

MARS

No. 338

25 November 2007

OBSERVATIONS

Published by the OAA Mars Section

CMO 2007/2008 Mars Report #09

OAA Mars Section

As the opposition month is around the corner, the apparent diameter δ has much grown. This time we deal with the period made during the period

from 16 October ($\lambda=331^\circ\text{Ls}$) to 15 November ($\lambda=348^\circ\text{Ls}$)

in which δ went up from 10.8" to 13.7". The phase angle ι much decreased from 40° to 29° . The central latitude ϕ was around $6^\circ\text{N} \sim 7^\circ\text{N}$; the tilt of the north pole was most toward to us around 9 Nov. The season is just before the northern spring equinox, and the north polar hood (nph) was active. The apparent declination D was 24.5°N on 15 November.

♂..... 最接近の月を翌月に控え視直径 δ も大きくなってきた。今回は**16Oct($\lambda=331^\circ\text{Ls}$)**から**15Nov($\lambda=348^\circ\text{Ls}$)**迄を扱うが、 δ は10.8"から13.7"に伸びている。位相角 ι は 40° から 29° に急速に落ちた。中央緯度 ϕ は 6°N から 7°N 、9Nov頃に最大になっている。季節は北半球の春分前で愈々北極雲が盛んであった。視赤緯 D は16Novで 24.5°N であった。

♂..... The observations we received with thanks are as follows. This time a total of 44 observers sent us their observations. 今回の報告は次の様である。今回も入れ替わりはあるが44名となった。

ADELAAR, Jan ヤン・アデラール (JAd) 尼徳蘭 Arnhem, Nederland

3 Sets of RGB + 3 RGB CCD Images (22, 31 October; 6, 15 November 2007)
f/45, 50 \times 23cm SCT with a DMK21AF

AKUTSU, Tomio 阿久津 富夫 (Ak) 菲律賓 Cebu, the Philippines

14 Sets of RGB CCD + 13 IR Images (20, 21, 24 October; 6, 9, 10*, 14 November 2007)
f/33 \times 36cm SCT, f/28 \times 28cm SCT* with a DMK21AF04

ALLEN, Ethan T イーサン・アッレン (EAl) 加利福尼亚 Sebastopol, CA, USA

3 Sets of RGB + 6 IR CCD Images (23, 24 October; 4 November 2007)
f/41, 46 \times 30cm speculum with a SKYnyx 2-0M

ARDITTI, David デイヴィッド・アーディッチ (DAr) 英國 Stag Lane, Edgware, UK

22 Sets of CCD Images (18, ~21, 31 October; 4, 5, 12, 15 November 2007)
36cm SCT with a SKYnyx 2-0

ASADA, Tadashi 淺田 正 (As) 福岡・宗像 Munakata, Fukuoka, Japan

8 Sets of CCD Images (21, 23, 30 October; 14 November 2007) 30cm SCT with a Lu075M

BATES, Donald R ドン・ベーツ (DBt) 徳克薩斯・休斯敦 Houston, TX, USA

1 Colour CCD Image (20 October 2007) f/30 \times 25cm speculum with a ToUcam Pro

BOSMAN, Richard リシャルト・ボズマン (RBs) 尼徳蘭 Enschede, Nederland

3 Set of RGB + 1 B CCD Images (20, 22 October; 14 November 2007)
f/50 \times 28cm SCT with an ATK-2HS

- CASQUINHA, Paulo** パウロ・カスキニャ (*PCq*) 葡萄牙, República Portuguesa
 22 Sets of RGB + 2 R + 11 IR CCD Images
 (16, 17, 20, 21, 23, 25, 30 October; 1, ~ 5, 7, 8, 11, 12 November 2007)
f/33, 44, 66@36cm SCT with a SKYnyx 2-0M
- CHAVEZ, Rolando** ロランド・チャヴェス (*RCv*) 喬治亞 Powder Springs, GA, USA
 1 Set of RGB CCD Images (3 November 2007) *f*/36@32cm spec
- DELCROIX, Marc** マルク・デルクロア (*MDc*) 法國 Tournefeuille, France
 1 Set of RGB + 2 IR CCD Images (22 October; 2 November 2007)
f/55@25cm SCT with SKYnyx 2-0M
- DUPONT, Xavier** グザヴィエ・デュボン (*XDp*) 法國 Saint Roch, France
 1 Set of RGB + 7 Colour + 1 R CCD Images (21 October; 1, 5, 7, 13 November 2007)
f/53@18cm spec with a ToUcam
- FERNÁNDEZ GÓMEZ, Francisco José**
 フランシスコ=ホセ=フェルナンデス=ゴメス(*FFn*) Ourense, España
 2 Colour CCD Image (21 October; 1 November 2007) 20cm SCT with a Meade LPI
- FLANAGAN, William D** ビル・フラナガン(*WFl*) 德克薩斯・休斯敦 Houston, TX, USA
 17 Sets of RGB CCD Images (26, 27, 30 October; 1, 3, ~5 November 2007)
f/36@36cm SCT with a Lu075M
- GERSTHEIMER, Ralf** ラルフ・ゲルシュトハイマー (*RGh*) 德國 Habichitswald, Deutschland
 2 Colour CCD Images (17, 20 October 2007) 32cm speculum with a DMK21AF04/ToUcam Pro 740
- GHOMIZADEH, Sadegh** サデグ・ゴミザデ (*SGh*) 伊朗・德黑蘭 Tehran, Iran
 18 Colour CCD Images (19, ~21, 23, ~ 27, 29, ~31 October; 1, 2, 13, ~15 November 2007)
f/37@28cm SCT with a ToUcam Pro III
- GÓMEZ, Pepe** ペペ・ゴメス (*PGm*) 西班牙・塞維利亞 Santa Bárbara, Sevilla, España
 1 Colour CCD Image (10 November 2007) 13cm Maksutov-Cassegrain with a ToUcam Pro 830K
- GORCZYNSKY, Peter** ピート・ゴルチンスキー (*PGc*) 康涅狄格 Oxford, CT, USA
 11 Sets of RGB + 4 Colour + 2 B+ 14 IR CCD Images
 (21*, 22*, 26*, 28, ~30 October; 1, 4, 5, 7, 8, 11, 12 November 2007)
f/42@18cm Maksutov-Cassegrain with a ToUcam* & DMK21AF04
- GRAFTON, Edward A** エド・グラフトン (*EGf*) 德克薩斯・休斯敦 Houston, TX, USA
 5 Sets of RGB + 1 Colour + 1 B CCD Images
 (20, 31 October; 1, 3, 4, 14 November 2007) *f*/39@36cm SCT with an ST402
- HEFFNER, Robert** ロバート・ヘフナー (*RHf*) 名古屋 Nagoya, Aichi, Japan
 1 Colour CCD Image (24 October 2007) 28cm SCT with a DMK21AF04
- HIDALGO-TORTOSA, Emilio** エミリオ・イダルゴ(*EHd*) 西班牙 La Carolina, Jaén, España
 8 Colour + 2 IR CCD Images (23 October; 2, 4, 11*, 12** November 2007)
f/27, 40@16cm refractor, *f*/44@30cm Dall-Kirkham*, *f*/28, 56@Apo 130**, ToUcam Pro
- KIDD, Simon D** サイモン・キッド (*SKd*) 英國 Welwyn, Herts, UK
 1 Colour CCD Image (19 October 2007) 36cm SCT with with a DBK21AF04 AS
- KINGSLEY, Bruce A** ブルース・キングスレイ (*BKn*) 英國 Maidenhead, UK
 2 Sets of R(G)B CCD Images (20 October 2007) *f*/40@28cm SCT with a SKYnyx2-0
- KUMAMORI, Teruaki** 熊森 照明 (*Km*) 堺 Sakai, Osaka, Japan
 14 Colour CCD Images (16, 19, 23 October; 2, 3, 7, 13, 14 November 2007)
f/70, 80@20cm Dall-Kirkham with a DMK21AF04/ToUcam pro
- LAWRENCE, Pete** ピート・ローレンス (*PLw*) 英國 Selsey, WS, UK
 5 Sets of RGB + 2 Colour CCD Images (18, 31 October; 2, 4, 5, November 2007)
f/67@36cm SCT with a SKYnyx2-0M

- LOMELI, Ed エド・ロメリ (ELm)** 加利福尼亚 Sacramento, CA, USA
6 Sets of RGB + 6 Colour + 6 IR CCD Images (22,~25 October; 2, 6, 7 November 2007)
f/40⊗23cm SCT (⊗Tele Vue 5× Powermate, 3×Barlow) with a DBK21AF04 & DMK21BF04
- MAKSYMOWICZ, Stanislas スタニスラス・マクシモヴィッチ (SMk)** 法國 Ecquevilly, France
5 Sets of Drawings (18, 21, 31* October; 6, 12 November 2007)
160, 200, 250, 270×15cm refractor, 200, 270×10cm refractor*
- MELILLO, Frank J フランク・メリッロ (FMI)** 紐約 Holtsville, NY, USA
2 Colour CCD Images (21 October; 11 November 2007) 25cm SCT with a ToUcam pro II
- MELKA, James T ジム・メルカ (JMI)** 密蘇里・聖路易斯 St. Louis, MO, USA
3 Colour + 1 B CCD Images (17 October; 2, 10 November 2007)
30cm speculum with a DBK21AF04
- MINAMI, Masatsugu 南 政次 (Mn)** 福井 Fukui, Fukui, Japan
28 Drawings (23, 30 October; 7, 13 November 2007) 400, 600×20cm ED refractor*
*Fukui City Observatory 福井市自然史博物館天文臺
- MURAKAMI, Masami 村上 昌己 (Mk)** 藤澤 Fujisawa, Kanagawa, Japan
3 Drawings (31 October; 3 November 2007) 320×20cm F/8 speculum
- NAKAJIMA, Takashi 中島 孝 (Nj)** 福井 Fukui, Fukui, Japan
12 Drawings (24 October; 7 November 2007) 400, 600×20cm ED refr*
*Fukui City Observatory 福井市自然史博物館屋上天文臺
- NARITA, Hiroshi 成田 廣 (Nr)** 川崎 Kawasaki, Kanagawa, Japan
17 Drawings (1, 13, 16, 19, ~21, 23, 24, 29, 31 October; 3, 4, 11, 14 November 2007)
400×20cm Astro ED refractor
- PARKER, Donald C ドン・パーカー (DPk)** 佛羅里達・邁阿密 Miami, FL, USA
4 Sets of CCD Images (4, 6, 10 November 2007) f/47⊗41cm F/6 spec with a SKYnyx 2-0M
- PEACH, Damian A デミアン・ピーチ (DPc)** 英國 Loudwater, Buckinghamshire, UK
30 Sets of RGB + 2 B CCD Images (18, ~ 21, 23, 31 October; 5, 6, 12 November 2007)
f/40⊗36cm SCT with a SKYnyx 2-0M
- PELLIER, Christophe クリストフ・ペリエ (CPI)** 法國 Seine-St-Denis, France
4 Sets of RGB +3 IR + 1 Violet CCD Images (21 October; 1 November 2007)
f/52⊗25cm Cassegrain with a SKYnyx 2-0M
- PHILLIPS, Jim ジム・フィリップス (JPh)** 南卡羅萊納 Charleston, SC, USA
1 Colour CCD Image (11 November 2007) 20cm refractor with a SKYnyx
- SALWAY, Mike マイク・ソルウェイ (MSI)** 新南威爾斯 Central Coast, NSW, Australia
4 CCD Images (20, 21, 27 October 2007) 31cm speculum with a DMK21AF04
- SÁNCHEZ, Jesús R ヘスス・サンチェス (JSc)** 西班牙・科爾多瓦 Córdoba, España
10 Colour + 2 IR CCD Images (17*, 26 October; 2, 5*#, 8, 11, 12 November 2007)
26cm Maksutov Cassegrain / 25cm SCT* with a DMK21AF04 AS & ToUcam Pro#
- SHARP, Ian イアン・シャープ (ISp)** 英國 Ham, West Sussex, UK
2 Colour CCD Images (4, 5 November 2007) f/55⊗28cm SCT with a SKYnyx 2-0M
- SOLDEVILLA GONZALEZ, José Antonio**
ホセ=アントニオ・ソルデビーヤ=ゴンサレス (JSd) 西班牙Canyelles, nr Barcelona, España
4 B&W CCD Images (3, 6, 10 November 2007) 25cm (F/5) spec with a RCA plug camera
- TATUM, Randy ランディ・テータム (RTm)** 維吉尼亞・里士滿 Richmond, VA, USA
2 Colour CCD Images (21, 31 October 2007) 25cm spec with a ToUcam Pro
- TYLER, David デーヴ・タイラー (DTy)** 英國 Flackwell Heath, Buckinghamshire, UK
6 Sets of RGB + 14 Colour CCD Images (18*,~22, 31 October; 2, ~6, 12 November 2007)
f/40, 50⊗36cm SCT with a SKYnyx 2-0 & Lu075M*

WALKER, Sean ショーン・ウォーカー (SWk) 新罕布夏 Chester, NH, USA

1 Set of RGB + 1 Colour CCD Images (31 October; 8 November 2007)
32cm speculum with a DMK21AF04

WARREN, Joel ジョエル・ウォーレン (JWn) 德克薩斯 Amarillo, TX, USA

16 Sets of RGB CCD Images (16, 20, 25, ~ 27, 29 October; 5, 8, ~12 November 2007)
20cm SCT (⊗ 2× Barlow) with a DBK21AF04

ZURUTUZA, Ignacio ナチヨ・スルトウサ (NZr) 西班牙 La Fresneda, Asturias, España

1 Set of RGB + 6 Colour + 4 IR CCD Images (21*, 28* October; 7, 10, 11, 13 November)
f/40⊗24cm SCT*/ f/30⊗28cm SCT with a DMK21AF04 & DBK21AF04

A) Resonant Dusts at Nilokeras Corridor: The most conspicuous event which occurred during this period was the dust cores seen at the area between Nilokeras and M Acidalium on 2 Nov ($\lambda=341^\circ\text{Ls}$), and its aftermath. The observations were made in Europe. The season was at the one when a northern dust might grow to a cross-equatorial one through the area (called the Nilokeras corridor by Ch PELLIER (*CPl*) in CMO #325 - 2005 Note (8)) which is located between the Tempe Terra (highland) and Acidalia Planitia (lowland). However perhaps because the catastrophe energy might have been exhausted on the preceding occasion of the Noachis dust storm, the dust disturbance which started on 2 Nov ceased by 6 Nov ($\lambda=343^\circ\text{Ls}$): On 2 Nov ($\lambda=341^\circ\text{Ls}$), a few numbers of dust cores at the Nilokeras area as well as the more dust downward (beneath the *nph*) were discovered by SÁNCHEZ (*JSc*) in Spain at $\omega=020^\circ\text{W}$, 026°W , 036°W , 047°W and also by TYLER (*DTy*) in England at $\omega=029^\circ\text{W}$ (also independently by CASQUINHA (*PCq*) and HIDALGO (*EHD*) both at $\omega=042^\circ\text{W}$). On 3 Nov ($\lambda=341^\circ\text{Ls}$), the cores did not appear, while Niliacus L and lower Chryse looked covered by non-bright gray dust as shown on the images by *PCq* at $\omega=026^\circ\text{W}$, and by *DTy* at $\omega=036^\circ\text{W}$. On 4 Nov ($\lambda=342^\circ\text{Ls}$), a lot of observations were chased as follows: ARDITTI (*DAr*) made at $\omega=351^\circ\text{W}$, 354°W , 005°W , 010°W and *EHD* at $\omega=356^\circ\text{W}$, *PCq* at $\omega=001^\circ\text{W}$, 013°W . Furthermore LAWRENCE (*PLw*) produced at $\omega=035^\circ\text{W}$, 038°W , *DTy* at $\omega=043^\circ\text{W}$,



