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2016 CMO/ISMO Mars Observations Made During the One-Month Period in August 2016 (λ=196°Ls~λ=214°Ls)

♂・・・・・・In this issue, as the 14th Report of the 2016 ISMO/CMO Mars observations, we treat the case made in August 2016. During the one-month, the planet Mars continued to make a prograde motion from the Lib constellation, grazing the Oph, into the Sco constellation. On 24 August the planet Mars passed by the north of Antares, and on the following day did the south of Saturn. It was amusing to watch the night-to-night variation of the celestial triangle made by Mars, Antares and Saturn (Mk stayed mostly at Chino, Nagano). The angular diameter of Mars went down from δ=13.1" to 10.5" during the month. The phase angle increased from ι=42° to 46°. The tilt (the latitude of the sub-Earth point) of Mars moved from φ=13°N to φ=07°N. It is destined to face to the southern latitude at the end of September. Because of the tilt variation, the tip of the south polar cap (spc) as stably observed at the latter period. The Martian season proceeded from λ=196°Ls to λ=214°Ls in August, and hence the season of the dust disturbances was coming. It was noticed that a dust disturbance at the slope area of the root of Nilokeras on 20 August, but it soon diffused or faded. Hellas mostly looked to be of beige colour, differently from the desert colour, so that there might have been some dust disturbances at the true bottom of the Hellas basin, while such dusts will never come out because the real inside of Hellas is beneath a higher pressure atmosphere (the depth is deeper than 6km). That is, we should pay our attention to the outside of Hellas, at the vast area at Noachis or the opposite eastern side (at Promethei Terra, Hesperia Planum, Tyrrhena Terra and so on).

The apparent declination D was going further southwards, down from 22.5°S to 25.1°S, and thus the observable time-zone from the terrestrial northern hemisphere has been quite shortened.

♂・・・・・This one-month period, we acknowledge receiving a total of 78 sets of images from 14 members. This summer the weather in Japan was poor, while the observations in the American continents increased. The list of observers and the data is as below. As to the observations in August we shall give a short comment for each below if they were received by 15 September.

We further received a total of 51 observations made earlier by three observers (received by 25 September). They mostly include the images made by Damian PEACH and Paul MAXSON. As to these, we have an intention to give another space after the end of the present season.

DELCROIX, Marc (*MDc*) Tournefeuille, France (Pic du Midi Observatory*)

1 *RGB Colour* + 1 *IR* Images (8 August 2016) 106cm Cassegrain* with an ASI174MM

FLANAGAN, William (*WFl*) Houston, TX, the USA

2 Sets of *RGB* Images (24, 25 August 2016) 36cm SCT @*f*/17 with a PGR Flea3 ICX618

FOSTER, Clyde *(CFs)* Centurion, SOUTH AFRICA

20 *Colour* + 20 *IR* Images (1, 2, 4,~7, 9,~ 12, 14*,~16*, 18*,~ 21*, 27*,~ 29* August 2016)
36cm SCT @*f*/33 with an ASI224MC & ASI290MC*

JUSTICE, Mark *(MJs)* Melbourne, AUSTRALIA

3 Sets of *RGB* Images (15, 29 August 2016) 30cm Spec with a DMK21AU618

KONNAÏ, Reiichi *(Kn)* Ishikawa-cho, Fukushima, JAPAN

6 *Colour* Images (1, 9, 11, 12, 21, 24 August 2016) 41m SCT with an ASI224MC

KUMAMORI, Teruaki *(Km)* Sakai, Osaka, JAPAN

3 *LRGB* + 3 *B* Images (1, 12, 31 August 2016) 36cm SCT @ *f*/38 with an ASI224MC & ASI290MM

MAXSON, Paul *(PMx)* Surprise, AZ, the USA

7 Sets of *RGB* + 7 *IR* Images (7,~10, 12, 14, 15 August 2016)
25cm Dall-Kirkham with an ASI290MM

MELILLO, Frank J (*FMl*) Holtsville, NY, the USA

14 *Colour* + 9 *IR** Images (3, 9, 14, 15, 20, 22, 23, 24/25, 26/27, 27 August 2016)
25cm SCT with a ToUcam pro II, DMK21AU618.AS*

MORALES RIVERA, Efrain (*EMr*) Aguadilla, PUERTO RICO

11 Sets of *RGB* Images (3, 4, 9, 9n, 16, 18, 20, 23, 28, 29, 31 August 2016) 31cm SCT with a Flea 3

MORITA, Yukio (*Mo*) Hatsuka-ichi, Hiroshima, JAPAN

4 Sets of *LRGB* Images (11, 24, 27 August 2016) 36cm SCT with a Flea 3

OHSUGI, Tadao *(Og)* Komatsu, Ishikawa, JAPAN

5 *Colour* Images (3, 11, 13, 14, 18 August 2016) 25cm Dall-Karkham with an ASI290MC

SCHULZ, Robert *(RSz)* Vienna, AUSTRIA

1 *LRGB* Image (7 August 2016) 20cm SCT with an ASI290MM

TRIANA, Charles *(CTr)* Bogota, COLOMBIA

1 *L* Image (21 August 2016) 25cm SCT @*f*/27 with an ASI120MM

♂····· We Further Received from

DELCROIX, Marc (*MDc*) Tournefeuille, France

1 *RGB Colour* + 1 *B* + 1 *IR* Images (24 July 2016) 32cm Spec with an ASI290MM

MAXSON, Paul *(PMx)* Surprise, AZ, the USA

29 Sets of *RGB* + 29 *IR* Images (18,~ 20, 23, 25, 26, 28 June; 03,~17, 22, 24, 25, 27~29, 31 July 2016)
25cm Dall-Kirkham with an ASI290MM

PEACH, Damian *(DPc)* Selsey, WS, the UK (Loc. Barbados Islands)

21 *RGB Colour* + 6 *B* Images (23 March; 11, 13, 15,~18 June 2016)

♂·····We are now in a position to give a short comment chronogically to each observation made in August 2016. Every image is found in the Web of the ISMO 2016 Mars Gallery.

1 August 2016 (λ=196°Ls, δ=13.0"~12.9", φ=13°N, ι=42°)

Reiichi KONNAÏ (Kn) obtained by using an ASI 224MC an L-colour image at ω=037°W. This summer,

the weather condition at the Japanese sky has remained very dismal. Especially at the Kwanto district where KONNAÏ (né HORIGUCHI) pursued Mars in the 1971 great apparition, it has been believed that the seeing condition remains great from the end of July to the beginning of August, while this belongs nowadays to folklore, and this summer, if the planet popped out through the clouds, the seeing conditions remained terribly poor (MURAKAMI (Mk) and ISHIBASHI (Is) are observing in this Kwanto district, while KONNAÏ moved to the East-Northern district, notorious with the so-called F-1 at Fukushima prefecture). KONNAÏ's present image on 1 August 2016 shows however several small markings rich in details on the Martian surface as if the outstanding summer great seeing of the former times was suddenly recovered. In fact, such delicate markings as the Neudrus double-canals, Brangæna, the complicated fracture of Oxus, the so-called Oxus dark segment, a central line which runs through Margaritifer S, the humanoid shaped marking of Auroræ S (associated with Juventæ Fons), the complexity of the eastern coast of M Acidalium and so on are all shown up as if they are easily brought by KONNAÏ's high perceptive eyes and high skill in drawing (plus the 40cm aperture) if the great summer seeing could be provided. Conversely speaking, these minor features must have been quite easily detected by KONNAÏ's powerful visual ability in great summer. However as to the seeing condition on this day, he wrote to us that "Seeing was still terrible, but some improvements in squeezing out some detail from the blurred images." On a next occasion (on 9 August 2016), KONNAÏ also wrote: "This year's 5th typhoon "Omais" has narrowly missed here north-eastern Japan, blowing out into the Pacific, agitating the air above our heads, causing hopelessly terrible seeing. The naked eye Mars nearing its heavenly rival was twinkling crazily, visually no Hellas, no Syrtis Major nor Sinus Sabæus in the telescope field, and the red planet's image in the display monitor was like a moving amoeba in a time-lapse animation."

So KONNAÏ confesses that what happens after squeezing/image-processing is like a *magic*. The present writers (Mn and Mk) do not believe however that KONNAÏ indulges in the image-processing indiscriminately. His success must have depended on his choice and his preparation: If his processing could never be defenceless but well prepared, this would imply that he must have suitably discarded what to be discarded, being commensurate with the "terrible" seeing conditions. We sincerely hope he will continue the best way without leaving anything in the lap of Gods.

In these cases with a new machine innovation, there would be one thing to be kept in mind. If one leaves carelessly everything in the hands of God, one may encounter with the cases where a flaw or a blemish or a devilish matter creeps in. In our older times, the IR (Infrared) images of Mars were treated with vigilance. It was because our observations of Mars has been the observations of the atmospheric meteorology of the planet Mars. So there was something important other than the minute markings.

