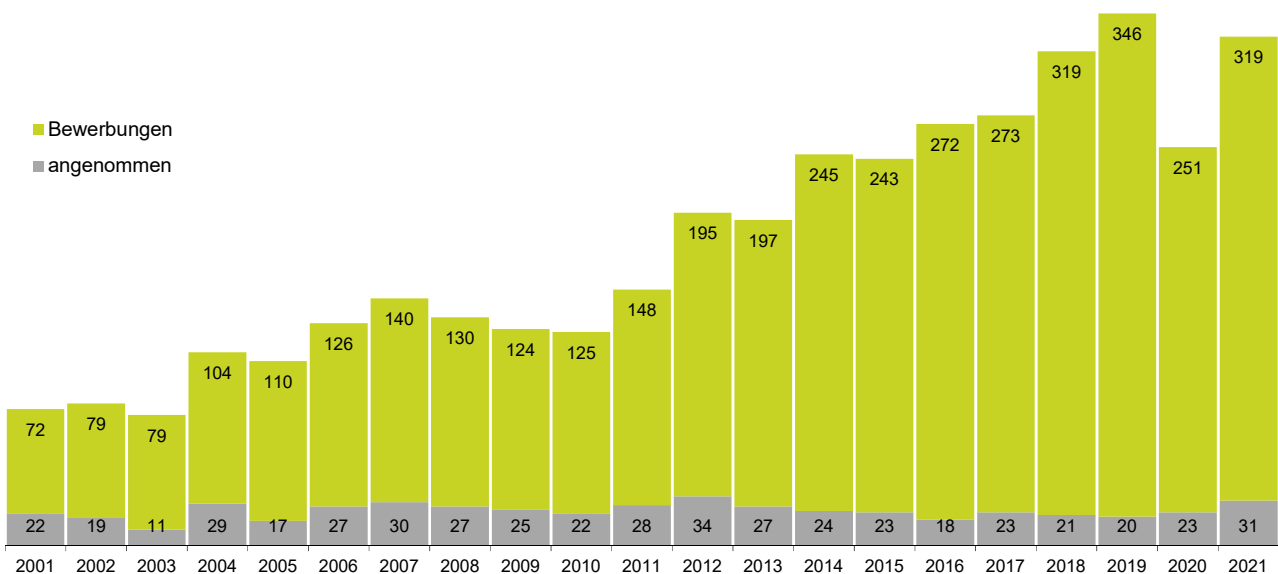


Internationale Max-Planck Research School (IMPRS) für Astrophysik

Die IMPRS für Astrophysik ist eine Graduiertenschule an der Ludwig-Maximilians-Universität (LMU) München. Sie ist ein gemeinsames Projekt der beiden Max-Planck-Institute MPE und MPA (Max-Planck-Institut für Astrophysik) sowie der Sternwarte der LMU München und der Europäischen Südsternwarte ESO. Im akademischen Jahr 2021 nahmen insgesamt 97 Studenten an dem Pro-

gramm teil, davon 46 am MPE. Für das Studienjahr 2021 haben sich 319 Studenten aus insgesamt 50 Ländern beworben. Davon wurden 31 Studenten angenommen, davon 13 am MPE. Aus den lokalen Universitäten kommen in der Regel übers Jahr weitere Doktoranden zum IMPRS Programm dazu, sodass man auf eine durchschnittliche Teilnehmerzahl von 25 Doktoranden pro Jahr kommt.

IMPRS Bewerbungen seit 2001



Jährliche Bewerbungen für das IMPRS Programm in Garching. Seit dem Start haben sich bis zum Studienjahr 2021 insgesamt 3897 Studenten beworben, 501 davon wurden angenommen.

Öffentlichkeitsarbeit

Das MPE engagierte sich 2021 durch folgende Aktivitäten in der Öffentlichkeitsarbeit: 33, zum Teil online gehaltene populär-wissenschaftliche Vorträge durch Wissenschaftler, sowie 21 Pressemitteilungen über wissenschaftliche Ergebnisse und allgemeine Nachrichten (wissenschaftliche Preise, Auszeichnungen). Aktivitäten am Institut waren aufgrund der Covid19-Pandemie stark eingeschränkt. Institutsführungen entfielen komplett, und auch Praktika konnten nur wenige stattfinden: Insgesamt wurden im Jahr 2021 neun Praktikanten betreut, davon drei Schülerpraktikanten. Ferner arbeiteten 14 Werkstudenten am MPE.

Der Girlsday 2021 wurde online abgehalten und bestand aus mehreren Vorträgen, einer vorher aufgezeichneten Laborführung sowie einem Livestream aus der Werkstatt. Insgesamt nahmen 50 Schülerinnen teil.

Seit Juni 2021 betreibt das MPE einen eigenen Twitteraccount (@MPE_Garching). Zum Stichtag 31.12.2021 wies der Account 760 Follower auf und setzte 322 Tweets bzw. Re-Tweets ab. Auch der Account auf LinkedIn (MPE-Garching) wurde 2021 intensiver betreut, hier hatte das MPE bis Ende des Jahres 1518 Follower angesammelt. Weitere Informationen zur Öffentlichkeitsarbeit sind unter:

<http://www.mpe.mpg.de>

zu finden.

Projekt-Gruppen

(Projektleiter unterstrichen)

Infrarot- und Submillimeter-Astronomie

Stellvertreter des Gruppendirektors:

Lutz, Tacconi.

ERIS:

Buron, Dallilar, R. Davies, Dengler, M. Deysenroth, Eisenhauer, Feuchtgruber, Gemperlein, Hans, Hartl, Hartwig, D. Huber, H. Huber, Kleiser, Kravchenko, Mandla, Pflüger, Plattner, C. Rau, Schubert, Sturm, Wiezorrek.

GRAVITY, GRAVITY+:

Bauböck, Bolzer, Bourdarot, Buron, Cao, de Zeeuw, Dengler, Drescher, Eisenhauer, Genzel, Gillessen, M. Haase, Hartl, Haußmann, Lutz, Mandla, Mang, More, T. Ott, Pflüger, C. Rau, Santos, Schubert, Shangguan, Shimizu, Stadler, Straub, Sturm, Tacconi, Uysal, von Fellenberg, Widmann, Wieprecht, Wiezorrek, Yazici, Zanker-Smith.

LBT Argos:

Barl, Ric Davies, M. Deysenroth, Gemperlein, Rabien, Zanker-Smith, Ziegleder

MICADO:

Barl, Biondi, Cao, R. Davies, Dengler, J. Eder, Eisenhauer, Andreas Emslander, Förster Schreiber, Geis, Gemperlein, Genzel, Gillessen, Hartl, Haußmann, Hörmann, H. Huber, Kleiser, Kravchenko, Neumeier, Pflüger, Plattner, Rabien, Schubert, Sturm, Ziegleder.

Galactic Center:

Bauböck, Bourdarot, Dallilar, Eisenhauer, Genzel, Gillessen, Habibi, Mang, T. Ott, von Fellenberg, Stadler, Straub, Widmann, Young, de Zeeuw.

Galactic Nuclei:

Cao, R. Davies, Genzel, Kaltenbrunner, Lutz, Schrubba, Shangguan, Santos, Shimizu, Sturm, Tacconi, de Zeeuw.

Galaxies at High Redshift:

Cao, Coogan, Förster Schreiber, Genzel, Habibi, L. Lee, M. Lee, D. Liu, Lutz, Price, Schrubba, Sturm, Tacconi, Übler.

Star Formation:

Bettoni, Cridland, Grant, Hu, Schrubba, van Dishoeck, Wölfer.

Hochenergie-Astrophysik

ATHENA/Mirror:

Bradshaw, Budau, Burwitz, Hartner, Langmeier, Müller, Passlack, Rukdee, Schmidt, .

ATHENA/WFI:

Albrecht, Andritschke, Antonelli, Behrens, Beitler, Bonholzer, Bornemann, Eder, Emberger, Eraerds, Frank, Freyberg, Haberl, Hälker, Hartmann, Hauser, Kink, Köglmeier, Lederhuber, Meidinger, Mican, Müller-Seidlitz, Nandra, Oser, Ott, Pietschner, Plattner, A. Rau, Reiffers, Schubert, Schweingruber, Strecker, v. Kienlin.

Chandra:

Burwitz, Predehl.

Einstein Probe/Detector:

Keil, Meidinger, Nandra.

Einstein Probe/Mirror:

Budau, Burwitz, Eder, Friedrich, Gaida, Hartmann, Hartner, Langmeier, Z. Liu, Müller, Passlack, Pfeffermann, Rohe, Rukdee, Schmidt, Schuppe, Stieglitz, .

eROSITA:

Andritschke, Becker, Boller, Bornemann, , Brunner, Budau, Burghardt, Bulbul, Burwitz, Carpano, Coutinho, Dennerl, Dittrich, Eder, Eibl, Emberger, Eraerds, Freyberg, P. Friedrich, S. Friedrich, Gaida, Goldbrunner, Gueguen, Haberl, Hälker, Hartmann, Hartner, F. Huber, Kink, Maitra, Meidinger, Merloni, Mican, S. Müller, Nandra, F. Oberauer, Pfeffermann, Pietschner, Predehl, Ramos-Ceja, Rau, Reiffers, Rohé, Rupprecht, Salvato, Schuppe, Soller, Stewart, Trümper, v. Kienlin, Yaroshenko.

ROSAT:

Boller, Freyberg, Haberl, Trümper.

Swift:

Greiner.

XMM-Newton:

Boller, Dennerl, Freyberg, Haberl, Meidinger, Trümper.

Fermi:

Collmar, Diehl, Greiner, v. Kienlin.

GROND:

A. Rau.

INTEGRAL:

Diehl, Greiner, v. Kienlin, Siegert, X.-L. Zhang.

MXT-SVOM:

Bradshaw, Burwitz, Budau, Hartner, Langmaier, Müller, Passlack, Meidinger, Nandra, Rukdee, Schmidt, A. Rau.

eXTP:

Altmann, Bechteler, Meidinger, Nandra, Yazici.

4MOST:

Comparat, Laas, Merloni, Salvato, Thi.

Active Galaxies:

Boller, Buchner, Collmar, Comparat, T. Liu, Merloni, Nandra, Salvato.

Clusters of Galaxies:

Buchner, Bulbul, Comparat, Dewlly, Gatuuz, Ghiradini, A. Liu, Locatelli, Ramos-Ceja, Sanders

eBOSS/SPIDERS:

Comparat, Merloni, Nandra, Salvato.

Optische und Interpretative Astronomie

Large Scale Structure, eBoss, HETDEX:

Bender, Farrow, Fabricius, Hopp, Sanchez.

EUCLID:

Bender, Escartin, Fabricius, Garcia Carpio, Grupp, Kruk, Hartung, Raison, Saglia, Steinwagner, Wetzstein.

Galaxy Dynamics:

Bender, Gajda, Gerhard, Parikh, Saglia, Thomas.

INODE:

Bender, Fabricius, Subramanian.

GRAVITY+:

Bender, Fabricius

KMOS:

Bender, Saglia.

MICADO:

Bender, Fabricius, Grupp, Saglia, Thomas.

PanSTARRS:

Bender, Farrow, Hopp, Saglia.

Prime Focus Spectrograph:

Bender, Fabricius, Garcia Carpio, Sanchez.

Stellar Populations and Galaxy Formation:

Bender, Hopp, Parikh, Saglia.

Zentrum für astrochemische Studien

Observations:

De Oliveira Alves, Hsieh, Jensen, Lin, Maureira Pinochet, Pineda Fornerod, Redaelli, Schmiedeke, Segura-Cox, Spezzano.

Theory:

Gong, Grassi, Ivlev, Nolan, Rab, Silsbee, Sipilä, Zhao.

Laboratory:

Endres, Giuliano, Jiménez Redondo, Jusko, Lattanzi, Spezzano.

Lehrveranstaltungen / Seminare

Departamento de Astronomía, Universidad de Concepción (Concepción, Chile)

Caselli, P.

Introduction to Astrochemistry. (WS 20/21)

Goethe University Frankfurt (Frankfurt, Germany)

Boller, Th.

AGN Physics. (SS20)

Strahlung und Materie. (SS 21)

IMPRS MPE Garching (Garching, Germany)

Boller, Th.

IMPRS Advanced Course on AGN Physics. (SS 21)

LMU (Muenchen, Germany)

Saglia, R.

Essentials of astrophysics. (SS 21)

Padua University (Padua, Italy)

de Zeeuw, T.

Dynamical Models for Galaxies. (SS 20)

TUM (Garching, Germany)

Eisenhauer, F.

High Angular Resolution Astronomy: Telescopes, Adaptive Optics, Interferometry, and more. (SS 21)

Introduction to Astrophysics. (WS 21/22)

Introduction to Astrophysics. (WS 20/21)

Organisation von wissenschaftlichen Seminaren / Konferenzen

Adaptive Optics for Astrophysics 4. Marseille, France, 14.06.-16.06.2021, Organisation: O. Beltramo-Martin, N. Thatte, R. Bacon, R. Davies, E. Moraux, J.-F. Sauvage, L. Schreiber, E. Tolstoy, J. Vernet.

Rock, Dust and Ice: Interpreting planetary data. Virtual, 23. - 26.03.2021, Organisation: A. Moullet, B. Bus, T. Mueller, E. Fayolle, A. Hendrix, M. MacAdam, B-G. Andersson, J. Jackson.

AAL/eROSITA collaboration workshop. Virtual, 15. - 17.02.2021, Organisation: M. Salvato, L. Chudczer, M. Filipovic, K. Nandra, D. Galloway, T. Reiprich.

The many faces of black hole accretion (EAS2021 Symposium). Virtual, 28.06. - 28.07.2021, Organisation: V. Impellizzeri, B. Trakhtenbrot, M. Koss, S. Aalto, L. Burtscher, P. Gandhi, D. Rosario, T. Shimizu, E. Sani, M. Salvato, C. Cicone, S. Paltani, M. Urry, M. Balokovic, A. Alonso Herrero, S. Hoenig.

NIFTy and GRAVITY imaging Crash Course. MPE, Garching, 24. - 27.08.2021, Organisation: MPE/MPA.

Rubin-Athena synergy. Virtual, 19. - 23.04.2021, Organisation: N. Brandt, S. Campana, N. Clerc, S. Allen, M. Salvato, K. Bechtol, A. Mahabal, A.R. Basu-zych.

Protostars and Planets VII. Kyoto, Japan, 21. - 27.03.2022 (postponed), Organisation: J. Alves, P. Andre, I. Baraffe, J. Carpenter, P. Caselli, W.-P. Chen, K. Dullemond, T. Guillot, A. Goodman, L. Hillenbrand, T. Henning, S. Ida, D. Johnstone, I. Kamp, M. Krumholz, J.-E. Lee, V. Meadows, M. Meyer, R. Nelson, T. Onishi, E. Ostriker, I. Pascucci, Y. Sekine, S. Tachibana, M. Tafalla, E. van Dishoeck, J. Williams.

European Astronomical Society 2021. Leiden (virtual), 28.06. - 02.07.2021, Organisation: J. Schaye - Chair, C. Aerts - Co-Chair, N. Aghanim, J. Brinchmann, P. Caselli, I. de Moortel, H. Falcke, J. Fynbo, E. Grebel, T. Guillot, L. Kaper, C. Lardo, S. Lucatello, G. Mellema, R. Morganti, H. Rauer, N. Rea, H. Rottgering, A. Różańska, R. Szabo, A. Vecchio, N. Werner.

Molecules in starless and pre-stellar cores: tools to understand low- and high-mass star-formation. Leiden (virtual), 01.07.2021, Organisation: Spezzano, Chair, P. Caselli, P. Schilke, M. Tafalla, J. Tan, C. Vastel, E. Wirström.

KROME BOOTCAMP 2021. Concepción (virtual), 22. - 26.02.2021 and 01. - 05.03.2021, Organisation: S. Bovino, P. Caselli, B. Ercolano, D. Galli, T. Grassi, D. Schleicher, D. Semenov.

Astrochemical Frontiers Quarantine Edition 2. Tokyo, Japan (virtual), 05. - 09.07.2021, Organisation: E. Bergin, P. Caselli, J. Jorgensen, Y. Aikawa, M. Cunningham, W. Geppert, K. Öberg, T. Millar.

GRAVITY+ Community Workshop. Garching (virtual), 24. - 25.02.2022, Organisation: L. Kreidberg, S. Hoenig, T. Shimizu, F. Eisenhauer, P. Garcia, J. Le Bouquin, D. Lutz, T. Paumard, C. Straubmeier.

MPE-ESO-LMU Star and Planet Formation Seminar. Webinar Series, 01.01. - 14.09.2021, Organisation: L. Tychoniec, D. Segura-Cox, T. Grassi.

Publikationen

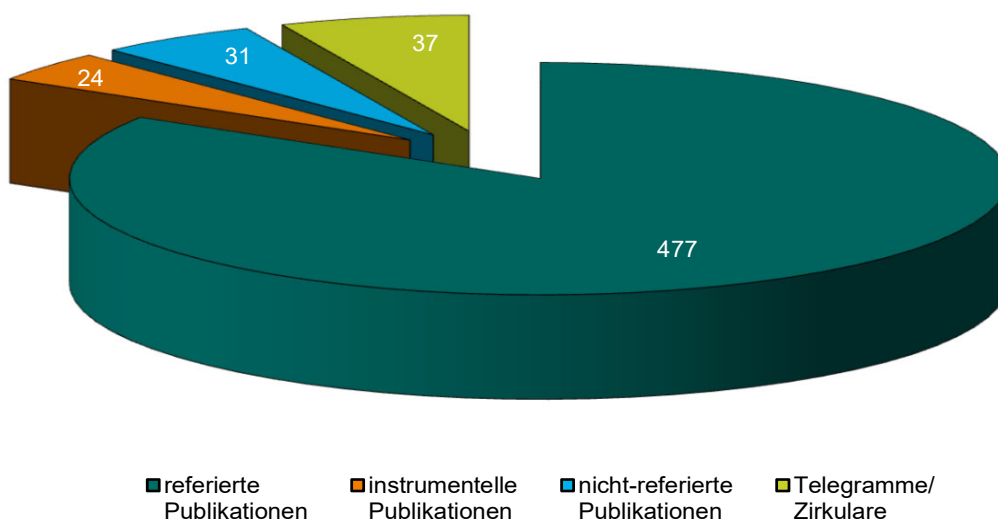
Hier präsentieren wir eine tabellarische und graphische Zusammenfassung unserer Veröffentlichungen aus 2021. Die Veröffentlichungen werden nach wissenschaftlicher Arbeitsgruppe und Publikationstyp gezählt. Die Gesamtliste unserer Publikationen aus den verschiedenen Kategorien ist nachfolgend aufgeführt.

Summe der MPE Publikationen in 2021

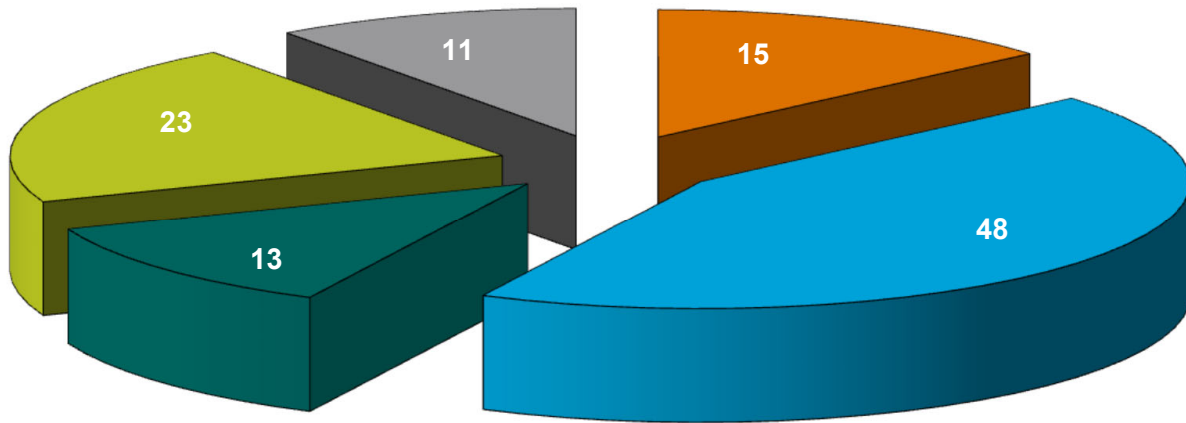
	Referierte Publikationen		Instrumentelle Publikationen		nicht-referierte Publikationen		Telegramme/ Zirkulare		Vorträge		Poster
	First Author	All	First Author	All	First Author	All	First Author	All	Invited/ Colloquium	All	Only First Author
IR	15	106	1	2	4	10	2	2	115	134	1
HE-Astro-physik	48	140	6	15	3	16	5	35	52	82	7
OPINAS	13	114	2	5	0	2	0	0	30	53	2
CAS	23	74	0	2	0	2	0	0	23	37	6
Restl. Gruppen	11	43	0	0	0	1	0	0	15	27	1
Total	110	477	9	24	7	31	7	37	235	333	17

Die Zahlen geben die Anzahl der Publikationen mit einem Erstautor vom MPE beziehungsweise die Anzahl der eingeladenen (bei Konferenzen und zu Kolloquien) Vorträge an. Die roten Zahlen zeigen die Gesamtzahl der Veröffentlichungen mit MPE-Autorenschaft (inklusive MPE Erstautoren) beziehungsweise die Gesamtzahl der gehaltenen Vorträge. Veröffentlichungen mit Beteiligung aus mehreren Arbeitsgruppen sind bei der Gruppe des führenden Autors gezählt. Bei Postern wurden nur MPE Erstautorenschaften berücksichtigt.

MPE Publikationen 2021 (nach Typ)

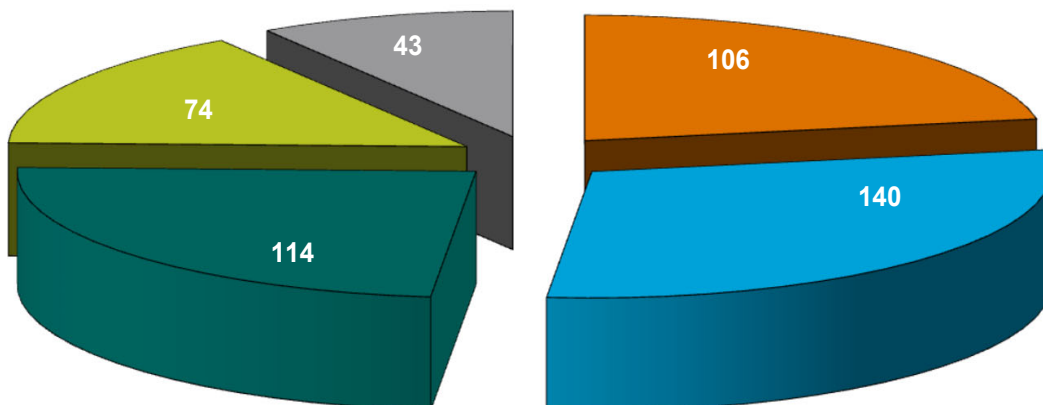


Referierte Publikationen mit MPE Erstautor in 2021 (nach wissenschaftlicher Arbeitsgruppe)



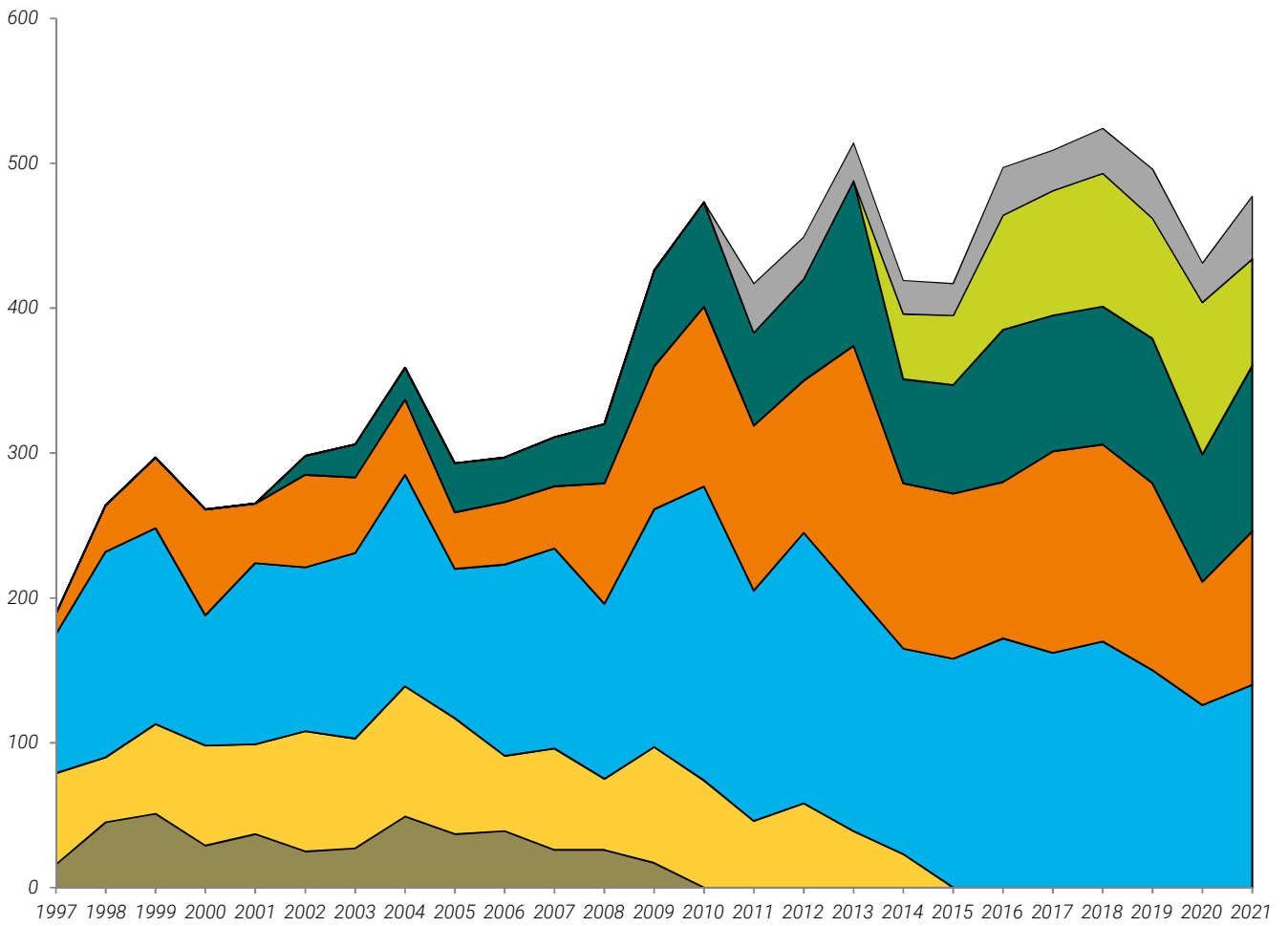
■ Infrarot ■ HE-Astrophysik ■ OPINAS ■ CAS ■ Forschungsgruppen

Gesamtzahl der referierten MPE Publikationen in 2021 (nach wissenschaftlicher Arbeitsgruppe)



■ Infrarot ■ HE-Astrophysik ■ OPINAS ■ CAS ■ Forschungsgruppen

Zeitliche Entwicklung der Gesamtzahl der referierten Publikationen (nach wissenschaftlicher Arbeitsgruppe)



■ Erdn. Weltraum ■ Theorie ■ HE-Astrophysik ■ Infrarot ■ OPINAS ■ CAS ■ Forschungsgruppen

Referierte Publikationen

- Abbott T., M. Adamów, M. Aguena, ..., T. Varga, ..., J. Weller, ..., Linea Science Server: The Dark Energy Survey Data Release 2. *Ap. J. Supp. Ser.* 255, 2 (2021).
- Adhikari S., T. Shin, B. Jain, ..., T.N. Varga, et al.: Probing Galaxy Evolution in Massive Clusters Using ACT and DES: Splashback as a Cosmic Clock. *Ap. J.* 923, 1 (2021).
- Alam S., M. Aubert, S. Avila, ..., J. Hou, ..., A.G. Sánchez, et al.: Completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: Cosmological implications from two decades of spectroscopic surveys at the Apache Point Observatory. *Physical Review D* 103, 8 (2021).
- Alam S., J.A. Peacock, D.J. Farrow, J. Loveday, A. Hopkins: Using GAMA to probe the impact of small-scale galaxy physics on nonlinear redshift-space distortions. *Mon. Not. R. Astron. Soc.* 503, 1 (2021).
- Alam S., N.P. Ross, S. Eftekharzadeh, J.A. Peacock, J. Comparat, A.D. Myers, A.J. Ross: Quasars at intermediate redshift are not special; but they are often satellites. *Mon. Not. R. Astron. Soc.* 504, 1 (2021).
- Alam S., A. de Mattia, A. Tamone, S. Ávila, J.A. Peacock, V. Gonzalez-Perez, A. Smith, A. Raichoor, A.J. Ross, J.E. Bautista, E. Burtin, J. Comparat, K.S. Dawson, H. du Mas des Bourboux, S. Escoffier, H. Gil-Marín, S. Habib, K. Heitmann, J. Hou, F.G. Mohammad, E. Mueller, R. Neveux, R. Paviot, W.J. Percival, G. Rossi, V. Ruhlmann-Kleider, R. Tojeiro, M. Vargas Magaña, C. Zhao, G. Zhao: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: N-body mock challenge for the eBOSS emission line galaxy sample. *Mon. Not. R. Astron. Soc.* 504, 4, 4667-4686 (2021).
- Alonso-Herrero A., S. García-Burillo, S. Hönic, I. García-Bernete, C. Ramos Almeida, O. González-Martín, E. López-Rodríguez, P. Boorman, A. Bunker, L. Burtscher, F. Combes, R. Davies, T. Díaz-Santos, P. Gandhi, B. García-Lorenzo, E. Hicks, L. Hunt, K. Ichikawa, M. Imanishi, T. Izumi, A. Labiano, N. Levenson, C. Packham, M. Pereira-Santaella, C. Ricci, D. Rigopoulou, P. Roche, D. Rosario, D. Rouan, T. Shimizu, M. Stalevski, K. Wada, D. Williamson: The Galaxy Activity, Torus, and Outflow Survey (GATOS). II. Torus and polar dust emission in nearby Seyfert galaxies. *Astron. Astrophys.* 652, A99 (2021).
- Anand G.S., J.C. Lee, S.D. Van Dyk, A.K. Leroy, E. Rosolowsky, E. Schinnerer, K. Larson, E. Kourkchi, K. Kreckel, F. Scheuermann, L. Rizzi, D. Thilker, R.B. Tully, F. Bigiel, G.A. Blanc, M. Boquien, R. Chandar, D. Dale, E. Emsellem, S. Deger, S.C. Glover, K. Grasha, B. Groves, R. S. Klessen, J.D. Kruijssen, M. Querejeta, P. Sánchez-Blázquez, A. Schrubba, J. Turner, L. Ubeda, T.G. Williams, B. Whitmore: Distances to PHANGS galaxies: New tip of the red giant branch measurements and adopted distances. *Mon. Not. R. Astron. Soc.* 501, 3 (2021).
- Andres, A., J. van den Eijnden, N. Degenaar, ..., G. Ponti et al.: A Swift study of long-term changes in the X-ray flaring properties of Sagittarius A. *Mon. Not. R. Astron. Soc.* 510(2), 2851-2863 (2021).
- Angelis A. D., V. Tatischeff, A. Argan, S. Brandt, A. Bulgarelli, A. Bykov, E. Costantini, R.C. da Silva, I.A. Grenier, L. Hanlon, D. Hartmann, M. Hernanz, G. Kanbach, I. Kuvvetli, P. Laurent, M.N. Mazziotta, J. McEnery, A. Morselli, K. Nakazawa, U. Oberlack, M. Pearce, J. Rico, M. Tavani, P. von Ballmoos, R. Walter, X. Wu, S. Zane, A. Zdziarski, A. Zoglauer: Gamma-ray astrophysics in the MeV range. *Experimental Astronomy* (2021).
- Aniyan S., A. Ponomareva, K. Freeman, M. Arnaboldi, O. Gerhard, L. Coccato, K. Kuijken, M. Merrifield: Resolving the Disc-Halo Degeneracy - II: NGC 6946. *Mon. Not. R. Astron. Soc.* 500, 3 (2021).
- Arcodia R., A. Merloni, K. Nandra, J. Buchner, M. Salvato, D. Pasham, R. Remillard, J. Comparat, G. Lamer, G. Ponti, A. Malyali, J. Wolf, Z. Arzoumanian, D. Bogensberger, D. Buckley, K. Gendreau, M. Gromadzki, E. Kara, M. Krumpe, C. Markwardt, M.E. Ramos-Ceja, A. Rau, M. Schramm, A. Schwobe: X-ray quasi-periodic eruptions from two previously quiescent galaxies. *Nature* 592, 7856 (2021).
- Arenas B.E., G. Batra, A.L. Steber, L. Bizzocchi, A. Pietropolli Charmet, B.M. Giuliano, P. Caselli, B.J. Harris, B.H. Pate, J. Guillemin, M. Schnell: Rotational spectroscopy of imidazole: Accurate spectroscopic information for three vibrationally excited states and the heavy-atom isotopologues up to 295 GHz. *Journal of Molecular Spectroscopy* 378, 111452 (2021).
- Athikkat-Eknath G., S. Eales, M. Smith, A. Schrubba, K. Marsh, A. Whitworth: Investigating variations in the dust emissivity index in the andromeda galaxy. *Mon. Not. R. Astron. Soc.* 511, 4, 5287-5300 (2021).
- Avery C.R., S. Wuyts, N.M. Förster Schreiber, C. Villforth, C. Bertemes, W. Chang, S.L. Hamer, J. Toshikawa, J. Zhang: Incidence, scaling relations and physical conditions of ionized gas outflows in MaNGA. *Mon. Not. R. Astron. Soc.* 503, 4 (2021).
- Avison A., G. Fuller, N. Peretto, A. Duarte-Cabral, A. Rosen, A. Traficante, J. Pineda, R. Güsten, N. Cunningham: Continuity of accretion from clumps to Class 0 high-mass protostars in SDC335. *Astron. Astrophys.* 645 (2021).
- Banhatti S., J. Palotás, P. Jusko, B. Redlich, J. Oomens, S. Schlemmer, S. Brünken: Infrared action spectroscopy of doubly charged PAHs and their contribution to the aromatic infrared bands. *Astron. Astrophys.* 648 (2021).
- Baron, D., H. Netzer, D. Lutz, J.X. Prochaska, R.I. Davies: Multiphase outflows in post-starburst E+A galaxies – I. General sample properties and the prevalence of obscured starbursts. *Mon. Not. R. Astron. Soc.* 509(3), 4457-4479 (2021).
- Barnes A., S. Glover, K. Kreckel, E. Ostriker, F. Bigiel, F. Belfiore, I. Bešlić, G. Blanc, M. Chevance, D. Dale, O. Ego-

- rov, C. Eibensteiner, E. Emsellem, K. Grasha, B. Groves, R. Klessen, J. Kruijssen, A. Leroy, S. Longmore, L. Lopez, R. McElroy, S. Meidt, E. Murphy, E. Rosolowsky, T. Saito, F. Santoro, E. Schinnerer, A. Schrubba, J. Sun, E. Watkins, T. Williams: Comparing the pre-SNe feedback and environmental pressures for 6000 H II regions across 19 nearby spiral galaxies. *Mon. Not. R. Astron. Soc.* 508, 4, 5362-5389 (2021).
- Barnes A., J. Henshaw, F. Fontani, J. Pineda, G. Cosentino, J. Tan, P. Caselli, I. Jiménez-Serra, C. Law, A. Avison, F. Bigiel, S. Feng, S. Kong, S. Longmore, L. Moser, R. Parker, Á. Sánchez-Monge, K. Wang: ALMA-IRDC: dense gas mass distribution from cloud to core scales. *Mon. Not. R. Astron. Soc.* 503, 3 (2021).
- Bautista J.E., R. Paviot, M. Vargas Magaña, S. de la Torre, S. Fromenteau, H. Gil-Marín, A.J. Ross, E. Burtin, K.S. Dawson, J. Hou, J. Kneib, A. de Mattia, W.J. Percival, G. Rossi, R. Tojeiro, C. Zhao, G. Zhao, S. Alam, J. Brownstein, M.J. Chapman, P.D. Choi, C. Chuang, S. Escoffier, A. de la Macorra, H. du Mas des Bourboux, F.G. Mohammad, J. Moon, E. Müller, S. Nadathur, J.A. Newman, D. Schneider, H. Seo, Y. Wang: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: measurement of the BAO and growth rate of structure of the luminous red galaxy sample from the anisotropic correlation function between redshifts 0.6 and 1. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Beaton R.L., R.J. Oelkers, C.R. Hayes, K.R. Covey, S. Chojnowski, N. De Lee, J.S. Sobeck, S.R. Majewski, R.E. Cohen, J. Fernández-Trincado, P. Longa-Peña, J.E. O'Connell, F.A. Santana, G.S. Stringfellow, G. Zasowski, C. Aerts, B. Anguiano, C. Bender, C.I. Cañas, K. Cunha, J. Donor, S.W. Fleming, P.M. Frinchaboy, D. Feuillet, P. Harding, S. Hasselquist, J.A. Holtzman, J.A. Johnson, J.A. Kollmeier, M. Kounkel, S. Mahadevan, A.M. Price-Whelan, A. Rojas-Arriagada, C. Román-Zúñiga, E.F. Schlafly, M. Schultheis, M. Shetrone, J.D. Simon, K.G. Stassun, A.M. Stutz, J. Tayar, J. Teske, A. Tkachenko, N. Troup, F.D. Albareti, D. Bizyaev, J. Bovy, A.J. Burgasser, J. Comparat, J.J. Downes, D. Geisler, L. Inno, A. Machado, M.K. Ness, M.H. Pinsonneault, F. Prada, A. Roman-Lopes, G.V. Simonian, V.V. Smith, R. Yan, O. Zamora: Final Targeting Strategy for the Sloan Digital Sky Survey IV Apache Point Observatory Galactic Evolution Experiment 2 North Survey. *Astron. J.* 162, 6 (2021).
- Becker W., N. Hurley-Walker, C. Weinberger, L. Nicastro, M. Mayer, A. Merloni, J. Sanders: Hoinga: a supernova remnant discovered in the SRG/eROSITA All-Sky Survey eRASS1. *Astron. Astrophys.* 648 (2021).
- Belli S., A. Contursi, R. Genzel, L.J. Tacconi, N.M. Förster-Schreiber, D. Lutz, F. Combes, R. Neri, S. García-Burillo, K.F. Schuster, R. Herrera-Camus, K. Tadaki, R.L. Davies, R.I. Davies, B.D. Johnson, M.M. Lee, J. Leja, E.J. Nelson, S.H. Price, J. Shanguan, T.T. Shimizu, S. Tacchella, H. Übler: The Diverse Molecular Gas Content of Massive Galaxies Undergoing Quenching at $z \sim 1$. *Ap. J. Lett.* 909, 1 (2021).
- Benedettini M., S. Viti, C. Codella, C. Ceccarelli, R. Neri, A. López-Sepulcre, E. Bianchi, G. Busquet, P. Caselli, F. Fontani, B. Lefloch, L. Podio, S. Spezzano, C. Vastel: Seeds of Life in Space (SOLIS). XI. First measurement of nitrogen fractionation in shocked clumps of the L1157 protostellar outflow. *Astron. Astrophys.* 645 (2021).
- Beri A., T. Girdhar, N.K. Iyer, C. Maitra: Evolution of timing and spectral characteristics of 4U 1901+03 during its 2019 outburst using the Swift and NuSTAR observatories. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Beri A., S. Naik, K.P. Singh, G.K. Jaisawal, S. Bhattacharyya, P. Charles, W.C. Ho, C. Maitra, D. Bhattacharya, G.C. Dewangan, M. Middleton, D. Altamirano, P. Gandhi, H. Raichur: AstroSat observations of the first Galactic ULX pulsar Swift J0243.6+6124. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Bernardinelli P.H., G.M. Bernstein, B.T. Montet, R. Weryk, R. Wainscoat, M. Agüena, S. Allam, F. Andrade-Oliveira, J. Annis, S. Avila, E. Bertin, D. Brooks, D. Burke, A. Carrero Rosell, M. Carrasco Kind, J. Carretero, R. Cawthon, C. Conselice, M. Costanzi, L. da Costa, M. Pereira, J. De Vicente, H. Diehl, S. Everett, I. Ferrero, B. Flaugher, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, K. Kuehn, N. Kuropatkin, O. Lahav, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, R. Ogando, F. Paz-Chinchón, A. Pieres, A.P. Malagón, M. Rodríguez-Monroy, A. Romer, A. Roodman, E. Sanchez, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, M. Soares-Santos, E. Suchyta, M. Swanson, G. Tarle, C. To, M. Troxel, T. Varga, A. Walker, Y. Zhang, DES Collaboration: C/2014 UN₂₇₁ (Bernardinelli-Bernstein): The Nearly Spherical Cow of Comets. *Ap. J. Lett.* 921, 2 (2021).
- Bešlić I., A. Barnes, F. Bigiel, J. Puschignig, J. Pety, C. Herrera Contreras, A. Leroy, A. Usero, E. Schinnerer, S. Meidt, E. Emsellem, A. Hughes, C. Faesi, K. Kreckel, F. Belfiore, M. Chevance, J. den Brok, C. Eibensteiner, S. Glover, K. Grasha, M. Jimenez-Donaire, R. Klessen, J. Kruijssen, D. Liu, I. Pessa, M. Querejeta, E. Rosolowsky, T. Saito, F. Santoro, A. Schrubba, M. Sormani, T. Williams: Dense molecular gas properties on 100 pc scales across the disc of NGC 3627. *Mon. Not. R. Astron. Soc.* 506, 1, 963-988 (2021).
- Bhargava Y., T. Belloni, D. Bhattacharya, S. Motta, G. Ponti.: A timing-based estimate of the spin of the black hole in MAXI J1820+070. *Mon. Not. R. Astron. Soc.* 508, 2, 3104-3110 (2021).
- Bhattacharya S., M. Arnaboldi, O. Gerhard, A. McConachie, N. Caldwell, J. Hartke, K.C. Freeman: The survey of planetary nebulae in Andromeda (M 31). III. Constraints from deep planetary nebula luminosity functions on the origin of the inner halo substructures in M 31. *Astron. Astrophys.* 647 (2021).
- Biffi, V., K. Dolag, T. H. Reiprich, A. Veronica, M. E. Ramos-Ceja, E. Bulbul, N. Ota, V. Ghirardini: The eROSITA view of the Abell 3391/95 field: Case study from the Magneticum cosmological simulation. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

- Boller T., T. Liu, P. Weber, R. Arcodia, T. Dauser, J. Wilms, K. Nandra, J. Buchner, A. Merloni, M. Freyberg, M. Krumpke, S. Waddell: Extreme ultra-soft X-ray variability in an eROSITA observation of the narrow-line Seyfert 1 galaxy 1H 0707-495. *Astron. Astrophys.* 647 (2021).
- Boller T.: 1H 0707-495: An AGN is dimming its X-ray light. *Astron. Nachr.* 342, 5, 708-714 (2021).
- Booth, A. S., N. van der Marel, M. Leemker, E.F. van Dishoeck, S. Ohashi: A major asymmetric ice trap in a planet-forming disk - II. Prominent SO and SO₂ pointing to C/O < 1. *Astron. Astrophys.* 651, L6 (2021).
- Boyce H., D. Haggard, G. Witzel, S. Willner, J. Neilsen, J. Hora, S. Markoff, G. Ponti, F. Baganoff, E. Becklin, G. Fazio, P. Lowrance, M. Morris, H. Smith: Erratum: "Simultaneous X-Ray and Infrared Observations of Sagittarius A*'s Variability" (2019, *ApJ*, 871, 161). *Ap. J.* 912, 2 (2021).
- Brusa, M., T. Urrutia, Y. Toba, J. Buchner, J.-Y. Li, T. Liu, M. Perna, M. Salvato, A. Merloni, B. Musiimenta, K. Nandra, J. Wolf, R. Arcodia, T. Dwelly, A. Georgakakis, A. Goulding, Y. Matsuoka, T. Nagao, M. Schramm, J. D. Silverman, Y. Terashima: The eROSITA Final Equatorial-Depth Survey (eFEDS): The first archetypal quasar in the feedback phase discovered by eROSITA. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Brüggen M., T. Reiprich, E. Bulbul, B. Koribalski, H. Anderson, L. Rudnick, D. Hoang, A. Wilber, S. Duchesne, A. Veronica, F. Pacaud, A. Hopkins, R. Norris, M. Johnston-Hollitt, M. Brown, A. Bonafede, G. Brunetti, J. Collier, J. Sanders, E. Vardoulaki, T. Venturi, A. Kapinska, J. Marvil: Radio observations of the merging galaxy cluster system Abell 3391-Abell 3395. *Astron. Astrophys.* 647 (2021).
- Buchner J.: Bayesian X-ray Analysis (BXA) v4.0. *The Journal of Open Source Software* 6, 61 (2021).
- Buchner J.: UltraNest - a robust, general purpose Bayesian inference engine. *The Journal of Open Source Software* 6, 60 (2021).
- Buchner J., M. Brightman, M. Baloković, K. Wada, F.E. Bauer, K. Nandra: Physically motivated X-ray obscurer models. *Astron. Astrophys.* 651 (2021).
- Bulut N., O. Roncero, A. Aguado, J.-C. Loison, D. Navarro-Almida, V. Wakelam, A. Fuente, E. Roueff, R. Le Gal, P. Caselli, M. Gerin, K. Hickson, S. Spezzano, P. Rivière-Marichalar, T. Alonso-Albi, R. Bachiller, I. Jiménez-Serra, C. Kramer, B. Tercero, M. Rodríguez-Baras, S. García-Burillo, J. Goicoechea, S. Treviño-Morales, G. Esplugues, S. Cazaux, B. Commerçon, J. Laas, J. Kirk, V. Latanzí, R. Martín-Doménech, G. Muñoz-Caro, J. Pineda, D. Ward-Thompson, M. Tafalla, N. Marcelino, J. Malinen, R. Friesen, B. Giuliano, M. Agúndez, A. Hacar: Gas phase Elemental abundances in Molecular cloudS (GEMS). III. Unlocking the CS chemistry: the CS+O reaction. *Astron. Astrophys.* 646 (2021).
- Burgess J.M., E. Cameron, D. Svinkin, J. Greiner: nazgul: A statistical approach to gamma-ray burst localization. *Triangulation via non stationary time series models. Astron. Astrophys.* 654, A26 (2021).
- Burgess J., F. Capel: popsynth: A generic astrophysical population synthesis framework. *The Journal of Open Source Software* 6, 63 (2021).
- Burkhardt A.M., R.A. Loomis, C.N. Shingledecker, K.L.K. Lee, A.J. Remijan, M.C. McCarthy, B.A. McGuire: Ubiquitous aromatic carbon chemistry at the earliest stages of star formation. *Nature Astronomy* 5 (2021).
- Burtscher L., R. Davies, T. Shimizu, R. Riffel, D. Rosario, E. Hicks, M.-Y. Lin, R. Riffel, M. Schartmann, A. Schnorr-Müller, T. Storchi-Bergmann, G. Orban de Xivry, S. Veilleux: LLAMA: Stellar populations in the nuclei of ultra-hard X-ray-selected AGN and matched inactive galaxies. *Astron. Astrophys.* 654, A132 (2021).
- Bustamante-Rosell M., E. Noyola, K. Gebhardt, M.H. Fabricius, X. Mazzalay, J. Thomas, G. Zeimann: Dynamical Analysis of the Dark Matter and Central Black Hole Mass in the Dwarf Spheroidal Leo I. *Ap. J.* 921, 2 (2021).
- Böhringer H., G. Chon: The Cosmic Large-Scale Structure in X-rays (CLASSIX) Cluster Survey. IV. Superclusters in the local Universe at $z \leq 0.03$. *Astron. Astrophys.* 656, A144 (2021).
- Böhringer H., G. Chon, J. Trümper: The Cosmic Large-Scale Structure in X-rays (CLASSIX) Cluster Survey. II. Unveiling a pancake structure with a 100 Mpc radius in the local Universe. *Astron. Astrophys.* 651, A15 (2021).
- Böhringer H., G. Chon, J. Trümper: The Cosmic Large-Scale Structure in X-rays (CLASSIX) Cluster Survey. III. The Perseus-Pisces supercluster and the Southern Great Wall as traced by X-ray luminous galaxy clusters. *Astron. Astrophys.* 651, A16 (2021).
- Calahan J.K., E. Bergin, K. Zhang, R. Teague, I. Cleeves, J. Bergner, G.A. Blake, P. Cazzoletti, V. Guzmán, M.R. Hogerheijde, J. Huang, M. Kama, R. Loomis, K. Öberg, C. Qi, E.F. van Dishoeck, J. Terwisscha van Scheltinga, C. Walsh, D. Wilner: The TW Hya Rosetta Stone Project. III. Resolving the Gaseous Thermal Profile of the Disk. *Ap. J.* 908, 1 (2021).
- Callanan, D., S.N. Longmore, J.M.D. Kruijssen, A. Schrubba, A. Ginsburg, M.R. Krumholz, et al.: The centres of M83 and the Milky Way: opposite extremes of a common star formation cycle. *Mon. Not. R. Astron. Soc.* 505(3), 4310-4337 (2021).
- Caputi K., G. Caminha, S. Fujimoto, K. Kohno, F. Sun, E. Egami, S. Deshmukh, F. Tang, Y. Ao, L. Bradley, D. Coe, D. Espada, C. Grillo, B. Hatsukade, K. Knudsen, M. Lee, G. Magdis, K. Morokuma-Matsui, P. Oesch, M. Ouchi, P. Rosati, H. Umehata, F. Valentino, E. Vanzella, W.-H. Wang, J. Wu, A. Zitrin: ALMA Lensing Cluster Survey: An ALMA Galaxy Signposting a MUSE Galaxy Group at $z = 4.3$ Behind "El Gordo". *Ap. J.* 908, 2 (2021).
- Caravano A., E. Komatsu, K.D. Lozanov, J. Weller: Lattice simulations of inflation. *J. of Cosmology and Astroparticle Phys.* 2021, 12 (2021).