SHARP (*ISp*) at $\omega=044^\circ\text{W}$, and Don PARKER (*DPk*) at $\omega=056^\circ\text{W}$, 073°W : The covering dust looked further developed except over the western part of M Acidalium. Still not bright perhaps because its altitude was quite low and also because the phase angle ι was still large. The dust looked to have extended to Chryse. It is unknown how this gray dust was related with the preceding bright cores, or otherwise the gray one might have had a chance of another northern source (images on 31 Oct ($\lambda=340^\circ\text{Ls}$) by *DPc* at $\omega=025^\circ\text{W}$, *PLw* at $\omega=027^\circ\text{W}$), and *DTy* at $\omega=033^\circ\text{W}$ may suggest a weak expansion of dust). On 4 Nov, the *nph* was thin at some width at $\Omega=060^\circ\text{W}$ ~ 100°W . On 5 Nov ($\lambda=342^\circ\text{Ls}$), the observations were rather complete: *DPc* started from $\omega=328^\circ\text{W}$, and the third and fourth sets at $\omega=344^\circ\text{W}$ and $\omega=351^\circ\text{W}$ respectively showed how the fourth day had another bright core which appeared on the morning limb at the midst of the nipper of Nilokeras. Since $\iota = 34^\circ$, the first two hours in the morning was still at the rear side,

but this was one of rare cases showing the just occurred dust core (as on 18 October 2005). *DPc* then successively shot at $\omega=003^\circ\text{W}$, 007°W , 014°W , 023°W , and at 027°W . Here we show the case of $\omega=007^\circ\text{W}$ (to be referred again later). On the day, *DAr* also took at $\omega=360^\circ\text{W}$, 003°W , 005°W , 018°W , and at 020°W . *ISp* also took at $\omega=006^\circ\text{W}$, DUPONT (*XDp*) at $\omega=025^\circ\text{W}$, *JSc* at $\omega=015^\circ\text{W}$, 018°W , and *PCq* at $\omega=024^\circ\text{W}$. A final important shot was made by FLANAGAN (*WFl*) in the US at $\omega=086^\circ\text{W}$: Thus it was proved the bright dust core remained unchanged throughout the day. This dust was sharper than the one on the first day both of which was onset on the highland near the Sharonov crater. The *nph* on the day was weak at the width at $\Omega=350^\circ\text{W}\sim 060^\circ\text{W}$ in contrary to the preceding day. On 6 Nov ($\lambda=343^\circ\text{Ls}$), the bright core was not reproduced and the dust event seems to have nearly ceased as stated by *DPk*: His image was produced at $\omega=051^\circ\text{W}$.

B) 31 Oct ($\lambda=340^\circ\text{Ls}$): We next pay attention to the images produced by *WFl* at $\omega=133^\circ\text{W}$, 138°W , by WALKER (*SWk*) at $\omega=139^\circ\text{W}$, and by GRAFTON (*EGf*) at $\omega=155^\circ\text{W}$ on 31 October: they all show a plume dust to the SW direction from the evening *nph* area whose density is quite lower than the following *nph* part. The dust is beneath the *nph* and so mingled with the water vapour as shown in B. The B images also imply that at the evening side adjacent to the plume dust a descending air works against the front (the dust streak). On the following day this portion was quite covered by the thicker *nph* (see *WFl*'s at $\omega=123^\circ\text{W}$, 128°W , and *EGf*'s at $\omega=131^\circ\text{W}$ on 1 Nov ($\lambda=340^\circ\text{Ls}$)), and at present no aftermath could be conceived though northern light spots near terminator on *WFl*'s images may tell something. the plume on 31 Oct might have influenced the area to the south of Propontis I, or otherwise to the following dust disturbance at Nilokeras as *WFl*'s 1 Nov image suggests. *WFl*'s image on 3 Nov ($\lambda=341^\circ\text{Ls}$) at $\omega=111^\circ\text{W}$, 116°W shows a bright plumes to the south of Propontis I (see also CHAVEZ (*RCv*) on the day at $\omega=121^\circ\text{W}$). Incidentally (but as important item) we note those images on 31 October give nice B images in which the evening Tharsis with Arsia Mons at the top was covered by a thin cloud implying the water vapour activity has resumed recovering (see also AKUTSU (*Ak*) on 14 Nov ($\lambda=342^\circ\text{Ls}$) at $\omega=158^\circ\text{W}$).

The Deformed Areas because of the Preceding Noachis Dust Storm: --In the following we don't intend to exhaust every image. Pardon us if some relevant are left omitted--

1) The Area of Solis L: As the angular diameter increased, some details of the area were shown up. See for example *WFl*'s images on 4 Nov ($\lambda=342^\circ\text{Ls}$) at $\omega=095^\circ\text{W}$ which show well that the central area of the high density is quite small (smaller than the case in 1926 and 1928). See otherwise the following images for example: *JSc*'s on 26 Oct ($\lambda=337^\circ\text{Ls}$) at $\omega=079^\circ\text{W}$, *PCq*'s on 30 Oct ($\lambda=339^\circ\text{Ls}$) at $\omega=074^\circ\text{W}$, 080°W , *EGf*'s on 3 Nov ($\lambda=341^\circ\text{Ls}$) at $\omega=098^\circ\text{W}$, *WFl*'s on 5 Nov ($\lambda=342^\circ\text{Ls}$) at $\omega=086^\circ\text{W}$, *SWk*'s on 8 Nov ($\lambda=344^\circ\text{Ls}$) at $\omega=075^\circ\text{W}$ etc.

2) Dædalia to M Sirenum: After the Noachis dust event, an impressive inlet of a bright streak has been seen to the south of M Sirenum, and

Similarity of the area of Daedalia & M Sirenum compared to the features in the Viking era

From Bill FLANAGAN's image on 1 November 2007



From a close-up image of Daedalia-M Sirenum at the Viking era made by USGS



this time also it was apparent for example on the images of *DTy* on 18 Oct ($\lambda=333^\circ\text{Ls}$) at $\omega=167^\circ\text{W}$, of *DPc* on 19 Oct ($\lambda=333^\circ\text{Ls}$) at $\omega=157^\circ\text{W}$, and on 21 Oct ($\lambda=334^\circ\text{Ls}$) at $\omega=120^\circ\text{W}$, and of PELLIER (*CPl*) at $\omega=121^\circ\text{W}$. Those areas including the shadowy Dædalia are seen on *PCq*'s images on 25 Oct ($\lambda=337^\circ\text{Ls}$) at $\omega=117^\circ\text{W}$, *WFl*'s on 31 Oct ($\lambda=340^\circ\text{Ls}$) at $\omega=133^\circ\text{W}$, 138°W as well as on *SWk*'s on the day at $\omega=139^\circ\text{W}$, on *EGf*'s on 1 Nov ($\lambda=340^\circ\text{Ls}$) at $\omega=131^\circ\text{W}$, LOMELI (*ELm*)'s on 7 Nov ($\lambda=344^\circ\text{Ls}$) at $\omega=107^\circ\text{W}$, 118°W etc. The shadowy Dædalia has existed since 2003, but became quite darkened after the preceding dust storm akin to the case in 1973. The darkened Dædalia in 1973 continued

ened after the preceding dust storm akin to the case in 1973. The darkened Dædalia in 1973 continued

until the Viking era, and the maps made by the USGS all show the area as well as the inlet to M Sirenum. Hence we here compare USGS' close-up map with *WFl*'s image on 1 Nov ($\lambda=340^\circ\text{Ls}$) at $\omega=123^\circ\text{W}$. Try to look closely at *WFl*'s from the lower and left angle so that the distance between Phoenicis L and Aria Mons should be apart. Then the bright inlet could look much similar. Since the darkening of Dædalia looks to be related with the preceding dust storm, the 1973 case must have possibly been caused by the 1971 Noachis dust storm. Incidentally, the new canal from the east end of the Ætheria dark patch is still present (eg see TATUM (*RTm*)'s image on 21 Oct ($\lambda=334^\circ\text{Ls}$) at $\omega=209^\circ\text{W}$ & *Ak*'s on 10 Nov ($\lambda=345^\circ\text{Ls}$) at $\omega=201^\circ\text{W}$) while it corresponds to a strangely standing bar-like marking on the USGS Viking maps at the Ætheria area. **3) Region around M Tyrrhenum:** M Tyrrhenum has quite degenerated by the present dust storm and a part of M Hadriacum has become fainter to the NW of Hellas. Since Trinacria is slightly darkened and Hesperia's mouth is relatively shadowy so that this region looks quite strange and seen in low modulation. The effect extends to the both sides of Syrtis Mj and this looks, as it were, to have lost flesh except a bone having both low contrast wings. These must be because of the dust fallout. This is shown on eg ALLEN (*EAl*)'s images on 24 Oct ($\lambda=336^\circ\text{Ls}$) at $\omega=240^\circ\text{W}$, 276°W , but more instructive are the series of images made by *DPc* on 12 Nov ($\lambda=346^\circ\text{Ls}$) at $\omega=260^\circ\text{W}$, 269°W , 273°W , 281°W , 285°W . See also *DTy*'s and *PCq*'s on the day at $\omega=261^\circ\text{W}$ and $\omega=273^\circ\text{W}$ respectively. **4) The Area of Margaritifer S:** The southern Margaritifer S remains to be fainter: See the following images on the Gallery (not exhaustive): On 20 Oct ($\lambda=334^\circ\text{Ls}$), SALWAY (*MSl*)'s images at $\omega=008^\circ\text{W}$, on 24 Oct ($\lambda=336^\circ\text{Ls}$) *Ak*'s at $\omega=350^\circ\text{W}$, 002°W , on 1 Nov ($\lambda=340^\circ\text{Ls}$) *CPl*'s at $\omega=003^\circ\text{W}$, 011°W , 029°W (the area looks faint even on IR images at $\omega=007^\circ\text{W}$, 027°W), on 8 Nov ($\lambda=344^\circ\text{Ls}$) *PCq*'s at $\omega=002^\circ\text{W}$, on 10 Nov ($\lambda=345^\circ\text{Ls}$) *DPk*'s at $\omega=026^\circ\text{W}$, on 11 Nov ($\lambda=345^\circ\text{Ls}$) *PCq*'s at $\omega=344^\circ\text{W}$, 350°W , and WARREN (*JWn*)'s at $\omega=002^\circ\text{W}$, on 14 Nov ($\lambda=347^\circ\text{Ls}$) *EGf*'s at $\omega=021^\circ\text{W}$ etc. **D) HELLAS:** The ccd's still show Hellas bright in the morning side. One of the present writers (*Mn*) watched Hellas on 23 Oct ($\lambda=336^\circ\text{Ls}$) from $\omega=280^\circ\text{W}$ to 338°W (on evening side) and on 30 Oct ($\lambda=339^\circ\text{Ls}$) from $\omega=258^\circ\text{W}$ to 339°W (on the morning side), but Hellas looked duller than expected and the inside was still out of season. At the evening terminator of the continents an evening mist stayed and covered Hellas when it approached the terminator. On 24 Oct ($\lambda=336^\circ\text{Ls}$) HEFFNER (*RHf*) took Hellas at the evening side at $\omega=307^\circ\text{W}$. The evening mist was also shown on 5 Nov ($\lambda=342^\circ\text{Ls}$) by *DTy* at $\omega=318^\circ\text{W}$, by *DPc* at $\omega=328^\circ\text{W}$ ~ 351°W , and by *PLw* at $\omega=331^\circ\text{W}$, and also on 7 Nov ($\lambda=343^\circ\text{Ls}$) by *PCq* at $\omega=333^\circ\text{W}$. SOLDEVILLA (*JSd*)'s IR pass image seems to suggest a fine structure inside the Hellas basin. **E) The NPH: 1) Angles at Propontis I:** Since the *nph* is variable and sometimes partially weakened or strengthened we need to be cautious, but we should say the *nph* became weaker on the images on 7 Nov ($\lambda=344^\circ\text{Ls}$) by KUMAMORI (*Km*)'s at $\omega=175^\circ\text{W}$, 186°W , and on 14 Nov ($\lambda=347^\circ\text{Ls}$) by *Ak* at $\omega=158^\circ\text{W}$, 171°W because some markings of Vastitas Borealis were more exposed in comparison with those in the forgoing images of the similar angles: For example on the images on 18 Oct ($\lambda=333^\circ\text{Ls}$) of *DPc* at $\omega=154^\circ\text{W}$, 162°W , on 31 Oct ($\lambda=340^\circ\text{Ls}$) of *WFl* at $\omega=133^\circ\text{W}$, 138°W as well as of *SWk* at $\omega=139^\circ\text{W}$, on 4 Nov ($\lambda=342^\circ\text{Ls}$) of *EAl*'s at $\omega=166^\circ\text{W}$ etc. **2) The Tip of Utopia:** Among the dark markings in Vastitas Borealis, the classical Utopia is one of the interesting area. The tip of Utopia was caught by many observers: some are BATES (*DBt*)'s on 20 Oct ($\lambda=334^\circ\text{Ls}$) at $\omega=249^\circ\text{W}$, *EGf*'s on the day at $\omega=252^\circ\text{W}$, *ELm*'s on 23 Oct ($\lambda=336^\circ\text{Ls}$) at $\omega=259^\circ\text{W}$, *EAl*'s on 24 Oct ($\lambda=336^\circ\text{Ls}$) at $\omega=240^\circ\text{W}$, 276°W etc on the first half of the period. However on the images on 11 Nov ($\lambda=345^\circ\text{Ls}$) of *Ehd* at $\omega=273^\circ\text{W}$, 282°W , on 12 Nov ($\lambda=346^\circ\text{Ls}$) of *DPc* at $\omega=260^\circ\text{W}$ ~ 285°W , of *DTy* at $\omega=261^\circ\text{W}$, and of *PCq*'s at $\omega=273^\circ\text{W}$, on 13 Nov ($\lambda=346^\circ\text{Ls}$) of ZURUTUZA (*NZr*) at $\omega=251^\circ\text{W}$, and finally on 15 Nov ($\lambda=347^\circ\text{Ls}$) of ADELAAR (*JAd*) at $\omega=247^\circ\text{W}$, 272°W all show that the Utopia is more exposed (mostly in R). **3) Around M Acidalium:** The *nph* when it is involved with M

Acidalium much varies, and at present it should be said still thick. See *DPk*'s and *MELKA (JMI)*'s images on 10 Nov ($\lambda=345^\circ\text{Ls}$) at $\omega=024/026^\circ\text{W}$ and at $\omega=034^\circ\text{W}$ respectively. The Dawes slit is visible on these.

