

# Summer hours

Translation made by AWB Anilkumar Kodali

2023

Our forecasts of astronomical observations – (generally excluding ephemerides)

I present here observation forecasts for the entire season from May to August 2023, which are often "unplanned" in the ephemerides.

Like last year, a little recess will make it difficult for me to draw up the next monthly forecasts. I will therefore offer you this document which covers the next few months.

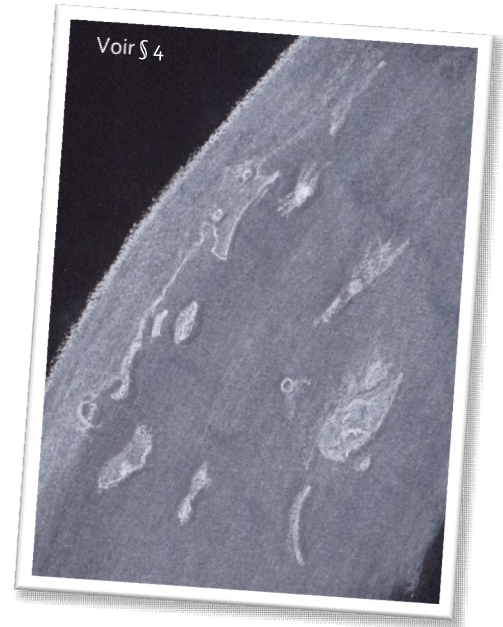
I will continue to send Alerts and videos, even in mobile mode.

## Topics

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I wish you good observations from this planet of brutes and if your sky is clear, I invite you to observe some of the wonders that the sky offers us! It's free but... to dream of the stars you have to leave your home!

Go - That's what I'm going to do!



For all observations that follow, I am in close contact with organizations of "citizen scientists".

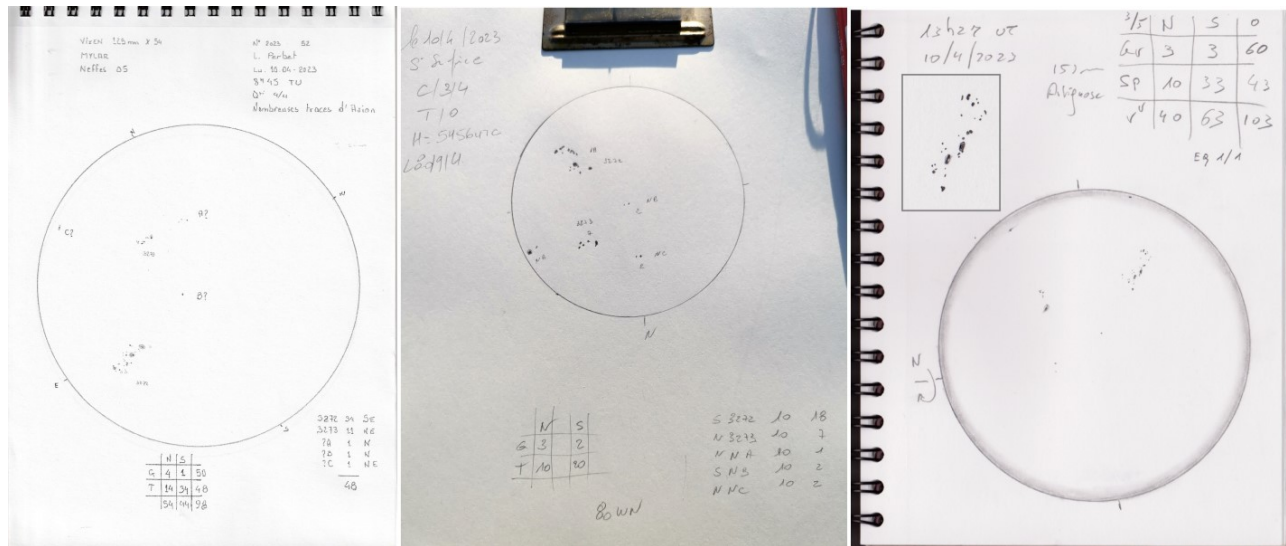
If you want to observe *useful*, Do not hesitate to contact me.

