

MARS

No. 357

25 April 2009

OBSERVATIONS

Published by the OAA Mars Section

Forthcoming 2009/2010 Mars (1)

Mars in 2009/2010 (2009/2010年の火星). I

Masatsugu MINAMI, Masami MURAKAMI and Akinori NISHITA

南 政 次(Mn)、村上 昌己(Mk)、西田 昭徳(Ns)

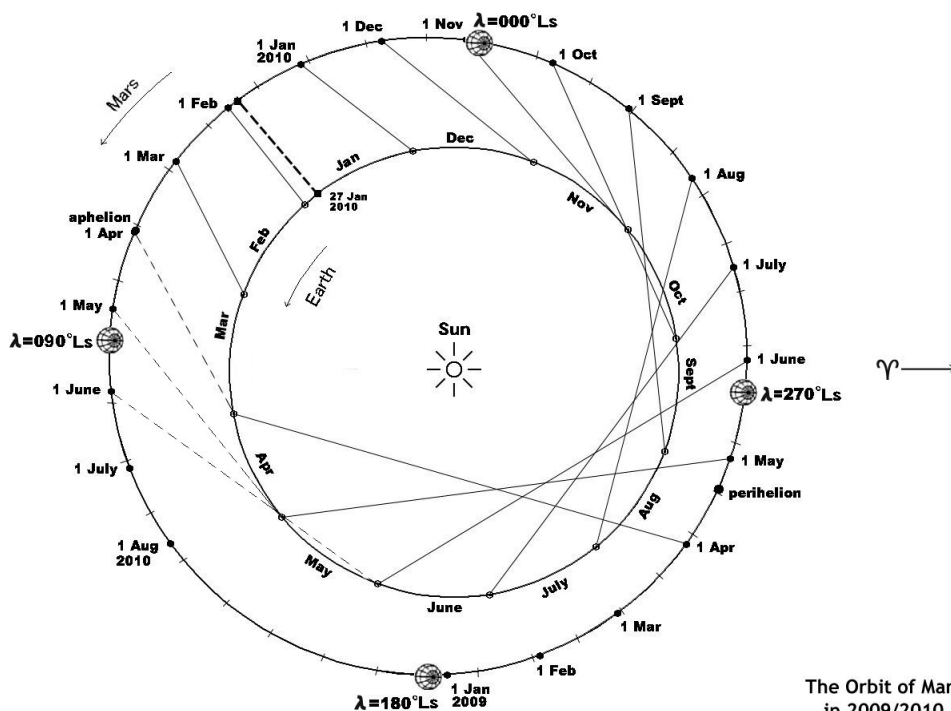
A. In March 2009, the planet Mars was not high enough yet in the morning skies, while it proceeded from Capricornus to Aquarius, and the apparent diameter was just $\delta=4.3''$ at the end of March. In mid-April, δ acquired $4.4''$ with the Martian season approaching $\lambda=250^\circ\text{Ls}$. At the beginning of May, $\delta=4.5''$ will be attained and in mid-May the season $\lambda=265^\circ\text{Ls}$ comes. Mars will be in Pisces, and the apparent declination just moves to the northern

hemisphere, though still the altitude is around 20° above the horizon when the Sun rises. Gradually it rises earlier, and on 10 July ($\lambda=300^\circ\text{Ls}$), the apparent diameter will exceed $\delta=5''$ in Taurus and will shine with Venus at the altitude of around 40° .

At the beginning of September ($\lambda=330^\circ\text{Ls}$), the planet comes up to Gemini, and the apparent declination will be maximal. The altitude will be around 60° at Sunrise. The Martian central latitude will face

to the north, and a large north polar hood (nph) will be visible.

The apparent diameter δ will exceed $\delta=7''$ in mid-October ($\lambda=355^\circ\text{Ls}$). Still it is in Gemini and so the condition is good for the northern observers to watch how the markings are different from the 2007/08 ones. On 29 October, the planet attains the western quadrature in Cancer. At the beginning of December, the



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The Orbit of Mars
in 2009/2010

angular diameter attains $\delta=10''$. On 22 December, the planet becomes stationary in Leo, and further approaches us towards the closest day on 27 January 2010 (GMT) when $\delta=14.1''$. It will be at opposition on 29 January 2010 (GMT).

At the end of 2009, the season is just $\lambda=031^\circ\text{Ls}$, and the angular diameter is $\delta=12.6''$.

The key in season, $\lambda=000^\circ\text{Ls}$, the northern spring equinox, will visit on 26 October 2009 when $\delta=7.6''$ and the central latitude $\phi=16^\circ\text{N}$.

On 1 November 2009 the planet passes through Præsepe, M44 in Cancer.

B. In the present apparition, the apparent diameter δ stays above 5 arc seconds during the period between the beginning of July 2009 ($\lambda=298^\circ\text{Ls}$) and the beginning of July 2010 ($\lambda=073^\circ\text{Ls}$), and hence in 2009 we can observe just one half of it and the other half-remainder in 2010. The central latitude ϕ faces towards north from mid-August 2009, and attains the maximal $\phi=19^\circ\text{N}$ at the beginning of December 2009 (around $\lambda=021^\circ\text{Ls}$). So we can appropriately watch the clearing of the npf and the appearance of the north polar cap (npc). Previously we experienced by halves a similar apparition in 1992/93 or in 1994/95. We next pick out several pressing points for observations.

First, we should watch the dusts which may arise deeply in the northern hemisphere. The so-called grand dust storms in the southern summer may arise just when the apparent diameter is small in this apparition, though we know the 1973 dust storm occurred later at $\lambda=300^\circ\text{Ls}$: Even then $\delta=5''$ in this apparition at the beginning of July 2009. In 1992, there was seen a dust near Ganges at $\lambda=334^\circ\text{Ls}$.

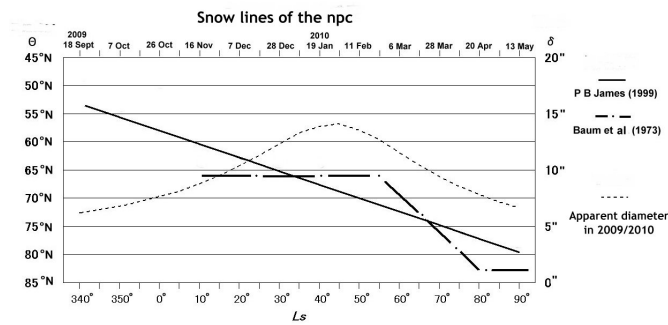
However it should be noticed, as the apparent diameter becomes fully large, that we should pay much attention to the northern dusts which will be conspicuous after around $\lambda=010^\circ\text{Ls}$ (around mid-November 2009). Especially the lowland of M Acidalium and the area of around Utopia must al-

ways be checked. In 2007/08, we met a bright dust at Utopia at $\lambda=021^\circ\text{Ls}$ (see CMO #348), and RMO-MARCI detected interesting dust disturbances at the bottom of M Acidalium at $\lambda=040^\circ\text{Ls}$ and $\lambda=052^\circ\text{Ls}$ and so on. The 1963 phenomenon that S Sabæus was cut into three pieces at $\lambda=045^\circ\text{Ls}$ must also possibly have been because of the dust which originated from the northern hemisphere.

Secondly, this is the season when we can watch the npf and the npc quite in a good condition: By around $\lambda=340^\circ\text{Ls}$ (around 16 September) the npf is active, and afterward some part will be slightly weaker and the so-called *Dawes Slit* may appear at the area of M Acidalium. From Japan M Acidalium will face to us at the beginning of October 2009 ($\lambda=345^\circ\text{Ls}$, $\delta=7''$) and at the beginning of November 2009 ($\lambda=005^\circ\text{Ls}$, $\delta=8''$). A faint dark line at the area of Vastitas Borealis to the south-west of Elysium was caught in 1992 at $\lambda=000^\circ\text{Ls}$, and so the period between mid-October ($\lambda=355^\circ\text{Ls}$, $\delta=7''$) and mid-November ($\lambda=012^\circ\text{Ls}$, $\delta=9''$) must be a chance, though the apparent diameter is not enough yet.

To distinguish the npc from npf will be not so easy and indefinite for some time. At around the northern spring equinox $\lambda=000^\circ\text{Ls}$, a bright morning cloud at M Acidalium will be checked whereas the daytime one may be weaker. The clearing up of the npf is expected around $\lambda=015^\circ\text{Ls}$ and this apparition the period corresponds to the end of November 2009. Conversely speaking, this apparition we may be able to watch the initial state of the npc in a better condition; apparent diameter δ will exceed 10 arc seconds, and the tilt of the north pole is towards us. As said, at the end of November the central latitude will be $\phi=19^\circ\text{N}$. We should say this is the best opportunity we have once for 15 years.

For the sake of reference, we here show a graph in which the two kinds of regression curves of the npc to be anticipated (compared with the growth of δ). One is a straight line recession and the other is a zigzagged graph: The straight line recession was issued by P B JAMES and B A CANTOR based on



MGS's observation in 1999, and it lies on the line

$$\Theta = 58.0 + 0.24\lambda$$

where $(\Theta)^\circ\text{N}$ is the latitude of the snow line, and is related linearly with the season $(\lambda)^\circ\text{Ls}$.

The other graph is due to W A BAUM *et al* based on the average data of the Lowell Observatory from 1905 (first published in 1969, but added some further data in 1973), in which the recession of the npc stands still during the period between $\lambda=010^\circ\text{Ls}$ and $\lambda=060^\circ\text{Ls}$ (Baum's plateaux). It is believed that the difference could occur depending on the dust activity in the foregoing season. In this apparition, the period of Baum's plateaux should be visible when δ is appropriately large and hence it is a good opportunity to distinguish the two. The tilt ϕ becomes also convenient for the observation.

Thirdly, we should mention about the orographic and roll cloud activity of Montes after $\lambda=000^\circ\text{Ls}$ (at the end of October 2009). After the spring equinox, the water vapour emitted from the npc (now thawing) immigrates to the south. If this air, abundant of the water vapour, hits the higher mountains, it will cause the orographic clouds if the mountains move to the afternoon side. The mountains include Alba Mons, Elysium Mons, Olympus Mons and Tharsis Montes. Since their latitudes Φ are different, the activity periods are different. Basically from around $\lambda=350^\circ\text{Ls}$, a weak mist is seen at the summits, and thicker from around $\lambda=025^\circ\text{Ls}$. It will be much prominent from around $\lambda=060^\circ\text{Ls}$, the period being attained around March 2010. In February 1993, a vast cloud activity in Elysium (Morita Phenomenon) was observed at $\lambda=039^\circ\text{Ls}$, and hence the morning side must also be paid much attention.

