

MARS

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OBSERVATIONS

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Forthcoming Mars in 2011/2012. II

By

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This is a sequel to the previous I which was published in CMO/ICMO #384/#10 (25 April 2011) where we reviewed a general survey of the present apparition of Mars. Here we shall treat the latter half of the apparition and put forward several observation points. According to the MEEUS table, the planet was at opposition on 3 March at around 20h GMT, and was closest to the Earth (distance=0.67368 AU) on 5 March at around 17h GMT with the maximal angular diameter $\delta=13.89''$: This was a so-called aphelic opposition. The planet was stationary at the most western part of *Vir* on 25 January and returned back to *Leo*, but will begin to proceed eastwards after the stationary state on 15 April. The eastern quadrature will occur around on 12 June, and will go down to the southern hemisphere on 5 July. Mars will be

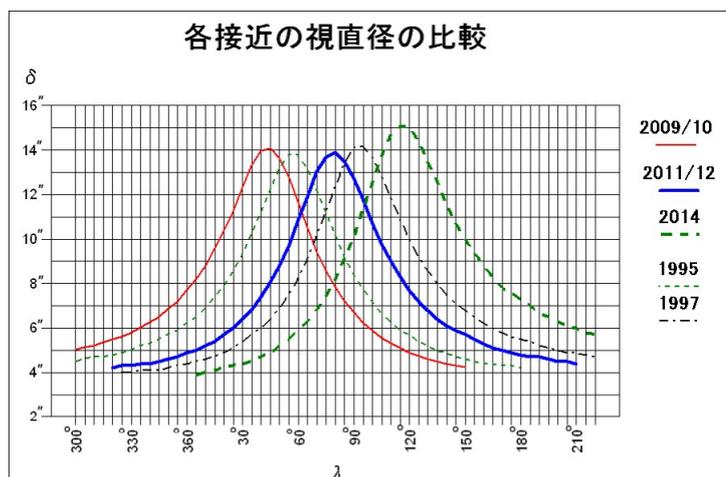
close to the planet Saturn on 15 August this year. The planet Mars will then remain long in the evening sky and go down to the direction of the Sun. At the beginning of October Mars will enter into the area of *Scor*, and hence it will be low from the northern hemisphere. It will be at conjunction at the end of April 2013.

The season λ and the angular diameter δ vary as shown here in what follows: We can observe the season before the northern summer solstice ($\lambda=090^\circ\text{Ls}$) up until the northern autumnal equinox ($\lambda=180^\circ\text{Ls}$).

1 Mar ($\lambda=077^\circ\text{Ls}$, $\delta=13.9''$) 1 Apr ($\lambda=090^\circ\text{Ls}$, $\delta=12.5''$)1 May ($\lambda=104^\circ\text{Ls}$, $\delta=9.9''$) 1 June ($\lambda=118^\circ\text{Ls}$, $\delta=7.9''$)1 July ($\lambda=133^\circ\text{Ls}$, $\delta=6.6''$) 1 Aug ($\lambda=148^\circ\text{Ls}$, $\delta=5.8''$)1 Sept ($\lambda=164^\circ\text{Ls}$, $\delta=5.2''$) 1 Oct ($\lambda=181^\circ\text{Ls}$, $\delta=4.8''$)

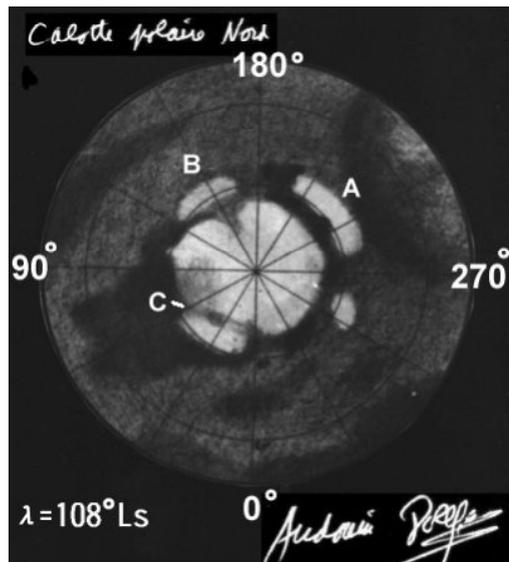
During the period the tilt ϕ (the central latitude) much

declined to the north and so the northern surface faces to us. The tilt ϕ will however change to the south in November. The opportunity to observe the Martian northern hemisphere deeply visits just this year and the next apparition. The next occasion when the planet most approach will be 14 April 2014 when $\lambda=116^\circ\text{Ls}$, $\delta=15.2''$, and $\phi=21.4^\circ\text{N}$. As shown in the graph, after $\lambda=095^\circ\text{Ls}$, the next apparition will gain larger diameter than this year. Here we stress that after opposition we can observe the



morning terminator and the morning side of the surface largely.

Next we shall paraphrase some points of Observations: **1) Around the NPC:** The thawing npc (north polar cap) stays as a residual cap after $\lambda=100^\circ\text{Ls}$ and some detachments around the main (dirty) cap will be apparent: It will not necessarily be easy to detect them all this year by visual observations but can be captured by the ccd apparatus. Here we picked out again



DOLLFUS's npc Map which was made from his observations of the npc in 1948~1952 at the Pic du Midi observatory (originally in A DOLLFUS: *Icarus* 18 (1973) 142). This was cited in CMO #183 (25 Jan 1997) p1984 "COMING 1996/97 MARS (5)". See

<http://www.hida.kyoto-u.ac.jp/~cmo/cmo/183/cmo183.html>

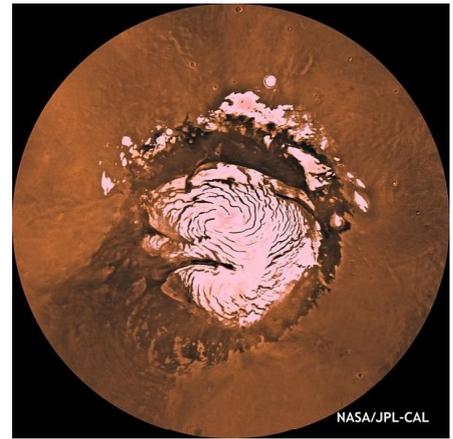
In the map, the part denoted A is called Olympia which lies to the north of Gyndes ~ Utopia. The dark segment between Olympia and the residual cap is called Rima Borealis and after around $\lambda=065^\circ\text{Ls}$ it becomes evident. This year already its precursory state was caught in mid January ($\lambda=059^\circ\text{Ls}$) and was quite evident at the beginning of February (around $\lambda=065^\circ\text{Ls}$). The island B is Ierne and will be detached around at $\lambda=105^\circ\text{Ls}$ which lies to the north of Olympus Mons. See:

<http://www.hida.kyoto-u.ac.jp/~cmo/cmomn0/97Note04.htm>

The half rift denoted C here is Chasma Boreale which is not so clear in the DOLLFUS Map but clearly shot by Orbiter 1 of Mariner 9 (Figure above-right). Note that no rift called Rima Tenuis so found by SCHIAPARELLI and called so by ANTONIADI. The detailed detachments are also seen from the following four HST images on 30 March 1997 ($\lambda=098^\circ\text{Ls}$):

<http://hubblesite.org/newscenter/archive/releases/1997/15/image/c/>

Also we should note that there is a dark area called Hyperboreus L adjacent to the npc to the north of M Acidalium, and a linkage called