<https://astro.aquarellia.com>

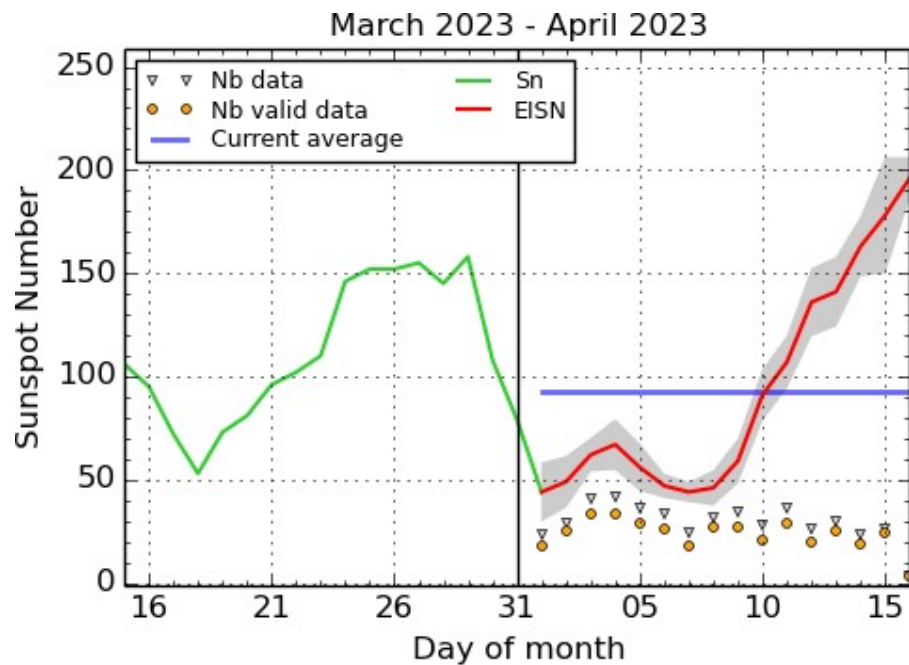


# 1. The Sun

The current solar cycle has the number 25, the first, historical, having started in August 1755. This first cycle corresponds to the beginning of the regular monitoring of the observation of sunspots. As for the month of March, the estimates for the month of April 2023 varied greatly.



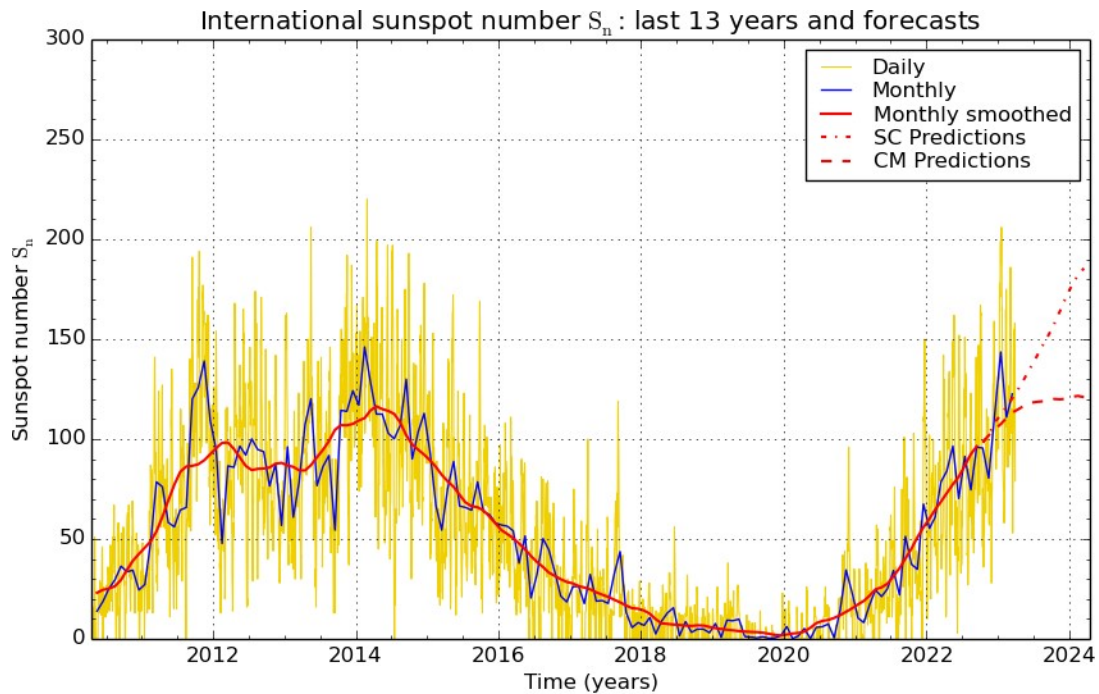
Above the production by the sketch of April 10, of three assiduous observers. From left to right Ludovic Perbet, Michel Besson, and myself.



