
Tucson Virtual 2021

CARLES MANRESA i PLA¹

¹GRADUATE GEOLOGIST

SUMMARY

After the three previous Virtual Show editions, SMAM Virtual 2020, Munich Mineralientage Virtual 2020 and Expominer Virtual 2020, here we are in 2021, a new year, with hope on the horizon and a new edition of virtual minerals, the Tucson Virtual 2021, the fourth in the series. An enormous output of energy by Fabre Minerals (FM) to offer a large number of pieces for all tastes and pocketbooks..

But Tucson Virtual 2021 was not just any virtual mineral show. Why? This year FM is celebrating double. Jordi Fabre celebrates 50 years since he started in the mineral trade and at the same time 25 years since FM began selling on the internet, something that in 1996 still seemed something of a chimera and in some ways a kind of "illusion". Time has passed and has proved those visionaries right who saw this promising future.

Via these lines I would like to congratulate FM for their way of creating and understanding the world of minerals, for their professionalism and, ultimately, for helping the many collectors who enjoy the minerals offered at the booths in shows where FM exhibits and, of course, through their website, and currently thanks to the Virtual Shows. Let's move on to Tucson Virtual 2021!

All photos by FM & Joaquim Callén©



RESUMEN

Después de las 3 ediciones Virtuales anteriores, la SMAM Virtual 2020, Mineralientage München Virtual 2020 y Expominer Virtual 2020 llega 2021 y con él un nuevo año, un horizonte esperanzador y una nueva edición de minerales virtual, la Tucson Virtual 2021, y cuarta en la serie. Derroche de fuerzas en Fabre Minerals (a partir de ahora FM) para ofrecer un gran número de piezas, para todos los gustos y bolsillos.

Pero la Tucson Virtual 2021 no ha sido una feria virtual más de minerales. Por qué? Este año en FM están de doble celebración. Jordi Fabre cumple 50 años desde el inicio del comercio de minerales y a la vez se cumplen 25 años del inicio del comercio de minerales a través de Internet de FM, algo que en 1996 parecía una quimera y en cierta manera una especie de "iluminación". El tiempo ha pasado y ha dado la razón a aquellos visionarios que supieron ver un futuro prometedor.

Desde estas líneas dar mi enhorabuena a FM, a su manera de hacer y entender el mundo de los minerales, a su profesionalidad y, a la postre, por ayudar a tantos y tantos coleccionistas que disfrutamos con los minerales ofrecidos en los stands de las Ferias donde FM expone y, por supuesto, a través de su web, y actualmente gracias a las Ferias Virtuales. Vamos a por Tucson Virtual 2021?

Todas las fotos son de FM y Joaquim Callén ©





FABRE MINERALS



TUCSON SHOW VIRTUAL 2021



Pyrite on Fluorite - Villabona Mines, SPAIN 12.8 x 5.7 cm



Sphalerite on Dolomite - Aliva, SPAIN crystal: 2 x 1.8 cm



Digital Photo: Fabre Minerals

Gold (spinel twin) - MOROCCO 3.1 x 0.5 cm

Barcelona, 01/21/2021

In the summer of 1971 when I was 14 years old and after a 'peculiar' trip to Morocco that I made with my brother Francesc, I sold the first batch of minerals that we got on that trip to a small mineral shop in Barcelona, the city in which I lived then and in which I still live now. Much has happened since then and almost without knowing how, this year marks 50 years since I started my mineral trading project.

In addition, this year also marks 25 years since September 1996 when I began the adventure of selling minerals over the Internet with the support and encouragement of James Catmur, the true force behind that project, which at the time seemed rather a crazy idea.

Since then we have not stopped progressing and I think that, considering my age, I reach my pinnacle in this edition of Tucson Virtual that closes the cycle of Virtual Shows that began with the Sainte Marie Virtual, continued with Munich Virtual, Expominer Virtual, and culminates now with this Tucson Virtual.

We will be constantly exhibiting new pieces for ten days, from Monday, January 25 to Wednesday, February 3, and we believe that we will reach a total of 300-400 pieces displayed during those 10 days.

Do not miss the opening on Monday, January 25 at 16:30 (Central European Time), the date and time in which we will open the Tucson Virtual Show for everyone and where you will see how hard we worked preparing the Show to adequately celebrate our 25th and 50th anniversaries and also kick off this 2021 in which we will not cease to celebrate together with all of you the Mineral Festival, with different surprises in our next editions.


Jordi Fabre

PS: all the minerals photographed in this mailing will not be available until the opening of the Tucson Show Virtual

Non-stop Tucson Show Virtual, from Monday January 25th at 4:30 p.m. (Central European Time) to Wednesday February 3th at fabreminerals.com



Silver - Himmelsfurst Mine, Erzgebirgskreis, GERMANY 3.5 x 2.8 cm



Cassiterite - Amo, CHINA crystal: 5.2 x 4 cm



JORDI FABRE Arc de Sant Martí 79, local 08032 BARCELONA (SPAIN) ☎ (34) 93 450 44 78
www.fabreminerals.com mail: mineral@fabreminerals.com
www.mineral-forum.com www.minerales.info



Cover letter for what would be the 'Minerals Festival', ie. the Virtual Tucson 2021, which was held from Monday, January 25 to Wednesday, February 3, ten days non-stop, uninterrupted, with the already known sections of "La Caja Fuerte" and "Corazón de Tucson" as well as the classic geographic sections with which we are already so well acquainted.

A show of this caliber, no matter how virtual, takes a lot of work before, during and after the Show. It well represents the climax, the culmination, of a lifetime dedicated to minerals. Let this chronicle serve as recognition and a tribute to FM and let's experience it for what it was, a Party!



Something important seems to be cooking. But we'll leave this till the conclusion of this article.



At this point, it's time to talk a little about how I personally experienced this Show. Of the four virtual shows organized by FM this was, much to my regret, the one most difficult to follow due to work obligations, being in the field for a good part of the day and without data coverage, so being attentive to all the new things turned out to be a chimera. Even so at night I managed to get good connectivity and could enjoy what had been offered during the day in the section "The Heart of Tucson", and even get one or two pieces for myself ;)

The starting gun took place on Monday, January 25 at 4:30 p.m. (Central European Time), so we can suppose that dozens and dozens of people were at that moment literally watching their smartphones, tablets or laptops. The arrival by email of the notice that the Show was beginning would alert more than one person to sit in front of the screen.

With all the gadgets and implements prepared, as for any show, the one essential thing that failed in my case in this virtual show was the data connection to the Internet. Anyway, sooner or later the connection came and I did what I could.

One of the "challenges" in a mineral show with a duration as long as the Tucson Virtual 2021 is the doubts that one has - I suppose I am not the only one - when it comes to whether or not to acquire a piece. I'll explain: It may be that on the first or second day of the Show a piece appears that we like, perhaps that we really like a lot, and it has a price which we can afford according to our budget. The doubt appears immediately when thinking: might more pieces be published of similar or even better quality in the following days? And if so, will I still be able to afford them? But if I wait and then I see that other similar or better ones are not published, will I still be able to buy the one that I had set my eyes on at first? Or will that piece that we loved now appear with a "reserved" or "sold" sign? Surely that has happened to more than one person, and it has certainly happened to me.

And in the end minerals and mineral shows, physical or virtual, are a bit of a game, like life itself, in which sometimes we win and sometimes we lose. So apart from our personal "miseries", let's now squarely enter into what was the Tucson Virtual 2021.



As in past Virtual events, the widgets did not vary since the needs, being away from home, were exactly the same, namely: battery chargers, both AC and DC for smartphone devices, with mini-USB and Type-C connectors, direct current to alternating current inverter with socket for equipment powered at 230 V, such as a laptop. And of course planning for availability of data for internet connections, wifi connections when possible, and something else essential too, fuel projections for the vehicle, especially working in the field and somewhat away from any hint of human civilization (although that seems like an oxymoron). With all these gadgets prepared, one just had to wait, cross ones fingers and try to have time to update the screens, all combined as best as one could with ones job. The challenge was beautiful, we had to see what surprises FM would bring us this time, and, as usual, there were not just a few.

As in our previous chronicles and following the same structure, we begin with a screenshot of the website at the start of the Tucson 2021 virtual show.



As with the previous virtual appointments, the two new sections to which we are getting accustomed, “La Caja Fuerte” and “El corazón de Tucson Virtual”, appear in addition to the already classic sections where pieces are offered grouped by geography, either by country (the majority) or by continent or specific region (like Spanish Fluorite).

The first four classic pages turned out to be “static” pages, each showing a certain number of specimens grouped by countries or geographical areas. So the first page was dedicated to minerals from deposits in the USA, Mexico and Spain. Page 2 was for specimens of Spanish Fluorite, Portugal, France, the rest of Europe and the FSU. Page 3 was dedicated exclusively to specimens from Morocco and the rest of Africa. Page 4 displayed specimens from Brazil, the rest of South America, China and the rest of Asia.

Already on page 5, again under the title of “The Strong Box” appear, as if it were no big deal, specimens of extraordinary quality. It is a pleasure and a treat for the senses to be able to see these types of pieces even if only virtually. In a “face-to-face” show these same specimens would probably not be visible to everyone, and only a few privileged folk would get to see this type of material, which often we can not even see on display in mineral museums. So a virtual mineral show like this Tucson Virtual 2021 “democratizes” this type of specimen that perhaps, in another context, we would not even know of their existence.