F) The NPC: It is supposed that the north polar cap (npc) is now more apparent since on the images on 12 Nov ($\lambda=346^\circ\text{Ls}$) taken by *DPc* at $\omega=260^\circ\text{W}\sim 285^\circ\text{W}$, by *DTy* at $\omega=261^\circ\text{W}$, and by *PCq* at $\omega=273^\circ\text{W}$ we can see the edge of *Vastitas Borealis* through the nph so that the lower part implies the outer ring of the npc. The snow line must be around $\Theta=55^\circ\text{N}$. **H) Kunowsky Crater:** *PELLIER (CPI)* communicated his recent scrutiny: he wisely detected a white crater on *DPc*'s series of images made on 5 Nov ($\lambda=342^\circ\text{Ls}$) at $\omega=328^\circ\text{W}\sim 027^\circ\text{W}$ and its position must be around (57°N , 8°W) (LtE). See afore-cited *DPc*'s image on 5 Nov at $\omega=007^\circ\text{W}$. The position should imply the Kunowsky crater at (56.8°N , 9.7°W). According to the MGS Map in http://mars.jpl.nasa.gov/mgs/msss/camera/images/moc_atlas/mc4.html it is quite a small crater but has a large roundish lava extension. The white spot at Kunowsky was also shot on the HST image produced on 28 October 2005 ($\lambda=314^\circ\text{Ls}$) (another of us (*Mk*) measured its position by the use of a grid). Thus we suppose *PEACH (DPc)* must be the first who caught the outer ring (maybe frosted) associated with Kunowsky from the ground-based station. We also conjecture that the June 2001 HST image must have conveyed the spot beneath the active nph.

♂……… **A) ニロケラスの黄塵**：今回のもっと大きな動きは十一月2日にニロケラスとマレ・アキダリウム間に発生した黄塵群とその影響である。この領域は歐羅巴を向いていた。ただ、既に大きな黄雲を経過しているので、この北半球黄塵群は南半球へは移動せずに5日には終わった。2Nov($\lambda=341^\circ\text{Ls}$)にサンチェス(*JSc*)氏の $\omega=020^\circ\text{W}$ 、 026°W 、 036°W 、 047°W の画像、及びタイラー(*DTy*)氏の $\omega=029^\circ\text{W}$ に明白にニロケラスとマレ・アキダリウム間に上下分かれて二つ、ニロケラスのハサミの中に一つのコアが現れ、更に北の方北極雲に下にも根があるようである。明点はカスキニャ(*PCq*)氏の $\omega=042^\circ\text{W}$ 、イダルゴ(*EHd*)氏の $\omega=042^\circ\text{W}$ にも表れている。ここはテムペ・テッラ(高台)とアキダリア・プラニチア(低地)との境で、北極域黄雲の通り道という意味でペリエ(*CPI*)氏が「ニロケラスの廊下」と呼んだところである(*CMO#325*の2005Note(8)参照)。3Nov($\lambda=341^\circ\text{Ls}$)にはコアが無くなったが、ニリアクス・ラクスとクリュセの北部を灰色黄雲とでも言うべき輝かないダストで覆われているのが、*PCq*氏の $\omega=026^\circ\text{W}$ 、*DTy*氏の $\omega=036^\circ\text{W}$ で示された。4Nov($\lambda=342^\circ\text{Ls}$)にはマレ・アキダリウムの西側を除いて、大きく黄雲に覆われるように見えた。輝かないのは低地低空で、未だ t が大きいからかも知れない。クリュセまで黄雲は延びているように見える。然し、先の黄塵とどう関係にあるか、一寸不明である。もう一つとしての可能性はマレ・アキダリウムの北から黄雲が上がったとも考えられるが、前日、前々日の観測数が少なくて、追跡することは出来ない。既に31Oct($\lambda=340^\circ\text{Ls}$)にはクリュセまで含めて淡く出ている可能性がある(*DPc*氏の $\omega=025^\circ\text{W}$ 、ローレンス(*PLw*)氏の $\omega=027^\circ\text{W}$ 、*DTy*氏の $\omega=033^\circ\text{W}$ 参照)。尚、4Novの観測は多く、アルディッチ(*DAr*)氏も $\omega=351^\circ\text{W}$ 、 354°W 、 005°W 、 010°W と撮像し、その間、*EHd*氏の $\omega=356^\circ\text{W}$ 、*PCq*氏の $\omega=001^\circ\text{W}$ 、 013°W 、更に*PLw*氏の $\omega=035^\circ\text{W}$ 、 038°W 、*DTy*氏の $\omega=043^\circ\text{W}$ 、シャープ(*ISp*)氏の $\omega=044^\circ\text{W}$ 、唐那・派克(*DPk*)氏の $\omega=056^\circ\text{W}$ 、 073°W と延びている。この日は北極雲は $\Omega=060^\circ\text{W}\sim 100^\circ\text{W}$ 邊りで薄くなっている。5Nov ($\lambda=342^\circ\text{Ls}$)には早くから観測が揃い、ピーチ(*DPc*)氏が $\omega=328^\circ\text{W}$ から開始するが、三、四枚目の $\omega=344^\circ\text{W}$ 乃至 $\omega=351^\circ\text{W}$ で朝縁から出てきたニロケラスの隕の中に黄塵が再び出て来ていることを示した。 $t=34^\circ$ であるから、朝の二時間餘は向こう側だが、明らかに発生直後である。*DPc*氏は續いて、 $\omega=003^\circ\text{W}$ 、 007°W 、 014°W 、 023°W 、 027°W と追跡した。この日はロンドン近郊はシーイングが良かったようで、*DAr*氏も $\omega=360^\circ\text{W}$ 、 003°W 、 005°W 、 018°W 、 020°W と撮っている。この中に、*ISp*氏の $\omega=006^\circ\text{W}$ 、デュボン(*XDp*)氏の $\omega=025^\circ\text{W}$ 、*JSc*氏の $\omega=015^\circ\text{W}$ 、 018°W 、*PCq*氏の $\omega=024^\circ\text{W}$ が散らばる。止めは美國に渡って、フラナガン(*WFI*)氏の $\omega=086^\circ\text{W}$ でこの黄塵が夕方に来ている。この間、終始輝いていたが、発展もまた殆ど変化もなかったようであ

る。この黄塵は一日目のものに似ているが、鋭くなっている。多分2Novと同じくシャロノフ火口邊りの高臺(缺はこれを囲む)に出たのだと思われる。この日の北極雲は弱い處が前日と違い $\Omega=350^{\circ}W\sim 060^{\circ}W$ の範囲である。6Nov($\lambda=343^{\circ}Ls$)にはDPk氏の $\omega=051^{\circ}W$ を見るとホボ回復したと思われる。 **B) 31 Oct ($\lambda=340^{\circ}Ls$)** : この日のWfI氏の $\omega=133^{\circ}W$ 、 $138^{\circ}W$ 、ウォーカー(SWk)氏の $\omega=139^{\circ}W$ 、グラフトン(EGf)氏の $\omega=155^{\circ}W$ にはプロポンティスI北の北極雲は濃いのに對し、夕方側半分は極端に薄くなり、そこから筋條黄塵が出ている。北極雲下だから當然水蒸氣混じりで、Bにも出ている。多分西側が吹き下ろし側、である。翌日にはこの邊りは濃い北極雲に覆われてしまって(1Nov($\lambda=340^{\circ}Ls$)、WfI氏の $\omega=123^{\circ}W$ 、 $128^{\circ}W$ 、EGf氏の $\omega=131^{\circ}W$)参照)、成り行きが分からないが(ただ、WfI氏の1Nov像の北極雲近くの夕方には光斑が見えている)、案外プロポンティスIの南まで影響したかも知れないし、もう一日後のニロケラス黄塵と関係があるかも知れない(その意味でWfI氏の1Nov像の光斑は意味ありげ)。プロポンティスIの南には3Nov($\lambda=341^{\circ}Ls$) $\omega=111^{\circ}W$ 、 $116^{\circ}W$ のWfI氏の畫像には明るいスジが見える(チャヴェス(RCv)氏の $\omega=121^{\circ}W$ も参照)。尚、先に引用した31Octの畫像のB像にはタルシスからアルシア・モンズまで明らかに夕雲が出ている。ノアキス黄雲後、水蒸氣の活動が再開している証據で重要である(阿久津(Ak)氏の14Nov($\lambda=347^{\circ}Ls$) $\omega=157^{\circ}W$ にも明らか)。 **C) ノアキス黄雲で變化した領域** : --以下に於いては、畫像は代表的なものだけを採り上げる。それにも遺漏があるかも知れない。平にご容赦--

1) ソリス・ラクス領域 : 視直徑が上がるにつれて、詳細が顕れている。例えばWfI氏の4Nov ($\lambda=342^{\circ}Ls$) $\omega=095^{\circ}W$ を見ると、それまで1926、1928年型かと思っていたが、中心はもっと小さい様である。他に例えば以下を参照されたい : JSc氏の26Oct($\lambda=337^{\circ}Ls$) $\omega=079^{\circ}W$ 、PCq氏の30Oct($\lambda=339^{\circ}Ls$) $\omega=074^{\circ}W$ 、 $080^{\circ}W$ 、EGf氏の3Nov($\lambda=341^{\circ}Ls$) $\omega=098^{\circ}W$ 、WfI氏の5Nov($\lambda=342^{\circ}Ls$) $\omega=086^{\circ}W$ 、SWk氏の8Nov($\lambda=344^{\circ}Ls$) $\omega=075^{\circ}W$ 等。

2) ダエダリアからマレ・シレヌム : マレ・シレヌムの南に明るい切れ込みが出ているのは既に分かっているが今回も、DTy氏の18Oct ($\lambda=333^{\circ}Ls$) $\omega=167^{\circ}W$ 、DPc氏の19Oct($\lambda=333^{\circ}Ls$) $\omega=157^{\circ}W$ と21Oct($\lambda=334^{\circ}Ls$) $\omega=120^{\circ}W$ やペリエ(CPI)氏 $\omega=121^{\circ}W$ に見えている。ダエダリアも含めた領域では、25Oct($\lambda=337^{\circ}Ls$)のPCq氏の $\omega=117^{\circ}W$ 、31Oct($\lambda=340^{\circ}Ls$)のWfI氏の $\omega=133^{\circ}W$ 、 $138^{\circ}W$ 、SWk氏の $\omega=139^{\circ}W$ 、1Nov($\lambda=340^{\circ}Ls$)のEGf氏の $\omega=131^{\circ}W$ 、7Nov($\lambda=344^{\circ}Ls$)のロメリ(ELm)氏の $\omega=107^{\circ}W$ 、 $118^{\circ}W$ などに見える。ダエダリアの濃化は1973年以來だが(尤も淡い形では2003年頃から出ている)、ヴァイキングの時代まで残っていたらしく、USGS作製に火星圖にはどれにも出ており、マレ・シレヌム南の切れ込みも出ている。ここではWfIの1Nov($\lambda=340^{\circ}Ls$) $\omega=123^{\circ}W$ の像からの切り抜き細工を作りこれとUSGSの圖を比べる。後者はクローズアップ圖であるから、WfI氏の像を左下から眺めたと思えばよい。今回もノアキス黄雲の後であるから、1973年のダエダリア異變も1971年のノアキス大黃雲の影響であった可能性が高い。尚、アエリア暗斑の東からマレ・キムメリウム西端に走る運河も今回も健在だが(例えばAk氏10Nov($\lambda=345^{\circ}Ls$) $\omega=201^{\circ}W$ 参照)、これもヴァイキング圖に顕れた奇妙な筋とホボ一致している。

3) マレ・テュッレヌム邊り : マレ・テュッレヌムは退化しており、これも大黃雲の影響であろう。トリナクリアはやや濃化しており、ヘスペリア入り口は比較的薄暗く、マレ・ハドリアクムの一部も淡化して全體が奇妙で、コントラストが低い。影響はシュルティス・マイヨルにも及んでいて、両端は削げたように稍淡化している。どれも砂被りであろう。24Oct($\lambda=336^{\circ}Ls$)のアッレン(EAl)氏の $\omega=240^{\circ}W$ 、 $276^{\circ}W$ に窺えるが、12Nov($\lambda=346^{\circ}Ls$)のDPc氏の連続畫像 $\omega=260^{\circ}W$ 、 $269^{\circ}W$ 、 $273^{\circ}W$ 、 $281^{\circ}W$ 、 $285^{\circ}W$ は特に参考になる。同じ日のDTy氏の $\omega=261^{\circ}W$ 、PCq氏の $\omega=273^{\circ}W$ も参照されたい。

4) マルガリティフェル・シヌス : マルガリティフェル・シヌスの南部は依然 淡化状態が續いている。例えば次の畫像を見られたい(全部ではない) : 20Oct($\lambda=334^{\circ}Ls$) ソルウェー(MSI)氏の $\omega=008^{\circ}W$ 、24Oct ($\lambda=336^{\circ}Ls$) Ak氏の $\omega=350^{\circ}W$ 、 $002^{\circ}W$ 、1Nov($\lambda=340^{\circ}Ls$) CPI氏の $\omega=003^{\circ}W$ 、 $011^{\circ}W$ 、 $029^{\circ}W$ (IRの $\omega=007^{\circ}W$ 、 $027^{\circ}W$ でも強くない)、8Nov($\lambda=344^{\circ}Ls$):PCq氏の $\omega=002^{\circ}W$ 、10Nov($\lambda=345^{\circ}Ls$):DPk氏の $\omega=026^{\circ}W$ 、11Nov($\lambda=345^{\circ}Ls$):PCq氏の $\omega=344^{\circ}W$ 、 $350^{\circ}W$ 、ウォーレン(JWn)氏の $\omega=002^{\circ}W$ 、14Nov($\lambda=347^{\circ}Ls$):EGf氏の $\omega=021^{\circ}W$ 等。