Alba Mons (including Alba Patera, $\Phi=40^\circ\text{N}$, $\Omega=110^\circ\text{W}$) will be active from $\lambda=355^\circ\text{Ls}$ (mid-October), and in 2008 also a bright spot was isolated from the light area following Tempe at around $\lambda=010^\circ\text{Ls}$. The highest period will visit around $\lambda=050^\circ\text{Ls}$: At the end of January of 1993 it was clearly observed bright from Japan. The activity lasts until $\lambda=070^\circ\text{Ls}$ and makes a second peak at around $\lambda=130^\circ\text{Ls}$.

Note also that when the planet is near at opposition, the defect illumination vanishing, the summits of Montes, like Olympus, Elysium *etc* shine brilliantly due to the opposition effect. It must be distinguished from the roll clouds. Every observer should be attentive at around the end of January 2010 (mostly in the US?).

Fourth, we should always be careful to the behaviour of the southern hemisphere: In the southern hemisphere, after $\lambda=270^\circ\text{Ls}$, the water vapour shows up at the higher latitudes and after around $\lambda=320^\circ\text{Ls}$ (mid-August in 2009) a morning mist may be watched thick at the morning limb. In 2008, from around $\lambda=000^\circ\text{Ls}$ a morning cloud zone was observed to expand from the morning to the noon at the latitude of 50°S . In 2008, a tick cloud was detected at Argyre at $\lambda=015^\circ\text{Ls}$ (26 November in 2009) and chased until around $\lambda=045^\circ\text{Ls}$. Argyre was also caught bright in 1993.

Hellas is an important object to observe. It will begin slightly active from around $\lambda=340^\circ\text{Ls}$: It will be seen further bright covered by the evening cloud from $\lambda=010^\circ\text{Ls}$. It is important to chase the difference of appearances in the morning and the evening side. In 1990, at the western side of Hellas a bar-like bright matter was observed stretched from north to south from around $\lambda=315^\circ\text{Ls}$, and it is necessary in this apparition also to watch whether this phenomenon will occur or not. In the preceding apparition, this phenomenon was not observed due to the foregoing big dust disturbance. Hellas will be very white just like a part of the spc from around $\lambda=090^\circ\text{Ls}$ but the season may quite be outside of

this apparition.

The water vapour also gives an effect from around $\lambda=000^\circ\text{Ls}$ to the higher latitude dark markings such as those like Depr Hellesponticæ and M Chronium. In December 1992, the morning side of Ausonia Australis was temporary bright at $\lambda=018^\circ\text{Ls}$.

Fifth, last but not the least, we mention about the activity of the mist along the equatorial band to be watched in the latter part of this season. A precursory phenomenon will be checked also in 2009. From around the spring equinox, the Sunset does not occur at around the north pole: Because the Martian air is thin, the temperature at the polar region will become higher than that at the area of

the equatorial region. The warmed up moist air easily ascends and is so sent to the direction of the equatorial zone where the air mass containing the water vapour is accumulated because of the halt of the Coriolis force and makes an Equatorial Band Mist (ebm) along the equatorial zone. It will be most evident from $\lambda=070^\circ\text{Ls}$ to 140°Ls , and so this may be the phenomenon which will be frequently observed in the next apparition. As the season will approach the northern fall equinox ($\lambda=180^\circ\text{Ls}$), it will vanish because the equatorial zone will be well warmed up.

C. We will publish a sequel in a coming issue (maybe in the autumn of this year).

Forthcoming 2009/2010 Mars (2)

Ephemeris for the Observations of the 2009/2010 Mars. I

May 2009

Masami MURAKAMI 村上 昌己 (Mk)

THE 2009/2010 apparition of Mars is now at hand, and we now begin the customary listing of the necessary elements of the Ephemeris for the physical observation of Mars from 1 May 2009: This is the first of the series. The data are listed for every day at 00:00 GMT (not TDT). ω and ϕ denote the longitude and latitude of the sub-Earth point respectively. The symbols λ , δ and ι stand for the areocentric longitude of the Sun, the appar-

ent diameter and the phase angle respectively. we also add the column of the Position Angle Π of the axis rotation, measured eastwards from the north point: This is useful to determine the north pole direction from the $p \leftarrow$. The apparent declination of the planet is also given at the final column. The data here are basically based on *The Astronomical Almanac for the Year 2009*.

Date (00:00GMT)	ω	ϕ	λ	δ	ι	Π	D
01 May 2009	131.34°W	25.1°S	257.10°Ls	4.47"	24.2°	-29.9°	+01°33'
02 May 2009	121.40°W	25.0°S	257.74°Ls	4.48"	24.4°	-30.2°	+01°52'
03 May 2009	111.45°W	24.9°S	258.37°Ls	4.49"	24.5°	-30.6°	+02°10'
04 May 2009	101.51°W	24.8°S	259.01°Ls	4.49"	24.7°	-30.9°	+02°28'
05 May 2009	091.57°W	24.7°S	259.64°Ls	4.50"	24.8°	-31.2°	+02°47'
06 May 2009	081.64°W	24.6°S	260.27°Ls	4.51"	24.9°	-31.5°	+03°05'
07 May 2009	071.70°W	24.5°S	260.91°Ls	4.52"	25.1°	-31.8°	+03°23'
08 May 2009	061.77°W	24.3°S	261.54°Ls	4.52"	25.2°	-32.1°	+03°41'
09 May 2009	051.84°W	24.2°S	262.17°Ls	4.53"	25.3°	-32.4°	+03°59'
10 May 2009	041.91°W	24.1°S	262.80°Ls	4.54"	25.4°	-32.7°	+04°18'
11 May 2009	031.99°W	24.0°S	263.44°Ls	4.54"	25.6°	-33.0°	+04°36'
12 May 2009	022.06°W	23.8°S	264.07°Ls	4.55"	25.7°	-33.2°	+04°54'
13 May 2009	012.14°W	23.7°S	264.70°Ls	4.55"	25.8°	-33.5°	+05°12'
14 May 2009	002.22°W	23.6°S	265.33°Ls	4.56"	26.0°	-33.8°	+05°29'
15 May 2009	352.31°W	23.4°S	265.96°Ls	4.57"	26.1°	-34.0°	+05°47'
16 May 2009	342.40°W	23.3°S	266.59°Ls	4.57"	26.3°	-34.3°	+06°05'
17 May 2009	332.48°W	23.1°S	267.22°Ls	4.58"	26.4°	-34.5°	+06°23'
18 May 2009	322.58°W	22.9°S	267.85°Ls	4.58"	26.5°	-34.7°	+06°40'
19 May 2009	312.67°W	22.8°S	268.48°Ls	4.59"	26.7°	-35.0°	+06°58'
20 May 2009	302.77°W	22.6°S	269.11°Ls	4.59"	26.8°	-35.2°	+07°15'

Date (00:00GMT)	ω	ϕ	λ	δ	ι	Π	D
21 May 2009	292.87°W	22.4°S	269.74°Ls	4.59"	26.9°	-35.4°	+07°32'
22 May 2009	282.97°W	22.3°S	270.37°Ls	4.60"	27.0°	-35.6°	+07°50'
23 May 2009	273.08°W	22.1°S	271.00°Ls	4.62"	27.2°	-35.8°	+08°07'
24 May 2009	263.18°W	21.9°S	271.62°Ls	4.63"	27.3°	-36.0°	+08°24'
25 May 2009	253.30°W	21.7°S	272.25°Ls	4.64"	27.4°	-36.2°	+08°41'
26 May 2009	243.41°W	21.5°S	272.88°Ls	4.65"	27.5°	-36.3°	+08°57'
27 May 2009	233.53°W	21.3°S	273.51°Ls	4.66"	27.7°	-36.5°	+09°14'
28 May 2009	223.65°W	21.1°S	274.13°Ls	4.66"	27.8°	-36.7°	+09°31'
29 May 2009	213.77°W	21.0°S	274.76°Ls	4.67"	27.9°	-36.8°	+09°47'
30 May 2009	203.90°W	20.7°S	275.39°Ls	4.68"	28.0°	-37.0°	+10°04'
31 May 2009	194.03°W	20.5°S	276.01°Ls	4.69"	28.2°	-37.1°	+10°20'
01 June 2009	184.16°W	20.3°S	276.64°Ls	4.69"	28.3°	-37.3°	+10°36'
02 June 2009	174.29°W	20.1°S	277.26°Ls	4.70"	28.4°	-37.4°	+10°52'
03 June 2009	164.43°W	19.9°S	277.88°Ls	4.70"	28.5°	-37.5°	+11°08'

07/08 CMO Note (12)

Deformation of the Ætheria Dark Patch

アエテリア暗斑の變形

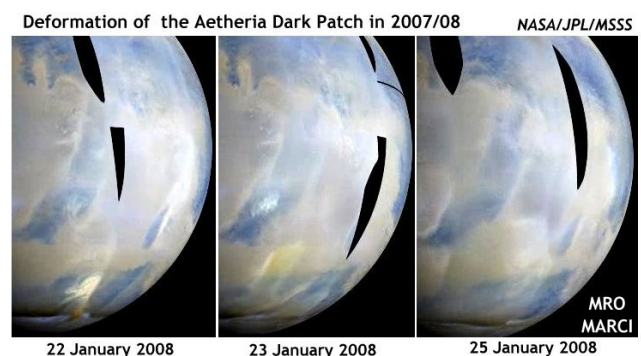
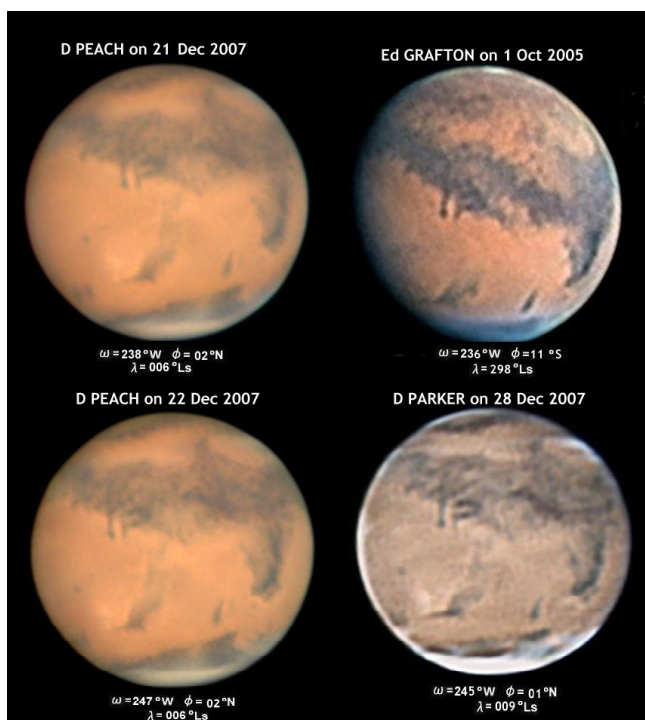
As the disk diameter of the planet grew in 2007, the area of the Ætheria dark patch appeared different than before, and the extension of the dark area towards south was counted as one of the most conspicuous deformations of the dark markings in 2007 after the global dust storm. As to this we reported in CMO #337 at p0747 and in #339 at p0793. Here we compare an image of Damian PEACH (*DPc*) on

