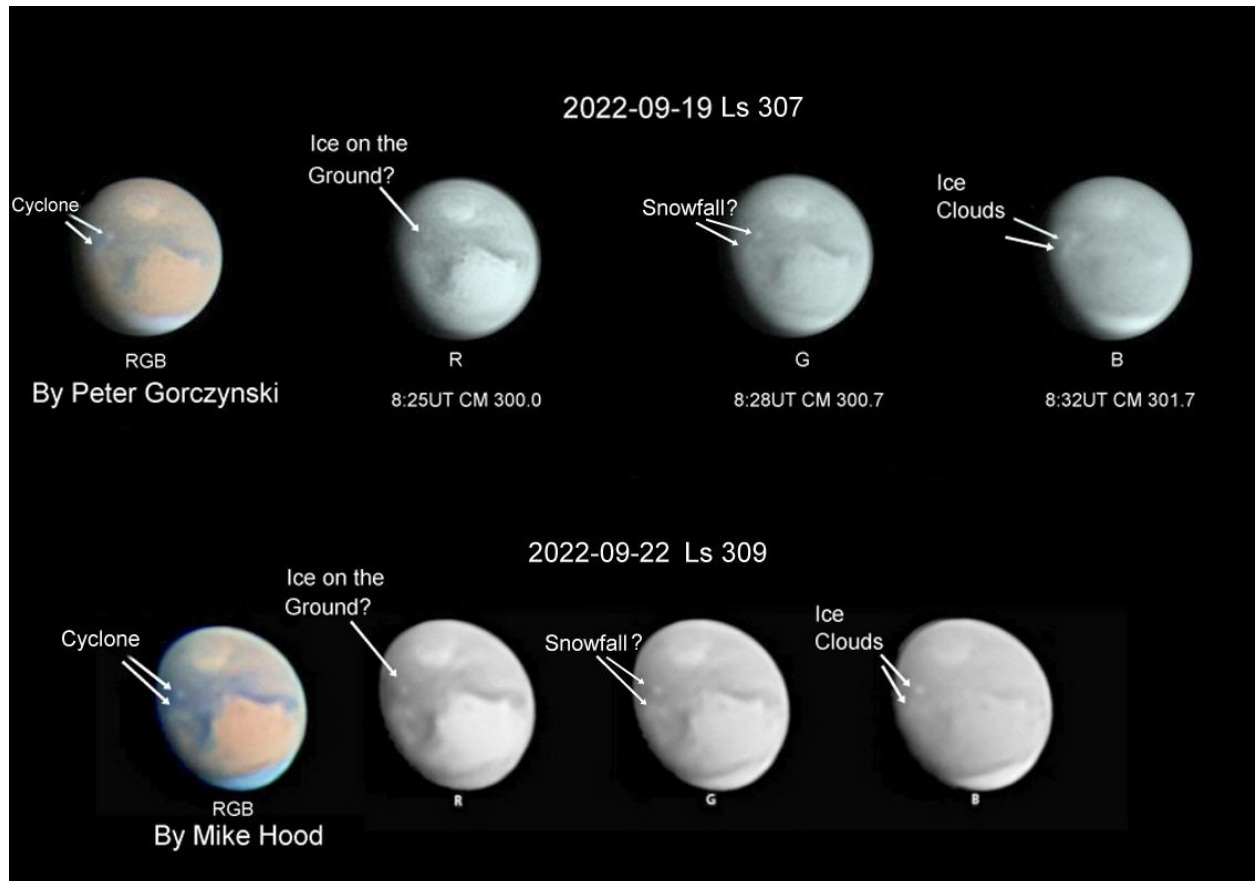


Highlights of the 2022-2023 Mars Apparition

By Jim Melka

Ice Storms Near Syrtis Minor

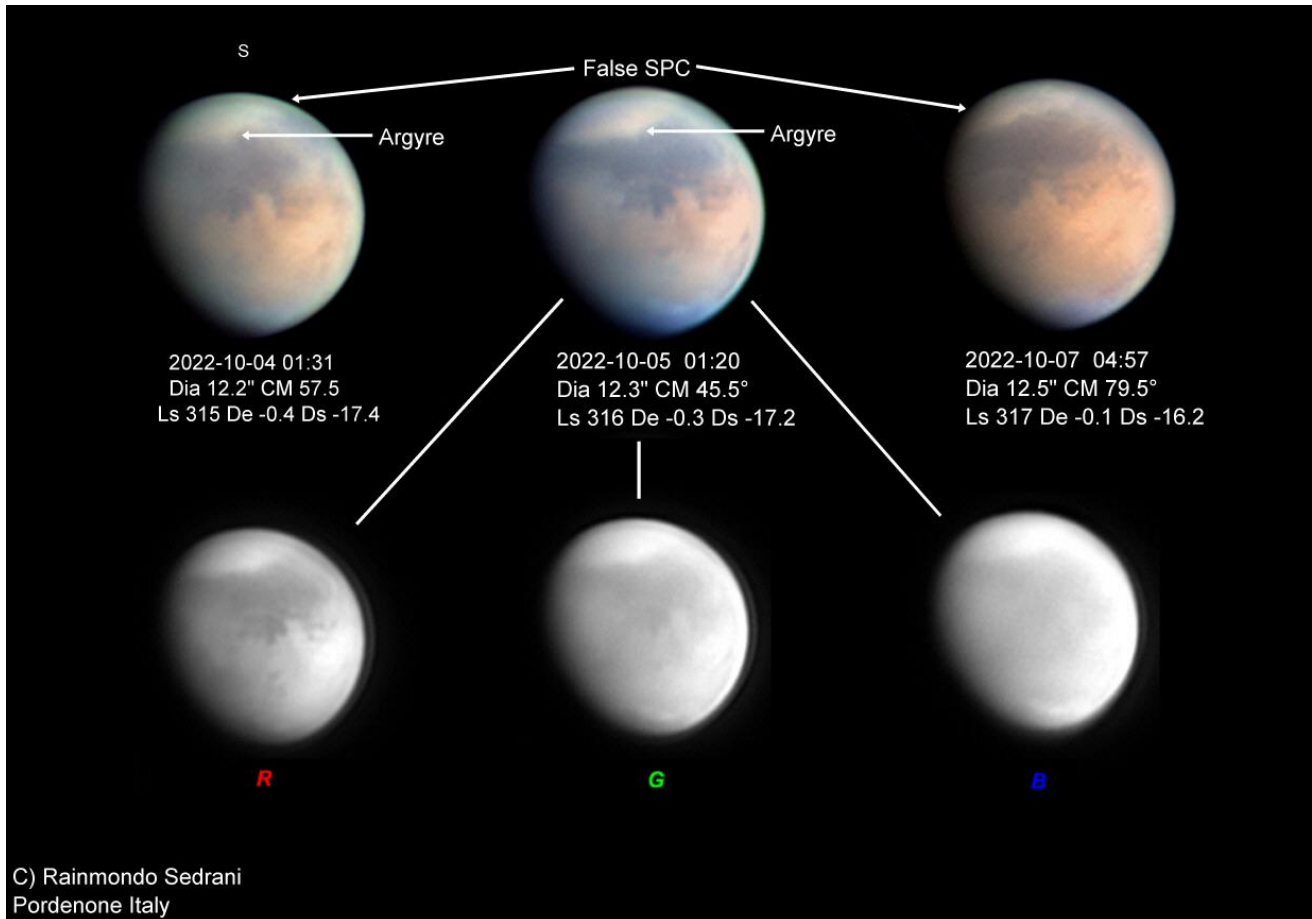
10/15/2022



Mars Shows a False SPC in Early October

10.12/2022

Large expanse of bright white dominates the South Polar Regions. The Red-filtered image of 2022-10-05 is the strongest showing of the three filters especially compared to the Blue-filtered image. This suggests possible CO₂ or H₂O ice on the ground.