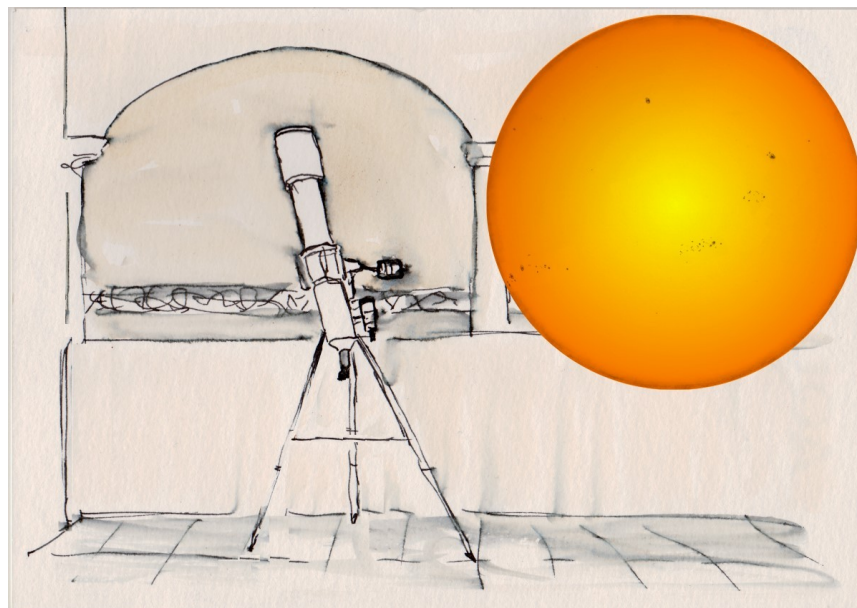
SILSO graphics (<http://sidc.be/silso>) Royal Observatory of Belgium, 2023 April 16

On the 88 official stations, (see the curves below), this month of April we were 25 to 40 observers whose stations are distributed all around the world, obviously the weather is not good everywhere. The small triangles indicate the number of active stations and the yellow balls the number of valid observations.

The following curve gives the evolution of solar activity during the relatively last 13 years, this curve, like the previous one, is based only on the visual estimates of the referenced stations.



SILSO graphics (<http://sidc.be/silso>) Royal Observatory of Belgium 2023 April 4



April 13 Bresser 152mm telescope - lens filter - equatorial mount

For several months, our Sun has been particularly active, but over the past two months it has also been particularly variable. As a reminder, the sun is a variable star, our readings show CQFD - what needed to be demonstrated.

PS: Do not hesitate to be part of those who observe the sun in a useful way always **using professional filters, but never DIY filters!**