I reiterate here that there is nothing like being on site, experiencing it live, and holding a piece in your hands. That feeling is unmatched and, for now, I’m not changing it for anything. If you are already lucky enough to be able to see these types of exemplary specimens in person, your happiness is total.

In 2020 rumors began to be heard about the discovery of a deposit in Morocco that yielded magnificent specimens of crystallized gold. As always happens with new things from Morocco, you have to wait a bit, confirm species ID, and wait a little longer to know the locality of origin, something always difficult and even more so when we refer to the always unpredictable Morocco. Well, the moment arrived and the fantastic specimens of Gold were finally seen, with excellent crystallization, many specimens showing clear spinel-law twinning and with something that is always appreciated in these cases, with analyses to validate the veracity of such minerals. Jordi has been kind enough to offer the analysis online and free of charge at the following link: <https://www.fabreminerals.com/include/Moroccan-Gold-intro/gold-study-1.pdf>. It’s time to see several of these specimens that are a delight to the eye and can even scare away the hiccups thinking about the formidable surprises that still await us and what still hides in the entrails of the land, and perhaps those that will never be discovered. Time to enjoy the natural beauty of Gold.





Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Specimen size: 1.5 × 0.6 × 0.5 cm. The largest crystal measures 0.7 × 0.2 cm. Weight: 1.8 grams. Rhombohedron as the dominant form and parallel growths of very sharp Gold crystals.



Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Specimen size: 2.3 × 0.6 × 0.5 cm. The largest crystal measures 0.6 × 0.3 cm. Weight: 2.8 grams. Rhombohedron as the dominant form and parallel growths of very sharp crystals of Gold.



Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Specimen size: 2.5 × 0.5 × 0.3 cm. The largest crystal measures 0.4 × 0.2 cm. Weight: 1.9 grams. Rhombohedron and octahedron as dominant forms and parallel growths of very sharp Gold crystals.



Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Specimen size: 3.1 × 0.9 × 0.5 cm. The largest crystal measures 1.9 × 0.2 cm. Weight: 5.1 grams. Cube, rhombohedron and octahedron as dominant forms, and parallel growths of very sharp lateral Gold crystals.





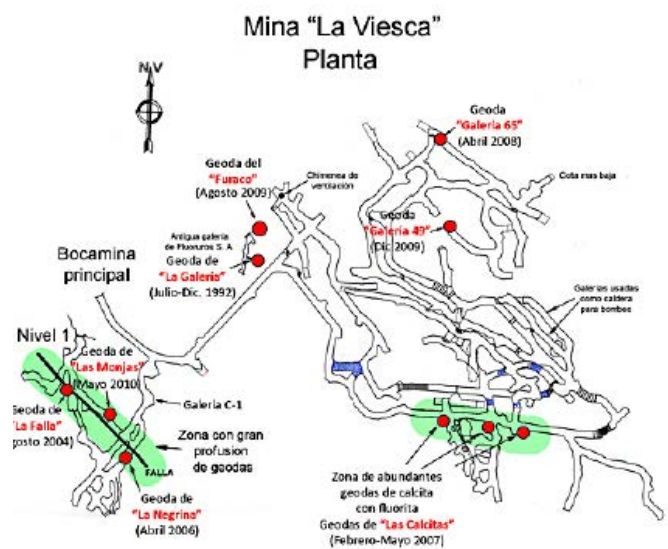
Gold (spinel-law twin). Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Size: $4 \times 1 \times 1$ cm. The largest crystal measures 0.7×0.6 cm. Weight: 10.5 grams. Crystals dominated by dodecahedron forms, some with skeletal and hopper growths, and with a very distinct spinel-law twin.



Fluorite, Quartz. Berbes mining area, Ribadesella, Asturias, Spain (\pm 1998). Specimen size: $12.8 \times 9.8 \times 5.6$ cm. The largest crystal measures 4.3×4 cm. With Baryte that fluoresces under both long- and short-wave UV. Sharp cubic crystals with very well defined faces and edges, with an intense lilac color and with geometric color zoning towards the edges in blue, on a matrix formed by small crystals of Quartz and white lamellae of Baryte. These types of specimens can be considered as icons of a splendid era, of a small paradise called Berbes in Asturias, where Nature has concentrated some of what are probably the most beautiful Fluorites ever found. There is a lot of literature on Asturian Fluorite, but a reference that can be considered indispensable would be the book "Fluorite. A century of mining in Asturias", whose authors are: M. Gutiérrez Claverol, C. Luque Cabal, J.R. García Álvarez (R.I.P.) and L.M. Rodríguez Terente (in Spanish).



Fluorite, Quartz. La Viesca mine, La Collada mining area, Huer-go, Siero, Oviedo region, Asturias, Spain (2007). Specimen size: 11 × 8.4 × 8 cm. The largest crystal measures 5 × 4.6 cm. Druse of Fluorite crystals with polycrystalline surfaces, transparent, lustrous, and extraordinarily deep and intense blue, with purple geometric zoning on the edges of the crystals. From another of the large Asturian Fluorite mines, the La Viesca mine, still in operation today. To complement the information about this mine and learn more about the different vugs from which specimens have been obtained, read the existing thread in FMF in Spanish: <https://www.foro-minerales.com/forum/viewtopic.php?p=60117#60117>. The following shot, made by José Ramón García Álvarez and Jordi Fabre and extracted from the previous thread, depicts the different positions of the vugs within the La Viesca mine.



Fluorite, Calcite, Quartz. Llamas quarry, Obdulia vein, Caravia mining area, Las Cabañas, Duyos, Caravia, Asturias, Spain (2018). Specimen size: 14.8 × 9.6 × 7.8 cm. The larger crystal measures 3 × 3 cm. Group of Fluorite crystals with cubic habit beveled by the rhombic dodecahedron, transparent, very lustrous, uniform blue with phantom growths. This kind of crystal, so transparent and shiny, is characteristic of the best pieces from this deposit. The Quartz matrix with scalenohedral Calcite crystals completes this beautiful combination of the three mineral species. Another relatively new deposit that is on its way to becoming another of the great classic Asturian deposits.



Brazilianite with Albite and Greifensteinite. Marcel Telirio mine, Divino das Laranjeiras, Minas Gerais, Brazil. Size of the piece: 8 x 7.2 x 4.3 cm. The largest crystal measures 6.5 x 2.8 cm. Matrix fluorescent under both short- and long-wave UV. Very large, well developed and sharp, doubly terminated crystals of Brazilianite, with a bright luster and very vivid color. The matrix is Albite, with small coatings of Greifensteinite, a rare calcium, iron and beryllium phosphate that gives the piece an added value, being a species that has been found in only 7 countries around the world. Another example of the mineral beauties that pegmatites can yield.



At mineral shows, cameras are essential to capture minerals and festive moments. Jamie Roncza vs Gail Spann in a duel of shutters, ISO's and ASO's.



The little ones are also important and should also have their space in mineral shows. After all, they are the future, and the future of this hobby will depend on them.



Octahedral Fluorite with Quartz and Dolomite. Shangbao mine, Leiyang, Hengyang Prefecture, Hunan Province, China (2007). Specimen size: 11.3 x 9.5 x 9.2 cm. The largest crystal measures 10 x 9.5 cm. Large crystal for the species and for the locality. The apparently octahedral habit is formed by polycrystalline growths dominated by dodecahedral rhomboid shapes. Pale pink, stronger-hued, in the center of the crystals, on a matrix of Quartz and Dolomite crystals. The mine is a polymetallic skarn rich in iron, tungsten and tin.





Cassiterite with Quartz. Amo deposit, Ximeng, Pu'er Prefecture, Yunnan Province, China (2002). Size: 11.8 × 9.7 × 7.5 cm. The largest crystal measures 4.7 × 4.7 cm. Twinned Cassiterite crystals with perfectly defined faces and edges, between transparent and translucent and dark brown in color, on matrix with Quartz crystals. The luster and size of the crystals are extraordinary for the locality, a hypothermal tin deposit with Cassiterite as its ore mineral. This deposit is also the type locality for a rare bismuth phosphate, Ximengite. This kind of specimen represents just a small part of the beauty that nature is capable of creating in the form of natural works of art, in this case, mineral.



Leaving the section “La Caja Fuerte” for later, let’s go now to “The Heart of Virtual Tucson”, the true soul of the Virtual Show, a dynamic section in which to discover day by day, for a total of 10 days without interruption, a large carousel of 201 mineral specimens distributed as follows:

- 16 pieces on Monday January 25.
- 16 pieces on Tuesday, January 26.
- 20 pieces on Wednesday January 27.
- 21 pieces on Thursday, January 28.
- 22 pieces on Friday January 29.
- 20 pieces on Saturday January 30.
- 20 pieces on Sunday January 31.
- 21 pieces on Monday, February 1.
- 22 pieces on Tuesday February 2.
- 23 pieces on Wednesday February 3, the last day of the Show.