Iaxartes between M Acidalium and Hyperboreus L. **2)**

Polar Dusts: We should also pay attention to the dusts which arise from the outer region or inner markings of the npc. On the preceding apparition in 2009/2010, a dust was observed from $\lambda=004^\circ\text{Ls}$. Further it was observed at $\lambda=026^\circ\text{Ls}$ and at $\lambda=045^\circ\text{Ls}$: Tomio AKUTSU (*Ak*) took the picture of the dust from the npc to Utopia in the shape of ">". At the same time in Europe there found dusts to the north of M Acidalium. This period also even at $\lambda=065^\circ\text{Ls}$ there were observed dusts near M Acidalium. Quite recently (as noted in the following report, there was observed a bright dust from Chasma Boreale and it expanded to the southern area near M Acidalium. At the opposite side near Utopia dust expansion was also noticed.) **3)**

Local Dusts: On 27 June 1997 ($\lambda=140^\circ\text{Ls}$), there was found by the HST that a dust core near Eos, and hence we should be attentive to the area if the season advanced. **4) Cyclones:** In 1999, the HST clearly captured a white cloud cyclone at the morning Baltia on 27 Apr ($\lambda=130^\circ\text{Ls}$): This was also caught visually in Japan and so we should be attentive. Even at the beginning of May ($\lambda=134^\circ\text{Ls}$ -) another morning cloud was observed at Utopia. These kind of phenomena were observed up until $\lambda=162^\circ\text{Ls}$ in 1999. Anyway the morning side of M Acidalium should be watched carefully. We should further remember that, as CMO #184 recorded, Viking Orbiter 1 caught two northern cyclones at $\lambda=105^\circ\text{Ls}$ and 126°Ls . **5) Behaviour of the Evening Clouds:** After the spring equinox the warm air mass containing the water vapour goes upwards and cooled down at the higher mountains to

make white clouds which are mostly made due to the ascending airs: At around $\lambda=050^\circ\text{Ls}$ it is observed at Alba Mons and then from around $\lambda=060^\circ\text{Ls}$, the Tharsis ridges, and Olympus Mons and Elysium Mons become covered by the white clouds in the afternoon and become stronger by $\lambda=090^\circ\text{Ls}$. Arsia Mons will become late and have a peak at $\lambda=120^\circ\text{Ls}$: This difference is because of the differences of the latitudes than others. And furthermore all others will cease to be active by around $\lambda=200^\circ\text{Ls}$, but Arsia Mons will be active even in the southern summer at $\lambda=270^\circ\text{Ls}\sim 300^\circ\text{Ls}$ because it lies near the southern high latitudes.

6) Poking out of the Higher Mountains from the Lower Morning Mists:

The water vapour going southwards make a thin morning mist at a lower level. Then the summits of Tharsis Montes and Olympus Mons will poke out from the lower mists and are seen as dark brownish spots. After opposition the morning area becomes largely apparent and hence there will increase the opportunity to catch them. It is recommended to determine the local time the morning mist is replaced by the afternoon cloud. 7) Mist along the Equatorial Zone: The warmed-up air mass at the polar region will be cooled down near the equator and by the Coriolis force it will be collected along the equatorial zone: It will be so seen as a mist broad band. It is possible to check visually the one which pinches Syrtis Mj from the Libya side and from the

Aeria side, or otherwise the one starting from Thymiamata to Chryse through Tharsis. In ccd this kind of mists should be captured by the B images. As to the mechanism of this phenomenon it was paraphrased in CMO #200 (25 February 1998)1996/97 Mars Sketch (2): "*Movement of Warm, Moist Air from the Arctic Area to the Equatorial Band.*" See

<http://www.hida.kyoto-u.ac.jp/~cmo/cmomn0/97Note02.htm>

Seasonally it appears from around 050°Ls when the polar region is warmed up by all night sunshine and will be make a peak at around 090°Ls , and finally cease to be active at around $\lambda=180^\circ\text{Ls}$ when the equatorial zone is warmed up. 8) Behaviour of Hellas: At the same time when the evening clouds of the northern mountains are active, the southern polar region begins to welcome winter and Hellas become frosty and by the ice or by the lower cold mist it will become brighter: This is however not only the evening activity but can be so from the morning side. Recently part of it is counted as the south polar cap. Argyre must be so, but because the tilt is too northwards this year and hence it is difficult to check this point.

Finally we stress that the back-numbers of the CMO contain several useful statements especially in 1996/1997: We hope you will check all of them from the Web Site:

<http://www.hida.kyoto-u.ac.jp/~cmo/cmomn4/hp3.htm>

□

CMO/ISMO 2011/12 Mars Report #07

2011/2012 Mars Observations in February 2012

♂.....We deal here with the observations made during February 2012 in which the planet Mars was in *Leo*, and the angular diameter went up from $\delta=11.8''$ to $13.9''$ just before opposition. The Martian season proceeded from $\lambda=065^\circ\text{Ls}$ to 077°Ls and the morning and the evening mist quite showed up. The central latitude ϕ was from 23°N to 22°N and so the northern hemisphere was largely faced to us. The phase angle was $\iota=23^\circ$ at the beginning of February but rapidly decreased and at the end of the month the disc became quite roundish. The thawing of the npc was also at the final state. From 28 February to 6 March the phase angle was under $\iota=5^\circ$ and it was expected that the opposition effect could have told us the position of Olympus Mons (in Japan) but Mons must have been covered by the noon cloud (further due to a poor seeing condition of this winter) so that generally it was not so evident.

♂.....This period we received from 9 domestic members plus 28 members from abroad as follows: In Japan the cold waves often went down to the main islands especially at the region facing to the Japan Sea, and also from mid-February, the changes of the weather became rapid to the effect that the sky remained

often dismal even at the areas facing to the Pacific Ocean. In Texas, Bill FLANAGAN complained about the bad weather. The observers from Europe were 15 members but contribution of each person was a few (perhaps due to the bad weather?). The images were mostly composite ones, and not accompanied by the colour decompositions. These tendencies were also said about the work in the US. Among them Efrain MORALES RIVERA (*EMr*) at Puerto Rico was most active.