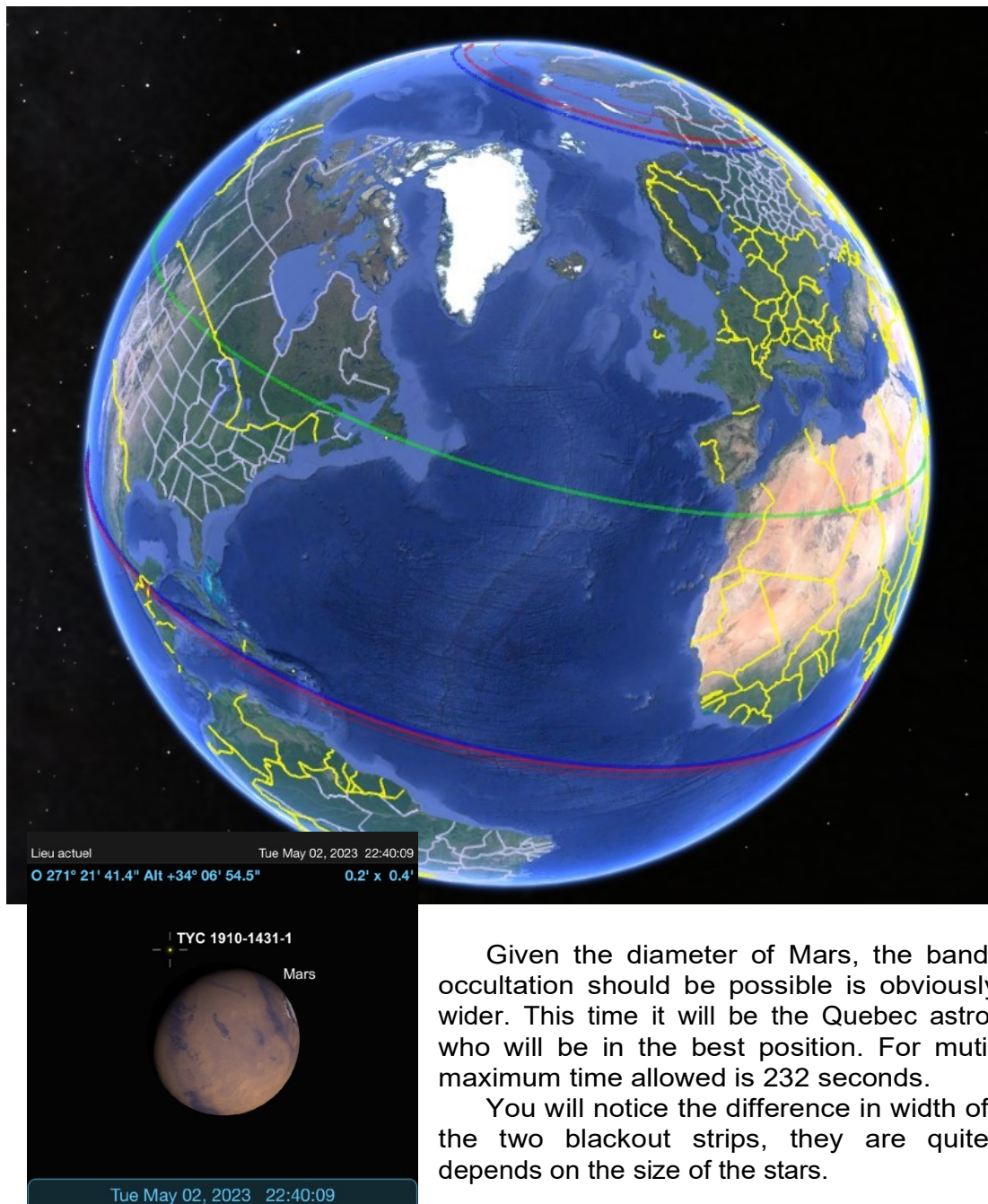
## 2. The Occultations

### 1- At the very beginning of May, there will be a rare occultation of a star by the planet Mars.

On May 2 around 8:42 p.m. (still in Universal Time), the star

TYC 1910-01431-1 of magnitude +9.9

will hide behind the planet Mars and, what will probably be very interesting, will be the gradual disappearance due to its atmosphere. The disappearance of the star will be easier because it will die out in the shadow of the Martian globe. The low luminosity of the star will be awkward compared to the magnitude (+1.4) of the red planet. A good telescope will therefore be necessary. The last observation of the occultation of a star by Mars dates from 2015 and only one observer had observed it.

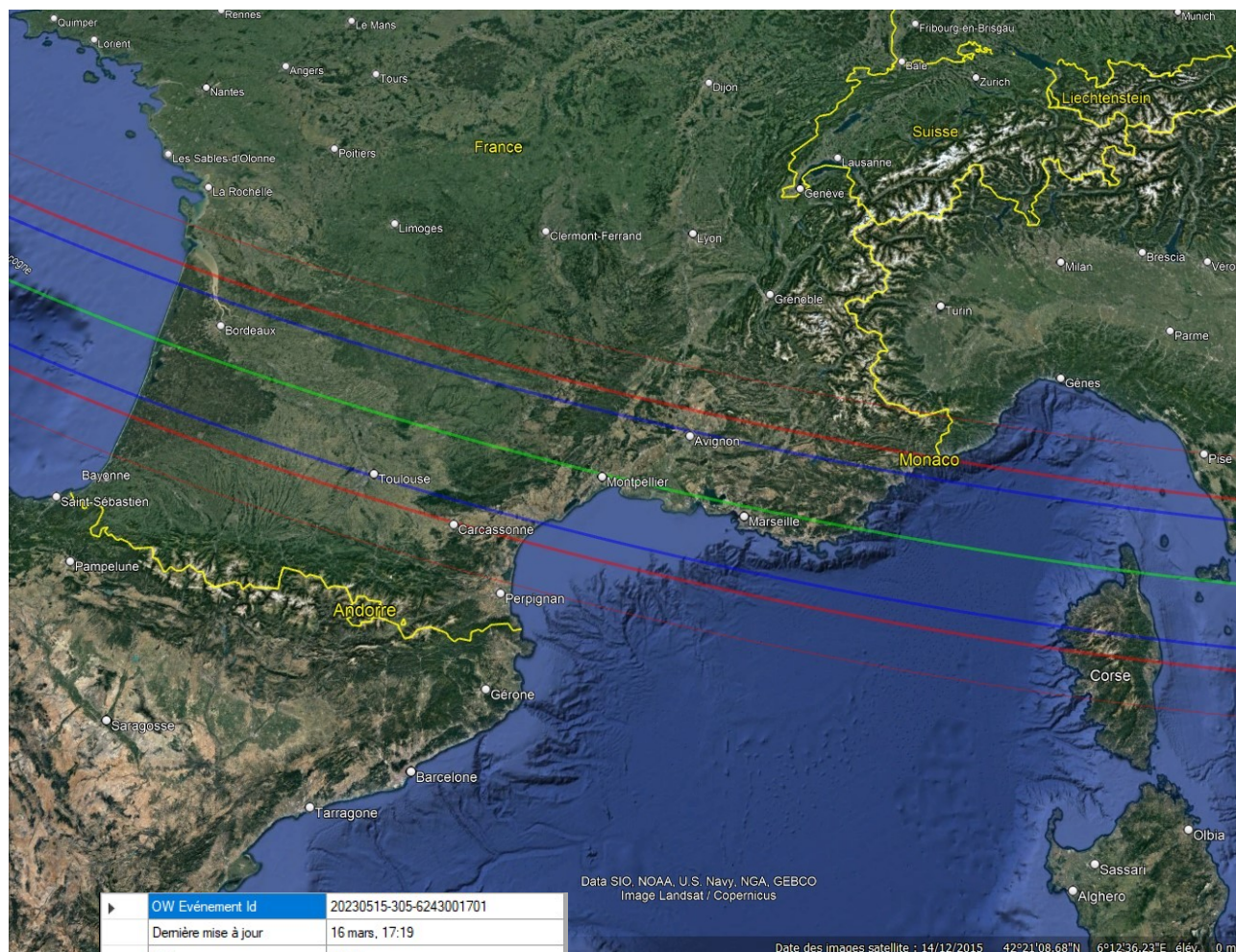


Given the diameter of Mars, the band where occultation should be possible is obviously much wider. This time it will be the Quebec astronomers who will be in the best position. For muting, the maximum time allowed is 232 seconds.