- Caravano A., M. Lüben, J. Weller: Combining cosmological and local bounds on bimetric theory. *J. of Cosmology and Astroparticle Phys.* 2021, 9 (2021).
- Casassus, S., V. Christiaens, M. Carcamo, S. Perez, P. Weber, B. Ercolano, E. F. van Dishoeck, et al.: A dusty filament and turbulent CO spirals in HD 135344B-SAO 206462. *Mon. Not. R. Astron. Soc.* 507(3), 3789-3809 (2021).
- Chartab N., B. Mobasher, A.E. Shapley, I. Shivaeei, R.L. Sanders, A.L. Coil, M. Kriek, N.A. Reddy, B. Siana, W.R. Freeman, M. Azadi, G. Barro, T. Fetherolf, G. Leung, S.H. Price, T. Zick: The MOSDEF Survey: Environmental Dependence of the Gas-phase Metallicity of Galaxies at $1.4 \leq z \leq 2.6$. *Ap. J.* 908, 2 (2021).
- Chavez C.F., T. Müller, J. Marshall, J. Horner, H. Drass, B. Carter: A thermophysical and dynamical study of the Hildas, (1162) Larissa, and (1911) Schubart. *Mon. Not. R. Astron. Soc.* 502, 4 (2021).
- Chen A., D. Hutner, S. Lee, A. Ferté, N. Weaverdyck, O. Alves, C. Leonard, N. MacCrann, M. Raveri, A. Porredon, E. Di Valentino, J. Muir, P. Lemos, A. Liddle, J. Blazek, A. Campos, R. Cawthon, A. Choi, S. Dodelson, J. Elvin-Poole, D. Gruen, A. Ross, L. Secco, I. Sevilla-Noarbe, E. Sheldon, M. Troxel, J. Zuntz, T. Abbott, M. Aguena, S. Alam, J. Annis, S. Avila, E. Bertin, S. Bhargava, S. Bridle, D. Brooks, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, T. Davis, P. Doel, T. Eifler, I. Ferrero, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, D. James, M. Jarvis, K. Kuehn, O. Lahav, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Roodman, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, M. Smith, E. Suchyta, G. Tarle, D. Thomas, C. To, T.N. Varga, J. Weller, R. Wilkinson, DES Collaboration: Constraints on dark matter to dark radiation conversion in the late universe with DES-Y1 and external data. *Physical Review D* 103, 12 (2021).
- Cheng Y., J.C. Tan, P. Caselli, L. Fissel, H.G. Arce, F. Fontani, M.D. Goodson, M. Liu, N. Galitzki: Star Formation in a Strongly Magnetized Cloud. *Ap. J.* 916, 2 (2021).
- Chernyshov, D. O., A. E. Egorov, V. A. Dogiel, A. V. Ivlev: On a Possible Origin of the Gamma-ray Excess around the Galactic Center. *Other Journal Symmetry*, 13, 8, (2021).
- Chevance, M., J.M.D. Kruijssen, M.R. Krumholz, B. Groves, B.W. Keller, A. Hughes, ..., D. Liu, ..., E.F. van Dishoeck et al.: Pre-supernova feedback mechanisms drive the destruction of molecular clouds in nearby star-forming disc galaxies. *Mon. Not. R. Astron. Soc.* 509(1), 272-288 (2021).
- Chiang I., K.M. Sandstrom, J. Chasteney, C.N. Herrera, E.W. Koch, K. Kreckel, A.K. Leroy, J. Pety, A. Schrubba, D. Utomo, T. Williams: Resolving the Dust-to-Metals Ratio and CO-to-H₂ Conversion Factor in the Nearby Universe. *Ap. J.* 907, 1 (2021).
- Chiavassa, A, K. Kravchenko, M. Montargès et al.: The extended atmosphere and circumstellar environment of the cool evolved star VX Sagittarii as seen by MATISSE. *Astron. Astrophys.* 658, A185 (2021).
- Chiu, I.-N., V. Ghirardini, A. Liu, S. Grandis, E. Bulbul, Y. Emre Bahar, J. Comparat, S. Bocquet, N. Clerc, M. Klein, T. Liu, X. C. Li, H. Miyatake, J. Mohr, M. Oguri, N. Okabe, F. Pacaud, M. E. Ramos-Ceja, et al.: The eROSITA Final Equatorial-Depth Survey (eFEDS). X-ray observable-to-mass-and-redshift relations of galaxy clusters and groups with weak-lensing mass calibration from the Hyper Suprime-Cam Subaru Strategic Program Survey. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Choudhury S., J.E. Pineda, P. Caselli, S.S. Offner, E. Rosolowsky, R.K. Friesen, E. Redaelli, A. Chacón-Tanarro, Y. Shirley, A. Punanova, H. Kirk: Transition from coherent cores to surrounding cloud in L1688. *Astron. Astrophys.* 648 (2021).
- Chung E.J., C.W. Lee, S. Kim, M. Gopinathan, M. Tafalla, P. Caselli, P.C. Myers, T. Liu, H. Yoo, K.H. Kim, M. Kim, A. Soam, J. Cho, W. Kwon, C. Lee, H. Kang: TRAO Survey of the Nearby Filamentary Molecular Clouds, the Universal Nursery of Stars (TRAO FUNS). II. Filaments and Dense Cores in IC 5146. *Ap. J.* 919, 1 (2021).
- Ciambur B.C., F. Fragkoudi, S. Khoperskov, P. Di Matteo, F. Combes: Double X/Peanut structures in barred galaxies - insights from an N-body simulation. *Mon. Not. R. Astron. Soc.* 503, 2 (2021).
- Circosta C., V. Mainieri, I. Lamperti, P. Padovani, M. Bischetti, C. Harrison, D. Kakkad, A. Zanella, G. Vietri, G. Lanzuisi, M. Salvato, M. Brusa, S. Carniani, C. Ciccone, G. Cresci, C. Feruglio, B. Husemann, F. Mannucci, A. Marconi, M. Perna, E. Piconcelli, A. Puglisi, A. Saintonge, M. Schramm, C. Vignali, L. Zappacosta: SUPER. IV. CO(J = 3-2) properties of active galactic nucleus hosts at cosmic noon revealed by ALMA. *Astron. Astrophys.* 646 (2021).
- Cleeves L.I., R.A. Loomis, R. Teague, E.A. Bergin, D.J. Wilner, J.B. Bergner, G.A. Blake, J.K. Calahan, P. Cazzolletti, E.F. van Dishoeck, V.V. Guzmán, M.R. Hogerheijde, J. Huang, M. Kama, K.I. Öberg, C. Qi, J. Terwisscha van Scheltinga, C. Walsh: The TW Hya Rosetta Stone Project IV: A Hydrocarbon-rich Disk Atmosphere. *Ap. J.* 911, 1 (2021).
- Codella C., E. Bianchi, L. Podio, S. Mercimek, C. Ceccarelli, A. López-Sepulcre, R. Bachiller, P. Caselli, N. Sakai, R. Neri, F. Fontani, C. Favre, N. Balucani, B. Lefloch, S. Viti, S. Yamamoto: SOLIS. XII. SVS13-A Class I chemical complexity as revealed by S-bearing species. *Astron. Astrophys.* 654, A52 (2021).
- Correa C.M., D.J. Paz, A.G. Sánchez, A.N. Ruiz, N.D. Padilla, R.E. Angulo: Redshift-space effects in voids and their impact on cosmological tests. Part I: the void size function. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Correa, C. M., D. J. Paz, N.D. Padilla, A.G. Sanchez, A.N. Ruiz, R.E. Angulo: Redshift-space effects in voids and their impact on cosmological tests – II. The void-galaxy

cross-correlation function. *Mon. Not. R. Astron. Soc.* 509(2), 1871-1884 (2021).

Costanzi M., A. Saro, S. Bocquet, T. Abbott, M. Aguena, S. Allam, A. Amara, J. Annis, S. Avila, D. Bacon, B. Benson, S. Bhargava, D. Brooks, E. Buckley-Geer, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, A. Choi, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, J. Dietrich, P. Doel, T. Eifler, S. Everett, I. Ferrero, A. Ferté, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, T. Giannantonio, P. Giles, S. Grandis, D. Gruen, R. Gruendl, N. Gupta, G. Gutierrez, W. Hartley, S. Hinton, D. Hollowood, K. Honscheid, D. James, T. Jeltema, E. Krause, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, N. MacCrann, M. Maia, J. Marshall, F. Menanteau, R. Miquel, J. Mohr, R. Morgan, J. Myles, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, D. Rapetti, C. Reichardt, A. Romer, A. Roodman, F. Ruppin, L. Salvati, S. Samuroff, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, P. Singh, M. Smith, M. Soares-Santos, A. Stark, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, D. Tucker, T. Varga, R. Wechsler, Z. Zhang, DES, SPT Collaborations: Cosmological constraints from DES Y1 cluster abundances and SPT multiwavelength data. *Physical Review D* 103, 4 (2021).

Daddi E., F. Valentino, R. Rich, J. Neill, M. Gronke, D. O'Sullivan, D. Elbaz, F. Bournaud, A. Finoguenov, A. Marchal, I. Delvecchio, S. Jin, D. Liu, V. Strazzullo, A. Calabro, R. Coogan, C. D'Eugenio, R. Gobat, B. Kalita, P. Laursen, D. Martin, A. Puglisi, E. Schinnerer, T. Wang: Three Lyman- α emitting filaments converging to a massive galaxy group at $z = 2.91$: discussing the case for cold gas infall. *Astron. Astrophys.* 649 (2021).

Dahmer-Hahn L.G., R. Riffel, A. Rodríguez-Ardila, R. A. Riffel, T. Storchi-Bergmann, M. Marinello, R. I. Davies, L. Burtscher, D. Ruschel-Dutra, D. J. Rosario: Stellar populations in local AGNs: evidence for enhanced star formation in the inner 100 pc. *Mon. Not. R. Astron. Soc.* 509, 3, 4653–4668 (2021).

Dalton T., S.L. Morris, M. Fumagalli, E. Gattuzz: Probing the physical properties of the intergalactic medium using blazars. *Mon. Not. R. Astron. Soc.* 508, 2, 1701-1718 (2021).

Davies R.L., N. Förster Schreiber, R. Genzel, T. Shimizu, R. Davies, A. Schrubba, L. Tacconi, H. Übler, E. Wisnioski, S. Wuyts, M. Fossati, R. Herrera-Camus, D. Lutz, J. Mendel, T. Naab, S. Price, A. Renzini, D. Wilman, A. Beifiori, S. Belli, A. Burkert, J. Chan, A. Contursi, M. Fabricius, M. Lee, R. Saglia, A. Sternberg: The KMOS^{3D} Survey: Investigating the Origin of the Elevated Electron Densities in Star-forming Galaxies at $1 \leq z \leq 3$. *Ap. J.* 909, 1 (2021).

Dávila-Kurbán F., A.G. Sánchez, M. Lares, A.N. Ruiz: Improved two-point correlation function estimates using glass-like distributions as a reference sample. *Mon. Not. R. Astron. Soc.* 506, 4, 4667-4675 (2021).

Davis D., K. Gebhardt, E. Mentuch Cooper, J. Chisholm, R. Ciardullo, D.J. Farrow, S.L. Finkelstein, C. Gronwall, E. Gawiser, G.J. Hill, U. Hopp, D. Jeong, M. Landriau, C. Liu, M. Lujan Niemeyer, D.P. Schneider, J. Snigula, S. Tuttle:

Detection of Lyman Continuum from $3.0 < z < 3.5$ Galaxies in the HETDEX Survey. *Ap. J.* 920, 2 (2021).

De Luca A., R. Salvaterra, A. Belfiore, S. Carpano, D. D'Agostino, F. Haberl, G. Israel, D. Law-Green, G. Lisini, M. Marelli, G. Novara, A. Read, G. Rodriguez-Castillo, S. Rosen, D. Salvetti, A. Tiengo, G. Vianello, M. Watson, C. Delvaux, T. Dickens, P. Esposito, J. Greiner, H. Hämmerle, A. Kreikenbohm, S. Kreykenbohm, M. Oertel, D. Pizzocaro, J. Pye, S. Sandrelli, B. Stelzer, J. Wilms, F. Zagaria: The EXTraS project: Exploring the X-ray transient and variable sky. *Astron. Astrophys.* 650 (2021).

De Marco B., A. Zdziarski, G. Ponti, G. Migliori, T. Belloni, A. Segovia Otero, M. Dzielak, E. Lai: The inner flow geometry in MAXI J1820+070 during hard and hard-intermediate states. *Astron. Astrophys.* 654, A14 (2021).

de Mattia A., V. Ruhlmann-Kleider, A. Raichoor, A.J. Ross, A. Tamone, C. Zhao, S. Alam, S. Avila, E. Burtin, J. Bautista, F. Beutler, J. Brinkmann, J.R. Brownstein, M.J. Chapman, C. Chuang, J. Comparat, H. du Mas des Bourboux, K.S. Dawson, A. de la Macorra, H. Gil-Marín, V. Gonzalez-Perez, C. Gorgoni, J. Hou, H. Kong, S. Lin, S. Nadathur, J.A. Newman, E. Mueller, W.J. Percival, M. Rezaie, G. Rossi, D.P. Schneider, P. Tiwari, M. Vivek, Y. Wang, G. Zhao: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: measurement of the BAO and growth rate of structure of the emission line galaxy sample from the anisotropic power spectrum between redshift 0.6 and 1.1. *Mon. Not. R. Astron. Soc.* 501, 4 (2021).

Deger, S., J.C. Lee, B.C. Whitmore, ..., A. Schrubba et al.: Bright, relatively isolated star clusters in PHANGS-HST galaxies: Aperture corrections, quantitative morphologies, and comparison with synthetic stellar population models. *Mon. Not. R. Astron. Soc.* 510, 1, 32-53 (2021).

Dekel A., J. Freundlich, F. Jiang, S. Lapiner, A. Burkert, D. Ceverino, X. Du, R. Genzel, J. Primack: Core formation in high- z massive haloes: heating by post-compacton satellites and response to AGN outflows. *Mon. Not. R. Astron. Soc.* 508, 1, 999-1019 (2021).

de Menezes R., E. Orlando, M. Di Mauro, A. Strong: A study of superluminous stars with the Fermi-Large Area Telescope. *Mon. Not. R. Astron. Soc.* 507, 1, 680-686 (2021).

den Brok J., D. Chatzigiannakis, F. Bigiel, J. Puschig, A. Barnes, A. Leroy, M. Jiménez-Donaire, A. Usero, E. Schinnerer, E. Rosolowsky, C. Faesi, K. Grasha, A. Hughes, J. Kruijssen, D. Liu, L. Neumann, J. Pety, M. Querejeta, T. Saito, A. Schrubba, S. Stuber: New constraints on the $^{12}\text{CO}(2-1)/(1-0)$ line ratio across nearby disc galaxies. *Mon. Not. R. Astron. Soc.* 504, 3 (2021).

Diehl J., J. Weller: Constraining ultra-light axions with galaxy cluster number counts. *J. of Cosmology and Astroparticle Phys.* 2021, 8 (2021).

Diehl R., M. Lugaro, A. Heger, A. Sieverding, X. Tang, K. Li, E. Li, C. Doherty, M. Krause, A. Wallner, N. Prantzos, H. Brinkman, J. den Hartogh, B. Wehmeyer, A. Yagüe López, M. Pleintinger, P. Banerjee, W. Wang: The radioactive nuclei (^{26}Al) and (^{60}Fe) in the Cosmos and in the solar

- system. *Publ. Astron. Soc. Australia*. 38, e062 (2021).
- Diehl R.: Radioactive isotopes in the interstellar medium. *Astrophys. Space Sci.* 366, 11 (2021).
- Diehl R., M.G. Krause, K. Kretschmer, M. Lang, M.M. Pleintinger, T. Siegert, W. Wang, L. Bouchet, P. Martin: Steady-state nucleosynthesis throughout the Galaxy. *New Astronomy Reviews* 92 (2021).
- Dogiel V., D. Chernyshov, A. Ivlev, A. Kiselev, A. Kopyev: Self-modulation of Cosmic Rays in Molecular Clouds: Imprints in the Radio Observations. *Ap. J.* 921, 1 (2021).
- Doroshenko, V., R. Staubert, C. Maitra, A. Rau, F. Haberl, A. Santangelo, A. Schwöpe, J. Wilms, D. A. H. Buckley, A. Semena, I. Mereminskiy, A. Lutovinov, M. Gromadzki, L. J. Townsend, I. M. Monageng: SRGAJ124404.1-632232/SRGU J124403.8-632231: New X-ray pulsar discovered in the all-sky survey by the SRG. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Doux C., E. Baxter, P. Lemos, C. Chang, A. Alarcon, A. Amon, A. Campos, A. Choi, M. Gatti, D. Gruen, M. Jarvis, N. MacCrann, Y. Park, J. Prat, M. Rau, M. Raveri, S. Samuroff, J. DeRose, W. Hartley, B. Hoyle, M. Troxel, J. Zuntz, T. Abbott, M. Agüena, S. Allam, J. Annis, S. Avila, D. Bacon, E. Bertin, S. Bhargava, D. Brooks, D. Burke, M. Carrasco Kind, J. Carretero, R. Cawthon, M. Costanzi, L. da Costa, M. Pereira, S. Desai, H. Diehl, J. Dietrich, P. Doel, S. Everett, I. Ferrero, P. Fosalba, J. Frieman, J. García-Bellido, D. Gerdes, T. Giannantonio, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, E. Huff, D. Huterer, B. Jain, D. James, E. Krause, K. Kuehn, N. Kuropatkin, O. Lahav, C. Lidman, M. Lima, M. Maia, F. Menanteau, R. Miquel, R. Morgan, J. Muir, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, E. Suchyta, M. Swanson, G. Tarle, C. To, D. Tucker, T. Varga, J. Weller, R. Wilkinson: Dark energy survey internal consistency tests of the joint cosmological probes analysis with posterior predictive distributions. *Mon. Not. R. Astron. Soc.* 503, 2 (2021).
- Doux C., C. Chang, B. Jain, J. Blazek, H. Camacho, X. Fang, M. Gatti, E. Krause, N. MacCrann, S. Samuroff, L. Secco, M. Troxel, J. Zuntz, M. Agüena, S. Allam, A. Amon, S. Avila, D. Bacon, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, A. Choi, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, T. Davis, J. Dietrich, P. Doel, I. Ferrero, A. Ferté, P. Fosalba, J. García-Bellido, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, S. Hinton, D. Hollowood, D. Huterer, D. James, K. Kuehn, N. Kuropatkin, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Roodman, E. Sanchez, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, M. Soares-Santos, E. Suchyta, G. Tarle, C. To, T. Varga, J. Weller, R. Wilkinson, DES Collaboration: Consistency of cosmic shear analyses in harmonic and real space. *Mon. Not. R. Astron. Soc.* 503, 3 (2021).
- Drozdovskaya M.N., I.R. Schroeder, I. M. Rubin, K. Altwegg, E.F. van Dishoeck, B.M. Kulterer, J. De Keyser, S.A. Fuselier, M. Combi: Prestellar grain-surface origins of deuterated methanol in comet 67P/Churyumov-Gerasimenko. *Mon. Not. R. Astron. Soc.* 500, 4 (2021).
- Ducci, L., S. Mereghetti, A. Santangelo, L. Ji, S. Carpano, S. Covino, V. Doroshenko, F. Haberl, C. Maitra, I. Kreykenbohm, A. Udalski: eROSITA detection of flares from the Be/X-ray binary A0538-66. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Eggemeier A., R. Scoccimarro, R.E. Smith, M. Crocce, A. Pezzotta, A.G. Sánchez: Testing one-loop galaxy bias: Joint analysis of power spectrum and bispectrum. *Physical Review D* 103, 12 (2021).
- Encalada F.J., L.W. Looney, J.J. Tobin, S.I. Sadavoy, D. Segura-Cox, E. Cox, Z. Li, G. Novak: 870 μm Dust Continuum of the Youngest Protostars in Ophiuchus. *Ap. J.* 913, 2 (2021).
- Endres C.P., M. Martin-Drumel, O. Zingsheim, L. Bonah, O. Piralí, T. Zhang, Á. Sánchez-Monge, T. Möller, N. Wehres, P. Schilke, M.C. McCarthy, S. Schlemmer, P. Caselli, S. Thorwirth: SOLEIL and ALMA views on prototypical organic nitriles: $\text{C}_2\text{H}_5\text{CN}$. *Journal of Molecular Spectroscopy* 375 (2021).
- Endres C.P., G.C. Mellau, M.E. Harding, M. Martin-Drumel, H. Lichau, S. Thorwirth: High-resolution infrared study of vinyl acetylene: The ν_{13} (214 cm^{-1}) and ν_{18} (304 cm^{-1}) fundamentals. *Journal of Molecular Spectroscopy* 379 (2021).
- eROSITA EDR: Bahar, Y.E., E. Bulbul, N. Clerc, V. Ghirardini, A. Liu, K. Nandra, F. Pacaud, I. Chiu, J. Comparat, J. Ider-Chitham, M. Klein, T. Liu, A. Merloni, K. Migkas, N. Okabe, M. E. Ramos-Ceja, T. H. Reiprich, J. S. Sanders, T. Schrabback: The eROSITA Final Equatorial-Depth Survey (eFEDS): X-ray properties and scaling relations of galaxy clusters and groups. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- eROSITA EDR: Boller, T., J.H.M.M. Schmitt, J. Buchner, M. Freyberg, A. Georgakakis, T. Liu, J. Robrade, A. Merloni, K. Nandra, A. Malyali, M. Krumpke, M. Salvato, T. Dwelly: The eROSITA Final Equatorial-Depth Survey (eFEDS): Variability catalogue and multi-epoch comparison. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- eROSITA EDR: Brunner, H., T. Liu, T., G. Lamer, A. Georgakakis, A. Merloni, M. Brusa, E. Bulbul, K. Dennerl, S. Friedrich, A. Liu, C. Maitra, K. Nandra, M.E. Ramos-Ceja, J. S. Sanders, I. M. Stewart, T. Boller, J. Buchner, N. Clerc, J. Comparat, T. Dwelly, D. Eckert, A. Finoguenov, M. Freyberg, V. Ghirardini, A. Gueguen, F. Haberl, I. Kreykenbohm, M. Krumpke, S. Osterhage, F. Pacaud, P. Predehl, T. H. Reiprich, J. Robrade, M. Salvato, A. Santangelo, T. Schrabback, A. Schwöpe, J. Wilms: The eROSITA Final Equatorial Depth Survey (eFEDS): The X-ray catalog. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Buchner, J., T. Boller, D. Bogensberger, A. Malyali, K. Nandra, J. Wilms, T. Dwelly, T. Liu: Systematic evaluation of variability detection methods for eROSITA. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Bulbul, E., A. Liu, T. Pasini, J. Comparat, D. Hoang, M. Klein, V. Ghirardini, M. Salvato, A. Merloni, R. Seppi, J. Wolf, S. F. Anderson, Y. E. Bahar, M. Brusa, M. Brueggen, J. Buchner, T. Dwelly, H. Ibarra-Medel, J. Ider Chitham, T. Liu, K. Nandra, M. Ramos-Ceja, J. S. Sanders, Y. Shen: The eROSITA Final Equatorial-Depth Survey (eFEDS): Clusters of Galaxies in Disguise. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Carpano, S., F. Haberl, C. Maitra, M. Freyberg, K. Dennerl, A. Schwöpe, A. H. Buckley, I. M. Monageng: SRG/eROSITA discovery of 164s pulsations from the SMC Be/X-ray binary XMMU J010429.4-723136. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Ghirardini, V., Y. E. Bahar, E. Bulbul, A. Liu, N. Clerc, F. Pacaud, J. Comparat, T. Liu, M. E. Ramos-Ceja, D. Hoang, J. Ider-Chitham, M. Klein, A. Merloni, K. Nandra, N. Ota, P. Predehl, T. Reiprich, J. Sanders, T. Schrabback: The eROSITA Final Equatorial-Depth Survey (eFEDS): Characterization of morphological properties of galaxy groups and clusters. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Haberl, F., C. Maitra, S. Carpano, X. Dai, V. Doroshenko, K. Dennerl, M. J. Freyberg, M. Sasaki, A. Udalski, K. A. Postnov, N. I. Shakura: eROSITA calibration and performance verification phase: High-mass X-ray binaries in the Magellanic Clouds. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Liu, A., E. Bulbul, V. Ghirardini, T. Liu, M. Klein, N. Clerc, Y. Oezsoy, M. E. Ramos-Ceja, F. Pacaud, J. Comparat, N. Okabe, Y. E. Bahar et al.: The eROSITA Final Equatorial-Depth Survey (eFEDS): The catalog of galaxy clusters and groups. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Liu, T., A. Merloni, J. Comparat, K. Nandra, J. Sanders, G. Lamer, J. Buchner, T. Dwelly, M. Freyberg, A. Malyali, A. Georgakakis, M. Salvato, H. Brunner, M. Brusa, M. Klein, V. Ghirardini et al.: Establishing the X-ray source detection strategy for eROSITA with simulations. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Liu, T., J. Buchner, K. Nandra, A. Merloni, T. Dwelly, J. S. Sanders, M. Salvato, R. Arcodia, M. Brusa, J. Wolf, A. Georgakakis, T. Boller, M. Krumpke, G. Lamer, S. Waddell, T. Urrutia, A. Schwöpe, J. Robrade, J. Wilms,

T. Dauser, J. Comparat, Y. Toba, K. Ichikawa, K. Iwasawa, Y. Shen, H. Ibarra Medel: The eROSITA Final Equatorial-Depth Survey (eFEDS): Point-source spectra and AGN catalogue. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Maitra, C., F. Haberl, M. Sasaki, P. Maggi, K. Dennerl, M. J. Freyberg: N1987A: Tracing the flux decline and spectral evolution through a comparison of SRG/eROSITA and XMM-Newton observations. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Mayer, M., W. Becker, P. Predehl, M. Sasaki, M. Freyberg: A global view of shocked plasma in the supernova remnant Puppis A provided by SRG/eROSITA. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Ramos-Ceja, M.E., M. Oguri, S. Miyazaki, V. Ghirardini, I. Chiu, N. Okabe, A. Liu, T. Schrabback, D. Akino, Y. E. Bahar, E. Bulbul, N. Clerc, J. Comparat, S. Grandis, M. Klein, Y.-T. Lin, A. Merloni, I. Mitsuishi, H. Miyatake, S. More, K. Nandra, A. J. Nishizawa, N. Ota, F. Pacaud, T. H. Reiprich, J. S. Sanders: The eROSITA Final Equatorial-Depth Survey (eFEDS). A complete census of X-ray properties of Subaru Hyper Suprime-Cam weak lensing shear-selected clusters in the eFEDS footprint. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Salvato, M., J. Wolf, T. Dwelly, A. Georgakakis, M. Brusa, A. Merloni, T. Liu, Y. Toba, K. Nandra, G. Lamer, J. Buchner, C. Schneider, S. Freund, A. Rau, A. Schwöpe, A. Nishizawa, M. Klein, R. Arcodia, J. Comparat, B. Musiimenta, T. Nagao, H. Brunner, A. Malyali, A. Finoguenov, S. Anderson, Y. Shen, H. Ibarra-Medel, J. Trump, W. N. Brandt, C. M. Urry, C. Rivera, M. Krumpke, T. Urrutia, T. Miyaji, K. Ichikawa, D. P. Schneider, A. Fresco, J. Wilms, T. Boller, J. Haase, J. Brownstein, R. R. Lane, D. Bizyaev, C. Nitschelm: The eROSITA Final Equatorial-Depth Survey (eFEDS): Identification and characterization of the counterparts to the point-like sources. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

eROSITA EDR: Sanders, J.S., V. Biffi, M. Brüggen, E. Bulbul, K. Dennerl, K. Dolag, T. Erben, M. Freyberg, E. Gatzuz, V. Ghirardini, D. N. Hoang, M. Klein, A. Liu, A. Merloni, F. Pacaud, M. E. Ramos-Ceja, T. H. Reiprich, J. A. ZuHone: Studying the merging cluster Abell 3266 with eROSITA. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Erwin, P., A. Seth, V.P. Debattista, M. Seidel, K. Mehrgan, J. Thomas, R. Saglia, A. de Lorenzo-Cáceres, W. Maciejewski, M. Fabricius, J. Méndez-Abreu, U. Hopp, M. Kluge, J.E. Beckman, R. Bender, N. Drory, D. Fisher: Composite bulges - II Classical bulges and nuclear discs in barred

- galaxies: the contrasting cases of NGC 4608 and NGC 4643. *Monthly Notices Of The Royal Astronomical* 502, 2, 2446-2473 (2021).
- Euclid Collaboration, O. Ilbert, S. de la Torre, N. Martinet, ..., R. Bender, ..., J. Graciá-Carpio, F. Grupp, L. ..., F. Raison, ..., J. Weller, et al.: Euclid preparation. XI. Mean redshift determination from galaxy redshift probabilities for cosmic shear tomography. *Astron. Astrophys.* 647, A117 (2021).
- Euclid Collaboration, A. Pocino, I. Tutusaus, F. Castander, ..., R. Bender, A. Biviano, C. Bodendorf, ..., J. Graciá-Carpio, F. Grupp, ..., F. Raison, ..., R. Saglia, A. Sánchez, et al.: Euclid preparation. XII. Optimizing the photometric sample of the Euclid survey for galaxy clustering and galaxy-galaxy lensing analyses. *Astron. Astrophys.* 655, A44 (2021).
- Fahion K., M. Lyubenova, G. van de Ven, M. Hilker, R. Leaman, J. Falcón-Barroso, A. Bittner, L. Coccatto, E. Corsini, D. Gadotti, E. Iodice, R. McDermid, I. Martín-Navarro, F. Pinna, A. Poci, M. Sarzi, P. T. de Zeeuw, L. Zhu: Diversity of nuclear star cluster formation mechanisms revealed by their star formation histories. *Astron. Astrophys.* 650, A137 (2021).
- Farrow D.J., A.G. Sánchez, R. Ciardullo, E.M. Cooper, D. Davis, M. Fabricius, E. Gawiser, H.S. Grasshorn Gebhardt, K. Gebhardt, G.J. Hill, D. Jeong, E. Komatsu, M. Landriau, C. Liu, S. Saito, J. Snigula, I.G. Wold: Correcting correlation functions for redshift-dependent interloper contamination. *Mon. Not. R. Astron. Soc.* 507, 3, 3187–3206 (2021).
- Faure B., F. Bournaud, J. Fensch, E. Daddi, M. Behrendt, A. Burkert, J. Richard: Hierarchical fragmentation in high redshift galaxies revealed by hydrodynamical simulations. *Mon. Not. R. Astron. Soc.* 502, 3, 4641-4657 (2021).
- Fernández-Valenzuela E., N. Pinilla-Alonso, J. Stansberry, J. Emery, W. Perkins, C. Van Laerhoven, B. Gladman, W. Fraser, D. Cruikshank, E. Lellouch, T. Müller, W. Grundy, D. Trilling, Y. Fernandez, C. Dalle Ore: Compositional Study of Trans-Neptunian Objects at $\lambda > 2.2 \mu\text{m}$. *The Planetary Science Journal* 2, 1 (2021).
- Ferrero I., M. Crocce, I. Tutusaus, ..., T. Varga, DES Collaboration: Dark Energy Survey Year 3 Results: Galaxy mock catalogs for BAO analysis. *Astron. Astrophys.* 656, A106 (2021).
- Ferrigno C., V. Savchenko, A. Coleiro, F. Panessa, A. Bazzano, E. Bozzo, J. Chenevez, A. Domingo, M. Doyle, A. Goldwurm, D. Götz, E. Jourdain, A. von Kienlin, E. Kuulkers, S. Mereghetti, A. Martin-Carrillo, L. Natalucci, F. Onori, J. Rodi, J. Roques, C. Sánchez-Fernández, P. Ubertini: Multi-messenger astronomy with INTEGRAL. *New Astronomy Reviews* 92 (2021).
- Fetherolf T., N.A. Reddy, A.E. Shapley, M. Kriek, B. Siana, A.L. Coil, B. Mobasher, W.R. Freeman, R.L. Sanders, S.H. Price, I. Shivaeei, M. Azadi, L. de Groot, G.C. Leung, T.O. Zick: The MOSDEF survey: the dependence of H α -to-UV SFR ratios on SFR and size at $z \approx 2$. *Mon. Not. R. Astron. Soc.* 508, 1, 1431–1445 (2021).
- Filipović M., I. Bojčić, K. Grieve, R. Norris, N. Tothill, D. Shobhana, L. Rudnick, I. Prandoni, H. Andernach, N. Hurley-Walker, R. Alsaberi, C. Anderson, J. Collier, E. Crawford, B.-Q. For, T. Galvin, F. Haberl, A. Hopkins, A. Ingalinera, P. Kavanagh, B. Koribalski, R. Kothes, D. Leahy, H. Leverenz, P. Maggi, C. Maitra, J. Marvil, T. Pannuti, L. Park, J. Payne, C. Pennock, S. Riggi, G. Rowell, H. Sano, M. Sasaki, L. Staveley-Smith, C. Trigilio, G. Umama, D. Urošević, J.T. van Loon, E. Vardoulaki: Radio continuum sources behind the Large Magellanic Cloud. *Mon. Not. R. Astron. Soc.* 507, 2, 2885–2904 (2021).
- Fiore A., T.-W. Chen, A. Jerkstrand, S. Benetti, R. Ciolfi, C. Inserra, E. Cappellaro, A. Pastorello, G. Leloudas, S. Schulze, M. Berton, J. Burke, C. McCully, W. Fong, L. Galbany, M. Gromadzki, C. Gutiérrez, D. Hiramatsu, G. Hosseinzadeh, D. Howell, E. Kankare, R. Lunnan, T. Müller-Bravo, D. O'Neill, M. Nicholl, A. Rau, J. Sollerman, G. Terreran, S. Valenti, D. Young: SN 2017gci: a nearby Type I Superluminous Supernova with a bumpy tail. *Mon. Not. R. Astron. Soc.* 502, 2, 2120-2139 (2021).
- Fitz Axen M., S.S. Offner, B.A. Gaches, C.L. Fryer, A. Hungerford, K. Silsbee: Transport of Protostellar Cosmic Rays in Turbulent Dense Cores. *Ap. J.* 915, 1 (2021).
- Fluetsch, A., R. Maiolino, S. Carniani, S. Arribas, F. Belfiore, E. Bellocchi, S. Cazzoli, C. Cicone, G. Cresci, A.C. Fabian, R. Gallagher, W. Ishibashi, F. Mannucci, A. Marconi, M. Perna, E. Sturm, G. Venturi: Properties of the multiphase outflows in local (ultra)luminous infrared galaxies. *Monthly Notices Of The Royal Astronomical* 505, 4, 5753-5783 (2021).
- Fontani F., A. Barnes, P. Caselli, J. Henshaw, G. Cosentino, I. Jiménez-Serra, J. Tan, J. Pineda, C. Law: ALMA-IRDC - II. First high-angular resolution measurements of the $^{14}\text{N}/^{15}\text{N}$ ratio in a large sample of infrared-dark cloud cores. *Mon. Not. R. Astron. Soc.* 503, 3, 4320-4335 (2021).
- Fontani F., L. Colzi, E. Redaelli, O. Sipilä, P. Caselli: First survey of HCNH⁺ in high-mass star-forming cloud cores. *Astron. Astrophys.* 651, A94 (2021).
- Fortino W., G. Bernstein, P. Bernardinelli, ..., T. Varga, A. Walker, J. Weller, W. Wester, DES Collaboration: Reducing Ground-based Astrometric Errors with Gaia and Gaussian Processes. *Astron. J.* 162, 3 (2021).
- Foster C., J. Mendel, C. Lagos, E. Wisnioski, T. Yuan, F. D'Eugenio, T. Barone, K. Harborne, S. Vaughan, F. Schulze, R.-S. Remus, A. Gupta, F. Colacchioni, D. Khim, P. Taylor, R. Bassett, S. Croom, R. McDermid, A. Poci, A. Battisti, J. Bland-Hawthorn, S. Bellstedt, M. Colless, L. Davies, C. Derkenne, S. Driver, A. Ferré-Mateu, D. Fisher, E. Gjergo, E. Johnston, A. Khalid, C. Kobayashi, S. Oh, Y. Peng, A. Robotham, P. Sharda, S. Sweet, E. Taylor, K.-V. H. Tran, J. Trayford, J. van de Sande, S. Yi, L. Zanisi: The MAGPI survey: Science goals, design, observing strategy, early results and theoretical framework. *Publ. Astron. Soc. Australia.* 38, E031 (2021).
- Friedrich O., F. Andrade-Oliveira, H. Camacho, ..., T.N. Varga, J. Weller, ..., DES Collaboration: Dark Energy Sur-

vey year 3 results: covariance modelling and its impact on parameter estimation and quality of fit. *Mon. Not. R. Astron. Soc.* 508, 3, 3125-3165 (2021).

Frigo M., T. Naab, A. Rantala, P. Johansson, B. Neureiter, J. Thomas, F. Rizzuto: The two phases of core formation - orbital evolution in the centres of ellipticals with super-massive black hole binaries. *Mon. Not. R. Astron. Soc.* 508, 3, 4610-4624 (2021).

Fritz T., L. Patrick, A. Feldmeier-Krause, R. Schödel, M. Schultheis, O. Gerhard, G. Nandakumar, N. Neumayer, F. Nogueras-Lara, M. Prieto: A KMOS survey of the nuclear disk of the Milky Way. I. Survey design and metallicities. *Astron. Astrophys.* 649, A83 (2021).

Fujimoto S., M. Oguri, G. Brammer, Y. Yoshimura, N. Laporte, J. González-López, G.B. Caminha, K. Kohno, A. Zitrin, J. Richard, M. Ouchi, F.E. Bauer, I. Smail, B. Hat-sukade, Y. Ono, V. Kokorev, H. Umehata, D. Schaerer, K. Knudsen, F. Sun, G. Magdis, F. Valentino, Y. Ao, S. Toft, M. Dessauges-Zavadsky, K. Shimasaku, K. Caputi, H. Kusakabe, K. Morokuma-Matsui, K. Shotaro, E. Egami, M.M. Lee, T. Rawle, D. Espada: ALMA Lensing Cluster Survey: Bright [C II] 158 μ m Lines from a Multiply Imaged Sub-L* Galaxy at $z = 6.0719$. *Ap. J.* 911, 2 (2021).

Fumagalli A., A. Saro, S. Borgani, ..., C. Bodendorf, ..., F. Grupp, ..., F. Raison, ..., R. Saglia, ..., J. Weller, et al.: Euclid: Effects of sample covariance on the number counts of galaxy clusters. *Astron. Astrophys.* 652, A21 (2021).

Fuselier S., S. Haaland, P. Tenfjord, G. Paschmann, S. Toledo-Redondo, D. Malaspina, M. Kim, K. Trattner, S. Petrinc, B. Giles, J. Goldstein, J. Burch, R. Strangeway: High Density Magnetospheric He⁺ at the Dayside Magnetopause and Its Effect on Magnetic Reconnection. *J. Geophys. Res. (Space Phys.)* 126, 1 (2021).

Gajda G., O. Gerhard, M. Blaña, L. Zhu, J. Shen, R.P. Saglia, R. Bender: Unravelling stellar populations in the Andromeda Galaxy. *Astron. Astrophys.* 647, A131 (2021).

Galán-de Anta, P.M., M. Sarzi, T. W. Spriggs, B. Nedelchev, F. Pinna, I. Martín-Navarro, L. Coccato, E. M. Corsini, P. T. de Zeeuw, J. Falcón-Barroso, D. A. Gadotti, E. Iodice, K. Fahrion, M. Lyubenova, R. M. McDermid, L. Morelli, G. van de Ven, S. Viaene and L. Zhu: The Fornax 3D project: PNe populations and stellar metallicity in edge-on galaxies. *Astron. Astrophys.* 652, A109 (2021).

García-Burillo S., A. Alonso-Herrero, C. Ramos Almeida, O. González-Martín, F. Combes, A. Usero, S. Hönig, M. Querejeta, E. Hicks, L. Hunt, D. Rosario, R. Davies, P. Boorman, A. Bunker, L. Burtscher, L. Colina, T. Díaz-Santos, P. Gandhi, I. García-Bernete, B. García-Lorenzo, K. Ichikawa, M. Imanishi, T. Izumi, A. Labiano, N. Levenson, E. López-Rodríguez, C. Packham, M. Pereira-Santaella, C. Ricci, D. Rigopoulou, D. Rouan, T. Shimizu, M. Stalevski, K. Wada, D. Williamson: The Galaxy Activity, Torus, and Outflow Survey (GATOS). I. ALMA images of dusty molecular tori in Seyfert galaxies. *Astron. Astrophys.* 652, A98 (2021).

Garilli B., R. McLure, L. Pentericci, ..., K. Nandra, ..., M. Salvato, ..., A. Georgakakis, et al.: The VANDELS ESO public spectroscopic survey. Final data release of 2087 spectra

and spectroscopic measurements. *Astron. Astrophys.* 647, A150 (2021).

Gasparyan, S., D. Bégué, N. Sahakyan: Time-dependent lepto-hadronic modelling of the emission from blazar jets with SOPRANO: the case of TXS 0506+056, 3HSP J095507.9+355101, and 3C 279. *Mon. Not. R. Astron. Soc.* 509, 2, 2102-2121 (2021).

Gatti M., E. Sheldon, A. Amon, M. Becker, ..., T.N. Varga, R. Wechsler, J. Weller, W. Wester, R. Wilkinson: Dark energy survey year 3 results: weak lensing shape catalogue. *Mon. Not. R. Astron. Soc.* 504, 3, 4312-4336 (2021).

Gatti, M., G. Giannini, G.M. Bernstein, ..., J. Mohr, ..., T.N. Varga, J. Weller et al.: Dark Energy Survey Year 3 Results: clustering redshifts – calibration of the weak lensing source redshift distributions with redMaGiC and BOSS/eBOSS. *Mon. Not. R. Astron. Soc.* 510, 1, 12231247 (2021).

Gatuzz E., J.A. García, T.R. Kallman: Nitrogen X-ray absorption in the local ISM. *Mon. Not. R. Astron. Soc.* 504, 3, 4460-4471 (2021).

Gatuzz E., J. Sanders, K. Dennerl, C. Pinto, A. Fabian, T. Tamura, S. Walker, J. ZuHone: Measuring sloshing, merging and feedback velocities in the Virgo cluster. *Mon. Not. R. Astron. Soc.* 511, 3, 4511-4527 (2021).

Gebhardt K., E. Mentuch Cooper, R. Ciardullo, V. Acquaviva, R. Bender, W.P. Bowman, B.G. Castanheira, G. Dalton, D. Davis, R.S. de Jong, D. DePoy, Y. Devarakonda, S. Dongsheng, N. Drory, M. Fabricius, D.J. Farrow, J. Feldmeier, S.L. Finkelstein, C.S. Froning, E. Gawiser, C. Gronwall, L. Herold, G.J. Hill, U. Hopp, L.R. House, S. Janowiecki, M. Jarvis, D. Jeong, S. Jogee, R. Kakuma, A. Kelz, W. Kollatschny, E. Komatsu, M. Krumpke, M. Landriau, C. Liu, M.L. Niemeyer, P. MacQueen, J. Marshall, K. Mawatari, E.M. McLinden, S. Mukae, G. Nagaraj, Y. Ono, M. Ouchi, C. Papovich, N. Sakai, S. Saito, D.P. Schneider, A. Schulze, K. Shanmugasundararaj, M. Shetrone, C. Sneden, J. Snigula, M. Steinmetz, B.P. Thomas, B. Thomas, S. Tuttle, T. Urrutia, L. Wisotzki, I. Wold, G. Zeimann, Y. Zhang: The Hobby-Eberly Telescope Dark Energy Experiment (HETDEX) Survey Design, Reductions, and Detections. *Ap. J.* 923, 2, (2021).

Ghirardini, V, E. Bulbul, R. Kraft, M. Bayliss, B. Benson, L. Bleem, S. Bocquet, et al.: Evolution of the Thermodynamic Properties of Clusters of Galaxies out to Redshift of 1.8. *Ap. J.* 911, 1 (2021).

Ghirardini V., E. Bulbul, D. Hoang, M. Klein, N. Okabe, V. Biffi, M. Brüggén, M.E. Ramos-Ceja, J. Comparat, M. Oguri, T. Shimwell, K. Basu, A. Bonafede, A. Botteon, G. Brunetti, R. Cassano, F. de Gasperin, K. Dennerl, E. Gatuzz, F. Gastaldello, H. Intema, A. Merloni, K. Nandra, F. Pacaud, P. Predehl, T. Reiprich, J. Robrade, H. Röttgering, J. Sanders, R. van Weeren, W. Williams: Discovery of a supercluster in the eROSITA Final Equatorial Depth Survey: X-ray properties, radio halo, and double relics. *Astron. Astrophys.* 647 First science highlights from SRG/eROSITA, A4 (2021).

Gong M., A.V. Ivlev, V. Akimkin, P. Caselli: Impact of Mag-

- netorotational Instability on Grain Growth in Protoplanetary Disks. II. Increased Grain Collisional Velocities. *Ap. J.* 917, 2 (2021).
- Gonzalez-Perez V., J. Comparat, P. Norberg, C. Baugh, S. Contreras, C. Lacey, N. McCullagh, A. Orsi, J. Helly, J. Humphries: Erratum: The host dark matter haloes of [O II] emitters at $0.5 < z < 1.5$. *Mon. Not. R. Astron. Soc.* 503, 1, 28-30 (2021).
- Goto M., A. Vasyunin, B. Giuliano, I. Jiménez-Serra, P. Caselli, C. Román-Zúñiga, J. Alves: Water and methanol ice in L 1544. *Astron. Astrophys.* 651, A53 (2021).
- Grandis S., J. Mohr, M. Costanzi, A. Saro, S. Bocquet, M. Klein, M. Aguena, S. Allam, J. Annis, B. Ansarinejad, D. Bacon, E. Bertin, L. Bleem, D. Brooks, D. Burke, A. Carrero Rosel, M. Carrasco Kind, J. Carretero, F. Castander, A. Choi, L. da Costa, J. De Vicente, S. Desai, H. Diehl, J. Dietrich, P. Doel, T. Eifler, S. Everett, I. Ferrero, B. Floyd, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gruen, R. Gruendl, J. Gschwend, N. Gupta, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, T. Jeltema, K. Kuehn, O. Lahav, C. Lidman, M. Lima, M. Maia, M. March, J. Marshall, P. Melchior, F. Menanteau, R. Miquel, R. Morgan, J. Myles, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, C. Reichardt, A. Romer, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, P. Singh, M. Smith, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, J. Weller, R. Wilkinson, H. Wu: Exploring the contamination of the DES-Y1 cluster sample with SPT-SZ selected clusters. *Mon. Not. R. Astron. Soc.* 504, 1, 1252-1273 (2021).
- Grandis S., S. Bocquet, J.J. Mohr, M. Klein, K. Dolag: Calibration of bias and scatter involved in cluster mass measurements using optical weak gravitational lensing. *Mon. Not. R. Astron. Soc.* 507, 4, 5671-5689 (2021).
- GRAVITY Collaboration, R. Abuter, A. Amorim, M. Bauböck, F. Baganoff, J. Berger, H. Boyce, H. Bonnet, W. Brandner, Y. Clénet, R. Davies, P. de Zeeuw, J. Dexter, Y. Dallilar, A. Drescher, A. Eckart, F. Eisenhauer, G. Fazio, N. Förster Schreiber, K. Foster, C. Gammie, P. Garcia, F. Gao, E. Gendron, R. Genzel, G. Ghisellini, S. Gillessen, M. Gurwell, M. Habibi, D. Haggard, C. Hailey, F. Harrison, X. Haubois, G. Heißel, T. Henning, S. Hippler, J. Hora, M. Horrobin, A. Jiménez-Rosales, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J.-B. Le Bouquin, P. Léna, P. Lowrance, D. Lutz, S. Markoff, K. Mori, M. Morris, J. Neilsen, M. Nowak, T. Ott, T. Paumard, K. Perraut, G. Perrin, G. Ponti, O. Pfuhl, S. Rabien, G. Rodríguez-Coira, J. Shangguan, T. Shimizu, S. Scheithauer, H. Smith, J. Stadler, D. Stern, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, F. Vincent, S. von Fellenberg, I. Waisberg, F. Widmann, E. Wieprecht, E. Wiezorrek, S. Willner, G. Witzel, J. Woillez, S. Yazici, A. Young, S. Zhang, G. Zins: Constraining particle acceleration in Sgr A* with simultaneous GRAVITY, Spitzer, NuSTAR, and Chandra observations. *Astron. Astrophys.* 654, A22 (2021).
- GRAVITY Collaboration, R. Abuter, A. Amorim, M. Bauböck, J. Berger, H. Bonnet, W. Brandner, Y. Clénet, Y. Dallilar, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, F. Eisenhauer, N. Förster Schreiber, P. Garcia, F. Gao, E. Gendron, R. Genzel, S. Gillessen, M. Habibi, X. Haubois, G. Heißel, T. Henning, S. Hippler, M. Horrobin, A. Jiménez-Rosales, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J.-B. Le Bouquin, P. Léna, D. Lutz, M. Nowak, T. Ott, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, S. Rabien, G. Rodríguez-Coira, J. Shangguan, T. Shimizu, S. Scheithauer, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, F. Vincent, S. von Fellenberg, I. Waisberg, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, S. Yazici, A. Young, G. Zins: Improved GRAVITY astrometric accuracy from modeling optical aberrations. *Astron. Astrophys.* 647, A59 (2021).
- GRAVITY Collaboration, A. Amorim, M. Bauböck, M. Bentz, W. Brandner, M. Bolzer, Y. Clénet, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, N. Förster Schreiber, P. Garcia, R. Genzel, S. Gillessen, D. Gratadour, S. Hönig, D. Kaltenbrunner, M. Kishimoto, S. Lacour, D. Lutz, F. Millour, H. Netzer, C. Onken, T. Ott, T. Paumard, K. Perraut, G. Perrin, P. Petrucci, O. Pfuhl, M. Prieto, D. Rouan, J. Shangguan, T. Shimizu, J. Stadler, A. Sternberg, O. Straub, C. Straubmeier, R. Street, E. Sturm, L. Tacconi, K. Tristram, P. Vermot, S. von Fellenberg, F. Widmann, J. Woillez: A geometric distance to the supermassive black hole of NGC 3783. *Astron. Astrophys.* 654, A85 (2021).
- GRAVITY Collaboration, A. Amorim, M. Bauböck, W. Brandner, M. Bolzer, Y. Clénet, R. Davies, P. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, N. Förster Schreiber, F. Gao, P. Garcia, R. Genzel, S. Gillessen, D. Gratadour, S. Hönig, D. Kaltenbrunner, M. Kishimoto, S. Lacour, D. Lutz, F. Millour, H. Netzer, T. Ott, T. Paumard, K. Perraut, G. Perrin, B. Peterson, P. Petrucci, O. Pfuhl, M. Prieto, D. Rouan, J. Sanchez-Bermudez, J. Shangguan, T. Shimizu, M. Schartmann, J. Stadler, A. Sternberg, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, K. Tristram, P. Vermot, S. von Fellenberg, I. Waisberg, F. Widmann, J. Woillez: The central parsec of NGC 3783: a rotating broad emission line region, asymmetric hot dust structure, and compact coronal line region. *Astron. Astrophys.* 648, A117 (2021).
- GRAVITY Collaboration, F. Eupen, L. Labadie, R. Grellmann, K. Perraut, W. Brandner, G. Duchêne, R. Köhler, J. Sanchez-Bermudez, R. Garcia Lopez, A. Caratti O Garratti, M. Benisty, C. Dougados, P. Garcia, L. Klarmann, A. Amorim, M. Bauböck, J. Berger, P. Caselli, Y. Clénet, V.