21/22 December 2007 ($\lambda=006^\circ\text{Ls}$) at $\omega=238^\circ\text{W}$ with an image by Ed GRAFTON (*EGf*) produced in 2005 at $\omega=236^\circ\text{W}$ on 1 October 2005 ($\lambda=298^\circ\text{Ls}$). We also associate *DPc*'s image on 22 December 2007 ($\lambda=006^\circ\text{Ls}$) at $\omega=247^\circ\text{W}$ and Don PARKER (*DPk*)'s image on 28 December 2007 ($\lambda=009^\circ\text{Ls}$) at $\omega=245^\circ\text{W}$.

Apparently a new feature is visible to the south of the Ætheria dark patch in 2007 notwithstanding that the dark markings are generally fainter in 2007 because of the devastation caused by the preceding dust fallout. We should further note that to the west of the portion of the new broad canal there looked to appear another shadowy area. Here so we compare it with the images made by the MRO-MARCI by clipping some images from the animation series from 21 January 2008 to 27 January 2008: http://www.msss.com/msss_images/2008/01/30/

http://www.msss.com/msss_images/2008/01/30/map_movie_012108_012708.mov

Especially the image on 25 January 2008 shows a certain detail. The shadowy area makes rather a



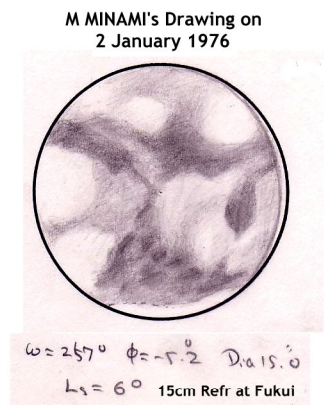
triangular shape. We tentatively note that the image on 22 January 2008 shows a bright dust at the northern hemisphere at Utopia, as to which we

once reported in Note (2) of CMO #348 at p0945 based on the terrestrial observations (we picked out the observations by GERSTHEIMER (RGh), FERNANDEZ-GOMEZ (FFn), DUPONT (XDp), ADELAAR (JAd), and BOSMAN (RBs) on the day). On the following 23 Jan 2008, there is seen a small resonant dust inside the Ætheria dark patch. On the day Pepe GOMEZ (PGm) took an image but the resolution power was in short. The three images on 22 January and 23 January as well as 25 January well show that the dust originated from the deep northern district also causes a resonant dust whereas they were not so effective to the dark deformation brought about by the preceding great dust storm.

The Ætheria dark patch has been since 1975, and the present feature is reminiscence of the dark aspect in 1975. Here we show a drawing by the present writer (Mn) on 2 January 1976 ($\lambda=006^\circ\text{Ls}$) at $\omega=257^\circ\text{W}$ for reference. As the darkening of Dædaria in the Viking era was seen again in 2007 (see CMO #338 p0769), the place also has potentially a darkening ability. On the other hand, it is a long time since such conspicuous dark makings as Nodus Laocoontis and Thoth-Nepenthes vanished.

(NB) The name of the Ætheria Dark Patch was originated from the fact that the Ætheria district was quite darkish in 1975 (perhaps because of the dust disturbance in 1973). This shadowy area became afterward largely faint except for the eastern corner which was hence sometimes called simply the Hyblæus extension. (Mn)

2007年の大黃雲の後に現出した暗色模様の變化の中で顕著なものの一つにアエテリアの暗斑から南に延びる太い運河状の模様がある。これについてはCMO#337p0751(英文ではp0747)、#339p0795(英文ではp0793)等で述べてある。ここではグラ



フトン (EGf)氏の2005年の $\omega=236^\circ\text{W}$ の画像(1Oct2005 ($\lambda=298^\circ\text{Ls}$))とピーチ (DPc)氏の21/22Dec2007($\lambda=006^\circ\text{Ls}$) $\omega=238^\circ\text{W}$ を比較し、更に2007年の画像を代表してDPc氏の同じく22Dec2007($\lambda=006^\circ\text{Ls}$) $\omega=247^\circ\text{W}$ の画像とパーカー (DPk)氏の28Dec2007($\lambda=009^\circ\text{Ls}$) $\omega=245^\circ\text{W}$ の画像を並べて載せる。明らかに2005年の画像とは違っており、2007年には全體が薄くなっているのに、元の西端部から南に新しく暗色帯が延びている。実際には更に西側にも淡い暗部が出ている様である。これをMRO-MARCIの21Jan2008から27Jan2008迄のアニメーション画像から切り抜いたものを比較してみる(夫々英文の部参照)。

http://www.msss.com/msss_images/2008/01/30/

この中で特に25Jan2008の画像を見ると、可成り詳細が判る。西側への張り出しも分かる。尚、22Jan2008の画像は、CMO#348のNote(2)p0945で採り上げたウトピアの黄塵を顕している(ここではゲルシュトハイマー(RGh)、フェルナンデス=ゴメス(FFn)、デュボン(XDp)、アデラル(JAd)、ボスマン(RBs)氏の当日の画像を挙げた)。23Jan2008にはアエテリア暗斑の中に飛び火(共鳴黄塵)が起こっているようだが、この日は、ペペ・ゴメス(PGm)氏の画像しか無く、解像力が足りなかった。22Jan2008と23Jan2008、25Jan2008の画像の比較では、北極域起源の黄塵も共鳴黄塵として傳播することを示すと同時に、大黃雲に依って齎された暗色模様にも然程影響を齎さないことを示している

尚、アエテリアの暗斑は1975年以來だが、當時の様子に今回の暗色化は幾らか先祖歸りしていると思う。2Jan1976($\lambda=006^\circ\text{Ls}$) $\omega=257^\circ\text{W}$ の筆者(Mn)のスケッチを参考のために挙げておく。ヴァイキング時代のダエダリアの暗斑が2007年に再び見られたように(CMO#338p0769参照)潜在的に濃化する素地があるのかもしれない。もともとノドゥス・ラオコーンティスやトト・ネペンテスの勇姿は絶えて久しく復活しないが。

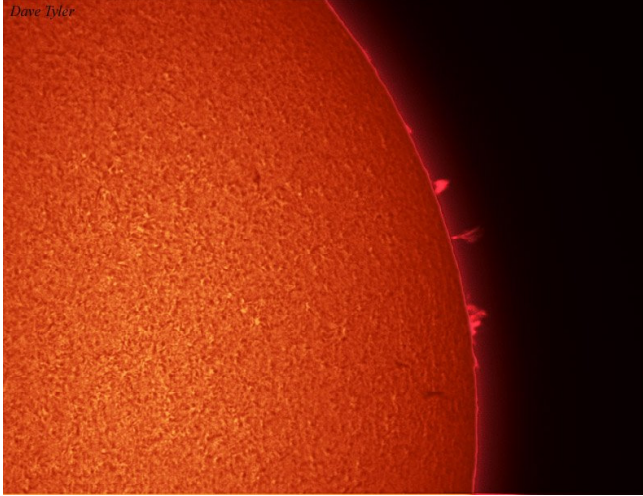
(註) アエテリアの暗斑という名稱は、(多分1973年の大黃雲に依って)1975年にアエテリア地方に大きな暗斑が出たことに據る。これがその後東端隅を残して他は淡化してしまい、まるでエリュシウムの外壁の様に見えて居た爲に、ヒュブラエウス延長と言われたに過ぎない。 (Mn)

便り

Letters to the Editor

●.....**Subject: Solar Images 20th March**
Received: Tue 24 Mar 2009 00:37:08 JST

Hi Guys, Following in the tracks of Pete's and Nick's fine images from the same day, here are a few more to wonder at. By "wonder", I mean I wonder when the sun is going to chuck up something a little bigger?! The two wide field images were from an Smax 60 DS scope with a 2.5x powermate. The higher mag shot was from a Daystar 6A ATM on an 80mm TMB and 4x Powermate.



○.....**Subject: solar images 24th March 2009**
Received: Thu 26 Mar 2009 05:45:53 JST

Hi Guys, Here are a few solar images from the 24th. A small active region keeps us company. The proms were small so I increased the mag to a 5x powermate on the S'Maxscope 60DS. The wide field shot was with a 2.5x powermate. The scope does not use a standard s'max Diagonal mirror, but a 2inch straight through blocking filter in a home made 2inch into 1.25 adaptor.

○.....**Subject: Saturn 26th March 2009**
Received: Sat 28 Mar 2009 19:18:20 JST

Hi Guys, Bright clear skies demanded a Saturn imaging session even though seeing was only about 4. The only features I note, are the subtle white belts in the north and south parts of the EZ, as commented on by Chris Go, and the ring on globe shadow, that has increased in width as the declination of the Earth (apparent ring tilt) has increased by 10% over the past 6 days. Accepting the seeing plays a part in the accuracy of the presentation.

○.....**Subject: Saturn EZ Spot 27th March 09**
Received: Wed 01 Apr 2009 02:25:54 JST

Hi Guys, A nice clear night but with soft seeing, at least enabled the current NEZ storm to be logged on some of the red images. Best wishes.

○.....**Subject: solar images 29 March**
Received: Thu 02 Apr 2009 00:25:36 JST

Hi Guys, Here are a couple of image of the current Active Region, along with quite a few filaments. Images taken through 60mm Double stacked Solarmax scope, with 2.5 and 4x powermates into a straight through

blocking filter. Best wishes.