You will notice the difference in width of the two blackout strips, they are quite depends on the size of the stars.

## 2- An ideal concealment

On May 15 at 2:45 UT will take place in the southern region of France, the occultation of the star TYC 6243-00170-1 of apparent magnitude +10.1 by the asteroid (305) Gordonia of apparent magnitude +14.4, which is ideal for the drop in magnitude of the star. The prediction gives a maximum duration of more than 4 seconds.

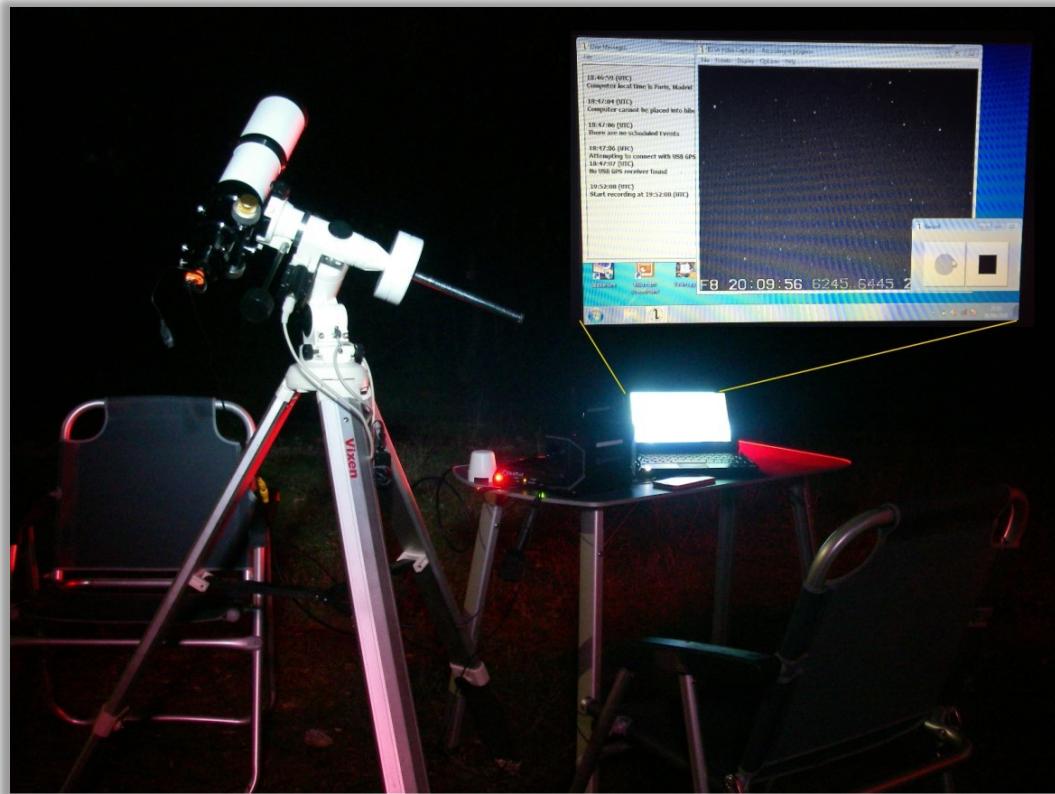


An occultation of a star by Gordonia has only been observed twice and by a single observer in 2006 and by another observer in 2018. The thin crescent Moon will not be distracting at all.

Opposite some additional information from Occult Watcher



### 3- Atmosphere of observation of a star occultation by asteroid in nomadic fashion.



GPSVideo Time Inserter"IOTA" for occultation registration

It is sometimes necessary to move to observe the event with a better chance of being on the theoretical shadow line. But if you are at the edge of the shadow zone, a non-occultation will specify the diameter of the asteroid, and if you are squarely outside, it offers you the possibility of discovering an asteroid satellite.

For your geographical location, do not hesitate to consult the excellent Occult Watcher software. There are many other possibilities of occultation of a star by an asteroid, by a comet or by a natural satellite. To predict them, it is your location that is important.

If you are interested in observing them from your region, I recommend the Euraster site:

<http://www.euraster.net/>

It gives you past results and a lot of very useful information.