ALBERT, Jay (*JAl*) Lake Worth, FL, the USA

1 Drawing (25 February 2012) 400×28cm SCT

AKUTSU, Tomio (*Ak*) Cebu, the Philippines

3 Sets of RGB + 3 IR Images (18, 19 February 2012)
36cm SCT @f/35 with a DMK21AU04, DFK21AU04

BATES, Donald R (*DBt*) Houston, TX, the USA

1 Colour Image (26 February 2012) 25cm speculum @f/25 with a ToUcam Pro II

BUDA, Stefan (*SBD*) Melbourne, Australia

1 Set of RGB + 2 Colour images (12, 14, 23 February 2012) 40cm Dall-Kirkham with a DMK21AU04

DELCROIX, Marc (*MDC*) Tournefeuille, France

1 Set of RGB + 1 IR Images (21 February 2012) 25cm SCT with a Basler acA640-100gm

EDWARDS, Peter (*PEd*) Horsham, West Sussex, the UK

1 Colour Image (25 February 2012) 28cm SCT @f/30 with a DMK21/618

FERNÁNDEZ GÓMEZ, Francisco José (*FFn*) Ourense, Spain

4 Colour Images (21, 23, 28/29 February 2012) 20cm SCT with a DSI III Pro Camera

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

2 Sets of LRGB Images (26 February 2012) 36cm SCT @f/27 with a Flea3

FUMEGA UCHA, Camilo (*CFm*) Galicia, Spain

5 Colour + 2 IR Images (18, 20, ~22, 28 February 2012) 30cm speculum @f/25 with a DMK21

GHOMIZADEH, Sadegh (*SGh*) Tehran, Iran

2 Sets of RsGB + 4 Colour Images (12, 17, 21, 24, 27, 28 February 2012)
(28cm SCT with a DMK21AU04.AS)

GORCZYNSKI, Peter (*PGc*) Oxford, CT, the USA

6 Sets of RGB + 5 IR Images (14, 16, 18, 21, 27 February 2012)
36cm SCT @f/28 with a DMKAU618.AS

HILL, Richard (*RHI*) Tucson, AZ, USA

2 Colour Images (24, 29 February 2012) 36cm SCT

ISHIBASHI, Tsutomu (*Is*) Sagamihara, Kanagawa, Japan

1 Colour Image (19 February 2012) 31cm speculum, with a SONY HC9 Video cam

KOHZAKI, Ichiro (*Kz*) Higashi-Kurume, Tokyo, Japan

18 Drawings (3, 10, 11, 18, ~20 February 2012) 340, 400, 480×20cm speculum

KONNAĪ, Reiichi (*Kn*) Ishikawa, Fukushima, Japan

10 Drawings (8, 12, 18, 19 February 2012) 430, 500×30cm SCT

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

10 LRGB Colour + 1 RGB Colour + 9 B Images (8, 9, 12, 14, 18, ~20, 26, 27, 29 February 2012)
28cm SCT @f/70 with a DMK21AF04/DFK21AF04

KOWOLLIK, Silvia (*SKw*) Ludwigsburg, Germany

16 Sets of RGB Images (4, ~7, 12 February 2012) 20cm speculum with a DMK31AF03.AS

LAWRENCE, Pete (*PLw*) Selsey, WS, UK

1 Colour Image (20 February 2012) 36cm SCT @f/67 (with a SKYnyx2-0M)

LEWIS, Martin R (MLw) St. Albans, Hertfordshire, UK

1 Colour Image (26 February 2012) 22cm speculum @f/49 with a DMK21AU618.AS

MELILLO, Frank J (FMI) Holtsville, NY, USA

14 Colour Images (7, 10, 18, 19, 21, 27 February 2012) 25cm SCT with a ToUcam pro II

MINAMI, Masatsugu (Mn) Fukui City Observatory*, Fukui, Japan

13 Drawings (5, 12, 24, 29 February 2012) 400×20cm Goto ED refractor*

MORALES RIVERA, Efrain (EMr) Aguadilla, Puerto Rico

14 Sets of LRGB Images (2, 6, 9, 11, 12, 16, 19, 21,~23, 25,~28 February 2012)
31cm SCT with a DMK21AF04

MORITA, Yukio (Mo) Hatsuka-ichi, Hiroshima, Japan

6 Sets of RGB + 6 LRGB Colour + 6 L Images (4, 9, 11, 15, 29 February 2012)
25cm speculum with a Flea3

MURAKAMI, Masami (Mk) Fujisawa, Kanagawa, Japan

14 Drawings (2, ~4, 9, 10, 18, 19 February 2012) 320×20cm F/8 speculum

NAKAJIMA, Takashi (Nj) Fukui City Observatory*, Fukui, Japan

13 Drawings (5, 12, 24, 29 February 2012) 400×20cm Goto ED refractor*

PARKER, Donald C (DPk) Miami, FL, the USA

5 Set of RGB + 1 IR + 1 UV Images (3, 15, 20, 22 February 2012)
36cm SCT @f/44, 48, 72 with a DMK21AU618.AS

PEACH, Damian A (DPc) Selsey, West Sussex, the UK

4 Sets of RGB + 4 RGB + 2 R + 1 B Images (2, 12, 19, 20, 22, 24 February 2012)
(36cm SCT with a SKYnyx 2-0Mor a Flea3)

PELLIER, Christophe (CPI) Nante, France

5 Sets of RGB + 6 IR + 4 Violet + 3 UV Images (20, 22, 26/27, 29 February 2012)
25cm speculum @f/32 with a PLA-Mx

POUPEAU, Jean-Jacques (Jpp) Essonne, France

7 Sets of RGB + 5 IR + 1 UV Images (11, 19,~22, 27 February 2012)
35cm Cassegrain with a SKYnyx 2-0

ROSOLINA, Michael (MRs) Friars, WV, the USA

2 Colour Drawings (3, 21 February 2012) 340×35cm SCT

SAN EMETERIO SANTOS, Francisco (FEm) Santander, Spain

1 Colour Image (24 February 2012) 25cm SCT with a DMK21 04.AS

SMET, Kris (KSm) Bornem, Belgium

1 Colour Drawing (20 February 2012) 210×30cm Dobsonian

SUSSENBACH, John S (JSb) Houten, The Netherlands

1 Set of Colour Images (19 February 2012) 28cm SCT with a Flea3

TYLER, David (DTy) Flackwell Heath, Bucks, the UK

1 RGB + 6 Colour + 2 B + 2 IR Images (19/20, 25 February 2012) 36cm SCT with a Flea3

WALKER, Sean (SWk) Manchester, NH, the USA

1 Set of RGB + 5 RGB Colour + 1 IR Images (6, 10, 19, 22*, 25* February 2012)
32cm speculum, 36cm SCT (with Don PARKER)* with a DMK21AU618

WARELL, Johan (JWr) Skivarp, Sweden

1 Set of RGB Images (13 February 2012) 22cm speculum @f/17 with a ToUcam pro III

WILLEMS, Freddy (FWI) Waipahu, Hawaii, the USA

7 Sets of RGB + 9 Colour + 11 IR Images (3, 14, 24 February 2012)
36cm SCT with a DMK21AU04.AS, DBK21AU618.AS

♂.....During February the npc apparently quite regressed as is evident if we compare the image at the beginning of the month with the end images. Still the P-ring existed but because of that there occurred a lot of dust condensations. **1) P-ring and the Dirty Residual Cap:** The excellent images by PEACH (*DPc*) on 2 Feb ($\lambda=065^\circ\text{Ls}$) at $\omega=203^\circ\text{W}$ shows the P-ring clearly and MORALES (*EMr*)'s colour composite on the day definitely shows that the off-white inside of the P-ring is rather reddish at $\omega=247^\circ\text{W}$: Already the new snow had been blown out by the descending high pressure air at the pole area. PARKER (*DPk*)'s images on 3 Feb ($\lambda=066^\circ\text{Ls}$) at $\omega=254^\circ\text{W}$ also suggests this fact. See also *EMr*'s images on 9 Feb ($\lambda=068^\circ\text{Ls}$) at $\omega=201^\circ\text{W}$. The residual cap on BUDA (*SBd*) on 12 Feb ($\lambda=070^\circ\text{Ls}$) at $\omega=293^\circ\text{W}$, and on 14 Feb ($\lambda=070^\circ\text{Ls}$) at $\omega=277^\circ\text{W}$ means also the dirty residual cap.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120202/EMr02Feb12.jpg>
<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120214/SBd14Feb12.jpg>

2) Olympia and Dust from Deucalidonius L (I): The images by *EMr* on 11 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=173^\circ\text{W}$ are interesting:

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120211/EMr11Feb12.jpg>

Obviously there aroused dusts at Deucalidonius L, and further outside markings had been affected by the dust and almost they are fallout. This rift was already caught by KOWOLLIK (*SKw*) on 5 Feb ($\lambda=066^\circ\text{Ls}$) at $\omega=171^\circ\text{W}$, 186°W , 192°W , and the eastern half of the npc slightly shadowy. *SKw* also produced a series of images on 6 Feb ($\lambda=067^\circ\text{Ls}$) at $\omega=152^\circ\text{W}$, 162°W , 174°W , and especially at $\omega=174^\circ\text{W}$, she showed Olympia came at the western side. On the same day WALKER (*SWk*) showed that Olympia was over the npc at $\omega=190^\circ\text{W}$. Further on the day *EMr* also showed the aspect at $\omega=225^\circ\text{W}$. On 10 Feb ($\lambda=069^\circ\text{Ls}$), *SWk* at $\omega=161^\circ\text{W}$ and MELILLO (*FMI*) at $\omega=178^\circ\text{W}$ clearly proved the rift associated with Deucalidonius L. The aspect of the expansion fallout of dust outside is visible on the west end of the npc shown by POUPEAU (*JPp*) on 11 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=092^\circ\text{W}$, and by *DPc* on 12 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=086^\circ\text{W}$, 091°W (093°W). Olympia was apparent on the aforementioned *SBd*'s images on 12 Feb and 14 Feb: These show the outside dust layer and also show the western tail of Olympia. The rift of Deucalidonius L was also captured by GORCZYNSKI (*PGc*) on 14 Feb ($\lambda=070^\circ\text{Ls}$) at $\omega=121^\circ\text{W}$, and also on the day WILLEMS (*FWl*) shows Olympia at $\omega=193^\circ\text{W}$ on the day. The rift of Deucalidonius L and the eastern P-ring are conspicuous on *DPk*'s excellent images on 15 Feb ($\lambda=071^\circ\text{Ls}$) at $\omega=130^\circ\text{W}$. The dust expansion to the dark marking (Vastitas Borealis) is also seen on *PGc*'s images on 16 Feb ($\lambda=071^\circ\text{Ls}$) at $\omega=128^\circ\text{W}$, and on *EMr*'s on the same day at $\omega=131^\circ\text{W}$, also on 18 Feb ($\lambda=072^\circ\text{Ls}$) at $\omega=136^\circ\text{W}$. Furthermore to the west of *SBd*'s images on 23 Feb ($\lambda=074^\circ\text{Ls}$) at $\omega=183^\circ\text{W}$ this is seen, as well as on AKUTSU (*Ak*)'s images on 18 Feb ($\lambda=072^\circ\text{Ls}$) at $\omega=227^\circ\text{W}$, 249°W : That is, the expansion should be said wider than expected. Also on the east it is evident on *DPk*'s images on 20 Feb ($\lambda=073^\circ\text{Ls}$) at $\omega=094^\circ\text{W}$. Otherwise it is also seen on the images by *FWl* on 24 Feb ($\lambda=075^\circ\text{Ls}$) at $\omega=112^\circ\text{W}$, 119°W , 128°W , by KUMAMORI (*Km*)'s on 26 Feb ($\lambda=076^\circ\text{Ls}$) at $\omega=158^\circ\text{W}$, on 27 Feb ($\lambda=076^\circ\text{Ls}$) at $\omega=137^\circ\text{W}$, on 29 Feb ($\lambda=077^\circ\text{Ls}$) at $\omega=126^\circ\text{W}$ and so on. **3) Olympia and Dust from Deucalidonius L (II):** From the Oriental, some sets of better images were put forward on 19 Feb ($\lambda=073^\circ\text{Ls}$) by *Km* at $\omega=223^\circ\text{W}$ and by *Ak* at $\omega=231^\circ\text{W}$. On the former, the east side shows the dust from Deucalidonius L and Olympia's outer edge looks to be zigzagged, and at the west side a part of P-ring is quite dark. On the latter the more rotated and the tail of Olympia is more described:

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120219/Km19Feb12.jpg>
<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120219/Ak19Feb12.jpg>

This western part tail must be the one checked by PELLIER (*CPI*) on 20 Feb ($\lambda=073^\circ\text{Ls}$) at $\omega=007^\circ\text{W}$. See also GHOMIZADEH (*SGh*)'s image on 21 Feb ($\lambda=074^\circ\text{Ls}$) at $\omega=283^\circ\text{W}$. **4) Fallout of the Dust to the Eastern-North of M Acidalium:** Already *FWl* on 3 Feb ($\lambda=066^\circ\text{Ls}$) at $\omega=005^\circ\text{W}$ and MORITA (*Mo*) on 4

Feb ($\lambda=066^\circ\text{Ls}$) at $\omega=014^\circ\text{W}$ showed that the expansion of the lower dust or fallout are seen getting over P-ring at the area to the EN of M Acidaium. LAWRENCE (*PLw*)'s images on 20 Feb ($\lambda=073^\circ\text{Ls}$) at $\omega=359^\circ\text{W}$ show a fallout which is considered to be related with the disturbance of the outlier of the npc. Compared with the beginning of the month, the outlier of the npc has been smaller and it looks something to protrude from the npc to Hyperboreus L. This is visible on other images on 20 Feb, but we hurry to the images on 21 Feb ($\lambda=073^\circ\text{Ls}$). It was seen on FERNÁNDEZ (*FFn*)'s at $\omega=359^\circ\text{W}$, *JPp*'s at $\omega=017^\circ\text{W}$, DELCROIX (*MDc*)'s at $\omega=029^\circ\text{W}$, and on *PGc*'s at $\omega=056^\circ\text{W}$ at the eastern side. On 22 Feb ($\lambda=074^\circ\text{Ls}$), FUMEGA (*CFm*)'s at $\omega=345^\circ\text{W}$, *JPp*'s at $\omega=348^\circ\text{W}$, 005°W , *CPI*'s at $\omega=350^\circ\text{W}$, and *DPc*'s at $\omega=024^\circ\text{W}$ show this. Similar situation can be seen on some excellent images on 24 Feb ($\lambda=075^\circ\text{Ls}$), 25 Feb ($\lambda=075^\circ\text{Ls}$), and 27 Feb ($\lambda=076^\circ\text{Ls}$). *EMr*'s images on 28 Feb ($\lambda=076^\circ\text{Ls}$) at $\omega=348^\circ\text{W}$ also show that something cuts P-ring or Hyperboreus L. **5) A Protrusion from the NPC to Hyperboreus L:** We don't know the relation with abovementioned case, but a whitish protrusion from the npc was observed by *Km* and *Mo* on 9 Feb ($\lambda=068^\circ\text{Ls}$) at $\omega=321^\circ\text{W}$ and at $\omega=334^\circ\text{W}$ respectively. *Mo*'s case on 11 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=324^\circ\text{W}$ looks to be related with the above mentioned dust expansion case. **6) Impressive Dust at and from Chasma Boreale:** On 22 Feb ($\lambda=074^\circ\text{Ls}$), *DPc*'s images at $\omega=024^\circ\text{W}$, and furthermore *DPk*'s images at $\omega=036^\circ\text{W}$ (the latter reached on 2 March) are both excellent and prove that the Chasma Boreale faintly seen and full of dust at the dent. Furthermore the dust looks to extend outside. This is also seen on the image by *SWk* & *DPk* (*SWk* processed) which reached earlier. Concerning this, the preceding image set by *EMr* on 21 Feb ($\lambda=073^\circ\text{Ls}$) at $\omega=088^\circ\text{W}$ is very interesting, which, since its rotation angle is different, shows that the disturbance at Deucalidonium L is clearly visible at the western side npc. On 23 Feb ($\lambda=074^\circ\text{Ls}$) at $\omega=047^\circ\text{W}$, *EMr* shows the middle area. The dust from Chasma Boreale flows across Hyperboreus L and extend to M Acidalium. FLANAGAN (*WFI*) took some nice pictures of the area on 26 Feb ($\lambda=076^\circ\text{Ls}$) at $\omega=041^\circ\text{W}$, 051°W : The dust at Chasma Boreale remains the same and shows a dust fine streak inside the npc as well as the rift related with Deucalidonium L. The dust near at M Acidalium is lower (or fallout) and covers the whole area. On the same day *EMr* shows at $\omega=014^\circ\text{W}$ that M Acidalium is quite brownish. There seems at the opposite side near Utopia also a brownish expansion is seen just like a fallout, and hence it is highly possible there occurs polar dusts which arise from the special areas like Deucalidonium L and Chasma Boreale. **7) Alba and Olympus Montes:** The phenomenon of the covering the summits of Montes is quite popular and everybody caught by B, so that here we skip the details but we should mention that *SKw* worked by the use of a 20cm spec to show the evening clouds of Montes on 7 Feb ($\lambda=067^\circ\text{Ls}$) at $\omega=132^\circ\text{W}$, 140°W , 151°W , 162°W , and on 12 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=128^\circ\text{W}$, where the clouded Tharsis three ridges are included. However special mention must be given to *EMr*'s image on 12 Feb ($\lambda=069^\circ\text{Ls}$) at $\omega=159^\circ\text{W}$ that the evening cloud over Asraeus Mons is thicker than the others. There are other images but among them *PGc*'s on 14 Feb ($\lambda=070^\circ\text{Ls}$) at $\omega=121^\circ\text{W}$ show that Olympus Mons is near the noon (though not necessarily unique). *FMI* tried to produce a successive series of images of clouds on 19 Feb ($\lambda=073^\circ\text{Ls}$). We should pay attention to *EMr*'s on the same day at $\omega=090^\circ\text{W}$:

<http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/120219/EMr19Feb12.jpg>

where Olympus Mons stays on the morning side inside a roundish mist poking out its dark caldera: The caldera of Asraeus Mons is followed by a mist also. It is interesting to know how these could combine with the afternoon clouds, but images are lacking. **8) Elysium:** There are visual observations of Elysium by KONNAĪ (*Kn*) on 19 Feb ($\lambda=073^\circ\text{Ls}$) at $\omega=241^\circ\text{W}$ et al, and he has high views about the variations of Elysium, and hence we shall expect him to summarise the behaviours of Elysium this season in CMO/ISMO Note after the season. **9) Syrtis Mj at the Morning and the Evening Side:** There are lots of

images which recorded the bluish tint of Syrtis Mj in February (after the *WFI* work on 28 Jan ($\lambda=063^\circ\text{Ls}$), and on 30 Jan ($\lambda=064^\circ\text{Ls}$) as reported in the preceding issue). These do not imply that any cloud and Syrtis Mj itself are bluish: According to *Kn*'s words it should be said "Bluish optical tint of peripheral (white) mist/cloud standing out against the dark background of Syrtis Mj." *Kn* and *Mk* visually saw the phenomenon faintly on 8 Feb ($\lambda=068^\circ\text{Ls}$) at $\omega=320^\circ\text{W}$, and on 9 Feb ($\lambda=068^\circ\text{Ls}$) at $\omega=329^\circ\text{W}$ respectively.

(M MINAMI & M MURAKAMI)

Letters to the Editor

●.....**Subject: Frosty Argyre and Galle**
Received: Thu 02 Feb 2012 16:32 JST

Dear all areoholics, It's already late autumn in the Martian southern hemisphere, and some largest craters in high southern latitudes are expected to be frosted.

On the image taken by Teruaki KUMAMORI (*Km*) on 31 Jan 2012 15:41GMT ($\lambda=064^\circ\text{Ls}$, $\omega=045^\circ\text{W}$, $\varphi=23^\circ\text{N}$, $\iota=23^\circ$), I noticed that frosty Argyre (over 600km across super-crater) and also frosted easterly adjoining 230km in diameter crater Galle are just about to be discernable near the southern end of the image:

I am attaching here an HST image on 25 Feb 1995 ($\lambda=064^\circ\text{Ls}$, $\varphi=18^\circ\text{N}$, $\iota=11^\circ$), the season of which is just the same as that of *Km*'s image. You can clearly see the frosty Argyre and Galle (yellow arrows) collectively look like "an easterly lying snowman" or "a frosty turtle heading eastward".

CMO/ISMO colleagues' Big Guns, I believe, will quite easily get its images soon. And, if I have a chance, I want to catch the object visually, a bit challenging.

Besides its meteorological importance, it may give a hint of the apparent sizes of the Martian larger craters as seen from the Earth... YES, I'm still adhering to the earth-based visual detection of the shadowed relief images of Martian craters! Any objections? Good Seeing with Excellent Scopes!

Reiichi KONNAI (Fukushima, JAPAN)

(註) We also received from him on 9, 14, 19, 17, 21, 25, 29 Feb.

●.....**Subject: Mars 2012 Jan 31**
Received: Fri 03 Feb 2012 06:32 JST

Dear colleagues, Please accept my latest Mars image. Winter has finally arrived, snowy and cold here!

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120131/JWr31Jan12.jpg>
Best regards,

Johan WARELL (Skivarp, SWEDEN)

(註) We also received from him on 15 Feb.

●.....**Subject: Re: Happy Birthday!**
Received: Sat 04 Feb 2012 05:27 JST

Hi Masatsugu, Thank you for your kind note and birthday wishes. I do miss Maureen -- especially since she was a great cook and made my favorites for my birthday. My children and grandchildren did help me celebrate and then I drove across the state to spend a few days with Tom Dobbins and his wife. Tom now lives in Florida. Naturally it was cloudy, so we couldn't observe, but made up for it by eating! Tom's wife is also an excellent cook. If I keep on like this I'll get even fatter. Actually I have lost 20 pounds since September and intend to lose much more.

I agree that I hope that we will be friends for MANY more years! Best,

○.....**Subject: Mars 22 February**
Received: Fri 02 Mar 2012 12:05 JST

Hi All, I have attached RGB Mars images taken on 22 February

by Sean Walker and me. The seeing was very good despite the low altitude. Shot at *f*/72 -- we were experimentally pushing the envelope!

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120222/DPk22Feb12.jpg>

Note the NPC rift. It lies in roughly the same position as classical reports of the Rima Tenuis. There is also dust along the following edge of the cap and hazes crossing Chryse, giving the appearance of a weak ECB. Best

Don PARKER (Coral Gables, FL)

(註) We also received from him on 4, 20, 21 Feb.

●.....**Subject: Mars - February 2nd, 06:07ut**
Received: Sat 04 Feb 2012 07:42 JST

Hi Mr. Minami, I send you my most recent session under favourable conditions from February 2nd, Clear Skies.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120202/EMr02Feb12.jpg>

Efrain MORALES RIVERA (Aguadilla, PUERTO RICO)

(註) We also received on 11, 13, 14, 18, 21, 25, 26, 28, 29 Feb.

●.....**Subject: Mars observation 03 February 2012**
Received: Sun 05 Feb 2012 12:59 JST

Hello, Finally after two months, please find attached another sketch of the Red Planet.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120203/MRs03Feb12.jpg>

Things appear to be pretty quiet on this side of Mars. Notes are with the sketch. Thank you,

Michael ROSOLINA (Friars Hill, WV)

(註) We also received on 22 Feb

●.....**Subject: Mars images (February 22nd, 2012.)**
Received: Thu 23 Feb 2012 19:54 JST

Hi all,

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120222/DPc22Feb12.jpg>

I waited up late as clear sky was approaching on the satellite under a favourable south westerly wind. Luckily the cloud cleared just in time while Mars was still at a reasonable altitude. Quite pleased I did wait it out as I caught my best set of images so far this apparition. Chryse/Acidaliium central with bright limb clouds:

Best Wishes

Damian PEACH (Selsey, the UK)

(註) We also received from him on 6, 15, 20, 21 Feb, 2 Mar

●.....**Subject: Mars - February 03, 2012 - Two complete sets**
Received: Mon 06 Feb 2012 19:32 JST

My two complete sets from February 03, 2012; Taken 14:49:24 UTC and 15:50:00 - Also combination with different filters. Seeing was average and a little fog at the time.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120203/FW103Feb12.jpg>

Freddy WILLEMS (Waipahu, HI, the US)

(註) We also received twice on 21, 28 Feb

●.....**Subject: Mars February 6th**
Received: Mon 06 Feb 2012 23:34 JST

Poor seeing and transparency, but still managed one fairly good run. Clouds over Olympus Mons, and a fainter one over Elysium.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120206/SWk06Feb12.jpg>

Sean WALKER (Imaging Editor, S&T)

(註) We also received from him on 10, 20, 29 Feb

●.....**Subject: Mars: February 7, 2012**
Received: Wed 08 Feb 2012 15:44 JST

Hi - I have attached my latest image of Mars February 7, 2012 at 6:26 UT to be posted.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120207/FMI07Feb12.jpg>

There are some orographic clouds over Olympus Mons along the sunset limb. It is much more apparently in B light than in red.