Coudé Du Foresto, P. de Zeeuw, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, M. Filho, V. Ganci, F. Gao, E. Gendron, R. Genzel, S. Gillessen, G. Heissel, T. Henning, S. Hippler, M. Horrobin, Z. Hubert, A. Jiménez-Rosales, L. Jocou, P. Kervella, S. Lacour, V. Lapeyrère, J. Le Bouquin, P. Léna, T. Ott, T. Paumard, G. Perrin, O. Pfuhl, G. Rodríguez-Coira, G. Rousset, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, E.F. van Dishoeck, F. Vincent, S. von Fellenberg, F. Widmann, J. Woillez, A. Wojtczak: The GRAVITY young stellar object survey. V. The orbit of the T Tauri binary star WW Cha. *Astron. Astrophys.* 648, A37 (2021).

GRAVITY Collaboration, V. Ganci, L. Labadie, L. Klarmann, A. de Valon, K. Perraut, M. Benisty, W. Brandner, A. Caratti O Garatti, C. Dougados, F. Eupen, R. Garcia Lopez, R. Grellmann, J. Sanchez-Bermudez, A. Wojtczak, P. Garcia, A. Amorim, M. Bauböck, J.-P. Berger, P. Caselli, Y. Clénet, V. Coudé Du Foresto, P. de Zeeuw, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, M. Filho, F. Gao, E. Gendron, R. Genzel, S. Gillessen, G. Heissel, T. Henning, S. Hippler, M. Horrobin, Z. Hubert, A. Jiménez-Rosales, L. Jocou, P. Kervella, S. Lacour, V. Lapeyrère, J.-B. Le Bouquin, P. Léna, T. Ott, T. Paumard, G. Perrin, O. Pfuhl, G. Heißel, G. Rousset, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, E.F. van Dishoeck, F. Vincent, S. von Fellenberg, F. Widmann, J. Woillez: The GRAVITY young stellar object survey. VIII. Gas and dust faint inner rings in the hybrid disk of HD141569. *Astron. Astrophys.* 655, A112 (2021).

GRAVITY Collaboration, M. Koutoulaki, R. Garcia Lopez, A. Natta, R. Fedriani, A. Caratti O Garatti, T. Ray, D. Coffey, W. Brandner, C. Dougados, P. Garcia, L. Klarmann, L. Labadie, K. Perraut, J. Sanchez-Bermudez, C. Lin, A. Amorim, M. Bauböck, M. Benisty, J. Berger, A. Buron, P. Caselli, Y. Clénet, V. Coudé Du Foresto, P. de Zeeuw, G. Duvert, W. de Wit, A. Eckart, F. Eisenhauer, M. Filho, F. Gao, E. Gendron, R. Genzel, S. Gillessen, R. Grellmann, M. Habibi, X. Haubois, F. Haussmann, T. Henning, S. Hippler, Z. Hubert, M. Horrobin, A. Jimenez Rosales, L. Jocou, P. Kervella, J. Kolb, S. Lacour, J.-B. Le Bouquin, P. Léna, H. Linz, T. Ott, T. Paumard, G. Perrin, O. Pfuhl, M. Ramírez-Tannus, C. Rau, G. Rousset, S. Scheithauer, J. Shangguan, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, E.F. van Dishoeck, F. Vincent, S. von Fellenberg, F. Widmann, E. Wieprecht, M. Wiest, E. Wiezorrek, S. Yazici, G. Zins: The GRAVITY young stellar object survey. IV. The CO overtone emission in 51 Oph at sub-au scales. *Astron. Astrophys.* 645, A50 (2021).

GRAVITY Collaboration, K. Perraut, L. Labadie, J. Bouvier, F. Ménard, L. Klarmann, C. Dougados, M. Benisty, J.-P. Berger, Y. Bouarour, W. Brandner, A. Caratti O Garatti, P. Caselli, P. de Zeeuw, R. Garcia-Lopez, T. Henning, J. Sanchez-Bermudez, A. Sousa, E.F. van Dishoeck, E. Aléccian, A. Amorim, Y. Clénet, R. Davies, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, N. Förster-Schreiber, P. Garcia, E. Gendron, R. Genzel, S. Gillessen, R. Grellmann, G. Heißel, S. Hippler, M. Horrobin, Z. Hubert, L. Jocou, P. Kervella, S. Lacour, V. Lapeyrère, J.-B. Le Bouquin, P. Léna, D. Lutz, T. Ott, T. Paumard, G. Perrin, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straub-

meier, E. Sturm, L. Tacconi, F. Vincent, S. von Fellenberg, F. Widmann: The GRAVITY young stellar object survey. VII. The inner dusty disks of T Tauri stars. *Astron. Astrophys.* 655, A73 (2021).

GRAVITY Collaboration, G. Rodríguez-Coira, T. Paumard, G. Perrin, F. Vincent, R. Abuter, A. Amorim, M. Bauböck, J. Berger, H. Bonnet, W. Brandner, Y. Clénet, P. de Zeeuw, J. Dexter, A. Drescher, A. Eckart, F. Eisenhauer, N. Förster Schreiber, F. Gao, P. Garcia, E. Gendron, R. Genzel, S. Gillessen, M. Habibi, X. Haubois, T. Henning, S. Hippler, M. Horrobin, A. Jimenez-Rosales, L. Jochum, L. Jocou, A. Kaufer, P. Kervella, S. Lacour, V. Lapeyrère, J. Le Bouquin, P. Léna, M. Nowak, T. Ott, K. Perraut, O. Pfuhl, J. Sanchez-Bermudez, J. Shangguan, S. Scheithauer, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, T. Shimizu, S. von Fellenberg, I. Waisberg, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, S. Yazici, G. Zins: MOLSphere and pulsations of the Galactic Center's red supergiant GCIRS 7 from VLTI/GRAVITY. *Astron. Astrophys.* 651, A37 (2021).

GRAVITY Collaboration, J. Sanchez-Bermudez, A. Caratti O Garatti, R. Garcia Lopez, K. Perraut, L. Labadie, M. Benisty, W. Brandner, C. Dougados, P. Garcia, T. Henning, L. Klarmann, A. Amorim, M. Bauböck, J. Berger, J. Le Bouquin, P. Caselli, Y. Clénet, V. Coudé Du Foresto, P. de Zeeuw, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, M. Filho, F. Gao, E. Gendron, R. Genzel, S. Gillessen, R. Grellmann, G. Heissel, M. Horrobin, Z. Hubert, A. Jiménez-Rosales, L. Jocou, P. Kervella, S. Lacour, V. Lapeyrère, P. Léna, T. Ott, T. Paumard, G. Perrin, J. Pineda, G. Rodríguez-Coira, G. Rousset, D. Segura-Cox, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, E.F. van Dishoeck, F. Vincent, S. von Fellenberg, F. Widmann, J. Woillez: The GRAVITY young stellar object survey. VI. Mapping the variable inner disk of HD 163296 at sub-au scales. *Astron. Astrophys.* 654, A97 (2021).

Grayling M., C. Gutiérrez, M. Sullivan, P. Wiseman, M. Vincenzi, S. González-Gaitán, B. Tucker, L. Galbany, L. Kelsey, C. Lidman, E. Swann, M. Smith, C. Frohmaier, D. Carollo, K. Glazebrook, G. Lewis, A. Möller, S. Hinton, S. Uddin, T. Abbott, M. Aguena, S. Avila, E. Bertin, S. Bhargava, D. Brooks, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, M. Costanzi, L. da Costa, J. De Vicente, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, B. Hoyle, K. Kuehn, N. Kuropatkin, M. Lima, N. MacCrann, J. Marshall, P. Martini, R. Miquel, R. Morgan, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, C. Sánchez, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, M. Soares-Santos, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, A. Walker, R. Wilkinson, DES Collaboration: Understanding the extreme luminosity of DES14X2fna. *Mon. Not. R. Astron. Soc.* 505, 3, 3950-3967 (2021).

Greiner J., J. Bolmer, R. Yates, M. Habouzit, E. Bañados, P. Afonso, P. Schady: Quasar clustering at redshift 6. *Astron. Astrophys.* 654, A79 (2021).

Guelbenzu, A. M. N., S. Klose, S., P. Schady, J. Greiner, et al.: The host galaxy of the short GRB 050709. *Astron.*

- Astrophys. 650, A117 (2021).
- Gárate M., J. Cuadra, M. Montesinos, P. Arévalo: Feedback-limited accretion: variable luminosity from growing planets. *Mon. Not. R. Astron. Soc.* 501, 3 (2021).
- Haaland S., H. Hasegawa, G. Paschmann, B. Sonnerup, M. Dunlop: 20 Years of Cluster Observations: The Magnetopause. *J. Geophys. Res. (Space Phys.)* 126, 8 (2021).
- Haerendel G., : Auroral Arcs: The Fracture Theory Revisited. *J. Geophys. Res. (Space Phys.)* 126, 1 (2021).
- Haerendel G., H. Frey: The Onset of a Substorm and the Mating Instability. *J. Geophys. Res. (Space Phys.)* 126, 10 (2021).
- Halder A., O. Friedrich, S. Seitz, T.N. Varga: The integrated three-point correlation function of cosmic shear. *Mon. Not. R. Astron. Soc.* 506, 2, 2780-2803 (2021).
- Hamilton T.S., M. Berton, S. Antón, L. Busoni, A. Caccianiga, S. Ciroi, W. Gässler, I.Y. Georgiev, E. Järvelä, S. Komossa, S. Mathur, S. Rabien: Observations of the γ -ray-emitting narrow-line Seyfert 1, SBS 0846+513, and its host galaxy. *Mon. Not. R. Astron. Soc.* 504, 4, 5188-5198 (2021).
- Hanasz M., A.W. Strong, P. Girichidis: Simulations of cosmic ray propagation. *Living Reviews in Computational Astrophysics* 7, 1 (2021).
- Hartley, W. G., A. Choi, A. Amon, R.A. Gruendl, ..., J.J. Mohr, ..., T.N. Varga, et al.: Dark Energy Survey Year 3 Results: Deep Field optical + near-infrared images and catalogue. *Mon. Not. R. Astron. Soc.* 509, 3, 3547-3579 (2021).
- Hashimoto T., T. Goto, D.J.D. Santos, S.C.-C. Ho, T.Y.-Y. Hsiao, Y.H.V. Wong, A.Y. On, S.J. Kim, T. Lu, E. Kilerci-Eser: Upper limits on Einstein's weak equivalence principle placed by uncertainties of dispersion measures of fast radio bursts. *Physical Review D* 104, 12 (2021).
- Hasinger G., M. Freyberg, E. Hu, C. Waters, P. Capak, A. Moneti, H. McCracken: The ROSAT Raster survey in the north ecliptic pole field. X-ray catalogue and optical identifications. *Astron. Astrophys.* 645 (2021).
- Hawkins K., G. Zeimann, C. Sneden, E.M. Cooper, K. Gebhardt, H.E. Bond, A. Carrillo, C.M. Casey, B.G. Castanheira, R. Ciardullo, D. Davis, D.J. Farrow, S.L. Finkelstein, G.J. Hill, A. Kelz, C. Liu, M. Shetrone, D.P. Schneider, E. Starkenburg, M. Steinmetz, J.C. Wheeler, Hetdex Collaboration: The Stars of the HETDEX Survey. I. Radial Velocities and Metal-poor Stars from Low-resolution Stellar Spectra. *Ap. J.* 911, 2 (2021).
- Hayden B., D. Rubin, K. Boone, G. Aldering, J. Nordin, M. Brodwin, S. Deustua, S. Dixon, P. Fagrelus, A. Fruchter, P. Eisenhardt, A. Gonzalez, R. Gupta, I. Hook, C. Lidman, K. Luther, A. Muzzin, Z. Raha, P. Ruiz-Lapuente, C. Saunders, C. Sofiatti, A. Stanford, N. Suzuki, T. Webb, S.C. Williams, G. Wilson, M. Yen, R. Amanullah, K. Barbary, H. Böhringer, G. Chappell, C. Cunha, M. Currie, R. Fassbender, M. Gladsters, A. Goobar, H. Hildebrandt, H. Hoekstra, X. Huang, D. Huterer, M.J. Jee, A. Kim, M. Kowalski, E. Linder, J.E. Meyers, R. Pain, S. Perlmutter, J. Richard, P. Rosati, E. Rozo, E. Rykoff, J. Santos, A. Spadafora, D. Stern, R. Wechsler, The Supernova Cosmology Project: The HST See Change Program. I. Survey Design, Pipeline, and Supernova Discoveries. *Ap. J.* 912, 2 (2021).
- Henghes B., O. Lahav, D. Gerdes, H. Lin, R. Morgan, T. Abbott, M. Aguena, S. Allam, J. Annis, S. Avila, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, C. Conselice, M. Costanzi, L. da Costa, J. De Vicente, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, S. Hinton, K. Honscheid, B. Hoyle, D. James, K. Kuehn, N. Kuropatkin, J. Marshall, P. Melchior, F. Menanteau, R. Miquel, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, C. Sánchez, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, M. Smith, M. Soares-Santos, E. Suchyta, G. Tarle, C. To, R. Wilkinson, DES Collaboration: Machine Learning for Searching the Dark Energy Survey for Trans-Neptunian Objects. *Publ. Astron. Soc. Pac.* 133, 1019 (2021).
- Herrera-Camus R., N. Förster Schreiber, R. Genzel, L. Tacconi, A. Bolatto, R. Davies, D. Fisher, D. Lutz, T. Naab, T. Shimizu, K. Tadaki, H. Übler: Kiloparsec view of a typical star-forming galaxy when the Universe was ~ 1 Gyr old. I. Properties of outflow, halo, and interstellar medium. *Astron. Astrophys.* 649 (2021).
- Heymans C., T. Tröster, M. Asgari, C. Blake, H. Hildebrandt, B. Joachimi, K. Kuijken, C. Lin, A.G. Sánchez, J.L. van den Busch, A.H. Wright, A. Amon, M. Bilicki, J. de Jong, M. Crocce, A. Dvornik, T. Erben, M.C. Fortuna, F. Getman, B. Giblin, K. Glazebrook, H. Hoekstra, S. Joudaki, A. Kannawadi, F. Köhlinger, C. Lidman, L. Miller, N.R. Napolitano, D. Parkinson, P. Schneider, H. Shan, E.A. Valentijn, G. Verdoes Kleijn, C. Wolf: KiDS-1000 Cosmology: Multi-probe weak gravitational lensing and spectroscopic galaxy clustering constraints. *Astron. Astrophys.* 646 (2021).
- Hill, G. J., H. Lee, P.J. MacQueen, ..., M. Fabricius, ..., M. Häuser, ..., M. Landriau, ..., J. Snigula, ..., R. Bender, R., ..., U. Hopp et al.: The HETDEX instrumentation: Hobby-Eberly telescope wide-field upgrade and VIRUS. *Ap. J.* 162, 6, 298 (2021).
- Hilton M., C. Sifón, S. Naess, M. Madhavacheril, M. Oguri, E. Rozo, E. Rykoff, T. Abbott, S. Adhikari, M. Aguena, S. Aiola, S. Allam, S. Amodeo, A. Amon, J. Annis, B. Ansarinejad, C. Aros-Bunster, J. Austermann, S. Avila, D. Bacon, N. Battaglia, J. Beall, D. Becker, G. Bernstein, E. Bertin, T. Bhandarkar, S. Bhargava, J. Bond, D. Brooks, D. Burke, E. Calabrese, M. Carrasco Kind, J. Carretero, S. Choi, A. Choi, C. Conselice, L. da Costa, M. Costanzi, D. Crichton, K. Crowley, R. Dünner, E. Denison, M. Devlin, S. Dicker, H. Diehl, J. Dietrich, P. Doel, S. Duff, A. Duivenvoorden, J. Dunkley, S. Everett, S. Ferraro, I. Ferrero, A. Ferté, B. Flaugher, J. Frieman, P. Gallardo, J. García-Bellido, E. Gaztanaga, D. Gerdes, P. Giles, J. Golec, M. Gralla, S. Grandis, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, D. Han, W. Hartley, M. Hasselfield, J. Hill, G. Hilton, A. Hincks, S. Hinton, S.-T. Ho, K. Honscheid, B. Hoyle,

- J. Hubmayr, K. Huffenberger, J. Hughes, A. Jaelani, B. Jain, D. James, T. Jeltema, S. Kent, K. Knowles, B. Koopman, K. Kuehn, O. Lahav, M. Lima, Y.-P. Lin, M. Lokken, S. Loubser, N. MacCrann, M. Maia, T. Marriage, J. Martin, J. McMahon, P. Melchior, F. Menanteau, R. Miquel, H. Miyatake, K. Moodley, R. Morgan, T. Mroczkowski, F. Nati, L. Newburgh, M. Niemack, A. Nishizawa, R. Ogando, J. Orłowski-Scherer, L. Page, A. Palmese, B. Partridge, F. Paz-Chinchón, P. Phakathi, A. Plazas, N. Robertson, A. Romer, A. Carnero Rosell, M. Salatino, E. Sanchez, E. Schaan, A. Schillaci, N. Sehgal, S. Serrano, T. Shin, S. Simon, M. Smith, M. Soares-Santos, D. Spergel, S. Staggs, E. Storer, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, H. Trac, J. Ullom, L. Vale, J. Van Lanen, E. Vavagiakis, J. De Vicente, R. Wilkinson, E. Wollack, Z. Xu, Y. Zhang: The Atacama Cosmology Telescope: A Catalog of >4000 Sunyaev-Zel'dovich Galaxy Clusters. *Ap. J. Supp. Ser.* 253, 1 (2021).
- Hoemann E., S. Heigl, A. Burkert: Merging filaments I: a race against collapse. *Mon. Not. R. Astron. Soc.* 507, 3 (2021).
- Horstman K., A.E. Shapley, R.L. Sanders, B. Mobasher, N.A. Reddy, M. Kriek, A.L. Coil, B. Siana, I. Shivaee, W.R. Freeman, M. Azadi, S.H. Price, G.C. Leung, T. Fetherolf, L. de Groot, T. Zick, F.M. Fornasini, G. Barro: The MOSDEF survey: differences in SFR and metallicity for morphologically selected mergers at $z \sim 2$. *Mon. Not. R. Astron. Soc.* 501, 1 (2021).
- Hou J., A.G. Sánchez, A.J. Ross, A. Smith, R. Neveux, J. Bautista, E. Burtin, C. Zhao, R. Scoccimarro, K.S. Dawson, A. de Mattia, A. de la Macorra, H. du Mas des Bourboux, D.J. Eisenstein, H. Gil-Marín, B.W. Lyke, F.G. Mohammad, E. Mueller, W.J. Percival, G. Rossi, M. Vargas Magaña, P. Zarrouk, G. Zhao, J. Brinkmann, J.R. Brownstein, C. Chuang, A.D. Myers, J.A. Newman, D.P. Schneider, M. Vivek: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: BAO and RSD measurements from anisotropic clustering analysis of the quasar sample in configuration space between redshift 0.8 and 2.2. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Hovis-Afflerbach B., C.L. Steinhardt, D. Masters, M. Salvato: Identifying and Repairing Catastrophic Errors in Galaxy Properties Using Dimensionality Reduction. *Ap. J.* 908, 2 (2021).
- Hsieh T., M. Takami, M.S. Connelley, S. Liu, Y. Su, N. Hirano, M. Tamura, M. Otsuka, J.L. Karr, T. Pyo: K-band High-resolution Spectroscopy of Embedded High-mass Protostars. *Ap. J.* 912, 2 (2021).
- Hsu C., J.C. Tan, M.D. Goodson, P. Caselli, B. Körtgen, Y. Cheng: Deuterium chemodynamics of massive pre-stellar cores. *Mon. Not. R. Astron. Soc.* 502, 1 (2021).
- Hu C., A. Sternberg, E.F. van Dishoeck: Metallicity Dependence of the H/H₂ and C⁺/C/CO Distributions in a Resolved Self-regulating Interstellar Medium. *Ap. J.* 920, 1 (2021).
- Huang, H., A.V. Ivlev, V. Nosenko, Y.-F. Lin: Dispersion relation of square lattice waves in a two-dimensional binary complex plasma. *Phys. Plasmas* 28, 1 (2021).
- Huang H., T. Eifler, R. Mandelbaum, G.M. Bernstein, A. Chen, A. Choi, J. García-Bellido, D. Huterer, E. Krause, E. Roza, S. Singh, S. Bridle, J. DeRose, J. Elvin-Poole, X. Fang, O. Friedrich, M. Gatti, E. Gaztanaga, D. Gruen, W. Hartley, B. Hoyle, M. Jarvis, N. MacCrann, V. Miranda, M. Rau, J. Prat, C. Sánchez, S. Samuroff, M. Troxel, J. Zuntz, T. Abbott, M. Aguena, J. Annis, S. Avila, M. Becker, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, F.J. Castander, L. da Costa, J. De Vicente, J. Dietrich, P. Doel, S. Everett, B. Flaugher, P. Fosalba, J. Frieman, R. Gruendl, G. Gutierrez, S. Hinton, K. Honscheid, D. James, K. Kuehn, O. Lahav, M. Lima, M. Maia, J. Marshall, F. Menanteau, R. Miquel, F. Paz-Chinchón, A.P. Malagón, K. Romer, A. Roodman, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla, M. Smith, M. Soares-Santos, E. Suchyta, M. Swanson, G. Tarle, D.H. Thomas, J. Weller, DES Collaboration: Dark energy survey year 1 results: Constraining baryonic physics in the Universe. *Mon. Not. R. Astron. Soc.* 502, 4 (2021).
- Iani E., A. Zanella, J. Vernet, J. Richard, M. Gronke, C. Harrison, F. Arrigoni-Battaia, G. Rodighiero, A. Burkert, M. Behrendt, C. Chen, E. Emsellem, J. Fensch, P. Hibon, M. Hilker, E. Le Floch, V. Mainieri, A. Swinbank, F. Valentino, E. Vanzella, M. Zwaan: Stellar feedback in a clumpy galaxy at $z \sim 3.4$. *Mon. Not. R. Astron. Soc.* 507, 3, 3830-3848 (2021).
- Ichikawa K., T. Yamashita, Y. Toba, T. Nagao, K. Inayoshi, M. Charisi, W. He, A.Y. Wagner, M. Akiyama, B. Vijarnwannaluk, X. Chen, M. Kajisawa, T. Kawamuro, C. Lee, Y. Matsuoka, M. Schramm, H. Suh, M. Tanaka, H. Uchiyama, Y. Ueda, J. Pflugradt, H. Fukuchi: A Wide and Deep Exploration of Radio Galaxies with Subaru HSC (WERGS). IV. Rapidly Growing (Super)Massive Black Holes in Extremely Radio-loud Galaxies. *Ap. J.* 921, 1 (2021).
- Indahl B., G. Zeimann, G.J. Hill, W.P. Bowman, R. Ciardullo, N. Drory, E. Gawiser, U. Hopp, S. Janowiecki, M. Boylan-Kolchin, E. Mentuch Cooper, D. Davis, D. Farrow, S. Finkelstein, C. Gronwall, A. Kelz, K.B. McQuinn, D. Schneider, S.E. Tuttle: HETDEX [O III] Emitters. I. A Spectroscopically Selected Low-redshift Population of Low-mass, Low-metallicity Galaxies. *Ap. J.* 916, 1 (2021).
- Ivlev A.V., K. Silsbee, M. Padovani, D. Galli: Rigorous Theory for Secondary Cosmic-Ray Ionization. *Ap. J.* 909, 2 (2021).
- Izquierdo A., L. Testi, S. Facchini, G. Rosotti, E.F. van Dishoeck: The Disc Miner. I. A statistical framework to detect and quantify kinematical perturbations driven by young planets in discs. *Astron. Astrophys.* 650 (2021).
- Jarvis M., G. Bernstein, A. Amon, C. Davis, P. Léget, K. Bechtol, I. Harrison, M. Gatti, A. Roodman, C. Chang, R. Chen, A. Choi, S. Desai, A. Drlica-Wagner, D. Gruen, R. Gruendl, A. Hernandez, N. MacCrann, J. Meyers, A. Navarro-Alsina, S. Pandey, A. Plazas, L. Secco, E. Sheldon, M. Troxel, S. Vorperian, K. Wei, J. Zuntz, T. Abbott, M. Aguena, S. Allam, S. Avila, S. Bhargava, S. Bridle, D. Brooks, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, M. Costanzi, L. da Costa, J. De Vicente, H. Diehl, P. Doel, S. Everett, B. Flaugher, P. Fosalba, J. Frieman, J. García-

- Bellido, E. Gaztanaga, D. Gerdes, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, S. Kent, K. Kuehn, N. Kuropatkin, O. Lahav, M. Maia, M. March, J. Marshall, P. Melchior, F. Menanteau, R. Miquel, R. Ogando, F. Paz-Chinchón, E. Rykoff, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, E. Suchyta, M. Swanson, G. Tarle, T. Varga, A. Walker, W. Wester, R. Wilkinson, R. Wilkinson, DES Collaboration: Dark Energy Survey year 3 results: point spread function modelling. *Mon. Not. R. Astron. Soc.* 501, 1 (2021).
- Jeffrey N., M. Gatti, C. Chang, L. Whiteway, U. Demirbozan, A. Kovacs, G. Pollina, D. Bacon, N. Hamaus, T. Kacprzak, O. Lahav, F. Lanusse, B. Mawdsley, S. Nadathur, J. Starck, P. Vielzeuf, D. Zeurher, A. Alarcon, A. Amon, K. Bechtol, G. Bernstein, A. Campos, A.C. Rosell, M.C. Kind, R. Cawthon, R. Chen, A. Choi, J. Cordero, C. Davis, J. DeRose, C. Doux, A. Drlica-Wagner, K. Eckert, F. Elsner, J. Elvin-Poole, S. Everett, A. Ferté, G. Giannini, D. Gruen, R. Gruendl, I. Harrison, W. Hartley, K. Herner, E. Huff, D. Huterer, N. Kuropatkin, M. Jarvis, P. Leget, N. MacCrann, J. McCullough, J. Muir, J. Myles, A. Navarro-Alsina, S. Pandey, J. Prat, M. Raveri, R. Rollins, A. Ross, E. Rykoff, C. Sánchez, L. Secco, I. Sevilla-Noarbe, E. Sheldon, T. Shin, M. Troxel, I. Tutusaus, T. Varga, B. Yanny, B. Yin, Y. Zhang, J. Zuntz, T. Abbott, M. Aguena, S. Allam, F. Andrade-Oliveira, M. Becker, E. Bertin, S. Bhargava, D. Brooks, D. Burke, J. Carretero, F. Castander, C. Conselice, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, J. Dietrich, P. Doel, I. Ferrero, B. Flaugher, P. Fosalba, J. García-Bellido, E. Gaztanaga, D. Gerdes, T. Giannantonio, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, B. Hoyle, B. Jain, D. James, M. Lima, M. Maia, M. March, J. Marshall, P. Melchior, F. Menanteau, R. Miquel, J. Mohr, R. Morgan, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, M. Rodriguez-Monroy, A. Roodman, E. Sanchez, V. Scarpine, S. Serrano, M. Smith, M. Soares-Santos, E. Suchyta, G. Tarle, D. Thomas, C. To, J. Weller, DES Collaboration: Dark Energy Survey Year 3 results: Curved-sky weak lensing mass map reconstruction. *Mon. Not. R. Astron. Soc.* 505, 3, 4626-4645 (2021).
- Jensen S., J. Jørgensen, L. Kristensen, A. Coutens, E.F. van Dishoeck, K. Furuya, D. Harsono, M. Persson: ALMA observations of doubly deuterated water: inheritance of water from the prestellar environment. *Astron. Astrophys.* 650, A172 (2021).
- Jiang N., M. Melosso, F. Tamassia, L. Bizzocchi, L. Dore, E. Canè, D. Fedele, J. Guillemin, C. Puzzarini: High-resolution infrared spectroscopy of DC_3N in the stretching region. *Frontiers in Astronomy and Space Sciences* 8 (2021).
- Jiménez Muñoz A., J. Macías-Pérez, A. Secroun, W. Gillard, B. Kubik, N. Auricchio, A. Balestra, C. Bodendorf, D. Bonino, E. Branchini, M. Brescia, J. Brinchmann, V. Capobianco, C. Carbone, J. Carretero, R. Casas, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, G. Congedo, L. Conversi, Y. Copin, L. Corcione, A. Costille, M. Cropper, H. Degaudenzi, M. Douspis, F. Dubath, S. Dusini, A. Ealet, E. Franceschi, P. Franzetti, M. Fumana, B. Garilli, B. Gillis, C. Giocoli, A. Grazian, F. Grupp, S. Haugan, W. Holmes, F. Hormuth, K. Jahnke, S. Kermiche, A. Kiessling, M. Kilbinger, M. Kümmel, M. Kunz, H. Kurki-Suonio, R. Laureijs, S. Ligori, P. Lilje, I. Lloro, E. Maiorano, O. Mantsuitti, O. Marggraf, K. Markovic, R. Massey, E. Medinaceli, S. Mei, M. Meneghetti, G. Meylan, L. Moscardini, S. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, W. Percival, S. Pires, G. Polenta, M. Poncet, L. Popa, L. Pozzetti, F. Raison, R. Rebolo, M. Roncarelli, E. Rossetti, R. Saglia, M. Sauvage, R. Scaramella, P. Schneider, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, D. Tavagnacco, A. Taylor, H. Teplitz, I. Tereno, R. Toledo-Moreo, L. Valenziano, T. Vassallo, G. Verdoes Kleijn, Y. Wang, J. Weller, M. Wetzstein, G. Zamorani, J. Zoubian: Euclid: Estimation of the Impact of Correlated Readout Noise for Flux Measurements with the Euclid NISP Instrument. *Publ. Astron. Soc. Pac.* 133, 1027 (2021).
- Jiménez-Rosales A., J. Dexter, S. Ressler, A. Tchekhovskoy, M. Bauböck, Y. Dallilar, P. de Zeeuw, A. Drescher, F. Eisenhauer, S. von Fellenberg, F. Gao, R. Genzel, S. Gillessen, M. Habibi, T. Ott, J. Stadler, O. Straub, F. Widmann: Relative depolarization of the black hole photon ring in GRMHD models of Sgr A* and M87*. *Mon. Not. R. Astron. Soc.* 503, 3, 4563-4575 (2021).
- Jiménez-Serra I., A.I. Vasyunin, S. Spezzano, P. Caselli, G. Cosentino, S. Viti: The Complex Organic Molecular Content in the L1498 Starless Core. *Ap. J.* 917, 1 (2021).
- Joachimi B., C.-C. Lin, M. Asgari, T. Tröster, C. Heymans, H. Hildebrandt, F. Köhlinger, A. Sánchez, A. Wright, M. Bilicki, C. Blake, J. van den Busch, M. Crocce, A. Dvornik, T. Erben, F. Getman, B. Giblin, H. Hoekstra, A. Kannawadi, K. Kuijken, N. Napolitano, P. Schneider, R. Scoccimarro, E. Sellentin, H. Shan, M. von Wietersheim-Kramsta, J. Zuntz: KiDS-1000 methodology: Modelling and inference for joint weak gravitational lensing and spectroscopic galaxy clustering analysis. *Astron. Astrophys.* 646 (2021).
- Johansson J., A. Goobar, S. Price, A. Sagués Carracedo, L. Della Bruna, P. Nugent, S. Dhawan, E. Mörtzell, S. Papadogiannakis, R. Amanullah, D. Goldstein, S. Cenko, K. De, A. Dugas, M. Kasliwal, S. Kulkarni, R. Lunnan: Spectroscopy of the first resolved strongly lensed Type Ia supernova iPTF16geu. *Mon. Not. R. Astron. Soc.* 502, 1 (2021).
- Kalita B.S., E. Daddi, R.T. Coogan, I. Delvecchio, R. Gobat, F. Valentino, V. Strazzullo, E. Tremou, C. Gómez-Guijarro, D. Elbaz, A. Finoguenov: Feedback factory: multiple faint radio jets detected in a cluster at $z = 2$. *Mon. Not. R. Astron. Soc.* 503, 1 (2021).
- Kalita B.S., E. Daddi, C. D'Eugenio, F. Valentino, R.M. Rich, C. Gómez-Guijarro, R.T. Coogan, I. Delvecchio, D. Elbaz, J.D. Neill, A. Puglisi, V. Strazzullo: An Ancient Massive Quiescent Galaxy Found in a Gas-rich $z = 3$ Group. *Ap. J. Lett.* 917, 2 (2021).
- Kammerer J., S. Lacour, T. Stolker, P. Mollière, D. Sing, E. Nasedkin, P. Kervella, J. Wang, K. Ward-Duong, M. Nowak, R. Abuter, A. Amorim, R. Asensio-Torres, M. Bauböck, M. Benisty, J. Berger, H. Beust, S. Blunt, A. Boccaletti, A. Bohn, M.-L. Bolzer, M. Bonnefoy, H. Bonnet, W. Brandner, F. Cantalloube, P. Caselli, B. Charnay, G. Chauvin, E. Choquet, V. Christiaens, Y. Clénet, V. Coudé du

- Foresto, A. Cridland, R. Dembet, J. Dexter, P. de Zeeuw, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, F. Gao, P. Garcia, R. Garcia Lopez, E. Gendron, R. Genzel, S. Gillessen, J. Girard, X. Haubois, G. Heißel, T. Henning, S. Hinkley, S. Hippler, M. Horrobin, M. Houllé, Z. Hubert, L. Jocou, M. Keppler, L. Kreidberg, A.-M. Lagrange, V. Lapeyrère, J. Le Bouquin, P. Léna, D. Lutz, A.-L. Maire, A. Mérand, J. Monnier, D. Mouillet, A. Müller, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, L. Pueyo, J. Rameau, L. Rodet, G. Rousset, Z. Rustamkulov, J. Shang-guan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, E.F. van Dishoeck, A. Vigan, F. Vincent, S. von Fellenberg, F. Widmann, E. Wiegand, E. Wiegand, J. Woillez, S. Yazici: GRAVITY K-band spectroscopy of HD 206893 B. Brown dwarf or exoplanet. *Astron. Astrophys.* 652, A57 (2021).
- Kartavykh Y., W. Dröge, B. Klecker, G. Kovaltsov, V. Ostyakov: A Mechanism for the Fractionation of Isotopes in ^3He -rich Solar Energetic Particle Events. *Ap. J.* 906, 1 (2021).
- Kelsey L., M. Sullivan, M. Smith, P. Wiseman, D. Brout, T. Davis, C. Frohmaier, L. Galbany, M. Grayling, C. Gutiérrez, S. Hinton, R. Kessler, C. Lidman, A. Möller, M. Sako, D. Scolnic, S. Uddin, M. Vincenzi, T. Abbott, M. Aguena, S. Allam, J. Annis, S. Avila, D. Bacon, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, F. Castander, M. Costanzi, L. da Costa, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, A. Ferté, B. Flaugher, P. Fosalba, J. García-Bellido, D. Gerdes, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, D. Hollowood, K. Honscheid, D. James, A. Kim, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, J. Marshall, P. Martini, F. Menanteau, R. Miquel, R. Morgan, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, C. Sánchez, E. Sanchez, S. Serrano, I. Sevilla-Noarbe, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, A. Walker, R. Wilkinson, DES Collaboration: The effect of environment on Type Ia supernovae in the Dark Energy Survey three-year cosmological sample. *Mon. Not. R. Astron. Soc.* 501, 4 (2021).
- Kerzendorf W.E., C. Vogl, J. Buchner, G. Contardo, M. Williams, P. van der Smagt: Dalek: A Deep Learning Emulator for TARDIS. *Ap. J. Lett.* 910, 2 (2021).
- Khoperskov S., M. Haywood, O. Snaith, P. Di Matteo, M. Lehnert, E. Vasiliev, S. Naroenkov, P. Berczik: Bimodality of $[\alpha \text{ Fe}]-[\text{Fe}/\text{H}]$ distributions is a natural outcome of dissipative collapse and disc growth in Milky Way-type galaxies. *Mon. Not. R. Astron. Soc.* 501, 4 (2021).
- Khoperskov S., I. Zinchenko, B. Avramov, S. Khrapov, P. Berczik, A. Saburova, M. Ishchenko, A. Khoperskov, C. Pulsoni, Y. Venichenko, D. Bizyaev, A. Moiseev: Extreme kinematic misalignment in IllustrisTNG galaxies: the origin, structure, and internal dynamics of galaxies with a large-scale counterrotation. *Mon. Not. R. Astron. Soc.* 500, 3 (2021).
- Kim J., M. Chevance, J.D. Kruijssen, A. Schrubba, K. Sandstrom, A.T. Barnes, F. Bigiel, G.A. Blanc, Y. Cao, D.A. Dale, C.M. Faesi, S.C. Glover, K. Grasha, B. Groves, C. Herrera, R.S. Klessen, K. Kreckel, J.C. Lee, A.K. Leroy, J. Pety, M. Querejeta, E. Schinnerer, J. Sun, A. Usero, J.L. Ward, T.G. Williams: On the duration of the embedded phase of star formation. *Mon. Not. R. Astron. Soc.* 504, 1, 487-509 (2021).
- Kirkpatrick C., N. Clerc, A. Finoguenov, S. Damsted, J. Ider Chitham, A. Kukkola, A. Gueguen, K. Furnell, E. Rykoff, J. Comparat, A. Saro, R. Capasso, N. Padilla, G. Erfanianfar, G. Mamon, C. Collins, A. Merloni, J. Brownstein, D. Schneider: SPIDERS: an overview of the largest catalogue of spectroscopically confirmed x-ray galaxy clusters. *Mon. Not. R. Astron. Soc.* 503, 4 (2021).
- Kleimeier N.F., M.J. Abplanalp, R.N. Johnson, S. Gozem, J. Wandishin, C.N. Shingledecker, R.I. Kaiser: Cyclopropanone ($\text{c-C}_3\text{H}_2\text{O}$) as a Tracer of the Nonequilibrium Chemistry Mediated by Galactic Cosmic Rays in Interstellar Ices. *Ap. J.* 911, 1 (2021).
- Klein, M., M. Oguri, J. J. Mohr, S. Grandis, V. Ghirardini, T. Liu, A. Liu, E. Bulbul, J. Wolf, J. Comparat, M. E. Ramos-Ceja, J. Buchner, I. Chiu, N. Clerc, A. Merloni, H. Miyatake, S. Miyazaki, N. Okabe, N. Ota, F. Pacaud, M. Salvato, S. P. Driver: The eROSITA Final Equatorial-Depth Survey (eFEDS): Optical confirmation, redshifts, and properties of the cluster and group catalog. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Kluge M., R. Bender, A. Riffeser, C. Goessl, U. Hopp, M. Schmidt, C. Ries: Photometric Dissection of Intracluster Light and Its Correlations with Host Cluster Properties. *Ap. J. Supp. Ser.* 252, 2 (2021).
- Knabenhans, M., J. Stadel, D. Potter, ..., R. Bender, ..., C. Bodendorf, ..., J. Gracia-Carpio, ..., F. Grupp, ..., F. Raison, ..., R. Saglia, ..., A.G. Sanchez et al.: Euclid preparation: IX. EuclidEmulator2 – power spectrum emulation with massive neutrinos and self-consistent dark energy perturbations. *Mon. Not. R. Astron. Soc.* 505, 2, 2840-2869 (2021).
- Knies J., M. Sasaki, Y. Fukui, K. Tsuge, F. Haberl, S. Points, P. Kavanagh, M. Filipović: Multiwavelength analysis of the X-ray spur and southeast of the Large Magellanic Cloud. *Astron. Astrophys.* 648 (2021).
- Koch E.W., E.W. Rosolowsky, A.K. Leroy, J. Chastenet, I.-D. Chiang, J. Dalcanton, A.A. Kepley, K.M. Sandstrom, A. Schrubba, S. Stanimirović, D. Utomo, T.G. Williams: A lack of constraints on the cold opaque H I mass: H I spectra in M31 and M33 prefer multicomponent models over a single cold opaque component. *Mon. Not. R. Astron. Soc.* 504, 2, 1801-1824 (2021).
- Kokorev V.I., G.E. Magdis, I. Davidzon, G. Brammer, F. Valentino, E. Daddi, L. Ciesla, D. Liu, S. Jin, I. Cortzen, I. Delvecchio, C. Giménez-Arteaga, C. Gómez-Guijarro, M. Sargent, S. Toft, J.R. Weaver: The Evolving Interstellar Medium of Star-forming Galaxies, as Traced by Stardust. *Ap. J.* 921, 1 (2021).
- Kong S., V. Ossenkopf-Okada, H.G. Arce, J. Bally, Á. Sánchez-Monge, P. McGehee, S. Suri, R.S. Klessen, J.M. Carpenter, D.C. Lis, F. Nakamura, P. Schilke, R.J. Smith, S. Mairs, A. Goodman, M.J. Maureira: The CARMA-NRO Orion Survey: Filament Formation via Collision-induced

- Magnetic Reconnection—the Stick in Orion A. *Ap. J.* 906, 2 (2021).
- Koss M.J., B. Strittmatter, I. Lamperti, T. Shimizu, B. Trakhtenbrot, A. Saintonge, E. Treister, C. Cicone, R. Mushotzky, K. Oh, C. Ricci, D. Stern, T.T. Ananna, F.E. Bauer, G.C. Privon, R.E. Bär, C. De Breuck, F. Harrison, K. Ichikawa, M.C. Powell, D. Rosario, D.B. Sanders, K. Schawinski, L. Shao, C. Megan Urry, S. Veilleux: BAT AGN Spectroscopic Survey. XX. Molecular Gas in Nearby Hard-X-Ray-selected AGN Galaxies. *Ap. J. Supp. Ser.* 252, 2 (2021).
- Koulouridis E., N. Clerc, T. Sadibekova, M. Chira, E. Drigga, L. Faccioli, J. Le Fèvre, C. Garrel, E. Gaynullina, A. Gkini, M. Kosiba, F. Pacaud, M. Pierre, J. Ridl, K. Tazhenova, C. Adami, B. Altieri, J.-C. Baguley, R. Cabanac, E. Cucchetti, A. Khalikova, M. Lieu, J.-B. Melin, M. Molham, M.E. Ramos-Ceja, G. Soucaïl, A. Takey, I. Valtchanov: The X-CLASS survey: A catalogue of 1646 X-ray-selected galaxy clusters up to $z \sim 1.5$. *Astron. Astrophys.* 652, A12 (2021).
- Kovács, A., N. Jeffrey, M. Gatti, ..., T.N. Varga, ..., J. Weller et al.: The DES view of the Eridanus supervoid and the CMB cold spot. *Mon. Not. R. Astron. Soc.* 510, 1, 216-229 (2021).
- Krause M.G., D. Rodgers-Lee, J.E. Dale, R. Diehl, C. Kobayashi: Galactic ^{26}Al traces metal loss through hot chimneys. *Mon. Not. R. Astron. Soc.* 501, 1 (2021).
- Kravchenko K., A. Jorissen, S. Van Eck, T. Merle, A. Chiavassa, C. Paladini, B. Freytag, B. Plez, M. Montargès, H. Van Winckel: Atmosphere of Betelgeuse before and during the Great Dimming event revealed by tomography. *Astron. Astrophys.* 650, L17 (2021).
- Kreckel K., I.-T. Ho, G. Blanc, B. Groves, F. Santoro, E. Schinnerer, F. Bigiel, M. Chevance, E. Congiu, E. Emsellem, C. Faesi, S. Glover, K. Grasha, J. Kruijssen, P. Lang, A. Leroy, S. Meidt, R. McElroy, J. Pety, E. Rosolowsky, T. Saito, K. Sandstrom, P. Sanchez-Blazquez, A. Schrubba: Erratum: “Mapping Metallicity Variations across Nearby Galaxy Disks” (2019, *ApJ*, 887, 80). *Ap. J.* 912, 2 (2021).
- Kronberg E., P. Daly, E. Grigorenko, A. Smirnov, B. Klecker, A.Y. Malykhin: Energetic Charged Particles in the Terrestrial Magnetosphere: Cluster/RAPID Results. *J. Geophys. Res. (Space Phys.)* 126, 9 (2021).
- Kruczkiewicz F., J. Vitorino, E. Congiu, P. Theulé, F. Du lieu: Ammonia snow lines and ammonium salts desorption. *Astron. Astrophys.* 652, A29 (2021).
- Kruczkiewicz F., J. Vitorino, E. Congiu, P. Theulé, F. Du lieu: Physically motivated X-ray obscurer models. *Astron. Astrophys.* 651, A58 (2021).
- Kudritzki R., A.F. Teklu, F. Schulze, R. Remus, K. Dolag, A. Burkert, H.J. Zahid: Erratum: “Galaxy Lookback Evolution Models: A Comparison with Magneticum Cosmological Simulations and Observations” (2021, *ApJ*, 910, 87). *Ap. J.* 922, 2 (2021).
- Kudritzki R., A.F. Teklu, F. Schulze, R. Remus, K. Dolag, A. Burkert, H.J. Zahid: Galaxy Look-back Evolution Models: A Comparison with Magneticum Cosmological Simulations and Observations. *Ap. J.* 910, 2 (2021).
- Kuffmeier M., C. Dullemond, S. Reissl, F. Goicovic: Misaligned disks induced by infall. *Astron. Astrophys.* 656, A161 (2021).
- Kuraszkiewicz J., B.J. Wilkes, A. Atanas, J. Buchner, J.C. McDowell, S. Willner, M.L. Ashby, M. Azadi, P. Barthel, M. Haas, D.M. Worrall, M. Birkinshaw, R. Antonucci, R. Chini, G.G. Fazio, C. Lawrence, P. Ogle: Beyond Simple AGN Unification with Chandra-observed 3CRR Sources at $0.5 < z < 1$. *Ap. J.* 913, 2 (2021).
- Kuulkers E., C. Ferrigno, P. Kretschmar, J. Alfonso-Garzon, M. Baab, A. Bazzano, G. Bélanger, I. Benson, A.J. Bird, E. Bozzo, S. Brandt, E. Coe, I. Caballero, F. Cangemi, J. Chenevez, B. Cenko, N. Cinar, A. Coleiro, S. De Padova, R. Diehl, C. Dietze, A. Domingo, M. Drapes, E. D’uva, M. Ehle, J. Ebrero, M. Edirianne, N.A. Eismont, T. Finn, M. Focchi, E.G. Tomas, G. Gaudenzi, T. Godard, A. Goldwurm, D. Götz, C. Gouiffès, S.A. Grebnev, J. Greiner, A. Gros, W. Hajdas, L. Hanlon, W. Hermsen, C. Hernández, M. Hernanz, J. Hübner, E. Jourdain, G. La Rosa, C. Labanti, P. Laurent, A. Lehanka, N. Lund, J. Madison, J. Malzac, J. Martin, J.M. Mas-Hesse, B. McBreen, A. McDonald, J. McEnery, S. Mereghetti, L. Natalucci, J. Ness, C.A. Oxborrow, J. Palmer, S. Peschke, F. Petrucciani, N. Pfeil, M. Reichenbaecher, J. Rodi, J. Rodriguez, J. Roques, E.S. Doñate, D. Salt, C. Sánchez-Fernández, A. Sauvageon, V. Savchenko, S.Y. Sazonov, S. Scaglioni, N. Scharrel, T. Siebert, R. Southworth, R.A. Sunyaev, L. Toma, P. Ubertini, E.P. van den Heuvel, A. von Kienlin, N. von Krusenstiern, C. Winkler, U. Zannoni: INTEGRAL reloaded: Spacecraft, instruments and ground system. *New Astronomy Reviews* 93, 101629 (2021).
- Kylafis N., J. Trümper, N. Loudas: Cyclotron line formation by reflection on the surface of a magnetic neutron star. *Astron. Astrophys.* 655, A39 (2021).
- Lacour S., J. Wang, L. Rodet, M. Nowak, J. Shangguan, H. Beust, A.-M. Lagrange, R. Abuter, A. Amorim, R. Asensio-Torres, M. Benisty, J.-P. Berger, S. Blunt, A. Boccaletti, A. Bohn, M.-L. Bolzer, M. Bonnefoy, H. Bonnet, G. Bourdaret, W. Brandner, F. Cantalloube, P. Caselli, B. Charnay, G. Chauvin, E. Choquet, V. Christiaens, Y. Clénet, V. Coudé Du Foresto, A. Cridland, R. Dembet, J. Dexter, P. de Zeeuw, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, F. Gao, P. Garcia, R. Garcia Lopez, E. Gendron, R. Genzel, S. Gillessen, J. Girard, X. Haubois, G. Heißel, T. Henning, S. Hinkley, S. Hippler, M. Horrobin, M. Houllé, Z. Hubert, L. Jocou, J. Kammerer, M. Keppler, P. Kervella, L. Kreidberg, V. Lapeyrière, J.-B. Le Bouquin, P. Léna, D. Lutz, A.-L. Maire, A. Mérand, P. Mollière, J. Monnier, D. Mouillet, E. Nasedkin, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, E. Rickman, L. Pueyo, J. Rameau, G. Rousset, Z. Rustamkulov, M. Samland, T. Shimizu, D. Sing, J. Stadler, T. Stolker, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, E.F. van Dishoeck, A. Vigan, F. Vincent, S. von Fellenberg, K. Ward-Duong, F. Widmann, E. Wieprecht, E. Wiezorrek, J. Woillez, S. Yazici, A. Young, GRAVITY Collaboration: The mass of β Pictoris c from β Pictoris b orbital motion. *Astron. Astrophys.* 654, L2 (2021).