○.....**Subject: Re: Invitation to the IWCMO**
Received: Thu 02 Apr 2009 06:48:03 JST

Hi Guys, You honour me with your invitation but sadly I will not be attending, I have many health complications at the moment and for some time to come. I am fine with my family around me and the security of my own home. I will however be active again imaging Mars this coming apparition. I am looking forward to that.

Best wishes and I wish you and you colleagues good luck with the meeting and workshop, I hope it is a great success.

○.....**Subject: Saturn images 29 March 2009**
Received: Thu 02 Apr 2009 17:44:21 JST

Hi Guys, Another night of reasonable seeing, revealing quite a few of the current features in Saturn's atmosphere. C14 2x TV Barlow stretched by ATK filter block and drawers. Trutek filters, Skynyx 2.0. Best wishes

○.....**Subject: Solar images 30 March**
Received: Sat 04 Apr 2009 02:29:59 JST

Hi Guys, Here are a few solar features imaged on the 30th March. There always seems to be something of interest going on up there, even with this extended solar minimum. Best wishes



○.....**Subject: Solar images 1st April**
Received: Wed 15 Apr 2009 05:54:38 JST

Hi Guys, Here are a few images from the 1st Apr. I have bit of a back log of solar processing, as the Moon was a particularly good Spring first quarter here in UK.

○.....**Subject: Saturn 13-April -2009**
Received: Thu 16 Apr 2009 17:04:41 JST

Hi Guys, Here is a Saturn image from the 13th taken in reasonable seeing. I was lucky to catch Rhea's shadow before it of went off the disc. Best wishes

Dave TYLER (テヴァイト・タイラー Bkh 英)

●.....**Subject: Saturn 2009.03.15 with spot**
Received: Wed 25 Mar 2009 21:31:58 JST

Dears, Here are images under average seeing, showing nonetheless the big north equatorial spot visible since a few weeks (drift rate around -32° LIII/day):

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=03&d=15>
 An animation shows it clearly:

http://astrosurf.com/delcroix/videos/saturne_20090315_rir_anim.gif

○.....**Subject: Saturn 2009.03.16**
Received: Sat 28 Mar 2009 17:36:16 JST

Dears, Under average conditions, without any spot visible:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=3&d=16>

In R+IR, with from left to right Dione, Tethys just above the rings and Enceladus which brightness has been enhanced:

http://astrosurf.com/delcroix/images/saturne_20090316_2200_4434_ondx2_1_3_1-5_9_9_1_lev.jpg

Lastly, a composite image showing from left to right Rhea, Enceladus, Saturn/Tethys, Dione, Iapetus, a star, Titan, Hyperion and another star:

http://astrosurf.com/delcroix/images/saturne_20090316_sat_80_100_ond_3_6_3_lev.jpg

Clear & steady skies,

○.....**Subject: Saturn & spot 2009.03.18**
Received: Mon 30 Mar 2009 17:01:02 JST

Dears, Under average seeing, Saturn with its bright North equatorial spot which seems to spread in both longitude and latitude these last weeks, and which drift rate seems to slow down a bit:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=3&d=18>

A composite image showing the 8 satellites visible easily by amateurs:

http://astrosurf.com/delcroix/images/saturne_20090318_sat_80_100_ond_3_6_3_lev3.jpg

From left to right Mimas, Saturn, Tethys, Enceladus, Dione, Rhea, Titan, Iapetus and weak Hyperion.

○.....**Subject: Saturn du 2009.03.19 and 2009.03.21 with EZn spot**
Received: Thu 02 Apr 2009 07:01:03 JST

Dears, Under bad conditions on March 19th:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=3&d=19>

Slightly "less worse" conditions on March 21st, allowing me to catch the EZn spot still visible after weeks:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=3&d=21>

I wish you better skies,

○.....**Subject: Saturn 2009.03.23**
Received: Sat 18 Apr 2009 22:17:47 JST

Dears, Under unfair seeing, nothing special to note on these images:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=3&d=23>

○.....**Subject: Saturn 2009.03.27**
Received: Sun 19 Apr 2009 21:52:58 JST

Hello all, Between clouds, the result of one single short film, without any details:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=4&d=18>

○.....**Subject: Saturne, dark spot, Dione and Rhea 2009.04.18**
Received: Tue 21 Apr 2009 07:01:01 JST

Hello all, Under correct conditions, here is Saturn with the dark spot north of SEBn which have been observed since beginning of this year:

<http://astrosurf.com/delcroix/images/planches/se.php?y=2009&m=4&d=18>

One might doubt about the spot, but i knew the conditions where correct enough to see details, identified something suspect with an animation, measured this subtle dark elongation, and confirmed afterwards its longitude fits perfectly the drift rate line i calculated from your previous images of this spot. I worked on measuring this spot on earlier images today, and suspect it might have developed a kind of double spot/horizontal 8 shape now. Additionnally, two R+IR and RGB composite images showing better Dione (close to the ring) and Rhea with Saturn:

http://astrosurf.com/delcroix/images/saturne_20090418_rir_sat_2200_4441_ondx2_1_3_1-5_9_13_1_lev.jpg

http://astrosurf.com/delcroix/images/saturne_20090418_rgb_sat.jpg

Clear skies,

Marc DELCROIX (マルク・テールクロアTournefeuille法)

●.....**Subject: Mars AkM090323 AkM090324**
Received: Thu 26 Mar 2009 17:20:45 JST

こんばんわ、セブでは本格的な暑い季節になり、

雨が降らなくなりました。天気は良く、夜は星が毎晩見えています。朝方、木星を見えています、先日、ためしに火星を見ました。眼視では大気差の影響で何も見えないくらいぼやけていましたが、画像を得ましたので添付します。南極冠が明るい、後は分からない状態でした。

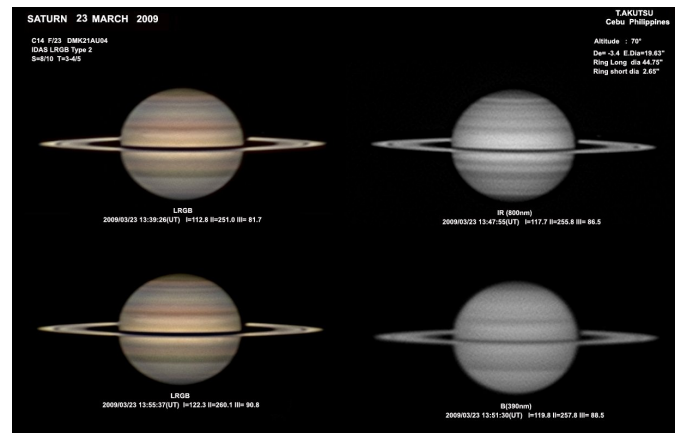
<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2009/090323/Ak23Mar09.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2009/090324/Ak24Mar09.jpg>

風景画像も添付します。

4月5日~12日、日本へ帰国します。桜が見られるのを楽しみにしています。

○.....**Subject: Jupiter & Saturn J090323 J090324 & S090323**
Received: Thu 26 Mar 2009 17:44:21 JST



こんばんわ セブでは乾期の天気になり、連日星が見えています。気流も良く、高く上る土星は良く、見えています。明け方の木星は、まだぱつとしません。

○.....**Subject: Jupiter J090326**
Received: Fri 27 Mar 2009 17:48:13 JST

こんばんわ、今朝の木星です。フアファの気流でしたが、BAは見えていました。

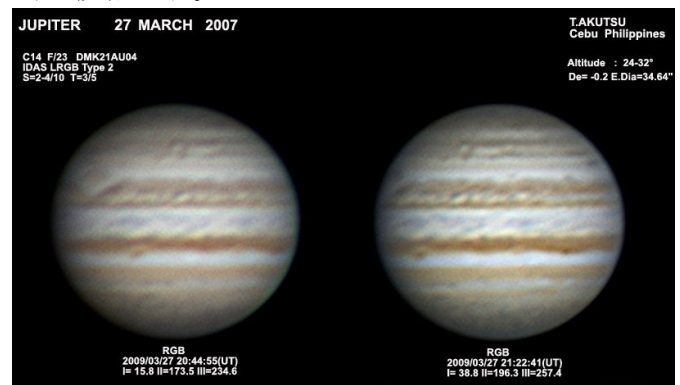
○.....**Subject: Mars AkM090327**
Received: Sat 28 Mar 2009 13:35:04 JST

こんにち、日本では土曜日はほとんど休みが普通なのにセブでは毎週出勤で疲れます。さて今朝、木星撮像の間、火星を撮って見ました。気流は悪いのですが、幾分改善しています。

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2009/090327/Ak27Mar09.jpg>

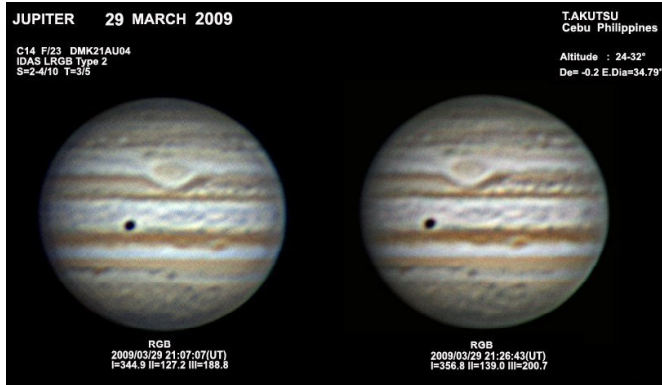
○.....**Subject: Jupiter J090327**
Received: Sat 28 Mar 2009 15:56:56 JST

今朝の木星です。気流は悪いが、何とか像にはなっています。GRS後方の様子が分かります、白雲が複雑です。



○.....**Subject: Jupiter J090329**

Received: Mon 30 Mar 2009 18:01:34 JST



今朝の木星です。気流は良くてS=3~4/10。ただ、透明度は最高に良かった。GRSは回りに白雲があり、濃度が無く、淡くなった。

○.....Subject: Saturn, Titan & its shadow S090328
Received: Mon 30 Mar 2009 19:09:18 JST

タイタンとその影の本体通過があり、最悪の条件で一画像が運良く撮れました。

○.....Subject: Mars AkM090328 AkM090329
Received: Tue 31 Mar 2009 14:35:24 JST

南様、その後の火星画像を添付します。15度以下の低空ではこんな画像しか得られません。

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2009/090328/Ak28Mar09.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2009/090329/Ak29Mar09.jpg>