Frank J MELILLO (Holtsville, NY)

(註) We also received on 11, 19, 20, 22, 28 Feb

●.....**Subject: Mars 2012/02/08-Kumamori**
Received: Fri 10 Feb 2012 20:57 JST

Masatsugu MINAMI-sama: The sky was a bit more stable than yesterday, but still not sufficiently stable. Hellas looked bright like a protruding cloud. Best

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120209/Km09Feb12.jpg>

Teruaki KUMAMORI (Sakai-Osaka, JAPAN)

(註) We received from him on 8,13,15,19,~21,27,28 Feb, 1 Mar.

●.....**Subject: Mars Drawings, 10 Feb 12**
Received: Sat 11 Feb 2012 11:32 JST

Dear Mr MURAKAMI, These are 5 drawings from this morning:
<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120210/Kz10Feb12.jpg>

Ichiro KOHZAKI (Higashi-Kurume, Tokyo, JAPAN)

(註) We also received on 12 Feb, 19 Feb, 21 Feb,

●.....**Subject: Mars 2012/02/11**
Received: Sat 11 Feb 2012 17:03 JST

Hello, Here is Mars on 2012/02/11.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120211/JPp11Feb12.jpg>

The seeing and the transparency were average. T = -8.5°C.

Regards

Jean-Jacques POUPEAU (Essonne, FRANCE)

(註) We also received from him on 19, 20, 21, 22, 27 Feb

●.....**Subject: Mars 2012-02-04**
Received: Sun 12 Feb 2012 05:10 JST

Hi all, here my marsimages from 2012-02-04. Icy temperatures made some trouble with the cables of my Laptop, its monitor and the powersupply.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120204/SKw04Feb12.png>

I found it astonishing, how clear the clouds over Tharsis region where they were detected. CS

Silvia KOWOLLIK (Ludwigsburg, GERMANY)

(註) We received other four emails on 12 Feb, and also on 17 Feb

●.....**Subject: mars 12 feb**
Received: Mon 13 Feb 2012 10:06 JST

Hi: After 2 weeks I had very bad seeing & atmosphere, I can not say about that, PLS see them. Best Wishes

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120212/SGh12Feb12.jpg>

Sadegh GHOMIZADEH (Tehran, IRAN)

(註) We received also from him on 19, 23, 26, 28 Feb, 1 Mar

●.....**Subject: Mars this morning**
Received: Mon 13 Feb 2012 11:10 JST

Hello everyone, I raced the clouds this morning and won. Managed to capture one RGB set with less than 10 seconds to spare before the clouds rolled in. Seeing was average.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120212/SBd12Feb12.jpg>

Best regards,

Stefan BUDA (Melbourne, AUSTRALIA)

(註) We have also received on 15 Feb, 24 Feb, 26 Feb

●.....**Subject: Mars on 2012-02-18**
Received: Sun 19 Feb 2012 20:28 JST

Hello again. In Spain and Galicia particularly have a continuous

season of bad seeing. This image is the best I could do so far.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120218/CFm18Feb12.jpg>

Best regards.

Camilo FUMEGA UCHA (Galicia, SPAIN)

(註) We also received on 20 Feb, 22 Feb, 23 Feb, 1 Mar

●.....**Subject: Mars images - February 14, 16 and 18**
Received: Sun 19 Feb 2012 22:32 JST

Gentlemen, Attached are sets of images from February 14, 16 and 18. Seeing was from poor to below average on all three nights, with the best seeing on Feb. 18.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120218/PGc18Feb12.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120216/PGc16Feb12.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120214/PGc14Feb12.jpg>

An interesting thing to note is that while clouds are intense over Olympus and Ascræus, they are weaker over Pavonis and Arsia.

Regards,

Peter GORCZYNSKI (Oxford, Connecticut, the USA)

(註) We also received on 24 Feb, 27 Feb, 1 Mar

●.....**Subject: Mo4 9 11 15Feb 12**
Received: Sun 19 Feb 2012 23:58 JST

I am sorry I am so late. A bit the seeing has improved and the angular diameter increased so that I think the images have become better.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120215/Mo15Feb12.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120211/Mo11Feb12.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120209/Mo09Feb12.jpg>

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120204/Mo04Feb12.jpg>

Best regards,

Yukio MORITA (Hiroshima, JAPAN)

(註) We also received from him on 5 Feb.

●.....**Subject: Mars 19 February 2012**
Received: Tue 21 Feb 2012 04:44 JST

Last night I made these images of Mars. Seeing was not good as usual here in the Low Countries. There is a bright band of fog over the equatorial region and clouds over Syrtis Major.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120219/JSb19Feb12.jpg>

Kind regards,

John SUSSENBACH (Houten, the NETHERLANDS)

●.....**Subject: Mars Image - Feb 20th 2012 00:03 UT**
Received: Tue 21 Feb 2012 06:10 JST

Hi all, Like Damian, I managed to get an image in just before the 'unexpected' clouds rolled in. Seeing was patchy with short good periods nestled inside longer rather blurred ones. Just as the clouds pulled closer, so the image of Mars started translational jumping - a good indication to give up!

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120220/PLw20Feb12.jpg>

Best regards,

Pete LAWRENCE (Selsey, the UK)

●.....**Subject: Mars images, 20th february 2012**
Received: Tue 21 Feb 2012 06:37 JST

Hi all, Here my first images of the season. I am now observing from a small garden and it's much easier to me to observe now.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120220/CPI20Feb12.jpg>

I have been able to get a violet and an UV images as well. Morning mists are very bright. Best wishes,

Christophe PELLIER (Nantes, FRANCE)

(註) We had also received from him twice on 20 Feb, Report on 23 Feb, 28 Feb, 2 Mar

●.....**Subject: Mars 19-20thFeb 2012 Dust storm ?**
Received: Wed 22 Feb 2012 00:57 JST

Hi Guys, I was happily processing my IR sG B of Mars from the 20th and jumped to the very last one taken at 01:24 ut, in proper RGB on slightly higher mag, and was surprised to see the top left of the image sporting a yellow "comb over". Compared to the attached 2005 image there does appear to be some obscuration. It occurred to me that the earlier IR dominated images had "seen

through / ignored" this thin dust? Worth keeping an eye open.
<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120219/DTy19Feb12.jpg>

Best wishes

Dave TYLER (Bucks, the UK)

(註) We also received other images on 22 Feb, 1 Mar.