- Lam M.I., C.J. Walcher, F. Gao, M. Yang, H. Li, L. Hao: Searching water megamasers by using mid-infrared spectroscopy (I): Possible mid-infrared indicators. *Mon. Not. R. Astron. Soc.* 506, 4, 5548-5558 (2021).
- Lamer G., A. Schwobe, P. Predehl, I. Traulsen, J. Wilms, M. Freyberg: A giant X-ray dust scattering ring discovered with SRG/eROSITA around the black hole transient MAXI J1348-630. *Astron. Astrophys.* 647 (2021).
- Laporte N., A. Zitrin, R. Ellis, S. Fujimoto, G. Brammer, J. Richard, M. Oguri, G. Caminha, K. Kohno, Y. Yoshimura, Y. Ao, F. Bauer, K. Caputi, E. Egami, D. Espada, J. González-López, B. Hatsukade, K. Knudsen, M. Lee, G. Magdis, M. Ouchi, F. Valentino, T. Wang: ALMA Lensing Cluster Survey: a strongly lensed multiply imaged dusty system at $z \geq 6$. *Mon. Not. R. Astron. Soc.* 505, 4, 4838-4846 (2021).
- Leauthaud A., A. Amon, S. Singh, ..., T.N. Varga, ..., J. Mohr, et al.: Lensing without borders. I. A blind comparison of the amplitude of galaxy-galaxy lensing between independent imaging surveys. *Mon. Not. R. Astron. Soc.* 510, 4, 6150-6189 (2021).
- Lee D., M. Berthoud, C. Chen, E.G. Cox, J.A. Davidson, F.J. Encalada, L.M. Fissel, R. Harrison, W. Kwon, D. Li, Z. Li, L.W. Looney, G. Novak, S. Sadavoy, F.P. Santos, D. Segura-Cox, I. Stephens: HAWC+/SOFIA Polarimetry in L1688: Relative Orientation of Magnetic Field and Elongated Cloud Structure. *Ap. J.* 918, 1 (2021).
- Lee M.M., T. Nagao, C. De Breuck, S. Carniani, G. Cresci, B. Hatsukade, R. Kawabe, K. Kohno, R. Maiolino, F. Mannucci, A. Marconi, K. Nakanishi, P. Troncoso, H. Umehata: Dense and Warm Neutral Gas in BR 1202-0725 at $z = 4.7$ as Traced by the [O I] 145 μm Line. *Ap. J.* 913, 1 (2021).
- Lee M.M., I. Tanaka, D. Iono, R. Kawabe, T. Kodama, K. Kohno, T. Saito, Y. Tamura: Revisited Cold Gas Content with Atomic Carbon [C I] in $z = 2.5$ Protocluster Galaxies. *Ap. J.* 909, 2 (2021).
- Lee M.M.: Gas mass calibration in a $z=2.5$ protocluster. *Ap. J.* 909, 181 (2021).
- Lee, S., M.A. Troxel, A. Choi, ..., J.J. Mohr, ..., T.N. Varga, J. Weller: Galaxy-galaxy lensing with the DES-CMASS catalogue: measurement and constraints on the galaxy-matter cross-correlation. *Mon. Not. R. Astron. Soc.* 509, 2, 2033-2047 (2021).
- Leemker M., M. van't Hoff, L. Trapman, M. van Gelder, M. Hogerheijde, D. Ruíz-Rodríguez, E.F. van Dishoeck: Chemically tracing the water snowline in protoplanetary disks with HCO⁺. *Astron. Astrophys.* 646 (2021).
- Lemos P., M. Raveri, A. Campos, ..., J. Mohr, ..., T. Varga, J. Weller, W. Wester, DES Collaboration: Assessing tension metrics with dark energy survey and Planck data. *Mon. Not. R. Astron. Soc.* 505, 4, 6179-6194 (2021).
- Leroy A.K., A. Hughes, D. Liu, J. Pety, E. Rosolowsky, T. Saito, E. Schinnerer, A. Schrubba, A. Usero, C.M. Faesi, C.N. Herrera, M. Chevance, A.P. Hygate, A.A. Kepley, E.W. Koch, M. Querejeta, K. Sliwa, D. Will, C.D. Wilson, G.S. Anand, A. Barnes, F. Belfiore, I. Bešlić, F. Bigiel, G.A. Blanc, A.D. Bolatto, M. Boquien, Y. Cao, R. Chandar, J. Chastenet, I.-D. Chiang, E. Congiu, D.A. Dale, S. Deger, J.S. den Brok, C. Eibensteiner, E. Emsellem, A. García-Rodríguez, S.C. Glover, K. Grasha, B. Groves, J.D. Henshaw, M.J. Jiménez Donaire, J. Kim, R.S. Klessen, K. Kreckel, J.D. Kruijssen, K.L. Larson, J.C. Lee, N. Mayker, R. McElroy, S.E. Meidt, A. Mok, H. Pan, J. Puschign, A. Razza, P. Sánchez-Blázquez, K.M. Sandstrom, F. Santoro, A. Sardone, F. Scheuermann, J. Sun, D.A. Thilker, J.A. Turner, L. Ubeda, D. Utomo, E.J. Watkins, T.G. Williams: PHANGS-ALMA Data Processing and Pipeline. *Ap. J. Supp. Ser.* 255, 1 (2021).
- Leroy A.K., E. Schinnerer, A. Hughes, E. Rosolowsky, J. Pety, A. Schrubba, A. Usero, G.A. Blanc, M. Chevance, E. Emsellem, C.M. Faesi, C.N. Herrera, D. Liu, S.E. Meidt, M. Querejeta, T. Saito, K.M. Sandstrom, J. Sun, T.G. Williams, G.S. Anand, A.T. Barnes, E.A. Behrens, F. Belfiore, S.M. Benincasa, I. Bešlić, F. Bigiel, A.D. Bolatto, J.S. den Brok, Y. Cao, R. Chandar, J. Chastenet, I.-D. Chiang, E. Congiu, D.A. Dale, S. Deger, C. Eibensteiner, O.V. Egorov, A. García-Rodríguez, S.C. Glover, K. Grasha, J.D. Henshaw, I.-T. Ho, A.A. Kepley, J. Kim, R.S. Klessen, K. Kreckel, E.W. Koch, J.D. Kruijssen, K.L. Larson, J.C. Lee, L.A. Lopez, J. Machado, N. Mayker, R. McElroy, E.J. Murphy, E.C. Ostriker, H. Pan, I. Pessa, J. Puschign, A. Razza, P. Sánchez-Blázquez, F. Santoro, A. Sardone, F. Scheuermann, K. Sliwa, M.C. Sormani, S.K. Stuber, D.A. Thilker, J.A. Turner, D. Utomo, E.J. Watkins, B. Whitmore: PHANGS-ALMA: Arcsecond CO(2-1) Imaging of Nearby Star-forming Galaxies. *Ap. J. Supp. Ser.* 257, 2 (2021).
- Leung S., R. Diehl, K. Nomoto, T. Siebert: Exploration of Aspherical Ejecta Properties in Type Ia Supernovae: Progenitor Dependence and Applications to Progenitor Classification. *Ap. J.* 909, 2 (2021).
- Li F., J. Wang, F. Gao, S. Liu, Z. Zhang, S. Li, Y. Gong, J. Li, Y. Shi: Dense gas in local galaxies revealed by multiple tracers. *Mon. Not. R. Astron. Soc.* 503, 3 (2021).
- Li J., J. Wang, X. Lu, V. Ilyushin, R.A. Motiyenko, Q. Gou, E.A. Alekseev, D. Quan, L. Margulès, F. Gao, F.J. Lovas, Y. Wu, E. Bergin, S. Li, Z. Shen, F. Du, M. Li, S. Zheng, X. Zheng: Propionamide (C₂H₅CONH₂): The Largest Peptide-like Molecule in Space. *Ap. J.* 919, 1 (2021).
- Liao W., Y. Chen, X. Liu, A.M. Holgado, H. Guo, R. Gruendl, E. Morganson, Y. Shen, T. Davis, R. Kessler, P. Martini, R.G. McMahon, S. Allam, J. Annis, S. Avila, M. Banerji, K. Bechtol, E. Bertin, D. Brooks, E. Buckley-Geer, A. Carrero Rosell, M. Carrasco Kind, J. Carretero, F. Javier Castander, C. Cunha, C. D'Andrea, L. da Costa, C. Davis, J. De Vicente, S. Desai, H. Thomas Diehl, P. Doel, T. Eifler, A. Evrard, B. Flaugher, P. Fosalba, J. Frieman, J. Garcia-Bellido, E. Gaztanaga, K. Glazebrook, D. Gruen, J. Gschwend, G. Gutierrez, W. Hartley, D.L. Hollowood, K. Honscheid, B. Hoyle, D. James, E. Krause, K. Kuehn, M. Lima, M. Maia, J. Marshall, F. Menanteau, R. Miquel, A. Plasas Malagón, A. Roodman, E. Sanchez, V. Scarpine, M. Schubnell, S. Sereno, M. Smith, R.C. Smith, M. Soares-Santos, F. Sobreira, E. Suchyta, M. Swanson, G. Tarle, V. Vikram, A. Walker: Discovery of a candidate binary supermassive black hole in a periodic quasar from circumbinary accretion variability. *Mon. Not. R. Astron. Soc.* 500, 3 (2021).

- Ligterink N., A. Ahmadi, A. Coutens, Ł. Tychoniec, H. Calcutt, E.F. van Dishoeck, H. Linnartz, J. Jørgensen, R. Garrod, J. Bouwman: The prebiotic molecular inventory of Serpens SMM1. I. An investigation of the isomers CH_3NCO and HOCH_2CN . *Astron. Astrophys.* 647 (2021).
- Lindholm V., A. Finoguenov, J. Comparat, C. Kirkpatrick, E. Rykoff, N. Clerc, C. Collins, S. Damsted, J. Ider Chitham, N. Padilla: Clustering of CODEX clusters. *Astron. Astrophys.* 646 (2021).
- Lipka M., J. Thomas: A novel approach to optimize the regularization and evaluation of dynamical models using a model selection framework. *Mon. Not. R. Astron. Soc.* 504, 3 (2021).
- Lippich M., A.G. Sánchez: MEDUSA: Minkowski functionals estimated from Delaunay tessellations of the three-dimensional large-scale structure. *Mon. Not. R. Astron. Soc.* 508, 3, 3771-3784 (2021).
- Liu H., A.C. Fabian, C. Pinto, H.R. Russell, J.S. Sanders, B.R. McNamara: Suppressed cooling and turbulent heating in the core of X-ray luminous clusters RXCJ1504.1-0248 and Abell 1664. *Mon. Not. R. Astron. Soc.* 505, 2, 1589-1599 (2021).
- Liu M., J.C. Tan, J. Marvil, S. Kong, V. Rosero, P. Caselli, G. Cosentino: SiO Outflows as Tracers of Massive Star Formation in Infrared Dark Clouds. *Ap. J.* 921, 1 (2021).
- Locatelli N., F. Vazza, A. Bonafede, S. Banfi, G. Bernardi, C. Gheller, A. Botteon, T. Shimwell: New constraints on the magnetic field in cosmic web filaments. *Astron. Astrophys.* 652, A80 (2021).
- Long F., A.D. Bosman, P. Cazzoletti, E.F. van Dishoeck, K.I. Öberg, S. Facchini, M. Tazzari, V.V. Guzmán, L. Testi: Exploring HNC and HCN line emission as probes of the protoplanetary disk temperature. *Astron. Astrophys.* 647 (2021).
- Loomis R.A., A.M. Burkhardt, C.N. Shingledecker, S.B. Charnley, M.A. Cordiner, E. Herbst, S. Kalenskii, K.L.K. Lee, E.R. Willis, C. Xue, A.J. Remijan, M.C. McCarthy, B.A. McGuire: An investigation of spectral line stacking techniques and application to the detection of HC_{11}N . *Nature Astronomy* 5, 188-196 (2021).
- Lotz M., K. Dolag, R. Remus, A. Burkert: Rise and fall of post-starburst galaxies in Magneticum Pathfinder. *Mon. Not. R. Astron. Soc.* 506, 3, 4516-4542 (2021).
- Loudas N., N. Kylafis, J. Trümper: Cross-sections of relativistic quantum-mechanical versus those of classical magnetic resonant scattering. *Astron. Astrophys.* 655, A38 (2021).
- Lupi A., S. Bovino, T. Grassi: On the low ortho-to-para H_2 ratio in star-forming filaments. *Astron. Astrophys.* 654, L6 (2021).
- Lustig P., V. Strazzullo, C. D'Eugenio, E. Daddi, M. Pannella, A. Renzini, A. Cimatti, R. Gobat, S. Jin, J.J. Mohr, M. Onodera: Compact, bulge-dominated structures of spectroscopically confirmed quiescent galaxies at $z \sim 3$. *Mon. Not. R. Astron. Soc.* 501, 2 (2021).
- Lutz, K. A., A. Saintonge, B. Catinella, L. Cortese, F. Eisenhauer, C. Kramer, S. M. Moran, L. J. Tacconi, B. Vollmer, J. Wang: xCOLD GASS and xGASS: Radial Metallicity Gradients and Global Properties on the Star-forming Main Sequence. *Astronomy And Astrophysics* 649 (2021).
- MacCrann, N., M.R. Becker, J. McCullough, ..., J.J. Mohr, et al.: Dark Energy Survey Y3 results: blending shear and redshift biases in image simulations. *Mon. Not. R. Astron. Soc.* 509, 3, 3371-3394 (2021).
- Maitra C., P. Esposito, A. Tiengo, J. Ballet, F. Haberl, S. Dai, M. Filipović, M. Pilia: IKT 16 aka PSR J0058-7218: discovery of a 22 ms energetic rotation-powered pulsar in the Small Magellanic Cloud. *Mon. Not. R. Astron. Soc.* 507, 1, L1-L5 (2021).
- Maitra, C., F. Haberl: Discovery of four super-soft X-ray sources in XMM-Newton observations of the Large Magellanic Cloud. *Astron. Astrophys.* 657, A26 (2021).
- Maitra C., F. Haberl, P. Maggi, P. Kavanagh, G. Vasilopoulos, M. Sasaki, M. Filipović, A. Udalski: XMMU J050722.1-684758: discovery of a new Be X-ray binary pulsar likely associated with the supernova remnant MCSNR J0507-6847. *Mon. Not. R. Astron. Soc.* 504, 1 (2021).
- Maitra C., F. Haberl, G. Vasilopoulos, L. Ducci, K. Dennerl, S. Carpano: Fast flaring observed from XMMU J053108.3-690923 by eROSITA: a supergiant fast X-ray transient in the Large Magellanic Cloud. *Astron. Astrophys.* 647 (2021).
- Malyali A., A. Rau, A. Merloni, K. Nandra, J. Buchner, Z. Liu, S. Gezari, J. Sollerman, B. Shappee, B. Trakhtenbrot, I. Arcavi, C. Ricci, S. van Velzen, A. Goobar, S. Frederick, A. Kawka, L. Tartaglia, J. Burke, D. Hiramatsu, M. Schramm, D. van der Boom, G. Anderson, J. Miller-Jones, E. Bellm, A. Drake, D. Duev, C. Fremling, M. Graham, F. Masci, B. Rusholme, M. Soumagnac, R. Walters: AT 2019avd: a novel addition to the diverse population of nuclear transients. *Astron. Astrophys.* 647 (2021).
- Manigand S., A. Coutens, J.-C. Loison, V. Wakelam, H. Calcutt, H. Müller, J. Jørgensen, V. Taquet, S. Wampfler, T. Bourke, B. Kulterer, E.F. van Dishoeck, M. Drozdovskaya, N. Ligterink: The ALMA-PILS survey: first detection of the unsaturated 3-carbon molecules Propenal ($\text{C}_2\text{H}_3\text{CHO}$) and Propylene (C_3H_6) towards IRAS 16293-2422 B. *Astron. Astrophys.* 645 (2021).
- Marchal A., P.G. Martin, M. Gong: Resolving the Formation of Cold HI Filaments in the High-velocity Cloud Complex C. *Ap. J.* 921, 1 (2021).
- Marciniak A., J. Ďurech, V. Alí-Lagoa, W. Ogłóza, R. Szakáts, T. Müller, L. Molnár, A. Pál, F. Monteiro, P. Arcorverde, R. Behrend, Z. Benkhaldoun, L. Bernasconi, J. Bosch, S. Brincat, L. Brunetto, M. Butkiewicz-Bąk, F. Del Freo, R. Duffard, M. Evangelista-Santana, G. Farroni, S. Fauvaud, M. Fauvaud, M. Ferrais, S. Geier, J. Golonka, J. Grice, R. Hirsch, J. Horbowicz, E. Jehin, P. Julien, C. Kalup, K. Kamiński, M. Kamińska, P. Kankiewicz, V. Kecske méthy, D.-H. Kim, M.-J. Kim, I. Konstanciak, J. Krajewski, V. Kudak, P. Kulczak, T. Kundera, D. Lazzaro, F. Manzini, H. Medeiros, J. Michimani-Garcia, N. Morales,

- J. Nadolny, D. Oszkiewicz, E. Pakštienė, M. Pawłowski, V. Perig, F. Pilcher, P. Pinel, E. Podlewska-Gaca, T. Polakis, F. Richard, T. Rodrigues, E. Rondón, R. Roy, J. Sanabria, T. Santana-Ros, B. Skiff, J. Skrzypek, K. Sobkowiak, E. Sonbas, G. Stachowski, J. Strajnic, P. Trela, Ł. Tychoniec, S. Urakawa, E. Verebelyi, K. Wagrez, M. Žejmo, K. Żukowski: Properties of slowly rotating asteroids from the Convex Inversion Thermophysical Model. *Astron. Astrophys.* 654, A87 (2021).
- Martín-Navarro, I., F. Pinna, L. Coccato, ..., P.T. de Zeeuw, et al.: Fornax 3D project: Assessing the diversity of IMF and stellar population maps within the Fornax Cluster. *Astron. Astrophys.* 654, A59 (2021).
- Martinelli M., C. Martins, S. Nesseris, I. Tutusaus, A. Blanchard, S. Camera, C. Carbone, S. Casas, V. Pettorino, Z. Sakr, V. Yankelevich, D. Sapone, A. Amara, N. Auricchio, C. Bodendorf, D. Bonino, E. Branchini, V. Capobianco, J. Carretero, M. Castellano, S. Cavuoti, A. Cimatti, R. Cle-dassou, L. Corcione, A. Costille, H. Degaudenzi, M. Douspis, F. Dubath, S. Dusini, A. Ealet, S. Ferriol, M. Frailis, E. Franceschi, B. Garilli, C. Giocoli, A. Grazian, F. Grupp, S. Haugan, W. Holmes, F. Hormuth, K. Jahnke, A. Kiessling, M. Kümmel, M. Kunz, H. Kurki-Suonio, S. Ligor, P. Lilje, I. Lloro, O. Mansutti, O. Marggraf, K. Markovic, R. Massey, M. Meneghetti, G. Meylan, L. Moscardini, S. Niemi, C. Padilla, S. Paltani, F. Pasian, K. Pedersen, S. Pires, M. Poncet, L. Popa, F. Raison, R. Rebolo, J. Rhodes, M. Roncarelli, E. Rossetti, R. Saglia, A. Secroun, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, J.-L. Starck, D. Tavagnacco, A. Taylor, I. Tereno, R. Toledo-Moreo, L. Valenziano, Y. Wang, G. Zamorani, J. Zoubian, M. Baldi, M. Brescia, G. Congedo, L. Conversi, Y. Copin, G. Fabbian, R. Farinelli, E. Medinaceli, S. Mei, G. Polenta, E. Romelli, T. Vassallo: Euclid: Constraining dark energy coupled to electromagnetism using astrophysical and laboratory data. *Astron. Astrophys.* 654, A148 (2021).
- Martinelli M., C. J. A. P. Martins, S. Nesseris, ..., C. Bodendorf, ..., F. Grupp, ..., F. Raison, ..., R. Saglia, J. Weller et al.: Euclid: Forecast constraints on the cosmic distance duality relation with complementary external probes. *Astron. Astrophys.* 6344, A80 (2021).
- Martinelli M., I. Tutusaus, M. Archidiacono, ..., F. Grupp, ..., F. Raison, ..., R. Saglia, et al.: Euclid: Impact of non-linear and baryonic feedback prescriptions on cosmological parameter estimation from weak lensing cosmic shear. *Astron. Astrophys.* 649 (2021).
- Mata Sánchez D., A. Rau, A. Álvarez Hernández, T. van Grunsven, M. Torres, P. Jonker: Dynamical confirmation of a stellar mass black hole in the transient X-ray dipping binary MAXI J1305-704. *Mon. Not. R. Astron. Soc.* 506, 1 (2021).
- Mayer M.G., W. Becker: A kinematic study of central compact objects and their host supernova remnants. *Astron. Astrophys.* 651, A40 (2021).
- McCarthy M.C., K.L.K. Lee, R.A. Loomis, A.M. Burkhardt, C.N. Shingledecker, S.B. Charnley, M.A. Cordiner, E. Herbst, S. Kalenskii, E.R. Willis, C. Xue, A.J. Remijan, B.A. McGuire: Interstellar detection of the highly polar five-membered ring cyanocyclopentadiene. *Nature Astronomy* 5 (2021).
- McGuire B.A., R.A. Loomis, A.M. Burkhardt, K.L.K. Lee, C.N. Shingledecker, S.B. Charnley, I.R. Cooke, M.A. Cordiner, E. Herbst, S. Kalenskii, M.A. Siebert, E.R. Willis, C. Xue, A.J. Remijan, M.C. McCarthy: Detection of two interstellar polycyclic aromatic hydrocarbons via spectral matched filtering. *Science* 371, 6535, 1265-1269 (2021).
- McLeod A.F., A.A. Ali, M. Chevance, L. Della Bruna, A. Schrub, H.F. Stevance, A. Adamo, J.D. Kruijssen, S.N. Longmore, D.R. Weisz, P. Zeidler: The impact of pre-supernova feedback and its dependence on environment. *Mon. Not. R. Astron. Soc.* 508, 4, 5425-5448 (2021).
- Mehdipour, M., G.A. Kriss, J.S. Kaastra, ..., G. Ponti, et al.: Transient obscuration event captured in NGC 3227 - I. Continuum model for the broadband spectral energy distribution. *Astron. Astrophys.* 652, A150 (2021).
- Meidt S.E., A.K. Leroy, M. Querejeta, E. Schinnerer, J. Sun, A. van der Wel, E. Emsellem, J. Henshaw, A. Hughes, J.D. Kruijssen, E. Rosolowsky, A. Schrub, A. Barnes, F. Bigiel, G.A. Blanc, M. Chevance, Y. Cao, D.A. Dale, C. Faesi, S.C. Glover, K. Grasha, B. Groves, C. Herrera, R.S. Klessen, K. Kreckel, D. Liu, H. Pan, J. Pety, T. Saito, A. Usero, E. Watkins, T.G. Williams: The Organization of Cloud-scale Gas Density Structure: High-resolution CO versus 3.6 μm Brightness Contrasts in Nearby Galaxies. *Ap. J.* 913, 2 (2021).
- Melosso M., L. Bizzocchi, L. Dore, Z. Kisiel, N. Jiang, S. Spezzano, P. Caselli, J. Gauss, C. Puzzarini: Improved centrifugal and hyperfine analysis of ND₂H and NH₂D and its application to the spectral line survey of L1544. *Journal of Molecular Spectroscopy* 377, 10, 111431 (2021).
- Mendoza, C., M.A. Bautista, J. Deprince, J.A. García, E. Gatuzz et al.: The XSTAR Atomic Database. *Atoms* 9, 1 (2021).
- Mercurio A., P. Rosati, A. Biviano, M. Annunziatella, M. Girardi, B. Sartoris, M. Nonino, M. Brescia, G. Riccio, C. Grillo, I. Balestra, G. Caminha, G. De Lucia, R. Gobat, S. Seitz, P. Tozzi, M. Scodeggio, E. Vanzella, G. Angora, P. Bergamini, S. Borgani, R. Demarco, M. Meneghetti, V. Strazzullo, L. Tortorelli, K. Umetsu, A. Fritz, D. Gruen, D. Kelson, M. Lombardi, C. Maier, M. Postman, G. Rodighiero, B. Ziegler: CLASH-VLT: Abell S1063. Cluster assembly history and spectroscopic catalogue. *Astron. Astrophys.* 656, A147 (2021).
- Migkas K., F. Pacaud, G. Schellenberger, J. Erler, N. Nguyen-Dang, T. Reiprich, M. E. Ramos-Ceja, L. Lovisari: Cosmological implications of the anisotropy of ten galaxy cluster scaling relations. *Astron. Astrophys.* 649, A151 (2021).
- Miller-Jones, J. C. A., A. Bahramian, J.A. Orosz, ..., X. Zheng et al.: Cygnus X-1 contains a 21-solar mass black hole-Implications for massive star winds. *Science* 371, 6533, 1046-1049 (2021).
- Mininni C., F. Fontani, A. Sánchez-Monge, V. Rivilla, M. Beltrán, S. Zahorecz, K. Immer, A. Giannetti, P. Caselli, L. Colzi, L. Testi, D. Elia: The TOPGöt high-mass star-form-

- ing sample. I. Methyl cyanide emission as tracer of early phases of star formation. *Astron. Astrophys.* 653, A87 (2021).
- Miotello A., G. Rosotti, M. Ansdell, S. Facchini, C. Manara, J. Williams, S. Bruderer: Compact disks. An explanation to faint CO emission in Lupus disks. *Astron. Astrophys.* 651, A48 (2021).
- Mizukoshi S., K. Kohno, F. Egusa, B. Hatsukade, T. Min ezaki, T. Saito, Y. Tamura, D. Iono, J. Ueda, Y. Matsuda, R. Kawabe, M.M. Lee, M.S. Yun, D. Espada: Physical Characterization of Serendipitously Uncovered Millimeter-wave Line-emitting Galaxies at $z \approx 2.5$ behind the Local Luminous Infrared Galaxy VV 114. *Ap. J.* 917, 2 (2021).
- Mizukoshi, S., K. Kohno, F. Egusa, ..., M.M. Lee et al.: Reducing ground-based astrometric errors with Gaia and Gaussian processes. *Ap. J.* 162, 3 (2021).
- Molina J., R. Wang, J. Shangguan, L.C. Ho, F.E. Bauer, E. Treister, Y. Shao: Compact Molecular Gas Distribution in Quasar Host Galaxies. *Ap. J.* 908, 2 (2021).
- Montargès M., E. Cannon, E. Lagadec, A. de Koter, P. Kervella, J. Sanchez-Bermudez, C. Paladini, F. Cantalloube, L. Decin, P. Scicluna, K. Kravchenko, A. Dupree, S. Ridgway, M. Wittkowski, N. Anugu, R. Norris, G. Rau, G. Perrin, A. Chiavassa, S. Kraus, J. Monnier, F. Millour, J.-B. Le Bouquin, X. Haubois, B. Lopez, P. Stee, W. Danchi: A dusty veil shading Betelgeuse during its Great Dimming. *Nature* 594, 7863, 365-368 (2021).
- Mori K., C.J. Hailey, T.Y. Schutt, S. Mandel, K. Heuer, J.E. Grindlay, J. Hong, G. Ponti, J.A. Tomsick: The X-Ray Binary Population in the Galactic Center Revealed through Multi-decade Observations. *Ap. J.* 921, 2 (2021).
- Mosbech M.R., C. Boehm, S. Hannestad, O. Mena, J. Stadler, Y.Y. Wong: The full Boltzmann hierarchy for dark matter-massive neutrino interactions. *J. of Cosmology and Astroparticle Phys.* 2021, 3 (2021).
- Mpetha C., C. Collins, N. Clerc, A. Finoguenov, J. Peacock, J. Comparat, D. Schneider, R. Capasso, S. Damsted, K. Furnell, A. Merloni, N. Padilla, A. Saro: Gravitational redshifting of galaxies in the SPIDERS cluster catalogue. *Mon. Not. R. Astron. Soc.* 503, 1, 669-678 (2021).
- Mucesh S., W. Hartley, A. Palmese, O. Lahav, L. Whiteway, A. Bluck, A. Alarcon, A. Amon, K. Bechtol, G. Bernstein, A. Carnero Rosell, M. Carrasco Kind, A. Choi, K. Eckert, S. Everett, D. Gruen, R. Gruendl, I. Harrison, E. Huff, N. Kuropatkin, I. Sevilla-Noarbe, E. Sheldon, B. Yanny, M. Aguena, S. Allam, D. Bacon, E. Bertin, S. Bhargava, D. Brooks, J. Carretero, F. Castander, C. Conselice, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, A. Drlica-Wagner, A. Evrard, I. Ferrero, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, K. Kuehn, M. Lima, H. Lin, M. Maia, P. Melchior, F. Menanteau, R. Miquel, R. Morgan, F. Paz-Chinchón, A. Plazas, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, M. Smith, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, R. Wilkinson, DES Collaboration: A machine learning approach to galaxy properties: joint redshift-stellar mass probability distributions with Random Forest. *Mon. Not. R. Astron. Soc.* 502, 2, 2770-2786 (2021).
- Muir J., E. Baxter, V. Miranda, C. Doux, A. Ferté, C. Leonard, D. Hutereer, B. Jain, P. Lemos, M. Raveri, S. Nadathur, A. Campos, A. Chen, S. Dodelson, J. Elvin-Poole, S. Lee, L. Secco, M. Troxel, N. Weaverdyck, J. Zuntz, D. Brout, A. Choi, M. Crocce, T. Davis, D. Gruen, E. Krause, C. Lidman, N. MacCrann, A. Möller, J. Prat, A. Ross, M. Sako, S. Samuroff, C. Sánchez, D. Scolnic, B. Zhang, T. Abbott, M. Aguena, S. Allam, J. Annis, S. Avila, D. Bacon, E. Bertin, S. Bhargava, S. Bridle, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, R. Cawthon, M. Costanzi, L. da Costa, M. Pereira, S. Desai, H. Diehl, J. Dietrich, P. Doel, J. Estrada, S. Everett, A. Evrard, I. Ferrero, B. Flaugher, J. Frieman, J. García-Bellido, T. Giannantonio, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, D. James, T. Jeltema, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, M. Maia, F. Menanteau, R. Miquel, R. Morgan, J. Myles, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, A. Roodman, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, M. Smith, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, D. Tucker, T. Varga, J. Weller, R. Wilkinson, DES Collaboration: DES Y1 results: Splitting growth and geometry to test Λ CDM. *Physical Review D* 103, 2 (2021).
- Mullikin E., H. Anderson, N. O'Hern, M. Farrah, C.R. Arumainayagam, E.F. van Dishoeck, P.A. Gerakines, A.I. Vasyunin, L. Majumdar, P. Caselli, C.N. Shingledecker: A New Method for Simulating Photoprocesses in Astrochemical Models. *Ap. J.* 910, 1 (2021).
- Mullikin E., H. Anderson, N. O'Hern, M. Farrah, C.R. Arumainayagam, E.F. van Dishoeck, P.A. Gerakines, A.I. Vasyunin, L. Majumdar, P. Caselli, C.N. Shingledecker: FAUST. II. Discovery of a secondary outflow in IRAS 15398-3359: Variability in outflow direction during the earliest stage of star formation? *Ap. J.* 910, 1 (2021).
- Muñoz, A. J., J. Macías-Pérez, A. Secroun, ..., C. Bodendorf, ..., F. Grupp, ..., F. Raison, ..., J. Weller et al.: Euclid: Estimation of the impact of correlated readout noise for flux measurements with the Euclid NISP instrument. *Publications of the Astronomical Society of the Pacific* 133, 1027 (2021).
- Myles J., A. Alarcon, A. Amon, C. Sánchez, S. Everett, J. DeRose, J. McCullough, D. Gruen, G. Bernstein, M. Troxel, S. Dodelson, A. Campos, N. MacCrann, B. Yin, M. Raveri, A. Amara, M. Becker, A. Choi, J. Cordero, K. Eckert, M. Gatti, G. Giannini, J. Gschwend, R. Gruendl, I. Harrison, W. Hartley, E. Huff, N. Kuropatkin, H. Lin, D. Masters, R. Miquel, J. Prat, A. Roodman, E. Rykoff, I. Sevilla-Noarbe, E. Sheldon, R. Wechsler, B. Yanny, T. Abbott, M. Aguena, S. Allam, J. Annis, D. Bacon, E. Bertin, S. Bhargava, S. Bridle, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, F. Castander, C. Conselice, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, S. Desai, H. Diehl, T. Eifler, J. Elvin-Poole, A. Evrard, I. Ferrero, A. Ferté, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, T. Giannantonio, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, D. Hutereer, D. James, E. Krause, K.

- Kuehn, O. Lahav, M. Lima, M. Maia, J. Marshall, P. Martini, P. Melchior, F. Menanteau, J. Mohr, R. Morgan, J. Muir, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, M. Rodríguez-Monroy, S. Samuroff, E. Sanchez, V. Scarpine, L. Secco, S. Serrano, M. Smith, M. Soares-Santos, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, T. Varga, J. Weller, W. Wester: Dark Energy Survey Year 3 results: redshift calibration of the weak lensing source galaxies. *Mon. Not. R. Astron. Soc.* 505, 3, 4249-4277 (2021).
- Möller T., P. Schilke, A. Schmiedeke, E. Bergin, D. Lis, Á. Sánchez-Monge, A. Schwörer, C. Comito: Herschel observations of extraordinary sources: full Herschel/HIFI molecular line survey of Sagittarius B2(M). *Astron. Astrophys.* 651, A9 (2021).
- Müller B., B. Giuliano, M. Goto, P. Caselli: Spectroscopic measurements of CH₃OH in layered and mixed interstellar ice analogues. *Astron. Astrophys.* 652, A126 (2021).
- Müller T., M. Burgdorf, V. Alí-Lagoa, S. Buehler, M. Prange: The Moon at thermal infrared wavelengths: a benchmark for asteroid thermal models. *Astron. Astrophys.* 650, A38 (2021).
- Navarro-Almaida D., A. Fuente, L. Majumdar, V. Wakelam, P. Caselli, P. Rivière-Marichalar, S. Treviño-Morales, S. Cazaux, I. Jiménez-Serra, C. Kramer, A. Chacón-Tanarro, J. Kirk, D. Ward-Thompson, M. Tafalla: Evolutionary view through the starless cores in Taurus. Deuteration in TMC 1-C and TMC 1-CP. *Astron. Astrophys.* 653, A15 (2021).
- Nazari P., M. van Gelder, E.F. van Dishoeck, B. Tabone, M. van't Hoff, N. Ligterink, H. Beuther, A. Boogert, A. Caratti o Garatti, P. Klaassen, H. Linnartz, V. Taquet, Ł. Tychońiec: Complex organic molecules in low-mass protostars on Solar System scales. II. Nitrogen-bearing species. *Astron. Astrophys.* 650, A150 (2021).
- Neureiter, B., J. Thomas, R. Saglia, R. Bender, F. Finozzi, A. Krukau, T. Naab, A. Rantala, M. Frigo: SMART: a new implementation of Schwarzschild's Orbit Superposition technique for triaxial galaxies and its application to an N-body merger simulation. *Monthly Notices Of The Royal Astronomical Society* 500, 1 (2021).
- Ni Q., W. Brandt, C. Chen, B. Luo, K. Nyland, G. Yang, F. Zou, J. Aird, D.M. Alexander, F.E. Bauer, M. Lacy, B.D. Lehmer, L. Mallick, M. Salvato, D.P. Schneider, P. Tozzi, I. Traulsen, M. Vaccari, C. Vignali, F. Vito, Y. Xue, M. Banerji, K. Chow, A. Comastri, A. Del Moro, R. Gilli, J. Mullaney, M. Paolillo, A. Schwobe, O. Shemmer, M. Sun, Timlin, John D., III, J.R. Trump: The XMM-SERVS Survey: XMM-Newton Point-source Catalogs for the W-CDF-S and ELAIS-S1 Fields. *Ap. J. Supp. Ser.* 256, 1 (2021).
- Nicuesa Guelbenzu A., S. Klose, P. Schady, J. Greiner, D. Hartmann, L. Hunt, B. Magnelli, N. Masetti, M. Michałowski, E. Palazzi, A. Rossi, M. Wieringa, B. Stecklum: The host galaxy of the short GRB 050709. *Astron. Astrophys.* 650 (2021).
- Notsu S., E.F. van Dishoeck, C. Walsh, A.D. Bosman, H. Nomura: X-ray-induced chemistry of water and related molecules in low-mass protostellar envelopes. *Astron. Astrophys.* 650, A180 (2021).
- O'Brien J.T., W.E. Kerzendorf, A. Fullard, M. Williamson, R. Pakmor, J. Buchner, S. Hachinger, C. Vogl, J.H. Gillanders, A. Flörs, P. van der Smagt: Probabilistic Reconstruction of Type Ia Supernova SN 2002bo. *Ap. J. Lett.* 916, 2, L14 (2021).
- Ogiya, G., F.C. van den Bosch, A. Burkert: On the tidal formation of dark matter-deficient galaxies. *Mon. Not. R. Astron. Soc.* 510, 2, 2724-2739 (2021).
- Okoda Y., Y. Oya, L. Francis, D. Johnstone, S. Inutsuka, C. Ceccarelli, C. Codella, C. Chandler, N. Sakai, Y. Aikawa, F.O. Alves, N. Balucani, E. Bianchi, M. Bouvier, P. Caselli, E. Caux, S. Charnley, S. Choudhury, M. De Simone, F. Dulieu, A. Durán, L. Evans, C. Favre, D. Fedele, S. Feng, F. Fontani, T. Hama, T. Hanawa, E. Herbst, T. Hirota, M. Imai, A. Isella, I. Jiménez-Serra, C. Kahane, B. Lefloch, L. Loinard, A. López-Sepulcre, L.T. Maud, M.J. Maureira, F. Menard, S. Mercimek, A. Miotello, G. Moellenbrock, S. Mori, N.M. Murillo, R. Nakatani, H. Nomura, Y. Oba, R. O'Donoghue, S. Ohashi, J. Ospina-Zamudio, J.E. Pineda, L. Podio, A. Rimola, T. Sakai, D. Segura-Cox, Y. Shirley, B. Svoboda, V. Taquet, L. Testi, C. Vastel, S. Viti, N. Watanabe, Y. Watanabe, A. Witzel, C. Xue, Y. Zhang, B. Zhao, S. Yamamoto: FAUST. II. Discovery of a Secondary Outflow in IRAS 15398-3359: Variability in Outflow Direction during the Earliest Stage of Star Formation?. *Ap. J.* 910, 1 (2021).
- Orlando E., A. Strong: StellarICS: inverse Compton emission from the quiet Sun and stars from keV to TeV. *J. of Cosmology and Astroparticle Phys.* 2021, 4 (2021).
- Paillas E., Y. Cai, N. Padilla, A.G. Sánchez: Redshift-space distortions with split densities. *Mon. Not. R. Astron. Soc.* 505, 4, 5731-5752 (2021).
- Parikh T., D. Thomas, C. Maraston, K.B. Westfall, B.H. Andrews, N.F. Boardman, N. Drory, G. Oyarzun: SDSS-IV MaNGA: radial gradients in stellar population properties of early-type and late-type galaxies. *Mon. Not. R. Astron. Soc.* 502, 4, 5508-5527 (2021).
- Parikh, T., R. Saglia, J. Thomas, K. Mehrgan, R. Bender: Stellar Population Parameters using MaNGA and MUSE. Proceedings of "Extragalactic Spectroscopic Surveys: Past, Present and Future of Galaxy Evolution (GALSPEC2021)", Online Conference, 12.-16. April 2021 (2021).
- Parrag E., C. Inserra, S. Schulze, J. Anderson, T. Chen, G. Leloudas, L. Galbany, C.P. Gutiérrez, D. Hiramatsu, E. Kankare, T.E. Müller-Bravo, M. Nicholl, G. Pignata, R. Cartier, M. Gromadzki, A. Kozyreva, A. Rau, J. Burke, D.A. Howell, C. McCully, C. Pellegrino: SN 2019hcc: a Type II supernova displaying early O II lines. *Mon. Not. R. Astron. Soc.* 506, 4, 4819-4840 (2021).
- Paschmann G., J. Quinn, R. Torbert, C. McIlwain, H. Vaith, S. Haaland, H. Matsui, C. Kletzing, W. Baumjohann, G. Haerendel: Results of the Electron Drift Instrument on Cluster. *J. Geophys. Res. (Space Phys.)* 126, 6 (2021).
- Paschmann G., B.Ö. Sonnerup, T. Phan, S. Fuselier, S. Haaland, R. Denton, J. Burch, K. Trattner, B. Giles, D. Ger-

- shman, I. Cohen, C. Russell: Anomalous Reconnection Layer at Earth's Dayside Magnetopause. *J. Geophys. Res. (Space Phys.)* 126, 9 (2021).
- Pasini, T., M. Brüggen, D. H. Hoang, V. Ghirardini, E. Bulbul, A. Liu, M. Klein, T. W. Shimwell, M. J. Hardcastle, W. L. Williams, A. Botteon, F. Gastaldello, R. J. van Weeren, A. Merloni, F. de Gasperin, Y. E. Bahar, F. Pacaud, M. Ramos-Ceja: The eROSITA Final Equatorial-Depth Survey (eFEDS). LOFAR view of brightest cluster galaxies and AGN feedback. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Pennock C.M., J.T. van Loon, M.D. Filipović, H. Andernach, F. Haberl, R. Kothes, E. Lenc, L. Rudnick, S.V. White, C. Agliozzo, S. Antón, I. Bojičić, D.J. Bomans, J.D. Collier, E.J. Crawford, A.M. Hopkins, K. Jeganathan, P.J. Kavanagh, B.S. Koribalski, D. Leahy, P. Maggi, C. Maitra, J. Marvil, M.J. Michałowski, R.P. Norris, J.M. Oliveira, J.L. Payne, H. Sano, M. Sasaki, L. Staveley-Smith, E. Vardoulaki: The ASKAP-EMU Early Science Project: 888 MHz radio continuum survey of the Large Magellanic Cloud. *Mon. Not. R. Astron. Soc.* 506, 3, 3540-3559 (2021).
- Penton, A., U. Malik, T.M. Davis, ..., T.N. Varga et al.: OzDES reverberation mapping program: Lag recovery reliability for 6-yr C iv analysis. *Mon. Not. R. Astron. Soc.* 509, 3, 4008-4023 (2021).
- Pessa I., E. Schinnerer, F. Belfiore, E. Emsellem, A. Leroy, A. Schrubba, J. Kruijssen, H.-A. Pan, G. Blanc, P. Sanchez-Blazquez, F. Bigiel, M. Chevance, E. Congiu, D. Dale, C. Faesi, S. Glover, K. Grasha, B. Groves, I. Ho, M. Jiménez-Donaire, R. Klessen, K. Kreckel, E. Koch, D. Liu, S. Meidt, J. Pety, M. Querejeta, E. Rosolowsky, T. Saito, F. Santoro, J. Sun, A. Usero, E. Watkins, T. Williams: Star formation scaling relations at ≈ 100 pc from PHANGS: Impact of completeness and spatial scale. *Astron. Astrophys.* 650, A134 (2021).
- Petit dit de la Roche D., N. Oberg, M. van den Ancker, I. Kamp, R. van Boekel, D. Fedele, V. Ivanov, M. Kasper, H. Käufl, M. Kissler-Patig, P. Miles-Páez, E. Pantin, S. Quanz, C. Rab, R. Siebenmorgen, L. Waters: New mid-infrared imaging constraints on companions and protoplanetary disks around six young stars. *Astron. Astrophys.* 648 (2021).
- Pezzotta A., M. Crocce, A. Eggemeier, A.G. Sánchez, R. Scoccimarro: Testing one-loop galaxy bias: Cosmological constraints from the power spectrum. *Physical Review D* 104, 4 (2021).
- Pineda J.E., A. Schmiedeke, P. Caselli, S.W. Stahler, D.T. Frayer, S.E. Church, A.I. Harris: Neutral versus Ion Line Widths in Barnard 5: Evidence for Penetration by Magnetohydrodynamic Waves. *Ap. J.* 912, 1 (2021).
- Poci A., R. McDermid, M. Lyubenova, L. Zhu, G. van de Ven, E. Iodice, L. Coccato, F. Pinna, E. Corsini, J. Falcón-Barroso, D. Gadotti, R. Grand, K. Fahrion, I. Martín-Navarro, M. Sarzi, S. Viaene, P. de Zeeuw: The Fornax3D project: Assembly histories of lenticular galaxies from a combined dynamical and population orbital analysis. *Astron. Astrophys.* 647, A145 (2021).
- Pocino, A., I. Tutusaus, F.J. Castander, ..., R. Bender, ..., C. Bodendorf, ..., J. Graciá-Carpio, F. Grupp, ..., F. Raison, ..., R. Saglia, A.G. Sánchez, et al.: Euclid preparation - XII. Optimizing the photometric sample of the Euclid survey for galaxy clustering and galaxy-galaxy lensing analyses. *Astron. Astrophys.* 655, A44 (2021).
- Ponti G., M. Morris, E. Churazov, I. Heywood, R. Fender: The Galactic center chimneys: the base of the multiphase outflow of the Milky Way. *Astron. Astrophys.* 646, A66 (2021).
- Poolakkil S., R. Preece, C. Fletcher, A. Goldstein, P. Bhat, E. Bissaldi, M. Briggs, E. Burns, W. Cleveland, M. Giles, C. Hui, D. Kocevski, S. Lesage, B. Mailyan, C. Malacaria, W. Paciesas, O. Roberts, P. Veres, A. von Kienlin, C. Wilson-Hodge: The Fermi-GBM Gamma-Ray Burst Spectral Catalog: 10 yr of Data. *Ap. J.* 913, 1 (2021).
- Porredon A., M. Crocce, P. Fosalba, J. Elvin-Poole, A. Carnero Rosell, R. Cawthon, T. Eifler, X. Fang, I. Ferrero, E. Krause, N. MacCrann, N. Weaverdyck, T. Abbott, M. Aguena, S. Allam, A. Amon, S. Avila, D. Bacon, E. Bertin, S. Bhargava, S. Bridle, D. Brooks, M. Carrasco Kind, J. Carretero, F. Castander, A. Choi, M. Costanzi, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, P. Doel, A. Drlica-Wagner, K. Eckert, A. Ferté, B. Flaugher, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, T. Gianantonio, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, D. James, M. Jarvis, K. Kuehn, N. Kuropatkin, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, A. Palmese, S. Pandey, F. Paz-Chinchón, A. Plazas, M. Rodriguez-Monroy, A. Roodman, S. Samuroff, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, M. Smith, M. Soares-Santos, E. Suchyta, M. Swanson, G. Tarle, C. To, T. Varga, J. Weller, R. Wilkinson, DES Collaboration: Dark Energy Survey Year 3 results: Optimizing the lens sample in a combined galaxy clustering and galaxy-galaxy lensing analysis. *Physical Review D* 103, 4 (2021).
- Pradhan P., B. Paul, E. Bozzo, C. Maitra, B. Paul: Comprehensive broad-band study of accreting neutron stars with Suzaku: Is there a bi-modality in the X-ray spectrum?. *Mon. Not. R. Astron. Soc.* 502, 1, 1163-1190 (2021).
- Predehl, P., R.A. Sunyaev, W. Becker, H. Brunner, R. Burinin, A. Bykov, A. Cherepashchuk, N. Chugai, E. Churazov, V. Doroshenko, N. Eismont, M. Freyberg, M. Gilfanov, F. Haberl, I. Khabibullin, R. Krivonos, C. Maitra, P. Medvedev, A. Merloni, K. Nandra, V. Nazarov, M. Pavlinsky, G. Ponti, J.S. Sanders, M. Sasaki, S. Sazonov, A.W. Strong, J. Wilms: Detection of large-scale X-ray bubbles in the Milky Way halo. *Nature* 588, 7837 (2020).
- Predehl P., R. Andritschke, V. Arefiev, V. Babyshkin, O. Batanov, W. Becker, H. Böhringer, A. Bogomolov, T. Boller, K. Borm, W. Bornemann, H. Bräuninger, M. Brüggen, H. Brunner, M. Brusa, E. Bulbul, M. Buntov, V. Burwitz, W. Burkert, N. Clerc, E. Churazov, D. Coutinho, T. Dauser, K. Dennerl, V. Doroshenko, J. Eder, V. Emberger, T. Eraerds, A. Finoguenov, M. Freyberg, P. Friedrich, S. Friedrich, M. Fürmetz, A. Georgakakis, M. Gilfanov, S. Granato, C. Grossberger, A. Gueguen, P. Gureev, F. Haberl, O. Hälker,

- G. Hartner, G. Hasinger, H. Huber, L. Ji, A.v. Kienlin, W. Kink, F. Korotkov, I. Kreykenbohm, G. Lamer, I. Lomakin, I. Lapshov, T. Liu, C. Maitra, N. Meidinger, B. Menz, A. Merloni, T. Mernik, B. Mican, J. Mohr, S. Müller, K. Nandra, V. Nazarov, F. Pacaud, M. Pavlinsky, E. Perinati, E. Pfeffermann, D. Pietschner, M.E. Ramos-Ceja, A. Rau, J. Reiffers, T. Reiprich, J. Robrade, M. Salvato, J. Sanders, A. Santangelo, M. Sasaki, H. Scheuerle, C. Schmid, J. Schmitt, A. Schwöpe, A. Shirshakov, M. Steinmetz, I. Stewart, L. Strüder, R. Sunyaev, C. Tenzer, L. Tiedemann, J. Trümper, V. Voron, P. Weber, J. Wilms, V. Yaroshenko: The eROSITA X-ray telescope on SRG. *Astron. Astrophys.* 647, A1 (2021).
- Price S.-H., T. Shimizu, R. Genzel, H. Übler, N. Förster Schreiber, L. Tacconi, R. Davies, R. Coogan, D. Lutz, S. Wuyts, E. Wisnioski, A. Nestor, A. Sternberg, A. Burkert, R. Bender, A. Contursi, R. Davies, R. Herrera-Camus, M.-M. Lee, T. Naab, R. Neri, A. Renzini, R. Saglia, A. Schrubba, K. Schuster: Rotation Curves in z 1-2 Star-forming Disks: Comparison of Dark Matter Fractions and Disk Properties for Different Fitting Methods. *Ap. J.* 922, 2 (2021).
- Puglisi A., E. Daddi, F. Valentino, G. Magdis, D. Liu, V. Kokorev, C. Circosta, D. Elbaz, F. Bournaud, C. Gomez-Guijarro, S. Jin, S. Madden, M.T. Sargent, M. Swinbank: Submillimetre compactness as a critical dimension to understand the main sequence of star-forming galaxies. *Mon. Not. R. Astron. Soc.* 508, 4 (2021).
- Pulsoni C., O. Gerhard, M. Arnaboldi, A. Pillepich, V. Rodríguez-Gomez, D. Nelson, L. Hernquist, V. Springel: The stellar halos of ETGs in the IllustrisTNG simulations. II. Accretion, merger history, and dark halo connection. *Astron. Astrophys.* 647, A95 (2021).
- Querejeta M., E. Schinnerer, S. Meidt, J. Sun, A. Leroy, E. Emsellem, R. Klessen, J. Muñoz-Mateos, H. Salo, E. Laurikainen, I. Bešlić, G. Blanc, M. Chevance, D. Dale, C. Eibensteiner, C. Faesi, A. García-Rodríguez, S. Glover, K. Grasha, J. Henshaw, C. Herrera, A. Hughes, K. Kreckel, J. Kruijssen, D. Liu, E. Murphy, H.-A. Pan, J. Pety, A. Razza, E. Rosolowsky, T. Saito, A. Schrubba, A. Usero, E. Watkins, T. Williams: Stellar structures, molecular gas, and star formation across the PHANGS sample of nearby galaxies. *Astron. Astrophys.* 656, A133 (2021).
- Raichoor A., A. de Mattia, A.J. Ross, C. Zhao, S. Alam, S. Avila, J. Bautista, J. Brinkmann, J.R. Brownstein, E. Burtin, M.J. Chapman, C. Chuang, J. Comparat, K.S. Dawson, A. Dey, H. du Mas des Bourboux, J. Elvin-Poole, V. Gonzalez-Perez, C. Gorgoni, J. Kneib, H. Kong, D. Lang, J. Moustakas, A.D. Myers, E. Müller, S. Nadathur, J.A. Newman, W.J. Percival, M. Rezaie, G. Rossi, V. Ruhlmann-Kleider, D.J. Schlegel, D.P. Schneider, H. Seo, A. Tamone, J.L. Tinker, R. Tojeiro, M. Vivek, C. Yèche, G. Zhao: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: large-scale structure catalogues and measurement of the isotropic BAO between redshift 0.6 and 1.1 for the Emission Line Galaxy Sample. *Mon. Not. R. Astron. Soc.* 500, 3 (2021).
- Rampalli R., M. Ness, S. Wylie: The Astrophysical Variance in Gaia-Radial Velocity Spectrometer Spectra. *Ap. J.* 921, 1 (2021).
- Razim, O., S. Cavuoti, M. Brescia, G. Riccio, M. Salvato, G. Longo: Improving the reliability of photometric redshift with machine learning. *Mon. Not. R. Astron. Soc.* 507, 3, 5034-5052 (2021).
- Redaelli E., S. Bovino, A. Giannetti, G. Sabatini, P. Caselli, F. Wyrowski, D. Schleicher, D. Colombo: Identification of pre-stellar cores in high-mass star forming clumps via H_2D^+ observations with ALMA. *Astron. Astrophys.* 650, A202 (2021).
- Redaelli E., O. Sipilä, M. Padovani, P. Caselli, D. Galli, A. Ivlev: The cosmic-ray ionisation rate in the pre-stellar core L1544. *Astron. Astrophys.* 656, A109 (2021).
- Reichardt C., S. Patil, P. Ade, A. Anderson, J. Austermann, J. Avva, E. Baxter, J. Beall, A. Bender, B. Benson, F. Bianchini, L. Bleem, J. Carlstrom, C. Chang, P. Chabab, H. Chiang, T. Chou, R. Citron, C.C. Moran, T. Crawford, A. Crites, T. de Haan, M. Dobbs, W. Everett, J. Gallicchio, E. George, A. Gilbert, N. Gupta, N. Halverson, N. Harrington, J. Henning, G. Hilton, G. Holder, W. Holzzapfel, J. Hrubes, N. Huang, J. Hubmayr, K. Irwin, L. Knox, A. Lee, D. Li, A. Lowitz, D. Luong-Van, J. McMahon, J. Mehl, S. Meyer, M. Millea, L. Mocuano, J. Mohr, J. Montgomery, A. Nadolski, T. Natoli, J. Nibarger, G. Noble, V. Novosad, Y. Otori, S. Padin, C. Pryke, J. Ruhl, B. Saliwanchik, J. Sayre, K. Schaffer, E. Shirokoff, C. Sievers, G. Smecher, H. Spieler, Z. Staniszewski, A. Stark, C. Tucker, K. Vanderlinde, T. Veach, J. Vieira, G. Wang, N. Whitehorn, R. Williamson, W. Wu, V. Yefremenko: An Improved Measurement of the Secondary Cosmic Microwave Background Anisotropies from the SPT-SZ + SPTpol Surveys. *Ap. J.* 908, 2 (2021).
- Reiprich T., A. Veronica, F. Pacaud, M.E. Ramos-Ceja, N. Ota, J. Sanders, M. Kara, T. Erben, M. Klein, J. Erler, J. Kerp, D. Hoang, M. Brüggen, J. Marvil, L. Rudnick, V. Biffi, K. Dolag, J. Aschersleben, K. Basu, H. Brunner, E. Bulbul, K. Dennerl, D. Eckert, M. Freyberg, E. Gattuzz, V. Ghirardini, F. Käfer, A. Merloni, K. Migkas, K. Nandra, P. Predehl, J. Robrade, M. Salvato, B. Whelan, A. Diaz-Ocampo, D. Hernandez-Lang, A. Zenteno, M. Brown, J. Collier, J. Diego, A. Hopkins, A. Kapinska, B. Koribalski, T. Mroczkowski, R. Norris, A. O'Brien, E. Vardoulaki: The Abell 3391/95 galaxy cluster system. A 15 Mpc intergalactic medium emission filament, a warm gas bridge, infalling matter clumps, and (re-) accelerated plasma discovered by combining SRG/eROSITA data with ASKAP/EMU and DECAM data. *Astron. Astrophys.* 647, A2 (2021).
- Reynolds N.K., J.J. Tobin, P. Sheehan, S.I. Sadavoy, K.M. Kratter, Z. Li, C.J. Chandler, D. Segura-Cox, L.W. Looney, M.M. Dunham: Kinematic Analysis of a Protostellar Multiple System: Measuring the Protostar Masses and Assessing Gravitational Instability in the Disks of L1448 IRS3B and L1448 IRS3A. *Ap. J. Lett.* 907, 1, L10 (2021).
- Rezaie M., A.J. Ross, H. Seo, E. Mueller, W.J. Percival, G. Merz, R. Katebi, R.C. Bunescu, J. Bautista, J.R. Brownstein, E. Burtin, K. Dawson, H. Gil-Marín, J. Hou, E.B. Lyke, A. de la Macorra, G. Rossi, D.P. Schneider, P. Zarrouk, G. Zhao: Primordial non-Gaussianity from the completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey - I: Catalogue preparation and systematic mitigation.