○.....Subject: Jupiter J090331
Received: Wed 01 Apr 2009 21:30:39 JST

木星画像です。

○.....Subject: Jupiter J090401 J090402
Received: Fri 03 Apr 2009 18:37:05 JST

明け方、曇る前の短い時間帯での撮像です。BAは輝度が無い。

○.....Subject: Re: 火星は如何でしたか
Received: Sat 04 Apr 2009 08:09:24 JST

おはようございます。今朝は、雨が降り、見えませんでした。ここ三日間は朝、雨のパターンです。明日の朝のフライトが7:40ですがぎりぎり時間が取れる？(本当はしんどい時間帯)晴れれば火星を撮り、日本へ戻ります。

○.....Subject: Returned home
Received: Mon 06 Apr 2009 01:15:53 JST

南様、5日朝、4時ごろ起きてみましたが、雲があり、火星は駄目でした。5日夜、烏山に戻りました。やはり、日本に戻るとホットします。火星の印刷物もちゃんと届いて、受け取りました。

12日には、セブに戻ります。その間は半分、出勤しますが、一寸おいしいものと桜見を楽しみたいと願っています。

○.....Subject: 退院 良かったですね。
Received: Sun 19 Apr 2009 21:55:27 JST

南様、退院された由先ずは良かったですね。詳しい状況は分かりませんが、兎に角、大事にして下さい。私は12日、セブに戻りました。今回、本社長と一緒にしたので先週の夜は星が見られずにいました。社長は先週末には戻りましたので、今後は観測はできます。今朝は曇りで見えませんでした。ではまた。

○.....Subject: Jupiter J090419
Received: Mon 20 Apr 2009 20:13:58 JST

木星画像です。今回からDFKのカラータイプで

撮りはじめました。イメージが悪くはないのですが、色が変わります。

阿久津 富夫(Tomio AKUTSU セブThe Philippines)

●.....Subject: solar tsunami
Received: Mon 30 Mar 2009 07:30:50 JST

Howdy solar pardners, I had a chance this weekend to capture some nice prominences on the edge of the sun:

http://www.avertedimagination.com/img_pages/tsunami_prom_20090328.html

These were captured with Little Big Man (Coronado 90 riding bareback atop the A-P f5 Stowaway.)

sunny skies and best wishes,

○.....Subject: Re: Invitation to the IWCMA
Sent: Thur 02 April 2009 02:14:16 JST

Dear Masami, Thanks so much for your message about this conference. It sounds great. I can't confirm yet my ability to travel to Paris in September, but I will take a good look at it and see if it is possible.

clear skies and best wishes,

Alan FRIEDMAN (アラン・フリードマン Buffalo NY美)

●.....Subject: Re: Need of invitation
Received: Mon 30 Mar 2009 08:36:55 JST

Dear Masatsugu, I have just received your splendid article on the 2001 dust storms, which I cherish as a major contribution to the science of Mars. I am especially fond of this paper as it was in 2001 that--thanks to Internet--we observers in the Western Hemisphere were first able to establish instantaneous contact with you in the Eastern Hemisphere, and monitor Mars in real time 24 hrs./day.

Following is a slightly revised version of the invitation, as you requested. I have only changed the English to make it more idiomatic. Your English is extremely good and continually amazes me. All the best,

○.....Subject: Daltonism and the canals of Mars
Received: Wed 22 Apr 2009 02:03:00 JST

Dear fellow Martians, I've recently written, as you know, about the perception of color on Mars. The Martian palette is very stimulating to the red-green photoreceptors, hence to an individual with normal color vision the planet appears an evocative mirage of ochers and blue-greens. For a long time I've suspected, based on my experience observing planets with large apertures of 1 meter or more that the main advantage of large apertures is not resolution per se enhanced brilliance of the image and the corresponding ability to realize subtle colors on a planetary surface.

I've also long suspected that the Schiaparellian canal system on Mars was at least partly a result of the Italian astronomer's visual idiosyncrasies—in particular, the fact that he suffered from red-green color blindness (or insensitivity as it is now euphemistically known), and a tendency to represent color differences as hard sharp boundaries between areas of halftone—but only yesterday did I have a chance to directly test that surmise.

Professionally, I have been doing functional brain

imaging work for the past several years—this involves looking at perfusion to the brain on the basis of an arbitrary false-color scale with decreasing per-

fusion represented on a white to red to yellow to green to blue basis. Yesterday I was interpreting the results of a scan to a young fellow with Asperger's

TEN YEARS AGO (164)

---CMO#215(10 Apr) & #216(25 Apr 1999) pp2455-2494---

CMO#215には、三月後半の観測報告(#08)として纏められている。報告者は17名だった。この期間に四月末の最接近を控えて火星は「おとめ座」を逆行していた。 δ は13.8"まで大きくなり、季節 λ も118°Lsまで進んだ。北極方向への傾きも増してきて16°Nとなった。日本各地では天候が思わしくなく観測は奮わなかったが、赤道帯の朝夕の霧、シュルチス・マイヨルの出現、マレ・アキダリウム周辺の様子が見えられた。外国からの報告では、山岳雲の描写などがある。CMO#216には四月前半の観測報告(#09)があり、報告者は18名だった。観測時間も延びて日本・アメリカ・ヨーロッパと観測が、ほぼ繋がるようになってきた。この期間の観測として、南端のタウマシアあたりにかかる雲が、アメリカ・日本での観測で見えられている。オリュムプス・モンズ、アスクラエウス・モンズなど高地の午後に白雲のかかる様子、赤道帯の朝夕の霧、縮小が進んだ北極冠周辺の様子も各地域で観測されている。この期間末には、 δ は15.5"に達した。 λ は125°Lsで北半球の大暑を過ぎた。北極方向への傾きも17°Nとなった。CMO#215には、1996/97 Mars Sketch (16) "Askraeus Cloud & Askraeus Lacus" 「アスクラエウス雲?とアスクラエウス・ラクス」と題し、現在の観測で得られる観測結果に古典的火星図地名を用いるときに、CMOが使用する指標を示した。またCMO#216には、Coming 1998/99 Mars (9)として、"Disks Displaying the Relative Size and Phase in 1998/1999. II" A NISHITA が掲載された。

<http://www.hida.kyoto-u.ac.jp/~cmo/cmo/coming/9909/09.html>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmo/coming/9909/09j.html>

LtEは WHITBY(USA), 頼 (Taiwan), D. PARKER(USA), HERNANDEZ(USA), PEACH (UK), BIVER (Hawaii), MELILLO(USA), SCHMUDE(USA), HEATH(UK), FALSARELLA(Brasil), WARELL(Sweden), NIKOLAI(Germany), SIEGEL (Denmark), GRAY(UK) の外国の各氏から、国内からは、松本達二郎(兵庫)、比嘉保信(沖縄)、佐藤健(広島)、日岐敏明(長野)、森田行雄(広島)、岩崎徹(福岡)、伊舎堂弘(沖縄)、常間地ひとみ(神奈川)、熊森照明(大阪)、阿久津富夫(栃木)、木村精二(東京)の各氏から寄せられている。CMO#215には、PARKER・HERNANDEZ(ChR)両氏から31Mar1999にChR氏がワッレス・マリネリス東方に観測したDustCloudに関してのメールが、CMO#216には、NIKOLAI(ANk)氏から、使用しているWFSの15cm ZEISS refractorのことやフィルターワークに関しての質問への回答がANk氏の写真入りで掲載されている。他に筆者(Mk)の通信が、「藤沢便り」としてCMO#215に纏めて採り上げられている。

TYA(44)は、CMO#071(25Apr1989)からで、20年前の火星は「おうし座」にあり、夕方の西空に順行を続けていた。1989年四月中旬迄の観測報告があり、この期間は天候が良くなくなり、視直径が5秒角台迄小さくなったものの、5名からの観測報告が寄せられている。期間末には $\delta=4.8"$ 、 $\lambda=026^\circ$ Lsとなって観測末期となった。「夜毎餘言XI・足羽山便り」も掲載された。

<http://www.hida.kyoto-u.ac.jp/~cmo/cmo/216/tya044.html>

村上昌己(Mk)

ISSN 0917-7388

COMMUNICATIONS IN 東亞天文學會「火星通信」since 1986

MARS

No. 215
10 April 1999

OBSERVATIONS Published by the OAA Mars Section

CMO Mars Report # 08 (1998/99) — OAA Fortnight Report —

1999年三月後半(16 Mar~31 Mar)の火星面観測
Martian Surfaces in the Second Half of March 1999
from 16 March 1999 (111° Ls) to 31 March 1999 (118° Ls)

原 辰 次 M MINAMI

が……視直径も大きくなり、最初のPangloss-appearingが、塵埃と観測は難むか……期待した沖繩の天候が思わしくなかったのが、良い。報告では暮春三月17日に、日の出前6:00AM、日の入午後6:04ということになった。日没は兎も角、冬至の頃は日の出前午前7時半頃であったわけだから、可成りの観測時間の損失である。尤も最近はその日の出前に西に傾いてしまおう、18Marに留まっていた。これから暫く六月まで上昇してくれるのが一救いである。24Apr1999GMT頃観測、25Apr1999GMT頃観測である。

The planet Mars has rapidly been approaching, and this is the first Fortnight Report of the CMO this season. The weather was however not satisfactory in Japan and especially the Okinawa district, the place we expect most, seemed to have suffered from poor conditions. At Fuku, on 17 March (207), the Sun rose at 6:04am, and set at 6:04pm. At the time of Winter Solstice, the sun rose after 7:30am, and so the observation time at dawn is now quite limited. On 18 March the planet became stationary, and hence the planet will shine higher henceforward for a while until June. Mars will be at opposition on 24 Apr at 18h GMT.