The automatic stacking may necessarily pick up any small spot if it is stably visible in all frames. However how about a vast boundless markings? How about Mare Erythræum? Is there no possibility that the God of stacking may forsake a desultory marking? On the present image, there is visible a distinguished tail of M Acidalium. It must be different from Iaxartes. Then what is it? What position should we give to it? We shall stop for now. But one other thing: What is the physical meaning of the yellowish dominance near the limb side?

Teruaki KUMAMORI (Km) secured an L-colour image at ω=060°W. Seeing was 2~3/10, and the author Km made appropriate image suitable for the seeing condition. Ganges and Nilokeras look explicit ly brownish. Other markings are depicted mildly in rich shade and light apposite to the present seeing

condition. The area of Solis L shows up thickly darkish and its south-eastern opposite area beyond Thaumasia is also dark. The pure whiteness is found for the spc and over there its northern side the thin water condensate floats. The arctic white cloud to the north of M Acidalium is largely explicit but its southern boundary is irregular and its northern lower part does not look so much a condensate as genuine dust.

Clyde FORSTER (CFs) gave a 224MC L-colour, and an IR685 image at ω=117°W. The brightness of the spc is evident, though the opposite arctic cloud looks quite dull. The disk is however not clear but dirty as a whole, while such supposed markings as the Tharsis three mountains and Olympus Mons together with Gordii Dorsum are squeezed out. The ring at Fortuna looks explicit. Ganges is brownish.

2 August 2016 (λ=196°Ls~197°Ls, δ=12.9"~12.8")

CFs successively obtained an L-colour image at ω=106°W. The depiction is quite the same as on the preceding day. The light surroundings around several spots are attentive. Olympus Mons looks more brownish distinctive. The arctic cloud is spread but thin.

3 August 2016 (λ=197°Ls~198°Ls, δ=12.8"~12.7")

Frank MELILLO (FMl) gave a Tou-cam-colour image at ω=248°W, and an IR720 image by the DMK image at ω=244°W. On the colour image, the whiteness associated with the spc and the white cloud spread at the arctic region are equally well shown up. Hesperia is nicely cut. On the IR image, the outline of Elysium is evident.

Efrain MORALES (EMr) produced an RGB composite at ω=245°W based on the R, G, B components. Though the RGB composite image is not so detailed but we believe this set of images are excellent: First of all, it shows attractive colours. The whitish arctic cloud expansion is mildly expanded covering totally Utopia. The spc looks dimly whitish, but Ausonia shows a bit of reddish tint. The deserts at the middle latitudes show a colour tone characteristic of the Martian surface even if the details are not shown up. The western part of M Cimmerium is bluish dark after the CM line. The reason why the spc is faint is because of the blurred expression of the south-circumpolar region in the G component which however proves an expansion of the weak water-condensate at the south-circumpolar region. The outline of Elysium is evident on the R component.

Tadao OHSUGI (Og) obtained a 290MC colour image at ω=023°W. Grains look coarser. Brangæna and the area around Oxus are nicely shown, just like on some IR image. Still the spc lacks the original whiteness, and the arctic area is without any smooth white cloud expansion.

4 August 2016 (λ=198°Ls, δ=12.7"~12.6")

CFs's is a part of the series these days. L-colour image is at ω=099°W and associated with an IR685 image. The small dots inside Tithonius L are mild and not showy. Ganges must have been a bit more brownish. Olympus Mons, near the morning terminator, is quite brownish.

EMr made an RGB composite at ω=210°W. The R component shows some characteristic details of M Cimmerium, while the RGB composite roughly but attractively describes the colour of the desert areas in-

cluding Valhalla. The south circumpolar region is somewhat misty with a bit reddish tint of Ausonia. Trivium Charontis looks quite large; and the inside of Elysium is slightly reddish. The arctic white cloud is large and thick to the north of Propontis I.

5 August 2016(λ=198°Ls~199°Ls, δ=12.6"~12.5", φ=12°N)

CFs gave an L-colour and an IR685 image at ω=090°W. Compared with the image on the preceding day, several small spots are more distinct. The three tops of Tharsis Montes are quite evident with brownish tint, and the doughnut ring at Fortuna is quite light and evident. Ganges is less brownish than expected, while the double nippers of Nilokeras are rather clearly seen. The arctic cloud is thicker at the evening side and should be compared with those on the preceding days.

6 August 2016 (λ=199°Ls, δ=12.5"~12.4")

CFs obtained an L-colour image with an IR image at ω=071°W. Solis L is not separated from the preceding markings. From the evening side of the spc there must be a projection of a triangular misty area of condensate. There must be a dusty streak between the root of Nilokeras and M Acidalium. The southern part of M Acidalium is not quite dark but looks dusty. The arctic cloud is weak.

7 August 2016 (λ=199°Ls~200°Ls, δ=12.4"~12.3", ι=43°)

Paul Maxson (PMx) issued an excellent RGB composite at ω=237°W together with its three ingredients as well as an IR685 image at ω=239°W. The dark markings on the composite look to be composed of coarse grains, while M Cimmerium and the western part of M Tyrrhenum are nicely mapped with some details. Trivium Charontis and Phlegra look natural with the following the Ætheria dark patch (slightly bluish). However the light streak preceding the Ætheria dark patch is less bright than before (due to ι=43°). The complexity of the inside of Elysium is interesting. The vertical line is evident. The spc is not so gorgeous, but Ausonia looks a bit reddish. The arctic white cloud is smooth and beautiful.

CFs gave an L-colour image with an IR image at ω=064°W. The surface looks dirty. Ganges must be brownish, but gloomy. At the arctic area to the north of M Acidalium, a few of cloud patches assemble. The brightness of the spc is striking and from the spc an inverted triangular condensate (water migrated dust) hangs down. The IR image shows the linear marking inside Elysium (more explicit than on R).

Robert SCHULZ (RSz) at Wien made a colour image at ω=112°W by the use of the ASI 290MM (issued no more than the composite). The area around of Solis L is not well separated and does not decompose into details. The blue tint looks too excessive. It is not so hard to point out the position of Nilokeras and Tharsis ridges.

8 August 2016 (λ=200°Ls~201°Ls, δ=12.3"~12.2")

PMx obtained a set of R, G, B and IR ingredients and made an RGB composite at ω=227°W (in addition to an IR685 image). M Cimmerium is detailed in a dark bluish tint. Hesperia is misty? Ausonia is a bit reddish. The pinkish streak at the western border of Elysium is more explicit than on the preceding image on 7 August. The arctic white cloud is nicely shown up.

Marc DELCROIX (MDc) used the famous 106cm Telescope at the Pic du Midi Observatory to make a colour composite at ω=121°W together with an IR685 image at ω=117°W by using an ASI 174MM. The colour image does not show well the spc and the description of the small spots at Tharsis might be said under an average. The summit of Olympus Mons looks brownish. The root of Nilokeras are more explicit on IR. The arctic white cloud is nicely shown up.

9 August 2016 (λ=201°Ls, δ=12.2")

FMl obtained a Tou-cam-colour image at ω=183°W together with an IR720 by DMK at ω=179°W. The dark fringe-like marking adjacent to the spc is quite dark and wide. On the northern hemisphere, Propontis I and others are brownish dark. The arctic cloud is also shot.

EMr made an RGB composite at ω=185°W (00:37 GMT). The composite shows a mild image where the spc is whitish thick and the arctic wide cloud is rather bluish white, the morning part covering the area to the north of the blurred Propontis I. On the evening side, the ring of Gorgii Dorsum may be visible.

PMx issued an excellent 290MM composite at ω=214°W together with the R,G,B ingredients and an IR685 image. The spc is not clear cut, but M Cimmerium is nicely shot with its intimate relation with M Tyrrhenum. Valhalla is rather evident (ι=43°). Elysium is nicely settled with Phlegra and central vertical line. The streak at the western corner is not particularly light. An interesting/peculiar aspect of the arctic white cloud attracts our notice: The white arctic cloud makes a form of isosceles acute-angled triangle. The base of the isosceles is at the evening limb and acute-angled triangle extends to the SW direction. The arctic side of the triangle works as the straight boundary of the non-covered ground area in Utopia from the white cloud. The IR image does not show the cloud, but the dusky area where the triangular cloud uncovered in looks quite explicit in Utopia.

Kn gave an L-colour image at ω=319°W. The seeing was denoted 0~1/10 and hence nothing must have been visually visible: Barely the image shows Syrtis Mj and S Sabæus were shot from the air. The bright Hellas just shows its minimal part. Compared with the dark markings, the whiteness of the spc is not equal footing. The arctic cloud is also not self-assertive.

CFs's L-colour image at ω=042°W is yellowish in general but standard in details. The brightness of the spc is intense, and a triangular mist is seen beyond the dark fringe of the spc. Since the IR685 image well shows the series of the minor markings at the southern end of Chryse while the series are weak in R and L-colour, it may be possible the haze exists which may weaken the shorter waves. However, the area of Brangæna and Oxia Palus (+Oxus) is rather clear. The north of M Acidalium is roundish-largely covered by the whitish arctic cloud thickly.