Mon. Not. R. Astron. Soc. 506, 3, 3439-3454 (2021).

Riffel R., T. Storchi-Bergmann, R. Riffel, M. Bianchin, N. Zakamska, D. Ruschel-Dutra, A. Schönell, D. Rosario, A. Rodriguez-Ardila, T. Fischer, R. Davies, N. Dametto, L. Dahmer-Hahn, D. Crenshaw, L. Burtscher, M. Bentz: The AGNIFS survey: distribution and excitation of the hot molecular and ionized gas in the inner kpc of nearby AGN hosts. *Mon. Not. R. Astron. Soc.* 504, 3, 3265-3283 (2021).

Rodríguez-Baras M., A. Fuente, P. Rivière-Marichalar, D. Navarro-Almaida, P. Caselli, M. Gerin, C. Kramer, E. Roueff, V. Wakelam, G. Esplugues, S. García-Burillo, R. Le Gal, S. Spezzano, T. Alonso-Albi, R. Bachiller, S. Cazaux, B. Commerçon, J. Goicoechea, J. Loison, S. Treviño-Morales, O. Roncero, I. Jiménez-Serra, J. Laas, A. Hacar, J. Kirk, V. Lattanzi, R. Martín-Doménech, G. Muñoz-Caro, J. Pineda, B. Tercero, D. Ward-Thompson, M. Tafalla, N. Marcelino, J. Malinen, R. Friesen, B. Giuliano: Gas phase Elemental abundances in Molecular cloudS (GEMS). IV. Observational results and statistical trends. *Astron. Astrophys.* 648, A120 (2021).

Rosolowsky E., A. Hughes, A.K. Leroy, J. Sun, M. Querejeta, A. Schruba, A. Usero, C.N. Herrera, D. Liu, J. Pety, T. Saito, I. Bešlić, F. Bigiel, G. Blanc, M. Chevance, D.A. Dale, S. Deger, C.M. Faesi, S.C. Glover, J.D. Henshaw, R.S. Klessen, J.D. Kruijssen, K. Larson, J. Lee, S. Meidt, A. Mok, E. Schinnerer, D.A. Thilker, T.G. Williams: Giant molecular cloud catalogues for PHANGS-ALMA: methods and initial results. *Mon. Not. R. Astron. Soc.* 502, 1, 1218-1245 (2021).

Rossi G., P.D. Choi, J. Moon, J.E. Bautista, H. Gil-Marín, R. Paviot, M. Vargas-Magaña, S. de la Torre, S. Fromenteau, A.J. Ross, S. Ávila, E. Burtin, K.S. Dawson, S. Escoffier, S. Habib, K. Heitmann, J. Hou, E. Mueller, W.J. Percival, A. Smith, C. Zhao, G. Zhao: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: N-body mock challenge for galaxy clustering measurements. *Mon. Not. R. Astron. Soc.* 505, 1, 377-407 (2021).

Runco J.N., A.E. Shapley, R.L. Sanders, M.W. Topping, M. Kriek, N.A. Reddy, A.L. Coil, B. Mobasher, B. Siana, W.R. Freeman, I. Shivaie, M. Azadi, S.H. Price, G.C. Leung, T. Fetherolf, L. de Groot, T. Zick, F.M. Fornasini, G. Barro: The MOSDEF survey: a comprehensive analysis of the rest-optical emission-line properties of $z \sim 2.3$ star-forming galaxies. *Mon. Not. R. Astron. Soc.* 502, 2, 2600-2614 (2021).

Saeedi, S., T. Liu, J. Knies, M. Sasaki, W. Becker, E. Bulbul, K. Dennerl, M. Freyberg, R. Laktionov, A. Merloni: eROSITA study of the globular cluster 47 Tucanae. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Sakatani N., S. Tanaka, T. Okada, T. Fukuhara, L. Riu, S. Sugita, R. Honda, T. Morota, S. Kameda, Y. Yokota, E. Tatsumi, K. Yumoto, N. Hirata, A. Miura, T. Kouyama, H. Senshu, Y. Shimaki, T. Arai, J. Takita, H. Demura, T. Sekiguchi, T. Müller, A. Hagermann, J. Biele, M. Grott, M.

Hamm, M. Delbo, W. Neumann, M. Taguchi, Y. Ogawa, T. Matsunaga, T. Wada, S. Hasegawa, J. Helbert, N. Hirata, R. Noguchi, M. Yamada, H. Suzuki, C. Honda, K. Ogawa, M. Hayakawa, K. Yoshioka, M. Matsuoka, Y. Cho, H. Sawada, K. Kitazato, T. Iwata, M. Abe, M. Ohtake, S. Matsuura, K. Matsumoto, H. Noda, Y. Ishihara, K. Yamamoto, A. Higuchi, N. Namiki, G. Ono, T. Saiki, H. Imamura, Y. Takagi, H. Yano, K. Shirai, C. Okamoto, S. Nakazawa, Y. Iijima, M. Arakawa, K. Wada, T. Kadono, K. Ishibashi, F. Terui, S. Kikuchi, T. Yamaguchi, N. Ogawa, Y. Mimasu, K. Yoshikawa, T. Takahashi, Y. Takei, A. Fujii, H. Takeuchi, Y. Yamamoto, C. Hirose, S. Hosoda, O. Mori, T. Shimada, S. Soldini, R. Tsukizaki, M. Ozaki, S. Tachibana, H. Ikeda, M. Ishiguro, H. Yabuta, M. Yoshikawa, S. Watanabe, Y. Tsuda: Anomalously porous boulders on (162173) Ryugu as primordial materials from its parent body. *Nature Astronomy* 5, 766-774 (2021).

Sampaio-Santos H., Y. Zhang, R. Ogando, T. Shin, J.B. Golden-Marx, B. Yanny, K. Herner, M. Hilton, A. Choi, M. Gatti, D. Gruen, B. Hoyle, M. Rau, J. De Vicente, J. Zuntz, T. Abbott, M. Aguena, S. Allam, J. Annis, S. Avila, E. Bertin, D. Brooks, D. Burke, M. Carrasco Kind, J. Carretero, C. Chang, M. Costanzi, L. da Costa, H. Diehl, P. Doel, S. Everett, A. Evrard, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. James, M. Jarvis, T. Jeltema, K. Kuehn, N. Kuropatkin, O. Lahav, M. Maia, M. March, J. Marshall, R. Miquel, A. Palmese, F. Paz-Chinchón, A. Plazas, E. Sanchez, B. Santiago, V. Scarpine, M. Schubnell, M. Smith, E. Suchyta, G. Tarle, D. Tucker, T. Varga, R. Wechsler: Is diffuse intracluster light a good tracer of the galaxy cluster matter distribution?. *Mon. Not. R. Astron. Soc.* 501, 1 (2021).

Sanchez, D. M., A. Rau, A.A.I. Hernandez, T.F.J. van Grunsven et al.: Dynamical confirmation of a stellar mass black hole in the transient X-ray dipping binary MAXI J1305-704. *Mon. Not. R. Astron. Soc.* 506, 1, 581-594 (2021).

Sanders R.L., A.E. Shapley, T. Jones, N.A. Reddy, M. Kriek, B. Siana, A.L. Coil, B. Mobasher, I. Shivaie, R. Davé, M. Azadi, S.H. Price, G. Leung, W.R. Freeman, T. Fetherolf, L. de Groot, T. Zick, G. Barro: The MOSDEF Survey: The Evolution of the Mass-Metallicity Relation from $z = 0$ to $z = 3.3$. *Ap. J.* 914, 1 (2021).

Santos-Sanz P., J. Ortiz, B. Sicardy, G. Benedetti-Rossi, N. Morales, E. Fernández-Valenzuela, R. Duffard, R. Iglesias-Marzoa, J. Lamadrid, N. Maicas, L. Pérez, K. Gazeas, J. Guirado, V. Peris, F. Ballesteros, F. Organero, L. Ana-Hernández, F. Fonseca, A. Alvarez-Candal, Y. Jiménez-Teja, M. Vara-Lubiano, F. Braga-Ribas, J. Camargo, J. Desmars, M. Assafin, R. Vieira-Martins, J. Alikakos, M. Boutet, M. Bretton, A. Carbognani, V. Charmandaris, F. Ciabattari, P. Delincak, A. Fuambuena Leiva, H. González, T. Haymes, S. Hellmich, J. Horbowicz, M. Jennings, B. Kattentidt, C. Kiss, R. Komžík, J. Lecacheux, A. Marciniak, S. Moindrot, S. Mottola, A. Pal, N. Paschalis, S. Pastor, C. Perello, T. Pribulla, C. Ratinaud, J. Reyes, J. Sanchez, C. Schnabel, A. Selva, F. Signoret, E. Sonbas, V. Alí-Lagoa:

The 2017 May 20 stellar occultation by the elongated centaur (95626) 2002 GZ₃₂. *Mon. Not. R. Astron. Soc.* 501, 4, 6062-6075 (2021).

Sarkar K.C., O. Gnat, A. Sternberg: Non-equilibrium ionization and radiative transport in an evolving supernova remnant. *Mon. Not. R. Astron. Soc.* 504, 1, 583-600 (2021).

Sarkar K.C., A. Sternberg, O. Gnat: A new ionization network and radiation transport module in PLUTO. *Mon. Not. R. Astron. Soc.* 503, 4, 5807-5825 (2021).

Sasaki, M., J. Knies, F. Haberl, C. Maitra, J. Kerp, A. M. Bykov, K. Dennerl, M. D. Filipovic, M. Freyberg, B. S. Koribalski, S. Points, L. Staveley-Smith: First studies of the diffuse X-ray emission in the Large Magellanic Cloud with eROSITA. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Schmiedeke A., J.E. Pineda, P. Caselli, H.G. Arce, G.A. Fuller, A.A. Goodman, M.J. Maureira, S.S. Offner, D. Segura-Cox, D. Seifried: Dissecting the Supercritical Filaments Embedded in the 0.5 pc Subsonic Region of Barnard 5. *Ap. J.* 909, 1 (2021).

Schmitt J., P. Ioannidis, J. Robrade, P. Predehl, S. Czesla, P. Schneider: Simultaneous eROSITA and TESS observations of the ultra-active star AB Doradus. *Astron. Astrophys.* 652, A135 (2021).

Schneider, P.C., S. Freund, S. Czesla, J. Robrade, M. Salvato, J. H. M. M. Schmitt: The eROSITA Final Equatorial-Depth Survey (eFEDS). The stellar counterparts of eROSITA sources identified by machine learning and Bayesian algorithms. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Schönfelder V., J. Greiner: Half-a-century of gamma-ray astrophysics at the Max-Planck Institute for Extraterrestrial Physics. *European Physical Journal H* 46, 1 (2021).

Schwöpe, A.D., A. M. Pires, J. Kurpas, V. Doroshenko, V. Suleimanov, M. Freyberg, W. Becker, K. Dennerl, F. Haberl, G. Lamer, C. Maitra, A. Potekhin, M. E. Ramos-Ceja, A. Santangelo, I. Traulsen, K. Werner: Phase-resolved X-ray spectroscopy of PSRB0656+14 with SRG/eROSITA and XMM-Newton. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Schwöpe, A.D., D. A. H. Buckley, A. Malyali, S. Potter, O. König, R. Arcodia, M. Gromadzki, A. Rau: Discovery of eRASSt J192932.9-560346: A bright, two-pole accreting, eclipsing polar. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Scott N., J. van de Sande, S. Sharma, J. Bland-Hawthorn, K. Freeman, O. Gerhard, M.R. Hayden, R. McDermid: Identification of an $[\alpha/\text{Fe}]$ -Enhanced Thick Disk Component in an Edge-on Milky Way Analog. *Ap. J. Lett.* 913, 1, L11 (2021).

Seppi R., J. Comparat, K. Nandra, E. Bulbul, F. Prada, A. Klypin, A. Merloni, P. Predehl, J. Ider Chitham: The mass

function dependence on the dynamical state of dark matter haloes. *Astron. Astrophys.* 652, A155 (2021).

Sevilla-Noarbe I., K. Bechtol, M. Carrasco Kind, A. Carnero Rosell, M. Becker, A. Drlica-Wagner, R. Gruendl, E. Rykoff, E. Sheldon, B. Yanny, A. Alarcon, S. Allam, A. Amon, A. Benoit-Lévy, G. Bernstein, E. Bertin, D. Burke, J. Carretero, A. Choi, H. Diehl, S. Everett, B. Flaugher, E. Gaztanaga, J. Gschwend, I. Harrison, W. Hartley, B. Hoyle, M. Jarvis, M. Johnson, R. Kessler, R. Kron, N. Kuropatkin, B. Leistedt, T. Li, F. Menanteau, E. Morganson, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Pieres, C. Pond, M. Rodriguez-Monroy, J.A. Smith, K. Stringer, M. Troxel, D. Tucker, J. de Vicente, W. Wester, Y. Zhang, T. Abbott, M. Aguena, J. Annis, S. Avila, S. Bhargava, S. Bridle, D. Brooks, D. Brout, F. Castander, R. Cawthon, C. Chang, C. Conselice, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, T. Davis, S. Desai, J. Dietrich, P. Doel, K. Eckert, A. Evrard, I. Ferrero, P. Fosalba, J. García-Bellido, D. Gerdes, T. Giannantonio, D. Gruen, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, E. Huff, D. Huterer, D. James, T. Jeltema, K. Kuehn, O. Lahav, C. Lidman, M. Lima, H. Lin, M. Maia, J. Marshall, P. Martini, P. Melchior, R. Miquel, J. Mohr, R. Morgan, E. Neilsen, A. Plazas, A. Romer, A. Roodman, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, M. Smith, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, R. Wechsler, J. Weller, R. Wilkinson, DES Collaboration: Dark Energy Survey Year 3 Results: Photometric Data Set for Cosmology. *Ap. J. Supp. Ser.* 254, 2 (2021).

Sextl E., R. Kudritzki, J. Weller, M.A. Urbaneja, A. Weiss: Modified Gravity and the Flux-weighted Gravity-Luminosity Relationship of Blue Supergiant Stars. *Ap. J.* 914, 2 (2021).

Shajib A., S. Birrer, T. Treu, M. Auger, A. Agnello, T. Anguita, E. Buckley-Geer, J. Chan, T. Collett, F. Courbin, C. Fassnacht, J. Frieman, I. Kayo, C. Lemon, H. Lin, P. Marshall, R. McMahan, A. More, N. Morgan, V. Motta, M. Oguri, F. Ostrovski, C. Rusu, P. Schechter, T. Shanks, S. Suyu, G. Meylan, T. Abbott, S. Allam, J. Annis, S. Avila, E. Bertin, D. Brooks, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, C. Cunha, L. da Costa, J. De Vicente, S. Desai, P. Doel, B. Flaugher, P. Fosalba, J. García-Bellido, D. Gerdes, D. Gruen, R. Gruendl, G. Gutierrez, W. Hartley, D. Hollowood, B. Hoyle, D. James, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, M. Maia, M. March, J. Marshall, P. Melchior, F. Menanteau, R. Miquel, A. Plazas, E. Sanchez, V. Scarpine, I. Sevilla-Noarbe, M. Smith, M. Soares-Santos, F. Sobreira, E. Suchyta, M. Swanson, G. Tarle, A. Walker: Erratum: Is every strong lens model unhappy in its own way? Uniform modelling of a sample of 13 quadruply+ imaged quasars. *Mon. Not. R. Astron. Soc.* 501, 2, 2833-2835 (2021).

Shin T., B. Jain, S. Adhikari, E. Baxter, C. Chang, S. Pandey, A. Salcedo, D. Weinberg, A. Amsellem, N. Battaglia, M. Belyakov, T. Dacunha, S. Goldstein, A. Kravtsov, T. Varga, T. Abbott, M. Aguena, A. Alarcon, S. Allam, A. Amon, F. Andrade-Oliveira, J. Annis, D. Bacon, K. Bechtol, M. Becker, G. Bernstein, E. Bertin, S. Bocquet, J. Bond, D. Brooks, E. Buckley-Geer, D. Burke, A. Campos, A.C. Rosell, M.C. Kind, J. Carretero, R. Chen, A. Choi, M. Costanzi, L. da Costa, J. DeRose, S. Desai, J. De Vicente, M. Devlin, H. Diehl, J.

- Dietrich, S. Dodelson, P. Doel, C. Doux, A. Drlica-Wagner, K. Eckert, J. Elvin-Poole, S. Everett, S. Ferraro, I. Ferrero, A. Ferté, B. Flaughner, J. Frieman, P. Gallardo, M. Gatti, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, G. Gutierrez, I. Harrison, W. Hartley, J. Hill, M. Hilton, S. Hinton, D. Hollowood, J. Hughes, D. James, M. Jarvis, T. Jeltema, B. Koopman, E. Krause, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, M. Lokken, N. MacCrann, M. Madhavacheril, M. Maia, J. McCullough, J. McMahon, P. Melchior, F. Menanteau, R. Miquel, J. Mohr, K. Moodley, R. Morgan, J. Myles, F. Nati, A. Navarro-Alsina, M. Niemack, R. Ogando, L. Page, A. Palmese, B. Partridge, F. Paz-Chinchón, M. Pereira, A. Pieres, A.P. Malagón, J. Prat, M. Raveri, M. Rodriguez-Monroy, R. Rollins, A. Romer, E. Rykoff, M. Salatino, C. Sánchez, E. Sanchez, B. Santiago, V. Scarpine, A. Schil-laci, L. Secco, S. Serrano, I. Sevilla-Noarbe, E. Sheldon, B. Sherwin, C. Sifón, M. Smith, M. Soares-Santos, S. Staggs, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, M. Troxel, I. Tutusaus, E. Vavagiakis, J. Weller, E. Wollack, B. Yanny, B. Yin, Y. Zhang: The mass and galaxy distribution around SZ-selected clusters. *Mon. Not. R. Astron. Soc.* 507, 4, 5758-5779 (2021).
- Shingledecker C., K. Lee, J. Wandishin, N. Balucani, A. Burkhardt, S. Charnley, R. Loomis, M. Schreffler, M. Siebert, M. McCarthy, B. McGuire: Detection of interstellar $H_2CC-CHC_3N$. A possible link between chains and rings in cold cores. *Astron. Astrophys.* 652, L12 (2021).
- Siebert M.A., A. Remijan, B.A. McGuire, C.N. Shingledecker, A.M. Burkhardt: a Search for Light Hydrides in the Envelopes of Evolved Stars. *Ap. J.* 901, 1, 22 (2021).
- Silsbee K., P. Caselli, A.V. Ivlev: Ice mantles on dust grains: dramatic variation of thickness with grain size. *Mon. Not. R. Astron. Soc.* 507, 4, 6205-6214 (2021).
- Silsbee K., A.V. Ivlev, M. Gong: Thermal Damping of Weak Magnetosonic Turbulence in the Interstellar Medium. *Ap. J.* 922, 1 (2021).
- Silsbee K., R.R. Rafikov: Planet formation in stellar binaries: global simulations of planetesimal growth. *Astron. Astrophys.* 652, A104 (2021).
- Singh, A., A. Singh}, C. D. Matzner, R. K. Friesen, P. G. Martin, J. E. Pineda, E. Rosolowsky, F. Alves, A. Chacón-Tanarro, H. H.-Hu. Chen, M. C.-Yu. Chen, S. Choudhury, J. Di Francesco, J. Keown, H. Kirk, A. Punanova, Y. Seo, Y. Shirley, A. Ginsburg, S. S. R. Offner, H. Arce, P. Caselli, A. Goodman, P. C. Myers, E. Redaelli, GAS Collaboration: Are Massive Dense Clumps Truly Subvirial? A New Analysis Using Gould Belt Ammonia Data. *Ap. J.* 922, 1 (2021).
- Sipilä O., K. Silsbee, P. Caselli: A Revised Description of the Cosmic Ray Induced Desorption of Interstellar Ices. *Ap. J.* 922, 2 (2021).
- Smith M.C., G.L. Bryan, R.S. Somerville, C. Hu, R. Teyssier, B. Burkhardt, L. Hernquist: Efficient early stellar feedback can suppress galactic outflows by reducing supernova clustering. *Mon. Not. R. Astron. Soc.* 506, 3, 3882-3915 (2021).
- Smith M.W., S.A. Eales, T.G. Williams, B. Lee, Z. Li, P. Barmby, M. Bureau, S. Chapman, B.S. Cho, A. Chung, E.J. Chung, H. Chung, C.J. Clark, D.L. Clements, T.A. Davis, I. De Looze, D.J. Eden, G. Athikkat-Eknath, G.P. Ford, Y. Gao, W. Gear, H.L. Gomez, R. de Grijs, J. He, L.C. Ho, T.M. Hughes, S. Jiao, Z. Li, F. Kemper, F. Kirchschrager, E.W. Koch, A.K. Kong, C. Lee, E. Lin, S. Mairs, M.J. Michałowski, K. Pattle, Y. Peng, S.E. Ragan, M.G. Rawlings, D. Rigopoulou, A. Saintonge, A. Schrubba, X. Tang, J. Wang, A.P. Whitworth, C.D. Wilson, K. Yim, M. Zhu: The HASHTAG Project: The First Submillimeter Images of the Andromeda Galaxy from the Ground. *Ap. J. Supp. Ser.* 257, 2 (2021).
- Spear S., M.J. Maureira, H.G. Arce, J.E. Pineda, M. Dunham, P. Caselli, D. Segura-Cox: VLA and NOEMA Views of Bok Globule CB 17: The Starless Nature of a Proposed First Hydrostatic Core Candidate. *Ap. J.* 923, 2 (2021).
- Speedie J., R.E. Pudritz, A. Cridland, F. Meru, R.A. Booth: Turbulent disk viscosity and the bifurcation of planet formation histories. *Mon. Not. R. Astron. Soc.* 510, 4, 6059-6084 (2021).
- Spezzano, S., A. Fuente, P. Caselli et al.: Gas phase Elemental abundances in Molecular clouds (GEMS) V. Methanol in Taurus. *Astron. Astrophys.* 657, A10 (2021).
- Spiniello C., C. Tortora, G. D'Ago, L. Coccato, F. La Barbera, A. Ferré-Mateu, C. Pulsoni, M. Arnaboldi, A. Gallazzi, L. Hunt, N. Napolitano, M. Radovich, D. Scognamiglio, M. Spavone, S. Zibetti: INSPIRE: INvestigating Stellar Population In RElics. II. First data release (DR1). *Astron. Astrophys.* 654, A136 (2021).
- Sprenger A.R., S. Jahanshahi, A.V. Ivlev, H. Löwen: Time-dependent inertia of self-propelled particles: The Langevin rocket. *Physical Review E* 103, 4 (2021).
- Spriggs T., M. Sarzi, P. Galán-de Anta, R. Napiwotzki, S. Viaene, B. Nedelchev, L. Coccato, E. Corsini, K. Fahrion, J. Falcón-Barroso, D. Gadotti, E. Iodice, M. Lyubenova, I. Martín-Navarro, R. McDermid, L. Morelli, F. Pinna, G. van de Ven, P. de Zeeuw, L. Zhu: The Fornax3D project: Planetary nebulae catalogue and independent distance measurements to Fornax cluster galaxies. *Astron. Astrophys.* 653, A167 (2021).
- Stanford S., D. Masters, B. Darvish, D. Stern, J. Cohen, P. Capak, N. Hernitschek, I. Davidzon, J. Rhodes, D. Sanders, B. Mobasher, F. Castander, S. Paltani, N. Aghanim, A. Amara, N. Auricchio, A. Balestra, R. Bender, C. Bodendorf, D. Bonino, E. Branchini, J. Brinchmann, V. Capobianco, C. Carbone, J. Carretero, R. Casas, M. Castellano, S. Cavuoti, A. Cimatti, R. Cledassou, C. Conselice, L. Corcione, A. Costille, M. Cropper, H. Degaudenzi, M. Douspis, F. Dubath, S. Dusini, P. Fosalba, M. Frailis, E. Franceschi, P. Franzetti, M. Fumana, B. Garilli, C. Giocoli, F. Grupp, S. Haugan, H. Hoekstra, W. Holmes, F. Hormuth, P. Hudelot, K. Jahnke, A. Kiessling, M. Kilbinger, T. Kitching, B. Kubik, M. Kummel, M. Kunz, H. Kurki-Suonio, R. Laureijs, S. Ligi, P. Lilje, I. Lloro, E. Maiorano, O. Marggraf, K. Markovic, R. Massey, M. Meneghetti, G. Meylan, L. Moscardini, S. Niemi, C. Padilla, F. Pasian, K. Pedersen, V. Pettorino, S. Pires, M. Poncet, L. Popa, L. Pozzetti, F. Raison, M. Roncarelli, E. Rossetti, R. Saglia, R. Scaramella, P. Schneider, A. Secroun, G. Seidel, S. Serrano, C. Sirignano, G. Sirri, A. Taylor, H. Teplitz, I. Tereno, R. Toledo-Moreo, E. Valentijn, L. Valenzi-

- ano, G. Verdoes Kleijn, Y. Wang, G. Zamorani, J. Zoubian, M. Brescia, G. Congedo, L. Conversi, Y. Copin, S. Kermiche, R. Kohley, E. Medinaceli, S. Mei, M. Moresco, B. Morin, E. Munari, G. Polenta, F. Sureau, P. Tallada Crespí, T. Vassallo, A. Zacchei, S. Andreon, H. Aussel, C. Baccigalupi, A. Balaguera-Antolínez, M. Baldi, S. Bardelli, A. Biviano, E. Borsato, E. Bozzo, C. Burigana, R. Cabanac, S. Camera, A. Cappi, C. Carvalho, S. Casas, G. Castignani, C. Colodro-Conde, J. Coupon, H. Courtois, J. Cuby, A. Da Silva, S. de la Torre, D. Di Ferdinando, C. Duncan, X. Dupac, M. Fabricius, M. Farina, S. Farrens, P. Ferreira, F. Finelli, P. Florese-Reimberg, S. Fotopoulou, S. Galeotta, K. Ganga, W. Gillard, G. Gozaliasl, J. Graciá-Carpio, E. Keihanen, C. Kirkpatrick, V. Lindholm, G. Mainetti, D. Maino, N. Martinet, F. Marulli, M. Maturi, S. Maurogordato, R. Metcalf, R. Nakajima, C. Neissner, J. Nightingale, A. Nucita, L. Patrizzii, D. Potter, A. Renzi, G. Riccio, E. Romelli, A. Sánchez, D. Sapone, M. Schirmer, M. Schultheis, V. Scottez, L. Stanco, M. Tenti, R. Teyssier, F. Torradeflot, J. Valiviita, M. Viel, L. Whittaker, E. Zucca: Euclid Preparation. XIV. The Complete Calibration of the Color-Redshift Relation (C3R2) Survey: Data Release 3. *Ap. J. Supp. Ser.* 256, 1 (2021).
- Stelzer, B., A. Klutsch, M. Coffaro, E. Magaudda, M. Salvato: A first eROSITA view of ultracool dwarfs. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Stern J., A. Sternberg, C. Faucher-Giguère, Z. Hafen, D. Fielding, E. Quataert, A. Wetzel, D. Anglés-Alcázar, K. El-Badry, D. Kereš, P.F. Hopkins: Neutral CGM as damped Ly α absorbers at high redshift. *Mon. Not. R. Astron. Soc.* 507, 2, 2869-2884 (2021).
- Sternberg A., A. Gurman, S. Bialy: H I-to-H₂ Transitions in Dust-free Interstellar Gas. *Ap. J.* 920, 2 (2021).
- Stringer K., A. Drlica-Wagner, L. Macri, C. Martínez-Vázquez, A. Vivas, P. Ferguson, A. Pace, A. Walker, E. Neilsen, K. Tavangar, W. Wester, T. Abbott, M. Aguena, S. Allam, D. Bacon, K. Bechtol, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, M. Costanzi, M. Crocce, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, P. Doel, I. Ferrero, J. García-Bellido, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, D. James, K. Kuehn, N. Kuropatkin, T. Li, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Roodman, E. Sanchez, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, M. Soares-Santos, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, R. Wilkinson, Y. Zhang, DES Collaboration: Identifying RR Lyrae Variable Stars in Six Years of the Dark Energy Survey. *Ap. J.* 911, 2 (2021).
- Stuber S.K., T. Saito, E. Schinnerer, E. Emsellem, M. Querejeta, T.G. Williams, A.T. Barnes, F. Bigiel, G. Blanc, D.A. Dale, K. Grasha, R. Klessen, J.D. Kruijssen, A.K. Leroy, S. Meidt, H. Pan, E. Rosolowsky, A. Schrubba, J. Sun, A. Usero: Frequency and nature of central molecular outflows in nearby star-forming disk galaxies. *Astron. Astrophys.* 653, A172 (2021).
- Su, B., L. G. Kong, A. B. Zhang, B. Klecker, C. P. Escoubet, D. O. Kataria, L. Dai: Performance and simulated moment uncertainties of an ion spectrometer with asymmetric 2 π field of view for ion measurements in space.. *Other Journal Review of Scientific Instruments*, 92, 2 (2021).
- Suess K.A., M. Kriek, S.H. Price, G. Barro: Dissecting the Size-Mass and Σ_1 -Mass Relations at $1.0 < z < 2.5$: Galaxy Mass Profiles and Color Gradients as a Function of Spectral Shape. *Ap. J.* 915, 2 (2021).
- Sunyaev R., V. Arefiev, V. Babushkin, A. Bogomolov, K. Borisov, M. Buntov, H. Brunner, R. Burenin, E. Churazov, D. Coutinho, J. Eder, N. Eismont, M. Freyberg, M. Gilfanov, P. Gureyev, G. Hasinger, I. Khabibullin, V. Kolmykov, S. Komovkin, R. Krivonos, I. Lapshov, V. Levin, I. Lomakin, A. Lutovinov, P. Medvedev, A. Merloni, T. Mernik, E. Mikhailov, V. Molodtsov, P. Mzhelsky, S. Müller, K. Nandra, V. Nazarov, M. Pavlinsky, A. Poghodin, P. Predehl, J. Robrade, S. Sazonov, H. Scheuerle, A. Shirshakov, A. Tkachenko, V. Voron: SRG X-ray orbital observatory. Its telescopes and first scientific results. *Astron. Astrophys.* 656, A132 (2021).
- Sureshkumar U., A. Durkalec, A. Pollo, M. Bilicki, J. Loveday, D. Farrow, B. Holwerda, A. Hopkins, J. Liske, K. Pimblet, E. Taylor, A. Wright: Galaxy and Mass Assembly (GAMA). Tracing galaxy environment using the marked correlation function. *Astron. Astrophys.* 653, A35 (2021).
- Svinkin D., D. Frederiks, K. Hurley, R. Aptekar, S. Golenetskii, A. Lysenko, A. Ridnaia, A. Tsvetkova, M. Ulanov, T. Cline, I. Mitrofanov, D. Golovin, A. Kozyrev, M. Litvak, A. Sanin, A. Goldstein, M. Briggs, C. Wilson-Hodge, A. von Kienlin, X.-L. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, P. Ubertini, A. Bazzano, J. Rodi, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr: A bright γ -ray flare interpreted as a giant magnetar flare in NGC 253. *Nature* 589, 7841, 211-213 (2021).
- Szakacs R., C. Péroux, M. Zwaan, A. Hamanowicz, A. Klitsch, A.Y. Fresco, R. Augustin, A. Biggs, V. Kulkarni, H. Rahmani: MUSE-ALMA haloes VI: coupling atomic, ionized, and molecular gas kinematics of galaxies. *Mon. Not. R. Astron. Soc.* 505, 4, 4746-4761 (2021).
- Tabone B., M.C. van Hemert, E.F. van Dishoeck, J.H. Black: OH mid-infrared emission as a diagnostic of H₂O UV photodissociation. I. Model and application to the HH 211 shock. *Astron. Astrophys.* 650, A192 (2021).
- Tahmasebzadeh B., L. Zhu, J. Shen, O. Gerhard, Y. Qin: Deprojection of external barred galaxies from photometry. *Mon. Not. R. Astron. Soc.* 508, 4, 6209-6222 (2021).
- Takemura H., F. Nakamura, S. Kong, H.G. Arce, J.M. Carpenter, V. Ossenkopf-Okada, R. Klessen, P. Sanhueza, Y. Shimajiri, T. Tsukagoshi, R. Kawabe, S. Ishii, K. Dobashi, T. Shimoikura, P.F. Goldsmith, Á. Sánchez-Monge, J. Kauffmann, T.G. Pillai, P. Padoan, A. Ginsberg, R.J. Smith, J. Bally, S. Mairs, J.E. Pineda, D.C. Lis, B. Burkhardt, P. Schilke, H.H. Chen, A. Isella, R.K. Friesen, A.A. Goodman, D.A. Harper: The Core Mass Function in the Orion Nebula Cluster Region: What Determines the Final Stellar Masses?. *Ap. J. Lett.* 910, 1, L6 (2021).

- Taniguchi K., E. Herbst, L. Majumdar, P. Caselli, J.C. Tan, Z. Li, T. Shimoikura, K. Dobashi, F. Nakamura, M. Saito: Carbon Chain Chemistry in Hot-core Regions around Three Massive Young Stellar Objects Associated with 6.7 GHz Methanol Masers. *Ap. J.* 908, 1 (2021).
- Tartaglia L., D. Sand, J. Groh, S. Valenti, S. Wyatt, K. Bostroem, P. Brown, S. Yang, J. Burke, T.-W. Chen, S. Davis, F. Förster, L. Galbany, J. Haislip, D. Hiramatsu, G. Hosseinzadeh, D. Howell, E. Hsiao, S. Jha, V. Kouprianov, H. Kuncarayakti, J. Lyman, C. McCully, M. Phillips, A. Rau, D. Reichart, M. Shahbandeh, J. Strader: The Early Discovery of SN 2017ahn: Signatures of Persistent Interaction in a Fast-declining Type II Supernova. *Ap. J.* 907, 1 (2021).
- Terwisscha van Scheltinga J., M.R. Hogerheijde, L.I. Cleeves, R.A. Loomis, C. Walsh, K.I. Öberg, E.A. Bergin, J.B. Bergner, G.A. Blake, J.K. Calahan, P. Cazzoletti, E.F. van Dishoeck, V.V. Guzmán, J. Huang, M. Kama, C. Qi, R. Teague, D.J. Wilner: The TW Hya Rosetta Stone Project. II. Spatially Resolved Emission of Formaldehyde Hints at Low-temperature Gas-phase Formation. *Ap. J.* 906, 2 (2021).
- Thilker, D. A., B.C. Whitmore, J.C. Lee, A. Schrubba et al.: PHANGS-HST: new methods for star cluster identification in nearby galaxies. *Mon. Not. R. Astron. Soc.* 509, 3, 4094-4127 (2021).
- To C., E. Krause, E. Rozo, H. Wu, D. Gruen, R. Wechsler, T. Eifler, E. Rykoff, M. Costanzi, M. Becker, G. Bernstein, J. Blazek, S. Bocquet, S. Bridle, R. Cawthon, A. Choi, M. Crocce, C. Davis, J. DeRose, A. Drlica-Wagner, J. Elvin-Poole, X. Fang, A. Farahi, O. Friedrich, M. Gatti, E. Gaztanaga, T. Giannantonio, W. Hartley, B. Hoyle, M. Jarvis, N. MacCrann, T. McClintock, V. Miranda, M. Pereira, Y. Park, A. Porredon, J. Prat, M. Rau, A. Ross, S. Samuroff, C. Sánchez, I. Sevilla-Noarbe, E. Sheldon, M. Troxel, T. Varga, P. Vielzeuf, Y. Zhang, J. Zuntz, T. Abbott, M. Aguena, A. Amon, J. Annis, S. Avila, E. Bertin, S. Bhargava, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, C. Chang, C. Conselice, L. da Costa, T. Davis, S. Desai, H. Diehl, J. Dietrich, S. Everett, A. Evrard, I. Ferrero, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, R. Gruendl, G. Gutierrez, S. Hinton, D. Hollowood, K. Honscheid, D. Huterer, D. James, T. Jeltema, R. Kron, K. Kuehn, N. Kuropatkin, M. Lima, M. Maia, J. Marshall, F. Menanteau, R. Miquel, R. Morgan, J. Muir, J. Myles, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, A. Roodman, E. Sanchez, B. Santiago, V. Scarpine, S. Serrano, M. Smith, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, D. Tucker, J. Weller, W. Wester, R. Wilkinson, DES Collaboration: Dark Energy Survey Year 1 Results: Cosmological Constraints from Cluster Abundances, Weak Lensing, and Galaxy Correlations. *Physical Review Letters* 126, 14 (2021).
- Toba Y., M. Brusa, T. Liu, J. Buchner, Y. Terashima, T. Urrutia, M. Salvato, M. Akiyama, R. Arcodia, A.D. Goulding, Y. Higuchi, K.T. Inoue, T. Kawaguchi, G. Lamer, A. Merloni, T. Nagao, Y. Ueda, K. Nandra: The eROSITA Final Equatorial-Depth Survey (eFEDS). An X-ray-bright, extremely luminous infrared galaxy at $z = 1.87$. *Astron. Astrophys.* 649, L11 (2021).
- Toba, Y., T. Liu, T. Urrutia, M. Salvato, J. Li, Y. Ueda, M. Brusa, N. Yutani, K. Wada, A. Nishizawa, J. Buchner, T. Nagao, A. Merloni, M. Akiyama, R. Arcodia, B.-C. Hsieh, K. Ichikawa, M. Imanishi, K. T. Inoue, T. Kawaguchi, G. Lamer, K. Nandra, J. Silverman, Y. Terashima: The eROSITA Final Equatorial-Depth Survey (eFEDS). A multiwavelength view of WISE mid-infrared galaxies/active galactic nuclei. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Topping M.W., A.E. Shapley, R.L. Sanders, M. Kriek, N.A. Reddy, A.L. Coil, B. Mobasher, B. Siana, W.R. Freeman, I. Shivaie, M. Azadi, S.H. Price, G.C. Leung, T. Fetherolf, L. de Groot, T. Zick, F.M. Fornasini, G. Barro, J.N. Runco: The MOSDEF survey: the mass-metallicity relationship and the existence of the FMR at $z = 1.5$. *Mon. Not. R. Astron. Soc.* 506, 1, 1237-1249 (2021).
- Tortosa, A., C. Ricci, F. Tombesi, L.C. Ho, P. Du, K. Inayoshi, J.-M. Wang, S. Jinyi, R. Li: The extreme properties of the nearby hyper-Eddington accreting active galactic nucleus in IRAS 04416+1215. *Mon. Not. R. Astron. Soc.* 509, 3, 3599-3615 (2021).
- Trapman, L., A.D. Bosman, G. Rosotti, M.R. Hogerheijde, E.F. van Dishoeck: CO isotopolog line fluxes of viscously evolving disks - Cold CO conversion insufficient to explain observed low fluxes. *Astron. Astrophys.* 649, A95 (2021).
- Treiber H., G. Vasilopoulos, C. Bailyn, F. Haberl, K. Gendreau, P. Ray, C. Maitra, P. Maggi, G. Jaisawal, A. Udalski, J. Wilms, I. Monageng, D. Buckley, O. König, S. Carpano: RX J0529.8-6556: a BeXRB pulsar with an evolving optical period and out of phase X-ray outbursts. *Mon. Not. R. Astron. Soc.* 503, 4, 6187-6201 (2021).
- Tröster T., M. Asgari, C. Blake, M. Cataneo, C. Heymans, H. Hildebrandt, B. Joachimi, C. Lin, A.G. Sánchez, A.H. Wright, M. Bilicki, B. Bose, M. Crocce, A. Dvornik, T. Erben, B. Giblin, K. Glazebrook, H. Hoekstra, S. Joudaki, A. Kannawadi, F. Köhlinger, K. Kuijken, C. Lidman, L. Lombriser, A. Mead, D. Parkinson, H. Shan, C. Wolf, Q. Xia: KiDS-1000 Cosmology: Constraints beyond flat Λ CDM. *Astron. Astrophys.* 649, A88 (2021).
- Turner J.A., D.A. Dale, J.C. Lee, M. Boquien, R. Chandar, S. Deger, K.L. Larson, A. Mok, D.A. Thilker, L. Ubeda, B.C. Whitmore, F. Belfiore, F. Bigiel, G.A. Blanc, E. Emsellem, K. Grasha, B. Groves, R.S. Klessen, K. Kreckel, J.D. Kruijssen, A.K. Leroy, E. Rosolowsky, P. Sanchez-Blazquez, E. Schinnerer, A. Schrubba, S.D. Van Dyk, T.G. Williams: PHANGS-HST: star cluster spectral energy distribution fitting with CIGALE. *Mon. Not. R. Astron. Soc.* 502, 1, 1366-1385 (2021).
- Tychoniec Ł., E.F. van Dishoeck, M.L. van't Hoff, M.L. van Gelder, B. Tabone, Y. Chen, D. Harsono, C.L. Hull, M.R. Hogerheijde, N.M. Murillo, J.J. Tobin: Which molecule traces what: Chemical diagnostics of protostellar sources. *Astron. Astrophys.* 655, A65 (2021).
- Übler H., S. Genel, A. Sternberg, R. Genzel, S.H. Price, N.M. Förster Schreiber, T.T. Shimizu, A. Pillepich, D. Nelson, A. Burkert, R. Davies, L. Hernquist, P. Lang, D. Lutz, R. Pakmor, L.J. Tacconi: The kinematics and dark matter frac-

tions of TNG50 galaxies at $z = 2$ from an observational perspective. *Mon. Not. R. Astron. Soc.* 500, 4 (2021).

Valentino F., E. Daddi, A. Puglisi, G. Magdis, V. Kokorev, D. Liu, S. Madden, C. Gómez-Guijarro, M.-M. Lee, I. Cortzen, C. Circosta, I. Delvecchio, J. Mullaney, Y. Gao, R. Gobat, M. Aravena, S. Jin, S. Fujimoto, J. Silverman, H. Dannerbauer: The effect of active galactic nuclei on the cold interstellar medium in distant star-forming galaxies. *Astron. Astrophys.* 654, A165 (2021).

Valenzuela L.M., B.P. Moster, R. Remus, J.A. O'Leary, A. Burkert: Globular cluster numbers in dark matter haloes in a dual formation scenario: an empirical model within EMERGE. *Mon. Not. R. Astron. Soc.* 505, 4, 5815-5832 (2021).

van de Sande J., S.P. Vaughan, L. Cortese, N. Scott, J. Bland-Hawthorn, S.M. Croom, C.D. Lagos, S. Brough, J.J. Bryant, J. Devriendt, Y. Dubois, F. D'Eugenio, C. Foster, A. Fraser-McKelvie, K.E. Harborne, J.S. Lawrence, S. Oh, M.S. Owers, A. Poci, R. Remus, S.N. Richards, F. Schulze, S.M. Sweet, M.R. Varidel, C. Welker: The SAMI Galaxy Survey: a statistical approach to an optimal classification of stellar kinematics in galaxy surveys. *Mon. Not. R. Astron. Soc.* 505, 2, 3078-3106 (2021).

van der Marel, N., A.S. Booth, M. Leemker, E.F. Dishoeck, S. Ohashi: A major asymmetric ice trap in a planet-forming disk - I. Formaldehyde and methanol. *Astron. Astrophys.* 651, L5 (2021).

van Dishoeck E., L. Kristensen, J. Mottram, A. Benz, E. Bergin, P. Caselli, F. Herpin, M. Hogerheijde, D. Johnstone, R. Liseau, B. Nisini, M. Tafalla, F. van der Tak, F. Wyrowski, A. Baudry, M. Benedettini, P. Bjerkeli, G. Blake, J. Braine, S. Bruderer, S. Cabrit, J. Cernicharo, Y. Choi, A. Coutens, T. de Graauw, C. Dominik, D. Fedele, M. Fich, A. Fuente, K. Furuya, J. Goicoechea, D. Harsono, F. Helmich, G. Herczeg, T. Jacq, A. Karska, M. Kaufman, E. Keto, T. Lamberts, B. Larsson, S. Leurini, D. Lis, G. Melnick, D. Neufeld, L. Paganí, M. Persson, R. Shipman, V. Taquet, T. van Kempen, C. Walsh, S. Wampfler, U. Yıldız, WISH Team: Water in star-forming regions: physics and chemistry from clouds to disks as probed by Herschel spectroscopy. *Astron. Astrophys.* 648 (2021).

Van Dishoeck, E. F., R.C. Kennicutt: Annual Review of Astronomy and Astrophysics Introduction. In *Annual Review of Astronomy and Astrophysics* (pp. V-VI). Palo Alto, CA, USA: Annual Reviews Inc. doi:10.1146/annurev-aa-59-071521-100001 (2021).

van Gelder M., B. Tabone, E.F. van Dishoeck, B. Godard: Modeling accretion shocks at the disk-envelope interface. Sulfur chemistry. *Astron. Astrophys.* 653, A159 (2021).

Vasconcellos, C. A. Z., P.O. Hess, G. Piccinelli, ..., T. Boller et al.: Preface: 9th international workshop on astronomy and relativistic astrophysics: From quarks to cosmos. *Astronomische Nachrichten* 1-7 (2021).

Vasconcellos, C. A. Z., P.O. Hess, G. Piccinelli, ..., T. Boller et al.: Special volume, preface – 9th international workshop on astronomy and relativistic astrophysics: from

quarks to cosmos. *Astronomische Nachrichten* 342, 5, 705-707 (2021).

Vasilopoulos G., F. Koliopoulos, F. Haberl, H. Treiber, M. Brightman, H.P. Earnshaw, A. Gúrpide: Chandra Probes the X-Ray Variability of M51 ULX-7: Evidence of Propeller Transition and X-Ray Dips on Orbital Periods. *Ap. J.* 909, 1 (2021).

Vazza, F., N. Locatelli, K. Rajpurohit et al.: Magnetogenesis and the Cosmic Web: a joint challenge for radio observations and numerical simulations. *Galaxies* 9, 4 (2021).