D) ヘッラス : ヘッラスは未だ朝方に明るく寫る様である。然し、筆者(Mn)の23Oct($\lambda=336^{\circ}Ls$) $\omega=$

280°W~338°Wのヘッラス塔方の観測でも、30Oct($\lambda=339^\circ\text{Ls}$) $\omega=258^\circ\text{W}$ ~339°Wのヘッラス朝方の観測でも鈍いものである。大陸の夕方には夕靄が出ていてヘッラスが来ると被る。当時の夕方ヘッラスの像はヘフナー(RHf)氏の24Oct($\lambda=336^\circ\text{Ls}$) $\omega=307^\circ\text{W}$ に表れている。夕方に靄を伴う像としては5Nov($\lambda=342^\circ\text{Ls}$)のDTy氏の $\omega=318^\circ\text{W}$ 、DPc氏の $\omega=328^\circ\text{W}$ ~351°W、PLw氏の $\omega=331^\circ\text{W}$ 、7Nov($\lambda=343^\circ\text{Ls}$)のPCq氏の $\omega=333^\circ\text{W}$ 等がある。季節上、この時期のヘッラスの常態も未だ出てきていない。尚、ソルデビーヤ(JSd)氏のIR素通しの10Nov($\lambda=345^\circ\text{Ls}$) $\omega=264^\circ\text{W}$ には内部構造が写っている様に見える。E) **北極雲** : 1) **プロポンティスIの周り** : 北極雲は部分的に薄くなったり濃くなったりするから注意が必要である(その他描寫の問題もある)が、18Oct($\lambda=333^\circ\text{Ls}$)のDPc氏の $\omega=154^\circ\text{W}$ 、162°Wの畫像や31Oct($\lambda=340^\circ\text{Ls}$)のWFl氏の $\omega=133^\circ\text{W}$ 、138°W、SWk氏の $\omega=139^\circ\text{W}$ 、4Nov($\lambda=342^\circ\text{Ls}$)のEAl氏の $\omega=166^\circ\text{W}$ の畫像のこの周りの北極雲に比べて、7Nov($\lambda=344^\circ\text{Ls}$)の熊森(Km)氏の $\omega=175^\circ\text{W}$ 、186°W、14Nov($\lambda=347^\circ\text{Ls}$)のAk氏の $\omega=158^\circ\text{W}$ 、171°Wではワスチタス・ボレアリスの露出度が強く、北極雲は少々淡化したように見える。2) **ウトピアの周り** : 北極雲から飛び出るウトピアの先端は前半、20Oct($\lambda=334^\circ\text{Ls}$) $\omega=249^\circ\text{W}$ のベーツ(DBt)氏、 $\omega=252^\circ\text{W}$ のEGf氏の像、23Oct($\lambda=336^\circ\text{Ls}$) $\omega=259^\circ\text{W}$ のELm氏の像、24Oct($\lambda=336^\circ\text{Ls}$) $\omega=240^\circ\text{W}$ 、276°WのEAl氏の像などに出ているが、後半歐羅巴での11Nov($\lambda=345^\circ\text{Ls}$)のEHd氏の $\omega=273^\circ\text{W}$ 、282°W、12Nov($\lambda=346^\circ\text{Ls}$)のDPc氏の $\omega=260^\circ\text{W}$ ~285°W、DTy氏の $\omega=261^\circ\text{W}$ 、PCq氏の $\omega=273^\circ\text{W}$ 、13Nov($\lambda=346^\circ\text{Ls}$)のスルトゥサ(NZr)氏の $\omega=251^\circ\text{W}$ 、15Nov($\lambda=347^\circ\text{Ls}$)のアデラール(JAd)氏の $\omega=247^\circ\text{W}$ 、272°Wを見ると、ウトピアの露出度が大きく(特にR系)、この周りも薄くなっていると思われる。3) **マレ・アキダリウムの周り** : マレ・アキダリウムに絡む北極雲はばらけたりするが、未だ濃く、10Nov($\lambda=345^\circ\text{Ls}$)のDPk氏の $\omega=024/026^\circ\text{W}$ 等は典型で、ドーズのスリットが淡く見える。同日のメルカ(JMk)氏の $\omega=034^\circ\text{W}$ も同様。F) **北極冠** : 12Nov($\lambda=346^\circ\text{Ls}$)のDPc氏の $\omega=260^\circ\text{W}$ ~285°W、DTy氏の $\omega=261^\circ\text{W}$ 、PCq氏の $\omega=273^\circ\text{W}$ には北極雲を透かせてワスチタス・ボレアリスの一部が見えているので、その北には北極冠の外側が支配していると思われる。雪線は $\Theta=55^\circ\text{N}$ ぐらいか。H) **クノウスキー・クレータ** : 最近、CPI氏が、DPc氏の5Nov($\lambda=342^\circ\text{Ls}$)の連続像の $\omega=328^\circ\text{W}$ ~027°Wの多くの畫像にクレータが写っていると看破した。(57°N, 8°W)の近くということなので(LtE)、これは(56.8°N, 9.7°W)に在るクノウスキーであろう。このクレータは高低差もなく、小さいがhttp://mars.jpl.nasa.gov/mgs/msss/camera/images/moc_atlas/mc4.htmlに據れば大きな溶岩の裾野を持つ。尚、このクレータは28October2005($\lambda=314^\circ\text{Ls}$)のHSTの畫像にも白斑として写っている(Mkが経緯度グリッドで位置を確かめた)。ピーチ氏の例(英文の部の像は一例)はこれを地上から捉えた最初の例かも知れない。尚、2001年六月のHST像にも写っているようである。

♂.....In the next issue we shall review the observations made during a fortnight period from 16 November ($\lambda=348^\circ\text{Ls}$, $\delta=13.7''$) to 30 November 2007 ($\lambda=356^\circ\text{Ls}$, $\delta=15.1''$). On 30 November the apparent declination D will attain $D=25^\circ23'\text{N}$ 南 政 次・村上 昌己 M MINAMI & M MURAKAMI

Forthcoming 2007/2008 Mars (14)

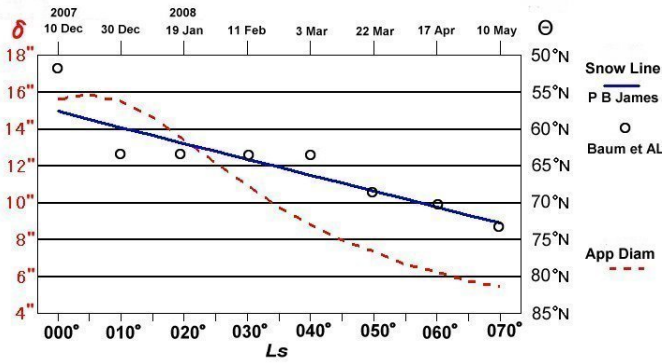
The Coming NPC in 2008 (2008年の北極冠)

Masatsugu MINAMI 南 政 次 (Mn)

FROM this apparition, we are to observe the planet Mars of the northern season in a favourable condition. First of all we are concerned with the north polar cap (npc). On 9 December 2007, the spring equinox of the northern hemisphere arrives with the tilt $\varphi=4^\circ\text{N}$ so that it is preferable to watch the north polar region (npr). Recent technique by IR ccd makes us allow digging out

the ground configurations including the existence of the outer frozen ring of the npc in comparison with the RGB images, but since the usual naked eye (should-be also by the usual RBG images) shows more or less the north polar hood (nph), it is not easy to grasp the largest npc before the spring equinox. It is usual just after $\lambda=000^\circ\text{Ls}$ for us to be able to probe the final struggle of the npc

Fig 1 Possible Snow-Line of the NPC



and the nph, the latter behaving spontaneously in its own way. After the spring equinox we encounter the period of the recession of the npc.

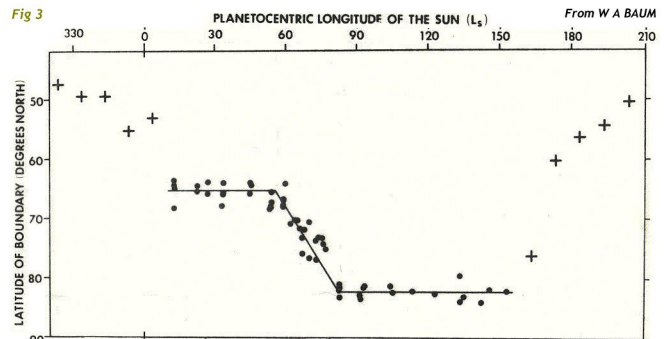
In any macroscopic world it is quite rare to have a linear variation, while at the regression of the npc, there is one example which claims a linear recession curve such that $\Theta = 57.7^\circ + 0.216 \times \lambda$, where Θ is the latitude of the snow line: This was put forward by P B JAMES in *Icarus* **52** (1982) 565 and based on the Viking data in 1979/1980. At $\lambda = 000^\circ L_s$, $\Theta = 57.7^\circ N$, and $\lambda = 010^\circ L_s$, $\Theta = 59.9^\circ N$. At $\lambda = 355^\circ L_s$, just before equinox, there seem to exist good red and blue images of the npc which told $\Theta = 55^\circ N$; this result however is not necessarily on the line.

Figure 1 was made by M MURAKAMI (*Mk*), and the line on the Fig is the James straight line. The dotted line has nothing to do with the npc recession, but is just shown to assert how this apparition is favourable (not best favourable) to watch the rudimental state of the npc.

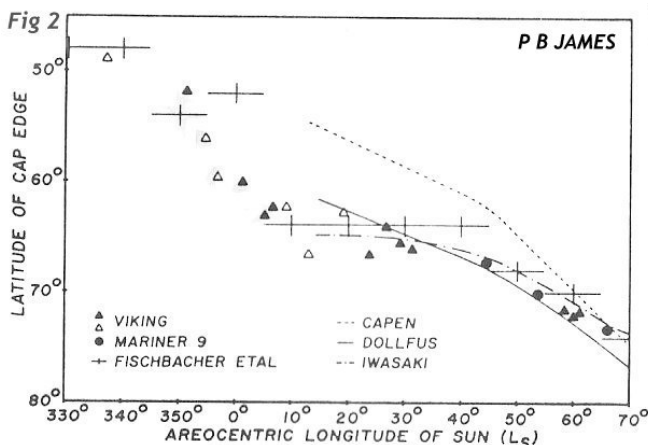
P B JAMES had already published the recession curve of the 1977/1978 npc based on the Viking early data in *JGR* **84** (1978) 8332 in which the npc did not thaw linearly: As mentioned in CMO#130 (25 Feb 1993), the npc looked to come to halt around from $\lambda = 010^\circ L_s$ to $030^\circ L_s$ and it belongs to the Baum plateau (as we called

so there). We here cite his Fig. 1 as Fig. 2 here. Apparently JAMES knows well about the Baum standstill (originally in FISCHBACHER et al 1969). Here IWASAKI implies the work by Kyosuke IWASAKI and others at the Kwasan Observatory, Kyoto University.

What's the Baum plateau? W A BAUM and L J MARTIN published an exquisite work on the polar caps with G E FISCHBACHER based on the Lowell plate collection covering more than 60 years, and as a by-product they put forward a figure which showed a recession of the npc. In 1973, BAUM and MARTIN revised the plots adding the results obtained by the IPP (Bull. Am. Astron. Soc. **5** (1973) 296). Here we cite their work as Fig 3 cited from W BAUM, in *Exploration of the Planetary System* 241-251 (1974) (ed. Woszczyk & Iwaniszewska), "Results of Current Mars Studies at the IAU Planetary Research Center." Just we here beg his pardon if we reverse his figure in our way because he uses a conversion where the north is upward. This shows apparently the npc comes to a standstill from $\lambda = 010^\circ L_s$ to $\lambda = 060^\circ L_s$. The essence of this plateau was



first shown us from Audouin DOLLFUS since his work on the npc recessions in 1946, 1948 and 1950 was compared with the work of BAUM and others. The Dollfus curve was cited in CMO #109 (15 Sept 1991) p0944 (by the courtesy of Prof DOLLFUS) in which Baum plateau was shown as halting dots on $\lambda = 010^\circ L_s$, $020^\circ L_s$, $030^\circ L_s$, $040^\circ L_s$. These were used in Fig 1 here. Note that it stopped at $\lambda = 040^\circ L_s$ in early work, but in Fig 3 it was extended to $\lambda = 060^\circ L_s$ because a new data was added (what year was it when the new dot was obtained?). Incidentally the Dollfus curve (very well-known) does not show any data at around $\lambda = 000^\circ L_s$, and those at $\lambda = 020^\circ L_s$ and $\lambda = 030^\circ L_s$ look to suggest a halt. At $\lambda = 040^\circ L_s$ the diagram implies that the snow line was lower

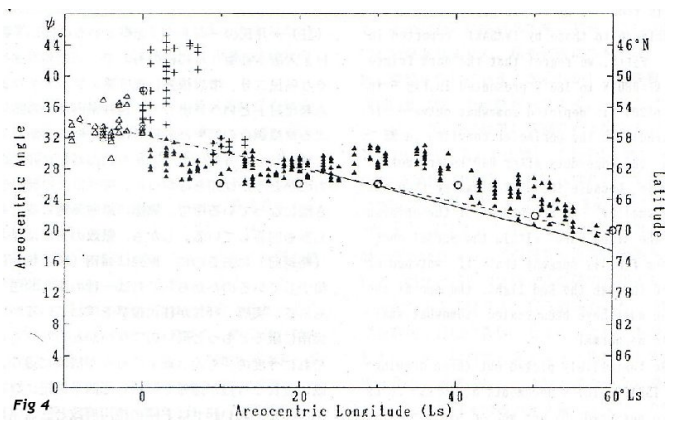


than the Baum's dot.

It should be remarked that the Baum-Martin diagram is made from the selected excellent data in an averaged form ranging over 60 years. Therefore it shows no more than a general tendency and does not imply the trend is all the same every Martian year. So it is not impossible if such a linear case as in 1979/80 is found. It was suggested the case was the one when no dust storm preceded the npc season, while it was known in 1977 preceding the 1977/79 case that two great dust storms appeared. So does the Baum-Martin diagram imply that the dust storm occur every Martian year in an averaged sense?

Since at the spring equinox the pole-to-pole grand circulation changes its direction via the equator-to-pole circulation, it is plausible the changing at the pole is accomplished slowly in a macroscopic world so that the wind-blow dies down for a while, though an instantaneous return is possible in a mathematical chart (no dust case or more in a vacuum atmosphere?). If the wind remains to die for a while, the recession of the npc also must come to a standstill. The retardation may be affected by several macroscopic elements, and the distribution of dust may be an ingredient. If a delay proves enough for the npr to become warmer than the equator band, the npr will become well ventilated. So we should say that the halt or retardation may be different from year to year depending upon some hidden conditions; that is, the delay may not occur, or a shorter delay may occur or a longer delay may appear, different continuously. Since we are not necessarily allowed to chase the npr every Martian year, we need to file up the data when it is possible for a longer period.

Previously we had chances to chase the recession of the npc in 1990 and 1992. However as shown in a chart in CMO #327 (25 Jan 2007 issue), in 1990 the tilt ϕ of the north pole was away from us, so that it was inconvenient to observe the npr. Contrarily in 1992/1993, $\phi = 13^\circ\text{N}$ when $\lambda = 000^\circ\text{Ls}$ on 21 Nov 1992 ($\phi = 4^\circ\text{N}$ at $\lambda = 040^\circ\text{Ls}$), and so it was quite favourable (more than this apparition). As to the npc regression we picked out the data of several observers in the CMO. Here we cite from CMO #139 (25 Nov 1993) p1314 a diagram of the present writer (*Mn*) plotted out by A NISHITA (*Ns*). We



should say in 1992/93 the Baum plateau continued up to $\lambda = 035^\circ\text{Ls}$. From Japan we encountered M Acidalium at around $\lambda = 027^\circ\text{Ls}$. The data was processed by *Ns* based on the Dollfus formula. Solid curve shows DOLLFUS' data, and the dotted line JAMES' 1979/80 line. The open circles denote the BAUM-MARTIN dots.

