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## The Final CMO/ISMO Mars Observations of the 2016 Mars Apparition in April 2017 (λ=342°Ls~λ=358°Ls)

♂・・・・・The planet Mars moved in April 2017 in the evening sky from the Aries constellation to the Taurus constellation, and in mid-April the apparent declination D became higher than 20°N (seen from the northern hemisphere), while at the final week of April, Mars decreased the apparent diameter δ to less than 4 seconds of arc. The elongation of Mars became under 30 degrees, and hence the observation reports utterly ceased by mid-April, and thus the 2016 Martian Apparition ended. The Martian season proceeded from λ=342°Ls to λ=358°Ls in April (so near the autumnal equinox of the Martian Southern Hemisphere). The phase angle decreased from ι=22° to 17°. The tilt decreased from φ=17°S to φ=09°S. We hope you will refer to a few terrestrial observations of Mars below.

♂・・・・・On the images of the MRO MARCI in April 2017, no large scale dust disturbances were recorded. And the surface looked rather clear with explicit dark markings. The northern polar clouds were not so clearly caught. However, the cloud belt from the northern part of Mare Acidalium to Tempe sometime appeared bright. At the end of April, it became brighter as seen on an MRO-MARCI image taken on 19 April (λ=352°Ls).

Also the cloud belt at the northern higher latitude seen from the side of Utopia sometimes witnessed, and towards the end of April at the afternoon side of Alba Patera was often seen active with a smaller scale clouds. The higher Montes at Tharsis looked as dark spots, while Arsia Mons was sometimes veiled by thin clouds.

Hellas showed a lighter place at the NW part, maybe ground lit. The area of Argyre also showed a lighter aspect. Chryse-Xanthe was not so transparent, and at the first half of April, Margaritifer S was proven to be slightly blurred.


♂・・・・・The image here cited of the MRO-MARCI taken on 19 April 2017 (λ=352°Ls) may be regarded as an example that called a halt to the terrestrial Mars observations in the 2016 apparition with an explicit description of the arctic cloud. In addition, the season was quite near the indicatory southern autumnal equinox λ=360°Ls.

As the apparitions that we experienced before, we remember those apparitions in 2001, 1986, 1969

and so on. In **the case of 2001**, the period λ=352°Ls～360°Ls visited on around April 2002: A pair of excellent observations were given by Teruaki KUMAMORI (*Km*) on 2 April 2002 (λ=352°Ls, δ=4.3"): The images show several dark markings with the arctic white cloud, even though the surface must have been still under an influence of the preceding global scale dust disturbances (started from Hesperia on 24 June 2001). To reveal the northern polar cap, the camera must have been sensitive to the blue light. *Km* well took the images by the use of a 60cm Cass at the Ōsaka-Sakai City Sophir-Sakai Museum to compensate the smaller diameter.

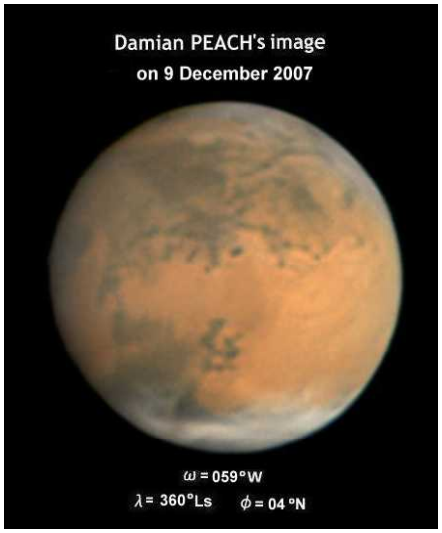

One of the present writers (*Mn*) also visually observed the planet on 2 April 2002 (λ=352°Ls) three times at ω=007°W, 016°W, 026°W: He thought that the npc was nearly visible, but it was not so large. The tilt was ϕ=14°S. The season λ=360°Ls visited on 18 April 2002. The arctic area was observed white [during the 2001 apparition, *Mn* continued up until 13 May 2002 (λ=012°Ls, δ=3.9") and *Mn* secured a total of 1088 drawings during the apparition, including the observations made in Okinawa].

