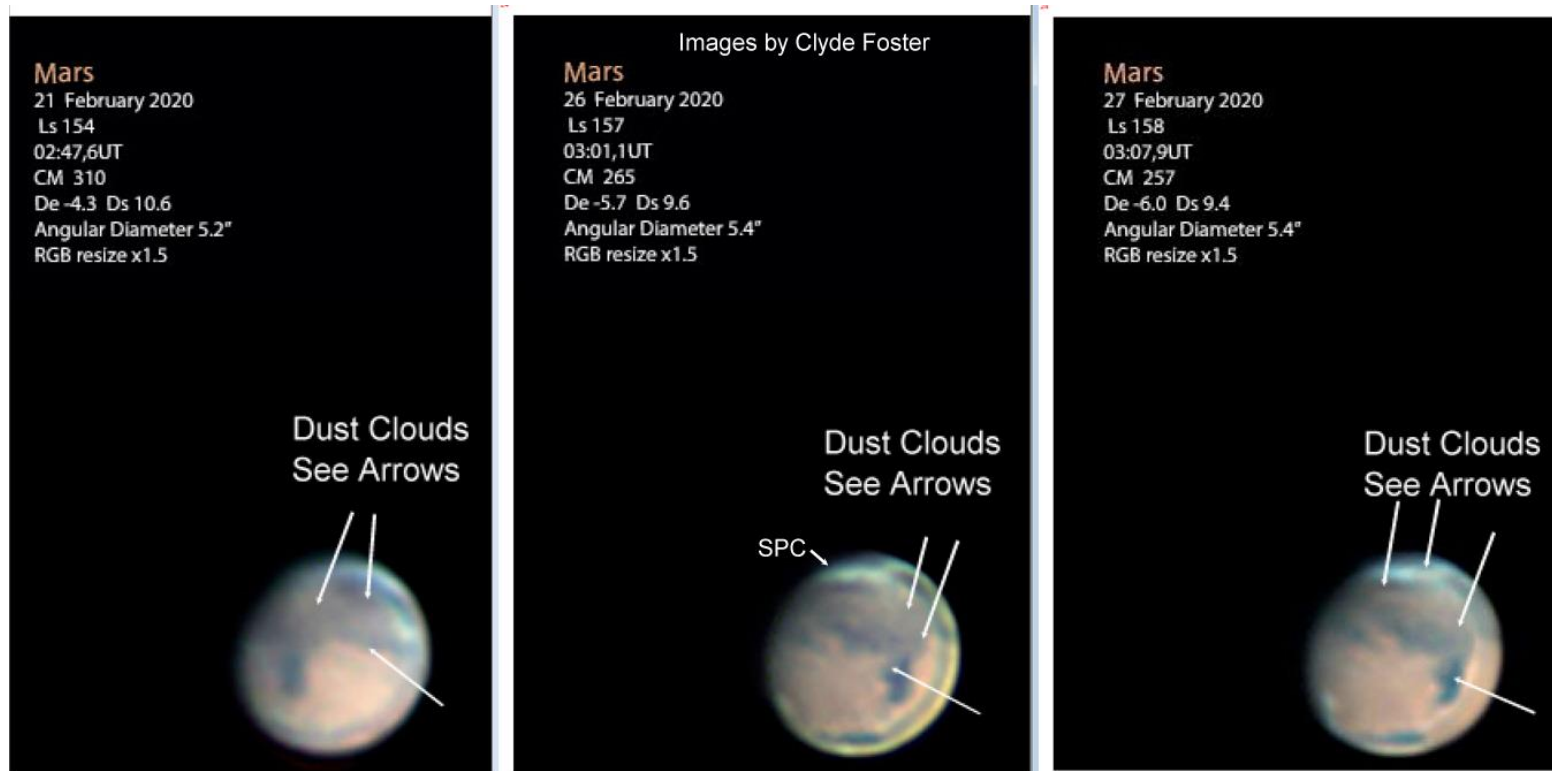


2020-2021 Featured Observations

Early Dust Storm Alert

By Jim Melka

Clyde Foster submitted to ALPO images of Mars on Feb. 21, 26 and 27 2020. All three together show what look like dust clouds as far West as Noachis and Eastward covering Hellas and Iapygia Viridis and as far East as the Southern part of Mare Tyrrhenum. There is a dust incursion onto the Northern edge of the SPC in the 2020-02-27 image. A composite of the three images can be found in an album titled “Dust storm alerts” on the [Mars Observers web site](#) as well as in [the ALPO Mars Gallery](#). Congratulations to Clyde Foster for the detailed images.