With this distribution, I will highlight, day by day, what was most interesting, all filtered of course through the lens of the Author ;))



The parties at Casa Vicente, with the hosts in the image on the left, assured a good atmosphere for several years, remembered by many. Below left, just look at the happy faces of Terry & Marie Huizing, the tireless workers behind Rocks & Minerals. Below, Marie Huizing and Jordi Fabre toasting to minerals, always minerals!



Monday, January 25:



Fluorite with Calcite. Hammam-Zriba mine, Zriba, Zaghouan Governorate, Tunisia. Size: 5.7 x 5.2 x 3 cm. Main crystal: 3.2 x 2.2 cm. Although at first glance you could think that this piece had its origin in the Llamas quarry in Asturias, the specimen is really Tunisian, where the Fluorite crystals are very sharp, transparent, with bright luster and pale lilac color with geometric color zoning towards the edges, on matrix with scalenohedral Calcite crystals. This mine exploits F, Ba, Sr, Pb and Zn. Ex-Jan Buma collection.



Schorl. Mimoso do Sul, Espirito Santo, Brazil. Size: 4 x 2.3 x 2.2 cm. Main crystal: 2.6 x 1.5 cm. Ex-Carles Curto collection. Group of Schorl crystals from a pegmatite, one of them clearly dominant, with excellent terminations and luster. A very balanced and elegant piece that is reminiscent of the Erongo mountains specimens from Namibia.

Here are a few specimens of Gold from the recent and important discovery in Morocco, specifically in the area of Western Sahara. While many pieces are unaffordable for most pockets, here we can find beautiful specimens at a very reasonable price, which is not always the case with quality specimens.



Gold. Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Size: 1.3 x 0.7 x 0.35 cm. Photos: Joaquim Callén. Weight: 0.4 grams. A characteristic of the golds of this deposit is the marked spinel-law twinning shown by most of these specimens.



Gold. Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Size: 1.2 x 0.2 x 0.2 cm. Photos: Joaquim Callén. Weight: 0.1 grams. Another characteristic of these golds is the curvatures that some pieces exhibit.



Gold. Aouint Ighoman, Assa-Zag Province, Guelmim-Oued Noun Region, Morocco (2020). Size: 1.0 x 0.3 x 0.1 cm. Photos: Joaquim Callén. Weight: 0.1 grams. All these specimens have been analyzed, with the results published for all to see, something to be appreciated. They can be seen at: https://www.fabremineerals.com/include/Moroccan_Gold-intro/gold_study-1.pdf.

Tuesday, January 26:



Quartz (variety citrine). Mamapa, Nam-pula Province, Mo-zambique (2016). Size: 6.6 x 4.5 x 4.1 cm. The citrine variety of Quartz, with very sharp crystal forms, transparent, with a bright luster and intense color. Most of these specimens have minor bumps or fractures but the natural citrine color compensates for these small flaws.



Andradite (variety topazolite) with Clinocllore. Yellow Cat mine, New Idria, Diablo Mountains, San Benito County, California, USA (11/1998). Piece size: 6.4 x 3.3 x 2 cm. Main crystal: 0.3 x 0.2 cm. An American classic that is not easy to find nowadays at mineral shows, whether virtual or face-to-face. Group of crystals, on matrix, of Andradite (variety topazolite), with defined faces and edges, with the dominant crystal forms of the rhombohedron, with accessory cube and trapezohedron faces. Deep honey in color, in clear contrast to the small spheroidal aggregates of very deep green Clinocllore.



Pyromorphite with Baryte. Les Farges mine, Ussel, Correze, Nouvelle-Aquitaine, France. Size of the piece: 7.2 x 5.1 x 2.3 cm. Main crystal: 0.1 x 0.5 cm. A French classic with a beautiful contrast between the matrix of whitish Baryte and yellow-brown Pyromorphite crystals with yellowish terminations. The Pyromorphite crystals show slight curvatures on the edges and on the faces. This lead mine closed in 1981.



Andradite (variety topazolite) with Clinocllore. Yellow Cat mine, New Idria, Diablo Mountains, San Benito County, California, USA (11/1998). Size: 3.7 x 3.1 x 1.4 cm. Main crystal: 0.2 x 0.2 cm. In this specimen the transparency of the crystals is more remarkable, forming a group of more isolated crystals. A very balanced piece.

Wednesday, January 27:

Of the 20 pieces shown this day, 15 of them corresponded to Moroccan specimens, which guarantees color, light and shapes. But we won't forget the remaining 5 pieces ... no less interesting.



Vanadinite. Coud'a, Mibladen mining district, Midelt, Drâa-Tafilalet Region, Morocco (04-05 / 2019). Size: 5 x 4.4 x 3.9 cm. Main crystal: 1.1 x 1 cm. Druse of Vanadinite crystals with short prism, doubly terminated, with parallel growths, with a bright luster and very vivid reddish color. From levels deeper than usual for the deposit, this piece corresponds to the finds made in 2019, of higher quality than those found before and which caused a "sensation" at the Sainte-Marie-aux-Mines show in 2019. Since then there has been no face-to-face celebration of that show due to the pandemic caused by COVID-19. Well into 2021, things still do not bode well.



Djurleite-Chalcocite intergrown with Calcite. Aït Ahmane, Bou Azzer District, Zagora Province, Drâa-Tafilalet Region, Morocco (11 / 2014-05 / 2015). Size: 5 x 4.4 x 3.9 cm. Main crystal: 1.1 x 1 cm. The specimen came with an analysis of the intergrowth between Djurleite and Chalcocite. Very sharp crystals between lamellar and tabular, with bright luster and a marked hexagonal outline, on a matrix of acid-etched Calcite. A good opportunity to get a quality specimen.



Anglesite with Galena. Touissit, Jerada Province, Oriental Region, Morocco. Size: 7 x 6.7 x 4.3 cm. Main crystal: 1.6 x 1 cm. Very sharp Anglesite crystals, lustrous and transparent, on a Galena matrix. This lead sulfate, together with lead carbonate and lead chlorocarbonate, form the lead triumvirate in Touissit: Anglesite, Cerussite and Phosgenite! If we are going for poker we could add Paralaurionite. Blessed is he who possesses all four species from that locality!



Baryte. Bouismas mine, Bouismas, Tazenakht, Bou Azzer District, Zagora Province, Drâa-Tafilalet Region, Morocco (2015). Size: 3.7 x 3 x 3.6 cm. Main crystal: 1.5 x 1 cm. Unusual isolated crystal of Baryte, with polycrystalline growths defining distinct geometric areas, with different intensities of luster and color, implanted on a matrix

formed by white Calcite crystals. This mine exploits a rich silver seam. Although in 2013 yellow Barytes had already been found in this mine, specimens more specifically like this one were found in 2015, being a novelty at the Munich show that year. Just like Sainte-Marie, the Munich show could not be held in 2020; we will see in 2021...



Chalcostibite with Azurite. Rhar el Anz, Wadi Cherrat, Chaouia-Ouardigha, Casablanca Prefecture, Morocco (2017). Size: 4.9 x 4.7 x 2.8 cm. Main crystal: 4.4 x 2.4 cm. Elongated crystals of Chalcostibite with good terminations and well defined faces and edges, partially pseudomorphed by Azurite, forming surfaces with a very vivid color, and small traces of Malachite. A Moroccan classic.



Quartz (variety amethyst). Santa Ana quarry, Artigas Department, Uruguay (03/2007). Size: 12.7 x 10.4 x 8.8 cm. Main crystal: 0.6 x 0.6 cm. Druse of translucent Quartz crystals (amethyst variety), with great luster and an intense violet color. The vugs where these amethysts are extracted are spread over an area of about 160 km².



Erythrite. Bou Azzer district, Drâa-Tafilalet Region, Morocco. Size: 8.3 x 6.4 x 5.8 cm. Main crystal 2.1 x 1 cm. Ex-Albert Botella collection - ex-Jaume Vilalta collection - ex-Jordi Vilallonga collection. Group of very sharp Erythrite crystals on matrix, with bright luster and an intense and uniform color. A Moroccan classic with a good pedigree from former collections for this "cobalt flower", a mineral that, like Vanadinite, has a halo that makes it special.



Carrollite with Calcite. Kamoya South II mine, Kamoya, Kambove District, Katanga (Shaba), Democratic Republic of Congo (Zaire) (2002). Size: 6.5 x 4.4 x 3.9 cm. Main crystal: 1.5 x 1.4 cm. Very shiny cubo-octahedral crystal of Carrollite, on a Calcite matrix with a snow-white color.





Variscite with Albite and Rockbridgeite. Boa Vista (Eduardo) mine, Conselheiro Pena, Vale do Rio Doce, Minas Gerais, Brazil (2006). Size: 9.5 x 9 x 4.6 cm. Main crystal: 0.5 x 0.4 cm. Spheroidal aggregates of Variscite, one of them clearly dominant, with great luster and an intense and uniform pink color, something uncommon for the species. On an Albite matrix with small Rockbridgeite coatings. Variscite does not usually occur in pegmatites, so the ones from this locality are a rarity. The pink color owes its origin to the presence of iron.

Thursday, January 28:

21 new pieces for this day, with Spanish deposits figuring most prominently, 17 of them, the remaining four being Moroccan.