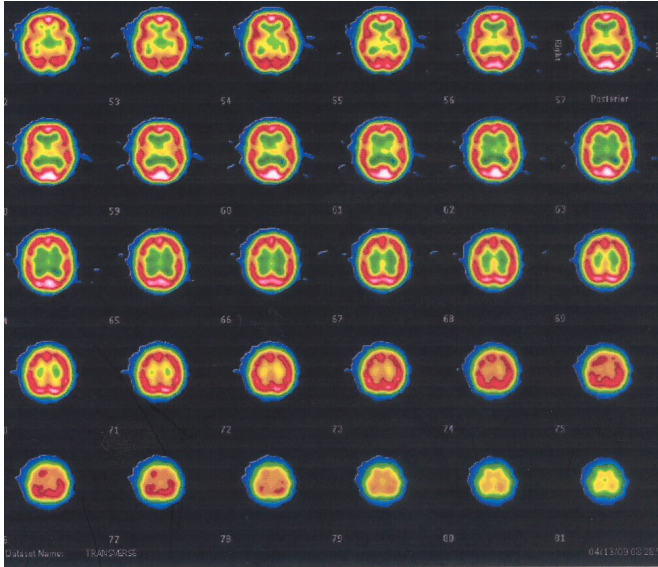
が……この半月の間に視直径 ϕ は12.0"から13.8"に急速に伸びた。もう小接近時の最大視直径である。方位角も27°から19°へと急速に傾き、火星像も丸味を帯びている。季節は111°Lsから118°Lsへ進んだ。中央緯度 δ は15°Nから16°Nへ昇った。以後更に北極冠がこちらを向くから、視直径の大きいくらいでこれから極小の北極冠が観測出来るわけである。

D uring the present period, the apparent diameter ϕ rose rapidly from 12.0" to 13.8", equal to the maximal diameter when we have at the aphelic opposition. The phase angle λ went down from 27° to 19°. The season proceeded from 111° Ls to 118° Ls. The central latitude δ began to rise from 15° N to 16° N. Since ϕ further rises to 23° N in June, we will have a good opportunity for observing the minimal apc.

が……今回この期間の観測に関する「火星通信」への報告と報告者は次の通りである。
The following are the observers who contributed to the CMO their observations made during the pres-

2 4 5 5

who also happens to have red-green insensitivity. I showed him the scan (see attachment) and was



amazed to find that he was able to identify very fine nuances of reds and greens on the basis of intensity differences alone—and he explained to me that he has learned to do so through long training.

I had the wherewithal to show him a color photograph of Mars which I just happened to have on hand(!), and asked him to sketch what he saw there. He produced a very Schiaparellian image of Mars. So it would appear that indeed Schiaparelli's color-blindness played a decisive role in creating the fashion of depicting canals on Mars. Q.E.D. Best,

Bill SHEEHAN (ウィリアム・シーハン MN 美)

●.....Subject: 『火星通信』

Received: Mon 30 Mar 2009 21:01:11 JST

『火星通信』と紀要別刷10冊が今日届きました。有難うございます。別刷は早速、知人に配ろうと思っています。.....

最近是比较的晴れ間が多いので、土星を撮っていますが、Seeingがあまり好くなく良像は得られていません。阿久津さんはもう火星を撮られ始められたようですね。こちらは、隣の屋根から上がったからになりますから、まだ、なかなかです。

また、良いものが撮れましたらお送りします。体は今のところ、異常なく過ごしています。ご心配をおかけしました。

Lu75Mの不都合な点については、浅田さんと連絡を取っていて、撮り方を研究中です。

森田 行雄 (Yukio MORITA 廿日市 Hiroshima)

●.....Subject: Re: May I ask a favour ?

Received: Mon 30 Mar 2009 23:32:35 JST

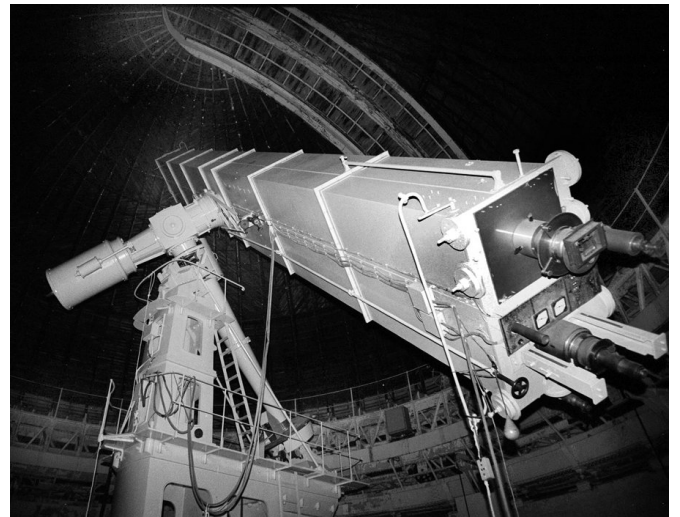
Dear Masatsugu, This is perfectly fine with me. I was away last week and will be very busy this one with the upcoming 100h of astronomy, so I will not be very active now for the IWCMO, but I greatly appreciate your help in this way!

Nicolas BIVER (ニコラ・ビヴァー Meudon 法)

●.....Subject: RE: Invitation to the IWCMO
Received: Thu 02 Apr 2009 00:46:26 JST

Dear Masami-san: I am going to try to attend the workshop in Paris/Meudon. I am making the transition to teaching, and it all depends on if I get a job teaching this fall or not. I should know soon, and will confirm or cancel as soon as I know something definite.

Back in 2004, I had the pleasure of spending some time with Nicolas Biver at the Meudon observatory. My wife and I were on a Paris vacation, and Nicolas generously agreed to take me on a tour of the great telescopes. (He even waited on me until after dark when I became lost after getting off the train). Seeing the observatory was the highlight of my trip, and I cannot think of a more gracious host than Nicolas. I have enclosed a few photos from that trip.



Now that Mars is coming back into our morning skies, I

will start sending images again to you from Houston. I have a new CCD camera that I am anxious to use. Best to all the CMO members, and thanks so much for the invitation. Best wishes,

Don BATES (ト・ン・ベーツ Houston TX 美)

(註) The first photo shows Nicolas BIVER in 2004, the second the Meudon Observatory, & the third the 83 cm Grand refractor.

●.....**Subject:** *Mars Climate Sounder Gives First Warning of a Major "Dust Event"*
Received: *Thu 02 Apr 2009 01:51:29 JST*

"In the past few days, Mars Climate Sounder has detected elevated temperatures in its data on Mars' atmosphere. The elevated temperatures are very likely the first warning of a significant dust event, one that may have already encircled the planet. Image data that is expected to arrive on Earth in the coming days may show the first signs of what could possibly become a global dust storm."

More info: <http://tinyurl.com/cc8upa>

Best,

○.....**Subject:** *[Fwd: Update on the Mars dust event - The Planetary Society Blog]*
Received: *Fri 10 Apr 2009 12:52:58 JST*

<http://www.planetary.org/blog/article/00001908/>

Sent from my iPhone

Ethan ALLEN (イーサン・アレン Sebastopol CA 美)

●.....**Subject:** *Re: Invitation to the IWC MO*
Received: *Thu 02 Apr 2009 22:45:30 JST*

Mr. Minami, Thank you very much for the invitation. It is such an honor to feel the excitement of the celebration of Mars 100 years by E.M. Antoniadi. I have observed Mars since the 1971 opposition and I did a lot of photographing and imaging at nearly every apparition.

Unfortunately, I won't be able to come due to my tight scheduling. But I will be there in spirits. I can imagine when others are there, they will be highly honored.

Once again, thanks...

Frank MELILLO (フランク・メリッロ Holtsville NY 美)
ALPO Mercury Coordinator

●.....**Subject:** *Re: Invitation to the IWC MO*
Received: *Saturday, April 04, 2009 09:45:57 JST*

Dear Masami, I'm happy to hear from you and very interested to the Paris/Meudon Int. Workshop. Although at this time I cannot tell you if I can attend it, I will surely consider to go. I will let you know sometime this summer if I can meet you at the workshop.

Please give my salute to your CMO colleagues. Best Regards,

PS: I will make some Mars observations this year, possibly I will use a 40cm Zeiss Refractor at Vatican Observatory near Rome.

Giovanni QUARRA (ジヤンニ・クアラ Firenze 義)

●.....**Subject:** *ご連絡*
Received: *Mon 06 Apr 2009 15:05:13 JST*

南 政次 様、桜満開の季節になりましたがお変わり御座いませんか。過日、村上様より九月のムードンでの火星会議についてのご案内をいただ

き、ご配慮有難く存じております。以前、この計画をお聞きした時から参加方考えておりましたが、年齢のせいか、最近健康状態が不安定になりまして、海外に出ることが無理のようで、残念ながら断念せざるを得なく相成りました。切角お誘いを頂戴しながら斯様な仕儀にて、なにとぞご了承賜りたく存ずる次第でございます。いろいろご計画もおありのことと存じますので、取り急ぎご連絡申し上げます。

寒暖の差の激しい今日この頃、ますますご自愛のほどお願い申し上げます。

松本_達二郎 (Tatsujiro_MATSUMOTO 尼崎 Hyogo)

●.....**Subject:** *Re: Invitation to the IWC MO*
Received: *Tue 07 Apr 2009 03:01:13 JST*

Hello to all and thank you for the reminder and invitation.... Actually this looks very interesting to me and perhaps I can attend this. It certainly would be worthwhile as well as a chance to visit my many friends and colleagues.

Let me check my schedule both at school and for my current projects and see what I might arrange.

Thank you and I hope that you have a prosperous 2009.

P Clay SHERROD (ドクター・クレイ AR 美)

●.....**Subject:** *RES: Invitation to the IWC MO*
Received: *Tue 07 Apr 2009 04:38:24 JST*

Dear Masami Murakami, it would be my pleasure to be present at IWC MO in Paris, you can count with my presence. Thank you for your invitation. My best regards.

○.....**Subject:** *Saturn 09/04/09*
Received: *Sat 11 Apr 2009 07:31:39 JST*

Hi, here is a Saturn image from April 09
http://astrosurf.com/pcasquinha/sat_090409.jpg

○.....**Subject:** *Saturn 090415*
Received: *Mon 20 Apr 2009 07:49:18 JST*

Hi, here is a Saturn image from April 15, nothing to report on the planet's atmosphere. Tethys can be seen on the left above the rings and Dione below.

http://astrosurf.com/pcasquinha/sat_090415.jpg

My best regards

Paulo CASQUINHA (パウロ・カスキニャ Portugal 葡)

●.....**Subject:** *Jupiter and GRS images from this morning (the best this year)*
Received: *Thu 09 Apr 2009 16:13:58 JST*

Hi all, Lester Barnes from South Australia captured the best image of Jupiter this year so far, of Jupiter and the GRS. He doesn't have a website or submit his images anywhere so I'm sharing it here on his behalf. You can see his images (as well a round-up featuring mine and Anthony's images from this morning and yesterday) here:

<http://www.mikesalway.com.au/2009/04/09/the-best-jupiter-image-this-year-plus-more-from-down-under>

Things are starting to look up!

Mike SALWAY (マイク・ソルウェイ NSW 澳)

●.....**Subject:** *RE: Your postal address*
Received: *Sun 12 Apr 2009 07:10:00 JST*

Hi Masatsugu, I'm doing fine but not active in astronomy at the present time. I hope to be active in the near future, though.