Vega-Ferrero J., H. Domínguez Sánchez, M. Bernardi, M. Huertas-Company, R. Morgan, B. Margalef, M. Aguena, S. Allam, J. Annis, S. Avila, D. Bacon, E. Bertin, D. Brooks, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, A. Choi, C. Conselice, M. Costanzi, L. da Costa, M. Pereira, J. De Vicente, S. Desai, I. Ferrero, P. Fosalba, J. Frieman, J. García-Bellido, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, S. Hinton, D. Hollowood, K. Honscheid, B. Hoyle, M. Jarvis, A. Kim, K. Kuehn, N. Kuropatkin, M. Lima, M. Maia, F. Menanteau, R. Miquel, R. Ogando, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Smith, E. Suchyta, M. Swanson, G. Tarle, F. Tarsitano, C. To, D. Tucker, T. Varga, R. Wilkinson: Pushing automated morphological classifications to their limits with the Dark Energy Survey. *Mon. Not. R. Astron. Soc.* 506, 2, 1927-1943 (2021).

Veilleux S., M. Meléndez, M. Stone, G. Cecil, E. Hodges-Kluck, J. Bland-Hawthorn, J. Bregman, F. Heitsch, C. Martin, T. Mueller, D. Rupke, E. Sturm, R. Tanner, C. Engelbracht: Exploring the dust content of galactic haloes with Herschel - IV. NGC 3079. *Mon. Not. R. Astron. Soc.* 508, 4, 4902-4918 (2021).

Veronica, A., Y. Su, V. Biffi, T. H. Reiprich, F. Pacaud, P. E. J. Nulsen, R. P. Kraft, J. S. Sanders, A. Bogdan, M. Kara, K. Dolag, J. Kerp, B. S. Koribalski, T. Erben, E. Bulbul, E. Gattuzi, V. Ghirardini, A. M. Hopkins, A. Liu, K. Migkas, T. Vernstrom: The eROSITA view of the Abell 3391/95 field: the Northern Clump. The largest infalling structure in the longest known gas filament observed with eROSITA, XMM-Newton, and Chandra. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).

Veropalumbo A., I. Sáez Casares, E. Branchini, B.R. Granett, L. Guzzo, F. Marulli, M. Moresco, L. Moscardini, A. Pezzotta, S. de la Torre: A joint 2- and 3-point clustering analysis of the VIPERS PDR2 catalogue at $z = 1$: breaking the degeneracy of cosmological parameters. *Mon. Not. R. Astron. Soc.* 507, 1, 1184-1201 (2021).

Vielzeuf P., A. Kovács, U. Demirbozan, P. Fosalba, E. Baxter, N. Hamaus, D. Huterer, R. Miquel, S. Nadathur, G. Pollina, C. Sánchez, L. Whiteway, T. Abbott, S. Allam, J. Annis, S. Avila, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, R. Cawthon, M. Costanzi, L. da Costa, J. De Vicente, S. Desai, H. Diehl, P. Doel, T. Eifler, S. Everett, B. Flaugher, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, W. Hartley, D. Hollowood, K. Honscheid, D.

- James, K. Kuehn, N. Kuropatkin, O. Lahav, M. Lima, M. Maia, M. March, J. Marshall, P. Melchior, F. Menanteau, A. Palmese, F. Paz-Chinchón, A. Plazas, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, M. Smith, E. Suchyta, G. Tarle, D. Thomas, J. Weller, J. Zuntz, J. Zuntz, DES Collaboration: Dark Energy Survey Year 1 results: the lensing imprint of cosmic voids on the cosmic microwave background. *Mon. Not. R. Astron. Soc.* 500, 1 (2021).
- Vincenzi M., M. Sullivan, O. Graur, D. Brout, T. Davis, C. Frohmaier, L. Galbany, C. Gutiérrez, S. Hinton, R. Hounsell, L. Kelsey, R. Kessler, E. Kovacs, S. Kuhlmann, J. Lasker, C. Lidman, A. Möller, R. Nichol, M. Sako, D. Scolnic, M. Smith, E. Swann, P. Wiseman, J. Asorey, G. Lewis, R. Sharp, B. Tucker, M. Agüena, S. Allam, S. Avila, E. Bertin, D. Brooks, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, F. Castander, A. Choi, M. Costanzi, L. da Costa, M. Pereira, J. De Vicente, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, D. Gerdes, D. Gruen, R. Gruendl, G. Gutierrez, D. Hollowood, K. Honscheid, B. Hoyle, D. James, K. Kuehn, N. Kuropatkin, M. Maia, P. Martini, F. Menanteau, R. Miquel, R. Morgan, A. Palmese, F. Paz-Chinchón, A. Plazas, A. Romer, E. Sanchez, V. Scarpine, S. Serrano, I. Sevilla-Noarbe, M. Soares-Santos, E. Suchyta, G. Tarle, D. Thomas, C. To, T. Varga, A. Walker, R. Wilkinson, DES Collaboration: The Dark Energy Survey supernova programme: modelling selection efficiency and observed core-collapse supernova contamination. *Mon. Not. R. Astron. Soc.* 505, 2, 2819-2839 (2021).
- Vulic, N., A. E. Hornschemeier, F. Haberl, A. R. Basu-Zych, E. Kyritsis, A. Zezas, M. Salvato, A. Ptak, A. Bogdan, K. Kovalakas, J. Wilms, M. Sasaki, T. Liu, A. Merloni, T. Dwelly, H. Brunner, G. Lamer, C. Maitra, K. Nandra, A. Santangelo: The eROSITA Final Equatorial-Depth Survey (eFEDS): Presenting the demographics of X-ray emission from normal galaxies. *Astron. Astrophys. Special Issue „The Early Data Release of eROSITA and Mikhail Pavlinsky ART-XC on the SRG mission“* (2021).
- Wagner K., A. Boehle, P. Pathak, M. Kasper, R. Arsenault, G. Jakob, U. Käufel, S. Leveratto, A.-L. Maire, E. Pantin, R. Siebenmorgen, G. Zins, O. Absil, N. Ageorges, D. Apai, A. Carlotti, É. Choquet, C. Delacroix, K. Dohlen, P. Duhoux, P. Forsberg, E. Fuenteseca, S. Gutruf, O. Guyon, E. Huby, D. Kampf, M. Karlsson, P. Kervella, J.-P. Kirchbauer, P. Klupar, J. Kolb, D. Mawet, M. N'Diaye, G. Orban de Xivry, S. Quanz, A. Reutlinger, G. Ruane, M. Riquelme, C. Soenke, M. Sterzik, A. Vigan, T. de Zeeuw: Imaging low-mass planets within the habitable zone of α Centauri. *Nature Communications* 12, 922 (2021).
- Wagner K., A. Boehle, P. Pathak, M. Kasper, R. Arsenault, G. Jakob, U. Käufel, S. Leveratto, A.-L. Maire, E. Pantin, R. Siebenmorgen, G. Zins, O. Absil, N. Ageorges, D. Apai, A. Carlotti, É. Choquet, C. Delacroix, K. Dohlen, P. Duhoux, P. Forsberg, E. Fuenteseca, S. Gutruf, O. Guyon, E. Huby, D. Kampf, M. Karlsson, P. Kervella, J.-P. Kirchbauer, P. Klupar, J. Kolb, D. Mawet, M. N'Diaye, G.O. de Xivry, S. Quanz, A. Reutlinger, G. Ruane, M. Riquelme, C. Soenke, M. Sterzik, A. Vigan, T. de Zeeuw: Author Correction: Imaging low-mass planets within the habitable zone of α Centauri. *Nature Communications* 12, 2651 (2021).
- Wakelam V., E. Dartois, M. Chabot, S. Spezzano, D. Navarro-Almaida, J.-C. Loison, A. Fuente: Efficiency of non-thermal desorptions in cold-core conditions. Testing the sputtering of grain mantles induced by cosmic rays. *Astron. Astrophys.* 652, A63 (2021).
- Wang J., A. Vigan, S. Lacour, M. Nowak, T. Stolker, R. De Rosa, S. Ginzburg, P. Gao, R. Abuter, A. Amorim, R. Asensio-Torres, M. Bauböck, M. Benisty, J. Berger, H. Beust, J.-L. Beuzit, S. Blunt, A. Boccaletti, A. Bohn, M. Bonnefoy, H. Bonnet, W. Brandner, F. Cantalloube, P. Caselli, B. Charney, G. Chauvin, E. Choquet, V. Christiaens, Y. Clénet, V. Coudé Du Foresto, A. Cridland, P. de Zeeuw, R. Dembet, J. Dexter, A. Drescher, G. Duvert, A. Eckart, F. Eisenhauer, S. Facchini, F. Gao, P. Garcia, R. Garcia Lopez, T. Gardner, E. Gendron, R. Genzel, S. Gillessen, J. Girard, X. Haubois, G. Heißel, T. Henning, S. Hinkley, S. Hippler, M. Horrobin, M. Houllé, Z. Hubert, A. Jiménez-Rosales, L. Jocou, J. Kammerer, M. Keppler, P. Kervella, M. Meyer, L. Kreidberg, A.-M. Lagrange, V. Lapeyrière, J.-B. Le Bouquin, P. Léna, D. Lutz, A.-L. Maire, F. Ménard, A. Mérand, P. Mollière, J. Monnier, D. Mouillet, A. Müller, E. Nasedkin, T. Ott, G. Otten, C. Paladini, T. Paumard, K. Perraut, G. Perrin, O. Pfuhl, L. Pueyo, J. Rameau, L. Rodet, G. Rodríguez-Coira, G. Rousset, S. Scheithauer, J. Shangguan, T. Shimizu, J. Stadler, O. Straub, C. Straubmeier, E. Sturm, L. Tacconi, E.F. van Dishoeck, F. Vincent, S. von Fellenberg, K. Ward-Duong, F. Widmann, E. Wieprecht, E. Wierzorrek, J. Woillez, GRAVITY Collaboration: Constraining the Nature of the PDS 70 Protoplanets with VLTI/GRAVITY. *Astron. J.* 161, 3 (2021).
- Wang, X.-D., B. Klecker, G. Nicolaou et al.: Neutralized solar energetic particles for SEP forecasting: Feasibility study of an innovative technique for space weather applications. *Earth and Planetary Physics* 6, 1, 42-51 (2021).
- Weiss, L. H., W.P. Bowman, R. Ciardullo, G.R. Zeimann et al.: Near-IR observations of the young star [BHB2007]-1: A substellar companion opening the gap in the disk. *Ap. J.* 912, 1 (2021).
- Weiss L.H., W.P. Bowman, R. Ciardullo, G.R. Zeimann, C. Gronwall, E. Mentuch Cooper, K. Gebhardt, G.J. Hill, G.A. Blanc, D.J. Farrow, S.L. Finkelstein, E. Gawiser, S. Janowiecki, S. Jogee, D.P. Schneider, L. Wisotzki: The HETDEX Survey: The Ly α Escape Fraction from 3D-HST Emission-Line Galaxies at $z \sim 2$. *Ap. J.* 912, 2 (2021).
- Whitmore, B.C., J.C. Lee, R. Chandar, ..., A. Schruba et al.: Star cluster classification in the PHANGS–HST survey: Comparison between human and machine learning approaches Get access Arrow. *Mon. Not. R. Astron. Soc.* 506, 4, 5294–5317 (2021).
- Wiedner, M. C., S. Aalto, L. Armus, ..., P. Caselli et al.: Origins space telescope: from first light to life. *Experimental Astronomy* (2021).
- Williams T.G., E. Schinnerer, E. Emsellem, S. Meidt, M. Querejeta, F. Belfiore, I. Bešlić, F. Bigiel, M. Chevance, D.A. Dale, S.C. Glover, K. Grasha, R.S. Klessen, J.D. Kruijssen, A.K. Leroy, H. Pan, J. Pety, I. Pessa, E. Rosolowsky, T. Saito, F. Santoro, A. Schruba, M.C. Sormani, J. Sun, E.J. Watkins: Applying the Tremaine-Weinberg Method to Nearby

Galaxies: Stellar-mass-based Pattern Speeds and Comparisons with ISM Kinematics. *Astron. J.* 161, 4 (2021).

Williams, T. G., K. Kreckel, F. Belfiore..., A. Schrubba et al.: The 2D metallicity distribution and mixing scales of nearby galaxies. *Mon. Not. R. Astron. Soc.* 509, 1, 1303-1322 (2021).

Willis J., M. Oguri, M.E. Ramos-Ceja, F. Gastaldello, M. Sereno, C. Adami, S. Alis, B. Altieri, L. Chiappetti, P. Corasaniti, D. Eckert, S. Ettori, C. Garrel, P. Giles, J. Lefevre, L. Faccioli, S. Fotopoulou, A. Hamabata, E. Koulouridis, M. Lieu, Y.-T. Lin, B. Maughan, A. Nishizawa, T. Okabe, N. Okabe, F. Pacaud, S. Paltani, M. Pierre, M. Plionis, B. Poggianti, E. Pompei, T. Sadibekova, K. Umetsu, P. Valageas: Understanding X-ray and optical selection of galaxy clusters: a comparison of the XXL and CAMIRA cluster catalogues obtained in the common XXL-HSC SSP area. *Mon. Not. R. Astron. Soc.* 503, 4, 5624-5637 (2021).

Wiseman P., M. Sullivan, M. Smith, C. Frohmaier, M. Vincenzi, O. Graur, B. Popovic, P. Armstrong, D. Brout, T. Davis, L. Galbany, S. Hinton, L. Kelsey, R. Kessler, C. Lidman, A. Möller, R. Nichol, B. Rose, D. Scolnic, M. Toy, Z. Zontou, J. Asorey, D. Carollo, K. Glazebrook, G. Lewis, B. Tucker, T. Abbott, M. Aguena, S. Allam, F. Andrade-Oliveira, J. Annis, D. Bacon, E. Bertin, D. Brooks, E. Buckley-Geer, D. Burke, A. Carnero Rosell, M. Carrasco Kind, J. Carretero, M. Costanzi, L. da Costa, M. Pereira, S. Desai, H. Diehl, P. Doel, S. Everett, I. Ferrero, B. Flaugher, P. Fosalba, J. Frieman, J. García-Bellido, E. Gaztanaga, T. Giannantonio, D. Gruen, R. Gruendl, J. Gschwend, G. Gutierrez, D. Hollowood, K. Honscheid, B. Hoyle, D. James, E. Krause, K. Kuehn, N. Kuropatkin, M. Maia, J. Marshall, P. Martini, F. Menanteau, R. Miquel, R. Morgan, R. Ogando, A. Palmese, F. Paz-Chinchón, D. Petravick, A. Pieres, A. Plazas Malagón, A. Romer, E. Sanchez, V. Scarpine, M. Schubnell, S. Serrano, I. Sevilla-Noarbe, M. Soares-Santos, E. Suchyta, M. Swanson, G. Tarle, D. Thomas, C. To, T. Varga, A. Walker, DES Collaboration: Rates and delay times of Type Ia supernovae in the Dark Energy Survey. *Mon. Not. R. Astron. Soc.* 506, 3, 3330-3348 (2021).

Wolf J., K. Nandra, M. Salvato, T. Liu, J. Buchner, M. Brusa, D. Hoang, V. Moss, R. Arcodia, M. Brüggen, J. Comparat, F. de Gasperin, A. Georgakakis, A. Hotan, G. Lamer, A. Merloni, A. Rau, H. Rottgering, T. Shimwell, T. Urrutia, M. Whiting, W. Williams: First constraints on the AGN X-ray luminosity function at $z \sim 6$ from an eROSITA-detected quasar. *Astron. Astrophys.* 647, A5 (2021).

Wylie S., O. Gerhard, M. Ness, J. Clarke, K. Freeman, J. Bland-Hawthorn: A2A: 21 000 bulge stars from the ARGOS survey with stellar parameters on the APOGEE scale. *Astron. Astrophys.* 653, A143 (2021).

Wölfer L., S. Facchini, N. Kurtovic, R. Teague, E.F. van Dishoeck, M. Benisty, B. Ercolano, G. Lodato, A. Miotello, G. Rosotti, L. Testi, M. Ubeira Gabellini: A highly non-Keplerian protoplanetary disc. Spiral structure in the gas disc of CQ Tau. *Astron. Astrophys.* 648, A19 (2021).

Xie Y., L.C. Ho, M. Zhuang, J. Shanguan: The Infrared Emission and Vigorous Star Formation of Low-redshift Quasars. *Ap. J.* 910, 2 (2021).

Yen H., B. Zhao, P.M. Koch, A. Gupta: No Impact of Core-scale Magnetic Field, Turbulence, or Velocity Gradient on Sizes of Protostellar Disks in Orion A. *Ap. J.* 916, 2 (2021).

Yew M., M.D. Filipović, M. Stupar, S.D. Points, M. Sasaki, P. Maggi, F. Haberl, P.J. Kavanagh, Q.A. Parker, E.J. Crawford, B. Vukotić, D. Urošević, H. Sano, I.R. Seitzzahl, G. Rowell, D. Leahy, L.M. Bozzetto, C. Maitra, H. Leverenz, J.L. Payne, L.A. Park, R.Z. Alsaberi, T.G. Pannuti: New optically identified supernova remnants in the Large Magellanic Cloud. *Mon. Not. R. Astron. Soc.* 500, 2 (2021).

Yoon J., C.L. Martin, S. Veilleux, M. Meléndez, T. Mueller, K. Gordon, G. Cecil, J. Bland-Hawthorn, C. Engelbracht: Exploring the dust content of galactic haloes with Herschel III. NGC 891. *Mon. Not. R. Astron. Soc.* 502, 1 (2021).

Yoshida T., T. Hsieh, N. Hirano, Y. Aso: Multi-epoch Submillimeter Array Observations of the L1448C(N) Protostellar SiO Jet. *Ap. J.* 906, 2 (2021).

Yuan W., L. Macri, B. Peterson, A. Riess, M. Fausnaugh, S. Hoffmann, G. Anand, M. Bentz, E. Dalla Bontà, R. Davies, G. De Rosa, L. Ferrarese, C. Grier, E. Hicks, C. Onken, R. Pogge, T. Storchi-Bergmann, M. Vestergaard: The Cepheid Distance to the Narrow-line Seyfert 1 Galaxy NGC 4051. *Ap. J.* 913, 1 (2021).

Zabel N., T.A. Davis, M.W. Smith, M. Sarzi, A. Loni, P. Serra, M.A. Lara-López, P. Cigan, M. Baes, G.J. Bendo, I. De Looze, E. Iodice, D. Kleiner, B.S. Koribalski, R. Peletier, F. Pinna, P.T. de Zeeuw: AlFoCS + F3D - II. Unexpectedly low gas-to-dust ratios in the Fornax galaxy cluster. *Mon. Not. R. Astron. Soc.* 502, 4, 4723-4742 (2021).

Zacharegkas, G., C. Chang, J. Prat, ..., T.N. Varga et al.: Dark Energy Survey Year 3 results: galaxy-halo connection from galaxy-galaxy lensing. *Mon. Not. R. Astron. Soc.* 509, 3, 3119-3147 (2021).

Zahorecz S., I. Jimenez-Serra, L. Testi, K. Immer, F. Fontani, P. Caselli, K. Wang, T. Onishi: Singly and doubly deuterated formaldehyde in massive star-forming regions. *Astron. Astrophys.* 653, A45 (2021).

Zampetaki A.V., B. Liebchen, A.V. Ivlev, H. Löwen: Collective self-optimization of communicating active particles. *Proceedings of the National Academy of Science* 118, 49 (2021).

Zamponi J., M.J. Maureira, B. Zhao, H.B. Liu, J.D. Ilee, D. Forgan, P. Caselli: The young protostellar disc in IRAS 16293-2422 B is hot and shows signatures of gravitational instability. *Mon. Not. R. Astron. Soc.* 508, 2, 2583-2599 (2021).

Zen Vasconcellos C.A., P.O. Hess, G. Piccinelli, M.V. Magaña, L.A. Ureña-Lopez, R.G. Felipe, T. Boller, S. Gullberg: Preface: 9th international workshop on astronomy and relativistic astrophysics: From quarks to cosmos. *Astron. Nachr.* 342, 1-2 (2021).

Zhang Y., M. Ouchi, K. Gebhardt, E. Mentuch Cooper, C. Liu, D. Davis, D. Jeong, D.J. Farrow, S.L. Finkelstein, E. Gawiser, G.J. Hill, Y. Harikane, R. Kakuma, V. Acquaviva, C.M. Casey, M. Fabricius, U. Hopp, M.J. Jarvis, M. Landriau, K. Mawatari, S. Mukae, Y. Ono, N. Sakai, D.P. Schneider: First

- HETDEX Spectroscopic Determinations of Ly α and UV Luminosity Functions at $z = 2-3$: Bridging a Gap between Faint AGNs and Bright Galaxies. *Ap. J.* 922, 2 (2021).
- Zhang Y., A.R. Pullen, S. Alam, S. Singh, E. Burtin, C. Chuang, J. Hou, B.W. Lyke, A.D. Myers, R. Neveux, A.J. Ross, G. Rossi, C. Zhao: Testing general relativity on cosmological scales at redshift $z \sim 1.5$ with quasar and CMB lensing. *Mon. Not. R. Astron. Soc.* 501, 1 (2021).
- Zhao B., P. Caselli, Z. Li, R. Krasnopolsky, H. Shang, K.H. Lam: The interplay between ambipolar diffusion and Hall effect on magnetic field decoupling and protostellar disc formation. *Mon. Not. R. Astron. Soc.* 505, 4, 5142-5163 (2021).
- Zhao C., C. Chuang, J. Bautista, A. de Mattia, A. Raichoor, A.J. Ross, J. Hou, R. Neveux, C. Tao, E. Burtin, K.S. Dawson, S. de la Torre, H. Gil-Marín, J. Kneib, W.J. Percival, G. Rossi, A. Tamone, J.L. Tinker, G. Zhao, S. Alam, E. Mueller: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: 1000 multi-tracer mock catalogues with redshift evolution and systematics for galaxies and quasars of the final data release. *Mon. Not. R. Astron. Soc.* 503, 1, 1149-1173 (2021).
- Zhao G., Y. Wang, A. Taruya, W. Zhang, H. Gil-Marín, A. de Mattia, A.J. Ross, A. Raichoor, C. Zhao, W.J. Percival, S. Alam, J.E. Bautista, E. Burtin, C. Chuang, K.S. Dawson, J. Hou, J. Kneib, K. Koyama, H. du Mas des Bourboux, E. Mueller, J.A. Newman, J.A. Peacock, G. Rossi, V. Ruhlmann-Kleider, D.P. Schneider, A. Shafieloo: The completed SDSS-IV extended Baryon Oscillation Spectroscopic Survey: a multitracer analysis in Fourier space for measuring the cosmic structure growth and expansion rate. *Mon. Not. R. Astron. Soc.* 504, 1, 33-52(2021).
- Zhao Y., L.C. Ho, J. Shangguan, M. Kim, D. Zhao, H. Gao: The Diverse Morphology, Stellar Population, and Black Hole Scaling Relations of the Host Galaxies of Nearby Quasars. *Ap. J.* 911, 2 (2021).
- Zhuang M., L.C. Ho, J. Shangguan: Black Hole Accretion Correlates with Star Formation Rate and Star Formation Efficiency in Nearby Luminous Type 1 Active Galaxies. *Ap. J.* 906, 1 (2021).
- Zier O., A. Burkert, C. Alig: On the Interaction of a Bonnor-Ebert Sphere with a Stellar Wind. *Ap. J.* 915, 1 (2021).
- Zurlo A., A. Garufí, S. Pérez, F.O. Alves, J.M. Girart, Z. Zhu, G.A. Franco, L.I. Cleeves: Near-IR Observations of the Young Star [BHB2007]-1: A Substellar Companion Opening the Gap in the Disk. *Ap. J.* 912, 1 (2021).

Instrumentelle Publikationen

- Barrière N.M., L. Babić, A. Bayerle, L. Castiglione, M.J. Collon, N. Eenkhoorn, D. Girou, R. Günther, E. Hauser, Y. Jenkins, B. Landgraf, L. Keek, B. Okma, G. Mendoza Serano, A. Thete, G. Vacanti, S. Verhoeckx, M. Vervest, L. Voruz, M.W. Beijersbergen, M. Bavdaz, E. Wille, I. Ferreira, S. Fransen, M. Olde Riekerink, J. Haneveld, B. Schurink, R. Start, C. van Baren, E. Handick, M. Krumrey, G. Valsecchi, M. Bradshaw, V. Burwitz: Assembly of confocal silicon pore optics mirror modules. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Bavdaz M., E. Wille, M. Ayre, I. Ferreira, B. Shortt, S. Fransen, M. Millinger, M.J. Collon, G. Vacanti, N.M. Barriere, B. Landgraf, M.O. Riekerink, J. Haneveld, R. Start, C. van Baren, D. Della Monica Ferreira, S. Massahi, S. Svendsen, F. Christensen, M. Krumrey, E. Handick, V. Burwitz, M. Bradshaw, G. Pareschi, G. Valsecchi, D. Vernani, G. Kailla, W. Mundon, G. Phillips, J. Schneider, T. Korhonen, A. Sanchez, D. Heinis, C. Colldelram, M. Torti, R. Willingale: ATHENA x-ray optics development and accommodation. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Bavdaz M., E. Wille, M. Ayre, I. Ferreira, B. Shortt, S. Fransen, M. Millinger, M.J. Collon, G. Vacanti, M. Barrière, B. Landgraf, M.O. Riekerink, J. Haneveld, R. Start, C. van Baren, D.D. Monica Ferreira, S. Massahi, S. Svendsen, F. Christensen, M. Krumrey, E. Handick, V. Burwitz, M.J. Bradshaw, G. Pareschi, G. Valsecchi, D. Vernani, G. Kailla, W. Mundon, G. Phillips, J. Schneider, T. Korhonen, A. Sanchez, D. Heinis, M. Tordi, R. Willingale: The Athena x-ray optics development and accommodation. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11852 (2021).
- Bradshaw M., V. Burwitz, G. Hartner, A. Langmeier, T. Müller, S. Rukdee, T. Schmidt, D. Girou, G. Vacanti, M.J. Collon, I. Ferreira: Effect of particulate contamination on a silicon pore optic. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Bradshaw M., V. Burwitz, G. Hartner, A. Langmeier, G. Vacanti, M.J. Collon, N.M. Barrière: Testing ATHENA optics: a new measurement standard at the PANTER x-ray test facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11852 (2021).
- Ciolfi R., G. Stratta, M. Branchesi, B. Gendre, S. Grimm, J. Harms, G.P. Lamb, A. Martin-Carrillo, A. McCann, G. Oganessian, E. Palazzi, S. Ronchini, A. Rossi, O.S. Salafia, L. Salmon, S. Ascenzi, A. Capone, S. Celli, S. Dall'Osso, I. Di Palma, M. Fasano, P. Fermani, D. Guetta, L. Hanlon, E. Howell, S. Paltani, L. Rezzolla, S. Vinciguerra, A. Zegarelli, L. Amati, A. Blain, E. Bozzo, S. Chaty, P. D'Avanzo, f. De Pasquale, H. Dereli-Bégué, G. Ghirlanda, A. Gomboc, D. Götz, I. Horvath, R. Huddec, L. Izzo, E. Le Floch, L. Li, F. Longo, S. Komossa, A.K. Kong, S. Mereghetti, R. Mignani, A. Nathanail, P.T. O'Brien, J.P. Osborne, A. Pe'er, S. Piranomonte, P. Rosati, S. Savaglio, F. Schüssler, O. Sergijenko, L. Shao, N. Tanvir, S. Turriziani, Y. Urata, M. van Putten, S. Vergani, S. Zane, B. Zhang: Multi-messenger astrophysics with THESEUS in the 2030s. *Experimental Astronomy* 52, 245-275 (2021).
- Collon M.J., L. Babić, N.M. Barrière, A. Bayerle, L. Castiglione, N. Eenkhoorn, D. Girou, R. Günther, E. Hauser, Y. Jenkins, B. Landgraf, L. Keek, B. Okma, G. Mendoza Serrano, A. Thete, G. Vacanti, S. Verhoeckx, M. Vervest, L. Voruz, M.W. Beijersbergen, M. Bavdaz, E. Wille, I. Ferreira, S. Fransen, B. Shortt, M. Olde Riekerink, J. Haneveld, A. Koelewijn, M. Wijnperle, J. Lankwarden, B. Schurink, R. Start, C. van Baren, P. Hieltjes, J. den Herder, E. Handick, M. Krumrey, M. Bradshaw, V. Burwitz, S. Massahi, S. Svendsen, D. Della Monica Ferreira, F.E. Christensen, G. Valsecchi, G. Kailla, W. Mundon, G. Phillips, K. Ball: Silicon pore optics x-ray mirror development for the Athena telescope. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- De Angelis A., V. Tatischeff, A. Argan, S. Brandt, A. Bulgarelli, A. Bykov, E. Costantini, R.C.d. Silva, I.A. Grenier, L. Hanlon, D. Hartmann, M. Hernanz, G. Kanbach, I. Kuvvetli, P. Laurent, M.N. Mazziotta, J. McEnery, A. Morselli, K. Nakazawa, U. Oberlack, M. Pearce, J. Rico, M. Tavani, P.v. Ballmoos, R. Walter, X. Wu, S. Zane, A. Zdziarski, A. Zoglauer: Gamma-ray astrophysics in the MeV range. *Experimental Astronomy* 51, 3 (2021).
- Döhring T., M. Stollenwerk, J. Stadtmüller, S. Zeising, D. Flachs, V. Stehlikova, V. Burwitz, M. Krumrey, V. Cotroneo, M. Klementova: Characterisation of X-ray mirrors based on chromium-iridium tri-layer coatings. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11776 (2021).
- Eraerds T., V. Antonelli, C. Davis, D. Hall, O. Hetherington, A. Holland, M. Hubbard, N. Meidinger, E. Miller, S. Molendi, E. Perinati, D. Pietschner, A. Rau: Enhanced simulations on the Athena/Wide Field Imager instrumental background. *Journal of Astronomical Telescopes, Instruments, and Systems* 7 (2021).
- Favata F., G. Hasinger, L.J. Tacconi, C.S. Arridge, K.S. O'Flaherty: Introducing the Voyage 2050 White Papers, contributions from the science community to ESA's long-term plan for the Scientific Programme. *Experimental Astronomy* 51, 3 (2021).
- Frontera F., E. Virgilli, C. Guidorzi, P. Rosati, R. Diehl, T. Siegert, C. Fryer, L. Amati, N. Auricchio, R. Campana, E. Caroli, F. Fuschino, C. Labanti, M. Orlandini, E. Pian, J. Stephen, S. Del Sordo, C. Budtz-Jorgensen, I. Kuvvetli, S. Brandt, R.C. da Silva, P. Laurent, E. Bozzo, P. Mazzali, M.D. Valle: Understanding the origin of the positron annihilation line and the physics of supernova explosions. *Experimental Astronomy* 51, 3 (2021).
- Grupp F., H. Kellermann, J.W. Arenberg: The role of

- standardization in the development of next generation large space telescopes. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11819 (2021).
- Landgraf B., L. Babić, N.M. Barrière, A. Bayerle, L. Castiglione, M.J. Collon, N. Eenkhoorn, D. Girou, R. Günther, E. Hauser, Y. Jenkins, L. Keek, B. Okma, G.M. Serano, A. Thete, G. Vacanti, S. Verhoeckx, M. Vervest, L. Voruz, M.W. Beijersbergen, M. Bavdaz, E. Wille, I. Ferreira, S. Fransen, B. Shortt, M.O. Riekerink, J. Haneveld, A. Koelewijn, M. Wijnperlé, J. Lankwarden, B. Schurink, R. Start, C. van Baren, P. Hieltjes, J. den Herder, E. Handick, M. Krumrey, M. Bradshaw, V. Burwitz, S. Massahi, S. Svendsen, D.D. Ferreira, F.E. Christensen, G. Valsacchi, G. Kailla, G. Phillips, W. Mundon, I. Chequer, K. Ball: SPO mirror plate production and coating. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Linz H., H. Beuther, M. Gerin, J.R. Goicoechea, F. Helmich, O. Krause, Y. Liu, S. Molinari, V. Ossenkopf-Okada, J. Pineda, M. Sauvage, E. Schinnerer, F. van der Tak, M. Wiedner, J. Amiaux, D. Bhatia, L. Buinhas, G. Durand, R. Förstner, U. Graf, M. Lezius: Bringing high spatial resolution to the far-infrared. *Experimental Astronomy* 51, 3 (2021).
- Meidinger N., R. Andritschke, K. Dennerl, V. Embarger, T. Eraerds, O. Hälker, G. Hartner, D. Pietschner, J. Reiffers: eROSITA camera array on the SRG satellite. *Journal of Astronomical Telescopes, Instruments, and Systems* 7, 2 (2021).
- Rodeghiero G., C. Arcidiacono, J. Pott, S. Perera, G. Pariani, D. Magrin, H. Riechert, M. Glück, E. Gendron, D. Massari, J. Sauter, M. Fabricius, M. Häberle, S. Meßlinger, R. Davies, P. Ciliegi, M. Lombini, L. Schreiber: Performance and limitations of using ELT and MCAO for 50 μ s astrometry. *Journal of Astronomical Telescopes, Instruments, and Systems* 7 (2021).
- Rukdee S., V. Burwitz, G. Hartner, T. Müller, T. Schmidt, A. Langmeier, M. Bradshaw: X-ray ray tracing with Zemax for the PANTER testing facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Salmaso B., S. Basso, V. Cotroneo, M. Ghigo, G. Pareschi, E. Redaelli, G. Sironi, D. Spiga, G. Tagliaferri, G. Vecchi, M. Fiorini, S. Incorvaia, M. Uslenghi, L. Paoletti, C. Ferrari, A. Zappettini, R. Lolli, M. Sanchez del Rio, V. Burwitz, F. Christensen, D. Ferreira, N. Gellert, S. Massahi, M. Bavdaz, I. Ferreira: Building the BEaTriX facility for the ATHENA mirror modules X-ray testing. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Simionescu A., S. Etori, N. Werner, D. Nagai, F. Vazza, H. Akamatsu, C. Pinto, J. de Plaa, N. Wijers, D. Nelson, E. Pointecouteau, G.W. Pratt, D. Spiga, G. Vacanti, E. Lau, M. Rossetti, F. Gastaldello, V. Biffi, E. Bulbul, M.J. Collon, J.d. Herder, D. Eckert, F. Fraternali, B. Mingo, G. Pareschi, G. Pezzulli, T.H. Reiprich, J. Schaye, S.A. Walker, J. Werk: Voyage through the hidden physics of the cosmic web. *Experimental Astronomy* 51, 3 (2021).
- Stehlikova V., T. Döhring, M. Stollenwerk, J. Stadtmüller, V. Marsikova, R. Hudec, D. Flachs, V. Burwitz, G. Hartner, S. Rukdee, T. Müller, A. Inneman, T. Schmidt, M. Klementova, S. Zeising, A. Langmeier: Lobster eye type X-ray telescope with chromium-iridium coated tri-layer mirrors. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11776 (2021).
- Steuer J., H. Kellermann, F. Grupp, C. Gössl, U. Hopp, F. Lang-Bardl, R. Bender: Confirming transiting exoplanets with the Fraunhofer Telescope Wendelstein. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11823 (2021).
- Vecchi G., V. Cotroneo, M. Ghigo, S. Basso, B. Salmaso, G. Sironi, D. Spiga, P. Conconi, G. Pareschi, G. Tagliaferri, V. Burwitz, G. Hartner, T. Müller, S. Rukdee, T. Schmidt, F. Christensen, D. Ferreira, N. Gellert, S. Massahi, M. Bavdaz, I. Ferreira: Manufacturing and testing of the X-ray collimating mirror for the BEaTriX facility. Society of Photo-Optical Instrumentation Engineers (SPIE) Conference Series 11822 (2021).
- Yazici, S., T. Sukegawa, M. Mayer, F. Eisenhauer, Y. Okura, K. Perraut, L. Jocou, S. Gillessen, F. Haussmann, A. Buron, D. Huber, L. Barl, K. Kravchenko, O. Pfuhl, S. Lacour, V. Lapeyriere, E. Wiezorrek, T. Ott, T. Paumard, J. Shangguan, F. Gao, C. Straubmeier, P. Guajardo, M. Riquelme, L. Pallanca, R. Genzel, T. de Zeeuw, M. Bauböck, M. Habibi, C. Rau, A. Jimenez Rosales, J. Stadler, O. Straub, E. Sturm, S. von Fellenberg, F. Widmann, E. Wieprecht, A. Eckart, G. Perrin, A. Amorim, P. Garcia, W. Brandner: GRAVITY upgrade with high-performance grisms with factor >2 enhanced throughput. *Proceedings Volume 11446, Optical and Infrared Interferometry and Imaging VII; 114461X* (2021). (Eds.) P. G. Tuthill, A. Mérand, S. Sallum. *SPIE Astronomical Telescopes + Instrumentation, 11446, SPIE, (2021).*

Nicht-referierte Publikationen

- Alvarez G., S. Randall, Y. Su, C. Jones, S. Walker, E. Bulbul, K. Holley-Bockelmann: Clusters on the Edge: The Interface Between Galaxy Cluster Outskirts and Large-Scale Intercluster Filaments. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Pivovarov, M., A. Álvarez Melcón, S. Arguedas Cuendis, J. Baier, K. Barth, H. Bräuninger, S. Calatroni, G. Cantatore, F. Caspers, J. Castel, S. Cetin, C. Cogollos, T. Dafni, M. Davenport, A. Dermenev, K. Desch, A. Díaz-Morcillo, B. Döbrich, H. Fischer, W. Funk, J. Gallego, J. García Barceló, A. Gardikiotis, J. Garza, B. Gimeno, S. Gninenko, J. Golm, M. Hasinoff, D. Hoffmann, I. Irastorza, K. Jakovčić, J. Kaminski, M. Karuza, B. Lakić, J. Laurent, A. Lozano-Guerrero, G. Luzón, C. Malbrunot, M. Maroudas, J. Miralda-Escudé, H. Mirallas, L. Miceli, P. Navarro, A. Ozbey, K. Özbozduman, C. Peña Garay, M. Pivovarov, J. Redondo, J. Ruz, E. Ruiz Chóliz, S. Schmidt, M. Schumann, Y. Semertzidis, S. Solanki, L. Stewart, I. Tsagris, T. Vafeiadis, J. Vogel, E. Widmann, W. Wuensch, K. Zioutas: First results of the CAST-RADES haloscope search for axions at 34.67 μeV . *Journal of High Energy Physics* 10, 75 (2021).
- Burgdorf M., S.A. Buehler, V. John, T. Müller, M. Prange: Calibration and Validation of Infrared Sounders with Moon and Mercury. *EGU General Assembly Conference Abstracts* (2021).
- Coogan, R., Daddi, E., Gobat, R., & Sargent, M.: The environmental effect on galaxy evolution: Cl J1449 0856 at $z = 1.99$. *Proceedings of the International Astronomical Union*, 15(S359), 170-172 (2021).
- Davies R., V. Hörmann, S. Rabien, E. Sturm, J. Alves, Y. Clénet, J. Kotilainen, F. Lang-Bardl, H. Nicklas, J.-. Pott, E. Tolstoy, B. Vulcani, MICADO Consortium: MICADO: The Multi-Adaptive Optics Camera for Deep Observations. *The Messenger* 182, 17-21 (2021).
- Davies, R.: Ionized outflows in local luminous AGN: Density and outflow rate. *Galaxy Evolution and Feedback across Different Environments*. (Eds.) T. Storchi-Bergmann, W. Forman, R. Overzier, R. Riffel. *Proc. IAU Symp.*, 359, Cambridge University Press, 226-231 (2021).
- Gendron-Marsolais M., J. Hlavacek-Larrondo, C. Hull, R. Perley, L. Rudnick, R. Kraft, A. Fabian, E. Roediger, R. van Weeren, A. Richard-Laferrrière, N. Arakawa, T. Clarke, B. Sebastian, T. Mroczkowski, E. Sheldahl, K. Blundell, K. Nyland, J. Sanders, W. Peters, H. Intema: High Dynamic Range JVLA Observations of Perseus Cluster Radio Galaxies. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Hill, G.J., H. Lee, P.J. MacQueen, ..., M. Fabricius, ..., M. Häuser, M., ..., J.M. Snigula, ..., R. Bender, ..., U. Hopp et al.: The HETDEX Instrumentation: Hobby-Eberly Telescope Wide-field Upgrade and VIRUS. *Astronomical Journal* 162, 6 (2021).
- Hsu C., J. Tan, M. Goodson, P. Caselli, B. Körtgen, Y. Cheng: Deuterium Chemodynamics of Massive Pre-Stellar Cores. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Hurley K., D. Svinkin, D. Frederiks, R. Aptekar, S. Golenetskii, A. Lysenko, A. Tsvetkova, M. Ulanov, T. Cline, I. Mitrofanov, D. Golovin, A. Kozyrev, M. Litvak, A. Sanin, A. Goldstein, M. Briggs, C. Wilson-Hodge, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, P. Ubertini, A. Bazzano, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, W. Boynton: A bright gamma-ray flare interpreted as a giant magnetar flare in NGC 253. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Ichikawa K., J. Ueda, T. Kawamuro: Serendipitous Discovery Of Dying Agn In Arp 187. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Jordán A., S. Eyheramendy, J. Buchner: State-space Representation of Matérn and Damped Simple Harmonic Oscillator Gaussian Processes. *Research Notes of the American Astronomical Society* 5, 5 (2021).
- Kiss C., A. Farkas-Takács, R. Szakáts, T. Müller, A. Pál: Dwarf planet light curves with TESS. *EPSC Abstracts* 15, (2021).
- Klein R., F. Bigiel, I. De Looze, A. Krabbe, D. Cormier, A. Barnes, C. Fischer, A. Bolatto, A. Bryant, S. Colditz, N. Geis, R. Herrera-Camus, C. Iserlohe, A. Leroy, H. Linz, L. Looney, S. Madden, A. Poglitsch, J. Stutzki, W. Vacca: CO-dark Molecular Gas and Star Formation across the Nearby Spiral Galaxy NGC 6946. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Kong S., H.G. Arce, J.R. Feddersen, J.M. Carpenter, F. Nakamura, Y. Shimajiri, H. Takemura, A. Isella, V. Ossenkopf-Okada, A.I. Sargent, Á. Sánchez-Monge, S. Suri, J. Kauffmann, T. Pillai, J.E. Pineda, J. Koda, J. Bally, D.C. Lis, P. Padoan, R. Klessen, S. Mairs, A. Goodman, P. Goldsmith, P. McGehee, P. Schilke, P.J. Teuben, M.J. Maureira, C. Hara, A. Ginsburg, B. Burkhart, R.J. Smith, A. Schmiedecke, J.L. Pineda, S. Ishii, K. Sasaki, R. Kawabe, Y. Urasawa, S. Oyamada, Y. Tanabe: The CARMA-NRO Orion Survey—Data Release. *Research Notes of the American Astronomical Society* 5, 3 (2021).
- Lee M.M., I. Tanaka, R. Kawabe: Cold gas studies of a $z = 2.5$ protocluster. *Proc. of the International Astronomical Union*, 15(S359), 136-140. (2021).
- Leroy A., E. Schinnerer, A. Hughes, E. Rosolowsky, A. Schrub, G. Blanc, C. Faesi, D. Liu, J. Pety, T. Saito, A. Usero, Phangs-Alma Collaboration: PHANGS-ALMA: Cloud Scale CO 2-1 Imaging of 90 Galaxies. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Leroy A., E. Schinnerer, A. Hughes, E. Rosolowsky, A. Schrub, G. Blanc, Phangs-Alma Team: PHANGS-ALMA: Arcsecond CO Imaging Of Nearby Galaxies. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Mainieri V., C. Circosta, D. Kakkad, M. Perna, G. Vietri, A. Bongiorno, M. Brusa, S. Carniani, C. Cicone, F. Civano, A.

- Comastri, G. Cresci, C. Feruglio, F. Fiore, A. Georgakakis, C. Harrison, B. Husemann, A. Lamastra, I. Lamperti, G. Lanzuisi, F. Mannucci, A. Marconi, N. Menci, A. Merloni, H. Netzer, P. Padovani, E. Piconcelli, A. Puglisi, M. Salvato, J. Scholtz, M. Schramm, J. Silverman, C. Vignali, G. Zamorani, L. Zappacosta: SUPER – AGN Feedback at Cosmic Noon: a Multi-phase and Multi-scale Challenge. *The Messenger* 182, 45-49 (2021).
- Marciniak A., J. Durech, V. Ali-Lagoa, W. Ogloza, R. Szakats, T. Müller, L. Molnar, A. Pal, F. Monteiro: Properties of long-period asteroids from simultaneous optimisation using visible and thermal data. *EPSC Abstracts* 15 (2021).
- Montargès, M., E. Cannon, E. Lagadec, ..., K. Kravchenko et al.: The Great Dimming of Betelgeuse as seen by the VLT/VLTI. *The Annual meeting of the French Society of Astronomy and Astrophysics, 2021*. (Eds.) A. Siebert, K. Baillié, E. Lagadec, N. Lagarde, J. Malzac, J.-B. Marquette, M. N'Diaye, J. Richard, O. Venot. *SF2A-2021: Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics SF2A 2021*, p.13-18 (2021).
- O'Rourke L., T.G. Müller, N. Biver, D. Bockelée-Morvan, S. Hasegawa, I. Valtchanov, M. Küppers, S. Fornasier, H. Campins, H. Fujiwara, D. Teyessier, T. Lim: The 3.1 μm absorption feature on asteroids (24) Themis and (65) Cybele is not due to surface water ice. *EPSC Abstracts* 15 (2021).
- Taylor P.L., T. Kitching, V.F. Cardone, ..., C. Bodendorf, ..., F. Raison, ..., R. Saglia, ..., J. Weller et al.: Euclid: Forecasts for k-cut 3x2 Point Statistics. *Open Journal of Astrophysics* 4, 1 (2021).
- Rasmussen M., E. Orlando, A. Strong: Updates on Galactic Gamma-ray Source Population Studies. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Rukdee S. et al.: A Fabry Perot Instrument for Oxygen Searches in Exoplanet Atmospheres. *EPSC Abstracts* 13 (2021).
- Ryan J., C. Young, M. McConnell, G. Rank, C. Winkler, W. Hermsen, V. Schoenfelder: The Standard Bearer LDGRF on 1991 June 11. *Bulletin of the American Astronomical Society* 53 (2021).
- Sanchez M., A. Banzatti, K. Hoadley, K. France, S. Bruderer: CO excitation in a UV-to-IR analysis of H₂ and CO spectra of disks with inner cavities. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Szakáts R., C. Kiss, T. Müller, V. Alí-Lagoa, A. Pál: Photometry of main belt asteroids from serendipitous Herschel/PACS observations. *EPSC Abstracts* 15 (2021).
- Teng Y., K. Sandstrom, J. Sun, E. Schinnerer, J. Smith, A. Bolatto, F. Israel, A. Leroy, F. Walter, B. Groves, A. Usero, E. Rosolowsky, A. Schrubba, D. Kruijssen, F. Bigiel, G. Blanc: ALMA Observations and Multi-line Modeling of the Galaxy Center of NGC 3351. *Bulletin of the American Astronomical Society* 53 (2021).
- Treiber H., G. Vasilopoulos, C. Bailyn, G. Jaisawal, P. Ray, F. Haberl, K. Gendreau, A. Udalski, C. Maitra: Unusual 2020 Outburst of Be/X-ray Binary LXP 69.5 in the LMC. *Bulletin of the American Astronomical Society* 53, 1 (2021).
- Vasilopoulos G., F. Haberl, M. Brightman, H. Earnshaw, H. Treiber, F. Koliopanos: M51 ULX-7: when strong beaming is not needed to explain super-Eddington luminosities. *Bulletin of the American Astronomical Society* 53, 1 (2021).

Bücher / Beiträge in Büchern

Harrison F.A., R.C. Kennicutt, J. Dalcanton, T. de Zeeuw, A. Driesman, J. Fortney, G. Gonzalez, J.A. Goodman, M.P. Kamionkowski, B. Macintosh, J.M. Oschmann, R.A. Osten, L.A. Page, E. Quataert, W.A. Sigur, R. Somerville, K.G. Stassun, J.L. Turner, P. van Dokkum, E.G. Zweibel: Pathways to Discovery in Astronomy and Astrophysics for the 2020s. National Academies Press, 2021.

Artikel in der Öffentlichkeitsarbeit

Gillessen, S.: Ein Wolf im Schafspelz. Spektrum der Wissenschaft 4 (2021).

Gillessen, S.: Was ist die Welt und wenn ja wie viele. Spektrum der Wissenschaft 7 (2021).

Gillessen, S.: Unheimliche Zukunft. Spektrum der Wissenschaft 10 (2021).

Gillessen, S.: Unverständliches bleibt – unverständlich. Spektrum der Wissenschaft 11 (2021).

Müller, T.: Reiche Beute für den Wanderfalken - Die Sonde Hayabusa-2 kehrt zur Erde zurück. Sterne und Weltraum 1, p.48 ff. (2021).

Telegramme / Zirkulare / Datenkataloge

- Bulbul E., : First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. APS 2021 (2021).
- Genzel R., : A 40-Year Journey. APS 2021 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210511B. GCN Circ. 30002 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210606B. GCN Circ. 30154 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210324C. GCN Circ. 29727 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210204A. GCN Circ. 29408 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210427A. GCN Circ. 29997 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210518A. GCN Circ. 30053 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210124B (short). GCN Circ. 29355 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Kozlova, S. Golenetskii, R. Aptekar, D. Frederiks, D. Svinkin, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN triangulation of GRB 210524A. GCN Circ. 30076 (2021).
- Hurley K., Ipn, I. Mitrofanov, D. Golovin, A. Kozyrev, M. Litvak, A. Sanin, Hend-Odyssey Grb Team, A. Ridnaia, S. Golenetskii, D. Frederiks, D. Svinkin, A. Lysenko, T. Cline, Konus-Wind Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi-Grb Team, A. von Kienlin, X. Zhang, Q. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grb-Odyssey Grb Team: IPN triangulation of GRB 210925B. GCN Circ. 30890 (2021).
- Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, J. Benkhoff, Bepicolombo Team, K. Hurley, Ipn, D. Svinkin, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Team: IPN triangulation of GRB 211219A. GCN Circ. 31346 (2021).
- Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, J. Benkhoff, Bepicolombo Team, K. Hurley, Ipn, D. Svinkin, S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN Triangulation of GRB 210927B. GCN Circ. 30956 (2021).
- Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, J. Benkhoff, Bepicolombo Team, K. Hurley, Ipn, D. Svinkin, S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb

Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R. Starr, Grs-Odyssey Grb Team: IPN Triangulation of GRB 211019A. GCN Circ. 30993 (2021).

Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, J. Benkhoff, Bepicolombo Team, K. Hurley, Ipn, D. Svinkin, S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R.G.G.T. Starr: IPN triangulation of GRB 211022A. GCN Circ. 31024 (2021).

Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo Team, Hend/Mars Odyssey Team, J. Benkhoff, Bepicolombo Team, K. Hurley, Ipn, D. Svinkin, S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, W. Boynton, C. Fellows, K. Harshman, H. Enos, R.G.G.T. Starr: IPN triangulation of GRB 211204C. GCN Circ. 31177 (2021).