Fluorite. La Viesca mine, La Collada mining area, Huergo, Siero, Oviedo region, Asturias, Spain (2018). Size: 9.1 x 4.8 x 4.1 cm. Main crystal: 1.9 x 1.9 cm. Group of Fluorite crystals of cubic habit with finely polycrystalline surfaces, very transparent and lustrous and, something that is not very common in this mine: totally colorless.



Baryte. Cala de la Cola de Caballo, Sierra Minera de Cartagena-La Unión, Portmán, La Unión, Region Campo de Cartagena, Murcia, Spain (1990). Specimen size: 10.2 x 7.6 x 5.2 cm. Main crystal: 4.3 x 4 cm. Group of tabular Baryte crystals in polycrystalline growths, lustrous and snow-white in color from a classic Murcian locality from which it is nowadays difficult to find quality specimens like the one shown.



Fluorite. Berbes mining area, Berbes, Ribadesella, Eastern Region, Asturias, Spain (2004). Specimen size: 2 x 2 x 2.1 cm. Former collection of Miguel David Martínez. Sharp Fluorite crystal, translucent, with good luster and a very deep color, with geometric zoning on the edges.





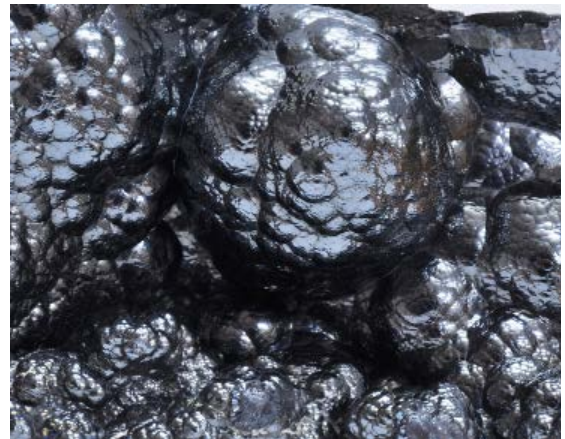
Calcite with Dolomite. La Florida mining area, Herrería-Valdáliga-Rionansa, Comarca Costa Occidental / Saja-Nansa, Cantabria, Spain (\pm 2000). Size: 8.8 x 6.2 x 2.4 cm. Main crystal 4.1 x 2.7 cm. Isolated Calcite crystal on matrix and very aerial, dominated by scalenohedron forms and very rich in minor forms, transparent, with good luster and a pale yellow color. A piece that has been added to my collection.



Goethite. La Arboleda mines, Trapagaran Valley, Gran Bilbao Region, Vizcaya, Euskadi, Spain. Size: 16.3 x 7.6 x 7.1 cm. With Lluís Daunís collection label. Botryoidal Goethite growths with very shiny and deep black surfaces. The locality represents one of the great iron deposits in Spain, or as legend has it ... "all iron".



Baryte. Moscona mine, El Llano, Solís, Corvera de Asturias, Avilés Region, Asturias, Spain (2015). Size: 5.9 x 3.8 x 3.7 cm. Main crystal: 1.9 x 1 cm. Former collection of Miguel David Martínez. Very aerial group of sharp Baryte crystals, between lamellar and tabular, with a uniform celestial blue color and good luster. The Moscona mine has produced good specimens of Baryte both in blue and yellowish tones.

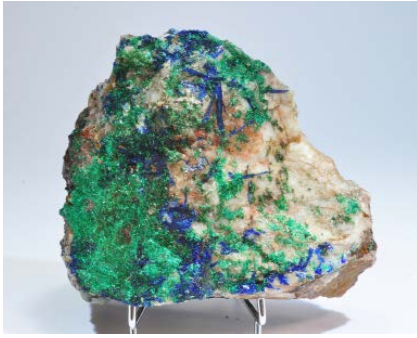


Quartz with Microcline. Mas Sever quarry, Massabè, Sils, La Selva Region, Girona, Catalunya, Spain (2003-2008). Size: 7.1 x 4 x 2.9 cm. Main crystal: 4.7 x 2.8 cm. Doubly terminated Quartz crystal with deformations on the faces and in which different growth phases can be seen, marked by a change in color and transparency of the crystal. On a Microcline matrix with highly recrystallized faces. From a classic deposit for Catalan mineralogy.



Quartz (amethyst variety) in Quartz (smoky variety). Mas Sever quarry, Massabè, Sils, La Selva Region, Girona, Catalonia, Spain (2008). Specimen size: 4.6 x 2.8 x 3.2 cm. Main crystal: 3.5 x 2.7 cm. Sceptor growth of a Quartz crystal (variety amethyst) with parallel growths in the lower part and with the upper termination embedded in a Quartz crystal (smoky variety).





Linarite with Brochantite. Goulmima, Er Rachidia, Er Rachidia Province, Drâa-Tafilalet Region, Morocco (2003). Size: 13.5 x 12.2 x 7 cm. Main crystal: 2.2 x 0.3 cm. Aggregates on matrix of elongated and flattened Linarite crystals with an intense blue color in contrast to the green acicular Brochantite. Specimen has been analyzed.

Friday, January 29:



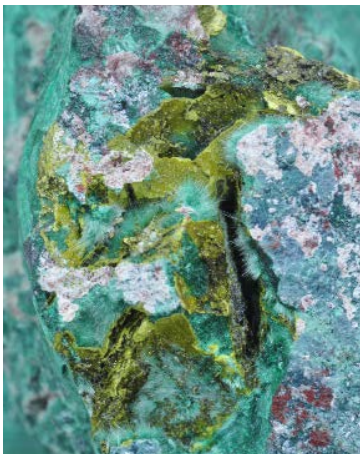
Azurite. Chessy-les-Mines, Les Bois d'Oingt, Villefranche-sur-Saône, Rhône, Auvergne-Rhône-Alpes, France (2014). Size: 3.4 x 3.1 x 2.4 cm. Main crystal: 0.5 x 0.4 cm. Type locality. Former Philippe Morelon collection. Spheroidal aggregate of equant Azurite crystals, with well-defined faces and edges and a deep blue color, somewhat bluer than usual for Azurites from this deposit, which, at the same time, is the type locality for the species. Quality specimen.



Pyromorphite. Bunker Hill mine, Kellogg, Coeur d'Alene District, Shoshone County, Idaho, USA. Size: 6.5 x 3 x 1.7 cm. Main crystal: 0.2 x 0.2 cm. Druse on matrix of twinned Pyromorphite crystals, many of them doubly terminated and barrel-shaped, almost spherical, with good luster and a yellow color with orange tones. An American classic.



Vésigniéita with Malachite. Milpillas mine, Cuitaca, Santa Cruz Municipality, Sonora, Mexico (2010). Size: 6.4 x 3.8 x 3.1 cm. With a copy of the analysis. Aggregate of tapered and fibrous Vésigniéite crystals that are very sharp for this rare barium and copper vanadate. Furthermore, this species is a rarity in the paragenesis of the Milpillas mine. Yellowish, on a Malachite tapestry as a crust on top of the rock matrix. Due to its resemblance to Volborthite, it is important to carry out an analysis to discern what species it is. The Milpillas mine has already stopped producing and has been closed, so this type of rarity will soon cease to be seen in the mineral market, whether in person or virtual.



Fluorite with Quartz. Ruyuan fluorite mine, Ruyuan, Shaoguan Prefecture, Guangdong Province, China (\pm 2005). Size: 14.4 x 9 x 5.4 cm. Main crystal: 3.3 x 3.2 cm. Former Casado Margolles collection. Group of very sharp octahedral Fluorite crystals, deep green with violet on the edges of the crystals, on a Quartz matrix. A very aesthetic color combination.





Fluorite with Baryte. Cuetu L'Aspa, Berbes, Ribadesella, Asturias, Spain. Size: 9.2 x 8 x 6.6 cm. Main crystal: 2.8 x 1.5 cm. Former Casado Margolles collection. Group of deep violet Fluorite crystals on a matrix of lenticular Baryte crystals. An Asturian, Spanish and world classic. Berbes Fluorite unique !!!



Saturday, January 30:



Pearceite-T2ac with Proustite and Calcite. Uchucchacua mine, Oyón Province, Lima Department, Peru. Size: 8.8 x 4.7 x 2.3 cm. Group of Pearceite crystals (polytype T2ac), very sharp and lustrous, on matrix, associated with sharp Proustite and Calcite crystals. Pearceite is a sulphosalt of silver, copper, arsenic and antimony and forms a series with Polybasite. This specimen is of a high quality for the species.



Azurite. Poteryaevskoe mine, Rubtsovsky district, Altai Krai, Russia. Size: 4 x 3.3 x 2.2 cm. Main crystal 0.2 x 0.2 cm. Former Doug Toland collection. Druse of very sharp and flattened Azurite crystals that form rosette aggregates with a very bright color and luster. From a little-known locality for the species, unlike the Cuprites found in that mine, a VMS type deposit ("Volcanogenic massive sulphide").



Fluorite. St Peter's mine, Sparty Lea, East Allerdale, North East Region, Northumberland, England. Specimen size: 20.2 x 15 x 7.4 cm. Main crystal: 4.8 x 3.7 cm. Group of sharp Fluorite crystals with abundant inclusions and an intense yellowish color. An English classic from a mine which exploited Galena, with Fluorite being the gangue. Recently the mine is being worked for specimens.