The Mountains of Mitchel aren't mountains as this feature was characterized in the early 1900s. It occurs on a long elevated region stretching about 800 km long and 300 km wide. Its North-facing edge is a high scarp (cliff) that causes the ground to slope toward the South resulting in a lower sun angle than surrounding regions. This causes a lower temperature of the ice in this region so that the ice doesn't sublime as quickly as it does in nearby areas.



Mars and its Moons

By Paul Maxson



Clear Example of More Surface Details Visible with Mars Closer to Earth

By Martin Lewis



Rarely recorded views of the residual South Polar Cap from Ls 330° late-southern summer to Ls 353° end-southern summer.

Composite images provided by Roger Venable. Note the terminator in the Ls 353° image almost envelopes the SPC. The SPC may have reached its smallest size and should be mostly H₂O ice as the surface temperature is still too cold for the ice to sublimate. The surface temperature should continue to decrease as the Sun angle continues to drop in early Fall.

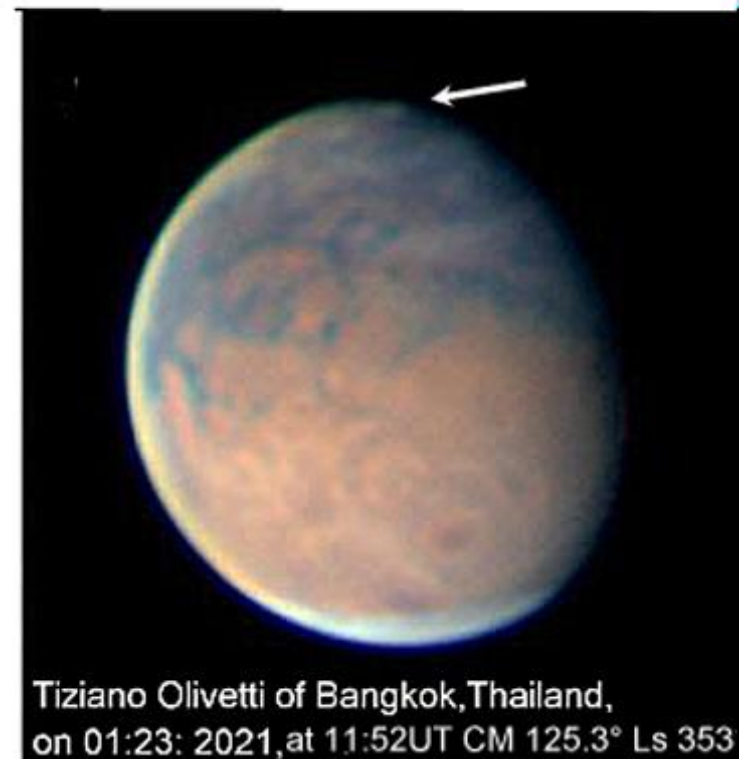
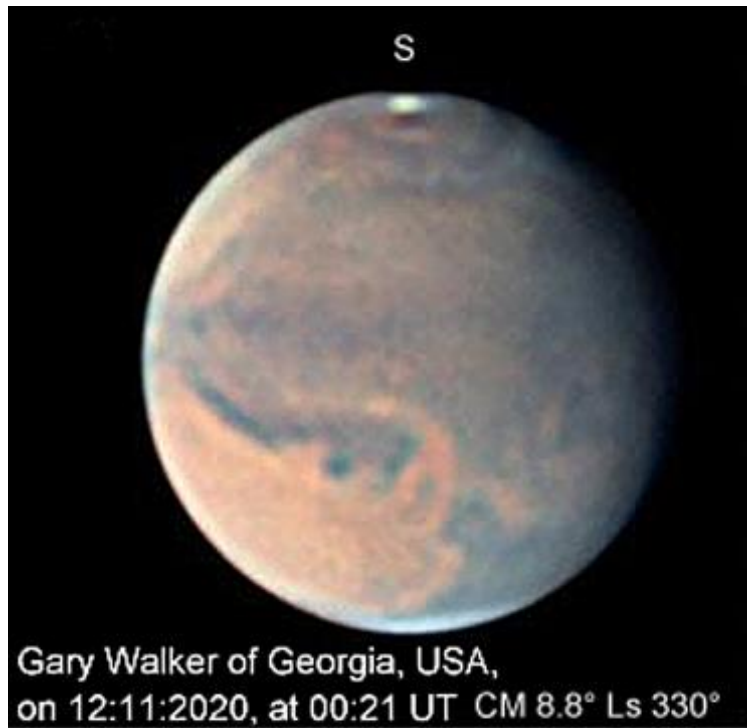
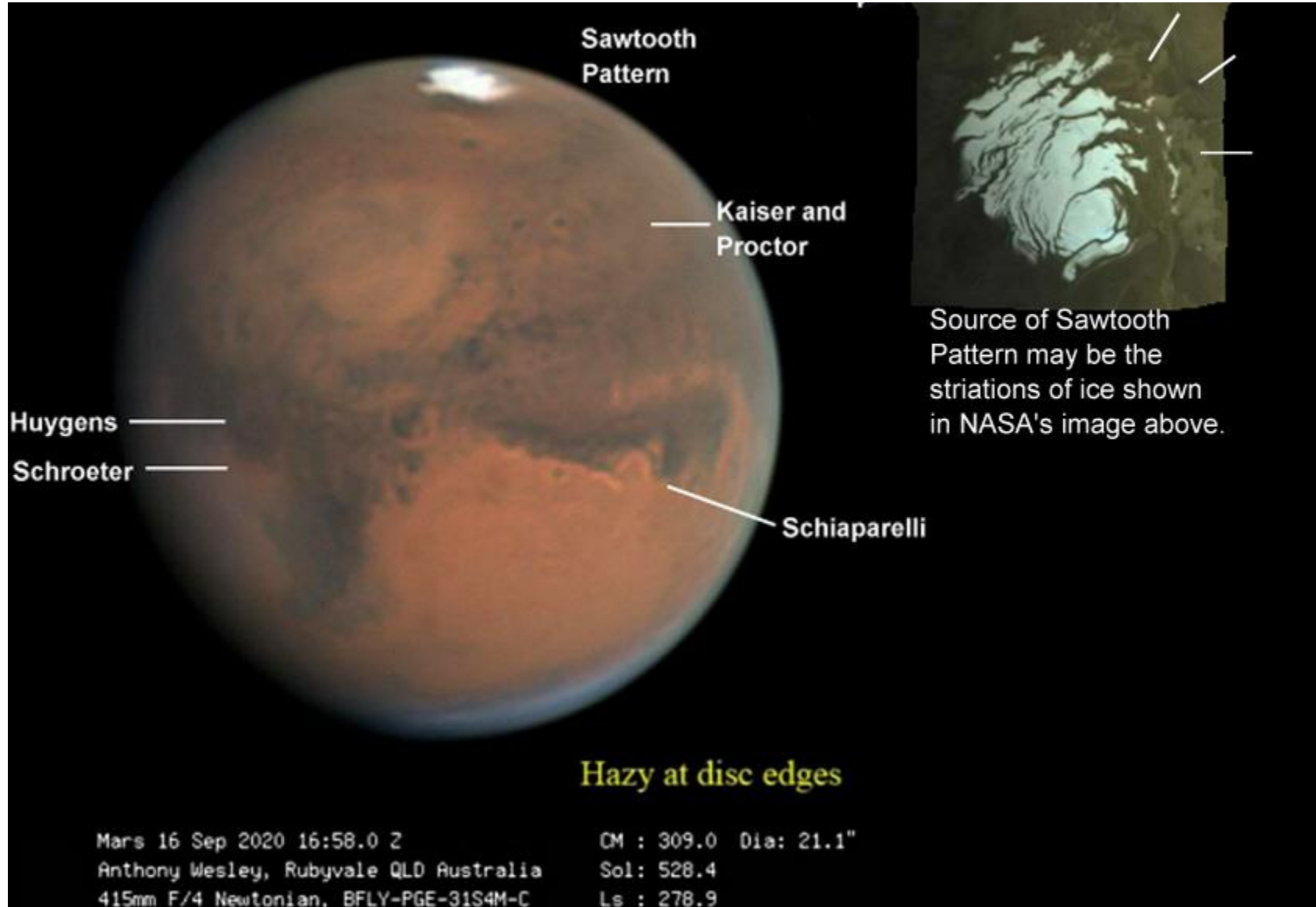
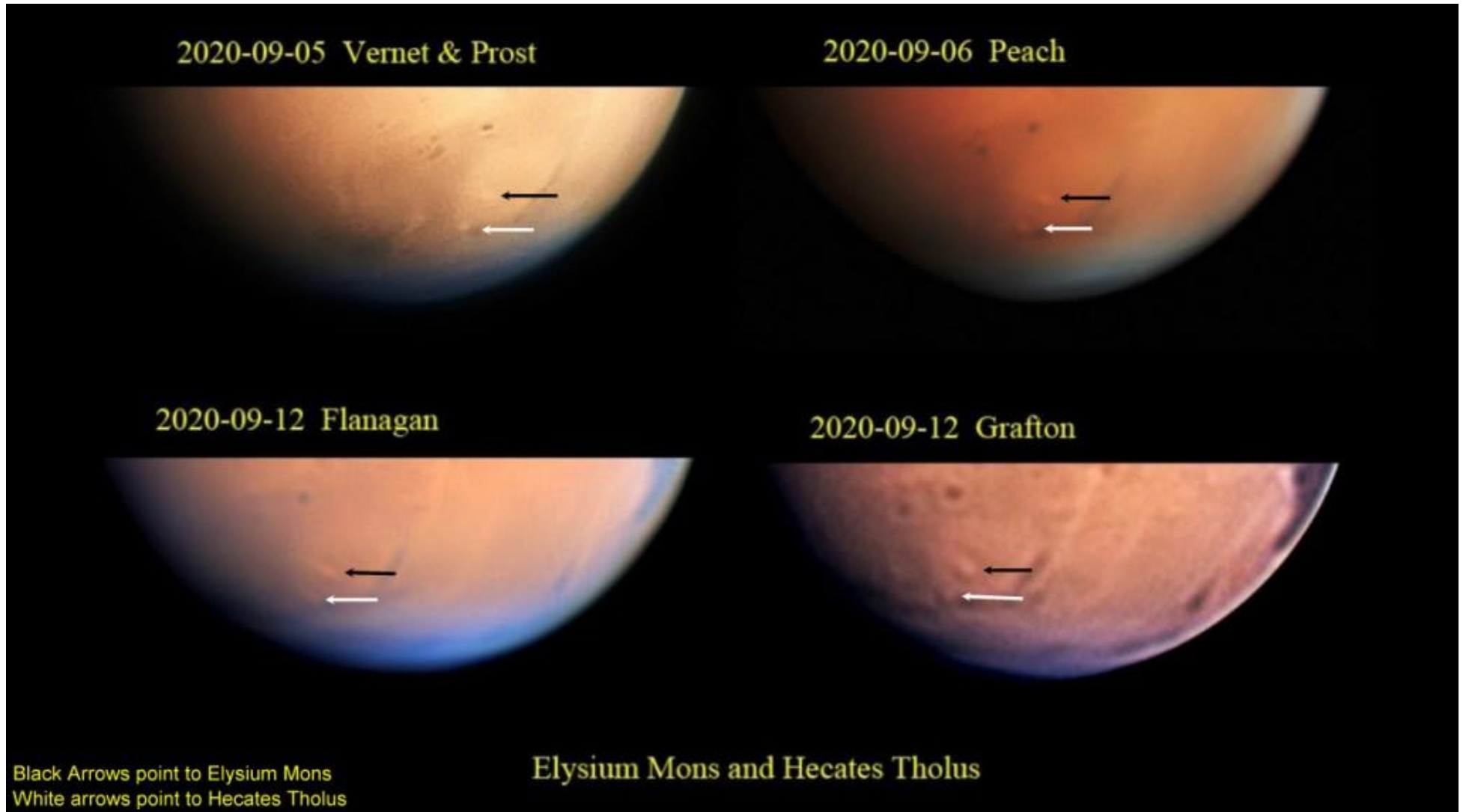


