

## MARS @ perihelic opposition August 2003

**Mars from Corfu. Lat 39°:30' Long - 27°**

**140TECAPO aperture 5.5-inches focal length 980mm Nagler 8-24mm x125 (8mm)**

Aug 15d:23h:30m to 16d:02h:00m UT Seeing I-II

Aug 16d:22h:30m to 17d:01h:00m UT Seeing I-II

Aug 17d:23h:00m to 18d:02h:00m UT Seeing I

Aug 18d:23h:30m to 19d:02h:00m UT Seeing I

longitude coverage 60° (bright morning limb) to 180°+

small bright SPC surrounded by dark greyish blue-green collar - very narrow & clearly defined.

atmosphere of planet hazy, making albedo features hard to discern

made composite colour sketch covering all four nights

The observing conditions were ideal - hot & humid - roughly 75°F & 95% rel hum. The air was slightly above the dew point. The seeing varied from perfect to nigh perfect. I used only x125 because the mount was unaligned and I simply allowed the image to drift across the fov.

The colour sketch is laid out on a Mercator style grid and covers 60° to 200°long & -50° to +30°lat.

The most prominent features were Solis Lacus, Aurorae Sinus, Mare Sirenum & the Aonius Sinus. The Tractus Albus could be seen across the Tharsis region, as well as Lux & Nix Olympica.

I have endeavoured to depict the hues & tones as accurately as I observed them, and not to exaggerate their contrast or saturation. The albedo features were a bluish grey-green ~ almost the colour of slate. The desert regions were various hues of pinkish-orange.

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### **Mars from Corfu. Lat 39°:09' Long - 27°**

**140TECAPO aperture 5.5-inches focal length 980mm Nagler 8-24mm x125 (8mm)**

Aug 20d:22h:00m to 21d:04h:00m UT Seeing II & I-II cm~90°

Limpid deep blue-black sky overlooking the Ionian Sea & the Corfiot mountains beyond. The 'Eye of Mars' caught pretty well on the central meridian at the first session. More detail than I am able to depict, even in a 140mm aperture. Made faithful pencil sketch so I might reproduce most of the exceedingly subtle albedo shadings.

The atmosphere of Mars is filled with dust. The albedo features are seen as through a bright haze that makes their appearance very obscure; as though seen through a veil.

### **Mars from Little Eversden. Lat 52°:30' Long - 00°**

**140TECAPO aperture 5.5-inches focal length 980mm 6mm Zeiss Orthoskop x160**

Aug 02d:00h:00m to 02d:02h:00m UT Seeing II & I-II cm~210°

Small SPC with dark collar merging into Mare Chronium. Mare Cimmerium dominates the disk straddling the visible hemisphere from east to west. The far end of Mare Sirenum to the west; Chimmerae, & the Syrtis Minor to the east.

Trivium Charontis & Cerberus below disc centre & Elysium. Eridania dominant light oval below SPC. Electris just off morning bright limb & Ausonia just coming over the evening terminator.

A truly magnificent view in superb seeing. Limpid, humid sky. A wealth of detail visible in only a 140mm apochromat. Desert areas various shades of pinkish-yellow ochre. Albedo features dull greyish blue-green. Everything except the SPC seen through a bright yellow-ochre haze.

### **Mars from Corfu. Lat 39°:09' Long - 27°**

**140TECAPO aperture 5.5-inches focal length 980mm Nagler 8-24mm x125 (8mm)**

Aug 22d:22h:00m to 23d:00h:00m UT Seeing I cm~335°

Excellent view of the Sabaeus Sinus & Meridiani Sinus, stretching from Hammonis Cornu & the Deltoton Sinus across to the Margaritifer Sinus on the morning bright limb. Noachis temporary albedo shading & Pandoraae Fretum noted. Edom very bright, almost rivalling the SPC.

Observation made in three, twenty minute periods at 22h; 23h & 00h. Edom corresponds to the dry ice filled crater Schiaparelli. This was easily resolved in a 5.5-inch apochromatic refractor.

The accompanying sketch has the Sabaeus Sinus, Meridiani Sinus &c all placed too far south. Pandoraae Fretum should be placed nearer the disc centreline.

The Martian atmosphere is clearer (i.e. less dust laden) than over longitudes ~90° to 180°+. The albedo features are not as veiled.

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**Mars from Corfu. Lat 39°:09' Long - 27°**

**140TECAPO aperture 5.5-inches focal length 980mm Nagler 8-24mm x125 (8mm)**

Aug 24d:23h:00m to 25d:01h:00m UT Seeing II cm~0°

Following a terrific thunderstorm the previous afternoon the skies eventually cleared at 2am local time (23h:00mUT). The seeing was not quite as good as the earlier nights, but almost as much detail could be seen in better moments. Employed same eyepiece and power (x125).

The Fastigium Aryn, which marks the zero meridian, was on the central meridian at the beginning of the observing session. The Sabaeus Sinus was receding to the evening terminator, there being no sign of the Deltoton Sinus. Edom & the adjacent Sigeus Portus were seen as equally well as on the 23rd.

Mare Erythraeum, Aurorae Sinus \* Margaritifer Sinus better placed towards end of session. Oxia Palus diffuse. The gulf Aram between Meridiani Sinus & Margaritifer Sinus particularly distinct: visible as a bright notch near the disc centre running around & westwards into Pandoraae Fretum.

Argyre I, the Nereidum Fretum & Noachis also well placed to the south.

An altogether splendid view. The Martian atmosphere particularly clear on this hemisphere.

**Mars from Corfu. Lat 39°:09' Long - 27°**

**140TECAPO aperture 5.5-inches focal length 980mm Nagler 8-24mm x125 (8mm)**

Aug 27d:23h:00m to 28d:00h:20m UT Seeing I-II cm~325°

Following two days of thunderstorms the night sky is a deep pellucid black. Formalhaut is visible for the first time. Humidity is high though, as always, and the seeing first rate.

At last a glimpse of the eastern side of the Syrtis Major, with Hellas on the south west limb & the wide sweeping Hesperus dominating the southern temperate latitudes.

Sabaeus Sinus & Meridiani Sinus are now on the eastern half of the disc. Edom is not so bright now it is approaching the evening limb. Noachis is approaching the south eastern limb, and appears dull ochre.

The atmosphere of this hemisphere is clear of dust. Whatever dust storm activity there may have been in Hellas in early July has left no legacy that I am able to detect. Hellas appears subdued & a leaden grey-ochre however.

No detail could be seen in the Syrtis itself, hugging the morning bright limb haze, but Oenotria & Iapygia & the Incurva Insulae could be all clearly described.

A very satisfying view following the planet's closest approach earlier in the day.