Arsenopyrite. Carrock mine, Carrock Fell, Caldbeck Fells, Allerdale, Cumbria (formerly Cumberland), England. Size: 4.2 x 3.9 x 4.5 cm. Main crystal: 1.4 x 1.1 cm. Continuing with the English classics, a specimen of Arsenopyrite with parallel and equant growths with polycrystalline growths and deep "anchors", lustrous, on a matrix also composed of Arsenopyrite. The Carrock mine was the only British mine where tungsten was exploited commercially outside of southwestern Britain, closing in the 1970s.



Sunday, January 31:



Quartz (variety jacinto de compostela). Domeño, Los Serranos Region, Valencia, Spain (2011). Specimen size: 5.7 x 3.6 x 4.1 cm. Main crystal: 1.8 x 1 cm. A classic of Spanish mineralogy.

Two translucent and lustrous Quartz crystals (jacinto de compostela variety), with a red to orange color due to inclusions, implanted in a gypsum matrix. This type of specimen abounds in the Spanish Triassic Keuper facies, especially between the area of Valencia and Cuenca, in which beautiful pieces of Aragonite and Quartz, like this one, have been found.



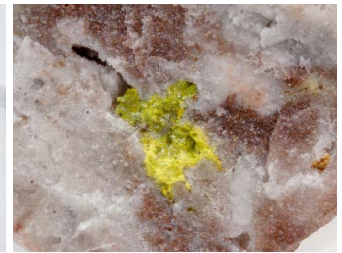
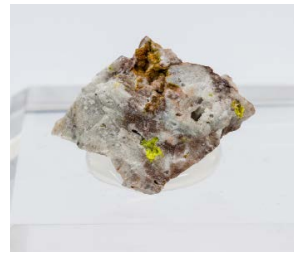
Spinel with Calcite. La Virgen, Benalmádena, Costa del Sol Occidental Region, Málaga, Andalusia, Spain (2011). Size: 4.7 x 4.3 x 1.5 cm. Main crystal: 0.4 x 0.4 cm. Very sharp octahedral Spinel crystals with a uniform mauve color, on matrix with white Calcite growths.



Mimetite. Filón Sur cut (external), Minas de Tharsis, Alosno, Comarca El Andalucía, Huelva, Andalusia, Spain (09-10 / 2011). Main crystal: 9 x 6.5 x 3.2 cm. Small but excellent quality tabular crystals of Mimetite, with very well defined faces and edges and an intense yellow color, on a limonite matrix with an ocher hue. These specimens appeared on the outside of the western part of the cut, and some of them are associated with Beudantite.



Lavendulan with Conichalcite. Calicata Dolores, Pastrana, Mazarrón-Águilas, Alto Guadalentín Region, Murcia, Spain (11/1992). Specimen size: 3 x 2.6 x 2.2 cm. Group of small sharp Lavendulan crystals, with bright luster and an intensely vivid blue color, with green globular growths of Conichalcite, on matrix. Possibly the best known locality for crystallized Lavendulan. It was rumored at one time that this type of material could be Lemanskiite until new analyses confirmed Lavendulan.



Rodalquilarite with Jarosite. Filón 340, Rodalquilar, Níjar, Almería, Andalusia, Spain (2012). Specimen size: 2.1 x 1.9 x 0.9 cm. Type locality. Cavities filled with yellowish Rodalquilarite crystals, on a Quartz matrix with Jarosite. The 340 vein was one of the richest in Rodalquilar, producing around 1 ton of gold with an average grade of 83 gr / ton, reaching 500 gr / ton in some sections, all of which are really very high grades. It was precisely in this vein where Rodalquilarita was first discovered.



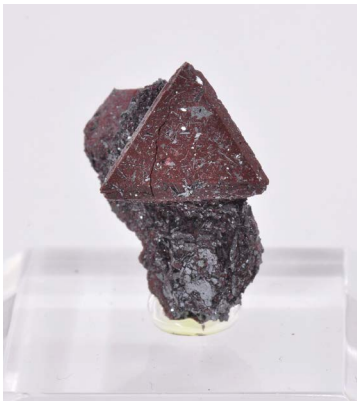
Bornite pseudomorph after Chalcocite, with Calcite. Las Cruces mine, Phase 6, level 130-135, ↓ 175 meter level, Gerena-Guillena-Salteras, Sierra Norte Region, Seville, Andalusia, Spain (01/2020). Size: 7.1 x 5.3 x 2.6 cm. Main crystal: 0.6 x 0.3 cm. Sharp Bornite pseudomorph after Chalcocite crystals, which occur in thick twins with a hexagonal outline and metallic iridescence, on matrix, with Calcite crystals. The locality is already extinct.



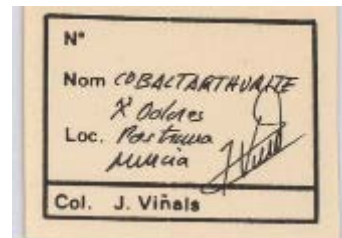


Titanite on Rutile pseudomorph after Ilmenite, on Microcline. Imilchil Zone, Anti-Atlas, Er Rachidia Province, Drâa-Tafilalet Region, Morocco (2016). Size: 6.4 x 3.3 x 1.8 cm. Main crystal: 1.1 x 0.6 cm. Tabular Ilmenite growths with an irregular outline completely pseudomorphed by Rutile and covered by very sharp crystals of Titanite, lustrous, with marked pleochroism, showing an intense yellow color under LED lights and greenish under daylight or fluorescent tube light. Partially covered by whitish Microcline crystals. The process of substitution of one mineral for the other -Ilmenite by Rutile- is due to hydrothermal processes associated with the deposit. The species described for this piece have been analysed, thereby enriching the already rich mineralogy of Imilchil.

Monday, February 1:



Zunyite with Hematite. Qalate Payeen salt dome, Bandar Abbas, Hormozgan Province, Iran (07/2019). Size: 2 x 1.5 x 1.3 cm. Main crystal 1.2 x 1.1 cm. Dominant crystal of this rare aluminum fluoride-silicate, red-brown in color, tetrahedral with the faces beveled by cube faces, and with lamellar Hematite inclusions. A novelty at Munich 2018.



Cobaltarthurite. La Reconquistada concession, Pastrana, Mazarrón, Alto Guadalentín region, Murcia, Spain (1999). Size: 3 x 1.6 x 1.7 cm. Type locality for the species. Small globular and leafy aggregates of Cobaltarthurite, black on the outside and yellowish on the inside. The specimen is accompanied by a Juan Viñals label, one of the describers of the species, who died in 2013. In memory of him.



Calcite. St. Andreasberg mining area, Goslar district, Harz, Lower Saxony, Germany. Size: 12.3 x 7 x 4.2 cm. Main crystal 5.4 x 2.4 cm. Group, on matrix, of scalenohedral Calcite crystals, water-clear and very lustrous. Exemplary of a classic German locality, St. Andreasberg, a historic mining district where mainly silver was mined as well as copper, lead and arsenic. This type of specimen was collected in mineralized Quartz and Calcite veins.



Tuesday, February 2:



Gypsum (variety selenite). Alabaster quarries, Fuentes de Ebro, Zaragoza, Aragon, Spain (12/15/2007). Size: 5.5 x 4.8 x 2.8 cm. Main crystal: 4 x 2.5 cm. Two very aerial, sharp, water-clear and lustrous Gypsum crystals on an alabaster matrix. Spain is a country with large sedimentary basins, so gypsum is very present in various parts of the national geography. But without a doubt, the best gypsum specimens to date have been found in the alabaster (massive gypsum) quarries of Fuentes de Ebro, in Zaragoza, and in Pulpí, Almería.



Sphalerite with Dolomite. Las Mánforas mine, Áliva mining district, Camaleño, Liébana Region, Cantabria, Spain. Specimen size: 5.4 x 3.8 x 2.2 cm. Another great classic of Spanish mineralogy: Polycrystalline growths with complex shapes, well-defined edges and faces, slightly curved, transparent, very lustrous and with a very deep and uniform toasted honey color, with small coatings of white rhombohedral Dolomite crystals. The locality is considered extinct as there is currently no access to the galleries.



Twinned Cinnabar with Quartz and Calcite. Escarlati mine, level 3, Puerto de las Signals, Maraña, León, Castilla y León, Spain (2007). Size: 4 x 3.3 x 3.6 cm. Main crystal: 0.8 x 0.7 cm. Cinnabar crystal in a very sharp star twin, with a very vivid color, on matrix, with Quartz and Calcite. The locality is a classic for Spanish mineralogy, of high quality and of which few specimens are preserved in collections. Some Cinnabar specimens from this locality are associated with Stibnite and Fluorite.



Baryte. El Telegrama adit, La Beltraneja concession, Minas del Cortijuelo, Bacares, Valle del Almanzora Region, Almería, Andalusia, Spain (09 / 2002-03 / 2003). Size: 14 x 10.2 x 6.7 cm. Main crystal 2.5 x 1.6 cm. Group of very sharp tabular Baryte crystals, translucent and with a very intense reddish brown color due to inclusions of iron oxides. The specimen comes from the first finds of quality material at the locality. As usually happens with finds of a certain quality, there was initial confusion about the origin of these pieces. Some will remember the.... "Could they be from Serón?"