◆ 愈々、今年度から久し振りに北半球の季節の火星が観測されるようになる。まずは北極冠である。今年(2007年)の9Decには $\lambda = 000^\circ\text{Ls}$ 、北半球の春分となる。而も $\phi = 4^\circ\text{N}$ だから、北極域を眺めるには有利である。最近はccdでIRで深く潜れるから、春分前にRGBとの比較により北極冠の存在は確認されると思うが、眼視では(RGBでもそうあるべきだが)春分前後では北極雲がそこはかたなく現れていて、なかなか最大級の北極冠の見極めは難しいと思う。氣儘な北極雲との駆け引きで矢張り北極冠の見極めは $\lambda = 000^\circ\text{Ls}$ 頃からだと思う。◆ 以後、北極冠は縮小期に入る。マクロな現象で一次的に増減するようなものは稀だが、北極冠縮小に関して、その強引な例が1979/1980年のヴァイキング影像の調査から出したジェームズ(Phillips B JAMES, *Icarus* 52 (1982) 565)の次の様な式である： $\Theta = 57.7^\circ + 0.216 \times \lambda$ 。ここで、 Θ は雪線の緯度である。春分 $\lambda = 000^\circ\text{Ls}$ をとれば、 57.7°N となる。 $\lambda = 010^\circ\text{Ls}$ では 59.9°N となる。尚、春分直前 $\lambda = 355^\circ\text{Ls}$ には赤青共に良像があるらしく、 55°N と出たらしいが、この式に乗っている譯ではない。◆ 圖1は村上昌己氏制作に依るものだが、一次直線で示すものがこの縮小ラインである。圖の點線に依る曲線は北極冠とは関係無く、今回の視直径の變化を示したもので、ここでは今回は北極冠初期の観測が適しているという點を強調している。◆ 尚、ジェームズはこれに先立って1977/1978年の縮小曲線もヴァイキングの像から求めている(*JGR*, 84 (1978)

8332)。これに依れば必ずしも一次曲線ではなく、CMO#130 (25 Feb 1993)で紹介したように、 $\lambda=010^\circ\text{Ls}$ から 030°Ls 邊り迄は停滞がないこともあって、これはそこで呼稱したボームのプラトーに属すると思われる。尚この圖にあるIWASAKIというのは岩崎恭輔さん達の花山での調査である。◆ボーム(W A BAUM)とマーティン(L J MARTIN)は1969年にフィッシュバヒェルなどと六十年に亙るローエル天文臺のプレートを調べ、南極冠や北極冠の縮小状況を調べたが、その副産物として北極冠の縮小曲線が得られている。1973年にはその後の例のパトロールフィルムからもデータを加えて、Bull. Am. Astron. Soc. 5 (1973) 296に発表しているが、ここではボームのWoszczyk & Iwaniszewska, ed, *Exploration of the Planetary System* 241-251 (1974) "Results of Current Mars Studies at the IAU Planetary Research Center"から紹介する。但しボームの圖は南北アベコベなので、われわれの基準に直す。これを見ると $\lambda=010^\circ\text{Ls}$ から $\lambda=060^\circ\text{Ls}$ 直前まで北極冠は縮小せず、停滞していることが分かる。この圖の平均折れ線のグラフから 10°Ls 毎に點(白丸)を打ったものが圖1に示したもので、もともとはドルフュス氏が自己の1946-1950年までの北極冠縮小曲線を求めた際Baum et alの圖として引用したもので、CMOでは#109 (15 Sept 1991) p0944に引用している。圖1のボーム點はドルフュス圖に依ったもので、プラトーは $\lambda=040^\circ\text{Ls}$ 迄となっているが、ボームの第2圖でも $\lambda=040^\circ\text{Ls}$ で切れぬことはない。然し $\lambda=060^\circ\text{Ls}$ 過ぎに一點低い値が出ているわけである。尚ドルフュス氏の1946-1950の平均値では、この邊り($\lambda=000^\circ\text{Ls}$ の値は無く) $\lambda=020^\circ\text{Ls}$ と $\lambda=030^\circ\text{Ls}$ には點がバラバラながら、停滞している感じもする。残念ながら $\lambda=040^\circ\text{Ls}$ にはデータが少なく、少ないデータは下に落ちている。◆ボーム-マーティンの圖は長年に亙る平均値に依っている。従って毎年、このような振る舞いをするとは限らないであろうが、總じてこうであろう、ただ、特殊な年

にジェームズのような一次直線縮小が見られると考えるのが適當かも知れない。1979年の前の1978年には1977年と違って大黃雲が出なかった爲こうなったのではないかとされている。そうするとボーム平均的には平均的に大黃雲が出ていることになる。それも妙な気がする。今回(2007/2008)などは典型的なボームのプラトーが出るのであろうか。◆然し一般的に、火星の春分とは大循環が方向を換えるところであり、春分後は極から極への大循環型から赤道-北極型の循環に替わったところであるから、赤道と北極が同じ温度になって一時的に風の停滞が起こり、従って北極冠の縮小も停滞するだろうことは想像できる(その後は北極域の方が赤道より暖かくなり、循環する)。停滞の期間が全くないか、 $\lambda=040^\circ\text{Ls}$ 迄か、 $\lambda=060^\circ\text{Ls}$ 迄かは確かにそれまでの初期に懸かる条件によって違ふかも知れない。その意味で、このボームのプラトーの存在非存在或いはその程度を確かめるのは意味のあることであろう。◆前回のこうした機會は1990年と1992年に訪れている。然し、#327 (25 Jan 2007號)所出の圖から分かる通り、1990年には終始 ϕ が南を向いており、北極域の觀測には不具合であった。これに對し、1992/1993年の $\lambda=000^\circ\text{Ls}$ のときに $\phi=13^\circ\text{N}$ であったから(21 Nov 1992)、今回よりも有利であった。この年の縮小傾向については、當時のCMOで何人かの觀測者のデータを採り上げたが、#139 (25 Nov 1993) p1314では筆者(Mn)の觀測を使ったのでその圖を引用する(他に極座標展開圖もある)。この年は $\lambda=040^\circ\text{Ls}$ 手前までボームのプラトーが存在すると言って好いだらう。少し山形になっているが、 ϕ が上がったからではなく、寧ろ $\lambda=040^\circ\text{Ls}$ では $\phi=4^\circ\text{N}$ に下がっている。 $\lambda=027^\circ\text{Ls}$ 前後でマレ・アキダリウム方面が日本を向いたことにも依る。圖の白丸はボームの點、實線はドルフュスの値、點線はジェームズの1979/80の値である。測定の方法は極冠の深さを測り ϕ も考慮するもので、ドルフュスに據る。

便り

Letters to the Editor

●.....Date: Wed, 24 Oct 2007 22:27:54 +0100
Subject: Mars 21st Oct

Hi Guys, Sorry Mars is a bit "samey", That's the trouble

when you get a run of concecutive clear nights for imaging Mars. Hopefully you will experience this, just like us in the sunny UK. We just had a summer spell at the end of October. Clear blue skies and little bit of cumulus humilis. Bit nippy at night though. The changes in shape of the polar hood is interesting, as is the "dark in green" collar around the hood. We are clouded out now, so the next images will be somewhat different. ...Best wishes

○ · · · · · **Date: Thu, 25 Oct 2007 18:42:52 +0100**
Subject: Mars Solis Lacus

Hi Guys, Seeing was just about a dim as it gets for this image. The camera was running at half the normal speed, with the gain doubled. A lot of Mars' dark limb is actually missing. This was imaged early, way east of the meridian, to catch some clearish sky before it clagged up entirely. The image, however, shows a preview of Solis Lacus, (from UK). If the skies hurry up and clear we will catch it nicely whilst nearer due south. · · · Best wishes

○ · · · · · **Date: Sun, 28 Oct 2007 01:15:42 +0100**
Subject: A mars 19th Image

Hi Guys, vast cloud sheets have stopped play on Mars, in the UK, so what else to do but check out earlier data, and leisurely experiment on it. Best wishes

○ · · · · · **Date: Wed, 31 Oct 2007 22:58:02 -0000**
Subject: Mars 31 Oct cm33

Hi Guys, We had some fair seeing in UK last night, enabling the scope and software to perform. · · · The "Busy" part of Mars at cm33 was imaged. Best wishes

○ · · · · · **Date: Sat, 3 Nov 2007 00:10:57 -0000**
Subject: Storm in Nilokeras

Hi guys, Jesus Sanches pointed out this storm, that is shown on images I was processing from this mornings imaging session. This one from the session is almost the same longitude as the reference image from the 31st Oct.

○ · · · · · **Date: Sat, 3 Nov 2007 15:43:21 -0000**
Subject: The current Martian storm

Hi guys, good seeing this morning enabled a further series of images to be captured of the latest storm. I have added one of them to the sequence from 31st Oct. It has expanded rapidly in the past 24 hours, and seems to be filling the whole areas of Chryse and Xanthe. Best wishes

○ · · · · · **Date: Sun, 4 Nov 2007 12:40:43 -0000**
Subject: Martian storm

Hi Guys, I was lucky to get Mars this morning through mackerel sky cloud gaps, managing only red and blue. It does show the progress of the storm, like a giant brush-stroke sweeping N East. Best wishes

○ · · · · · **Date: Mon, 5 Nov 2007 18:31:14 -0000**
Subject: Mars CM318 5th Nov UK

Hi guys, I opted for the midnight+ shift on Mars today. Seeing was poor, but longitude seen was a nice change. We are looking edge on into the current storm activity, and I'm tempted to suggest it is responsible for the yellow appearance of the right horizon, as it is also shown on Pete L's image. As you can see from the registax raw red image some editing work has been carried out to reduce the turbulence artifact, whilst keeping as much of the real data as possible. This must be considered when trying to form any opinion on the dust storm's affect. The green image is bright on that limb and the blue a little less so. Pity seeing was poor at the lower altitude at that time. Best wishes

○ · · · · · **Date: Wed, 7 Nov 2007 18:22:24 -0000**
Subject: Mars 6th Nov

Hi Guys, very soft images from the 6th, but I do believe they show the yellow dust storm coming onto the disc. The left-hand side of the polar hood also appears a little yellow.

○ · · · · · **Date: Fri, 9 Nov 2007 14:27:06 -0000**
Subject: big prom alert

Hi Guys, No our moon has not gone out of orbit and occulted part of M31 This is a solar prominence out there on the sun right now. More images later. I need a bigger chip! Best wishes

○ · · · · · **Date: Fri, 9 Nov 2007 23:33:13 -0000**
Subject: Solar images 9th Nov

Hi guys, Here are a couple of colour renditions of the current large prominence. One is 108 inches focal length

and 4.5 aperture, and the other 216 inches at 6 inch aperture. Scope is 6 inch vixen ED 1500 stopped to 4.5", with 2X powermate for 108"fl, and the 216 inch is at full aperture with a 2.5x powermate stuck into that. The 2,5x drops to 2x when extended by the daystar filter. Camera is skynyx 2.0 at 66fps.

Best wishes.

○ · · · · · **Date: Mon, 12 Nov 2007 18:56:36-0000**
Subject: Mars this morning

Hi Guys, We had a spell of dodgy seeing this morning, The temp fell 3°C to zero, during the hour and a half that I was observing, but at least we could go out to play. The scope was not properly cooled making good collimation impossible to achieve. The 400 x bino view at the beginning of the session showed me more than I had previously seen using one eyepiece. On the image, the extended Hyblaeus extension is shown. Best wishes

○ · · · · · **Date: Mon, 12 Nov 2007 23:12:51 -0000**
Subject: Re: Mars 2007/11/12

Very nice data again Paulo (PCq), I will now have to make an RGB !!! You certainly got a much better green than I managed. Cheers

○ · · · · · **Date: Sun, 18 Nov 2007 18:53:14 -0000**
Subject: Mars 16 Nov

Hi guys, here are a set of Mars images from the 16th, Seeing was good with excellent patches. Is that a polar cap under the cloud or just thicker cloud defined by a certain cooler more northern latitude point? Best wishes

○ · · · · · **Date: Mon, 19 Nov 2007 23:11:08 -0000**
Subject: Mars images 17th nov

Hi Guys, A brief period of clear sky till about 2am / ut, with -3°C temps, was our last clear spell before some pretty dismal weather. Seeing was fair to imageable. There appears to me, to be a "snowline", visible through mist, following the profile of the albedo marking in the North Polar region. Best wishes

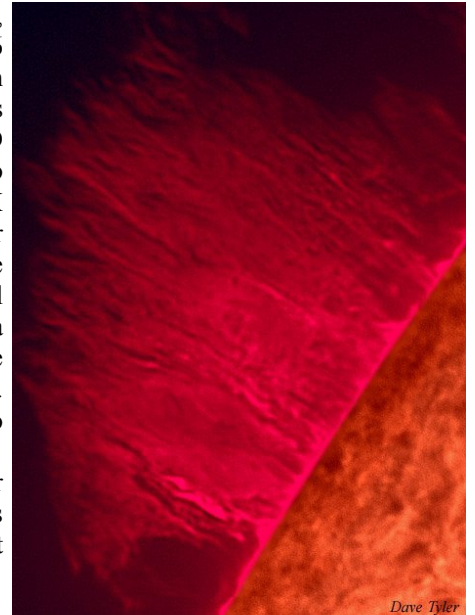
Dave TYLER (テラ イト・タイラー Bkh 英)

● · · · · · **Date: Thu, 25 Oct 2007 01:46:53 +0100**
Subject: Mars October 19

Good seeing on this date. Olympus is prominent near the terminator, and the ridges of Eumenides Dorsum and Gordii Dorsum just visible in shadows following it, particularly in green light. (IR)GB images, no luminance, and no attempt to remove the limb-sharpening artefact, which is therefore quite prominent.

○ · · · · · **Date: Fri, 26 Oct 2007 22:24:38 +0100**
Subject: Mars 2007 October 20

Another good night. Images were obtained over about an hour, during which time the seeing improved as Mars climbed. Here are two sets of RGB images and two sets of (IR)(SG)B images. The former method seems to be more successful for me now. Nothing new, but interesting to see the intensifying shadows of Olympus and the terrain follow-



ing it as they approach the terminator.

○ · · · · · **Date: Mon, 29 Oct 2007 03:12:37 +0000**
Subject: Comet 17/P 2007 October 28

At last, after four days of continuous cloud and rain since the discovery of the outburst by Santana, a clear night here in Edgware allowed me to see this amazing object. It is unlike any comet I have seen before, though it reminds me of the drawing of the fission of Biela's comet of 1846, the circular part.



The darker region within the remarkably sharp outer coma suggests a shell of material has been ejected, planetary nebula-like, symmetrically at the outburst. This character was also clear visually when I examined it through a Celestron 14. The nucleus is almost centred in this outer coma, but the inner coma is very asymmetric about the nucleus.

The comet is so bright it is very easy to image. This 1 minute exposure with an ordinary DSLR was tracked at sidereal rate, using a 100mm refractor on an Astro-Physics 1200 mount.

○ · · · · · **Date: Mon, 5 Nov 2007 17:50:07 +0000**
Subject: Mars 2007 October 21

Here are some images from another good night, slightly delayed by the evanescent excitement of the comet: an RGB set and three (IR)(SG)B sets.

The former shows the best detail, especially in the north polar area, where there seems, as Christophe noted, to be an area of pinkish polar cap that has come out from behind the clouds of the hood. All 4 big volcanoes well-seen, no evidence of cloud there.

○ · · · · · **Date: Mon, 12 Nov 2007 03:54:15 +0000**
Subject: Mars 2007 October 31

Seeing was fairly poor on this occasion. I always think of this as the "frilly" side of Mars.

○ · · · · · **Date: Tue, 13 Nov 2007 17:10:06 +0000**
Subject: Saturn November 05

A morning of very good seeing allowed my first Saturn of the apparition.

○ · · · · · **Date: Sun, 18 Nov 2007 00:59:01 +0000**
Subject: Mars 2007 November 04

"Average" seeing this night. I was continuing to experiment with different methods of filtration here. For some years I have been using a technique copied from Dave T and Damian of using a non-IR blocked red filter in combination with IR-blocked G and B filters. I thought I would try to establish if this really was the best technique by taking separate sets using these filters with and without an overall IR blocker over the top of them.

My conclusion: there is very little in it, but perhaps some subtlety of detail and shading is lost by allowing the IR into the R channel. The IR component increases the overall signal, and increases contrast, but excluding it perhaps gives a

more "natural" result.

I have decided to start giving links rather than sending these big collections of images themselves. However, tell me if you find less inconvenient than the previous system.