For the predictions I mainly use the Occult Watcher software which is to be loaded on PC via the website:

<http://www.occultwatcher.net/>

### 3. Comets

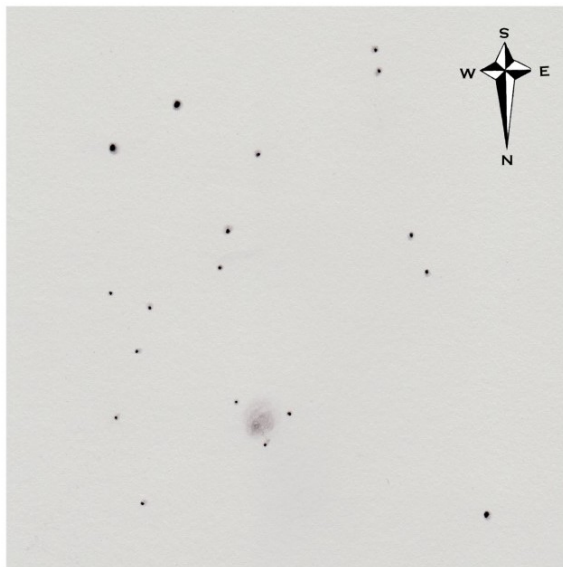
#### 1-The most beautiful comets of the moment...

...are still not that great... With the disappearance towards the great South of comet ZTF, more precisely C/2022 E3, we are left with only these interesting little comets, of course, but much less spectacular.

Already from April the comet C/2022 E3 has become an object which will be visible mainly from the southern hemisphere.

Comet(s)	Today			Perihelion			Nearest approach		
designation	magn	delta	radius	date	magn	radius	date	magn	delta
<a href="#">C/2017 K2 (PANSTARRS)</a>	9.2	2.65 AU	2.28 AU	19 Dec 2022	8.3	1.80 AU	14 Jul 2022	8.8	1.81 AU
<a href="#">C/2020 V2 (ZTF)</a>	10.2	3.10 AU	2.25 AU	8 May 2023	10.3	2.23 AU	17 Sep 2023	9.8	1.85 AU
<a href="#">C/2022 A2 (PANSTARRS)</a>	10.9	2.55 AU	1.86 AU	18 Feb 2023	9.6	1.74 AU	17 Jan 2023	9.5	1.61 AU
<a href="#">C/2022 E3 (ZTF)</a>	11.3	2.07 AU	1.76 AU	12 Jan 2023	6.9	1.11 AU	1 Feb 2023	5.1	0.28 AU
<a href="#">C/2020 K1 (PANSTARRS)</a>	12.0	3.00 AU	3.09 AU	9 May 2023	11.7	3.07 AU	9 Jun 2023	11.5	2.47 AU
<a href="#">C/2019 L3 (ATLAS)</a>	12.0	4.82 AU	5.35 AU	9 Jan 2022	9.4	3.55 AU	6 Jan 2022	9.4	2.58 AU
<a href="#">364P/PANSTARRS</a>	12.2	0.13 AU	0.96 AU	14 May 2023	14.0	0.80 AU	7 Apr 2023	12.3	0.12 AU
<a href="#">C/2019 U5 (PANSTARRS)</a>	12.2	2.70 AU	3.63 AU	29 Mar 2023	12.2	3.62 AU	24 Mar 2023	12.2	2.63 AU
<a href="#">81P/Wild</a>	12.7	1.32 AU	1.95 AU	15 Dec 2022	11.6	1.60 AU	18 May 2023	13.5	1.22 AU
<a href="#">237P/LINEAR</a>	12.9	1.66 AU	2.01 AU	14 May 2023	12.3	1.99 AU	8 Jul 2023	12.1	1.06 AU
<a href="#">C/2019 T4 (ATLAS)</a>	13.3	4.15 AU	4.93 AU	8 Jun 2022	12.2	4.24 AU	4 Apr 2022	11.9	3.33 AU
<a href="#">C/2021 T4 (Lemmon)</a>	13.5	3.02 AU	2.12 AU	31 Jul 2023	8.7	1.48 AU	20 Jul 2023	8.2	0.54 AU

#### 2-Comet C/2020 V2 (ZTF)



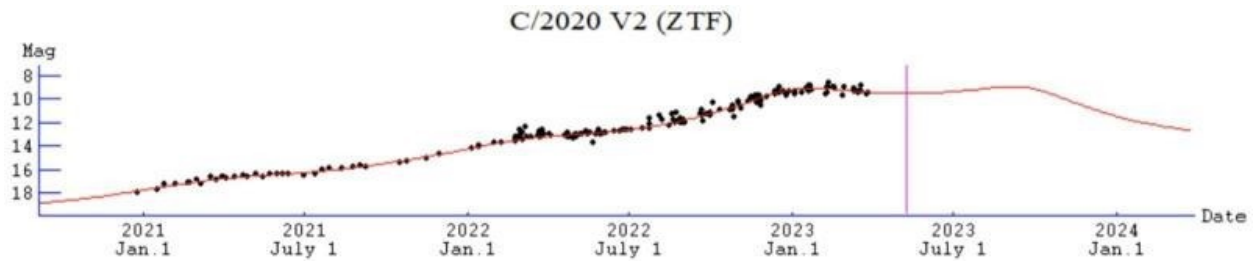
Comet C/2020 V2 (ZTF)  
Mewlon 250mm f10 - 192x