EMr made a second appearance on the day, and obtained another RGB composite at ω=165°W (23:55 GMT). The colour of the image is a bit more vivid than the preceding, though the image is similar but changing by 20°W, and this is much nicer. Apparently Gordii Dorsum stands out, and Olympus Mons is one of subordinates. Valhalla is visible, and near Pavonis Mons a *green* spot is caught.

10 August 2016 (λ=201°Ls~202°Ls, δ=12.2"~12.1")

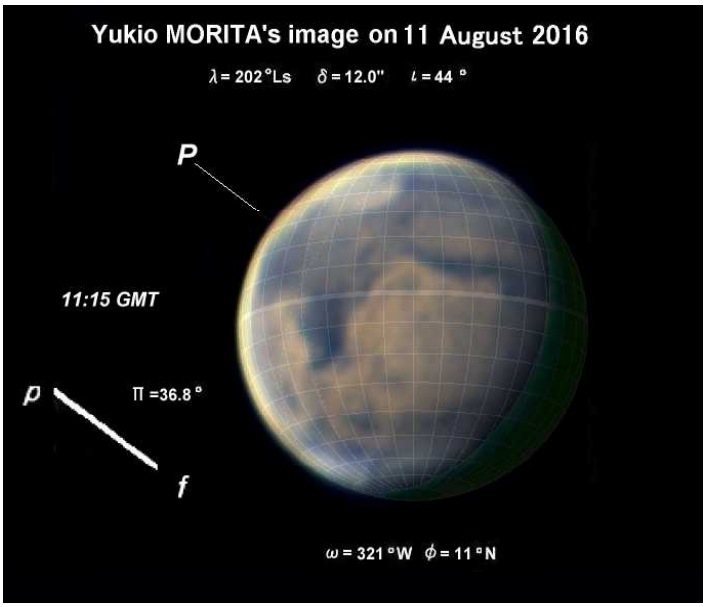
CFs took an L-colour image et al at ω=030°W. The thumbnail image gives a good impression. However, though the area of S Meridiani and Oxia Palus looks lucid, the dark markings appear generally gloomy as if strung by yellowish thin film. The spc is bright, and the south circumpolar area shows a water-vapour distribution. The arctic cloud is evident at the northern part of M Acidalium with the thicker clumpy cloud at the evening limb side.

11 August 2016 (λ=202°Ls, δ=12.1"~12.0", φ=11°N)

Kn gave a 224MC L-colour image at ω=294°W. The light and shade of the dark markings including Syrtis Mj near the CM is nicely mapped and looks attractive. Hellas keeps its beige atmosphere inside and Ausonia, near the evening limb, is a bit reddish. The spc is not separated. S Sabæus is half seen, and Æria is reddish. The arctic bottom is occupied by a roundish thin cloud.

Og gave a 290MC-colour at ω=313°W. S Sabæus is entering. The tinge of the inside of Hellas is akin to the colour of deserts; but this might have been caused by the fact that the width of the colour recognition is narrow.

Yukio MORITA (Mo) secured two sets of R,G,B ingredients for two sets of the RGB composited (and two LRGB composites) at ω=314°W and at ω=321°W. The width of gradation (for instance on LRGB and RGB at ω=321°W) is rich, and for example the network of fainter/smaller markings around the desert areas at Æria and Arabia is attractive (if observed in the Lowell times, one might have drawn a lot of fine line canals). Note at ω=314°W, the border of Hellas is distinctive and the inside basin is of a beige colour. Half an hour later, the streak near the western wall is lighter. The spc is however not clear. The arctic cloud does not so stand out, just nicely visible at the evening side on the RGB composite. In R, the present status of M Serpentis is well shown.



As is widely known every image file of Yukio MORITA is associated with $p \longleftrightarrow f$ line to determine the rotation axis perpendicularly, and hence we here show a grid display of the ω=321°W case. We employed the Π value from our Ephemeris, that is Π=36.8° (see CMO n°449, 10 June issue), at page Ser3-1130. Unfortunately the spc is not distinct under the grids but it is apparent the north geometrical pole already lies inside the polar night. The western border of the arctic cloud patch looks to stay around at Ω=280°W, Φ=60°N~70°N.

CFs took an L-colour image at ω=030°W. Anywhere in colour the markings look like hazed and not distinct (as if covered with frosted glass). The spc is bright and the arctic cloud is a bit seen.

12 August 2016 (λ=202°Ls~203°Ls, δ=12.0"~11.9")

PMx secured an IR685 image at ω=187°W, and took three R,G,B ingredients to make an RGB com-

posite at ω=188°W. The spc is not well separated but shines very bright. Valhalla is quite distinct. The Elysium area near the morning terminator is nicely described. The arctic cloud is very thick near the evening limb as shown by G and B. At the preceding region, Gordii Dorsum is very evident and Olympus Mons appears be brownish.

Kn obtained an L-colour image at ω=301°W, but this looks poorer than the image on the preceding day. The spc is not described if stacked.

Km gave an L-colour image at ω=311°W. The seeing condition was recorded 1~3/10, but the final finish gives a fine moderate image. From the noon to the evening side the markings look beneath a large airborne haze, but the morning deserts like Arabia are normalised to be natural. Hellas is of the beige colour and the border is clear. Syrtis Mj is mostly apparent at its northern district, while the southern part looks fainter. A half of S Sabæus lies on the morning side in a bit brownish tint. The arctic cloud is thick at Utopia.

CFs gave an L-colour image at ω=017°W. The spc is yellowish bright, but totally the surface shows a subdued colour.

13 August 2016 (λ=203°Ls, δ=11.9"~11.8")

Og took a 290MC colour image at ω=298°W. Hellas looks a bit reddish. The area of the spc is lighter, but not separated. Noachis looks normal.

14 August 2016 (λ=203°Ls~204°Ls, δ=11.8"~11.7")

FMl issued a Tou-cam-colour image at ω=139°W, and by DMK obtained an IR image at ω=135°W. The NS axis is uncertain. In colour, the both polar sides are a bit whitish.

PMx obtained an RGB composite at ω=167°W based on the three R,G,B ingredients and furthermore an IR685 image at ω=166°W. The Martian ground in colour depicts really the Martian desert colour. The details are few to be mentioned; just Gordii Dorsum is visible. The whitish arctic cloud is described in a beautiful way. Another peculiar thing is that one or two of Tharsis Montes show(s) a greenish flash partly.

Og gave a colour image at ω=293°W where Syrtis Mj is near the CM. The spc is not independent. The arctic area is just blurred, not surely whitish. Hellas is rather reddish, far from the beige colour.

CFs obtained an L-colour image at ω=354°W. From this time instead of the ASI 224MC, the author CFs begins to use an ASI 290MC. The spc is bright, and outside of the dark fringe there lies a white belt equi-latitudinally. Otherwise Noachis is not particularly disturbed. The arctic whitish cloud makes a few layers.

15 August 2016 (λ=204°Ls~205°Ls, δ=11.7"~11.6")

PMx obtained a set of R,G,B ingredients and an RGB composite at ω=156°W, and otherwise an IR785 image at ω=159°W. M Sirenum is dark in dark-bluish tint. Gordii Dorsum is quite apparent near the CM,

and Olympus Mons is also evident from the summit to its flanks (also clear in R and IR). Near Arsia Mons, there is visible a greenish spot (as noted on the preceding day). Ascræus Mons is also peculiarly visible. The arctic white cloud is thick and pretty on the evening polar side.

Mark JUSTICE (MJs) sent us from Melbourne after a while two sets of excellent RGB composites made at ω=249°W and at ω=258°W. On the morning side of the southern hemisphere, the morning mist is vastly visible, perhaps including the area of the Hellas basin. Especially at ω=258°W, the mist is deeper inside and must have been reached (or remained until) Hesperia. The R image at ω=249°W quite describes the inner structure of M Tyrrhenum and also M Cimmerium. In both RGB composites, the surroundings of Elysium are well shown up. The pinkish streak preceding the Ætheria dark patch is still conspicuous (it is more vivid than on the image of PMx on 7 August, but must be equal to PMx's expression of the streak on 8 August). As a recent tendency, a dusky fine line is visible from S to N near the centre of Elysium (this was checked once in 2001 when the global dust storm reached the northern hemisphere). The whiteness of the spc is pretty, and the arctic white cloud luxuriantly described is also attractive.

CFs took an L-colour image at ω=349°W by the use of 290MC. S Sabæus is near the CM. Neudrus double canals are visible. The spc is bright and the dark fringe this side is dark. We are however bothered by the yellow colour which dominates at the evening limb. The arctic clouds are weaker but looks made of a few layers. No explicit disturbance at Noachis though the season λ=205°Ls reached.

FMl gave a Tou-cam colour at ω=103°W, ϕ=10°N and a DMK IR image at ω=099°W. The former shows a good tint, and the white arctic cloud is pretty. The latter DMK's IR shows the areas of Solis L and the southern district of M Acidalium dark. No white cloud is depicted.