Kozyrev A., D. Golovin, M. Litvak, I. Mitrofanov, A. Sanin, Mgns/Bepicolombo, Hend/Mars Odyssey Teams, J. Benkhoff, Bepicolombo Team, A. Ridnaia, D. Frederiks, D. Svinkin, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team: IPN triangulation of GRB 211130A. GCN Circ. 31161 (2021).

Lesage S., A. von Kienlin, C. Meegan, Fermi GBM Team: GRB 210306B: Fermi GBM detection. GCN Circ. 29637 (2021).

Lesage S., A. von Kienlin, C. Meegan, C. Malacaria, Fermi GBM Team: GRB 210308A: Fermi GBM detection. GCN Circ. 29626 (2021).

Liu, Z.: SRG/eROSITA detection of X-ray emission from TDE candidate AT 2021blz. The Astronomer's Telegram (ATel), (2021).

Merloni A., : eROSITA on SRG: Mission status and AGN Surveys first results. APS 2021 (2021).

Ridnaia A., S. Golenetskii, D. Frederiks, D. Svinkin, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team: IPN triangulation of GRB 210727A (short). GCN Circ. 30541 (2021).

Ridnaia A., S. Golenetskii, D. Frederiks, D. Svinkin, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, Integra SPI-ACS Grb Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team: IPN triangulation of GRB 211118A. GCN Circ. 31138 (2021).

Roberts O., J. Wood, R. Hamburg, A. von Kienlin, P. Veres, G. Younes: Fermi GBM Observations of SGR J1935+2154. The Astronomer's Telegram 14359 (2021).

Roberts O., J. Wood, A. von Kienlin, P. Veres, G. Younes, Fermi GBM Team: Fermi GBM Observations of SGR J1935+2154. GCN Circ. 29374 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team: IPN triangulation of GRB 211106A (short). GCN Circ. 31078 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Xiao, S. Xiong, X. Li, Y. Huang, S. Zhang, Insight-Hxmt Team: IPN triangulation of GRB 210506A. GCN Circ. 29968 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team: IPN triangulation of GRB 210531A. GCN Circ. 30110 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team: IPN triangulation of GRB 210624A (short). GCN Circ. 30318 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team: IPN triangulation of GRB 210605A (short). GCN Circ. 30143 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. von Kienlin, S. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team: IPN triangulation of GRB 210212B (consistent with ZTF21aakruew/AT2021c wd). GCN Circ. 29511 (2021).

Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Lysenko, T. Cline, Konus-Wind Team, K. Hurley, Ipn, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI ACS Grb Team, A. Goldstein, M. Briggs, C. Wilson-Hodge, Fermi Gbm Team, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuvavohu, Swift-Bat Team: IPN triangulation of GRB 211124A (short). GCN Circ. 31116 (2021).

- Svinkin D., S. Golenetskii, D. Frederiks, A. Ridnaia, A. Ly-senko, T. Cline, Konus-Wind Team, P. Hurley, Ipn, S. Barthelmy, J. Cummings, H. Krimm, D. Palmer, A. Tohuva-vohu, Swift-Bat Team, A. von Kienlin, X. Zhang, A. Rau, V. Savchenko, E. Bozzo, C. Ferrigno, INTEGRAL SPI-ACS Grb Team: IPN Triangulation of a bright burst from SGR 1935+2154. GCN Circ. 30598 (2021).
- Tacconi (chair), L. J.: Voyage 2050: Final Recommendations from the Voyage 2050 Senior Committee. Other journal, ESA Publications, (2021).
- Wood J., A. von Kienlin, C. Meegan, Fermi GBM Team: GRB 210211A: Fermi GBM observation. GCN Circ. 29482 (2021).
- von Kienlin A., Fermi GBM Team: Fermi GBM trigger 657780594/211105201 is not a GRB. GCN Circ. 31043 (2021).
- von Kienlin A., C. Meegan, Fermi GBM Team: GRB 210626A: Fermi GBM observation. GCN Circ. 30340 (2021).

Poster

- Alberton, D.: Millimeter Laboratory Spectroscopy of Allylmine. ACO Astro Chemical Origins, Torino, Italy, September 2021.
- Choudhury, S.: Ammonia as a tracer to probe the transition to coherence in dense cores. EAS 2021 Annual Meeting, Virtual Meeting, June/July 2021.
- Choudhury, S.: Probing the transition to coherence. Star Formation: From Clouds to Discs, Malahide, Ireland, October 2021.
- Comparat, J.: The final SDSS-IV/SPIDERS X-ray point source spectroscopic catalogue. European Astronomy Society, EAS, Virtual Meeting, Germany, June 2021.
- Comparat, J.: The large-scale structure traced by simulated eROSITA AGN and Clusters. European Astronomy Society, EAS, Virtual Meeting, Germany, June 2021.
- Coogan, R.: Galaxy evolution in clusters at $z=2$: starbursts, AGN, and the ICM. Formation and Evolution of Galaxy Clusters Across Cosmic Time, Tenerife, Spain, November 2021.
- Endres, C.P.: The Soleil View on Dimethyl Ether. HRMS Cologne 2021 / I. Physikalisches Institut, Universität zu Köln, Cologne, Virtual Meeting, Germany, August 2021.
- Ferrer Asensio, J.: HC170+ hyperfine emission in L1544: Observations and radiative transfer modelling. EAS Annual Conference, Virtual Meeting, June 2021.
- Haase, J.: The SciServer at MPE - Enabling collaboration for eROSITA & HETDEX. Astronomical Data Analysis Software and Systems (ADASS XXXI), Cape Town, Virtual Meeting, South Africa, October 2021.
- Kluge, M.: Structure of Brightest Cluster Galaxies and Intracluster Light. EAS Annual Meeting, Leiden, Netherlands, remote, June 2021.
- Kluge, M.: Data reduction techniques for preserving the faint outskirts of largely extended sources. EAS Annual Meeting, Leiden, Netherlands, remote, June 2021.
- Liu, T.: Characterizing the eFEDS X-ray point-source catalog with simulation and spectral analysis. EAS2021 conference, Virtual Meeting, July 2021.
- Ramos-Ceja, M. E.: X-ray properties of shear-selected clusters in the eFEDS footprint. A multi-wavelength view of galaxy clusters: Deriving masses in the era of wide-field surveys, Virtual Meeting, September 2021.
- Sanders, J.: MBProj2 and MBProj2D: Forward modelling of X-ray cluster data to obtain profiles and masses. A multi-wavelength view of galaxy clusters: deriving masses in the era of wide-field surveys, European Space Agency, Virtual Meeting, September 2021.
- Spezzano, S.: Methanol GEMS: An extensive study on methanol towards starless cores in Taurus. EAS2021, Virtual Meeting, June 2021.
- Wolf, J.: First constraints on the AGN X-ray luminosity function at $z\sim 6$ from an eROSITA detected quasar. EAS, Leiden, Virtual Meeting, The Netherlands, June 2021.
- Wölfer, L.: Spiral structure in the gas disc of CQ Tau. EAS 2021 Leiden, virtual conference, June/July 2021.

Vorträge

- Alberton D: Laboratory Spectroscopy for Astrochemistry: a Rotational Investigation of 3-AMINO-2-PROPENENITRILE. Contributed Talk, 2021 International Symposium on Molecular Spectroscopy, Virtual Meeting, June 2021.
- Alves, F. O.: Growing stars and planets in the furrows of Barnard 59. Contributed Talk, European Astronomical Society Annual Meeting, Virtual, June 2021.
- Arcodia, R.: eROSITA discoveries of Quasi-Periodic Eruptions. Contributed Talk, European Astronomical Society Annual Meeting, Leiden, Netherlands, July 2021.
- Arcodia, R.: eROSITA discoveries of Quasi-Periodic Eruptions from two previously quiescent black holes. Contributed Talk, European Astronomical Society Annual Meeting, Leiden, Netherlands, July 2021.
- Arcodia, R.: X-ray blasts from two previously quiescent galaxies. Contributed Talk, 16th Marcel Grossmann Meeting, Virtual, July 2021.
- Arcodia, R.: New discoveries of variable supermassive black holes with eROSITA. Invited Talk, EAS 2021 (Press Conference dedicated to eROSITA EDR), Leiden (remote), The Netherlands, June 2021.
- Behrendt, M.: What is the life time of clumps in high-z galaxies? Contributed Talk, Ringberg Meeting: The Puz-zles of Starformation, Schloss Ringberg, Germany, June 2021.
- Biltzinger, B.: GRB spectroscopy with PySPI and physical models. Contributed Talk, INTEGRAL: towards the third decade of X and Gamma ray observations, Pula, Italy, October 2021.
- Boehringer, H.: Application of X-ray Spectroscopy in Astrophysics. Invited Talk, Lecture in honor of Prof. Chintamani Mandi, University of Nagpur, India, December 2021.
- Boller, Th.: Was wissen wir über Schwarze Löcher. Public Talk, VHS Hallbergmoos, Hallbergmoos, Germany, June 2021.
- Boller, Th.: Die wahre Geschichte des Sterns von Bethlehem aus astronomischer Sicht. Public Talk, VHS Hallbergmoos, Hallbergmoos, Germany, December 2021.
- Boller, Th.: eROSITA discovery of ultra-soft X-ray variability in the Narrow-Line Seyfert 1 Galaxy 1H0707-495. Contributed Talk, 43th COSPAR Scientific Assembly, Sydney, Australia, January 2021.
- Bulbul, E: Galaxy Groups and Clusters in the eROSITA Final Depth Equatorial Survey. Invited Talk, Radio 2021 and GLOW Annual Assembly, Garching, Germany, November 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. Invited Talk, American Physical Society Physics Meetings, Online, USA, April 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. Invited Talk, Marcel Grossman Meeting of Relativistic astrophysics, Online, USA, October 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. Invited Talk, International School of Astrophysics Daniel Chalonge, Paris, France, October 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. Colloquium, Strasbourg Observatory, Strasbourg, France, December 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters Detected in the eFEDS Field. Invited Talk, European Astronomical Society Meeting, Leiden, Netherlands, June 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters. Colloquium, NASA Goddard Space Flight Center, Greenbelt, USA, May 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters. Colloquium, University of Edinburgh, Royal Observatory, Edinburgh, Scotland, October 2021.
- Bulbul, E: First Results from eROSITA Observations of Galaxy Clusters. Colloquium, University of California Santa Cruz, Santa Cruz, USA, October 2021.
- Bulbul, E: eFEDS as a Preview of the eROSITA Cluster Survey. Invited Talk, EAS2021 (Press Conference Dedicated to the eROSITA EDR), Virtual, July 2021.
- Burkert, A.: Urknall und Sternenstaub. Public Talk, Aalen, March 2021.
- Burkert, A.: Ein Nobelpreis für Schwarze Löcher. Public Talk, Petershausen, remote, May 2021.
- Burkert, A.: Physik des Universums. Public Talk, Pfaffenhofen, July 2021.
- Burkert, A.: Wir sind nicht allein. Public Talk, Langeoog, August 2021.
- Burkert, A.: Urknall und Sternenstaub. Public Talk, Langeoog, August 2021.
- Burkert, A.: Urknall, Schwarze Löcher und die Entstehung des Universums. Public Talk, TUM, Garching, October 2021.
- Burkert, A.: The Pythagorean Music of Celestial Spheres and modern astronomy. Public Talk, EAS, remote, October 2021.
- Burkert, A.: Dynamik des Universums. Public Talk, Frutigen, Schweiz, October 2021.
- Burkert, A.: Urknall und Sternenstaub. Public Talk, Gersfeld, Germany, October 2021.

- Burkert, A.: Urknall und Sternenstaub. Public Talk, Calw, Germany, October 2021.
- Burkert, A.: Urknall und Sternenstaub. Public Talk, Edenkoben, Germany, October 2021.
- Burkert, A.: Urknall und Sternenstaub. Public Talk, Amorbach, Germany, October 2021.
- Burkert, A.: Was ist der Mensch? Public Talk, München, November 2021.
- Burkert, A.: Urknall, Sternenstaub und die Frage nach dem Leben. Public Talk, Berlin, December 2021.
- Burkert, A.: Collapsing sheets the power of the edge effect. Invited Talk, Dublin, October 2021.
- Burkert, A.: Physics of Galaxy Formation. Invited Talk, Frankfurt, remote, December 2021.
- Burkert, A.: The puzzles of Star formation, The puzzles of the universal gas depletion timescale. Contributed Talk, Schloss Ringberg, Germany, 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, Institute of Cosmology and Gravitation, University of Portsmouth, Portsmouth, UK, February 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, School of Physics and Astronomy, University of St. Andrews, St. Andrews, UK, March 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, The Department of Astronomy and Astrophysics, The Pennsylvania State University, University Park, PA, USA, March 2021.
- Caselli, P.: From clouds to planets, the astrochemical link. Colloquium, Institute for Theory and Computation, Harvard University, Cambridge, MA, USA, April 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, Origins Center, Groningen, The Netherlands, May 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, Scuola Normale Superiore, Pisa, Italy, May 2021.
- Caselli, P.: Our Astrochemical Origins. Colloquium, Instituto de Astrofísica, Pontificia Universidad Católica de Chile, Santiago, Chile, September 2021.
- Caselli, P.: From clouds to planets, the astrochemical link. Colloquium, Dipartimento di Fisica, Università di Tor Vergata, Roma, Italy, December 2021.
- Caselli, P.: Astrochemistry at the dawn of star and planet formation. Invited Talk, Faraday joint interest group conference 2021, Sheffield, UK, March 2021.
- Caselli, P.: Almost complete freeze-out before stellar birth. Invited Talk, CICO-VICO-CASSUM Spring Workshop 2021, Charlottesville, VA, USA, May 2021.
- Caselli, P.: From pre-stellar cores to protoplanetary disks. Invited Talk, Ringberg Meeting: Puzzles of Star Formation, Ringberg, Germany, July 2021.
- Caselli, P.: From clouds to planets: the astrochemical link. Invited Talk, ngVLA Summer Short Talk Series, Charlottesville, VA, USA, July 2021.
- Caselli, P.: Molecular fractionation in star- and planet-forming regions. Invited Talk, Chemical processes in Solar-type star forming regions, Torino, Italy, September 2021.
- Caselli, P.: Perspective Talk. Invited Talk, MIAPP - Gaps, rings, spirals and vortices: structure formation in planet-forming disks, Garching, Germany, October 2021.
- Clarke, J.: Galactic Centre and Inner Galaxy. Contributed Talk, MW-Gaia Workshop 2021, Heidelberg, Germany, Virtual Meeting, February 2021.
- Clarke, J.: Galactic Centre and Inner Galaxy. Contributed Talk, EAS2021, Leiden, Netherlands, Virtual Meeting, July 2021.
- Collmar, W.: COMPTEL Reloaded - An updated View on the MeV Sky. Contributed Talk, Ninth International Fermi Symposium (held virtually), Johannesburg, South Africa, April 2021.
- Comparat, J.: The cosmic web of X-ray AGNs. Colloquium, Cosmology Seminar at Max Planck fuer Astrophysik, Garching bei München, Germany, May 2021.
- Comparat, J.: Mapping large scale structures in X-rays: cosmological forecast. Invited Talk, Cosmology from home, Mexico, Virtual, July 2021.
- Comparat, J.: Full-Sky Photon Simulation of Clusters and Active Galactic Nuclei in the Soft X-Rays for eROSITA. Contributed Talk, National astronomy meeting 21 (RAS), Bath, UK, July 2021.
- Comparat, J.: Forward modelling the cosmological large scale structure seen in the X-ray by eROSITA. Contributed Talk, Cluster mass 2020 @ ESAC, Madrid, Spain, September 2021.
- Coogan, R.: Environmental effects on galaxy evolution in a $z=2$ cluster. Contributed Talk, Confronting simulations with observations of high-redshift galaxies and (proto) clusters, Nanjing (virtual), China (virtual), November 2021.
- Coogan, R.: ClJ1449: excited galaxies and multiple radio jets in the core of a mature galaxy cluster at $z=2$. Contributed Talk, Galaxy Cluster Formation II, Garching (virtual), Germany, June 2021.
- Davies, R.: An extremely sharp view of AGN with the Extremely Large Telescope. Invited Talk, The many faces of black hole accretion, Leiden, Netherlands, July 2021.
- Dennerl, K.: Calibration of eROSITA. Contributed Talk, EPIC Calibration Meeting, virtual, April 2021.
- Dennerl, K.: First Results and Calibration of eROSITA. Invited Talk, IACHEC Special Plenary Talk, virtual, April 2021.
- de Zeeuw, T.: Astro2020. Invited Talk, IR Group Ringberg Retreat, Ringberg, Germany, December 2021.
- de Zeeuw, T.: A Muse for Mount Olympus. Colloquium, Institute for Astrophysics, Heraklion, Greece, October 2021.
- de Zeeuw, T.: Fornax3D. Colloquium, Teatalk at the MPE, Garching, Germany, February 2021.

Drescher, A.: First Observations with GRAVITY Wide. Contributed Talk, NYRIA Virtual Workshop, Garching, Germany, October 2021.

Eisenhauer, F.: Follow Tycho Brahe: Precision Astronomy with Interferometry. Invited Talk, Danish Institute for Advanced Study, University of Southern Denmark, Odense, Denmark, November 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY+. Invited Talk, Scientific Technical Committee (STC) and La Silla Paranal Committee, European Southern Observatory (online), Garching, Germany, October 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY(+). Invited Talk, IPAG - Institut de Planétologie et d'Astrophysique, Grenoble, France, October 2021.

Eisenhauer, F.: Great Times Ahead. Invited Talk, European Southern Observatory 2020 Nobel Prize Celebration (online), Santiago de Chile and Garching, Chile and Germany, September 2021.

Eisenhauer, F.: Infrared Interferometry of the Galactic Center Black Hole. Invited Talk, Virtual Annual Meeting of the German Astronomical Society, Hamburg, Germany, September 2021.

Eisenhauer, F.: An Experimentalists View on Black Holes and Gravity – the Galactic Center Black Hole. Invited Talk, 20th Lomonosov Conference (online), Moscow, Russia, August 2021.

Eisenhauer, F.: GRAVITY+ All-Sky, High-Contrast, Milli-Arcsecond Optical Interferometric Imaging and Spectroscopy. Invited Talk, European Astronomical Society Annual Meeting (online), Leiden, The Netherlands, June 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY. Invited Talk, Heidelberg Joint Astronomical Colloquium (online), Heidelberg, Germany, June 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY. Invited Talk, University of Vienna, Astrophysics Colloquium (online), Vienna, Austria, June 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY. Invited Talk, Sydney Institute for Astronomy, The University of Sydney (online), Sydney, Australia, April 2021.

Eisenhauer, F.: Infrared Interferometry of the Galactic Center Black Hole. Invited Talk, Extreme Gravity Mini Symposium, Erlangen Centre for Astroparticle Physics, Friedrich-Alexander Universität Erlangen-Nürnberg (online), Erlangen, Germany, April 2021.

Eisenhauer, F.: A New Era of Interferometry with GRAVITY. Invited Talk, Dunlap Institute for Astronomy & Astrophysics Colloquium, University of Toronto (online), Toronto, Canada, March 2021.

Eisenhauer, F.: GRAVITY+ – All-Sky, High-Contrast, Milli-Arcsecond Optical Interferometric Imaging and Spectroscopy. Invited Talk, The Infrared Sky at Milli- and Microarcsecond Resolution with GRAVITY+ Online Workshop (online), Garching, Germany, February 2021.

Eisenhauer, F.: Next Decade of Galactic Center Black

Hole Observations with Infrared Interferometry and 30-40m Telescopes. Invited Talk, Next Generation EHT Conference 2021 (online), Cambridge, MA, USA, February 2021.

Eisenhauer, F.: General Relativistic Effects in Stellar Orbits around the Galactic Center Black Hole with GRAVITY. Invited Talk, Revealing the Milky Way with GAIA workshop (online), Heidelberg, Germany, February 2021.

Eisenhauer, F.: The Discovery of the Massive Black Hole in the Center of the Galaxy. Invited Talk, Iberian String 2021 (online), Lisbon, Portugal, January 2021.

Eisenhauer, F.: GRAVITY+: All-Sky, High-Contrast, Milli-Arcsecond Optical Interferometric Imaging and Spectroscopy. Invited Talk, DIAS Astronomy & Astro-physics Seminar (online), Dublin, Ireland, January 2021.

Eisenhauer, F.: Recent GRAVITY Results on the Galactic Center Black Hole. Invited Talk, 43rd COSPAR Scientific Assembly (online), Sydney, Australia, January 2021.

Endres, C.P.: Automatic Spectral Assignment Procedure ASAP - Application to complex spectra of chiral molecules. Invited Talk, SFB1319 Winterschool 2021 / Universität Kassel, Kassel, Germany, December 2021.

Esposito, M.: Weighing Cosmic Structures with Clusters of Galaxies and the Intergalactic Medium, Invited Talk, Large Scale Structure Seminar, Cambridge, UK, 2021.

Farrow, D.: Correcting correlation functions for redshift dependent interloper contamination. Invited Talk, HEZ Board Meeting, remote, June 2021.

Forster Schreiber, N. M.: Galaxy Evolution at the Peak Epoch of Cosmic Star Formation: Witnessing In-situ the Growth and Transformations of Young Galaxies. Colloquium, Seoul National University, Dept. of Physics and Astronomy, Seoul, South Korea, May 2021.

Forster Schreiber, N. M.: Galaxy evolution: an observational perspective. Invited Talk, Workshop on Massively Parallel Large Area Spectroscopy from Space, Porto, Portugal, June 2021.

Genzel, R.: Über die Galaxie zum Nobelpreis. BADW-Gesprächsreihe Vis-à-Vis, Munich, Germany, January 2021.

Genzel, R.: A 40-Year Journey. Invited talk (remote), Congreso Futuro Antofagasta, Universidad Católica del Norte, Chile, January 2021.

Genzel, R.: A 40-Year Journey. Invited talk (remote), Congreso Futuro, Chile, January 2021.

Genzel, R.: A 40-Year Journey. Keynote speech (remote), Telekom Digital Leadership Meeting, Germany, January 2021.

Genzel, R.: Testing General Relativity and the Massive Black Hole Paradigm with Infrared Techniques in the Galactic Center – A 40-Year Journey. Invited talk (remote), International School of Astrophysics Daniel Chalonge - Hector de Vega, Paris, France, February 2021.

Genzel, R.: Presentation of the Jury's Grand Prize. Invited address and discussion (remote), Science Outreach

- Program for Schools, Nobel Prize Museum, Stockholm, Sweden, February 2021.
- Genzel, R.: A 40-Year Journey. Invited talk and discussion (remote), Oxford German Society, Oxford, UK, February 2021.
- Genzel, R.: Impulse aus der Wissenschaft. Address and discussion, (remote), Interner Wissenschaftspolitischer Austausch der bundesgrünen Fraktions- und Parteispitze, Berlin, Germany, March 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), Colloquium University of Portsmouth, UK, March 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), Colloquium Physics Department University of Athens, Greece, March 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), Colloquium Graduate Program in Physics at Pará University, Brazil, March 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), General Astrophysics Colloquium at Leiden Observatory, Leiden, Netherlands, March 2021.
- Genzel, R.: Discussion on where Physics stands and questions (remote discussion). With Henry Kissinger, Eric Schmidt, Klaus Kleinfeld, David Gross and Brian Schmidt, initiated by Lindau Nobel Laureate Meetings, Lindau, Germany, March 2021.
- Genzel, R.: A Night with the Space Nobelists. Interview (remote) with Finnish Physical Society, the University of Helsinki and Aalto University, Finland, April 2021.
- Genzel, R.: A 40-Year Journey. Hans-Jensen Lecture (remote), Heidelberg University, Germany, April 2021.
- Genzel, R.: About the Nobel Prize and the role of science for policy and decision making. Self-introductory speech and panel discussion (remote), Swedish Parliament, Stockholm, Sweden, April 2021.
- Genzel, R.: A 40-Year Journey. Nobel Lecture (remote), Dutch FYSICA meeting (online), The Netherlands, April 2021.
- Genzel, R.: A 40-Year Journey. Invited talk, Nobel Prize Session (remote), APS April Meeting (online), USA, April 2021.
- Genzel, R.: Eine 40-jährige Reise zum Zentrum der Milchstraße. Invited public talk (remote), Magnus-Haus der DPG, Berlin, Germany, April 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), Byurakan Astrophysical Observatory (BAO), Armenia, May 2021.
- Genzel, R.: A 40-Year Journey: From Theoretical Predictions to Empirical Evidence for a Supermassive Black Hole at the Center of the Milky Way. Invited talk (remote), golden webinar at the Institute of Astrophysics of Pontificia Universidad Catolica de Chile (IA-PUC), Santiago, Chile, May 2021.
- Genzel, R.: Speech on the SHAW Prize in Astronomy on behalf of the Committee. (remote, recorded), SHAW Prize 2020 Virtual Award Ceremony, Hong Kong, May 2021.
- Genzel, R. Schwarze Löcher & Galaxien. Invited talk, Frühjahrstagung Orden Pour Le Merit, Berlin, Germany, June 2021.
- Genzel, R. Cosmic Evolution of Star Forming Galactic Disks. Invited talk (remote), Celebration of 50 years of Catherine Cesarsky's career in astronomy, Paris, June 2021
- Genzel, R.: Galactic Center, A 40-Year Journey. Colloquium, IRAM, Grenoble, France, June 2021.
- Genzel, R.: A 40-Year Journey. Keynote speech (remote), World of Photonics Congress, Munich, Germany, June 2021.
- Genzel, R.: Nobelpreisträger Reinhard Genzel im Gespräch mit Harald Lesch im Rahmen der Festversammlung der 72. Jahresversammlung der Max-Planck-Gesellschaft. Munich, Germany, June 2021.
- Genzel, R.: Karliczek trifft ...Nobelpreisträger Reinhard Genzel. Interview and discussion, BMBF-Festveranstaltung zu den Nobelpreisen in Lindau, Germany, June 2021.
- Genzel, R.: Galaxien und Schwarze Löcher. Public lecture, Lindau Nobel Laureate Meetings, Lindau, Germany, June 2021.
- Genzel, R.: A 40-Year Journey. Invited talk, Lindau Nobel Laureate Meetings, Lindau, Germany, June 2021.
- Genzel, R.: Dark & Black. Panel discussion, Lindau Nobel Laureate Meetings, Lindau, Germany, June 2021.
- Genzel, R.: Panel Lindau Nobel Conference Opening Ceremony. Made in Germany – Research Perspectives for Young Scientists, panel discussion with Bernd Sibler, Anja Karliczek, Lindau Nobel Laureate Meetings, Lindau, Germany, June 2021.
- Genzel, R.: Eine vierzigjährige Reise (zum schwarzen Loch) – Forschen leben und erleben. Address and keynote speech (remote), Virtueller Empfang des Bayerischen Ministerpräsidenten für neuberufene Professorinnen und Professoren, Staatskanzlei, Munich, Germany, June 2021.
- Genzel, R.: A 40-Year Journey. Invited plenary talk (remote), Sixteenth Marcel Grossmann Virtual Meeting - MG16, July 2021.
- Genzel, R.: Vorstellung: Das Max Planck Institut für extraterrestrische Physik. Address and introductory talk, official visit of Stm. Bernd Sibler at Max Planck Institute for Extraterrestrial Physics, Garching, Germany, July 2021.
- Genzel, R.: Testing the massive black hole paradigm with high-resolution astronomy. Invited talk (remote), Game Changer Seminars, ISSI Bern, Switzerland, July 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), University of Arizona/ Center for Consciousness Studies, Science & Roger Penrose: On the Occasion of his 90th birthday and Nobel Prize, Online Event, USA, August 2021.

- Genzel, R.: A 40-Year Journey – General relativity and supermassive black holes. Invited talk (remote), 42nd edition of the Meeting for the Friendship of Peoples, Rimini, Italy, August 2021.
- Genzel, R.: Galaxien und Schwarze Löcher. Invited talk (remote), DPG Frühjahrstagung, Jena, Germany, August 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), XL Meeting of the Polish Astronomical Society, Szczecin, Poland, September 2021.
- Genzel, R.: Eine 40-jährige Reise zum Zentrum der Milchstraße. Invited public talk (remote), Zooming into the Universe, Tagung der Astronomischen Gesellschaft 2021 (online), Germany, September 2021.
- Genzel, R.: Galaxies and Massive Black Holes. Invited talk (remote) for the virtual seminar series: Precision Physics and Fundamental Symmetries, Germany/ Switzerland, September 2021.
- Genzel, R.: Eine 40-jährige Reise zum Zentrum der Milchstraße. Invited talk (remote), Jean-Hanley-Memorial Lecture, Hauptstadtkongress der DGAI (online), Germany, September 2021.
- Genzel, R.: Eine 40-jährige Reise Invited talk, Treffen der Jugend forscht Landessiegerinnen und -sieger im Fachgebiet Physik, ausgerichtet vom Max-Planck-Institut für extraterrestrische Physik (online), Germany, September 2021.
- Genzel, R.: Eine 40-jährige Reise. Invited talk, Der Bundeswirtschaftssenat im Dialog, Munich, Germany, September 2021.
- Genzel, R.: A 40-Year Journey: Testing General Relativity & The Massive Black Hole Paradigm at the Center of the Milky Way. Invited plenary talk (remote), International Online Conference "Black Holes Inside and Out, USA/ Japan, September 2021.
- Genzel, R.: A 40-Year Journey: Testing General Relativity & The Massive Black Hole Paradigm at the Center of the Milky Way. Invited talk (remote), ESO Event celebrating the Nobel Prize of Physics 2020 (online), Chile, September 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), Photonics Days 2021, Jena, September 2021.
- Genzel, R.: 40-Year Journey. Invited talk (remote), IAP Colloquium (séminaire de l'Institut d'Astrophysique de Paris), Paris, France, October 2021.
- Genzel, R.: Vorstellung: Das Max-Planck-Institut für extraterrestrische Physik. Address and introductory talk, official visit of Dr. Heubisch and delegation from Bayerischer Landtag at Max Planck Institute for Extraterrestrial Physics, Garching, Germany, October 2021.
- Genzel, R.: Galaxien und Schwarze Löcher. Invited talk, Mitgliederversammlung der Heisenberg-Gesellschaft, Munich, Germany, Oktober 2021.
- Genzel, R.: Speech on the SHAW Prize in Astronomy on behalf of the Committee (remote, recorded). SHAW Prize 2021 Virtual Award Ceremony, Hong Kong, October 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (recorded), 4th World Laureates Forum "Open Science" (online), Shanghai, China, October 2021.
- Genzel, R.: Black Holes: From Theoretical Speculation to Fundamental Physics Laboratories. Invited talk (remote), Astrophysics Roundtable, University of California, Berkeley, USA, November 2021.
- Genzel, R.: Verstehen, was nicht zu verstehen ist: Ein Blick auf Metawissen und die Bedeutung von schwarzen Löchern – Prof. Dr. Reinhard Genzel und Prof. Rolf Rodenstock im Gespräch. Invited discussion (recorded), RHI-Fachsymposium (online), Munich, November 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (recorded TED talk), 2021 WE Summit, Beijing, China, 2021.
- Genzel, R.: A 40-Year Journey. Invited talk (remote), II NAT Lectures on Astrophysics, Universidade Cidade de São Paulo (UNICID), Brazil, November 2021.
- Genzel, R.: State of the MPE-IR Group's research and projects. MPE-IR Group Retreat, Ringberg Castle, Germany, December 2021.
- Genzel, R.: Future questions in black hole and galactic nuclei research. MPE-IR Group Retreat, Ringberg Castle, Germany, December 2021.
- Gillessen, S.: The Galactic Center Black Hole. Invited Talk, Regensburg, Germany, February 2021.
- Gillessen, S.: Kepler, Einstein und das Schwarze Loch im Zentrum der Milchstraße. Public Talk, Deutsches Museum, Munich, Germany, February 2021.
- Gillessen, S.: Einstein im Test – Das Schwarze Loch im Zentrum der Milchstraße. Invited Talk, Physik-Olympiade, virtual, Germany, February 2021.
- Gillessen, S.: Schwarze Löcher - Science Fiction oder Realität?. Public Talk, Junior-Uni, Wuppertal, Germany, March 2021.
- Gillessen, S.: Das Schwarze Loch im Zentrum der Milchstraße. Invited Talk, RoundTable, Heilbronn, Germany, November 2021.
- Gillessen, S.: Das Schwarze Loch im Zentrum der Milchstraße. Public Talk, Justinus-Kerner-Gymnasium, Heilbronn, Germany, November 2021.
- Gillessen, S.: Schwarze Löcher - Science Fiction oder Realität?. Public Talk, Schulvortrag, Cuxhaven, Germany, November 2021.
- Gillessen, S.: Das Schwarze Loch im Zentrum der Milchstraße. Public Talk, Auricher Wissenschaftstage, Aurich, Germany, November 2021.
- Grupp, F.: The role of standardization in the development of next generation of large telescopes. Invited Talk, UV/ Optical/IR Space Telescopes and Instruments: Innovative Technologies and Concepts-X, August 2021.
- Haerendel, G.: New Insights into the Onset of a Substorm.

- Colloquium, Space Physics Seminar Series / Rice University / Zoom, Houston, USA, April 2021.
- Halder, A.: The integrated 3-point shear correlation function. Contributed Talk, Cambridge LMU Workshop, remote, January 2021.
- Halder, A.: The integrated 3-point shear correlation function. Colloquium, Density Splits Statistics Group Seminar, Stanford University, March 2021.
- Halder, A.: The integrated 3-point shear correlation function. Invited Talk, Dark Energy Survey Collaboration Meeting, May 2021. oston, USA, April 2021.
- Hu, C.-Y.: Metallicity dependence of the H/H₂ and C+/C/CO distributions in a resolved self-regulating interstellar medium. Cologne ISM group meeting, virtual, May 2021.
- Hu, C.-Y.: Metallicity dependence of the X_CO factor in a multiphase interstellar medium. IAU Symposium „The predictive power of computational astrophysics“, virtual, November 2021.
- Hu, C.-Y.: Metallicity dependence of the H/H₂ and C+/C/CO distributions in a resolved self-regulating interstellar medium. ISM 2021 conference, virtual, May 2021.
- Hu, C.-Y.: Metallicity dependence of the H/H₂ and C+/C/CO distributions in a resolved self-regulating interstellar medium. MPA cosmology seminar, virtual, March 2021
- Hu, C.-Y.: The dependence of XCO on metallicity, intensity, and spatial scales. CCA galaxy group meeting, virtual, October 2021.
- Jiménez-Redondo, M.: Study of low-temperature ion-neutral interactions in a 22-pole ion trap. Contributed Talk, Laboratory Astrophysics Workshop 2021, Dornburg, Germany, November 2021.
- Kravchenko, K.: Tomography of evolved star atmospheres. Invited Talk, The Death-throes of Evolved stars, a Virtual Encounter, Leuven, Belgium, April 2021.
- Kravchenko, K.: The Great Dimming of Betelgeuse revealed by tomography. Contributed Talk, EAS 2021, virtual meeting, June 2021.
- Kravchenko, K.: MICADO: Instrument overview and cold tests. Contributed Talk, (The Network of Young Researchers in Instrumentation for Astronomy virtual workshop, October 2021.
- Kruk, S.: Galaxy morphology in the era of large surveys. Invited Talk, Modern statistics of Galaxies Series, LMU and USM, Munich, Germany, November 2021.
- Lee, M.: Cold gas in high redshift galaxies. Invited Talk, Seoul National University Colloquium, Seoul, South Korea, June 2021.
- Lee, M.: Gas mass calibration in a z=2.5 protocluster, Galaxy Cluster Formation II (GCF2021). Contributed Talk, Virtual meeting, June 2021.
- Lee, M.: Galaxy evolution in different environments at cosmic noon, DAWN summit 2021. Contributed Talk, Copenhagen and zoom, Denmark/online, September 2021.
- Lee, M.: Earth, Solar system and the Universe (in Korean). Public Talk, Saarbrücken, Germany, May 2021.
- Liu, T.: The eROSITA Final Equatorial Depth Survey (eFEDS): X-ray catalog and AGN spectra. Contributed Talk, 2021 INTEGRAL conference, Pula, Italy, October 2021.
- Malyali, A.: Early results from eROSITA's search for Tidal Disruption Events. Contributed Talk, AAS 237, Virtual, January 2021.
- Malyali, A.: AT 2019avd: a novel addition to the diverse population of nuclear transients. Contributed Talk, eROSITA consortium meeting, Virtual, January 2021.
- Meidinger, N.: eROSITA Detector Development for X-ray Astronomy. Colloquium, Forum Munich Aerospace, Garching, Germany, May 2021.
- Merloni, A.: New eyes on the X-ray sky: First Results from eROSITA on SRG. Colloquium, ASI, Rome, Italy, January 2021.
- Merloni, A.: New eyes on the X-ray sky: First Results from eROSITA on SRG. Colloquium, DESY, Hamburg, Germany, February 2021.
- Merloni, A.: New eyes on the X-ray sky: First Results from eROSITA on SRG. Colloquium, Astroparticle and Cosmology Lab, Paris, France, February 2021.
- Merloni, A.: New eyes on the X-ray sky: First Results from eROSITA on SRG. Colloquium, Space Telescope Science Institute, Baltimore, USA, March 2021.
- Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, ASTRON, Dwingeloo, The Netherlands, April 2021.
- Merloni, A.: eROSITA on SRG: Mission Status and AGN surveys first results. Invited Talk, American Physical Society April Meeting, Remote, USA, April 2021.
- Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, University of Groningen, Groningen, The Netherlands, May 2021.
- Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, FAU, Erlangen, Germany, May 2021.
- Merloni, A.: Galaxy Clusters and AGN with SRG/eROSITA. Invited Talk, EAS Meeting, S3, Leiden, The Netherlands, June 2021.
- Merloni, A.: The X-ray variability of galactic nuclei as probed by SRG/eROSITA. Invited Talk, EAS Meeting, SS18, Leiden, The Netherlands, June 2021.
- Merloni, A.: eROSITA on SRG: early science highlights and transients. Invited Talk, ULTRASAT Workshop, Tel Aviv, Israel, October 2021.
- Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, ISSI 'Game Changers' Series, Bern, Switzerland, October 2021.
- Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions:

First results from eROSITA on SRG. Colloquium, Stockholm University, Stockholm, Sweden, November 2021.

Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, IRAP, Toulouse, France, November 2021.

Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, Beijing University, Beijing, China, November 2021.

Merloni, A.: Of Bubbles, Filaments, Echoes and Eruptions: First results from eROSITA on SRG. Colloquium, University of Bologna, Bologna, Italy, November 2021.

Merloni, A.: Status of the SRG/eROSITA telescope and scientific results of the German consortium. Invited Talk, IKI High-Energy Astrophysics Conference, Moscow, Russia, December 2021.

Merloni, A.: Introducing eROSITA on SRG. Invited Talk, EAS 2021 (Press Conference dedicated to eROSITA EDR), Leiden, The Netherlands, June 2021.

Müller, T.: Revisiting Ryugu's pre-/post-mission thermal observations: emissivity determination. Contributed Talk, Europlanet Science Congress 2021, Virtual, September 2021.

Müller, T.: Interpretation of Short-Wavelength Thermal Observations: The Case of Ryugu. Contributed Talk, Rock, Dust and Ice: Interpreting planetary data, Virtual, March 2021.

Müller, M. B.: Ice, Ice, Baby - Chemie im All und die Geburt von Sternen. Invited Talk, Talk for the JungChemikerForum of the University Würzburg, Würzburg (virtual), Germany, April 2021.

Müller-Seidlitz, J.: Silicon Detectors for Future X-Ray Astrophysics. Invited Talk, Silicon Sensors for Precision Radiation Detection and Quantum Applications, MPI Semiconductor Laboratory, Virtual Symposium, Munich, Germany, September 2021.

Parikh, T.: Stellar Population Analysis: A Sample of MUSE Galaxies. Invited Talk, Galaxy Breakfast Meeting, remote, Institute of Cosmology and Gravitation, University of Portsmouth, UK, February 2021.

Parikh, T.: Probing the IMF using a sample of MUSE Galaxies: Stellar Population and Dynamical Constraints. Contributed Talk, EAS 2021, Leiden, Netherlands, June 2021.

Pezzotta, A.: Testing one-loop galaxy bias. Invited Talk, Cosmology Seminar, Lorentz Institute for theoretical physics, Leiden University, Leiden, Netherlands, November 2021.

Pineda, J.: The role of Streamers on star and disk formation: mirage or reality?. Invited Talk, Ringberg: Puzzles of Star Formation, Kreuth, Germany, July 2021.

Predehl, P.: eROSITA on SRG The new X-ray All-sky Survey. Invited Talk, Theseus 2020 Conference, Malaga (Zoom), Spain, March 2021.

Predehl, P.: X-ray Instrumentation to observe the Universe. Invited Talk, High Precision X-ray Measurement

2021, Frascati (Zoom), Italy, June 2021.

Predehl, P.: The hot and energetic Universe and the X-ray Telescope eROSITA. Colloquium, MPI für Kernphysik, Heidelberg (Zoom), Germany, July 2021.

Predehl, P.: eROSITA und das heiße Universum. Public Talk, Planetarium Hamburg, Hamburg, Germany, November 2021.

Predehl, P.: eROSITA und das heiße Universum. Public Talk, Sternfreunde Nordenham, Nordenham, Germany, October 2021.

Predehl, P.: eROSITA und das heiße Universum. Public Talk, Olbers-Gesellschaft, Bremen, Germany, October 2021.

Predehl, P.: eROSITA - Eine neue Himmelsdurchmusterung im Röntgenlicht. Public Talk, Museum für Naturkunde, Münster, Germany, October 2021.

Price, S.: Probing the structure and dynamics of distant massive star-forming galaxies with MICADO and HARMONI: From galaxy to clump scales. Contributed Talk, Spatially Resolved Spectroscopy with Extremely Large Telescopes, Oxford (virtual), UK, Sept 2021.

Pulsoni, C.: The outer reaches of galaxies: structure, kinematics, and accretion history. Invited Talk, EAS 2021, Leiden, Netherlands, June 2021.

Pulsoni, C.: The stellar halos of ETGs in the IllustrisTNG simulations. Invited Talk, EAS 2021, Leiden, Netherlands, June 2021.

Pulsoni, C.: The stellar halos of massive ETGs. Contributed Talk, RU-D Science Day of the ORIGINS Excellence Cluster, Garching, Germany, September 2021.

Pulsoni, C.: The stellar halos of ETGs in the IllustrisTNG simulations. Colloquium, Galaxy Evolution Seminar, Oxford, UK, February 2021.

Pulsoni, C.: The stellar halos of ETGs in the IllustrisTNG simulations. Colloquium, OPINAS Seminar, Garching, Germany, February 2021.

Pulsoni, C.: The structure of stellar halos in early type galaxies. Colloquium, MPE institute seminar, Garching, Germany, December 2021.

Rab, Ch.: Constraining the energetic particle flux of young stars during the period of planet formation.. Contributed Talk, Virtual Meeting of the German Astronomical Society - Zooming into the Universe, Online, Germany, September 2021.

Rab, Ch.: Detecting PAHs in exoplanets and planet-forming disks with Twinkle. Contributed Talk, Twinkle and the Next Generation of Exoplanet Scientists, Online, Online, September 2021.

Rab, Ch.: Constraining the energetic particle flux of young stars during the period of planet formation. Contributed Talk, AGU Fall-Meeting - Session: Cool Stars and Their Influence on (Exo)Planetary Habitability, Online, United States, December 2021.

- Ramos-Ceja, M. E.: Mapping large scale structures at high energies: initial results from eROSITA on SRG. Colloquium, GreatWestern Seminar Series, Bristol, Bath & Cardiff, United Kingdom, February 2021.
- Ramos-Ceja, M. E.: Mapping large scale structures at high energies: initial results from eROSITA on SRG. Colloquium, Chalmers Astrophysics Colloquium, Online, Sweden, May 2021.
- Ramos-Ceja, M. E.: Comparison of X-ray detected and shear-selected galaxy cluster samples in the eFEDS area. Contributed Talk, European Astronomical Society Annual Meeting, Online, Netherlands, June 2021.
- Ramos-Ceja, M. E.: Mapping large scale structures in X-rays: eROSITA in SRG. Invited Talk, Cosmology from Home, Online, Germany, June 2021.
- Ramos-Ceja, M. E.: El Universo en rayos X (in Spanish). Public Talk, Festival de la Familia Marista, Online, Mexico, May 2021.
- Ramos-Ceja, M. E.: El Universo visto en rayos X (in Spanish). Public Talk, Centro Escolar Juana de Asbaje, Zamora, Mexico, December 2021.
- Ramos-Ceja, M. E.: eROSITA-DE Early Data Release (EDR). Invited Talk, EAS 2021 (Press conference dedicated to the eROSITA EDR), Virtual, June 2021.
- Rau, A.: Surveys for Transients - Athena/VRO Synergies. Invited Talk, Rubin-Athena Synergy Workshop, remote, April 2021.
- Rau, A.: Athena/WFI Update. Invited Talk, Athena X-IFU Consortium Meeting #13, remote, May 2021.
- Rau, A.: Tidal Disruption Events - An Overview of eROSITA-DE Findings in eRASS1-3. Contributed Talk, eROSITA Consortium Meeting, remote, June 2021.
- Rau, A.: SRG/eROSITA. Invited Talk, Swift Senior Review Strategy Workshop, remote, November 2021.
- Rau, A.: Athena/WFI Update. Invited Talk, Athena/X-IFU Consortium Meeting #14, remote, November 2021.
- Redaelli, E.: The cosmic-ray ionisation rate in the prestellar core L1544. Invited Talk, Annual meeting of the german astronomical society, Online, Germany, September 2021.
- Redaelli, E.: Identification of prestellar cores in high-mass clumps with ALMA o-H₂D⁺ observations. Contributed Talk, Astrochemical Frontiers - quarantine edition 2.0, Online, Germany, July 2021.
- Redaelli, E.: Molecular fractionation in low-mass star forming regions. Contributed Talk, EAS annual meeting, Online, Germany, July 2021.
- Redaelli, E.: Molecular fractionation in star forming regions. Colloquium, Laura Bassi series - INAF, Online - Padova, Italy, June 2021.
- Salvato, M.: An update on eROSITA. Invited Talk, Accretion History of AGN (AHA) workshop, Virtual, USA, January 2021.
- Salvato, M.: eROSITA contribution to AGN studies. Colloquium, Leibniz Institute Astrophysics (former AIP), Potsdam, Germany, February 2021.
- Salvato, M.: Identification of counterparts to X-ray sources using Machine Learning (but not only). Invited Talk, Chandra data science workshop, Virtual, USA, August 2021.
- Salvato, M.: The eROSITA Final Equatorial-Depth Survey (eFEDS): an unprecedented test bench for AGN studies. Contributed Talk, EAS2021, Virtual, June/July 2021.
- Salvato, M.: The eROSITA Final Equatorial-Depth Survey (eFEDS). Contributed Talk, Supermassive Black Hole Studies with the Legacy Survey of Space and Time 2021, Virtual, July 2021.
- Salvato, M.: Active Galactic Nuclei and the 7 X-ray eyes of eROSITA. Colloquium, St. Andrew University, St. Andrew, UK, November 2021.
- Salvato, M.: Synergies between eROSITA and other observatories. Invited Talk, EAS2021 (Press Conference dedicated to the eROSITA EDR), Virtual, Virtual, June/ July 2021.
- Sanchez, A.: The correct interpretation of RSD measurements. Invited Talk, Cambridge-LMU cosmology workshop, remote, January 2021.
- Sanchez, A.: Let us bury the prehistoric h: arguments against using Mpc/h. Invited Talk, 16th Marcel Grossmann meeting, remote, July 2021.
- Sanchez, A.: Evolution mapping: a new approach to describe non-linear. Colloquium, Cosmology Seminar, MPA Garching, remote, September 2021.
- Sanchez, A.: Evolution mapping: a new approach to describe non-linear. Invited Talk, Modern statistics of cosmic structure series, USM, Munich, October 2021.
- Sanders, J.: New results on galaxy clusters from the eROSITA early data release. Colloquium, Institute of Astronomy, Cambridge (Virtual), UK, June 2021.
- Segura-Cox, D.: Starting Early: Embedded Disks Jumpstart Planet Formation. Colloquium, University of Illinois Department of Astronomy, Urbana, USA, March 2021.
- Segura-Cox, D.: A ringed Class I dust disk accretes envelope material via an accretion streamer. Contributed Talk, From Core to Disk 2, Orsay, France, May 2021.
- Segura-Cox, D.: Starting Sooner: Streamers could Jumpstart Planet Formation in Embedded Disks. Invited Talk, European Astronomical Society (EAS) Annual Meeting 2021, Leiden, Netherlands, June 2021.
- Seppi, R.: The mass function dependence on the dynamical state of dark matter haloes. Contributed Talk, A multi-wavelength view of galaxy clusters: deriving masses in the era of wide-field surveys, Virtual, September 2021.
- Seppi, R.: The mass function dependence on the dynamical state of dark matter haloes. Contributed Talk, UK NAM 2021, University of Bath, UK, virtual, July 2021.