In **the case of 1986**, *Mn* mostly observed the 1986 Mars apparition at the Taipei-City Yuanshan Observatory, Taiwan ROC, equipped with an *F*15 25cm GOTO Refractor, and it was on 26 December 1986 when *Mn* returned home at Ōtsu (near Kyoto). On the evening *Mn* observed the planet three times (every forty minutes) at λ=307°Ls with δ=7.2". The season λ=352°Ls reached on 17 March 1987 with δ=4.8" and ϕ=16°S. The critical λ=360°Ls reached on 2 April 1987. In March and April the weather was dismal, and no explicit results were reported concerning the activity of the nph: The observations continued up until the end of April (e.g. Takashi NAKAJIMA at Fukui). Refer to CMO #030~#032.

♂·····We here detour to see how the Martian surface shows the north polar region when its diameters are more preferably larger at the seasons λ=352°Ls～λ=360°Ls. Apparently this period does not occur near the perihelic oppositions, and may be found in the slightly aphelic periods: For instance, after the 1986 apparition, one of us (*Mn*) caught Mars having the diameter δ=15.3" at the season λ=353°Ls on 21 December 1990 when ϕ=13°S: Even then the nph looked considerably large and its morning side was brighter and the area of Propontis I looked like a dark fringe (from ω=139°W at Ōtsu). In 1990, the planet was at opposition on 27 November. The season λ=360°Ls reached on 4 January 1991: δ was 13.3"and ϕ=13°S. Almost of the region of Mare Acidalium was covered by the nph, but the area of the arctic cap could not be clear because of the tilt.

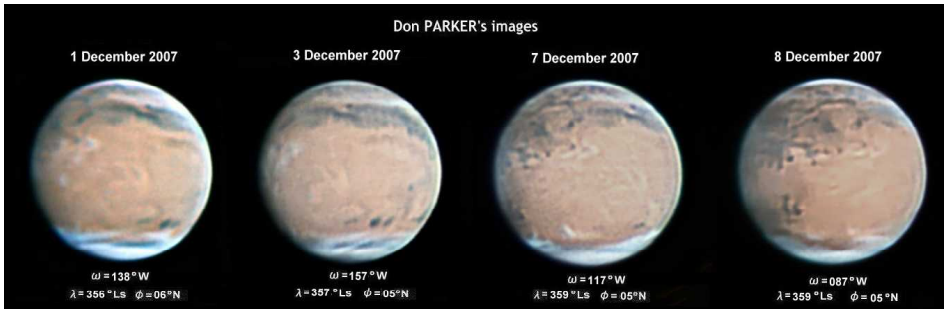

It may be said that the 2007 apparition was one of the most appropriate cases for us to check the surfaces at the seasons λ=352°Ls～λ=360°Ls. In fact, on 23 November 2007 (λ=352°Ls, ϕ=07°N, δ=14.4"~14.5"), we received a nice image (here cited) from Paulo CASQUINHA, where the nph was miraculously described. We had also several good images on the day issued from Jesús R SÁNCHEZ, Yukio MORITA, Teruaki KUMAMORI, Akinori NISHITA, Stanislas MAKSYMOWICZ, and Ralf GERSTHEIMER. And also at λ=360°Ls, namely on 9 December (ϕ=07°N, δ=15.6"~15.7"), several good images were sent us from José Antonio SOLDEVILLA GONZALEZ, David ANDERSON, Ian SHARP, Damian PEACH, Sean WALKER, David TYLER, Peter GORCZYNSKI, Carlos E HERNANDEZ, Yukio MORITA,

Tadashi ASADA, Teruaki KUMAMORI, and Sadegh GHOMIZADEH. Here we cite the image at $\lambda$=360°Ls made by Damian PEACH at Barbados. Furthermore during the period between 24 November and 8 December a lot of observations were performed by Christophe PELLIER, David ARDITTI, Frank J MELILLO, William D FLANAGAN, Richard BOSMAN, Xavier DUPONT, Mike SALWAY, Robert SCHULZ, Ignacio ZURUTUZA, Michael KARRER, Silvia KOWOLLIK, Vittorio AMADORI, Jan ADELAAR, Tomio AKUTSU, Donald C PARKER, Yasunobu HIGA, Bruce A KINGSLEY, Donald R BATES, Francisco José FERNÁNDEZ GÓMEZ, Ian HANCOCK, Pepe GÓMEZ, and Johan WARELL in addition to the members who observed on 23 November and 9 December. The images given by these observers are easily found out in the following site:

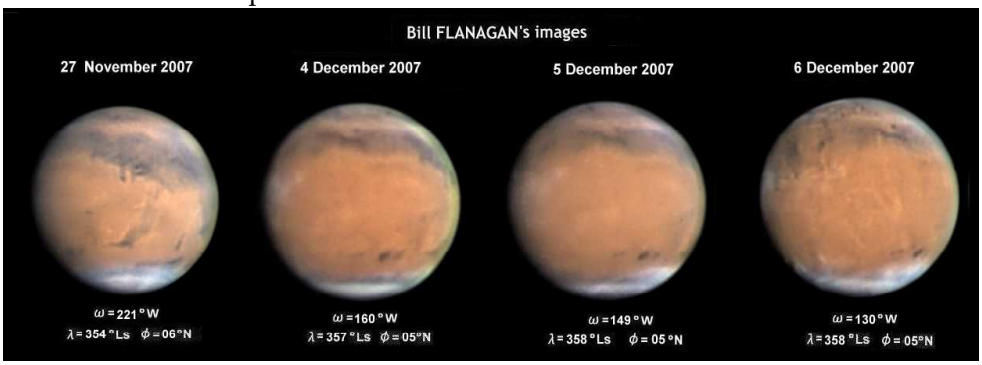



http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2007/f_image.html

The following sets of images are those captured by Don PARKER (*DPk*) and Bill FLANAGAN (*WFl*) during the period $\lambda$=352°Ls～$\lambda$=360°Ls in 2007. *DPk*'s images show interestingly some cirrostratus separated from the nph or the possible npc. *WFl*'s series images suggest a presence of a thick boundary band of the nph or the npc in addition to the separated thin clouds.




The variety of the images here of the nph region will give the reader the status of the activity of the nph and the hidden upcoming npc during the very seasons $\lambda$=352°Ls～$\lambda$=360°Ls.




♂・・・・・We now finally give some description of the CMO/ISMO observations made during April 2017. The observers who succeeded in finding Mars were just two as follows: We further received some images made in June and July 2016 from MORITA:

**LEWIS, Martin *(MLw)*** St. Albans, Hertfordshire, the UK

1 *Colour* Image (7 April 2017) 45cm Spec with an ASI224MC

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

1 *IR* Image (14 April 2017) 25cm SCT with a DMK21AU618.AS

♂・・・・・ We Further Received from

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

9 Sets of *LRGB* Images (30 June; 3,~5, 17, 22, 27, 29, 31 July 2016) 36cm SCT with a Flea 3

♂・・・・・We now close this note by reviewing the latest two observations:

**7 April 2017 (λ=345°Ls~346°Ls, δ=4.1", φ=14°S)**

**Martin LEWIS (MLw)** took a nice image at ω=252°W by using a 44cm Dobsonian equipped with an ASI 224MC. On the afternoon side, Mare Cimmerium lies obliquely and the area of Syrtis Minor is darkish. Near the morning terminator, Syrtis Major is faintly but definitely seen. The area of Ausonia is not so light. The spc is not detected on the shadowy southern limb side. Along the northern limb, a white cloud is spread. For δ=4.1", this is a beautiful Martian image (MLw's prime image).

**14 April 2017 (λ=349°Ls~350°Ls, δ=4.1", φ=13°S)**

**Frank MELILLO (FMl)** was the last to observe the 2016/2017 Mars. The image was a DMK IR610 one made at ω=245°W by the use of a 25cm Meade SCT. At the centre a dark area is visible while M Cimmerium and M Tyrrhenum do not separate. To its morning side, near the terminator, Syrtis Mj is shown. The northern limb area may be light. FMl secured a total of nearly 90 images during the 2016 apparition from NY. FMl is one of our old friends since our publication of the CMO.