Image by Anthony Wesley shows a composite version of the striations of ice in the SPC as a sawtooth pattern. NASA's image shows the SPC at a smaller size than Wesley's image. Names are provided of some of the prominent craters that are resolved.



Ultra-high-resolution images show two volcanoes, Elysium Mons and Hecates Tholus.

Montage provided by Roger Venable.



The dust clouds of the regional storm shown below continue expanding Eastward and Northward on Nov. 21 and Nov. 24.

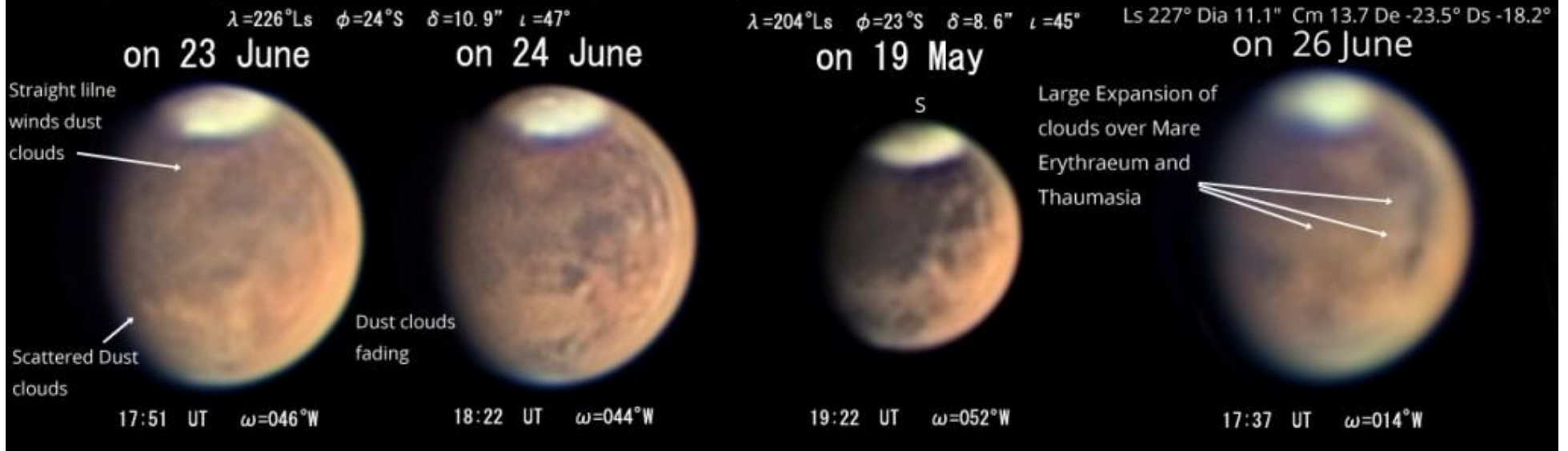


This Nov. 15 image shows a large eruption of dust into the air. This dust cloud gradually absorbs solar energy causing the temperature of the cloud to increase. As the temperature of the dust clouds increases, the size of the clouds increases. This process feeds upon itself until the size increases to the maximum possible. Then a massive Dust Cloud on Nov. 17. This is what the author suspects happens by Jim Melka.