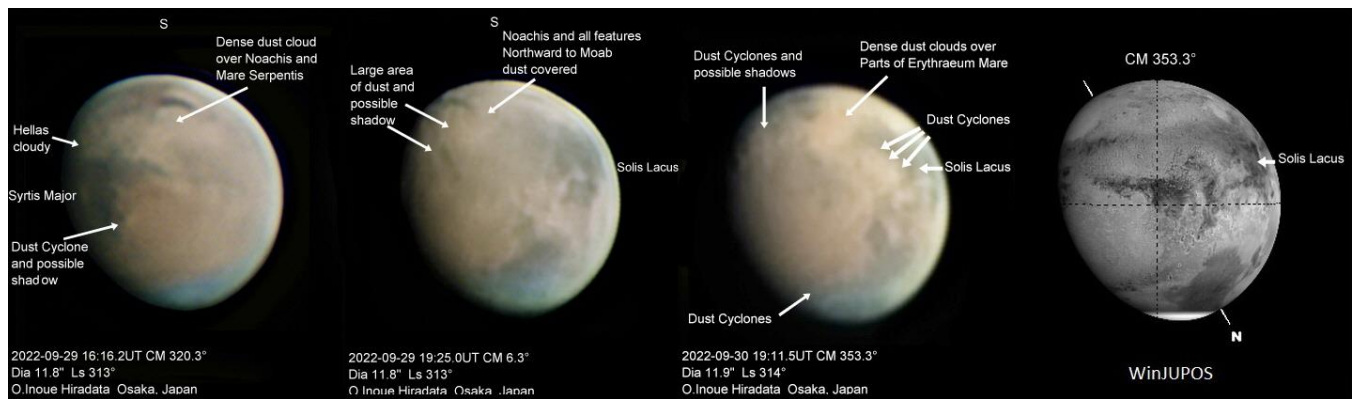
Late September Regional Dust Storm

10/2/2022

Early dust clouds observed on September 23, 2022. See below for images.



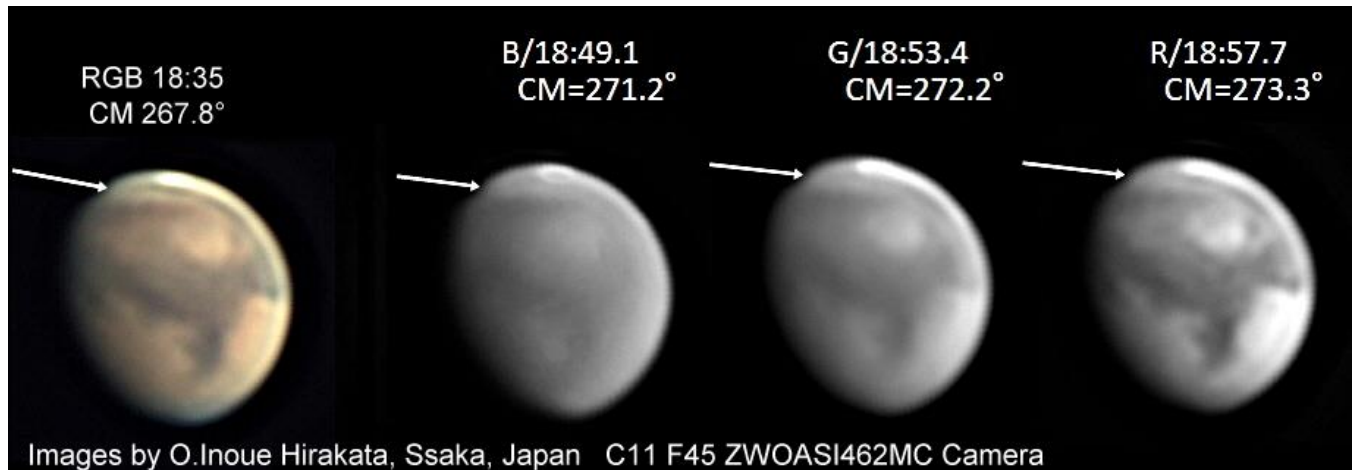
As of September 30, 2022, dust clouds spread Eastward as far as Hellas in the Southern hemisphere and Ismenia Lacus in the Northern hemisphere.