●.....*Subject: Mars 20120221 00:40 GMT*
Received: Wed 22 Feb 2012 05:54 JST

Hello, I send to you a new picture that I obtained the night, 21th february of 2012. 00:40 GMT

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120221/FFn21Feb12.jpg>

Clouds/mists?? Yours sincerely

Francisco José FERNÁNDEZ GOMÉZ (Ourense, SPAIN)

(註) We also received on 24 Feb, 1 Mar, 2 Mar

●.....*Subject: Mars images Ak18Feb12*
Received: Wed 22 Feb 2012 06:53 JST

Dear Mr. Minami: I attach Mars images on 18 February 2012. Seeing was good. It continued cloudy or rainy weather in February. The trouble of the Mars images does not still improve.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120218/Ak18Feb12.jpg>

Tomio AKUTSU (Cebu, the PHILIPPINES)

●.....*Subject: Back from Paris*
Received: Sun 26 Feb 2012 02:00 JST

Dear Masatsugu, Just back from Paris, and pleased to be greeted on my return with the latest CMO/ISMO and the marvelous article by Francis Oger on the Sorbonne Observatory.

Just last Sunday, Francis, his wife Yoko, my wife Debb and I made a pilgrimage to Juvisy—though the place is overall a depressing ruin, as you recall, for reasons Francis can best explain, it has at least now a working telescope in its cupola, and we managed to get some good observations of Venus, Jupiter and—above all—our chef d'oeuvre, Mars. (The latter was rising over the lawn of Flammarion's estate—it was really splendidly evocative of the imagination.) Francis even managed to get us to the train station—with about two seconds to spare—for the train from Juvisy back to the area of Paris where we were staying (the other side of Paris!). I shall long remember this evening as a highlight of a many-splendored trip.

In due course, I hope that Francis and I can write up the experience for CMO. Best

Bill SHEEHAN (Willmar, MN)

●.....*Subject: 4 planets during the Feb. 20 to 21 2012 night*
Received: Sun 26 Feb 2012 02:15 JST

...After a few hours sleep, my second Mars for this apparition (first one was 5 months ago)!... Sincerely,

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120221/MDc21Feb12.jpg>

Marc DELCROIX (Tournefeuille, FRANCE)

●.....*Subject: RE: How are you?*
Received: Sun 26 Feb 2012 06:04 JST

Dear Masatsugu, Thanks for the note. I'm doing fine but the weather here has not been cooperating. It has been cloudy virtually every night since I took my last images in January. Quite often it would clear during the day but then cloud over by mid-night before Mars rose above the tress in my backyard. It's cloudy now but the forecast is for skies to clear around midnight (a nice change). I plan to try to catch Mars tonight if the weather cooperates. Hopefully I will have some images to send to you soon!

Best wishes,

Bill FLANAGAN (Houston, TX)

(註) We received his report on 28 Feb

●.....*Subject: mars sketch 20/02/12*
Received: Mon 27 Feb 2012 05:45 JST

Hi, here is my sketch from february 20: Greetings,

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120220/KSm20Feb12.jpg>

Kris SMET (Bornem, BELGIUM)

●.....*Subject: Mars on 24th february*
Received: Mon 27 Feb 2012 06:54 JST

Hi everyone; I'd been much time no taking Mars photos. I think my last image was sent in 2007. I send you this one taken past friday. regards

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120224/FEEm24Feb12.jpg>

Francisco SAN EMETERIO SANTOS (Santander, SPAIN)

●.....*Subject: Mars 25th February*
Received: Tue 28 Feb 2012 04:36 JST

Here is an image from the evening of 25th February. Seeing conditions were poor, Syrtis Major well presented on the meridian. Slight hint of a cloud over Elysium.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120225/PEd25Feb12.jpg>
 regards

Peter EDWARDS (Horsham, West Sussex, the UK)

●.....*Subject: Don Bates Mars Image 02/26/2012*
Received: Tue 28 Feb 2012 08:16 JST

Haikei M Minami, M Murakami: Ogenki de irasshaimasu ka.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120226/DBt26Feb12.jpg>

Sorry for my long absence from the CMO Mars web site! I have recently done some maintenance on my homemade 250mm Reflector, and now have it back in top shape. (Now if I could just find that darn IR filter!)

I have enclosed my latest Mars image. I will try to take more when the weather clears here in Houston. I did not expect much from this apparition since Mars is still so far away, but was somewhat surprised at what I could see in the eyepiece. The seeing has been poor in southeast Texas, and it has been raining here lately. (Although the severe drought we suffered last summer seems to be lifting). 250mm L @ f/25, ToUcam Pro (no IR), Haze on limb near Syrtis Major. M Acidalium area dark and easily visible.

I wish you clear skies and steady seeing, *Keigu*,

Donald R BATES (Houston, TX)

●.....*Subject: Re: Fw: Back from Paris*
Received: Tue 28 Feb 2012 16:56 JST

Dear Masatsugu, We received safely No 394 of CMO with the text on Sorbonne Observatory. We also found it on the internet site of CMO/ISMO.

It was our pleasure to have the visit of Deborah and Bill Sheehan just for the beginning of the observations in Juvisy. Presently, I am waiting for good weather to improve the polar alignment of the instrument. With best wishes.

Yoko and Francis OGER (nr Paris, FRANCE)

●.....*Subject: FW: Mars Observation*
Received: Wed 29 Feb 2012 13:30 JST

To: Masatsugu Minami, I am a member of the A.L.P.O. and active mainly in the Lunar and Mars sections of that organization.

Don Parker of the A.L.P.O. has asked me to forward the attached Mars observing report to you. I'll be glad to copy you on my future Mars observing reports should you wish to receive them.

Please let me know either way. Thank you.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120225/JA125Feb12.jpg>

Regards,

Jay ALBERT (Lake Worth, FL)

●.....*Subject: Mars from early hours of 26th Feb 2012*
Received: Fri 02 Mar 2012 06:28 JST

Hi, First Mars of this apparition late last Sat. night in very juddery seeing.

<http://www.hida.kyoto-u.ac.jp/~cmo/cmoms/2011/120226/MLw26Feb12.jpg>
 Hopefully steadier stuff to come. Regards,

Martin R LEWIS (St. Albans, the UK)

☆☆☆

Ephemeris for the Observations of the 2011/12 Mars. IX

April 2012

Masami MURAKAMI

As a sequel to the preceding list of the Ephemeris for the physical observations of Mars, we here list up the necessary elements of the Ephemeris for the period from 29 March 2012 to 3 May 2012: The data are listed for every day at 00:00 GMT (not TDT). The symbols 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 Apparent 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 (denoted D). The data here are basically based on *The Astronomical Almanac for the Year 2012*.