Pyromorphite with Plumbogummite. Yangshuo mine, Yangshuo, Guilin Prefecture, Guangxi Zhuang Autonomous Region, China (01/2015). Size: 6.3 x 5.1 x 3.4 cm. Main crystal: 1 x 0.3 cm. Elongated, barrel-shaped crystals of Pyromorphite, some of them doubly terminated and with partial coatings, bluish-green in color, with yellowish tones in some areas. The crystals appear on a dark matrix, the whole offering a good color contrast. This mine is connected underground to the Daoping mine, known for its beautiful Pyromorphites like the one shown below.



Pyromorphite. Daoping mine, Gongcheng, Guilin Prefecture, Guangxi Zhuang Autonomous Region, China (05/2000). Size: 4.8 x 3.1 x 1.8 cm. Main crystal: 1.1 x 0.6 cm. Very aerial group of Pyromorphite crystals, some of them doubly terminated and with pinacoid terminations. Very vivid and uniform green color. This piece and the previous one have their origin in a hydrothermal lead-zinc deposit.

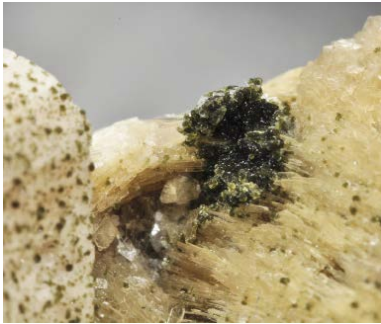


Sphalerite with Quartz. Shuikoushan mine, Shuikoushan, Changning, Hengyang Prefecture, Hunan Province, China (\pm 2005). Size: 18.7 x 13.4 x 10.2 cm. Main crystal: 2.1 x 2 cm. Druse of complex, transparent, very lustrous Sphalerite crystals with an intense orange color with reddish tones, partially covered by microcrystalline Quartz. The specimen comes from the former Raúl Sanabria Orellana collection. This specimen formed in a skarn, in this case forming a deposit of copper-lead-zinc. Skarn-type deposits originate from the contact of carbonate rocks with igneous bodies, in this case a lopolite formed by a granodiorite in contact with carbonate rocks of Carboniferous-Permian age. These Sphalerites are considered among the most beautiful in the world.

Wednesday, February 3:



Greifensteinite with Muscovite and Feldspar. Xanda mine, Virgem da Lapa, Jequitinhonha, Minas Gerais, Brazil. Size: 5.8 x 5.3 x 4 cm. Groups of small tabular crystals of Greifensteinite, a very rare phosphate of calcium, iron and beryllium, of pegmatitic origin, with very well defined faces, translucent, with a color between brown and green, on a matrix of Muscovite and Feldspar crystals. Greifensteinite is found in only a dozen localities worldwide, so it can be considered a rare species.



Something really remarkable are the following Dissakisite-(Ce) / Allanite-(Ce) pieces, some of them also with Hydroxylbastnäsite-(Ce) on a Dolomite matrix. High quality specimens for the species and from a classic French deposit, the Trimouns mine.



Dissakisite-(Ce) / Allanite-(Ce) with Dolomite. Trimouns mine, Luzenac, Ariège, Occitanie, France. Size: 4.4 x 3.8 x 2.3 cm. Main crystal: 1.4 x 0.3 cm. Doubly terminated crystal of the isomorphic series Dissakisite-(Ce)-Allanite-(Ce). The majority of Trimouns specimens usually present color zoning that seems to indicate the presence of both species in the same crystal, the darkest areas corresponding to Allanite-(Ce), as they are richer in iron, with the lightest areas being the dominant Dissakisite-(Ce).



Dissakisite-(Ce) / Allanite-(Ce) with Dolomite. Trimouns mine, Luzenac, Ariège, Occitanie, France. Specimen size: 4.2 x 3.6 x 3.4 cm. Main crystal: 1 x 0.1 cm. This specimen was published on the website of the Mineralogical Record magazine, in the 'What's New' section, issue 59, March 7, 2021, page 6.



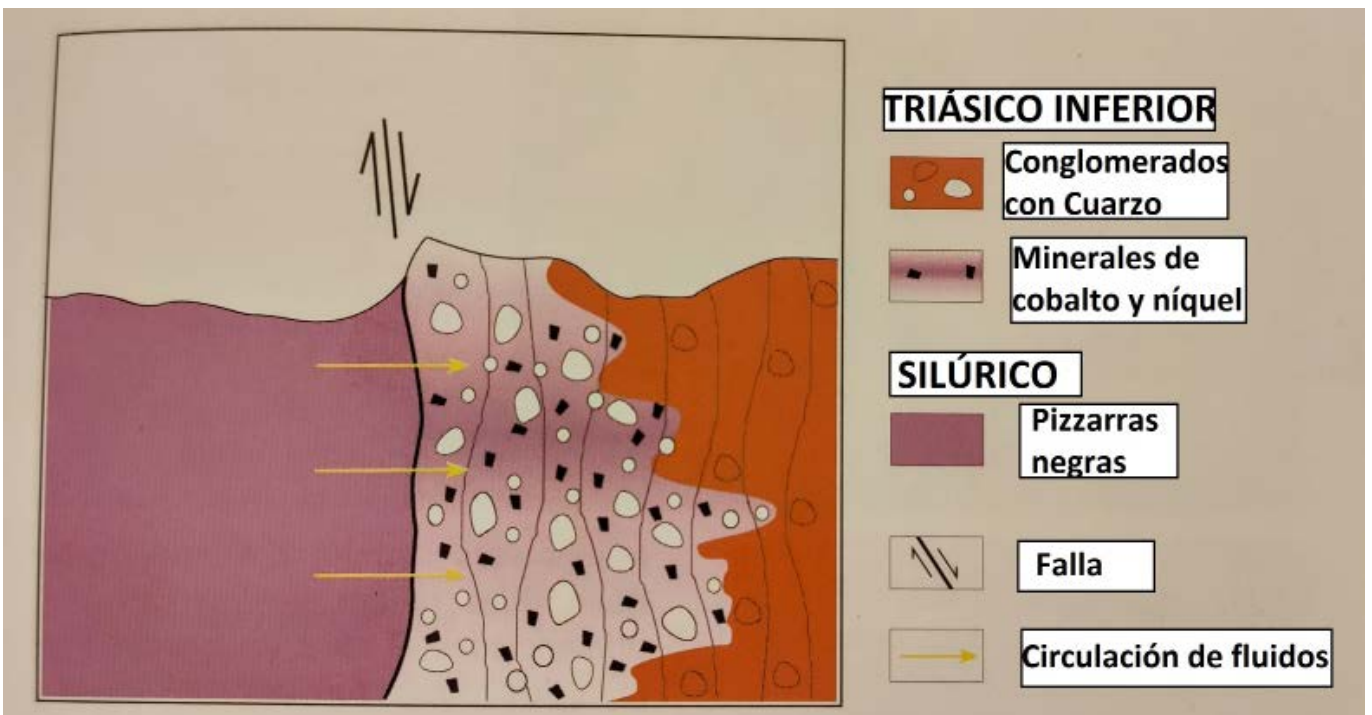
Dissakisite-(Ce) / Allanite-(Ce) with Hydroxylbastnäsite-(Ce) and Dolomite. Trimouns mine, Luzenac, Ariège, Occitanie, France. Size: 5.9 x 3.8 x 1.1 cm. Main crystal: 0.9 x 0.2 cm. This specimen, in addition to the Dissakisite-(Ce) / Allanite-(Ce), contains hexagonal crystals of Hydroxylbastnäsite-(Ce), which makes it even more attractive. The Trimouns mine exploits Talc, producing an annual amount of around 400,000 tons. Due to its orographic position, at about 1,800 meters elevation, the mine works from April to November, taking advantage of the good weather, but plant production does not stop throughout the year. The deposit is the type locality for two species.



Synchysite-(Ce) / Parisite-(Ce) with Dolomite and Talc. Trimouns mine, Luzenac, Ariège, Occitanie, France. Size: 3.3 x 3 x 1.7 cm. Main crystal: 0.4 x 0.3 cm. Doubly terminated crystal of the isomorphic Synchysite-(Ce)-Parisite-(Ce) series, transparent and lustrous. The majority of Trimouns specimens tend to exhibit color zoning that seems to indicate the presence of both species in the same crystal, with Parisite-(Ce) being the darkest areas, richest in iron, and the dominant Synchysite-(Ce) being the lightest with an intense yellow color. On matrix, with Talc and white rhombohedral Dolomite crystals



Calcite (cobalt-bearing variety). Solita mine, Peramea, Baix Pallars, Pallars Sobirà Region, Lleida, Catalunya, Spain. Size: 15 x 8 x 6 cm. Main crystal: 1.5 x 0.2 cm. A piece from my own home territory, formed by botryoidal aggregates of Calcite (cobalt-bearing variety) with areas of different colors varying from white to pink and deep mauve, with more crystalline, translucent and lustrous areas. A classic of Catalan mineralogy.



Cobalt-rich minerals were mined at the Solita mine. The mineralization is found at the contact between Lower Triassic conglomerates and Silurian black slates. It is stratiform and comes from the leaching of the slates, which are rich in cobalt and nickel, with subsequent infiltration and concentration of the solutions in the conglomerates, where they impregnate fractures forming films on the edges. (Modified from Lluís Ardèvol et al., "Meravelles geològiques del Pallars Sobirà", Arola editors.)