16 August 2016 (λ=205˚Ls, δ=11.6", φ=10˚N)

EMr put forward a set of RGB components and made an RGB composite at ω=113°W. At a glance, on the RGB composite, the whole sphere appears as wholly covered by a global haze. Just R image shows the presence of Solis L and Tithonius L. These aspects might have been provided by SBIG's Custom scientific photometric filters and they may be more sensitive and excessively capture the airborne dust and water-vapour condensates. This may be contrary to the other system which may tend to the longer wave length side, and may be akin to the visual observation system. The arctic cloud is nicely described.

CFs obtained an L-colour and an IR685 image by using 290MC at ω=333°W. The spc is bright but yellowish. Noachis looks not disturbed. The border of Hellas is definite. The spread of the brightness of the arctic cloud is at a low level.

18 August 2016 (λ=206˚Ls~207˚Ls, δ=11.5"~11.4")

Og obtained a 290MC image at ω=241°W. The spc is hardly detected. The width of the colour temperature must be quite narrow in addition to the fact that the seeing condition must be dismal.

CFs obtained a 290 MC L-colour image at ω=322°W. The spc is not so bright, but the dark fringe is

ible. Along the western wall of Hellas a pinkish streak is seen inside. The arctic cloud shows a spread but not thickly described.

EMr obtained an RGB composite based on a set of three ingredients at ω=077°W. The composite gives us an impression that the airborne dust is thicker and that the more obliquely the atmospheric air region is viewed, the mistier or the more hazed become the oblique regions. However the area of Ganges near the CM looks brownish implying that the air depth of the area must be shallow. The light ring at Fortuna is clearly visible. The spc is pure white (though not distinct). The arctic cloud also looks naturally thick. Solis L is somewhat indistinct, but looks quite large.

19 August 2016 (λ=207˚Ls, δ=11.4"~11.3")

CFs gave a 290 MC L-colour image at ω=306°W. The spc is evident. The western wall of the Hellas basin is clear and is not pinkish but a bit whitish. The arctic cloud is not thick but very complex near at Utopia. The IR685 image suggests a structure inside the Hellas basin.

20 August 2016 (λ=207˚Ls~208˚Ls, δ=11.3", φ=09˚N)

CFs gave an L-colour image at ω=293°W, φ=09°N. The spc is visible bright, but not sharp. The whole disk looks dirty. Hellas is seen, but looks dull. There may be a small dust disturbance at the southern district of Syrtis Mj. The arctic cloud is not conspicuous and just thick at around Utopia.

FMl gave a Tou-cam colour image at ω=055°W, φ=09°N in addition to a DMK IR720 image at ω=052°W. The former shot nicely a bit of S Meridiani near the evening limb, and suggest the markings around it are normal. Ganges look a bit brownish. Nilokeras is also separated from M Acidalium so that there may be exist a dust streak between M Acidalium and Nilokeras. The arctic white cloud largely covers the northern district of M Acidalium. The spc looks quite pure white.

EMr issued an attractive RGB composite at ω=060°W. The spc is pure white, and the southern higher latitude region is largely covered by a wide-spread white mist. Auroræ S is outside the mist (or Auroræ S is near the CM, so that the layer of the mist is thinner there), while Solis L is still is still beneath the large mist. From Ganges to Nilokeras the brownish colour dominates, implying a presence of the high pressure air. The arctic white cloud also shows an attractive spread and thickness. There is a dust accumulation between the west coast of M Acidalium and the root of Nilokeras. This accumulation looks to exist at Nilokeras Scopulus (56.2°W, 31.6°N: Scopulus=irregular scarp) or at Nilokeras Mensæ (52°W, 31.1°N: Mensa=A flat-topped prominence with cliff-like edges): That is, the dust exists at the borderline of a highland and another lowland. The dust disturbance was announced by Richard McKIM as the beginning of a "dust storm" as recorded at the last lines of the LtE corner of CMO n°453. However such a disturbance does scarcely produce the storm, but rather an aftermath of the dust activity. The dust storm tends to be given rise to the disturbance at the higher atmosphere.

21 August 2016 (λ=208˚Ls, δ=11.3"~11.2")

Charles TRIANA (CTr) sent us from Columbia an L-image by 120MM at ω=077°W. The white areas at the both polar regions are visible.

Kn obtained 224MC colour image at ω=197°W. The seeing condition was about 2/10, but the image was processed mildly, and gives a comfortable impression. The details of M Cimmerium are held down proportional to the seeing, but the author Kn was successful in expressing the "hourglass" parts of M Cimmerium. Elysium is also not made so detailed as it should be. However the inside of Elysium as well as Ausonia may suggest a bit more reddish tint: As to the colour of the disk, the yellowish tint a bit dominates at the desert region. The spread and thickness of the arctic white cloud are rich, the cloud extending to the north of Propontis I.

It is commented here that there is visible a faint projection at the morning terminator (see LtE below).

CFs gave an L-colour image at ω=289°W. The spc is bright with dark fringe. Hellas is near the CM, and the border of the western end is clearly seen. The inside of Hellas is full of a dull matter and such a reddish tint which governs the preceding Ausonia is not suggested here. The area of Utopia is dusky, and the arctic haze is not distinct.

22 August 2016 (λ=208°Ls~209°Ls, δ=11.2"~11.1")

FMl gave a Tou-cam-colour image at ω=039°W. S Meridiani is separated near the evening limb. It appears that the northern half of M Acidalium is largely occupied by the arctic white cloud. The spc area also shows a white colour.

23 August 2016 (λ=209°Ls~210°Ls, δ=11.1"~11.0")

FMl gave a Tou-cam-colour image at ω=028°W. S Meridiani is further inside the disk, and seen separated from Margaritifer S. M Acidalium is fainter and he northern half is beneath the arctic cloud (whose evening part is whiter). Chryse is lighter.

EMr also gave a set of three components and their RGB composite at ω=028°W (at the same time as FMl today). Aryn's nails are explicit as well as Margaritifer S. Chryse is misty light. The markings on the southern hemisphere look hazy with some condensates. The spc exhibits a pure white colour. The arctic white cloud is also spread beautifully.

24 August 2016 (λ=210°Ls, δ=11.0")

Bill FLANAGAN (WFl) issued a set of R,G,B ingredients to produce an RGB composite image at ω=070°W. The spc on the RGB composite is purely white. Its dark fringe is associated with a faint circumpolar mist, especially thicker on the morning side. The procedure of the evening limb is exquisitely skilful and S Meridiani remains still visible quite near the limb. Margaritifer S and Oxia Palus are nicely described. The humanoid marking at Auroræ S looks now incomplete, so that there may exist a dust disturbance near it. The large Solis L is loosely visible and Tithonius L is minutely visible. Ophir is light, but not so bright. Ganges looks brownish. The root of Nilokeras is blurred. M Acidalium is a bit fainter than normal. The arctic cloud looks split and is thicker on the morning and the evening side, and quite thin at the central area in the way to avoid the part of M Acidalium. Ascræus Mons is quite darkly seen near the morning terminator following the light ring at Fortuna. The seeing is denoted 5/10.

Kn obtained a 224MC colour image at ω=165°W. The total of M Sirenum is darkly described. Gordii

Dorsum's surroundings are well shown up. Near the evening limb, a bright/white streak is visible, but it is too early for the evening orographic clouds, and cannot be distinguished from a ghost bright streak. The arctic cloud is not so thick. Seeing=2/10.

Mo gave a set of R, G, B and L ingredient and made an LRGB and an RGB composite images at ω=203°W. The L is unsatisfactory, and hence the RGB image is better. For example, the spc is suspected on RGB but not on LRGB. The spread of the arctic cloud is better on RGB.

FMl gave three Tou-cam colour images at ω=023°W, 031°W, 037°W and also three IR720 DMK images at ω=019°W, 027°W, 035°W. Any image shows S Meridiani and this works as a kind of the Litmus test. S Meridiani is best shown on the first image, while if take account of the presence of Auroræ S, the second image is most balanced. The white arctic cloud is described on all colour images, but we cannot grasp the motion of the arctic cloud during the time span.

25 August 2016 (λ=210˚Ls~211˚Ls, δ=11.0"~10.9", φ=08˚N)

WFl secured a set of R,G,B ingredients to compose a genuine RGB image at ω=058°W. The composite image looks to be covered by a set of faint condensates especially at the higher latitude south-circumpolar region. An inverse triangular blowout from the perimeter of the spc is visible (see WFl's LtE below in this issue). The area of Oxia Palus rather looks normal with a reddish colour at Aram. But its westward area is rather slightly dusty. The humanoid marking at Auroræ S is recovering but a bit incomplete. The transparency of M Acidalium is poor. The bottom of the disk is occupied by a large but moderate arctic haze covering the northern half of M Acidalium.

26 August 2016 (λ=211°Ls, δ=10.9"~10.8")

FMl obtained three Tou-cam-colour images at ω=354°W, 001°W, 012°W. The first image shows Syrtis Mj near the evening limb. Hellas is of beige tint also at the evening limb. At ω=001°W, Aryn's two nails are visible. The three all show the white arctic cloud. The seeing condition is denoted 6/10 in NY.