Images with IR inclusive reds
<http://www.davidarditti.co.uk/mars2007-11-04-DLA.jpg>

Images with IR totally blocked

<http://www.davidarditti.co.uk/mars2007-11-04-irbDLA.jpg>

○ · · · · · **Date: Tue, 20 Nov 2007 00:52:03 +0000**
Subject: Mars 2007 November 05

On this morning I had the best seeing I have experienced this apparition (I have already posted a Saturn done that morning). My Mars images here are the highest resolution I have ever achieved, and I think get close to the highest that can be achieved with this set-up. This is the first time I have been able to see Vallis Marineris in my images. I took so many it has been rather a long process processing and laying them all out. I hope they prove informative.

R images:

<http://www.darditti.dircon.co.uk/mars2007-11-05-rDLA.jpg>

G images:

<http://www.darditti.dircon.co.uk/mars2007-11-05-gDLA.jpg>

B images:

<http://www.darditti.dircon.co.uk/mars2007-11-05-bDLA.jpg>

RGB images

<http://www.darditti.dircon.co.uk/mars2007-11-05-rgbDLA.jpg>

○ · · · · · **Date: Wed, 21 Nov 2007 20:35:38 +0000**

Subject: Mars 2007 November 12

Fairly poor seeing - but for some reason, less than usual limb edge- sharpening artefact. Some types of seeing generate this, and others do not, it doesn't necessarily seem to go with "good" or "bad" seeing. The appearance of dusty Hellas remains bizarre - someone who didn't know might think it was a polar cap.

Images:

<http://www.darditti.dircon.co.uk/mars2007-11-12-DLA.jpg>

○ · · · · · **Date: Thu, 22 Nov 2007 00:52:30 +0000**

Subject: Mars 2007 November 15

A similar view to the 12th, but worse seeing.

<http://www.darditti.dircon.co.uk/mars2007-11-15-DLA.jpg>

David ARDITTI (テウァイト・アチ Edgware ME 英)

● · · · · · **Date: Thu, 25 Oct 2007 22:40:30 +0900**

Subject: Mars - 2007/10/24 - poor conditions

Dear CMO, Here is my first image of Mars this month. Poor seeing & transparency and also imaged rather low in the mid 50's. Anyway, quality is not so great but just some practice until winter comes.

Hope all is going well these days Minami-san! Please take care and stay strong. All the best,

○ · · · · · **Date: Fri, 26 Oct 2007 23:58:16 +0900**

Subject: Re: RE:Mars - 2007/10/24 - poor conditions

Minami-san, Thanks for your reply. . . . I look forward to reading CMO 337 over the weekend. I will try to send more images in November, though the jet stream pattern and my limited angle (restricted to max of around 59 deg due to my roof) will be issues to overcome. I am trying to find a better local spot for December imaging where I have direct overhead access to Mars.

Have a good weekend, and clear skies (Sunday is forecasted to be clear after the Typhoon passes). Best regards,

○ · · · · · **Date: Sat, 17 Nov 2007 17:40:24 +0900**

Subject: Mars - 2007/11/16 UT (an attempt)

Dear CMO, Here is an image finally this month of Mars from my location! Seeing was very poor but thankfully Mars is getting large enough in apparent diameter to image some detail despite the conditions.

Seeing chart for 15:00 UT Nov. 16th;

<http://cimss.ssec.wisc.edu/tropic/real-time/westpac/winds/archive/wgmsdlm6-5.html>

Hope all is going well in Fukui these days! and will send more images seeing/time permitting. Best regards as always,
 ○·····**Date: Sun, 18 Nov 2007 07:15:17 +0900**
Subject: Re: RE:Mars - 2007/11/16 UT (an attempt)

Minami-san, Thanks for your reply and information in your latest e-mail. It was good to be able to participate to CMO this month with at least one image though ideally of course I would like to be able to send you an R-G-B image in better seeing.

The Western North Pacific jet stream maps are broken down into several layers on the HP, and even when the 200-700hPa winds are strong, sometimes seeing can be relatively fair when the 300-850hPa level winds and even 700-850hPa winds show *green* or *blue* sections over Japan.

<http://cimss.ssec.wisc.edu/tropic/real-time/westpac/winds/winds-dlm.html>

One the 16th there was some orange over Japan at 300-850hPa so I made the latest attempt. ···

I'm trying to remain upbeat about the upcoming opposition in December, though winter seeing will likely test our patience of course. Best,

Robert HEFFNER (ロバート・ヘフナー 名古屋 Aichi)

●·····**Date: Fri, 26 Oct 2007 06:50:25 +1000**
Subject: Mars from Australia - 20th/21st October 2007

Hi all, It's been a long time between drinks for me and Mars. It's low in the North now, transiting at only 31-32°.

Reasonable conditions last weekend allowed me to capture my first images since it was 5-6" (and higher in the southern sky) back in May/June. Thanks for looking.

○·····**Date: Mon, 29 Oct 2007 08:54:12 +1100**
Subject: Mars, Venus and Saturn - 27th October 2007

Hi all, Seeing was good on Sunday morning, with stable overnight temperatures (14°C) helping to keep my mirror to within 0.2° of ambient temperature. Mars was at 31° altitude, and the red channel was used as luminance. Venus was at 20°, and is the red channel only. Saturn (my first for the season) was at 30° altitude, and is the red channel only. ···Thanks for looking.

Mike SALWAY (マイク・ソルウェイ NSW 澳)

●·····**Date: Thu, 25 Oct 2007 08:25:11 -0700 (PDT)**
Subject: mars and mellish

Dear Sir, Back in 1994 I did presented a paper on Mellish and the craters of mars at the IAU's Conference in the Hague, the Netherlands. As a result, Mellish was remembered by a crater on Mars being named after him. I googled "mellish" today and came across the article on Thomas Cave in your journal. Mellish and Cave knew one another. Do you want a copy of the paper I presented? Sincerely,

Mike ANDERER (マイク・アンダラー-St. Charles II 美)

●·····**Date: Thu, 25 Oct 2007 12:31:47 -0500**
Subject: Images: 10-25-07 45 minute rotation

Greetings list, Here are the best results from this morning. The first is a link to a single image, the best result.

Below that is a link to 3 images, showing 45 inutes worth of rotation. The NPH appears active (as always).

<http://marswatch.amaonline.com/10-25-071010.jpg>

40 minute rotation...

<http://marswatch.amaonline.com/10-27-070430comp.jpg>

○·····**Date: Mon, 5 Nov 2007 12:35:01 -0600**
Subject: Image: Dust 11-05-07 0850 UT

Greetings everyone, Normally I wouldn't try to image in such poor seeing, let alone post the result, but with the reports of dust, I thought I would give it a try. A few important things were caught though. First, the dust cloud that

Paulo imaged and reported is seen close to the PM terminator along with dusty clouds all over Chryse. The clouds over Chryse aren't really seen in the images coming from our European members (when Chryse was closer to the CM) which lead me to believe in my image they are mainly a light dust/blue water-ice mix. A brighter cloud, south of the one Paulo reported, is also seen.

<http://marswatch.amaonline.com/11-05-070850.jpg>

○·····**Date: Thu, 8 Nov 2007 13:03:13 -0600**
Subject: Image: 11-08-07 10:50 UT

Greetings everyone, An image from this morning. Taken in poor seeing through the jet stream, but decent detail to be had. I've started adding some additional info to the images for my own personal reference in regards to local weather conditions involving the jet stream, pressure, humidity, temperature, dew point and what the CSC says seeing/transparency should be. Wanted to point that out incase you are curious as to what those letters/numbers are. Just my attempt to start to try and nail down when to try to image and when not to.

<http://marswatch.amaonline.com/11-08-071050.jpg>

○·····**Date: Fri, 9 Nov 2007 05:04:08 -0600**
Subject: Image: 11-09-07 08:50 UT

Greetings everyone, Very good seeing with a good view of Chryse and the NPH. The Tempe/NPH is region bright in all color channels. No obvious signs of dust or other cloud activity. I'll have other images to follow over the next day or so.

<http://marswatch.amaonline.com/11-09-07850.jpg>

○·····**Date: Fri, 9 Nov 2007 12:18:45 -0600**
Subject: Images: 11-09-07

Greetings list, Complete set from this morning, showing a total of about 1 hour of rotation. The best result is here.

<http://marswatch.amaonline.com/11-09-070855.jpg>

Complete set here..

<http://marswatch.amaonline.com/11-09-070845.jpg>

<http://marswatch.amaonline.com/11-09-07850.jpg>

<http://marswatch.amaonline.com/11-09-070855.jpg>

<http://marswatch.amaonline.com/11-09-070950.jpg>

I'm not sure if it is the NPC being seen in those images. If you look closely, you can see what might be the NPC surrounded by an outer ring of clouds, with a thin area of surface/albedo seen between the two in the first 3 images.

○·····**Date: Sat, 10 Nov 2007 02:16:13 -0600**
Subject: Image: 11-10-07 0645UT

Greetings everyone, Imaged through high thin clouds.

<http://marswatch.amaonline.com/11-10-070645.jpg>

○·····**Date: Sun, 11 Nov 2007 02:54:38 -0600**

Subject: Image: 11-11-07 07:30UT

Greetings everyone, An image from 11-11-07 @ 07:30UT.

Good seeing. The NPH is still looking dense and organized.

<http://marswatch.amaonline.com/11-11-070730.jpg>

○·····**Date: Mon, 12 Nov 2007 17:46:52 -0600**
Subject: Image: 11-12-07 06:55UT

Greetings list, The best result from last night. Very poor seeing. One thing noticeable though despite poor seeing are AM clouds over the Mare Erythraeum region. Seen as a bluish haze in RGB and bright in B.

<http://marswatch.amaonline.com/11-12-071255.jpg>

○·····**Date: Sun, 18 Nov 2007 02:24:33 -0600**
Subject: Image: 11-18-07 07:10UT

Greetings list, If I had to guess, I would say the NPC is being seen in this image. Still not sure though. The NPH looks thin, a cloud band possibly with some dust mixed in on the southern edge. Possibly a front headed south. The yellowish limb arc reminds me of results from November 2005 when there was a lot of dust in the air. Some images

from and hour earlier, which I won't post due to bad seeing showed evening clouds over Mare Tyrrhenum.
<http://marswatch.amaonline.com/11-18-070710.jpg>
 Regards,

Joel WARREN (シヨエル・ウォーレン Amarillo TX 美)

●.....Date: Sat, 27 Oct 2007 09:40:01 +0900

Subject: カラー合成

南様：今シーズンからAstronomikのRGBに加えて以前使っていたRフィルターでも撮影しています。この画像はシャープをややきつくかけても不自然にならないので、見栄えが良くなります(a23m3r3.jpg)。この画像をLとして使い、AstronomikのRGBと合成したのがa23m2.jpgです。これだと北極の雲が弱くなるので、B光とセットにしてご報告用にしようと思いましたが、いかがでしょうか？

○.....Date: Mon, 29 Oct 2007 20:52:06 +0900

Subject: Re: カラー合成

> ステライメージにLとRGBとを合成する方法が附いていて、
 > LRGBと称しているなら、それでいいでしょうね。多分Lab分解して
 > いるのだと思う。今後LRGBということで、B像と並べて投稿してく
 > だされれば結構です。縮まりのある方が好い。

了解しました。

> 熊さんのホームページも見ましたがよく分からなかった。最近
 > はLRGBが簡単に作れるのでしょう。貴君の場合でも北極雲が弱くなり
 > ますが、FLANAGANのは青くならず可成り強く残っています。何か
 > 秘策があるのかな。訊いたけど分からなかった。

以下、熊さんから来たメールです。

> 火星のカラー画像ですが、なかなか難しいですね。
 > 現在の私のシステムは、L画像をDMK21AF04（フィルターなし）、
 > RGB画像をToUcam PRO（赤外カットフィルターあり）で得て、
 > LRGB合成を行っています。
 > http://homepage2.nifty.com/rb_star/LRGB-01.htm
 > 火星の雲は、極雲、黄雲など赤・赤外で良く写らないために
 > RGBの取得には赤外カットフィルターを用いたRGBと、
 > L画像はRフィルターを使わない可視光を中心としたものとし
 > ています。
 > RGBのR画像やL画像を、R60や近赤外のフィルターを
 > 通して撮影しますと、火星の模様が見映えしますが、雲
 > の情報が落ちてしまいます。
 > 現在の北極雲（フード）は眼視では明るく見えていますが、
 > 上記の「模様を写し込むモード」で撮影すると、輝度のない白
 > 雲になってしまいます。
 > 私のL画像も赤外カットフィルターを通した方が、より雲が
 > 写るとは思うのですが、未だ！模様の詳細を写したいと言う亡
 > 霊？から抜け出せないでいるため、フィルターなしで撮影して
 > います。中途半端ですが・・・(笑)
 > 現在の画像処理は、レジスタックス4でスタックとウェーブ
 > レット処理、その後ステライメージで最大エントロピー処理を

TEN YEARS AGO (147)

---CMO #197 (25 November 1997) pp2179-2190---

この期の観測も終焉を迎えて纏めの"1996/97 Mars Sketch"シリーズが始まり、巻頭には1回目の「107°Lsにおけるエリュシウムから朝方にかけての朝雲活動ー比嘉氏の観測を中心に」"White-Cloud Burst over Elysium to the Mornig Side at 107°Ls - HIGA's Observations -"が掲載されている。これは、20Apr1997頃に見られた、エリュシウム南部から西方の朝方にかけての二つ玉の濃い朝霧に関しての纏めで、前後の観測を見ると、四月上旬(101°Ls)から五月下旬(125°Ls)にかけても同様な現象が見られているが、20April頃がピークであったかもしれないとの結論である。このころは北半球は夏至過ぎで引用された画像にはオリュムプス・モンスが夕端で明るく見えている。

LtEは、Randy TATUM (USA), David J LEHMAN (USA), Samuel WHITBY (USA), Nicolas BIVER (Hawaii, USA)の外国の各氏から、また、山本進(滋賀)、木村精二(東京)、伊舎堂弘(沖縄)の各氏からの国内からの便りが紹介されている。N.BIVER氏はフランスからハワイへ多分ポストで移った頃で新しい連絡先が披露されている。

OAA MARS SECTION Reportでは、1997年十一月中旬までの最終観測がまとめられている。火星は夕方の南西の空低く、視直径δも5秒角を切りOAAの観測は終了していた。最後は三名の報告が国内からあった。他に期間外の外国からの観測が取り上げられている。

TYA(27)はCMO#040 (15 November 1987)の記事からである。廿年前の火星は朝方のおとめ座にあり、太陽との離角も視直径も小さくまだ観測は始まっていない。記事として、南氏の台北での1986年の観測から、南極冠の観測の纏めの論文が掲載されていた。

巻末の「シー・エム・オー・フクイ」には、1998年正月に計画されていた福井での懇談会が予告された。

村上昌己 (Mk)

ISSN 0917-7388

Communications in Mars Observations

火星通信 No. 197

No. 19 / 1996~1997
25 November 1997

Published by the OAA Mars Section

★1996/97 Mars Sketch (1) -----

107°Lsにおけるエリュシウムから朝方にかけての朝雲活動ー比嘉氏の観測を中心に
 White-Cloud Burst over Elysium to the Mornig Side at 107°Ls - HIGA's Observations --