2023-02-16 18h27 UTC  
F.O.S.: 20'

<https://astro.aquarellia.com>

Comet C/2020 V2 (ZTF) is one month away from perihelion which will take place on May 8, 2023 at a distance of 2.23 astronomical units from the Sun. C/2020 V2 is expected to remain brighter than magnitude 10 for most of 2023. It is approaching solar conjunction and therefore all observers, even those in the north, will lose sight of the comet by mid-2020.

month. It will reappear in the morning sky for most observers in June or July when it should still be around its current brightness.



I invite you to discover all the cometary images. I obviously only want to talk about the images shared to the whole world by amateurs and professionals.

To access it follow the link below: <https://alpo-astronomy.org/gallery3/index.php/Comet-Images-and-Observations>

**Comet hunters - Call for papers:**

As co-responsible for the comets section of the ALPO (L'association internationale association for the observation of the solar system) directed by Carl Hergenrother, I await your observations, images (photo or sketch) of the comets that you observe.

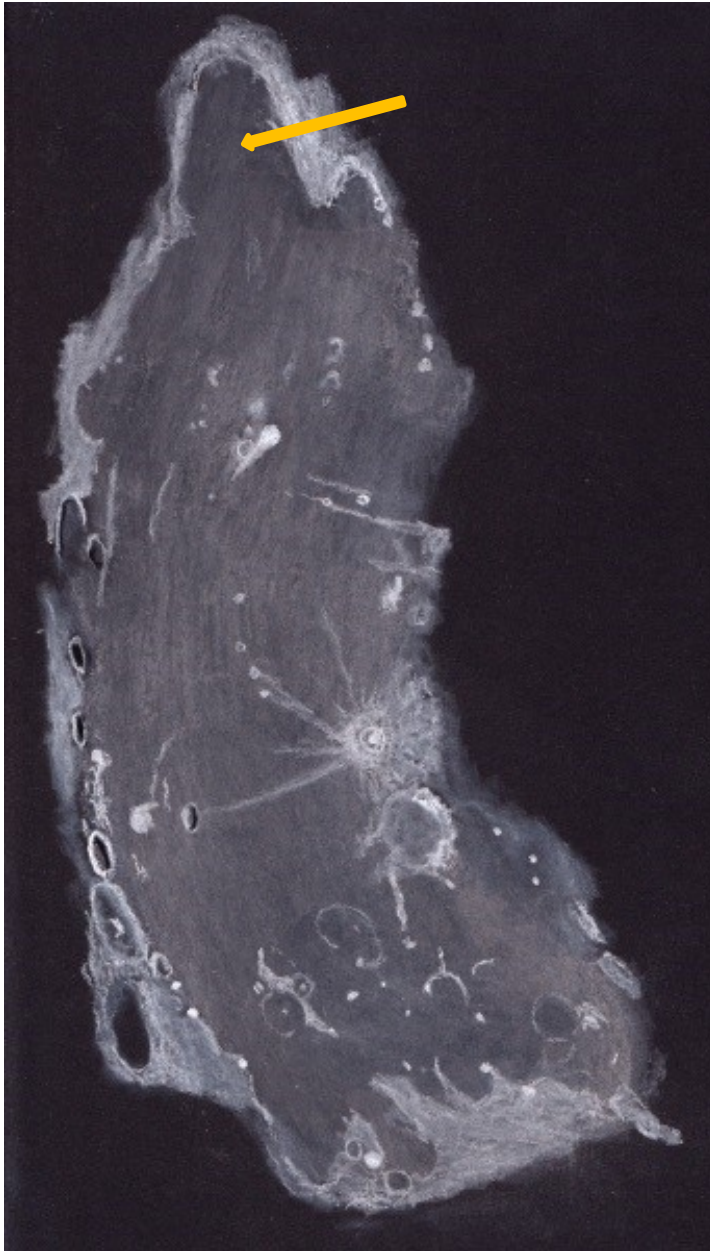


My address for comets:  
[michel.deconinck@alpo-astronomy.org](mailto:michel.deconinck@alpo-astronomy.org)



## 4. The Moon

And it's still my association ALPO that offers you the possibility, every two months, of carrying out some interesting challenges, called "Focus-On".



Ocean of Storms Global Pastel – June 2019

The next challenge will be that of the Mons Rümker region.

This time we will highlight the area of Mons Rümker, a complex of volcanic domes in the northern part of the Ocean of Storms

Unfortunately, this area is too close to the limb of the Moon to see it easily. It is therefore advisable to carry out the observation with a favorable release.