27 August 2016 (λ=211˚Ls~212˚Ls, δ=10.8"~10.7")

Mo showed an LRGB and RGB composites at ω=164°W together with the L,R,G,B ingredients. As a composite, the RGB looks better as is easily seen if the description of the spc and the arctic cloud are compared. On the RGB or R, we can easily guess the configurations of Gorgii Dorsum, Olympus Mons. Near the evening limb, we also see the definite Phœnicis L and a curved belt surrounding Arsia Mons. We thus guess the positions of Tharsis Montes. There is not seen any orographic cloud because the evening domain is utterly on the rear side.

CFs obtained a 290MC L-colour image at ω=231°W. The image looks dirty where the yellowish dominates. However the constitution of Elysium looks preferable with the western corner light streak. M Cimmerium is detailed, and Ausonia is a bit reddish. However the author does not pay attention to the arctic haze.

FMl gave a Tou-cam-colour image at ω=352°W and by DMK an IR610 image at ω=349°W. S Sabæus

lies near the CM, and Syrtis Mj is visible in a slender shape. Both in colour and IR, M Serpentis look broader (or fatter). In colour Hellas and Æria are connected by a misty matter.

28 August 2016 (λ=212°Ls~213°Ls, δ=10.7")

EMr gave a set of images to make an RGB composite at ω=355°W. M Serpentis is dark present. Notable is the fact the arctic cloud looks quite inactive. Just in B, the evening part may be thick.

CFs gave an L-colour image at ω=219°W. Elysium is near the CM. The western corner of the light streak is seen. The arctic cloud is extremely weak.

29 August 2016 (λ=213°Ls, δ=10.7"~10.6", φ=07°N)

MJs, at Melbourne, obtained by DMK a set of R,G,B ingredients to constitute the RGB composite image at ω=109°W. The image is not so sharp, but the structure of Tithonius L is grasped lucidly. Ophir is light in a reddish or pinkish tint. We are at a loss however how to express the colour of Ganges (maybe basically brownish). Nilokeras is rather darker. Solis L is large and made of several spots. The doughnuts ring at Fortuna is evident. Tharsis Montes are explicit and Ascræus Mons is darker. The spc is white though the perimeter looks a bit blurred. The arctic cloud is not uniform but complex, though we should say it's beautifully expanding. The following area of Solis L is generally reddish, though the south circumpolar region is misty.

CFs gave an L-colour image at ω=211°W. Along the dark band made of M Sirenum and M Cimmerium, Bill SHEEHAN's Valhalla is visible (ι=46°). Elysium looks flat in IR, but in colour it is deeply nuanced. The arctic cloud is weak.

EMr gave an RGB composite at ω=326°W. The arctic white cloud is deep and smooth, and looks to be related with the evening limb cloud. Hellas is however independent and the inside of Hellas is of a beige tint and must be stable. Syrtis Mj appears rough, but the southern district may be dusty (different in colour from the beige tint inside). The spc white part is distinguished.

31 August 2016 (λ=214°Ls, δ=10.5", φ=07°N)

Km obtained an L-colour image at ω=112°W. This summer, due to a climate change, the high pressure atmosphere at the Pacific Ocean has been very weak, even at Osaka where the author Km observes, the later fortnight of August, the planet Mars has not appeared from the behind the clouds. At last at the end of August, his place became tentatively clear after a Typhoon had passed, but Km says the seeing was very formidable. The seeing condition was no better than 2~3/10. The evening Ganges and Nilokeras are brownish, and Ophir is usually light. A nice image!

Finally **EMr** gave an RGB composite based on a set of R,G,B components at ω=307°W (the contour of the Mars image in B looks artificial). Syrtis Mj is near the CM, but looks blurred and the boundary of Hellas is not definite, while Yaonis Fr is rather explicit. A wide spread of the arctic cloud is also evident. The spc is white.

(Masatsugu MINAMI and Masami MURAKAMI)

Letters to the Editor

●·····***Subject: Mars 2016/07/30 1532UT CM138***
Received: 1 August 2016 at 15:23 JST

Hi all, A twilight capture of Mars from 30 July, centred on the Tharsis region. The top of Olympus Mons is seen as a dark spot slighty below and to the right of centre. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160730/CFs30July16.jpg

○····***Subject: Mars 2016/07/31 1531UT CM128***
Received: 1 August 2016 at 17:48 JST

Hi all, An early evening capture from yesterday. I note the structure around the north polar region. Would this be the NPC that is visible already(I note that it is quite evident in the R image), or would this still be cloud? Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160731/CFs31July16.jpg

○····***Subject: Mars 2016/08/01 1542UT CM117***
Received: 2 August 2016 at 18:20 JST

Hi all, Twilight certainly seems to be giving me some consistent, reasonable seeing conditions, which deteriorate rapidly as it gets dark. This is coinciding with a nice altitude for Mars from here. The image is still centered on the Tharsis region, with Olympus Mons, right of centre, showing a reddish tinge under these conditions. I am afraid I have the contrast arc back and will see what I can do over the next couple of days to improve. My ASI290MM/MC cameras are in the country, but not delivered yet. Looking forward to trying them out. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160801/CFs01Aug16.jpg

○····***Subject: RE: Mars 2016/07/31 1531UT CM128***
Received: 3 August 2016 at 14:24 JST

Thanks for your comments Jim. I was suspicious as it did look too large and substantial for this season. Regards,

○····***Subject: Mars 2016/08/02 1519UT CM106***
Received: 3 August 2016 at 16:11 JST

Hi all, Solis Lacus, the Vallis Marineris complex and Nilokeras all becoming visible. Olympus Mons near the morning terminator at right. I also note the light streaks in the region of Alba Patera. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160802/CFs02Aug16.jpg

○····***Subject: Mars 2016/08/04 1609UT CM100***
Received: 5 August 2016 at 15:34 JST

Hi all, Unfortunately seeing was too poor to get anything decent out on 3 August. Conditions a little improved last night. Some large scale cloud structure detectable in both the north and south polar regions. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160804/CFs04Aug16.jpg

○····***Subject: Mars 2016/08/05 1607UT CM90***
Received: 6 August 2016 at 22:11 JST

Hi all, Some pretty decent conditions yesterday evening. I am always wary of limb effects, but the bright SE limb at upper left was noticeable on the screen when I was imaging. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160805/CFs05Aug16.jpg

○····***Subject: Mars 2016/08/06 1530UT CM71***
Received: 7 August 2016 at 03:55 JST

Hi all, Mars this evening under average seeing conditions. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160806/CFs06Aug16.jpg

○····***Subject: Mars 2016/08/07 1540UT CM64***
Received: 8 August 2016 at 18:53 JST

Hi all, We are at Ls 200 and the Mars is rapidly approaching 12". Unfortunately I have not been able to resolve the limb arc as yet and the SPC is overprocessed in this image in an attempt to bring out other features on Mars. Some nice large scale cloud structures in the north Polar region. There was a small brightish feature on the western limb of M Acidalium yesterday which extended towards the east across Acidalium. I suspect it may have been a small transient localised dust event. No sign of it today. Best,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160807/CFs07Aug16.jpg

○····***Subject: Mars 2016/08/09 1529UT CM42***
Received: 10 August 2016 at 04:29 JST

Hi all, Conditions were too poor on 8 August to get anything decent. This evening conditions were a bit improved although still rather poor. Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160809/CFs09Aug16.jpg

○····***Subject: Mars 2016/08/10 1517UT CM30***
Received: 11 August 2016 at 17:24 JST

Hi all, Poor conditions are continuing. Hoping that the images are still at least able to confirm that there is no major dust storm developments at present. Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160810/CFs10Aug16.jpg

○····***Subject: Mars 2016/08/11 1555UT CM30***
Received: 12 August 2016 at 05:07 JST

Hi all, Relatively poor conditions are continuing. Possibly a cyclonic storm system in the north polar region? Also thanks to Damian Peach for providing input to dealing with the limb arc . Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160811/CFs11Aug16.jpg

○····***Subject: Mars 2016/08/12 1541UT CM17***
Received: 13 August 2016 at 02:49 JST

Hi all, Mars this evening under improved conditions. Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160812/CFs12Aug16.jpg

○····***Subject: Mars 2016/08/14 1525UT CM354***
Received: 15 August 2016 at 04:51 JST

Hi all, First light for my new ASI290MC camera. I have resized the template to accommodate the new size of image. Still testing and some adjustments still need to be considered, but happy with the first results. Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160814/CFs14Aug16.jpg

○····***Subject: Mars 2016/08/15 1525UT CM354***
Received: 16 August 2016 at 19:08 JST

Hi all, Continuing to test the ASI290MC, this time reverting to the 3x Barlow. Likely oversampled, but seeing what results I get. All still relatively quiet on Mars. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160815/CFs15Aug16.jpg

○····***Subject: Mars 2016/08/16 1518UT CM333***
Received: 17 August 2016 at 04:41 JST

Hi all, Mars this evening under average conditions. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160816/CFs16Aug16.jpg

○····***Subject: Mars 2016/08/18 1550UT CM322***
Received: 19 August 2016 at 17:01 JST

Hi all, Below average conditions yesterday evening. "Normal" processing has resulted in the SPC being burned out in recent images, so I have masked in a slightly less processed SPC to try and capture it more accurately. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160818/CFs18Aug16.jpg