◆20 Apr 1997 通りでエリュシウム南部から朝方西方にかけて濃い朝霧のburstが二つ玉の形で見られたことについて、#190 p2082 (英訳はp2084)で、特に比嘉(Hi)氏の観測を中心に報告したが、Hi氏の観測は充実していることではそれをやや詳しく解説・補足したい。◆Hi氏の画像に現われた朝雲の様子は、特に西側の噴出し雲が実に印象深いものであって、Mk氏もHi氏からFDで報告を受け、再三その印象を筆者宛のemailで述べている。◆最もこの二つ玉の朝霧が顕著に現われているのは、20Apr11:55GMTω = 210° W 離りの観点 (12:03GMTω = 212° W, 12:12GMTω = 214° W等)であるが、動画の方に11:20GMTω = 202° Wの画像があり、まだ朝方は不鮮明ながら、既にエリュシウム上は白く、アエテリアの暗斑の南まで流れているという状態である(Hi氏のその後のお便りによると、20Aprの観測は11:19~12:24GMTであった。11:55 GMTω = 210° W等のプリントはカラー像だけでなく、赤色像、青色像が分離されていて、特に青色像に二つ玉は顕著である。従って白色雲であることは間違いない。尚、20Aprで季節は107°Ls、視直径δ = 12.5"、位相角ι = 25°であった。

◆一方、Hi氏は前後の19Aprと21Aprを撮影しているため、ある程度比較が可能である。19Aprには12:30GMTω = 225° Wの像がある。エリュシウムは既に午後側に移っていて、明るいが噴出しの部分不明瞭ではない。ただ、ジュレディス・

マイヨルは西端から顔を出し掛かっているが、この通りには朝霧が見えている(Hi氏のその後の撮影で12:48GMTω = 232° Wの画像を頂いた。この時の撮影時刻は12:46~13:21GMTの由)。エリュシウムに続く縞々型雲帯はジュレディス・マイヨルの朝雲と同質であろうが、朝方可なり長く持続するもの、正午に近づくにつれてエリュシウム上の雲より薄れるものであろう(ω = 232° Wではジュレディス・マイヨル上と隣接しているが、エリュシウムは孤立して明るい)。然し、20Aprにそれがburstした可能性が高い。

◆Hi氏の21Aprの像は動画で報告を受けたのが最初である。既に、#190p2082で述べたように、1)11:40GMTω = 193° W, 2)ω = 202° W, 3)ω = 212° W, 4)ω = 222° W, 5)ω = 232° W, 6)14:40GMTω = 241° Wと続く1)ではまだエリュシウムが朝方である。2)はイメージが不好。3)は20Aprの顕著な像に相当するが、20Apr程に著しくはない。拡散したか、



HIGA (Hi)'s Blue Image on 20 April 1997 (107°Ls) ω = 209° W δ = 24" N δ = 12.5" ι = 25°

2 1 7 9

> 行っています (L 画像)。

> ToUcam PROで撮影したものは、レジスタックス4のウエーブ
> レット処理後、フォトショップCSで色を調整後、ステライメ
> ージ5でのLRGB合成としています。
> RGB分解フィルターはメーカーによって、いろいろ違いが
> あると思いますが、経験が少ないので(光映舎の新LRGBフ
> イルターしか持っていない)良く分かりません。
> 現在の私のLRGBシステムは、木星でも火星でも大きな破
> 綻は無いと思われまので、しばらくはこの方法で撮影を続け
> るつもりです。

○.....Date: Thu, 15 Nov 2007 06:22:37 +0900
Subject: 『火星通信』 #337 拝受

昨日午後、『火星通信』 #337 拝受いたしました。
いつもありがとうございます。

○.....Date: Fri, 16 Nov 2007 06:34:06 +0900
Subject: 11月14日の画像

11月14日の画像をお送りします。この後曇ってしま
って、この日は1セットだけでした。

浅田 正 (Tadashi ASADA 宗像 Fukuoka)

●.....Date: Sat, 27 Oct 2007 12:44:41 +0900 (JST)
Subject: 明日帰国します

南様、メールありがとうございます。村上さん
から、入院したと聞いておりました。無理は禁物を
思います。御大事にしてください。

急な話ですが明日の日曜日、日本に参ります。今
回の帰国も短くて11月4日にはセブへ戻ります。一
週間はアツという間ですが、今回は日本の旬のさん
まを食べたいですね。セブでのC-14には少し慣れま
した。屋上の風対策と筒内気流の対策が出来れば完
璧な観測が出来るとでしょう。しかし外国での観測は
治安問題が心配になります。幸いにもSecurityがし
っかりしていますから変な事は起きないと思ってお
ります。今回は日本の風避けブルーシート(セブ品
は駄目)を持って行き、ビニール管で風避け屏風を
作る計画です。風対策が出来ればイメージがより良
くなる筈です。

来週は自宅の反射で見ます。天気と気流が良け
れば期待しております。

○.....Date: Sat, 10 Nov 2007 14:09:27 +0900 (JST)
Subject: 火星画像 AKM071106

こんにちは、11月6日の火星です。先週日本に戻
り、パソコンを変えました。画像取り込みが早くな
り、今まで画像処理で出していたモアレが解消され
てすっきりしました。今朝、撮った画像は来週の月曜
日に送ります。今夜は久々にChris宅のC-11で撮るつ
もりです。日本はこれから寒い季節になりますが、
どうぞお体を大切にしてください。

○.....Date: Mon, 12 Nov 2007 11:26:44 +0900 (JST)
Subject: 火星画像 AKM071109.071110, 他

おはようございます。先週の土、日の火星画像で
す。土曜日の夜は久々にChris宅行き、ホームス
彗星を見ました。彼の家は高台の高級住宅地の割と空
が暗い場所でスカッとした条件で彗星を見ることが
できました。尾っぽがない彗星はまるで提灯のよう
です。彼のC-11はC-14とくらべ、一回り小さく、以
前は大きく感じたのに慣れとは変なもの。土星、
金星画像も添付します。金星のUVとIR画像では雲
の様子が反転されています。変化があり、観測とし
ても興味あります。

○.....Date: Fri, 16 Nov 2007 11:03:38 +0900 (JST)
Subject: 火星画像 AKM071114

こんにちは、11月14日の火星画像です。気流が良
く、アルシア山系の雲、オリンピアモンスもくつき
り見えています。後半、風の影響でぶれた像になり
ました。土星のIRに明るいバンドが見えています。

○.....Date: Tue, 20 Nov 2007 10:12:01 +0900 (JST)
Subject: C-14 壊れました

おはようございます。悲しい報告です。昨日、セ
ブでは台風のような猛烈な風と雨が午後あり、私の

C-14が倒れ、CPが割れてしまいました。この風は
想定外の強さでした。ChrisのC-11も倒れたそうで
すが筒は大丈夫だったようです。沖縄の比嘉さんも台
風で被害にあったようですが、私も同じ被害です。
今後の火星観測にC-14ではできないのがとても残念
でたまりません。CP交換修理が可能か?どうか。CP
交換の情報がありましたら、ご連絡ください。

阿久津 富夫 (Tomio AKUTSU セブ The Philippines)

●.....Date: Sat, 27 Oct 2007 14:17:55 +0100
Subject: Mars images (October 19th, 2007.)

Hi all, Here is a large set of images from Oct 19th under
some very good seeing at times. Plenty of interesting details
across the disk. Note the dark brick red colouration around
the NPH and the albedo markings below the NPH.

http://www.damianpeach.com/mars07/m2007_10_19trgb01_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19trgb02_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19red01_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19red02_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19green_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19blue_dp.jpg

○.....Date: Sat, 27 Oct 2007 15:08:11 +0100

Subject: Mars images (October 23rd, 2007.)

Hi all, Here are some images from Oct 23rd under very
poor seeing conditions.

http://www.damianpeach.com/mars07/m2007_10_23rgb_dp.jpg

○.....Date: Sat, 27 Oct 2007 16:52:26 +0100
Subject: Mars images (October 19th, 2007.)

Hi all, Here is a large set of images from Oct 19th under
some very good seeing at times. Plenty of interesting details
across the disk. Note the dark brick red colouration around
the NPH and the albedo markings below the NPH.

http://www.damianpeach.com/mars07/m2007_10_19trgb01_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19trgb02_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19red01_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19red02_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19green_dp.jpg
http://www.damianpeach.com/mars07/m2007_10_19blue_dp.jpg

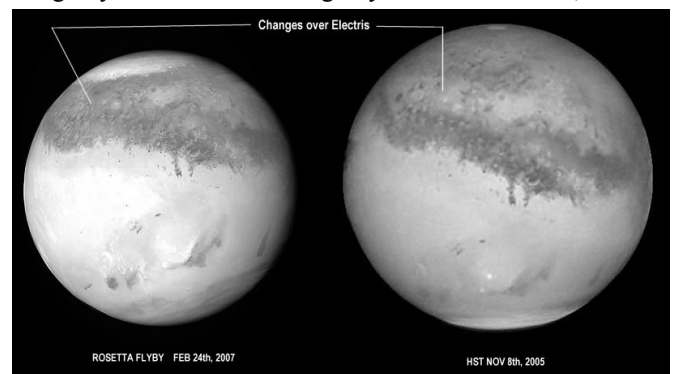
○.....Date: Sun, 4 Nov 2007 22:43:19 -0000
Subject: Mars images (October 31st, 2007.)

Hi all, Here are some images from Oct 31st in fair seeing.
I've not since obtained any further images as ive been away
overseas the last few days so missed the start of the region-
al storm captured by Dave. All looks pretty normal on this
day and i suspect the ground cap is being seen through the
hood.

http://www.damianpeach.com/mars07/m2007_10_31rgb_dp.jpg

○.....Date: Mon, 5 Nov 2007 20:48:50 -0000
Subject: Mars - Changes over Electris.

Hi Richard/Masatsugu, While looking at some past images
this evening, notably the wonderful colour images obtained
by Rosetta back in February i just by chance compared the
image by Rosetta to the image by HST on Nov 8th, 2005 of



the same longitude. A marked difference was apparent. It
seems the area of Electris in the southern hemisphere bor-
dering Mare Cimmerium has considerably darkened be-

tween these dates. Both images are in similar filters (Red around 630nm.) Do you think there was a dust event of some kind that we didn't see while Mars was so near the Sun that caused this change? Best Wishes

○ · · · · · **Date: Mon, 5 Nov 2007 21:15:48 -0000**
Subject: Mars colour processing guide.

Hi all, Given that the apparition is now in full swing here is a link to an article I wrote recently concerning today's Martian colour and processing:

<http://www.damianpeach.com/marscolour.htm>

Hopefully some will find this helpful and give some food for thought! Best Wishes

○ · · · · · **Date: Fri, 9 Nov 2007 18:01:16 -0000**
Subject: Mars images (November 5th, 2007.)

Hi all, Here is an extensive set of images from Nov 5th. Some very good seeing at times during this session. I fancy the resolution has "bottomed out" in red light for the aperture. The structure within the NPH/NPC is quite interesting. Note the opaque dust cloud over Chryse/Oxia Palus and Nilivacus Lacus from the original storm eruption on Nov 2nd. Also a bright new dust core has appeared next to Achillis Fons.

True RGBs:

http://www.damianpeach.com/mars07/m2007_11_05rgb01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05rgb02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05rgb03_dp.jpg

Red Light:

http://www.damianpeach.com/mars07/m2007_11_05red01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05red02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05red03_dp.jpg

Green Light:

http://www.damianpeach.com/mars07/m2007_11_05green01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05green02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_05green03_dp.jpg

Blue Light:

http://www.damianpeach.com/mars07/m2007_11_05blue_dp.jpg

○ · · · · · **Date: Fri, 9 Nov 2007 19:12:56 -0000**
Subject: Mars images (November 6th, 2007.)

Hi all, Here are some images from Nov 6th under very poor seeing.

http://www.damianpeach.com/mars07/m2007_11_06rgb_dp.jpg

○ · · · · · **Date: Wed, 14 Nov 2007 23:24:47 -0000**
Subject: Mars images (November 12th, 2007.)

Hi all, Here are some images from Nov 12th. Rather "ropy" seeing most of the time and I was surprised as usual that they turned out well. Mars strikes me as still rather misty/dusty in the straight RGB results. Looks as though there is some weak clouds over Mare Tyrrhenum. Hellas still looks rather bright.

http://www.damianpeach.com/mars07/m2007_11_12rgb01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_12rgb02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_12red_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_12green_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_12blue_dp.jpg

○ · · · · · **Date: Wed, 21 Nov 2007 23:43:16 -0000**
Subject: Mars images (November 16th, 2007.)

Hi all, Here is an extensive set of images from Nov 16th in good seeing. Elysium to Syrtis Major was captured. Lots of interesting details, especially the interesting weak clouds and features seen in Blue light (note the streaks surrounding the Hyblaesus extension in this filter.) The surface NPC boundary to me looks pretty clear in the Red images as the Hood seems weaker. Also Elysium Mons/Hecates Tholus are seen nicely as bright spots. Another point is that when I compared the Red data compared to 2005 (processed the same) the albedo markings still notably lack contrast compared to then. I guess there is still a good amount of atmospheric dust reducing contrast from a "clear" Mars.

Straight RGBs:

http://www.damianpeach.com/mars07/m2007_11_16rgb01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16rgb02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16rgb03_dp.jpg

Red Light:

http://www.damianpeach.com/mars07/m2007_11_16red01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16red02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16red03_dp.jpg

Green Light:

http://www.damianpeach.com/mars07/m2007_11_16green01_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16green02_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_16green03_dp.jpg

Blue Light:

http://www.damianpeach.com/mars07/m2007_11_16blue_dp.jpg

○ · · · · · **Date: Fri, 23 Nov 2007 00:33:48 -0000**
Subject: Mars images (November 17th, 2007.)

Hi all, Here are some images from Nov 17th showing the Elysium hemisphere. The NPC again seems well defined in Red light.

http://www.damianpeach.com/mars07/m2007_11_17rgb_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_17red_dp.jpg
http://www.damianpeach.com/mars07/m2007_11_17grb_dp.jpg

Best Wishes

Damian PEACH (デミアン・ピーチ Bkh 英)

● · · · · · **Date: Sat, 27 Oct 2007 18:22:24 +0200**
Subject: Meeting of Mars observers

Dear Masatsugu, I was happy to read in CMO that you were able to leave from hospital and resume your observations. I remember that my father had the same kind of physical problem.

The meeting of Mars observers in Meudon in September 2007 will probably be organized by Nicolas Biver. You can contact him concerning the duration and the program of the meeting, the parts which require a conference room, the number and the names of persons who intend to come...

Meudon Observatory will provide the conference room and the lunch. The organization work (inscriptions, reservations,...) will be done by members of the *Société Astronomique de France*. As no appropriate hotel is available near the observatory, some special bus may be necessary, similarly to the IWCA meeting on Comet Observations three years ago.

I will be happy to be a member of the Local Organization Committee (LOC). A Scientific Organization Committee (SOC) is also necessary. With best wishes.

Francis OGER (フランス・オジェ nr Paris 法)

● · · · · · **Date: Sat, 27 Oct 2007 13:42:07 -0500**
Subject: Re: FW: Meeting of Mars observers

Dear Masatsugu, This looks excellent. I wonder if the Meudon refractor is restored by then, we will not need hotels but can observe at night.

I think Audouin Dollfus would be interested in all this. I had the splendid opportunity to meet him at Pic du Midi in 1992--of course, I had been awe of him for ages, since his reputation was legendary among anyone with an interest in planets. While a man of great dignity, he was also extremely personal and among the most charismatic individuals I have ever met. One of us should take the initiative and contact him about the 2009 event--he lives in Meudon; should I do it, or would it be preferable if one of our French colleagues did so? He is now in his early 80s and I do hope his health is good.

