Subject: [ORAS] Solar System EAA Observations Friday 02-07-2025
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Date: 2/8/2025, 6:33 PM
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hi all,
I was out in my backyard observatory for a few hours last night. It was a little hazy for Deep-Sky work but Shallow-Sky was fine!
It was "Mars o'Clock" time! 😳

Mars is now nearly a month past opposition, so its size is beginning to shrink as the distance between us widens.
The martian disk is down to only 13 arc seconds in size, and beginning to show a gibbous phase.
But using my Meade 8" LX200GPS at f10 and ZWO ASI290MC camera & IR filter, with Sharpcap's planetary livestack tool, I was still able to EAA observe details.
It was fun using the stacked image and my trusty old National Geographic map to identify surface features, including the North Polar Cap and Mare Sirenum in the southern hemisphere.
Here's the observation showing the faint oval indicating the location of the super-volcano Olympus Mons on the martian central meridian.

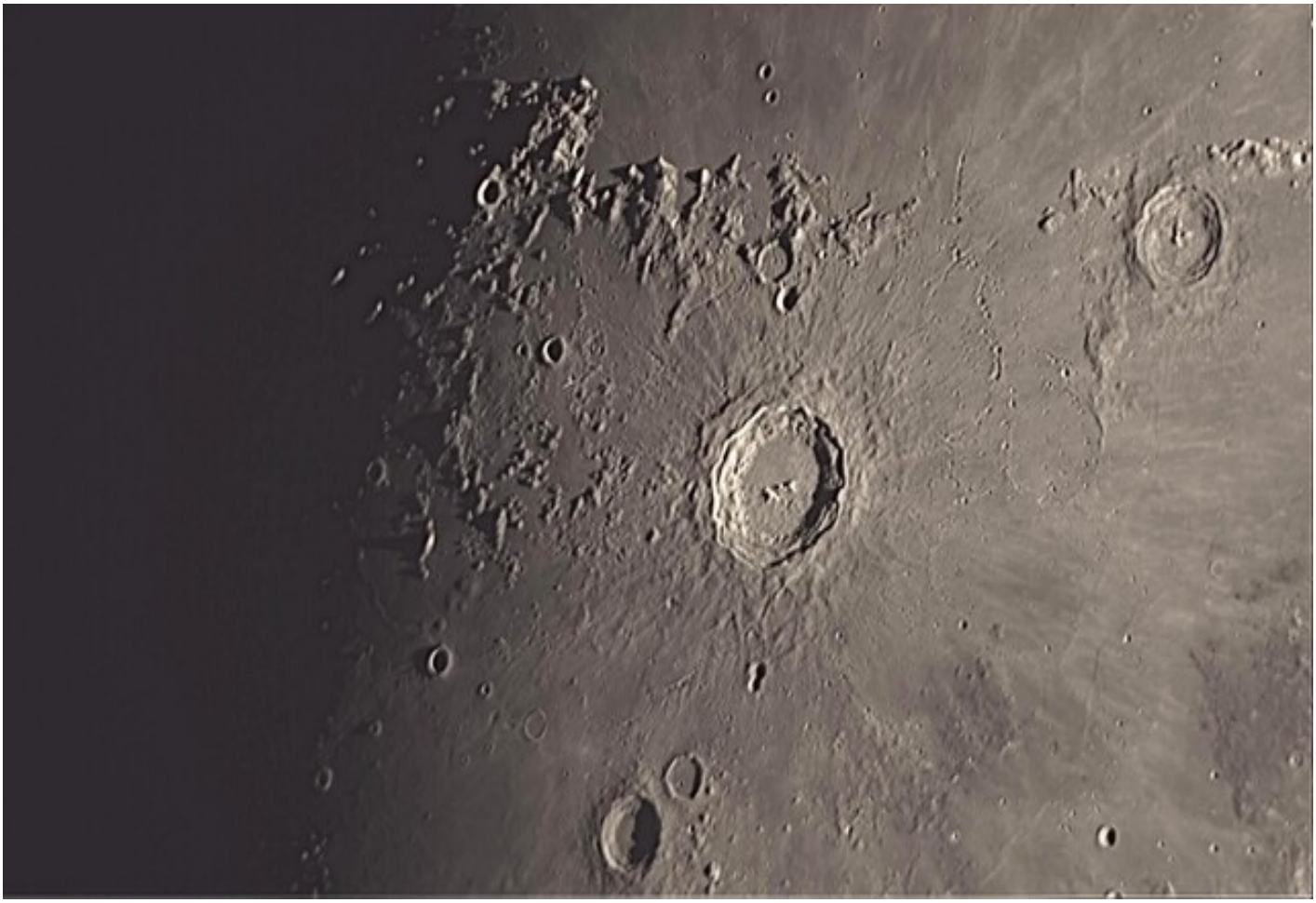
I also spent time watching the Galilean Moon Europa make a transit across Jupiter's disk:

But the most fun of the evening was using my Rukl's Atlas of the Moon to explore our feature-filled nearest neighbor.
The 8" SCT & Sharpcap shows a wealth of surface details and I could have spent the entire evening browsing along the terminator line. I did spend almost two hours zooming around the lunar mountains and craters, but thicker clouds and the cold finally ended the night.

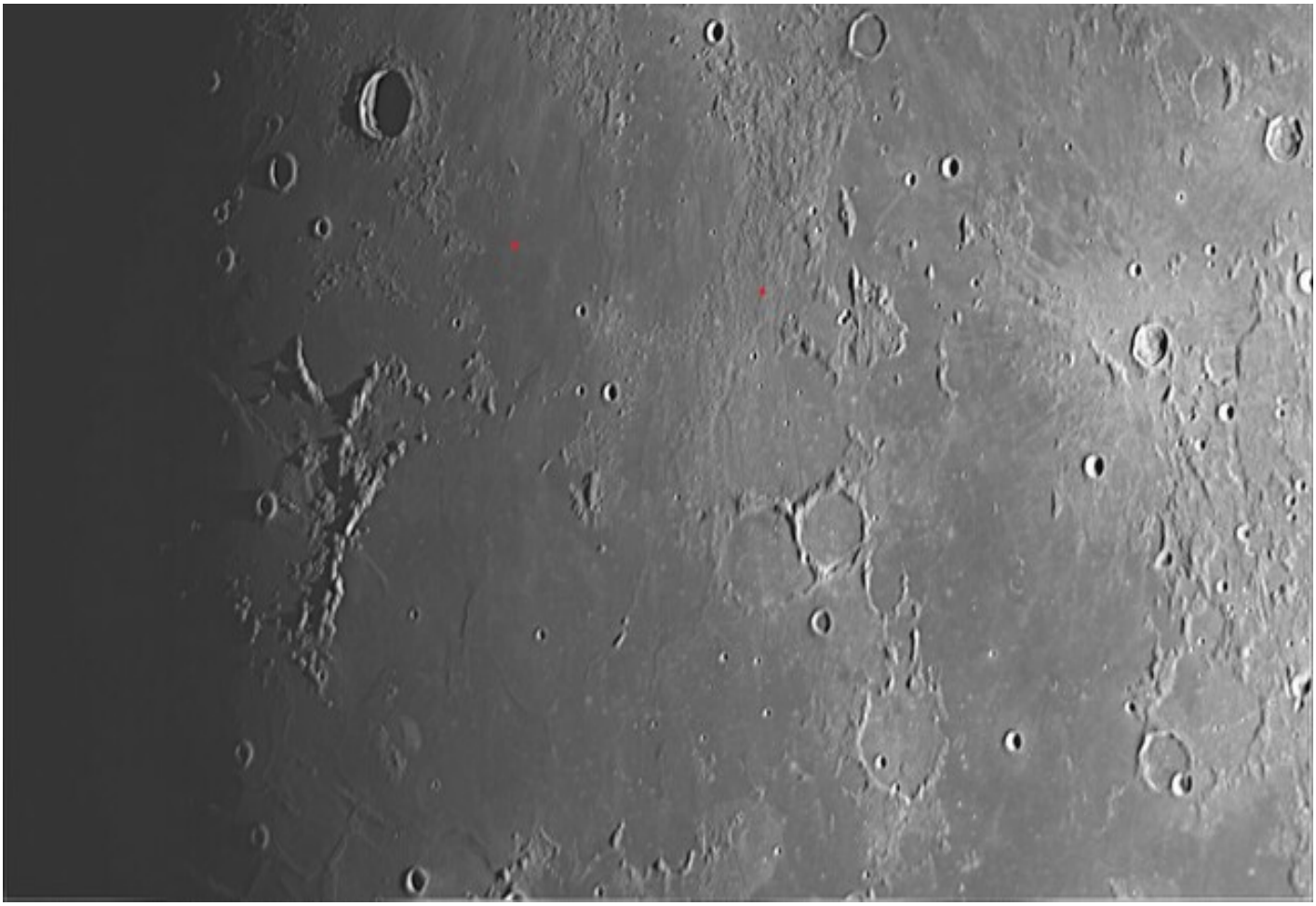
Here's a few of the best regions that I explored:
Plato: considered to be a walled-plain, its always fun to pull out the few faint craterlets inside of the 62 mile floor. Nearby to the right is the cleft of the 112 mile long Alpine Valley.
Just below Plato is the lunar peak called Mons Pico, towering 7,874 ft above Mare Imbrium impact