Thus we finished the regular survey of the CMO/ISMO 2016 Mars observations. Unfortunately, no observation reached to cover the period λ=352°Ls～360°Ls. This performance will be naturally difficult because the diameter is quite small and the apparent declination remained unfavourable. However, the very image by Martin LEWIS at λ=346°Ls taken from St Albans, UK (located at about 52°North) looks excellent, and hence we expect to receive appropriate work of members at any next opportunity.

♂・・・・・From the next issue we shall begin to sort out other remaining images which "We Further Received" in 2016.

*Masatsugu MINAMI and Masami MURAKAMI*

# Letters to the Editor

●・・・・*Subject: Mars: April 14, 2017*
*Received: 16 April 2017 at 14:21 JST*

Hi, I have attached my latest image of Mars April 14, 2017 at 23:30 UT. Thanks,

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/170414/FMl14Apr17.jpg

**Frank J MELILLO** (Holtsville, NY)

●・・・・*Subject: Mo Mars 2016*
*Received: 14 May 2017 at 12:37 JST*

Dear Dr. Masatsugu Minami, Attached please find some images from my backlogs made in June and July 2016. At the latter part of July 2016, the seeing conditions slightly improved. Now I am now looking forward to preparing some additional images made in August 2016. Thank you.

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160731/Mo31July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160729/Mo29July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160727/Mo27July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160722/Mo22July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160717/Mo17July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160705/Mo05July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160704/Mo04July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160703/Mo03July16.jpg
http://www.kwasan.kyoto-u.ac.jp/~cmo/cmons/2016/160630/Mo30June16.jpg

**Yukio MORITA** (Hiroshima, JAPAN)

●・・・・*Date: 19 May 2017 06:23:30-0700 (22:23 JST)*
*Subject: Hokusaï: the Great Wave that swept the world | Art and design | The Guardian*
*From: William Sheehan*
*To: Masatsugu Minami*

M MINAMI received with thanks this email of **Bill SHEEHAN** sent from Bill's *iPhone* telling about an exhibition of Hokusaï which will be soon opened at the British Museum. The following site is the URL of an article of *The Guardian* on Hokusaï KATSUSHIKA cited in his email.

https://www.google.com/amp/s/amp.theguardian.com/artanddesign/2017/may/19/hokusai-japanese-artist-late-blossoming-great-wave-mount-fuji

It says for example "His late blooming was spectacular – it was only in his 70s that he made his most celebrated print series, *Thirty-Six Views of Mount Fuji*, including the famous *Great Wave*, an image that subsequently swept over the world. ....."

About Hokusaï, Percival LOWELL once touched in his book: *The Soul of the Far East* (1888). However I (Masatsugu MINAMI) felt that his referring was not thoughtful, but based on his shallow dichotomy. I was rather irritated by his lack of understanding the Hokusaï art. So I wrote a long essay about "*Hokusaï*" in March 2004 (just before *the 2004 Lowell conference at Anamidzu*) and published it in the CMO-Web. It's inside the URL :

http://www.kwasan.kyoto-u.ac.jp/~cmo/cmomn3/LP_HP/index.htm

(Unfortunately however this is not well viewable if one uses the Windows 10 Microsoft Edge. It must be browsed by the old Internet Explorer. If it appears without any figure, it is false and in that case one must click to change to the "Internet Explorer" and then click the "Compatibility View Settings").

Anyway, LOWELL was a person who regarded 'any Art is inferior to the Western Science.'

I wrote "The book is full of such axioms as the individual and progressive West *vs* the impersonal and impassive East, and one may be easily led to the proposition that the Japanese lacks the originality and holds a spirit of imitation. Even if the Japanese is endowed with "the power of observation and the kindred capability of perception" they are not "the cause of soul-evolution" and the soul-evolution is just provided by the imagination (*à la* SPENCER) which is however the very characteristics the Japanese lacks. He wrote "If imagination be the impulse of which increase the individuality is the resulting motion, that quality should be minimum" in the Far East. I then wrote "Such theorems as the inferior impersonal languages or impassive vanishing savages are nowadays those disgusting ideas that have been abandoned by the post-modern cultural anthropology: Any of *pensées sauvages* bears fruit in addition to its showy blossoms. However we should keep in mind the possibility that such a detestable point of view must have been spread and engraved by this book in the minds of Westerners and kept even now implicitly"; *and so on*. .....

☆ ☆ ☆

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