After a quick review of the minerals “seen” during the Virtual Show, those that were presented day by day and hour after hour, now on to review the fixed sections of this edition of Virtual Tucson 2021, the fourth and last show that closes the circle after the Sainte-Marie, Munich and Barcelona shows in 2020. At the time of writing these lines we already have bad and good news. Sainte Marie 2021 has been canceled in person, at least for its usual dates, but we already have confirmation that Sainte Marie 2021 will be held virtually, and everything seems to indicate that in this next edition the star country in terms of novelties will be Morocco, something that on the other hand has also been common in the face-to-face shows. Of course, we continue to miss the atmosphere of face-to-face shows but it is time to adapt and overcome the present in order to go for it in future.

USA, Mexico and Spain:



Wulfenite. Old Yuma mine, Saguaro National Monument, Amole District, Tucson Mountains, Pima County, Arizona. Specimen size: $3.5 \times 2.7 \times 1.3$ cm. Polycrystalline growth of very sharp Wulfenite crystals with a deep and uniform orange color, translucent and very lustrous. An American classic, ex-Ignacio Gaspar collection.



Gold. Round Mountain mine, Round Mountain, Nye County, Nevada. Specimen size: $2.2 \times 2.1 \times 0.9$ cm. The largest crystal measures 1.8×0.6 cm. Floater group of native Gold with flattened crystals, with the dominant cube and dodecahedron shapes and highly esthetic elongated shapes. Open pit mine with Au-Ag-As-Sb-Th-Hg-Mo-F-Mn-W mineralization. This mine produced 4 million tons of ore in 1984, of which 3,720 kg were Gold.



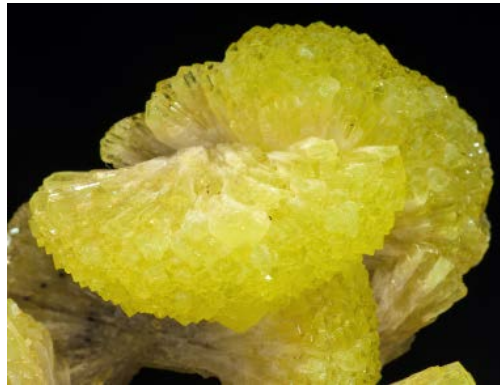
Copper. Ray mines, Scott Mountain area, Mineral Creek district, Dripping Spring Mountains, Pinal County, Arizona. Specimen size: $3.7 \times 3.3 \times 1.5$ cm. The largest crystal measures 1×0.3 cm. Very aerial dendritic growth of sharp Copper crystals, with the dominant forms of the cube and the dodecahedron and with a very reddish color due to a fine coating of Cuprite. From one of the most classic American copper mining districts, covered by some 50 mining claims rich in W-Au-Ag-Cu-Pb. Mineralization occurs in a pre-Cambrian shale intruded in places by diorites and granodiorites. This specimen comes from the Lluís Daunis collection.



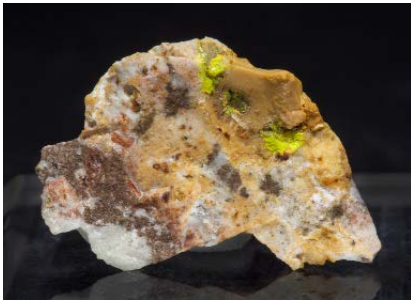
Fluorite with Calcite and Chalcopyrite. Annabel Lee mine, Harris Creek sub-district, Hardin County, Illinois. Specimen size: $4.6 \times 4.3 \times 3.6$ cm. The largest crystal measures 4.4×4.1 cm. Slight fluorescence with short-wave UV. Former Pierre-Marie Guy collection. Group of very sharp Fluorite crystals, between transparent and translucent, with good luster and a geometric color zoning very marked by the contrast between the yellow in most of the crystal and deep violet on the edges.



With Calcite and small Chalcopyrite crystals. A classic from the USA. This fluorite mine operated between 1984 and 1995.



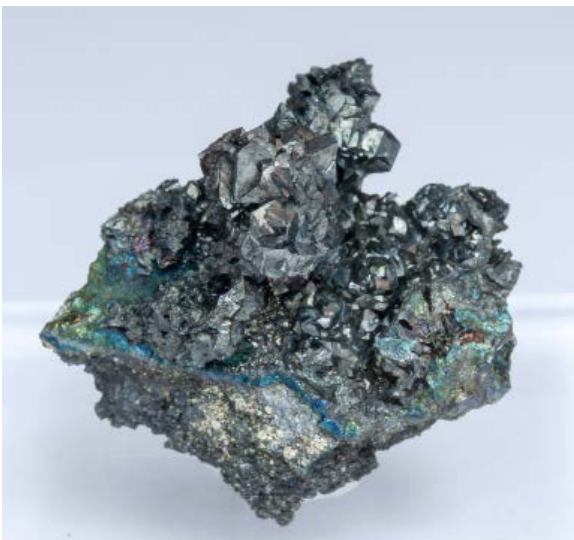
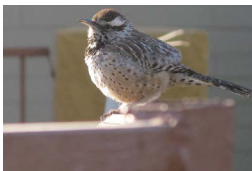
Adamite. Ojuela mine, Mapimí, Durango, Mexico. Specimen size: 4.5 × 4.4 × 2.6 cm. Very fluorescent under both long- and short-wave UV. Former Pedro Hernández collection. Fan-shaped groups of prismatic Adamite crystals with perfect terminations, good luster and an intense yellow color. A very aesthetic piece of this zinc arsenate from a classic mine for Mexican mineralogy, the legendary Ojuela mine in Mapimí, a locality that is the type locality for six species.



Paratellurite with Rodalquilarite and Jarosite. Filón 340, Rodalquilar, Níjar, Almería, Andalusia, Spain (± 2016). Specimen size: 2.3 × 1.5 × 0.9 cm. Former Ignacio Gaspar collection. Rare specimen of Paratellurite, an oxide of tellurium, together with Rodalquilarite from the type locality, the mythical Vein 340 of the Rodalquilar mines in Almería, Andalusia. Specimens of this type are difficult to find in the market due to their rarity and the small number available.



Pyrite with Fluorite. Villabona mines, Barrio de la Estación, Villabona, Llanera, Comarca del Nora, Asturias, Spain. Specimen size: 13.1 × 6.4 × 5.3 cm. The largest crystal measures 1 × 0.7 cm. Fluorite fluorescent under both long- and short-wave UV. Pyrite crystals with cubic habit and polycrystalline surfaces covering a druse of transparent, lustrous Fluorite crystals with an intense yellow color. This old specimen comes from the Villabona mines, a locality much less prolific than the nearby Moscona mine, where the yellow Fluorites are well known but with not so many Pyrites of a size like those of this piece.



Tennantite-(Fe). Las Cruces mine, Phase 6, level 130-135, ↓ 175 meter level, Gerena-Guillena-Salteras, Sierra Norte Region, Seville, Andalusia, Spain (01/2020). Specimen size: 2.6 × 2.6 × 1.4 cm. The largest crystal measures 0.2 × 0.2 cm. Very aerial group on matrix of Tennantite-(Fe) crystals with the dominant faces of a tetrahedron accompanied by minor forms. The specimen, which has an unusual crystal habit, comes from the last find before the definitive closure of the open-pit mining here and has been analyzed.

Spanish Fluorite, Portugal, France, Europe and FSU:



Octahedral Fluorite with Calcite. Berta quarry, Turó de Can Domènech, Serra de Roques Blanques, Sant Cugat del Vallès-El Papiol, Vallès Occidental / Baix Llobregat Region, Barcelona, Catalonia, Spain. Size: $4 \times 3.3 \times 2$ cm. The largest crystal measures 1.8×1.7 cm. Very fluorescent under both long- and short-wave UV. Former Pedro Hernández collection. Group of octahedral Fluorite crystals, one of them clearly dominant, translucent and with an intense deep green color, on a Calcite matrix. A classic of Spanish mineralogy, and cradle of Catalan mineralogy, and even the emblem and symbol of the Grup Mineralògic Català, G.M.C. This piece was virtually acquired and is now a physical part of my collection.



Gail Spann, well-known American collector, & Eloïse Gaillou, curator of the Ecole des Mines de Paris - Paris-Tech Museum - a duo of pure enthusiasm for minerals.



Fluorite with Siderite, Fluorapatite, Muscovite and Arsenopyrite. Panasqueira mines, Village of São Francisco de Assis, Covilhã, Castelo Branco, Cova da Beira, Portugal. Specimen size: $10 \times 6.4 \times 4.6$ cm. The largest crystal measures 0.6×0.5 cm. Fluorapatite fluorescent under both long- and short-wave UV. Sharp Fluorite crystals, transparent, with good luster and an intense violet color, partially covered by lenticular crystals of Siderite. On matrix, with tabular crystals of Fluorapatite, Arsenopyrite and leafy aggregates of Muscovite. Panasqueira specimens are usually represented by several mineral species in a single piece, as in this specimen, something that is not common and is appreciated by collectors. In that sense, this Lusitanian locality can be considered a paradise for paragenesis.