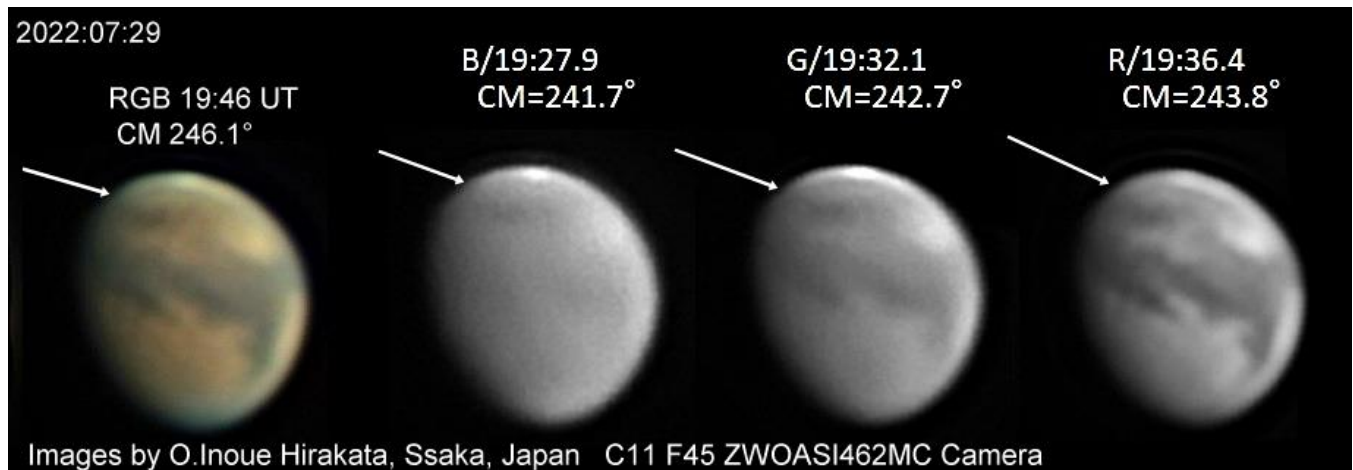
Stable Ground Ice North of the South Polar Cap

Two image montages dated 2022-07-25 and 2022-07-29 below provide evidence for ground ice and snowfall. Arrows point to the ice-feature for the blue, green and red filters. The red filter image carries the most weight for ice on the ground. If the feature was a cloud, it would not be present or only weakly present with a red filter. Over the four-day period the ice was stable and did not sublime. The source could be snowfall providing enough depth to be stable. A polar cold front was imaged at the feature's location a week before the ground ice was imaged. If the feature was frost, then sunlight probably would be enough for sublimation.