Date (00:00GMT)	ω	ϕ	λ	δ	ι	Π	D
29 March 2012	026.28°W	22.2°N	089.48°Ls	12.82"	19.4°	13.3°	+12°45'
30 March 2012	017.39°W	22.2°N	089.92°Ls	12.74"	20.1°	13.2°	+12°47'
31 March 2012	008.48°W	22.2°N	090.36°Ls	12.66"	20.7°	13.0°	+12°49'
01 April 2012	359.55°W	22.2°N	090.81°Ls	12.57"	21.3°	12.9°	+12°50'
02 April 2012	350.61°W	22.3°N	091.25°Ls	12.49"	21.9°	12.8°	+12°52'
03 April 2012	341.66°W	22.3°N	091.69°Ls	12.40"	22.5°	12.7°	+12°52'
04 April 2012	332.69°W	22.3°N	092.13°Ls	12.31"	23.1°	12.6°	+12°53'
05 April 2012	323.71°W	22.3°N	092.58°Ls	12.22"	23.6°	12.6°	+12°53'
06 April 2012	314.72°W	22.4°N	093.02°Ls	12.13"	24.2°	12.5°	+12°53'
07 April 2012	305.71°W	22.4°N	093.46°Ls	12.04"	24.7°	12.4°	+12°53'
08 April 2012	296.69°W	22.4°N	093.91°Ls	11.95"	25.2°	12.4°	+12°53'
09 April 2012	287.65°W	22.4°N	094.35°Ls	11.86"	25.7°	12.3°	+12°52'
10 April 2012	278.60°W	22.5°N	094.80°Ls	11.77"	26.2°	12.3°	+12°51'
11 April 2012	269.53°W	22.5°N	095.24°Ls	11.68"	26.7°	12.2°	+12°49'
12 April 2012	260.46°W	22.5°N	095.69°Ls	11.59"	27.2°	12.2°	+12°48'
13 April 2012	251.36°W	22.6°N	096.13°Ls	11.50"	27.7°	12.2°	+12°46'
14 April 2012	242.26°W	22.6°N	096.58°Ls	11.41"	28.1°	12.2°	+12°43'
15 April 2012	233.14°W	22.7°N	097.02°Ls	11.32"	28.6°	12.2°	+12°41'
16 April 2012	224.01°W	22.7°N	097.47°Ls	11.23"	29.0°	12.2°	+12°38'
17 April 2012	214.86°W	22.8°N	097.91°Ls	11.14"	29.4°	12.2°	+12°35'
18 April 2012	205.71°W	22.8°N	098.36°Ls	11.05"	29.8°	12.2°	+12°32'
19 April 2012	196.54°W	22.9°N	098.80°Ls	10.96"	30.2°	12.2°	+12°29'
20 April 2012	187.35°W	22.9°N	099.25°Ls	10.87"	30.6°	12.3°	+12°25'
21 April 2012	178.16°W	23.0°N	099.70°Ls	10.78"	31.0°	12.3°	+12°21'
22 April 2012	168.95°W	23.0°N	100.14°Ls	10.69"	31.3°	12.3°	+12°17'
23 April 2012	159.73°W	23.1°N	100.59°Ls	10.60"	31.7°	12.4°	+12°13'
24 April 2012	150.50°W	23.1°N	101.04°Ls	10.52"	32.0°	12.5°	+12°08'
25 April 2012	141.25°W	23.2°N	101.49°Ls	10.43"	32.4°	12.5°	+12°03'
26 April 2012	132.00°W	23.2°N	101.94°Ls	10.35"	32.7°	12.6°	+11°58'
27 April 2012	122.73°W	23.3°N	102.39°Ls	10.26"	33.0°	12.7°	+11°53'
28 April 2012	113.45°W	23.4°N	102.84°Ls	10.18"	33.3°	12.8°	+11°47'
29 April 2012	104.16°W	23.4°N	103.29°Ls	10.10"	33.6°	12.9°	+11°42'
30 April 2012	094.86°W	23.5°N	103.74°Ls	10.01"	33.8°	13.0°	+11°36'
01 May 2012	085.55°W	23.6°N	104.19°Ls	9.93"	34.1°	13.1°	+11°30'
02 May 2012	076.23°W	23.6°N	104.64°Ls	9.85"	34.4°	13.2°	+11°24'
03 May 2012	066.90°W	23.7°N	105.10°Ls	9.78"	34.6°	13.3°	+11°17'

TEN YEARS AGO (203)

--- CMO #258 (25 March 2002) pp3275~3276---

<http://www.hida.kyoto-u.ac.jp/~cmo/cmomn2/cmo258/index.htm>

This issue begins with our encounter on 24 Mar 2002 with Jeff BEISH (JBs) who visited Japan to meet his son's family, and the detail was announced to be in the next issue.

The 21st Report treated the observation made in the second half of February and the first half of March. Contributions were given by 6 persons domestically and 3 Observers from abroad (a total of 54 observations and 5 ones respectively). We further received 8 colour photos from ISHIBASHI (Is). The planet Mars in March was in Psc while the sunset became rapid, and furthermore δ was under 5" which implied the season was ending. The season was from $\lambda = 328^\circ\text{Ls}$ to 342°Ls : However PEACH (DPc) captured the tiny spc on his images. It was announced MINAMI (Mn) was just retiring from Kyoto University at the end of March. 2001 Mars CMO Note (4) was about "Dædalia-Syria Planum in Mid-July 2001":

<http://www.hida.kyoto-u.ac.jp/~cmo/cmomn2/258Note4/index.htm>

LtE recorded the emails from SHERROD (AR), GRAFTON (TX), Dave MOORE (AZ), JBs (FL), DPc (the UK), Don PARKER (FL), SHEEHAN (MN), OGER (France), COLVILLE (Canada) and domestically from KUMAMORI, Is, NAGAÏ, HORIKAWA, Ken SATO, MORITA, AKUTSU and ISHADOH. MURAKAMI (Mk)'s emails also cited at the end.

TUNEMACHI's 17th column was about "Cc". She talked about her dog Jj who died one year before: In future by the use of cloning of pets, one can gain Cc of his or her pet, but TSUNEMACHI said that it must be impossible to recover the irreplaceable time when they spent with their pets. Finally Director's Reports #11 was recorded:

http://www.hida.kyoto-u.ac.jp/~cmo/cmo/ds2001/ds/d_repo2.html

TYA#079 dealt with CMO#115 (25 March 1992): Mars twenty years ago stayed in the morning sky and no observation yet. This issue shows at the top "SOMETHING OLD (4)" where Roy CERRETA (Teramo, Italy) wrote about Vincenzo CERULLI (1859~1927). 1988 CMO Note (17) was about "On the variation of intensity inside the spc in 1986 and 1988." Mn wrote about "To A New Synthesis" instead of Analysis. (Mk & Mn)

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東京天文学会 『火星通信』 since 1986
COMMUNICATIONS IN
MARS
No. **258**
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OBSERVATIONS
Jeff D BEISH, ALPO Mars Section, visited Japan and kindly gave an interesting talk to the CMO Members on 24 March at Yokohama. His lecture was concerned with a computational result (by JDB and Jim DeYOUNG) on the closest approaches during a period of 200,000 years centered on JD 2452200.5 (JDB's birthday on 17 October 2001). The story amazingly shows not only the fact that the 2003 opposition (the apparent diameter being 25.11 seconds of arc at maximum) is the first closest approach ever since the beginning of the AD (as proved by J. MERZ), but also that the preceding similar closest approach occurred in the year -57,537! (with an apparent diameter 25.14 seconds of arc). His talk also suggested that in the year -79,241 the apparent diameter of the planet was 26.16 seconds of arc, and in the future we will have another occasion in the year 25,695 where the apparent diameter grows up to 26.04 seconds of arc! The results are not yet published, and so we were the first to hear... Our encounter shall be reported in detail later...
ALPOのジエフェリイ・ベッシュ氏から地球来日の報告(佐藤隆) 藤原ひとしと重信 かつら、相沢実とを招き、三月24日で地球まで約四億四千万キロになった、火星は、ベッシュ氏の親子が厚木基地勤務で、両方に便利会場として選ばれた。急ぎごとく関東地方の方のみにemailで要を付けた。最終的に、中島孝正氏(佐藤隆)、石橋芳夫、村上正彦、菅原謙雄、坂井芳夫が参加し、加賀も出て来た。厚木から厚木駅構内まで集合し、MAG2のアメリカン・レストランで懇談。次いで同じく同所(高層階)の高級ホテルで宴会。2003年の火星接近を位置づけると上記の報告面白い講演を聴いた。そのあと和立亭少平のワンルームへ行き、広瀬洋治氏の最新発見のネットゆびをみんがで見て、最後は藤原中継所へ帰って来られた。親子で観望会と一緒に、和立亭の焼しりー日であった。詳しくは次號で。(Mk)

International Society of the Mars Observers (ISMO)

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CMO #395/ ISMO #21 (25 March 2012)

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