Thanks in advance for sending me a copy of your article.

Kent DeGROFF (ケント・デグロフ AZ 美)

●.....**Subject: Saturn 10.4.2009**
Received: Sun 12 Apr 2009 13:56:20 JST

Hi Guys, I solved my computer problems and now I am back on planet observing: In the night 10/11 April I started capturing Saturn with my 8" newton on my balcony in Ludwigsburg and after image processing I found a small Spot 525° (III) near the equator. Is it a real spot or an artefact from image processing? Cheers

Silvia KOWOLLIK

(シルヴィア・コウロリク Ludwigsburg 徳)

>From: Kuniaki Horikawa
>To: Silvia Kowolik
>Date: Thu, 16 Apr 2009 00:28:16 +0900
>Subject: Re: Fw: Saturn 10.4.2009
>

>Hello, Ms. Silvia Kowolik,
> I am Kuniaki Horikawa of the Jupiter-Saturn Section of the Oriental
>Astronomical Association (OAA) of Japan.
>Attached your mail was forwarded to me by Mr. Masatsugu Minami
>to respond to your question.
> As you may already have received answers from other observers,
>the small spot near equator is real.
> This spot has been observing since early January,
>and is retrograding at a rate of +1 deg./day. Please note that the
>longitude of the spot should be measured in System I,
>because it is in the Equatorial Zone.
>The spot in your image was at 180.0 deg. in System I.
> By the way, I am looking for Jupiter/Saturn images to make monthly
>report of our section.
> Would you please send me your images, if you like?
> You will have a translated version of our report in several months
> later (Sorry, I need much time for translation). Best regards,
>**Kuniaki HORIKAWA**, Director, the OAA Jupiter/Saturn Section

●.....**Subject: Mars image 12th April**
Received: Tue 14 Apr 2009 07:17:24 JST

Hi everyone, Please find attached my first Mars image for the apparition. The seeing was quite horrific so close to the horizon and it was bad even for Jupiter which was at 52 degrees at the same time. Best regards.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2009/090412/SBd12Apr09.jpg>

○.....**Subject: RE: Mars image 12th April**
Received: Mon 20 Apr 2009 07:14:49 JST

Dear Masatsugu, I wish you speedy recovery from the surgery and thank you for the feed back about my Mars imaging. I tried imaging Mars this morning but the fog rolled in just minutes before I was ready to capture data.

Unfortunately I will not be able to attend the Paris/Meudon conference in September. Best regards,

○.....**Subject: Mars image 20Apr2009**
Received: Tue 21 Apr 2009 21:22:19 JST

Hi everyone, I imaged Jupiter this morning at an altitude of about 53 degrees and then Mars at an altitude of 26. While the seeing at Jupiter's altitude was better than average, down at Mars's it was quite horrific. It took a lot of time to extract the attached image from the poor data.

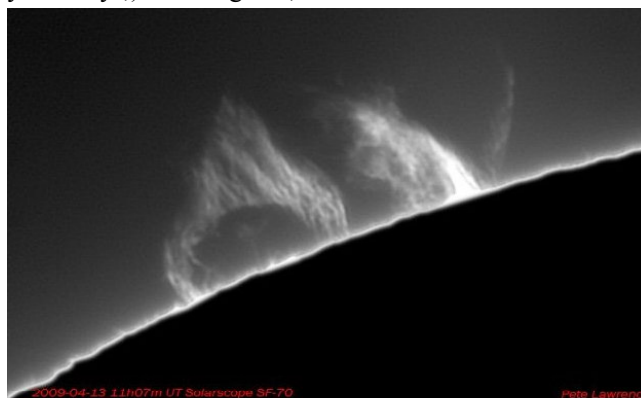
<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2009/090420/SBd20Apr09.jpg>

Best regards,

Stefan BUDA (スチーフアン・ブダ Melbourne 澳)

●.....**Subject: April 13th prominence**
Received: Tue 14 Apr 2009 17:28:03 JST

Hi all, The surface of the Sun remained rather calm and the limb was also fairly quiet on the 13th April save for one very nice prominence which reminded me of a squirrel attempting to grab a giant nut! Perhaps too much Sun yesterday ;) Best regards,



Pete LAWRENCE (ピート・ローレンス Selsey 英)

●.....**Subject: Re: Fw: Saturn 10.4.2009**
Received: Thu 16 Apr 2009 00:07:40 JST

南 政次 さま、ご無沙汰しております。
(KOWOLLIKさんの)情報ありがとうございます。送信先の面々から察して、すでに回答はされていると思いますが、後ほど私からも回答を送ります。

堀川_邦昭(Kuniaki_HORIKAWA 横濱Yokohama)

●.....**Subject: dust in Hellas**
Received: Thu 16 Apr 2009 06:56:29 JST

<http://themis.asu.edu/dustmaps/>

○.....**Subject: RE: dust in Hellas**
Received: Sun 19 Apr 2009 01:22:24 JST

Masatsugu-San, Sorry to hear of your illness and I hope all is well with you. I am in need of new knees and when I satisfy my "saw-bones" (American slang for doctor) with my weight he will replace them both using non-evasive surgery. I told him that as an astronomer I fully understood how that is done -- with magic!

Due to my knee problem and loss of interest in Mars-phobia I will not be able to attend Paris/Meudon meeting. I am not very active in the ALPO Mars Section these days and hope to get back to observing Mars this apparition, or at least later on this year. The Red Planet is hovering in the morning sky and the urge to uncover my telescope to see what is going on get stronger each day. Climbing that ladder seems to be more torture than even I can stand.

Of course, when dust is sighted in Hellas and possibly Noachis the a large dust storm is possible. After Mike Malin's survey of dust storms on Mars I am sure we missed a few small ones over the years.

Wow, at the end of next month marks some happy, and then unhappy anniversaries: first, it will be eight years since I retired and then it will have been 23 years since we lost our friend and colleague, Chick Capen. I remember on the morning he passed away I was observing Mars

and noticed a bright yellowish spot in NW Hellas. My memory of the event is foggy, but it was definitely a dust storm brewing in the lowlands of Hellas. I was tempted to call Chick then, but for some reason I didn't.

Take care and get well. 謹賀

Jeff BEISH (ジエフ・ビッシュ Lake Placid FL美)

●.....Subject: Re: Invitation to the IWC MO
Received: Fri 17 Apr 2009 22:24:51 JST

Dear Mr Murakami, Thank you for your kind invitation to attend the forthcoming IWC MO in Paris/Meudon in September. Please excuse my delayed reply, as I have had to see if I could arrange leave from work in September of this year.

It would be of great interest for me to attend your international workshop, but I must also see if I can organize things financially to do so.

I am sorry that I cannot give you a firm answer yet, but over the next few weeks I will have a reply for you.

Best Regards

Maurice VALIMBERTI

(モリス・ヴァリムバーティ Melbourne 澳)

●.....Subject: Moon northern terminator 2009 April 02
Received: Sat 18 Apr 2009 07:44:32 JST

Pete Lawrence has already beat me to it by going much further on the same night and with exactly the same equipment, but here, for what it is worth, is my C14, f11 northern terminator mosaic from the first quarter Moon on the second.

Excellent seeing was clearly widespread over southern England that evening.

Also attached is Vallis Alpes at f33. I am working on a Vallis Alpes area mosaic at f50 as well, from that night, and will send that later if it turns out to be any good. Iimages:

<http://www.davidarditti.co.uk/moon2009-04-02-2009-15-DLA.jpg>

<http://www.davidarditti.co.uk/moon2009-04-02-2028-DLA.jpg>

David ARDITTI (デヴィッド・アーデイチ Edgware ME 英)

☆☆☆

ときどき歳時記

(5)◆弥生・望月◆今年も桜の季節が無事過ぎた。

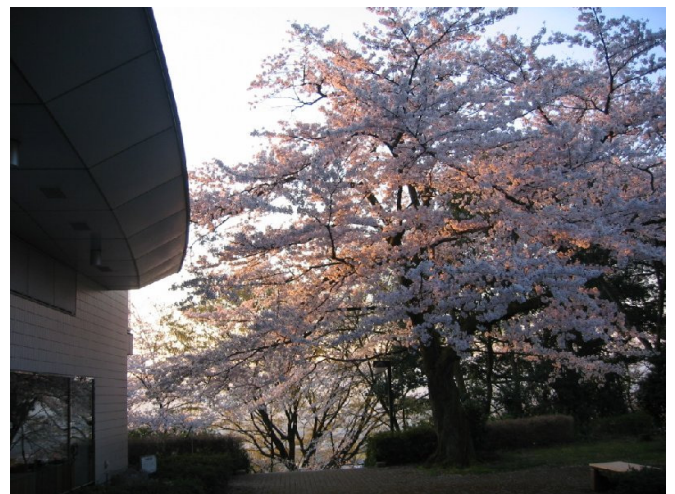
関東では二月が暖かかったこともあり、東京での

開花は春分の翌日の三月21日と少し早まった。藤沢でも裏庭のソメイヨシノは23日に開き始めた。その後の曇天続きと花冷えでゆっくりと進み、満開となったのは四月上旬であった。今年の桜は長く保ったのが特徴となった。四月2日の宵には久しぶりの晴天となり、五分咲きの花に上弦の月が懸かった。◆四月9日は旧暦三月(弥生)の望で、遅れて満開となったヤマザクラと共の画像が得られた。月面に花を眺める女性の横顔が見えるだろうか? 外国向けに画像のキャプションには"Diana"と入れてみた。◆「このような夜桜は『荒城の月』



の風情だな」とか、「西行の望んだ景色かな」と

か思いながら、デジカメを弄くって時間を過ごした。◆私は旧暦でも如月に咲く花は梅だと思っていたのだが、西行の有名な歌「願はくは花の下にて春死なむ そのきさらぎの望月の頃」の花は、梅ではなく桜とされている。実際、西行は後年二月16日に歿したらしい。如月の望は釈迦の入寂の日でもあり、沙羅双樹に花があったかどうか知らないが、西行の時代の桜はソメイヨシノではありえず、ヤマザクラとの組み合わせが、如月のもちづきの頃であったことであろう。◆福井では少し遅れて四月10日に足羽川土手の桜並木が満開になったとテレビニュースが取り上げた。少し遅れて足羽山の桜も満開になったらしい(ここで自然史



博物館前の桜の写真を南氏からお借りする)。ニュースでは桜の並木越しに足羽山が写り、天文台のドームとアンテナ塔が遠く見えたのが懐かしかった。もう何年も訪れていない。(村上 昌己 Mk)

CMO 2009/2010 Mars Report #01

OAA Mars Section

♂.....We shall now start reviewing the Mars observations in the 2009/2010 apparition. This time we pick out the period from **23 March ($\lambda=233^\circ\text{Ls}$)** to **15 April 2009 ($\lambda=247^\circ\text{Ls}$)** just because AKUTSU (*Ak*) began observing on 23 April, and some pieces of information from the MRO came around. During the period the apparent diameter was $\delta=4.3''$, and the central latitude remained $\phi=26^\circ\text{S}$. Apparent declination D moved from $10^\circ20'\text{S}$ (23 Mar 00hTT) to $03^\circ24'\text{S}$ (15 Apr 00hTT). The phase angle ι was from 19° to 22° .