- Shangguan, J.: GRAVITY results on Active Galactic Nuclei. Colloquium, Virtual Seminar at University of Hertfordshire, Hertfordshire, UK, Virtual Meeting, January 2021.
- Shangguan, J.: Probing the active supermassive black hole with VLTI/GRAVITY. Contributed Talk, AG2021, Virtual Meeting, September 2021.
- Shangguan, J.: Resolving the Active Galactic Nuclei with VLTI/GRAVITY. Contributed Talk, EAS2021, Leiden, Netherlands, Virtual Meeting, June 2021.
- Shangguan, J.: Science of VLTI/GRAVITY near-infrared interferometer and the studies of luminous AGNs. Colloquium, British Columbia Galaxy Summer Seminars, Virtual Meeting, June 2021.
- Shimizu, T.: Probing AGN and Feedback with VLTI/ GRAVITY. Contributed Talk, EAS 2021, Leiden, virtual, June 2021.
- Shimizu, T.: GRAVITY+: A Cosmic Evolution Explorer. Invited Talk, EAS 2021, Leiden, virtual, June 2021.
- Shimizu, T.: GRAVITY+: A Cosmic Evolution Explorer. Invited Talk, GRAVITY+ Community Workshop, Garching, virtual, February 2021.
- Shimizu, T.: Resolving the Sub-parsec Structure of AGN with VLTI/GRAVITY. Colloquium, International AGN Seminar Series, Washington D.C., U.S.A., June 2021.
- Sipilä, O.: A Revised Description of the Cosmic Ray- Induced Desorption of Interstellar Ices. Contributed Talk, EAS21 SS15: Molecules in starless and pre-stellar cores, online, July 2021.
- Sipilä, O.: A Revised Description of the Cosmic Ray- Induced Desorption of Interstellar Ices. Contributed Talk, Astrochemical Frontiers 2021, online, July 2021.
- Spezzano, S.: Chemical complexity at the dawn of star formation. Colloquium, Institute Seminar, Heraklion, Crete, March 2021.
- Spezzano, S.: Methanol GEMS: An extensive study on methanol towards starless cores in the Taurus Molecular Cloud. Contributed Talk, Astrochemical Frontiers, online, July 2021.
- Spezzano, S.: H₂CS deuteration maps towards the pre-stellar core L1544. Contributed Talk, SOFIA workshop, online, June 2021.
- Stadler, J.: Imaging @ GRAVITY. Invited Talk, ESO VLTI image reconstruction coordination meeting, Garching, Germany, April 2021.
- Straub, O.: GR with GRAVITY: latest news from the Galactic Centre. Invited Talk, The 11th "Accretion disk and relativistic astrophysics" meeting, Bremen, Germany, June 2021.
- Straub, O.: GRAVITY: General Relativity in the Galactic Centre. Invited Talk, Hertfordshire, UK, June 2021.
- Straub, O.: GRAVITY: Optical/IR Interferometry and General Relativity in the Galactic Centre. Invited Talk, 16th Marcel Grossmann Meeting, Rome, Italy, July 2021.
- Subramanian, S.: INODE for Astrophysics: SDSS Database. Invited Talk, International INODE EOSC Workshop 2021, remote, may 2021.
- Tacconi, L. J.: The Evolution of the Star Forming Interstellar Medium Across Cosmic Time. Colloquium, Paris (remote via zoom), France, November 2021.
- Tacconi, L. J.: European Leadership in Space Science. Invited Talk, Meeting of the Expert Group on the Future of Space in Europe, Frascati, Italy, July 2021.
- Tacconi, L. J.: Voyage 2050 Recommendations. Invited Talk, ESA Science Programme Committee Meeting, Virtual meeting, Virtual meeting, June 2021.
- Tacconi, L. J.: The Evolution of the Star Forming Interstellar Medium Across Cosmic Time. Colloquium, Hebrew University, Jerusalem (virtual presentation), Israel, May 2021.
- Tacconi, L. J.: The Evolution of the Star Forming Interstellar Medium Across Cosmic Time. Colloquium, Munich Joint Astronomy Colloquium, Garching, Germany, January 2021.
- Übler, H.: Nobelpreis für Physik 2020. Public Talk, Nobelpreis-Matinee 2021, Lindau, Germany, January 2021.
- Valdivia Mena, M. T.: River in the sky: a streamer feeding a Class I protostar. Contributed Talk, European Astronomical Society Annual Meeting, Leiden, The Netherlands, June 2021.
- Valdivia Mena, M. T.: A Class I protostar with a high streamer mass infall rate. Contributed Talk, Gaps, Rings, Spirals, and Vortices: Structure Formation in Planet-Forming Disks / Miapp Conference, Garching, Germany, October 2021.
- van Dishoeck, E.: Our Origins in Space. Public Talk, Late night conference series, Nijmegen, Netherlands, January 2021.
- van Dishoeck, E.: Our Origins in Space. Invited Talk, Prix Jules Janssen lecture, Societe astronomique de France, Paris, France, January 2021.
- van Dishoeck, E.: Our Origins in Space. Invited Talk, Origins conference, Groningen, Netherlands, January 2021.
- van Dishoeck, E.: Our Origins in Space. Public Talk, European Network of Science Centres and Museums (Ecsite) annual conference, Brussels, Belgium, June 2021.
- van Dishoeck, E.: Zooming into planet-forming zones of disks with ALMA. Colloquium, Golden Jubilee talk, Indian Institute of Astrophysics, Bangalore (virtual), India, March 2021.
- van Dishoeck, E.: Zooming into planet-forming zones of disks with ALMA. Colloquium, Physics Dept., Drexel University, Philadelphia (virtual), USA, February 2021.
- van Dishoeck, E.: Zooming into planet-forming zones of disks with ALMA. Colloquium, Astronomy Dept., Tel Aviv University, Tel Aviv (virtual), Israel, February 2021.
- van Dishoeck, E.: Zooming into planet-forming zones of disks with ALMA. Colloquium, Astronomy Dept., Yale Uni-

versity, New Haven (virtual), USA, October 2021.

van Dishoeck, E.: Astrochemistry of diffuse and dense gas: some basics and recent results. Invited Talk, ISM2021 meeting, Beirut (virtual), Lebanon, May 2021.

van Dishoeck, E.: Astrochemistry and the formation of planetary systems. Invited Talk, Symposium in honor of Catherine Cesarsky, Paris (virtual), France, June 2021.

van Dishoeck, E.: The journey of water and complex molecules from clouds to planets. Public Talk, Golden Webinar seminar, Santiago (virtual), Chile, July 2021.

van Dishoeck, E.: Molecular processes in UHV between the stars. Invited Talk, 2nd Faraday Joint Interest Group meeting on Astrochemistry, Sheffield (virtual), UK, March 2021.

van Dishoeck, E.: Molecular processes in UHV between the stars. Invited Talk, American Vacuum Society meeting, Charlotte (virtual), USA, October 2021.

van Dishoeck, E.: Observing simple and complex molecules in space. Invited Talk, Intercat meeting, Sandbjerg, Denmark, September 2021.

van Dishoeck, E.: Deciphering protoplanetary disks: step by step. Invited Talk, Perspective talk, MIAPP meeting on Structure Formation in Planet-forming Disks, Garching, Germany, October 2021.

van Dishoeck, E.: Building stars, planets and the ingredients for life in space. Invited Talk, Kylafis Prize lecture, University of Crete, Heraklion, Greece, October 2021.

van Dishoeck, E.: Synergies and challenges of ground and space astronomy. Invited Talk, ISSI Forum meeting, Bern, Switzerland, November 2021.

van Dishoeck, E.: Nieuwe Werelden, nieuwe perspectieven. Public Talk, Annual lecture, Koninklijke Hollandsche Maatschappij der Wetenschappen, Haarlem (virtual), Netherlands, May 2021.

van Dishoeck, E.: things we have never seen: the James Webb Space Telescope explores the cosmos. Public Talk, World Science Festival forum, New York (virtual), USA, December 2021.

van Dishoeck, E.: JWST: een nieuwe ontdekkingsreis. Public Talk, Omniversum Planetarium, The Hague, Netherlands, November 2021.

van Dishoeck, E.: Building stars, planets and the ingredients for life in space. Public Talk, Arago Lustrum symposium, Enschede, Netherlands, May 2021.

van Dishoeck, E.: Building stars, planets and the ingredients for life in space. Public Talk, Descartes College, Utrecht, Netherlands, November 2021.

van Dishoeck, E.: Life, the Universe and Everything!. Public Talk, Studium Generale, Eindhoven, Netherlands, September 2021.

van Dishoeck, E.: Where does the water on Earth come from?. Public Talk, Public talk, Beirut (virtual), Lebanon, May 2021.

van Dishoeck, E.: The IAU Today. Invited Talk, Historical, Cultural and Scientific Heritage of Astromical Observatories, Kazan (virtual), Russia, April 2021.

van Dishoeck, E.: IAU100: Hundred years under one Sky. Public Talk, Communicating Astronomy to the Public Conference, Paris (virtual), France, May 2021.

van Dishoeck, E.: Women in Astronomy and the IAU. Public Talk, University of Crete, Heraklion, Greece, October 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Colloquium, LSST Cluster cosmology working group, April 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Colloquium, MPE OPINAS Seminar, MPE Garching, March 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Colloquium, Excellence Cluster ORIGINS RU-C Science Day, February 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Colloquium, Cambridge-LMU Collaboration Meeting, January 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Contributed Talk, LSST-DESC Cluster working group telecon in-kind contribution update 2021, September 2021.

Varga, T.: Synthetic Galaxy Clusters and Images from DES Y3. Contributed Talk, LSST-DESC CSS working group telecon in-kind contribution update 2021, October 2021.

Varga, T.: Update on DES Y3 Cluster weak lensing measurement pipeline. Colloquium, DES Cluster working group, February 2021.

Varga, T.: Project pitch: Weak lensing mass feature importance analysis for DES Y3 Galaxy clusters. Colloquium, DES Cluster working group, March 2021.

Varga, T.: Update on Weak lensing mass feature importance analysis for DES Y3 galaxy clusters. Colloquium, DES Cluster working group, July 2021.

Varga, T.: Update on Weak lensing mass feature importance analysis for DES Y3 galaxy clusters. Colloquium, DES Cluster working group, November 2021.

von Kienlin, A.: Das hochenergetische Universum. Public Talk, Fortbildungsveranstaltung „Fachschaftsleitungsstagung Physik“, R L F B Mittelfranken, Nürnberg, Germany, October 2021.

von Kienlin, A.: A Decade of Gamma-ray Bursts Observed by Fermi-GBM. Contributed Talk, Ninth International Fermi Symposium, Virtual Conference, Germany, April 2021.

Widmann, F.: The GRAVITY instrument and its science results. Invited Talk, VLT Summer School, online, June 2021.

Wylie, S.M. Abundance maps of the Milky Way's b/p bulge and long bar using the combined A2A and APOGEE surveys. Colloquium, Workshop Heidelberg, Heidelberg, 2021

Dissertationen

Arcodia, R.: Accretion onto black holes across the mass scale. Ludwig Maximilian University, 2021.

Ider Chitham, J. (2021). Galaxy cluster identification with eRosita in the era of big data. PhD Thesis, Ludwig Maximilians Universität München, München, Germany.

Kaltenbrunner, D.: A comprehensive Study of Molecular Gas near Active Galactic Nuclei. MPE, 2021.

Lippich, M.: On unbiased and higher-order large-scale structure statistics: Covariance Matrices and Minkowski Functionals. Max-Planck-Institute for Extraterrestrial Physics, 2021.

Malyali, A.: The transient X-ray sky of eROSITA: from prediction, through observation, to interpretation. Max Planck Institute for Extraterrestrial Physics, 2021.

Pulsoni, C.: Stellar halos of massive galaxies: morphology, kinematics, and cosmological origin. Ludwig-Maximilians-Universität München, 2021.

von Fellenberg, S.: Probing the accretion physics of Sgr A*. MPE, 2022.

Masterarbeiten

Blumhoff, M.: 2D stellar kinematics of (barred) disk galaxies. LMU, 2021.

Bolzer, M.-L.: Upgrading a VLTI beam compressor into a differential delay line. Max Planck Institute for Extraterrestrial Physics, 2021.

Drescher, A.: First Observations with GRAVITY Wide. Max Planck Institute for Extraterrestrial Physics, 2021.

Giers, Katharina: Deuteration of $c\text{-C}_3\text{H}_2$ towards the pre-stellar core L1544. MPE, 2021.

Gonzales, J.: Stacking the Spectra of eROSITA Galaxy Cluster Data for Searches of the 3.5keV line: Dark Matter Decay or Charge Exchange?. MPE/LMU, 12.2021.

Grau, Marco: The eROSITA Final Equatorial-Depth Survey (eFEDS): optical spectroscopy of the counterparts to the point-like sources. MPE, 2021.

Haase, M.: Control Electronics Development for GRAVITY+ Wavefront Sensors. TU München, 2021.

Kaltenbrunner, D.: A comprehensive Study of Molecular Gas near Active Galactic Nuclei. Max-Planck-Institut für extraterrestrische Physik, 2021.

Ozsoy, Y.: Finding Superclusters with eROSITA. MPE/LMU, 10.2021.

Scheck, D.: Mass Profiles of Galaxy Clusters in the eROSITA Survey. Technical University of Munich, 2021.

Wimmer, L.: Investigation of Collective Complex Plasma Phenomena with PK-4. Max Planck Institute for Extraterrestrial Physics, 2021.

Young, A.: Determining stellar accelerations in the regime of the clockwise disk in the Galactic Center. Institute for Extraterrestrial Physics, 2021.

Bachelorarbeiten

Ecker, L.: The mass of the supermassive black hole of the BCGs of Abell 498/592. Albert-Ludwig Universität Freiburg, 2021.

Haubold, T.: Atmosphärenphysik von Exoplaneten. LMU, 2021.

Loebbecke, M.: Massenbestimmung von supermassiven schwarzen Löchern und Korrelationen. LMU, 2021.

Perez de Lema Ezcurra, M.: Supermassereiche schwarze Löcher in aktivn Galaxienkernen und ihre Charakterisierung mittels H_2O -Maser Emissionen. LMU, 2021.

Wiertel, M.: Massenbestimmung supermassiver schwarzen Löcher. Karlsruher Institut für Technologie, 2021.

Yasar, D.: Phaenomene bei Naehrung von Sternen an supermassive schwarze Löcher. LMU, 2021.

Kollaborationen / Wissenstransfer

Wissenschaftliche Kollaborationen nach Ländern



Belgien

Katholieke Universiteit Leuven, Leuven: GRAVITY+.

Brasilien

Universidade Federal de Minas Gerais, Belo Horizonte: CAS-Observations.

Canada

University of Toronto, Toronto: CAS-Theory.

Chile

ESO, Joint ALMA Observatory, Santiago de Chile: CAS-Observations; SBNF.

Universidad de Chile, Santiago de Chile: CAS-Observations.

Universidad de Concepcion: Max-Planck-Partnergruppe Baryonischer Zyklus in Galaxien; Röntgen-Doppelsternsysteme; CAS-Observations; Galaxienentwicklung.

Universidad Catolica Santiago, Santiago de Chile: Röntgen-Doppelsternsysteme; Max-Planck-Partnergruppe Galaktisches Zentrum.

Universidad Diego Portales, Santiago de Chile: CAS-Observations.

China

Donghua University, Shanghai: CAS-Theory.

Institute for High-Energy Physics (IHEP), Peking: Gammaquellen mit COMPTEL und INTEGRAL; Einstein Probe; eXTP.

Nanjing University, Nanjing: CAS-Observations.

National Astronomical Observatories of China, Peking: PFS; CAS-Observations, CAS-Theory.

Kavli Institute for Astronomy and Astrophysics at Peking University, Peking: PFS.

Shanghai Jiao Tong University, Shanghai: PFS.

Tsinghua University, Peking: PFS.

University of Hongkong, Hongkong: Strahlungsmechanismen von Pulsaren im Röntgen- und Gammabereich.

University of Science and Technology of China, Hefei: PFS.

Xiamen University, Xiamen: PFS.

Xinjiang Astronomical Observatory, Ürümqi: CAS-Theory.

Dänemark

Dänemarks Technische Universität, Lyngby: ATHENA.

Niels Bohr Institute, University of Copenhagen: CAS-Theory.

Deutschland

Astrophysikalisches Institut Potsdam, Potsdam: eROSITA; XMMNewton; OPTIMA; ARGOS; HETDEX; 4MOST.

Deutsches Elektronen-Synchrotron, Hamburg: CAS-Laboratory.

European Southern Observatory (ESO), Garching: GRAVITY; GRAVITY+; Galaxienentstehung; Nukleare Astrophysik; MICADO; ERIS; Black Hole Cam; Infrared Dark Clouds; CAS-Observations; CAS-Theory.

Fraunhofer Institut für Integrierte Schaltungen, Erlangen: Mikroelektronikentwicklungen; ATHENA.

Fraunhofer Institut for Computer Graphics Research IGD, Darmstadt: IODE.

Heinrich-Heine-Universität, Düsseldorf: Soft Matter Physics.

Institut für Astronomie und Astrophysik Tübingen (IAAT), Tübingen: XMM-Newton; eROSITA; ATHENA; SBO-DS.

Institut für Astrophysik Göttingen, Göttingen: MICADO.

Institut für Festkörperphysik und Werkstoff-Forschung, Dresden: Entwicklung weichmagnetischer Werkstoffe.

Institut für Materialphysik im Weltraum, Köln: Glasübergänge.

Landessternwarte Heidelberg-Königstuhl, Heidelberg:

Galaxienentstehung; ARGOS.

Laser Zentrum Hannover, Hannover: Dichroics for ARGOS; Anti-Reflection Coating ERIS.

Ludwig-Maximilians-Universität, München: MICADO; HETDEX; eROSITA; CAS-Theory.

Max-Planck-Institut für Astronomie, Heidelberg: GRAVITY; GRAVITY+; PanSTARRS; SDSS; ARGOS; MICADO; EUCLID; CAS-Theory.

Max-Planck-Institut für Astrophysik, Garching: SDSS; OPTIMA; eROSITA; PFS.

Max-Planck-Institut für Gravitationsphysik, Potsdam: Black Hole Cam.

Max-Planck-Institut für Physik, Werner Heisenberg Institut, München: MPG Halbleiterlabor; Athena.

Max-Planck-Institut für Radioastronomie, Bonn: ARGOS; Black Hole Cam; CAS-Observations; CAS-Theory.

Physikalisch-Technische Bundesanstalt Berlin, Berlin: eROSITA.

Technische Universität Berlin, Berlin: Interstellares Medium.

Technische Universität Darmstadt, Darmstadt: CAST.

Technische Universität München, München: Nukleare Astrophysik; ESBO-DS.

Thüringer Landessternwarte Tautenburg, Tautenburg: GROND; Gamma-Ray Bursts.

Universität Bonn, Bonn: ATHENA; eROSITA; EUCLID; CAS-Observations.

Universität der Bundeswehr, München: SBNAF.

Universität Düsseldorf, Düsseldorf: ERC Advanced Grant; CAS-Theory.

Universität Erlangen (ECAP), Erlangen: eROSITA; ATHENA.

Universität Hamburg, Hamburg: eROSITA; OPTIMA (Flarestars).

Universität Heidelberg, Heidelberg: ATHENA; XFEL; CAS-Theory.

Universität Jena, Jena: Isolierte Neutronensterne; Nukleare Astrophysik.

Universität Kassel, Kassel: CAS-Observations, CAS-Laboratory.

Universität Köln, Köln: Galaktisches Zentrum; GRAVITY; GRAVITY+; CAS-Observations; CAS-Theory; CAS-Laboratory.

Universität Mannheim, Mannheim: ATHENA; XFEL.

Universität Stuttgart, Stuttgart: ESBO-DS.

Universität Würzburg, Würzburg: AGADE.

Finnland

University of Helsinki, Helsinki: CAS-Theory; CAS-Observations.

University of Turku - Finnish Centre for Astronomy with ESO (FINCA), Turku: MICADO.

Frankreich

Aix-Marseille University, Marseille: CAS-Theory.

CEA, Saclay: INTEGRAL-Spektrometer SPI; EUCLID; SVOM; ATHENA.

Centre d'Etude Spatiale des Rayonnements (UPS), Toulouse: INTEGRAL-Spektrometer SPI; CAS-Observations.

Centre National de la Recherche Scientifique, Paris: IN-ODE.

IAP, Paris: Nukleare Astrophysik.

IPAG, Grenoble: GRAVITY; GRAVITY+; MICADO; CAS-Observations; CAS-Theory.

IRAM, Grenoble: CAS-Observations.

IRAM, Saint-Martin-d'Hères: CAS-Observations; Galaxienentstehung.

Laboratoire d'Astrophysique de Marseille (LAM), Marseille: EUCLID; Gamma-Ray Bursts; PFS; CAS-Observations.

Laboratoire Univers et Particules de Montpellier, Montpellier: Cosmic-ray propagation in molecular clouds.

Observatoire astronomique de Strasbourg, Strasbourg, ATHENA.

Observatoire de la Côte d'Azur Nice (OCA), Nizza: GRAVITY+.

Observatoire de Paris (GEPI), Paris: MICADO; GRAVITY.

Observatoire de Paris (LERMA), Paris: CAS-Theory.

Observatoire de Paris (LESIA), Paris: MICADO; GRAVITY.

Observatoire de Paris-Meudon, Paris: GRAVITY; GRAVITY+, Galaktisches Zentrum.

SOLEIL Synchrotron (AILES beamline), Saint-Aubin: CAS-Laboratory.

Universität de Bordeaux, Bordeaux: CAS-Theory.

Université de Cergy-Pontoise, Cergy Pontoise Cedex: CAS-Observations.

Université de Franche-Comté (UTINAM), Besançon: MICADO

Université de Lyon (CRAL), Lyon: GRAVITY+; CAS-Observations.

Université de Rennes, Rennes: CAS-Laboratory; CAS-Observations.

Université de Toulouse, Toulouse: CAS-Observations; CAS-Laboratory.

Université Paris Diderot, Paris: CAS-Observations.

Université Paris-Saclay, Saclay: CAS-Laboratory; CAS-Observations.

Griechenland

ATHENA RC, Research and Innovation Centre in Information, Communication and Knowledge Technologies, Athen: INODE.

Infili Technologies, Athen: INODE.

University of Crete and Foundation for Research and Technology Hellas (FORTH), Heraklion: Röntgendoppelsternsysteme; OPTIMA Photometer; Röntgen-AGN.

National Observatory of Athens, Athen: Athena; eROSITA.

Großbritannien

John Moores University, Liverpool: Himmelsdurchmusterung Galaxienhaufen; Infrared Dark Clouds; CAS-Observations.

Open University, Milton Keynes: Kataklysmische Variablen; Novae; ATHENA.

Queen's University, Belfast: PanSTARRS.

Queen Mary University of London, London, UK: CAS-Observations; CAS-Theory.

Rutherford Appleton Laboratory, Council for the Central Laboratory of the Research Councils, Swindon: SIS-Junctions.

SKA Organisation, Jodrell Bank Observatory, Macclesfield: CAS-Observations.

United Kingdom Astronomy Technology Centre (UKATC), Edinburgh: EUCLID; ERIS.

University of Cambridge, Cambridge: DES; CAS-Theory.
 University College London, London: High Energy Pulsars; EUCLID; DES; CAS-Observations.
 University of Durham, Durham: PanSTARRS.
 University of Edinburgh, Edinburgh: DES; PanSTARRS.
 University of Leeds, Leeds: CAS-Theory.
 University of Leicester, Leicester: XMM-Newton; ATHE-NA; Swift.
 University of Nottingham, Nottingham: DES.
 University of Portsmouth, Portsmouth: DES.
 University of Sussex, Brighton: DES.
 University of Southampton, Southampton: GRAVITY+; Magellanic Clouds.

Indien

Tata Institute of Fundamental Research, Mumbai: CAS-Observations.

Irak

University of AL-Muthanna, AL-Muthanna: CAS-Observations.

Irland

National University of Ireland, Galway: High Time Resolution Astronomy; CAS-Theory.
 University College Dublin: Fermi/GBM.

Israel

School of Physics and Astronomy, Wise Observatory, Tel Aviv: Aktive Galaxien; Interstellares Medium; Galaxienentwicklung.

Italien

Free University of Bozen-Bolzano, Bozen: INODE.
 IFCAI-CNR Palermo, Palermo: XMM-Newton Beobachtungen von Neutronensternen und Pulsaren.
 INAF (Istituto Nazionale di Astrofisica), Rom: ATHENA; EUCLID.
 INAF Arcetri, Florenz: ARGOS; LBT; ERIS; CAS-Observations; CAS-Theory.
 INAF Padua, Padua: LBT; MICADO; ERIS.
 INAF Roma, Rom: LBT; Nukleare Astrophysik.
 INAF Teramo, Teramo: ERIS.
 INAF Trieste, Triest: Gamma-Ray Bursts; Fermi/LAT.
 INFN Frascati, Frascati: SIDDHARTA.
 Osservatorio Astronomico di Brera, Brera: Himmelsdurchmusterung Galaxienhaufen.
 Osservatorio Astrofisico di Catania, Catania: CAS-Theory; CAS-Laboratory.
 Scuola Normale Superiore, Pisa: CAS-Observations.
 Università degli Studi di Firenze, Florenz: CAS-Observations; CAS-Theory.
 Università degli Studi di Milano, Mailand: CAS-Observations.
 Università degli Studi di Torino, Turin: CAS-Observations.
 Università di Bologna, Bologna: EUCLID; CAS-Theory; CAS-Laboratory; CAS-Observations.
 Università di Perugia, Perugia: CAS-Observations.

Japan

Academia Sinica, Nangang: PFS.

Kavli Institute for the Physics and Mathematics of the Universe, Kashiwa: PFS.

Kobe University, Kobe: CAS-Theory.

National Astronomical Observatory of Japan, Mitaka/Tokio: CAS-Theory; CAS-Observations; Galaxienentwicklung; PFS.

Institute of Physical and Chemical Research, Saitama: CAS-Observations.

Japan Aerospace Exploration Agency, Sagami-hara, Kanagawa: SBNAF.

Tokio Institute of Technology (TITECH), Ookayama: ASCA/XMM-Newton Beobachtungen von AGN.

University of Osaka, Osaka: Astro-H.

University of Tokyo, Tokyo: PFS; CAS-Observations.

University of Tokyo, Institutes for Advanced Study (UTIAS), Tokyo: PFS.

Tohoku University, Sendai: Galaxienentwicklung.

Lettland

Ventspils University College, Ventspils: CAS-Theory.

Mexiko

Universidad Nacional Autonoma de México, Ensenada: CAS-Observations.

Niederlande

ESTEC, Noordwijk: XMM-Newton; INTEGRAL; EUCLID; ATHENA; eROSITA.

JIVE Dwingeloo, Dwingeloo: Black Hole Cam.

NOVA (Leiden, Groningen, ASTRON/Dwingeloo, Amsterdam): MICADO; ERIS.

Leiden University, Leiden: CAS-Observations; CAS-Theory; IR/Submm Spectroscopy.

Radboud University, Nijmegen: Black Hole Cam; CAS-Laboratory.

SRON, Utrecht: Chandra-LETG.

University of Groningen, Kapteyn Institute, Groningen: Rekonstruktion der Dichteverteilung im Universum; EUCLID; Dynamical-Chemical Models; CAS-Theory; CAS-Observations.

Österreich

Institut für Weltraumforschung, Graz: ATHENA WFI.

Universität und TU Wien: MICADO; ATHENA.

Universität Innsbruck: MICADO.

Universität Linz: MICADO.

RICAM Linz: MICADO.

Polen

Nicolaus Copernicus University, Torun: Pulsars Astronomical Centers; ATHENA.

Space Research Center (CBK), Warschau: ATHENA WFI.

Astronomical Observatory Institute, Poznań: SBNAF.

University Zielona Gora: OPTIMA.

Portugal

CENTRA Lissabon und Porto, Lissabon: GRAVITY; GRAVITY+.

Osservatorio Astronomico de Lisboa, Lissabon: ATHENA.

Universidade de Coimbra, Coimbra: Departamento de Engenharia Química: CAS-Laboratory.

Russland

Baumann Moscow State Technical University, Moskau: Stark gekoppelte Systeme; Time-domain spectroscopy; CAS-Theory; CAS-Laboratory.

Institute of Astronomy, Moskau: CAS-Theory.

Lebedev Institute of Physics, Moskau: CAS-Theory.

Prokhorov General Physics Institute, Moskau: CAS-Laboratory.

Space Research Institute (IKI) of the Russian Academy of Science, Moskau: eROSITA/Spektrum Röntgen-Gamma.

Skobeltsyn Institute of Nuclear Physics, Moskau: Nukleare Astrophysik; Gamma-Ray Bursts; AGADE.

Ural Federal University, Jekaterinburg: CAS-Theory.

Schweden

Chalmers University of Technology, Onsala Space Observatory, Onsala: CAS-Observations.

University Lund/Observatory, Lund: OPTIMA.

Schweiz

CERN, Geneva: CAST.

ETH Zürich, Zürich: ERIS.

Observatoire de Genève Sauverny, Genf: ISDC/INTEGRAL; Nukleare Astrophysik; EUCLID.

Swiss Institute of Bioinformatics, Lausanne: INODE.

Universität Basel, Basel: Nukleare Astrophysik.

University of Geneva, Genf: ATHENA.

University of Zurich, Zürich: Infrared Dark Clouds.

Zürcher Hochschule für Angewandte Wissenschaften, Zürich: INODE.

Spanien

Centro de Investigaciones Energeticas, Medioambientales y Tecnológicas, Madrid: DES.

Centro de Astrobiología (CSIC/INTA), Madrid: CAS-Laboratory.

ESAC, Madrid: XMM-Newton Science Operations Center; INTEGRAL Science Operations Center; Herschel; Euclid; SBNAF.

Instituto de Astrofísica de Andalucía (IAA), Granada: SBNAF; ESBO-DS.

Instituto de Astrofísica de Canarias, La Laguna: SBNAF.

Instituto de Ciencias del Espacio, Bellaterra: DES.

Instituto de Ciències de l'Espai, Cerdanyola del Vallès: CAS-Observations.

Institut de Física d'Altes Energies, Barcelona: DES; EUCLID.

Javalambre Physics of the Accelerating Universe Astrophysical Survey (J-PAS), Javalambre: eROSITA follow up.

SIRIS Academic SL, Barcelona: INODE.

Universitat Autònoma de Barcelona, Bellaterra: CAS-Observations.

Universidad de Valencia, Department de Astronomia, Valencia: INTEGRAL-Spektrometer SPI.

Universidad de Zaragoza, Zaragoza: CAST.

Observatorio Astronómico de Mallorca, Costitx: Novae; Kometen.

Observatorio Astronómico Nacional, Madrid: CAS-Observations.

South Korea

Seoul National University, Seoul: Hayabusa-2.

Taiwan

Academia Sinica Institute of Astronomy and Astrophysics (ASIAA), Taipei: CAS-Theory; CAS-Observations; PFS.

National Central University, Chungli; PanSTARRS.

Tschechien

Charles University, Prague: SBNAF; Hayabusa-2.

Ungarn

Konkoly Observatory of the Hungarian Academy of Sciences, Budapest: SBNAF; CAS-Observations; CAS-Theory.

Institute for Nuclear Research (ATOMKI), Debrecen: CAS-Laboratory.

USA

Argonne National Laboratory, Lemont: DES.

Brookhaven National Laboratory, Upton: strahlenharte JFETelektronik; strahlenharte Detektoren.

Benedictine College, Atchison: CAS-Theory.

California Inst. of Technology, Pasadena: X-ray Survey; PFS.

CfA, Cambridge: ATHENA/WFI; XMM-Newton/Chandra Kalibration.

Clemson University, Clemson: Gamma-Ray Bursts; Nukleare Astrophysik.

Fermilab, Batavia: DES.

Harvard University, Cambridge: PanSTARRS.

Harvard-Smithsonian Center for Astrophysics, Cambridge: CAS-Observations; CAS-Laboratory; CAS-Theory.

Institute for Astronomy, Hawaii, Honolulu: Galaxienentstehung; PanSTARRS; NIR Kamera für Wendelstein.

Johns Hopkins University, Baltimore: PanSTARRS; PFS.

Marshall Space Flight Center, Huntsville: Fermi Gamma-Ray Burst Monitor; XMM-Newton und Chandra Beobachtungen von Neutronensternen, Pulsaren und Supernova-Überresten.

MIT, Cambridge: ATHENA WFI.

NASA/Ames Research Center, Mofett Field (CA): MHD Shocks; SBNAF.

NASA/Goddard Space Flight Center, Greenbelt (MD): INTEGRAL-Spektrometer SPI; Swift.

NASA/Jet Propulsion Laboratory, Pasadena: EUCLID; PFS; CAS-Observations.

National Radio Astronomy Observatory, Charlottesville: CAS-Theory; CAS-Observations.

National Radio Astronomy Observatory, Socorro, New Mexico: CAS-Observations.

National Science Foundation, Arlington: CAS-Observations.

NOAO, Tucson: DES.

Ohio State University, Columbus: DES; LBT.

Pacific Northwest National Laboratory (PNNL), Richland: CAST.

Pennsylvania State University, State College: HETDEX; Swift; ATHENA.

Princeton University, Princeton: PFS; CAS-Theory.

Research Corporation, Tucson: LBT.

San Jose State University, San Jose: MHD shocks.

SLAC, Stanford: CAMP; DES; ATHENA.

Smithsonian Astrophysical Observatory, Cambridge: Chandra-LETGS; PanSTARRS; Röntgendoppelsterne in M31; Athena.

Space Telescope Science Institute, Baltimore: Galaxienentstehung; PanSTARRS; Turbulence; SBNF.

Stanford University, Stanford: DES; Fermi/LAT; Fermi/GBM.

Texas A & M University, College Station: DES; SBNF.

Texas State University, San Marcos: HETDEX.

University of Arizona, Tucson: Kosmische Strahlung; Planetenentstehung; LBT; ARGOS; CAS-Observations; CAS-Theory.

University of California, Berkeley: MPG/UCB-Kollaboration; FAST; INTEGRAL-Spektrometer SPI; Superbubbles.

University of California, Santa Cruz: DES.

University of Chicago, Chicago: CAS-Observations; DES.

University of Colorado, Boulder (Co): Superbubbles; CAS-Observations; Galaxienkerne.

University of Florida, Gainesville: Infrared Dark Clouds.

University of Hawaii, Honolulu, Hawaii: CAS-Theory.

University of Illinois, Urbana-Champaign: DES.

University of Massachusetts, Amherst: CAS-Observations.

University of Michigan, Ann Arbor: DES.

University of Nevada, Las Vegas: CAS-Observations.

University of Pennsylvania, State College: DES.

University of Pittsburgh, Pittsburgh: Galaxienentstehung.

University of Texas, Austin: Galaxienentstehung; HETDEX, CAS-Theory.

University of Texas, San Antonio: SBNF.

University of Toledo, Toledo: Galaxienentstehung; CAS-Observations.

University of Virginia, Charlottesville: CAS-Theory; CAS-Observations.

University of Wisconsin-Madison, Madison: CAS-Theory.

Yale University, New Haven: CAS-Observations.

Multinationale Kollaborationen - Projekte

ARGOS - Laserleitstern für das LBT: Arcetri Observatory, Italy; AIP, LSW Heidelberg, MPIa, MPIfR, Germany; University of Arizona, USA.

ASPI - The International Wave Consortium: CNR-IFSI Frascati, Italy; LPCE/CNRS Orleans, France; Dept. of Automatic Control and Systems University of Sheffield, UK.

ATHENA - Advanced Telescope for High Energy Astrophysics: Dänemarks Technische Universität, Dänemark; Nikolaus Kopernikus Astronomical Center, Polen; Universität Wien, Österreich; IWF, Graz; INAF Italy, Italy; CEA Frankreich, Frankreich; University of Leicester, Open University, UK; Institut für Astronomie und Astrophysik Tübingen, Erlangen Centre for Astroparticle Physics (ECAP), Germany; ESA; NOA, Greece; Universität Geneva, Schweiz; Institute for Astrophysics, Portugal; Stanford University, USA.

BOSS - Baryon Oscillation Spectroscopic Survey: SDSSIV Collaboration.

Chandra: Marshall Space Flight Center Huntsville, Massachusetts Institute of Technology Cambridge, Smithsonian Astrophysical Observatory Cambridge, USA; Space Research Institute Utrecht, The Netherlands; Universität Hamburg, Germany.

COSMOS - Cosmological Evolution Survey: INAF-Osservatorio Astronomico di Bologna, INAF-Osservatorio Astronomico di Roma, INAF-Osservatorio Astrofisico di Arcetri, INAF/IASF-CNR, Sezione di Milano, IRA-INAF, Bologna, Dipartimento di Astronomia, Università Padova, Dipartimento di Fisica, Università degli Studi Roma Tre, Italy; Harvard-Smithsonian Centre for Astrophysics, Cambridge, Dept. of Physics, Carnegie Mellon University, Pittsburg, Institute for Astronomy, University of Hawaii, California Institute of Technology, Pasadena, Dept. of Astronomy, Yale University, USA; INTEGRAL Science Data Centre, Versoix, Switzerland; Laboratoire d'Astrophysique de Marseille, France.

DES - Dark Energy Survey: LMU München, Excellence Cluster Universe, Germany; The Fermi National Accelerator Laboratory (Fermilab), University of Chicago, NOAO, University of Michigan, University of Pennsylvania, University of Illinois at Urbana-Champaign, Ohio State University, Texas A&M University, University of California Santa Cruz, Stanford University, SLAC National Accelerator Laboratory, The Lawrence Berkeley National Laboratory, Argonne National Laboratory, USA; University College London, University of Cambridge, University of Edinburgh, University of Portsmouth, University of Sussex, University of Nottingham, UK; Observatorio Nacional, Centro Brasileiro de Pesquisas Físicas, Universidade Federal do Rio, Brasilien; Instituto de Ciencias del Espacio, Institut de Física d'Altes Energies, Centro de Investigaciones Energéticas Medioambientales y Tecnológicas, Spain.

eBOSS - SDSS-IV Extended Baryon Oscillation Spectroscopic Survey: Carnegie Mellon University (CMU), University of Colorado Boulder, Harvard-Smithsonian Center for Astrophysics Participation Group, Johns Hopkins Uni-

versity, Kavli Institute for the Physics and Mathematics of the Universe, New Mexico State University, New York University, The Ohio State University, Penn State University, University of Utah, University of Wisconsin, Yale University, USA; Max-Planck-Institut fuer Astrophysik (MPA Garching), Max-Planck-Institut für extraterrestrische Physik (MPE), Max-Planck-Institut für Astronomie (MPIA Heidelberg), Germany; National Astronomical Observatories of China, Shanghai Astronomical Observatory, China; United Kingdom Participation Group, University of Portsmouth, UK.

ERIS - Enhanced Resolution Imager and Spectrograph for the VLT: ESO, Germany; ETH Zürich, Switzerland; INAF Arcetri (with OAA, OATe and OAPd), Italy; UKATC Edinburgh, Scotland; NOVA Leiden, The Netherlands.

EinsteinProbe - Chinese Academy of Science, Institute of High Energy Physics, National Astronomical Observatories, China, ESA.

eROSITA - extended Roentgen Survey with an Imaging Telescope Array: AIP Potsdam, Universität Tübingen, Universität Bonn, Universität Erlangen, Universität Hamburg, Remis-Sternwarte Bamberg, MPA Garching, LMU (USM) München, Germany; IKI Moskau, Russia.

ESBO-DS - European Stratospheric Balloon Observatory - Design Study, EU H2020 project; University of Stuttgart, University of Tübingen, Germany; Swedish Space Corporation, Sweden; Instituto de Astrofísica de Andalucía, Spain.

EUCLID - ESA Mission to map the Dark Energy: ESA; CEA Saclay, LAM, France; University Bologna, INAF, Italy; MSSL, Durham University, UKATC UK; STScI, USA; MPIA Heidelberg, Universität Bonn, Germany.

Fermi/GBM - Fermi Gamma-Ray Burst Monitor: Marshall Space Flight Center Huntsville, University of Huntsville, USA.

Fermi/LAT - Fermi Gamma-Ray Large Area Space Telescope: Stanford University Palo Alto, Naval Research Laboratory Washington DC, Sonoma State University Rohnert Park, Lockheed Martin Corporation Palo Alto, University of California Santa Cruz, University of Chicago, University of Maryland Greenbelt, NASA Ames Research Center Moffett Field, NASA Goddard Space Flight Center for High Energy Astrophysics Greenbelt, Boston University, University of Utah Salt Lake City, University of Washington Seattle, SLAC Particle Astrophysics Group Palo Alto, USA; ICTP and INFN Trieste, Istituto Nazionale di Fisica Nucleare Trieste, Italy; University of Tokyo, Japan; CEA Saclay, France.

GRAVITY - Instrument for VLT Interferometry: MPIA Heidelberg, Universität Köln, ESO Garching, Germany; CENTRA Lisbon and Porto, Portugal; IPAG Grenoble, Observatoire de Paris / Meudon (LESIA), France.

GRAVITY+ - VLT Interferometry upgrade project: MPIA Heidelberg, Universität Köln, ESO Garching, Germany; CENTRA Lisbon and Porto, Portugal; IPAG Grenoble, Ob-

servatoire de Paris / Meudon (LESIA), OCA Nice, CRAL Lyon, France; University of Southampton, UK; KU Leuven, Belgium.

HETDEX - Hobby-Eberly Telescope Dark Energy Experiment: University of Texas, Austin, Pennsylvania State University, Texas A&M University, USA; AIP Potsdam, LMU, USM, Germany.

INODE - Intelligent Open Data Exploration: Zürcher Hochschule für Angewandte Wissenschaften, Athena RC, Research and Innovation Center in Information, Communication and Knowledge Technologies, Fraunhofer Institute for Computer Graphics Research IGD, Infi li Technologies Private Company, Center National de la Recherche Scientifique, SIRIS Academic SL, Swiss Institute of Bioinformatics, Free University of Bozen-Bolzano.

INTAS - Cooperation of Western and Eastern European Scientists: France, Germany, Norway, Russia.

ISDC - INTEGRAL Science Data Centre: Observatoire de Geneva Sauverny, Switzerland; Service d'Astrophysique Centre d'Etudes de Saclay, France; Rutherford Appleton Laboratory Oxon Dept. of Physics University Southampton, UK; Institut für Astronomie und Astrophysik Tübingen Germany; Danish Space Research Institute Lyngby, Denmark; University College Dublin, Ireland; Istituto di Fisica Milano, Istituto die Astrofi sica Spatiale Frascati, Italy; N. Copernikus Astronomical Center Warsaw, oland; Space Research Institute of the Russian Academy of Sciences Moscow, Russia; Laboratory for High Energy Astrophysics GSFC Greenbelt, USA.

INTEGRAL-Spectrometer SPI: Centre d'Etude Spatiale des Rayonnements (CESR) Toulouse, CEA Saclay Gif-sur-Yvette, France; University de Valencia Burjassot, Spain.

LBT - Large Binocular Telescope Project: MPIA Heidelberg, MPIfR Bonn, Landessternwarte Heidelberg Königstuhl, AIP, Germany; University of Arizona, Tucson, Ohio State University, Columbus, Research Corporation, USA; INAF, Italy.

MICADO - Multi-Adaptive Optics Imaging Camera for Deep Observations: ESO, LMU (USM), MPIA Heidelberg, IAG Göttingen, Germany; INAF-OAPD Padova, INAF-OAR Roma, Italy; A* (an Austrian partnership comprising the University of Vienna, the University of Innsbruck, the University of Graz, and the University of Linz [with RICAM Linz]; specific contributions to MICADO come from Vienna/Innsbruck/Linz), Austria; NOVA (a federation several astronomical institutes; specific contributions to MICADO come from the University of Groningen, the University of Leiden, and the NOVA optical/infrared instrumentation group based at ASTRON in Dwingeloo), The Netherlands; CNRS/INSU (representing LESIA and GEPI, Paris, IPAG, Grenoble and UTINAM, Besançon), France; FINCA (University of Turku) Turku, Finland.

MXT - Microchannel X-Ray Telescope for Gamma-Ray Bursts: CEA, Saclay, France; University of Leicester, UK.

OPTIMA: AIP, MPI für Astrophysik, Universität Hamburg, Germany; University of Crete, Greece; University Zielona Gora, Poland; University Lund/Observatory, Schweden.

PanSTARRS - Panoramic Survey Telescope & Rapid Response System: MPIA Heidelberg, Germany, University of Hawaii, Harvard University, Johns Hopkins Univ. Baltimore, MD, USA; Universities of Durham, Edinburgh, Belfast, UK.

PFS - The Subaru Prime Focus Spectrograph Collaboration: Kavli Insitute for the Physics and Mathematics of the Universe, California Institute of Technology, NASA Jet Propulsion Laboratory, Princeton University, Johns Hopkins University, USA; The University of Tokyo Institutes for Advanced Study (UTIAS), University of Tokyo, National Astronomical Observatory of Japan, Academia Sinica, Japan; Institute of Astronomy and Astrophysics (ASIAA), Taiwan; Laboratoire d'Astrophysique de Marseille, France; Brazilian Consortium: IAG Universidad de Sao Paulo, Laboratorio Nacional de Astrofi sica, Brazil; Max Planck Society, Max-Planck-Institut für Astrophysik (MPA, Garching), Max-Planck-Institut für extraterrestrische Physik (MPE), Germany; Chinese Consortium: Shanghai Jiao Tong University, National Astonomical Observatories of China, Tsinghua University, The University of Science and Technology of China, Xiamen University, Peking University, China.

SBNF - Small Bodies Near and Far, EU H2020 project; Poznań, Poland; Instituto de Astrofísica de Andalucía, Granada, Instituto de Astrofísica de Canarias (IAC), Spain; Konkoly Observatory, Budapest, Hungary; Institute of Space and Astronautical Science (ISAS, JAXA), Kanagawa, Japan.

SDSS - Sloan Digital Sky Survey: MPA Garching, MPIA Heidelberg, Germany; Univ. of Washington, Seattle, Fermi National Accelerator Laboratory, Batavia, University of Michigan, Ann Arbor, Carnegie Mellon University, Pittsburgh, Penn State University, University Park, Princeton University Observatory, Princeton, Institute of Advanced Study Princeton, Space Telescope Science Institute, Baltimore, Johns Hopkins Univ. Baltimore, USA.

Swift - Gamma-Ray Burst Mission: NASA/GSFC Greenbelt, Penn State University, USA; University of Leicester, Mullard Space Science Laboratory London, UK; Osservatorio Astronomico Brera, Italy.

XMM-Newton/SSC (Survey Science Center): AIP, Germany; SAP Saclay, CDS Strasbourg, CESR Toulouse, France; University of Leicester, Institute of Astronomy Cambridge, MSSL London, UK.

XMM-Newton/EPIC (European Photo Imaging Camera): SAP Saclay, IAS Orsay, CESR Toulouse, France; University of Leicester, University Birmingham, UK; CNR Mailand-Palermo-Bologna-Frascati, Osservatorio Astronomico Mailand, Italy; Institut für Astronomie und Astrophysik Tübingen, Germany.

Industrielle Kollaborationen

3d shape GmbH, Erlangen: Metrology for slumped glass mirror study.

ABN GmbH, Neuried: Ongoing servicing of the MPE test facility PANTER.

AC Tech GmbH, Freiberg: ERIS Konus.

ACM GmbH, Naumburg - Acktar Ltd., Kiryat-Gat, Israel: Schwärzen für EUCLID und ERIS.

af inventions, Braunschweig: FPGA Programmierung für eROSITA.

AHC Oberflächentechnik GmbH / Aalberts Surface Technologies GmbH: coating for MICADO

ALPAO, Montbonnot-Saint-Martin, France: GRAVITY+ deformable mirrors.

Alwin Müller GmbH & Co. KG, Nürnberg: Oberflächenbeschichtung vieler Projekte.

Ariane Group GmbH, Munich: EUCLID design study, eROSITA, ATHENA, Oberflächenbeschichtung und cleanliness control EinsteinProbe.

Array Electronics, Egmatung: DAQ development OPTIMA.

Bach Research, Boulder, USA: High resolution grating for ERIS.

BASF Coatings AG, Münster: Investigations on the scattering properties of micro particles.

Bräuninger & Konstruktionen, Neuried: Construction and manufacturing of laboratory equipment.

Buchberger GmbH, Tuchenbach: Manufacturing of parts for PANTER manipulators, ERIS telescope flange.

Carl Zeiss QEC GmbH, Garching b. München, Deutschland: Messdienstleistungen, EinsteinProbe.

Christian Rehm - ISKON, Isen: Design and mechanical engineering for MICADO, GRAVITY+.

CryoVac GmbH, Troisdorf: MICADO Cryostat; ERIS SPIFFI Upgrade.

DHL Special services, Flughafen München, EinsteinProbe.

Dico-Solutions, München: eROSITA Betrieb.

DoKaSch TEMPERATURE SOLUTIONS GmbH, Kelsterbach, Deutschland: klimatisierte Frachtcontainer, EinsteinProbe.

ECM Engineered Ceramic Materials GmbH, Moosinning: Hersteller von CESIC.

EATON Powering Business Worldwide, Camarillo, CA, USA: Actuators separation-nuts for eROSITA.

First Light Imaging, Meyreuil, France: GRAVITY+ wavefront sensor cameras.

Fraunhofer IOF, Jena: Mirror development for MICADO.

Freyer GmbH, Tuningen: PANTER.

Frühschütz Lohngalvanik GmbH, Penzberg: Oberflächenbeschichtung vieler Projekte.

GEWO Feinmechanik GmbH, Wörth/Hörlkofen: Mechanische Fertigung, ERIS.

Gräfe Spezialoptik GmbH, Camburg: Zerodur-Materialbearbeitung und -Lieferant.

Hans Englert GmbH, Berlin: Manufacturing of front panels and metering devices.

Hembach Photonik, Rednitzhembach, Optical Design, GRAVITY+.

HERMLE AG, Gosheim, Milling Machines, MPE Workshop.

HOC Optik Dr. Christoph Horneber, Lauf: GRAVITY+

Hochschule München, Laserlabor, Prof. Heinz Huber, München: Materialbearbeitung mit Ultrakurzpulsar laser.

Hyprostatik, Göppingen: MICADO Hydrostatik.

Industrieanlagen – Betriebsgesellschaft mbH (IABG), Otobrunn: Testanlagen, Luftfahrtsicherheit, EinsteinProbe.

Industrieberatung Reinhard Katterloher, München: Specifications for MICADO Test Cryostat.

Ingenieurbüro Josef Eder, Hilgertshausen: System engineering for eROSITA, ATHENA, ERIS, Einstein Probe.

Ingenieurbüro Weisz, München: Design and mechanical engineering for ERIS, MICADO and GRAVITY+.

Ingenieurbüro Michael Kautz, Regensburg, Design and mechanical engineering for CAS.

IRIDIAN Spectral Technologies, Ottawa, Ontario, Canada: ERIS Filters.

Kampf Telescope Optics (KTO), München: Design & System Engineering for MICADO.

Korth Kristalle GmbH, Kiel: Lenses and windows for ERIS Spectrometer.

Kinkele GmbH & Co. KG, Ochsenfurt: ERIS Struktur.

LaserJob GmbH, Fürstfeldbruck, Deutschland: Präzisions-Laserzuschnitt und Schweißen EinsteinProbe.

LEX GmbH, Miesbach, Deutschland: Mechanische Fertigung, ATHENA, EinsteinProbe.

LT Ultra, Herdwangen-Schönach: Spiegelhersteller.

Feinmechanische Werkstätte Thomas Markl GmbH, Deisenhofen; eROSITA.

Medway Optics Ltd, Rainham, Kent, UK: Optical coatings for ERIS.

M-Industrieverpackung GmbH, Sulzemoos: ERIS Transportcontainer.

OHB System AG, München: EUCLID design study.

Peter Blank GmbH, Aschaffenburg: Mechanische Fertigung MICADO.

Peter Feckl Maschinenbau GmbH, Forstern: Mechanische Fertigung, ERIS, Spiegelmodule EinsteinProbe.

Plappert Industrieanlagen GmbH, Schorndorf: Design and mechanical engineering for MICADO Handling Tools.

Plasmatechnik Reusche, Jettingen-Scheppach: verzugs-
freies Randschichthärten für ERIS.

Qioptic GmbH, Feldkirchen: Oberflächenbeschichtung
vieler Projekte.

Steinmeyer Mechatronik, Dresden: GRAVITY+ translatio-
nal stages.

Tafelmaier Dünnschicht-Technik, Rosenheim: Optical
Coatings, GRAVITY+.

Unholtz-Dickie Corp., Wallingford, USA: Shaker System,
MPE Test Facility.

Aktivitäten im Wissenstransfer

Durch unsere vielen Kooperationen mit anderen For-
schungseinrichtungen und der Industrie ergibt sich ein
natürlicher Wissenstransfer.

Dies gilt auch bei der Vergabe von Aufträgen an die
Industrie. Des Weiteren hielt das MPE Ende 2021 12
Patente und 4 Lizenzen.