○····***Subject: Mars 2016/08/19 1525UT CM306***
Received: 20 August 2016 at 03:53 JST

Hi all, Poor and challenging conditions this evening. Not particularly happy with the final result. Despite this I was rather taken aback as Mars appeared on the screen. The region to the east (left) of Syrtis Major was so bright that I initially suspected that there may be some significant activity taking place. This was increased by the rather dim Arabia region on the other side of Syrtis Major. However, subject to further comparison images, I believe it has to be assumed the brightness is due to the incident light, and the significant gibbous phase that is currently evident. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160819/CFs19Aug16.jpg

○····***Subject: Mars 2016/08/20 1513UT CM293***
Received: 21 August 2016 at 04:16 JST

Hi all, Capture of Mars from this evening. Below average seeing just before a storm came in.
Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160820/CFs20Aug16.jpg

○····***Subject: Mars 2016/08/21 1534UT CM289***
Received: 22 August 2016 at 03:28 JST

Hi all, Conditions a bit improved this evening. Possibly some subtle markings in Hellas. Otherwise conditions on Mars look fairly settled. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160821/CFs21Aug16.jpg

○····***Subject: Mars 2016/08/27 1532UT CM231***
Received: 28 August 2016 at 05:00 JST

Hi all, Back home for a few days in between family visits to Durban and Cape Town, and I was rewarded with some fairly decent early twilight seeing conditions. Very little cloud detectable. An apparently cloud-free Elysium at lower centre, with the Gale crater extension directly above it.
Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160827/CFs27Aug16.jpg

○····***Subject: Mars 2016/08/28 1523UT CM219***
Received: 29 August 2016 at 04:20 JST

Hi all, Conditions not as good as yesterday eve-

ning. However, sufficient detail is seen to indicate that at least this face of Mars seems to be experiencing rather fair weather. Hopefully one more capture tomorrow afternoon before I head off to Cape town for just over a week, during which period I will not be submitting any images. The giant "?" which partially encompasses the Amazonis region and also borders Elysium is quite prominent- a feature that I have noted throughout the apparition. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160828/CFs28Aug16.jpg

○····***Subject: Mars 2016/08/29 1527UT CM211***
Received: 30 August 2016 at 04:00 JST

Hi all, A rather rushed capture and process. I would like to look a bit closer at this image set when I return as there appeared to be an extension off the upper right hand terminator, which was visible on the 3 L captures I took (15.21-15.29UT). I will not be submitting any images until I return on 7 Sept. Best regards

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160829/CFs29Aug16.jpg

Clyde FOSTER (Centurion, SOUTH AFRICA)

●·····***Subject: Mars images (June 11th.)***
Received: 2 August 2016 at 04:35 JST

Hi all, Excellent seeing for the first set of images while slightly less for the second. Sinus Meridiani is central with Chryse head off and Syrtis Major at the limb. It looked a striking blue/cyan colour visually through the eyepiece as well as in the image.

RGB1: http://www.damianpeach.com/mars1617/m2016-06-11-RGB01.jpg

RGB2: http://www.damianpeach.com/mars1617/m2016-06-11-RGB02.jpg

Best Wishes

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160611/DPc11June16.jpg

●·····***Subject: Mars images (June 13th.)***
Received: 7 August 2016 at 02:39 JST

Hi all, Here are some images from June 13th in excellent seeing.

http://www.damianpeach.com/mars1617/m2016-06-13-RGB.jpg

http://www.damianpeach.com/mars1617/m2016-06-13-0208_0-BLUE.jpg

Best Wishes

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160613/DPc13June16.jpg

○····***Subject: Mars dust storm (June 15th.)***
Received: 22 August 2016 at 00:10 JST

Hi all, Excellent seeing once again allowed a great view of the localised dust storm occurring over Mare Erythraeum. Also note the linear cloud streak in the southern hemisphere - clearly those Martian flying saucer pilots have been having fun :-)

RGB: http://www.damianpeach.com/mars1617/m2016-06-15-RGB.jpg

Blue: http://www.damianpeach.com/mars1617/m2016-06-15-BLUE.jpg

Best Wishes

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160615/DPc15June16.jpg

○····***Subject: Mars with Antares (August 25th.)***
Received: 28 August 2016 at 04:06 JST

Hi all, I zoomed out a bit for these views of Mars on August 25th against a very picturesque backdrop.... Best Wishes

http://www.damianpeach.com/deepsky/rhomars_2016_08_25label.jpg

Normal: http://www.damianpeach.com/deepsky/rhomars_2016_08_25.jpg

○····***Subject: Mars (June 16th.)***
Received: 29 August 2016 at 03:08 JST

Hi all, Good seeing. Syrtis Major coming onto the disk. Note how rapidly the dust storms captured the previous day dissipated! Best Wishes

RGB: http://www.damianpeach.com/mars1617/m2016-06-16-RGB.jpg

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160616/DPc16June16.jpg

Damian PEACH (Selsey, West Sussex, the UK)
Web: http://www.damianpeach.com/

●·····***Subject: Mars June 18***
Received: 2 August 2016 at 10:45 JST

Very soft conditions.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160618/PMx18June16.jpg

○····***Subject: Mars June 19***
Received: 3 August 2016 at 09:02 JST

June 19

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160619/PMx19June16.jpg

○····***Subject: Mars June 20***
Received: 5 August 2016 at 07:44 JST

Very hot during capture.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160620/PMx20June16.jpg

○····***Subject: Mars June 23***
Received: 6 August 2016 at 08:18 JST

Very good seeing this session.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160623/PMx23June16.jpg

○····***Subject: Mars June 25***
Received: 7 August 2016 at 10:39 JST

Still decent seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160625/PMx25June16.jpg

○····***Subject: Mars June 26***
Received: 9 August 2016 at 04:20 JST

More good seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160626/PMx26June16.jpg

○····***Subject: Mars June 26***
Received: 9 August 2016 at 12:37 JST

Average or better seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160628/PMx28June16.jpg

○····***Subject: Mars July 3***
Received: 11 August 2016 at 04:34 JST

Nice seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160703/PMx03July16.jpg

○····***Subject: Mars July 4***
Received: 13 August 2016 at 06:48 JST

Rather poor seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160704/PMx04July16.jpg

○····***Subject: Mars July 5***
Received: 14 August 2016 at 10:59 JST

Good seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160705/PMx05July16.jpg

○····***Subject: Mars July 6***
Received: 17 August 2016 at 07:28 JST

Unsteady seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160706/PMx06July16.jpg

○····***Subject: Mars July 7***
Received: 18 August 2016 at 04:00 JST

Much better seeing here.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160707/PMx07July16.jpg

○····***Subject: Mars July 8***
Received: 19 August 2016 at 11:01 JST

Good seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160708/PMx08July16.jpg

○····***Subject: Mars July 9***
Received: 20 August 2016 at 09:02 JST

Below average seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160709/PMx09July16.jpg

○····***Subject: Mars July 10***
Received: 21 August 2016 at 09:07 JST

Average seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160710/PMx10July16.jpg

○····***Subject: Mars July 11***
Received: 23 August 2016 at 08:08 JST

The seeing was not very good.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160711/PMx11July16.jpg

○····***Subject: Subject: Mars July 12***
Received: 25 August 2016 at 07:48 JST

Average seeing, not much action.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160712/PMx12July16.jpg

○····***Subject: Mars July 13***
Received: 26 August 2016 at 08:00 JST

Better seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160713/PMx13July16.jpg

○····***Subject: Mars July 14***
Received: 28 August 2016 at 01:44 JST

Good seeing.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160714/PMx14July16.jpg

○····***Subject: Mars July 15***
Received: 30 August 2016 at 04:11 JST

Looking nice here.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160715/PMx15July16.jpg

○····***Subject: Mars July 16***
Received: 31 August 2016 at 01:53 JST

Loots of detail.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160716/PMx16July16.jpg

Paul MAXSON (Surprise, AZ)

●·····***Subject: Mars 2016 7-26 CM=321.7***
Received: 3 August 2016 at 01:02 JST

Hi, The attached image of Mars was taken with a C-14 @ F-24 at twilight with average seeing and poor transparency.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160726/MHd26July16.jpg

Mike HOOD (Kathleen, GA)

●·····***Subject: Re: Mars 2016/07/31 1531UT CM128***
Received: 3 August 2016 at 07:27 JST

Hi Clyde, Fall has just started in the Northern

hemisphere and I think it might be too warm for the H_2O cap to form. Looking at your RGB monochromes, the blue and green are bright that could be hood-like features. The red image is also bright but not brighter than other desert regions. The color image shows a few orange spots that could be a desert under the clouds. So I would say the white polar regions are clouds over a desert. Thanks,

Jim MELKA (Chesterfield, MO)

●·····***Subject: Mars: August 3, 2016***
Received: 3 August 2016 at 12:15 JST

Hi, I have attached my latest image of Mars August 3, 2016. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160803/FMl03Aug16.jpg

○····***Subject: Mars: August 9, 2016***
Received:10 August 2016 at 10:10 JST

Hi, I have attached my latest image of Mars August 9, 2016 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160809/FMl09Aug16.jpg