♂.....三月下旬の段階では視直径 δ は4.3"であり、通常なら報告期間に入らないのだが、今回はMCSのAlert等があった為、早い段階から始めることにする。それに阿久津(*Ak*)氏が23March($\lambda=233^\circ\text{Ls}$)以降低い火星を連続して上手く拾い上げたこともある。今回は従って三月下旬から15April($\lambda=247^\circ\text{Ls}$)迄の観測報告とする。 $\delta=4.3''$ 、中央緯度 $\phi=26^\circ\text{S}$ であった。また視赤緯 D は $10^\circ20'\text{S}$ から $03^\circ24'\text{S}$ に動いた。

♂..... The following observations reached us. 今回の観測は次のようである。

AKUTSU, Tomio 阿久津 富夫 (*Ak*) セブ・フィリッピン Cebu, the Philippines

5 Sets of *RGB* + 5 *IR* Images (23, 24, 27, 28, 29 March 2009) 36cm SCT@f23 with a DMK21AU04

BUDA, Stefan ステイーファン・ブダ (*Sbd*) メルボルン Melbourne, Australia

1 *RGB* Image (12 April 2009) 40cm Dall-Kirkham with a DMK21AF04

MINAMI, Masatsugu 南 政次 (*Mn*) 福井 Fukui*, Fukui, Japan

3 Drawings (7, 8, 10 April 2009) 370, 400×20cm ED refractor*

*Fukui City Observatory 福井市自然史博物館屋上天文台

♂.....Tomio AKUTSU (*Ak*) at Cebu ccd imaged Mars on 23 Mar ($\lambda=233^\circ\text{Ls}$) at $\omega=108^\circ\text{W}$, 24 Mar ($\lambda=234^\circ\text{Ls}$) at $\omega=100^\circ\text{W}$, 27 Mar ($\lambda=235^\circ\text{Ls}$) at $\omega=070^\circ\text{W}$, 28 Mar ($\lambda=236^\circ\text{Ls}$) at $\omega=056^\circ\text{W}$, and on 29 Mar ($\lambda=237^\circ\text{Ls}$) at $\omega=050^\circ\text{W}$: The south polar cap (spc) and the dark markings at the areas of Solis L to M Erythraeum were shot. Time was around 21 hrs GMT. The animations of the MRO-MARCI look to show some dust disturbance near Solis L on 27 March, while *Ak*'s image was not enough to discriminate it because the angular diameter was small. Then Ethan ALLEN (*EAl*) kindly informed us of a Mars Climate Sounder (MCS) alert; the MCS, which quantifies horizontally the atmosphere's vertical variations of temperature, detected on 30 March a considerable ascending temperature and warned that a major dust event already encircled the planet and might grow to raise a global dust storm (published on 31 March: http://www.planetary.org/programs/projects/mars_climate_sounder/update_20090331.html). *Ak* stayed unfortunately at home in Japan, and so at Fukui Takashi NAKAJIMA (*Nj*) and one of us (*Mn*) tried on 6 April to observe the planet at the Fukui City Observatory: The seeing condition however was very poor on the day and we just watched in vain. *Mn* however succeeded in observing on 7 Apr ($\lambda=242^\circ\text{Ls}$) at $\omega=304^\circ\text{W}$, 9 April ($\lambda=244^\circ\text{Ls}$) at $\omega=287^\circ\text{W}$, and on 10 Apr ($\lambda=244^\circ\text{Ls}$) at $\omega=277^\circ\text{W}$: Especially on 10 April the condition much improved and *Mn* caught the planet just above the eastern mountain at 19:30 GMT and made a sketch at 20:20 GMT. However the planet did not show any yellow brightness characteristic of the great dust storm, whereas the spc and Syrtis Mj were slightly caught. Hellas looked light but not so bright. $\delta=4.4''$, $\iota=21^\circ$. On the other hand, the MRO-MARCI animations showed a brightening of Hellas from around 4 or 5 April, and as Jeff BEISH (*JBs*) noticed, the THEMIS images show a dusty augmentation from around 1 April in Hellas (<http://themis.asu.edu/dustmaps/>). On 12 Apr ($\lambda=246^\circ\text{Ls}$) Stefan BUDA (*Sbd*) at Melbourne produced a beautiful image at $\omega=257^\circ\text{W}$ with the bright spc and the dark Syrtis Mj where Hellas however looked to be just bright as usual. So we considered that at least the dust was still confined inside the area of Hellas and at the stage the large dust disturbance was not visible from this side. On the other hand the MRO-MARCI animations give an impression that they show a vast airborne dust covering

the planet globally perhaps since around mid-February when some dust was seen near Chryse and others. ♂.....阿久津(Ak)氏のccd観測は23Mar($\lambda=233^\circ\text{Ls}$)には $\omega=108^\circ\text{W}$ 、24Mar($\lambda=234^\circ\text{Ls}$)には $\omega=100^\circ\text{W}$ 、27Mar($\lambda=235^\circ\text{Ls}$)には $\omega=070^\circ\text{W}$ 、28Mar($\lambda=236^\circ\text{Ls}$)には $\omega=056^\circ\text{W}$ 、29Mar($\lambda=237^\circ\text{Ls}$)には $\omega=050^\circ\text{W}$ と撮り、南極冠と共にソリス・ラクスからマレ・エリュトウラエウムに掛けての暗色模様を写し出している。時刻は21hGMT前後である。MRO-MARCIの連続画像を見ると、27Mar辺りにはソリス・ラクス周辺で黄塵が立っているような具合だが、まだ視直径が小さく、Ak氏の画像では未だ明確ではない。次にアッレン(EAI)氏の知らせで、Mars Climate Sounder (MCS)の水平方向の大気温度測定器が30Marから温度上昇を認め、既に黄雲が高緯度をencircleしており、global_dust_stormになるかも知れないという警告に接した(31Mar発表http://www.planetary.org/programs/projects/mars_climate_sounder/update_20090331.html)が、既にAk氏は日本に一時帰国の段階にあり、観測が適わなかった。そこで、福井では6Aprilに中島孝(Nj)氏と筆者の一人(Mn)が(当初五月からの)予定を早めて天文台に登り、朝方の火星を狙ったが、火星は捉えたものの靄と直ぐに薄明に入って初観測は適わなかった。然し、その後晴天が続いたので(Nj氏は旅行に出たが)、Mnが7Apr($\lambda=242^\circ\text{Ls}$) $\omega=304^\circ\text{W}$ 、9April($\lambda=244^\circ\text{Ls}$) $\omega=287^\circ\text{W}$ 、10Apr($\lambda=244^\circ\text{Ls}$) $\omega=277^\circ\text{W}$ と観測を敢行した。特に10Aprは火星の出から快晴で捉えられ(福井では19:30GMT頃)20:20には一応の観測ができたが、"大黃雲"という様な輝きはなく、南極冠もシュルティス・マイヨルも仄かに見える状態であった。ヘッラスも幾らか明るい状況だが、然程のことではないと判断した。 $\delta=4.4"$ 、 $i=21^\circ$ 。実際にはMRO-MARCIは4Apr、5Apr頃からヘッラスが明るくなっており、ビーシュ(JBs)氏からの通知にある様に、THEMISが1Apr以降のヘッラスにダスト見ているが(<http://themis.asu.edu/dustmaps/>)、ヘッラスから出ているようには見えない。12Apr($\lambda=246^\circ\text{Ls}$)でオーストラリアのブダ(SBd)氏が $\omega=257^\circ\text{W}$ で綺麗な像を捉えたが、ヘッラスも普通の輝きであろうと思われる。従って、四月半ばの段階では"大黃雲"に到っていないと思われる。但し、MRO-MARCIの動画では二月中旬辺りからクリュセ辺りに黄塵が立って以降浮遊ダストが多くなっているという印象は受ける。

南 政 次・村上 昌己 M MINAMI (Mn) & M MURAKAMI (Mk)

シー・エム・オー・フクイ

中 島 孝 Nj

★前回報告以降、成田 広様(421)、阿久津 富夫様(422)、森田 行雄様(423)よりカンパを頂戴しました。有難うございました。不一

★前号は3月27日に印刷・丁合し、国内はメール便で19時までreprintと一緒に発送しましたが、藤沢(Mk氏)、宗像(As氏)、横浜(Ts氏)、広島(Mo氏)には30日の配達になった様です。海外便はSALにて福井南局から発送しています。現在のところ海外郵送分の方が部数は多い状況です。不一

☆ Kasei-Tsūshin CMO (http://www.hida.kyoto-u.ac.jp/~cmo/cmo/oa_mars.html)

『火星通信』 #357 (25 April 2009) 編集：淺田 正(As)、南 政次(Mn)、村上 昌己(Mk)
中 島 孝(Nj)、西田 昭徳(Ns)

Edited by: Tadashi ASADA, Masatsugu MINAMI, Masami MURAKAMI,
Takashi NAKAJIMA and Akinori NISHITA

発行 Published by/for : 東亜天文学会 OAA 火星課 Mars Section

☆ Any e-mail to CMO is acknowledged if addressed to

cmo@mars.dti.ne.jp (Masami MURAKAMI at Fujisawa)

vzv03210@nifty.com (Masatsugu MINAMI at Mikuni-Sakai)

☆ Usual mails to CMO are acknowledged if addressed to

Dr Masatsugu MINAMI, 3-6-74 Midori-ga-Oka, Mikuni, Sakai City, Fukui, 913-0048 JAPAN

☎913-0048 福井縣坂井市三國町緑ヶ丘3丁目6-74 南 政次 (☎/FAX 0776-82-6222)