Despite its name, Mons Rümker is not really a mountain, it is a vast complex of volcanoes. The total diameter of the formation is 65 km. There are a good dozen separate domes, using a telescope it looks more like a dilapidated mound. Several of the domes feature pateras or *paterae*(\*) at their top.

(\*) A patera is what is called a caldera on earth, it is for us a vast circular depression located at center of volcanic formations.

In exogeology they are called paterae. There are some famous ones like Sappho Patera on Venus, Apollinaris Patera on Mars, Loki Patera on Io, or Leviathan Patera on Triton.

So, these beautiful images, let's not keep them for ourselves, let's share them, we are also waiting for old images of this region.

Please send articles, drawings, images, etc. to Alberto Anunziato (Argentina) and David Teske (USA) by April 20, 2023, for your observations to appear in the May 2023 issue of "The Lunar Observer".

Ideally, the email to be sent must contain the following information:

- **Observer name and location**
- **Object name.**
- **Date and time of the observation in Universal Time (use the name of the month in English or the format "mm-dd-yyyy-hhmm" or even "yyyy-mm-dd-hhmm")**
- **Filter (if used)**
- Size and type of telescope used. Magnification (for sketches)
- Camera used (for photos and electronic images)
- Image Orientation: (North/South - East/West)
- Seeing: 0 to 10 (0-worst 10-best)
- Transparency: 1 to 6
- Feel free to add comments.

It is not necessary to reduce the size of the file, but at least the information in bold is necessary.

Files should be submitted by email to

- David Teske — [david.teske@alpo-astronomy.org](mailto:david.teske@alpo-astronomy.org)
- Alberto Anunziato — [albertoanunziato@yahoo.com.ar](mailto:albertoanunziato@yahoo.com.ar)
- Wayne Bailey — [wayne.bailey@alpo-astronomy.org](mailto:wayne.bailey@alpo-astronomy.org)

Do not hesitate to leaf through the latest TLO, this monthly magazine now has 134 pages thanks to your images:

<https://alpo-astronomy.org/gallery3/var/albums/Lunar/The-Lunar-Observer/2022/tlo202209.pdf?m=1661994318>

(\*) ALPO <http://alpo-astronomy.org/index.htm>

To get a little ahead here are the future Focus-On's:

- For August 20, 2023: Floor-Fractured Craters
- For October 20, 2023: Dorsa Smirnov

## 5. Small Atlas of the Lunar Seas

About our marvelous natural satellite, I had my first book published. This is a small atlas of the lunar seas.

It is on sale here: <https://merslunaires.com/>



This booklet takes up the seas and the ocean on the visible side of the Moon with useful indications for their observations as well as some crisp anecdotes. It is interactive, indeed a table allows you to indicate your observations, even with the naked eye!

In french only





## 6.Contact

Email: Michel Deconinck: [contact@aquarellia.com](mailto:contact@aquarellia.com)

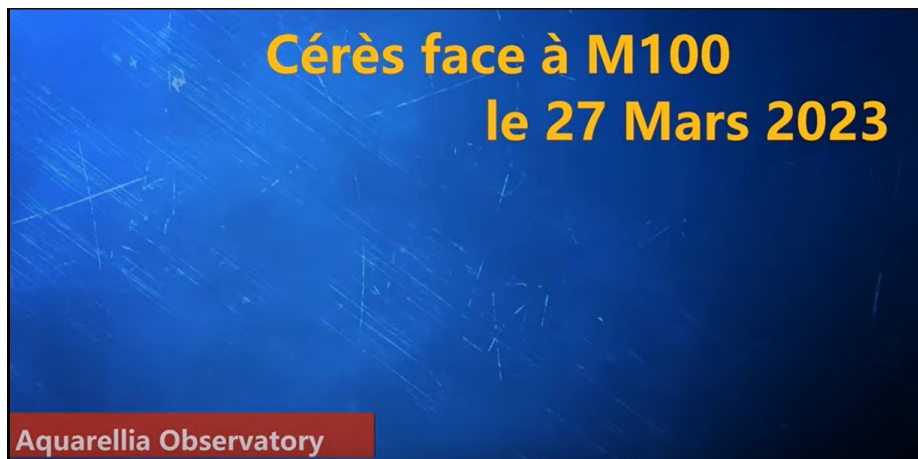
Or for comets:

[michel.deconinck@alpo-astronomy.org](mailto:michel.deconinck@alpo-astronomy.org)

Website :

<https://astro.aquarellia.com>

And for fun or not to miss anything, don't hesitate to watch one of our latest videos like this:



<https://youtu.be/LHIEv-9SOkw>

And,... if you like it, subscribe to one of our two channels **Youtube**, it's fun and it's free.

Astronomy: <https://www.youtube.com/@MichelDeconinck> And

Journey : <https://www.youtube.com/c/Aquarevan>

Between watercolor travels and astronomy, other videos will follow.

Good to you all!

A handwritten signature in black ink, appearing to read 'MICHEL' with a stylized flourish at the end.