basin. Finally, coming out of the shadows of sunrise is Cape Laplace, marking the start of the eastern tip of the Jura Mountain range.

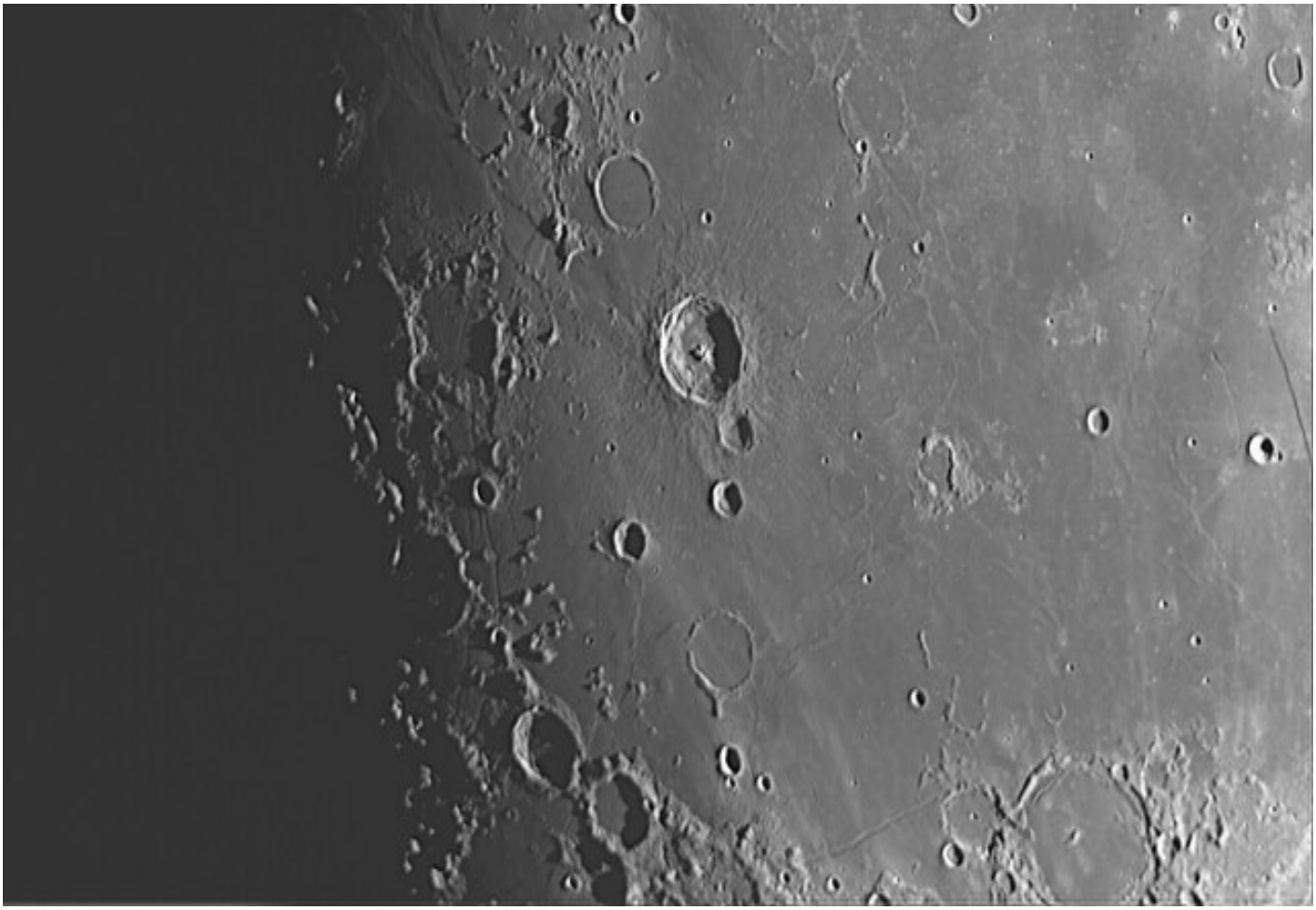
Next is my favorite large lunar impact crater - Copernicus! (the location of the originally planned Apollo 18 landing site, before the program was canceled after Apollo 17! 😳)
Copernicus is 58 miles in circumference and 12,335 ft deep. Its terraced crater rim rises 2,952 ft above the Mara, and its interior central mountain peaks rise nearly 4,000 ft from the crater floor.
Surrounding the crater is the wrack terrain from the impact. An intricate view in any scope!
Just to the north at the base of the Carpathian Mountains is the small rille - Rima Gay-Lussac, that runs for about 40km.
To the upper right is the 36 mile in diameter crater Eratosthenes, also displaying terraced walls and central peaks.



Continuing southwards we come to a region of flooded craters - Fra Mauro:
This area is well past sunrise so the detail defining shadows are mostly missing, but the faint ghostly rings of Fra Mauro, Bonpland, Parry, and Guericke can still be seen.
Along the sunrise line are the peaks of the 93 mile long range called Montes Riphaeus. Just above center are the red dots of the Apollo 12 (left) and Apollo 14 (right) landing sites.



Then our virtual lunar spacecraft come to the medium size 38 mile in diameter crater called Bullialdus: The 11,515 ft deep crater displays several terraced walls, central peaks, and outer impact terrain, similar to Copernicus.
There's a number of rilles visible to the west of Bullialdus, and several flooded ghost crater rings to the right and south of the main crater.
One interesting broken-rimed crater in particular is called Kies, (27 miles in diameter) half-way between Bullialdus and the frame edge, that sorta looks like a pickle-ball racket with a short handle. If you look just a little ways to the left you will see the small faint lunar dome called Kies Pi. (perhaps thats the ball? 🙂) The dome is about 6 miles in diamter and 900 ft high with a tiny crater-vent on top.



Finally, our last stop for the night is my favorite off-world destination from 2001 A Space Odyssey: the walled plain Clavius:
There's numerous large and small craters embedded within the 140 mile ancient crater. But, no sign of any monolith,,,,, 😊

And with that, I'll conclude the EAA lunar tour from Friday night.

Larry

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