Fluorite with Pyromorphite. Chaillac mine, Chaillac, Le Blanc, Indre, Center-Val de Loire, France. (\pm 1985) Size: $11.8 \times 5.4 \times 4.3$ cm.

The largest crystal measures 4×3 cm. Slight fluorescence under both long- and short-wave UV. Former George Bouvet collection. Group of Fluorite crystals with very well defined faces and edges, translucent and with a purplish color with geometric color zoning, more intense on the edges. Noteworthy for the brown coatings of Pyromorphite formed by a multitude of crystals that cover a good part of the Fluorite crystals. From a stratiform Baryte deposit with a Fluorite vein.



Wulfenite. Mežica (Miess), Slovenia. Specimen size: $5.8 \times 2.7 \times 2.7$ cm. The largest crystal measures 0.5×0.2 cm. Group of crystals with a clearly hemihedral habit with one end very sharp and the opposite end finely polycrystalline. Very lustrous, with a vivid color, on matrix. An excellent classic, very characteristic for the locality, but which at the same time has a very original crystal habit.



Chalcocite with Calcite. Cornwall, England. Specimen size: 5.6 × 4.2 × 3.4 cm. The largest crystal measures 1 × 0.7 cm. Former Jean Béhier collection. Very aerial group of flattened Chalcocite crystals with sharp cycloidal twinning with a hexagonal outline, lustrous, on matrix with small white Calcite coatings. This specimen, an excellent English classic of high quality, reminds us of the Chalcocites recently found in the Cobre Las Cruces deposit, in Andalusia, Spain.



Silver. Himmelsfürst mine, Brand-Erbisdorf, Freiberg District, Erzgebirgskreis, Saxony, Germany. Specimen size: 3.3 × 2.8 × 1.8 cm. The largest crystal measures 2.4 × 0.3 cm. Former Carles Curto collection. Aggregate of elongated Silver crystals, with twists, hooked shapes and very sharp terminations. The specimen, a German classic, comes from a mine that produced more than 600,000 tons of silver between 1710 and 1896.



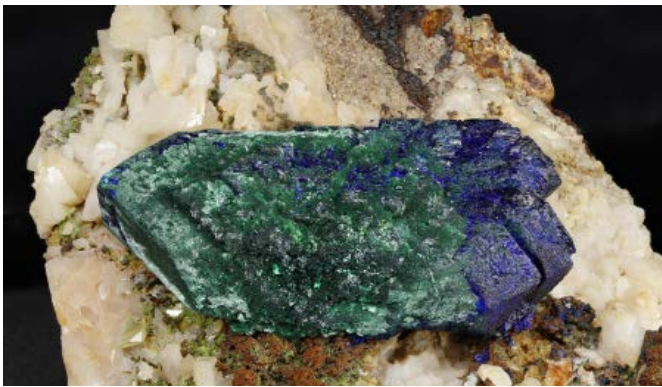
Pyromorphite. Friedrichsseggen mine, Frücht, Bad Ems District, Lahn Valley, Rhineland-Palatinate, Germany. Specimen size: 4.7 × 1.5 × 1.7 cm. Slight fluorescence under both long- and short-wave UV. Former Ignacio Gaspar collection. Parallel growths of doubly terminated prismatic crystals of Pyromorphite, lustrous and dark brown. Specimen comes from a lead mine that was exploited until 1913.



Fluorite (octahedral) with Quartz. Kara-Oba, Betpak-Dala desert, Karaganda Region, Kazakhstan. Specimen size: 12.6 × 4.5 × 4 cm. Ex-Jan Buma collection, number 920301. The characteristic cubo-octahedral Kara-Oba Fluorite of dark violet color on a very white, doubly terminated Quartz which gives a special contrast. From a Greisen-type tungsten-molybdenum deposit.



Morocco and Africa:



Doubly terminated Azurite with Malachite and Dolomite. Touissit, Jerada Province, Oriental Region, Morocco. Size: 6 x 4.5 x 3 cm. Former Ignacio Gaspar collection. Doubly terminated Azurite crystal, very sharp and with very sharp crystal forms and Malachite coatings, on a matrix partially covered with pink rhombohedral Dolomite crystals. A Moroccan classic - always so special, always so beautiful.



Galena with Dolomite. Zelidja mine, Touissit-Bou Bekker mining district, Jerada Province, Oriental Region, Morocco. Specimen size: 11.5 x 8.8 x 3.6 cm. The largest crystal measures 2.3 x 2 cm. A good size cubo-octahedral Galena crystal with very distinct polycrystalline growths, lustrous, on a matrix coated by pink rhombohedral Dolomite crystals. This material was practically unknown until now. Beautiful color contrast.



Malachite. Kambove District, Katanga (Shaba), Democratic Republic of Congo (Zaire). Specimen size: 12.4 x 11.4 x 4.3 cm. Malachite, botryoidal and very aerial stalagmitic growth. Lustrous and deep and uniform green, this piece is extraordinarily aesthetic and is accompanied by an old label from the prestigious Deyrolle establishment in Paris. The Kambove mining district contains a whopping 45 total TL mineral species.



Marie Huizing, the head of the American mineralogy magazine Rocks & Minerals. Maintaining a printed mineral magazine is not an easy task in current times where the virtual is growing at an unstoppable pace. Congratulations, and best wishes for many more years!

Brazil, South America, China and Asia:



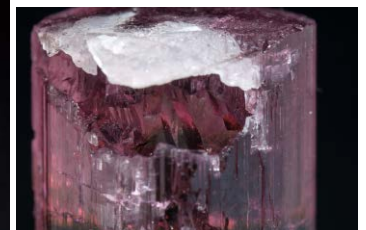
Zanazziite (manganese) with Albite and Elbaite. Jenipapo district, Itinga, Jequitinhonha, Minas Gerais, Brazil (2002-2003). Specimen size: $6.9 \times 5.4 \times 4.2$ cm. The largest crystal measures 0.1×0.1 cm. Polycrystalline aggregates of radial aggregates of Zanazziite, a rare phosphate of calcium, magnesium, and beryllium. Translucent and pink in color, they are on Albite matrix with Elbaite crystals. Analysis shows an almost complete substitution of manganese for the more usual subsidiary iron, which is why we call it "manganese Zanazziite". Note that species as rare as this are difficult to find in the market, even more so with analyses that justify the quality and provide peace of mind with regard to guaranteed identification.



Quartz (variety rose quartz). Huancayo district, Huancayo Province, Junín Department, Peru (2020). Specimen size: $5.8 \times 5 \times 4.4$ cm. The largest crystal measures 0.9×0.2 cm. A novelty at Tucson Virtual 2021. Original fan-shaped growths on a matrix of translucent Quartz crystals, with good luster and an intense pink color, the color of which is not due to inclusions of iron oxides but is rather their inherent natural color. The precise name of the mine is not yet known, but will surely become known with the passage of time.



Copper. Corocoro, Pajajes Province, La Paz Department, Bolivia. Specimen size: $3.2 \times 2.7 \times 1.6$ cm. The largest crystal measures 0.8×0.5 cm. Former Carles Curto collection. Arborescent growth of very lustrous Copper crystals with very sharp dodecahedron forms. An excellent miniature. The Corocoro district mined copper hosted in poorly consolidated sediments of Oligocene-Miocene age. The well-known Copper pseudomorphs after Aragonite come from this classic locality in Bolivia too.



Elbaite (variety rubellite) with Albite. Stak Nala, Haramosh Mountains, Baltistan District, Gilgit-Baltistan (Northern Areas), Pakistan. Specimen size: $7 \times 3.4 \times 3.3$ cm. The largest crystal measures 5×1.5 cm.

Elbaite crystal with very well defined faces and edges, lustrous, transparent and with clear zoning of intense pink-magenta color around the termination. It also shows a partial dissolution of the subsequently recrystallized Elbaite and a coating of crystallized Albite. The crystal is on a matrix of platy Albite crystals

Conclusions:

So far a review, with a personal outlook, of the now distant Tucson Virtual 2021 show. Work obligations did not allow it to be completed until four months after it was held. As the next virtual show offered by FM will be Sainte-Marie-aux Mines, we can say that the virtual circle has closed. The evolution from the first virtual show to the latest has been evident, both in the number of pieces offered, and in the presentation, with many descriptions added in the section “The Heart of ...” as well as videos that always help to better visualize one piece or another. Classic pieces, new finds, pieces from ex-collections, etc ... make the range sufficient for all tastes and pockets.

2021 is going to be a year of impasse, with guaranteed virtual shows and probably face-to-face shows toward the second half of the year. Many dealers continue to sell their specimens through their own web pages and/or through social media. Other platforms have been consolidated, such as the one started under the umbrella of “Pandemic Mineral” in Spain, which is gradually advancing along a not easy path and which brings together multiple local mineral dealers.

It remains to be seen what happens to all these initiatives once “normality” returns, all international borders are reopened and the major mineral shows in Europe and America return to normal schedules, without forgetting Asia and especially China..

See you at Sainte-Marie-aux-Mines virtual 2021!



Jordi Fabre in jet lag mode



The Huizings, or Rocks & Minerals



Pedro Ansorena and Eloïsa Artola



In memoriam, John Veevaert