○····***Subject: Mars: August 14, 2016 UT***
Received: 14 August 2016 at 11:49 JST

Hi, I have attached my latest images of Mars August 14, 2016 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160814/FMl14Aug16.jpg

○····***Subject: Mars: August 15, 2016 UT***
Received: 16 August 2016 at 11:16 JST

Hi, I have attached my latest image of Mars August 15, 2016 at 23:17 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160815/FMl15Aug16.jpg

○····***Subject: August 20, 2016***
Received: 21 August 2016 at 10:07 JST

Hi, I have attached my latest images of Mars August 20, 2016 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160820/FMl20Aug16.jpg

○····***Subject: Revised: Mars: August 15, 2016***
Received: 21 August 2016 at 10:53 JST

Hi , I have attached Mars images which have been revised August 15, 2016 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160815/FMl15Aug16.jpg

○····***Subject: Mars: August 22, 2016***
Received: 25 August 2016 at 13:15 JST

Hi, I have attached my images of Mars August 22, 2016 at 23:45 UT. Note the dust clouds in Niliacus Lacus and Chryse.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160822/FMl22Aug16.jpg

○····***Subject: Mars: August 23, 2016***
Received: 25 August 2016 at 13:17 JST

Hi, I have attached my images of Mars August 23, 2016 at 23:40 UT. Note the dust clouds in Niliacus Lacus and Chryse.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160823/FMl23Aug16.jpg

○····***Subject: Mars: August 24-25, 2016 UT***
Received: 26 August 2016 at 08:57 JST

Hi, I have attached my latest images of Mars August 24th at 23:45 UT to August 25th, 2016 at 1:01 UT. Mars is showing the dust clouds over Chryse. It is not spreading but the storm had moved southward and most of Niliacus Lacus area may be free of dust. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160824/FMl24Aug16.jpg

○····***Subject: Mars: August 27, 2016 UT***
Received: 30 August 2016 at 03:31 JST

Hi, I have attached my latest image of Mars August 27th, 2016 at 23:37 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160827/FMl27Aug16.jpg

○····***Subject: Mars: August 26, 2016 UT***
Received: 30 August 2016 at 05:10 JST

Hi, I have attached my images of Mars August 26, 2016 at 23:19 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160826/FMl26Aug16.jpg

Frank J MELILLO (Holtsville, NY)

●·····***Subject: Mars 01 August 2016***
Received: 4 August 2016 at 21:59 JST

Dear Dr. Minami, I have attached my latest image of Mars. Seeing was still terrible, but some improvements in squeezing out some detail from the blurred images. Clear skies with good Seeing!

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160801/Kn01Aug16.jpg

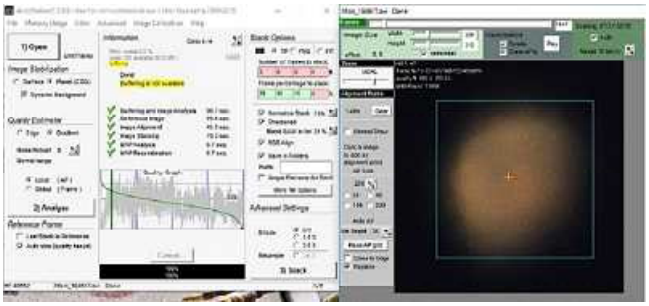
○····***Subject: Mars after a Typhoon Passage***
Received:10 August 2016 at 19:20 JST

Dear Dr. Minami, This year's 5th typhoon "Omais" has narrowly missed here northeastern Japan, blowing out into the Pacific, agitating the air above our heads, causing hopelessly terrible seeing. The naked eye Mars nearing its heavenly rival was twinkling crazily, visually no Hellas, no Syrtis Major nor Sinus

Sabaeus in the telescope field, and the red planet's image in the display monitor was like a moving ameba in a time-lapse animation. Here I am attaching what I could have squeezed out through image processing, feel it like a kind of magic!

GOOD Seeing!

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160809/Kn09Aug16.jpg



○····***Subject: Mars 11 August 2016***
Received: 12 August 2016 at 11:52 JST

Dear Dr. Minami, Attached here is my latest image of Mars. Seeing was still poor, but by far better than at 9th. Visually, Hellas was grayish light with a slight tint of pinkish. NPH area fairly bright, relatively bluish. SPC barely visible?, almost indiscernable. Best Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160811/Kn11Aug16.jpg

○····***Subject: Mars 12 August 2016***
Received: 13 August 2016 at 17:49 JST

Dear Dr. Minami, Naked eye twinkling Mars, Saturn and Antares again. Visually, through the telescope, Hellas is dull white with a very slight tint of pink. Syrtis Major steel dark gray. Ausonia desert color. Good Seeing!

○····***Subject: Mars revised image 1 August***
Received: 15 August 2016 at 16:17 JST

Dear Dr. Minami, Attached here is a revised Mars image of the one dated 1 August I had already submitted. I restarted from the stacking, trying various alignment points and the stacking frame percentages. (Over?)compensation for the terminator darkening makes it easier to check the features along the terminator zone, may lose its fantastic shadowed ball-like 3D feeling instead. Best Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160801/Kn01Aug16.jpg

○····***Subject: South Polar Cap***
Received: 16 August 2016 at 13:17 JST

Dear all, I am attaching here an montage showing the latest Mars Express VMC's image of Martian South Polar Cap compared with the one by Mars Global Surveyer MOC in the similar season, which may give you an idea of what you are looking at quite obliquely along the southern edge of the Martian disk through your telescopes. Best Regards,

○····***Subject: Mars 21 August 2016***
Received: 22 August 2016 at 13:08 JST

Dear Dr. Minami, Three typhoons were consecutively near-missing/approaching/and aiming at Japan, I could have managed to capture one image through a gap in rapidly moving clouds, minding thunderbolts not so distant, seeing was terrible but not hopeless. Visually, SPC fairly bright, pure white. NPH area considerably bright, with a slight tint of greenish blue. Good Seeing!

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160821/Kn21Aug16.jpg

○····***Subject: Mars revised image 21 August 2016***
Received: 22 August 2016 at 20:21 JST

Dear Dr. Minami, I am attaching here a revised image of the one I have submitted this noon, on which I noticed a possible terminator protrusion over the Ausonia region. I wonder how the solar activity was, and whether the Oceanian Big Guns have also captured this. Best Regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160821/Kn21Aug16.jpg

○····***Subject: Mars 24 August 2016***
Received: 24 August 2016 at 21:38 JST

Dear Dr. Minami, Attached here is my latest image of Mars from the session under the blue sky (18h03m JST). Seeing was miserable as lately, visually Olympus Mons non discernable at all, SPC fairly bright, pure white, NP area not so light, whitish. Good Seeing!

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160824/Kn24Aug16.jpg

Reiichi KONNAÏ (Fukushima, JAPAN)

●·····***Subject: terminator projections***
Received: 7 August 2016 at 01:35 JST

Dear Masatsugu and Richard, I have followed with interest your correspondence related to the terminator projections on Mars. As you know, I am in Flagstaff now-and recall having seen some pages of calculations by Percival Lowell on this subject, from about 1903. Next time I am in the archives I will have them brought out again, and take some smartphone images for you, in the event they may be of interest.

It certainly seems that Masatsugu's suggestion of a CME hitting Mars is a good one to explain the unusual 2012 event. As you both may know, there are some interesting ideas by Candace Gray of New Mexico State University to suggest that CME-related activity may give rise to dramatically increased oxygen green-line emission on the night side of Venus--and that this, at least in principle, might account for a small subset of Ashen Light observations. The proof is in the pudding, whether it can be demonstrated that visual observers report the AL at the same time Venus is in the direct line of a CME.

Noting the alert for the Edom flares on August 5. It seems that the circusmtances are less favorable this year than they were in 2001 or in 1954, so I am doubtful anything will be seen. All the best to both,

○····***Subject: Brashear article***
Received: 23 August 2016 at 10:21 JST

Hi, fellow Lowell preservationists, The attached article appeared in *Astronomy Now* (June 2016), concerning another telescope with Lowell associations.

Thought you might find it of interest. Best,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmo/The Brashear Telescope.pdf

Bill SHEEHAN (Flagstaff, AZ)

●·····***Subject: Mars - August 3rd, 4th***
Received: 8 August 2016 at 02:24 JST

Hi Mr. Minami and All !, Some of my better sessions under below average conditions from August 3rd,4th. (Tropical Storms, Saharra dust aerosols)

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160803/EMr03Aug16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160804/EMr04Aug16.jpg

○····***Subject: Mars - August 9th***
Received: 15 August 2016 at 22:53 JST

Hi Mr. Minami and All!, Here I submit two sessions from august 8/9 under below/average conditions. much rain and T/S in my region (season).

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160809/EMr09Aug16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160809/EMr09Aug16n.jpg

○····***Subject: Mars - August 16th***
Received: 19 August 2016 at 03:49 JST

Hi Mr. Minami and All!, Here I submit my latest session from august 16th under below average conditions.