Early Spring Dust Clouds in the Southern Hemisphere. Planet-wide storm possible

All images are by Teruaki Kumamori Sakai City Osaka, Japan

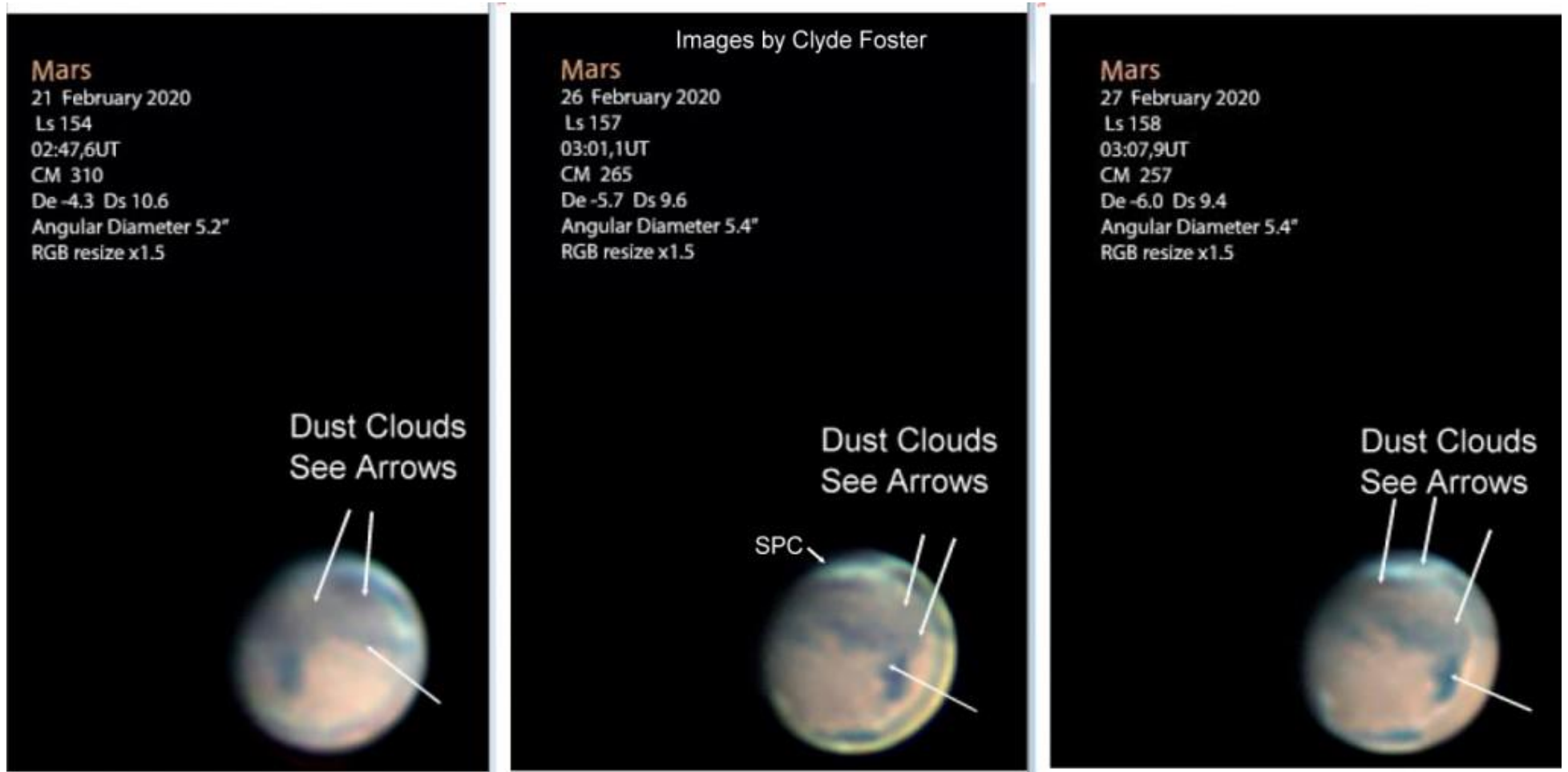


South Polar Cap Recedes Over Argyre Impact Basin

NOTE Argyre's Latitude is 50° S



A collage of frames showing large expanse of dust clouds



Clyde Foster submitted these images of Mars taken on Feb. 21, 26 and 27. The three show regional dust clouds in and around Hellas. A composite of the three images has been posted in the album "Dust storm alerts" on the Mars Observers web site. I've attached the composite image above. These clouds are an indication that the SPC is sublimating. Sublimation has been known to generate high-velocity Winds.

Short-lived Dust Clouds Recorded



All images are by Clyde Foster. Besides the short-lived new dust clouds, fragmentation of the SPC dark collar is easily recognized. The SPC dark collar is where sublimation of Ice produces strong winds that sweep away bright dust on the surface exposing dark albedo rock. It is suspected that these winds have produced the recent dust clouds.