July 25, 2022

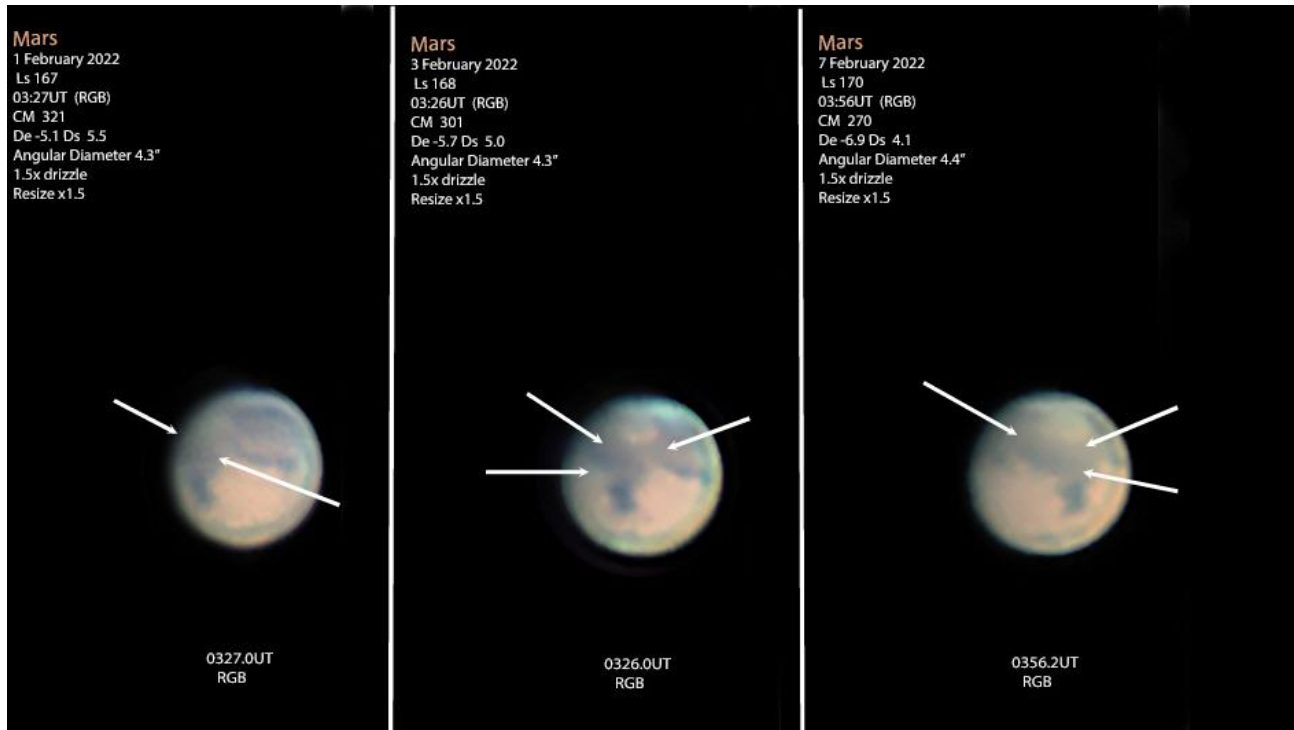


July 29, 2022

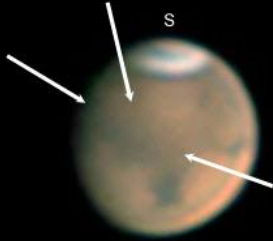


Dust Brightens Dark Markings

Dark features including Mare Hadriacum, Ionium, Iapygia, Yaonis Regio, and Hellespontus are only faintly visible in Clyde Foster's February 1st, 3rd, and 7th images below. Arrows point to these features. Airborne dust is also normally tan colored in color balanced images. However, it is proposed that there is dust on the ground that is brightening the normally dark features. Next see a montage of his April 1st, 2nd and 3rd images. Arrows point to the same regions and once again show the tan color. However, there are no notable changes over a two-month period that suggests at least a semi-permanent ground cover of dust. There may have been recent dust clouds that settled out over these areas.

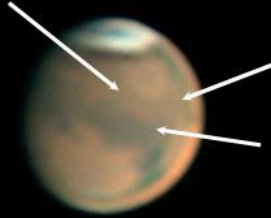


Mars
20 April 2022
Ls 212
03:58UT (RGB)
CM 282
De -23.7 Ds -13.1
Angular Diameter 5.5"
1.5x drizzle
Resize x1.5



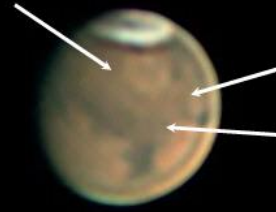
03 57.7UT
RGB

Mars
21 April 2022
Ls 213
02:57UT (RGB)
CM 257
De -23.8 Ds -13.3
Angular Diameter 5.6"
1.5x drizzle
Resize x1.5



02 56.5UT
RGB

Mars
22 April 2022
Ls 214
04:47UT (RGB)
CM 274
De -23.9 Ds -13.5
Angular Diameter 5.6"
1.5x drizzle
Resize x1.5



04 46.6UT
RGB