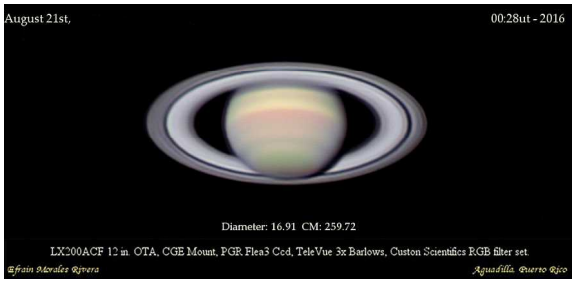
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160816/EMr16Aug16.jpg

○····***Subject: Mars July 11***
Received: 23 August 2016 at 00:04 JST

Hi Mr. Minami and All!, Here are my latest session from august 18th, 20th under above average conditions.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160818/EMr18Aug16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160820/EMr20Aug16.jpg

And a session of Saturn after mars session.



○····***Subject: Mars - August 23rd***
Received: 26 August 2016 at 06:01 JST

Hi Mr. Minami and All!, Here is a session from august 23rd under variable conditions, T/S front close by.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160823/EMr23Aug16.jpg

○····***Subject: Mars - August 28th***
Received: 30 August 2016 at 02:02 JST

Hi Mr. Minami and All!, Here is my latest session of mars on august 28th. T/S has finally departed from our regions but still turbulent conditions.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160828/EMr28Aug16.jpg

Efrain MORALES (Aguadilla, PUERTO RICO)

●·····***Subject: NS axis orientation of Mars images***
Received: 13 August 2016 at 05:09 JST

Regarding my image of 4 July 2016 you noted in CMO#452 that the NS axis should be oriented using

the Parker/Morita method. Would you kindly provide a reference for this method?

With best regards,

○····***Subject: Re: NS axis orientation of Mars images***
Received: 29 August 2016 at 10:09 JST

Dear Sirs, Thank you for the information. I was not able to readily find a description of a method. Your response is most helpful. With kind regards,

-----Original Message-----
From: Masatsugu Minami <vzv03210@nifty.com>
Sent: Sat, Aug 27, 2016 2:15 am
Subject: RE: NS axis orientation of Mars images

Dear Gary (may we?)
Thank you very much for your kind inquiry. We are very sorry we were quite late in replying. We could not afford to reply for a while because one of the present writers (Mn) has not been in good health. Furthermore we ourselves could not pin down an appropriate reference. As far as we can say, we just thought there could be some useful/suggestive sentences in the following article at page Ser3-0222 in:
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmomn4/CMO392.pdf
Instead, we decided to include a short note concerning the NS axis orientation at the top at the next CMO #453, and a while ago we completed the PDF version. The publication will be soon announced.
Thank you very much for your constant contributions of excellent Mars images this season to the CMO/ISMO Mars Gallery. Unfortunately we were not able to review your work thoroughly yet (especially those made in May and June….), but as soon as this apparition of Mars releases us from a possible alert system, we will start to check all images which "we further received" to think about where we should place every of your work in the 2016 Mars history.
As well, we look forward to your contributions in the next great apparition in 2018.
Pardon us for our laziness, but we are Sincerely Yours.
Masatsugu MINAMI, vzv03210@nifty.com
Masami MURAKAMI, cmo@mars.dti.ne.jp
CMO/ISMO

Gary WALKER (Macon, GA)

●·····***Subject: Mars observation 7th August 2016***
Received: 13 August 2016 at 07:54 JST

Dear CMO/OAA-team! Here is my latest Mars observation from 7th August 2016. I used Winjupos for combining the videos for this LRGB. best regards

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160807/RSz07Aug16.jpg

Robert SCHULZ (Vienna, AUSTRIA)

●·····***Subject: Mars 2016.08.08 from Pic du Midi***
Received: 18 August 2016 at 07:45 JST

Dears, Mars from last night of our mission (processed by Christophe), without ADC unfortunately, which one can tell looking at the images... Still the shadowed summits of Tharsis volcanoes are rising, and the polar clouds from fall's start in Northern hemisphere. Due to polar axis inclination (12°N), South polar cap is almost not visible anymore:

http://www.astrosurf.com/delcroix/images/planches/m20160808-PIC.png

Steady skies,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160808/MDc08Aug16.jpg

○····***Subject: Mars 2016.07.24***
Received: 28 August 2016 at 17:45 JST

Dears, Last Mars observation for me for this apparition, one month ago, with Syrtis Major almost at CM, with a zone slightly bright between Utopia and Arcadia planitia.

Infrared image :
http://www.astrosurf.com/delcroix/images/planches/m20160724i-20h53.5UT-MDe.png

Unfortunately for the RGB the seeing was very poor:
http://www.astrosurf.com/delcroix/images/planches/m20160724-21h13.4UT-MDe.png
http://www.astrosurf.com/delcroix/images/planches/m20160724b-21h21.1UT-MDe.png

Steady skies,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160724/MDc24July16.jpg

Marc DELCROIX (Tournefeuille, FRANCE)
http://astrosurf.com/delcroix

●·····***Subject: Mars images***
Received: 21 August 2016 at 18:01 JST

Dear Sirs, Please find attached a Mars image set from the 15th Aug 2016. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160815/MJs15Aug16.jpg

○····***Subject: Mars images***
Received: 30 August 2016 at 08:48 JST

Dear Sirs, Please find attached a Mars image set from the 29th Aug 2016. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160829/MJs29Aug16.jpg

Mark JUSTICE (Melbourne, AUSTRALIA)

●·····***Subject: Mars Image 2016/08/21***
Received: 28 August 2016 at 04:42 JST

Dear Masatsugu, Dear Masami, I send you one

image.

2016/08/21 UT 01:01:13
CM= 76.7° SCT LX200UHTC 254mm + Barlow 2x + L Filter + ASI120MM @ 0.11"/pixel (f/27) L: 5262 frames @ 59 fps @ 90 sec S: 4/10 - T: 5/5 - Alt: 52° AstroExplor Observatory -
Comments:
Mars image 21-Aug-2016. Having spent many days with overcast skies, tonight the sky was completely clear. It corresponds to an image with luminance filter, only. It was not possible to obtain RGB and IR components because of a technical problem with the energization of the telescope mount, which prevented continue the observation and imaging session. In the center are observed Solis L, Tithonius, Chryse, Aurorae Sinus and Nilokeras. Best regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160821/CTr21Aug16.jpg

Charles TRIANA (Bogota, COLOMBIA)
www.astroexplor.org

●·····*Subject: mars observations*
Received: 28 August 2016 at 08:01 JST

Dear Sirs: Regrettably, we could not continue our observations of mars from Oro Verde, Argentina, during these cloudy winter months. In the meantime, I send to you some previous images of this year. I hope our images could be useful. These are the data of the observations:

Name and location: **Francisco Alsina Cardinalli** (Oro Verde, Argentina).

Date and time (UT): 05-14-2016-04:32, 05-14-2016-04:35.
Filter: Astronomik ProPlanet 742 IR-pass.
Size and type of telescope used: 250 mm (Meade LX 200).
Medium employed: QHY5-II.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160514/FCd14May16.jpg

Name and location: **Cesar Fornari** (Oro Verde, Argentina).
Date and time (UT): 06-18-2016-00.15
Telescope used: Celestron 11" HD Hedge.
Medium employed: QHY5-II.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160618/CFo18June16.jpg

Name and location: **Cesar Fornari** (Oro Verde, Argentina).
Date and time: 06-21-2016-23.58.
Telescope used: Celestron 11" HD Hedge.
Medium employed: Canon 60D. Kind regards,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160621/CFo21June16.jpg

Alberto ANUNZIATO (Oro Verde, ARGENTINA)

●·····*Subject: Mars - August 24 & 25*
Received: 30 August 2016 at 03:34 JST

Dear Masatsugu and Masami, Attached are images of Mars I took on August 24th and 25th. Both show an interesting small cloud in Argyre and perhaps some dissipating dust from an earlier storm in the Niliacus Lacus and Chryse regions.

August has been another rainy month here and Mars is starting move out of my reach in the backyard. I have a small window after sunset to observe Mars but it quickly moves behind the trees and houses to the South of me. Hopefully I can capture a few more images before I have to say goodbye to our friend. Best Wishes,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160824/WFl24Aug16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160825/WFl25Aug16.jpg

Bill FLANAGAN (Houston, TX)

☆ ☆ ☆

International Society of the Mars Observers (ISMO)

Advisory Board: Donald PARKER † , Christophe PELLIER, William SHEEHAN, and Tadashi ASADA, Reiichi KONNAÏ, Masatsugu MINAMI

Bulletin: Kasei-Tsûshin CMO (http://www.mars.dti.ne.jp/~cmo/ISMO.html)

CMO n°454/ ISMO #80 (25 September 2016)

Editorial Board: Tadashi ASADA, Masatsugu MINAMI, Masami MURAKAMI, Takashi NAKAJIMA and Akinori NISHITA

☆ *Any e-mail to CMO/ISMO including the image files is acknowledged if addressed to*

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