I just learned of an ALPO article on Saheki from the 1960s and am tracking that down. Saheki really stands out as one of the exceptional Mars observers of all time--I can't actually think of any amateur of his era who rivaled him.

Glad that you are feeling better and able once more to chase your beloved Mars through the stars of the Twins.

Best regards,

○ · · · · · **Date: Fri, 16 Nov 2007 13:16:03 -0600**
Subject: request for information by richard baum

Dear Masatsugu, I received the following note today from

my colleague Richard Baum. He seeks information about Miyamori. At first I thought he was referring to Miyamoto, about whom you have previously enlightened me and whose copy of Dirac's 1st edition of quantum mechanics you once used, but I think he means someone else. I know you will be able to answer immediately.

Regarding the meeting at Meudon, I continue to think of it. It is very good to have Dollfus's involvement; what a legend he is. Richard McKim seems interested in coming, though the meeting falls during his school term--do we yet know the precise dates of the meeting, or have a tentative agenda? He indicates that with an invite to present some specific topic--he wishes naturally to discuss Antoniadi, as he has every right to do. It would be splendid to have him.

He will speak on Antoniadi--I hope with particular reference to that magical night of September 20, 1909, when the New World of Mars was revealed in those hours of splendid seeing--and I will be glad to discuss Barnard's work. I just returned from Nashville, Tennessee, two weeks ago, where I was invited to give two talks on Barnard at Vanderbilt in honor of his 150th birthday. The letters that Antoniadi wrote to Barnard after his splendid night of observing might make up a separate chapter in itself--first discovered in the Joseph Heard Library's Barnard collection when I visited in 1991, they were among the most useful documents that Richard used to reconstruct his authoritative life of E. M. Antoniadi.

I hope we can think about doing a conference proceedings of some sort, and Richard McKim and I have even discussed doing a "Men of Mars" collection; perhaps this will give us the final impetus to set something down. Best

○·····**Date: Sun, 18 Nov 2007 11:20:45 -0600**
Subject: Re: RE:request for information by richard baum

Dear Masatsugu, Thank you much for extreme promptness of your reply, which I have sent on to Richard Baum. It will satisfy his curiosity about these points. I will not detain you long at present--except to mention that I have been asked to review for the University of Chicago Press a marvelous book proposal by an assistant professor of geography at the University of New Mexico, which presents a very innovative and thought-provoking of the whole era of canal-based maps of the Mars. She has drawn on some of my earlier work but has far surpassed it--among other things, she has thoroughly studied the Brera archives to shed fresh light on Schiaparelli's achievement. Of course I will wholeheartedly recommend it for publication. I would like to ask if you would possibly mind my inviting her to our reconre.

I would like to suggest for the subject-matter that we commemorate the achievements of 1909 as both the culmination of the visual era of Martian studies and also as marking a point close to the beginning of the modern photography of the planet (with some anticipations by the Lowell expedition to Chile which I have written about for *Sky & Telescope* and would be glad to present). ···

We must also remember that 1909 was the last year of Schiaparelli's active involvement with Mars--he died the next year--and I think it is interesting to consider his attempts, no doubt with a magnifying glass, to divulge to himself the fine detail in the photographs Percival Lowell had sent him. Again, we have that moment in which the visual history of Mars observations is poised in the balance with the oncoming photographic era, and Schiaparelli lived just long enough to realize the latter's potential ("I should

never have imagined it possible" to record a canal photographically, he wrote to Lowell). I promised to be brief; but the conference will be exciting. Best,

Bill SHEEHAN (ウィリアム・シーハン MN 美)

●·····**Date: Sun, 28 Oct 2007 19:10:49 -0500**
Subject: RE: From the CMO

Hello Masatsugu, I'm doing pretty well thanks. I hope you are doing good by now. I have some data from 26 October which I should have a chance to process tomorrow. I'm also planning to get some images this morning, 29 Oct, if things go well. I'll send them to you soon I hope.

Thanks again for all the hard work you guys do analyzing our images and preparing the CMO's! Best regards,

○·····**Date: Wed, 31 Oct 2007 12:08:30 -0500**
Subject: Images for 26 October 2007

Dear Masatsugu, Attached is a set of Mars images from 26 October. I'm currently have raw images from 29, 30, and 31 October that I should be able to send to you shortly.

I hope everything is going well over there. Best regards,

○·····**Date: Thu, 1 Nov 2007 16:25:28 -0500**
Subject: Images for 29, 30 and 31 October 2007

Dear Masatsugu, Attached are 3 sets of Mars images from 29, 30, and 31 October. The blue images on October 31 appear to show a cloud feature above Arsia Mons that widens as it drifts toward the eastern terminator. Also the NPH shows a very bright feature just to the N of the Propontis Complex. Similar bulges in the NPH also show up near this location in the images from 29 & 30 Oct. The seeing was much better on the 31st than it was on the 29 & 30 which may also explain the increased contrast of this feature on the 31st. Best regards,

○·····**Date: Fri, 2 Nov 2007 17:06:13 -0500**
Subject: Images for 01 October 2007

Dear Masatsugu, Attached is a set of images for 1 November 2007. The blue images still show some faint clouds from Arsia Mons flowing westward toward the evening terminator. Your comments are that the appearance of this feature indicates a clearing of the airborne dust are interesting. Mars has seemed to be have been real dusty these past months. Best regards,

○·····**Date: Mon, 5 Nov 2007 09:12:10 -0600**
Subject: Mars Images - 03 November

Dear Masatsugu, Attached is a set of Mars images from November 3rd. There seems to be a small dust streak in Amazonis just SW of the Propontis Complex. I couldn't catch the dust storm in Chryse and Xanthe as it was past the terminator before Mars rose above the trees in the backyard. Best regards,

○·····**Date: Mon, 5 Nov 2007 20:14:27 -0600**
Subject: RE: Mars Images - 04 & 05 November

Dear Masatsugu, Attached are some Mars images from November 4th & 5th. The November 5th images appear to show a small dust streak in Lunae Lacus or just south of Achillis Fons and Idaeus Fons. Not sure if this is connected with the storm reported by David Tyler in Chryse and Xanthe or maybe a new storm, since it didn't really show in the November 4th images. Best regards,

○·····**Date: Wed, 21 Nov 2007 15:50:44 -0600**
Subject: RE: Your permission please

Dear Masatsugu, You most certainly have my permission to use my image in your discussion of the Daedalis area after the Noachis dust storm. I'm am very pleased that I can help in any way. In fact, if you feel that you need to make any changes to the image to emphasize your point you are also welcome to make those changes.

The weather has been kind of bad here lately. Hopefully,

I will get some clear skies soon and will be able to resume imaging Mars in the coming weeks. I look forward to contributing more images and will be honored if you find them useful in future work. I look forward to reading your discussion in CMO #338. Sincerely,

○·····Date: Thu, 22 Nov 2007 22:50:05 -0600
Subject: RE:RE:RE: Your permission please

Dear Masatsugu, I did notice the interesting light spots near the terminator on the 1 Nov image. To me they seem to be located in the Tempe region just next to Nilokeras. They also seem to be mostly dissipated by the 3 Nov image. However, when you blink compare the 1 Nov images with the 3 Nov images, it gives the impression that have evolved and spread toward Arcadia. Showing on the 3 Nov image as a fainter but larger luminous patch just south of the NPH. The green and blue 3 Nov images show this patch most clearly as extending out of the NPH. Exactly how this little dust event could be related to the Nilokeras events on 2 Nov is a good question. They seem to be located at a higher LCM than the 2 Nov event and perhaps moving away from Nilokeras, that is, if you assume that what is shown in the 3 Nov images is a continuation of the dust which began on 1 Nov.

The 3 Nov image also shows what appears to be a dust streak arching above (South) the Propontis Complex. This same streak also seems to show up on Rolando Chavez image taken on the same date. However, by 4 Nov this streak seems to be gone on the images that were made on that date.

The 31 October image also shows what appears to be a dust event that is involved with the NPH. In Arcadia at about LCM = 125 degs W, there is another streak jutting out of the NPH. But by 1 Nov, the NPH appears to have thickened in this region and perhaps covered this event if it was still in progress. Very interesting stuff! Thanks for pointing some of it out to me! Best regards,

Bill FLANAGAN (ヒル・フラナガン Houston TX 美)

●·····Date: Sun, 28 Oct 2007 02:23:13 -0000
Subject: Mars

Hi here are my Mars images since October 12.

○·····Date: Sat, 3 Nov 2007 14:45:01 -0000
Subject: RE: 2 November: New Storm ?

Hi, I'm still in backlog processing but I've change the sequence to process some images that can bring some information to this event. there are noticeable changes in NiliacusLacus area extending to Achilles F and Idaeus F.

http://www.astrosurf.com/pcasquinha/mars_dust.jpg

○·····Date: Mon, 5 Nov 2007 06:55:02 -0000
Subject: Mars Dust Update

Here are some preliminary results from 4 and 5 of November in IR wavelength. Note the intense concentration of dust just between Achilles Fons and Idaeus Fons on today's Image. Color channels will be processed later.

○·····Date: Fri, 9 Nov 2007 01:07:43 -0000
Subject: Mars 2007/11/05

The color images of the dust dot on November 5th

○·····Date: Sat, 10 Nov 2007 15:07:02 -0000
Subject: Mars 2007/11/07

Hi here is a Mars image from November 7.

○·····Date: Mon, 12 Nov 2007 01:39:09 -0000
Subject: Mars 2007/11/11

Mars Images from yesterday, the seeing improved just before sunrise, so this time I give it a try at a longer focal length. My best regards

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

●·····Date: Mon, 29 Oct 2007 00:55:53 +0100
Subject: Mars 26-Oct.-2007

Image avec bon seeing et le neuf telescope Vixen VMC260L

○·····Date: Fri, 2 Nov 2007 23:35:45 +0100
Subject: 2 November: New Storm ?

Hello: Images showing new activity in Mare Acidalium.

○·····Date: Sat, 3 Nov 2007 01:13:28 +0100
Subject: Cryse high bright

Hello: Images of 2nd November with IR pass 742 nm showing activity of high bright in Cryse and Nilokeras.

○·····Date: Wed, 7 Nov 2007 01:08:49 +0100
Subject: Mars Nov., 5

Hello: Images of low resolution showing a remnant spot of the dust clouds discovered Nov., 2. Also I think It is visible a long dark jet cloud at the south of the north polar hood.

http://astrosurf.com/astropasion/Mars2007/20071105_jrs.jpg

○·····Date: Thu, 8 Nov 2007 21:27:41 +0100
Subject: Mars 8 November

A new image selected of a night with fair seeing.

http://astrosurf.com/astropasion/Mars2007/20071108_jrs.jpg

○·····Date: Sat, 17 Nov 2007 20:03:46 +0100
Subject: Mars November, 11 - 12

Hello: New images with fair-good seeing.

http://astrosurf.com/astropasion/Mars2007/20071111_jrs.jpg

http://astrosurf.com/astropasion/Mars2007/20071112_jrs.jpg

Jesús SANCHEZ (ハスス・サンチェス Córdoba 西)

●·····Date: Mon, 29 Oct 2007 18:42:25 -0700
Subject: Mars 23, 24 October 2007

Hi Masatsugu, Here's Mars on 23 & 24 October. The images on the 24th show the new canal. The IR image at 12:08 UT shows the canal's "dots". Hope your health has improved. Best wishes,

○·····Date: Sun, 04 Nov 2007 11:16:13 -0800
Subject: Re: Mars 23, 24 October 2007

Hi Masatsugu, Good to hear you are feeling better. Thanks for the clarification of the TT/UT gap and associated CM differences. I use WinJupos for CM, Ls, etc. If I recall, it uses the new USNO ephemeris. I will certainly round of my CM values in the future. There was some ambiguity for me as I've seen CM's written out in both formats. On another note, I made an effort over the last two mornings to follow up on Bill & Sean's observations of the NPH at around LCM=133. The seeing was very bad and I'm not sure I can get a good enough B image for color. I'm extremely busy with my day job, working straight through the weekend. So, it looks like I will not be able to send you images for a few days. Best wishes,

○·····Date: Wed, 07 Nov 2007 07:26:16 -0800
Subject: Mars 4 November 2007

Hi Masatsugu, Heres Mars on 4 November in very poor seeing. It appears that the activity in the north polar region, pointed out in your 3 November CMO notice, was still active as of the 4th. Best wishes,

○·····Date: Wed, 07 Nov 2007 07:26:44 -0800
Subject: Re: Mars 23, 24 October 2007

Hi Masatsugu, Attached is a revised set of images from 24 October. I corrected the CM's as you suggested and adjusted the color a bit. Best wishes,

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

●·····Date: Wed, 31 Oct 2007 18:30:32 -0500
Subject: Mars October 31st 2007

An image from October 31st 2007. Seeing was pretty good after a long period of wonderfully clear but unsteady skies.

<http://www.ghg.net/egrafton/10-31-07.jpg>

○ ······ **Date: Thu, 1 Nov 2007 21:34:41 -0500**
Subject: Mars November 1st 2007

An image from November 1st 2007.

<http://www.ghg.net/egrafton/11-01-07.jpg>

○ ······ **Date: Sat, 3 Nov 2007 20:40:10 -0500**
Subject: Mars November 3rd 2007

An image from November 3rd 2007.

<http://www.ghg.net/egrafton/11-03-07.jpg>

○ ······ **Date: Sun, 4 Nov 2007 19:20:22 -0600**
Subject: Mars November 4th 2007

An image from November 4th 2007.

<http://www.ghg.net/egrafton/11-04-07.jpg>

○ ······ **Date: Wed, 14 Nov 2007 11:34:31 -0600**
Subject: Mars November 14th 2007

An image from November 14th 2007.

<http://www.ghg.net/egrafton/11-14-07.jpg>

Ed GRAFTON (エド・グラフトン Houston TX 美)

● ······ **Date: Thu, 01 Nov 2007 22:18:57 +0100**
Subject: Mars 1st november 2007

Hi all, My first really good night for this apparition, with very good seeing and excellent transparency.

<http://www.astrosurf.com/pellier/M071101-CPE>

Note the rapid evolution of clouds inside the north polar hood in less than two hours of time. The main question for me now is do we see the polar cap itself or not. I'm of the opinion that the cap is formed during autumn/winter time (MGS and HST images taken at that season are not ambiguous to my eyes). On the images (but also on some from others observers), the white area in IR looks now too regular and sharp to be only clouds. That precise area takes on a dull white-pinkish hue a bit different from the usual white-bluish tint of the hood. Best wishes

○ ······ **Date: Fri, 02 Nov 2007 19:53:28 +0100**
Subject: Re: Mars 1st november 2007

Dear Masatsugu, I'm ok with your note ;). My only interrogation is whether the streak you're pointing at is really dust or not - it looks a bit bright in blue to me. So there is certainly water vapor in this cloud. On the other hand a red filter doesn't erase the thickest white clouds so the streak in red light may not be dust with certainty. Could you advice Bill to take images in near IR also ? Of course you're absolutely right when you say that small dust clouds at the edge of the cap are common. I have noticed Bill's image already with a great interest. I do think that the cap is visible. The difference in color/albedo with the hood itself is the same as seen (at least) on my last images and also Sean's latest. Best wishes

○ ······ **Date: Mon, 05 Nov 2007 23:20:38 +0100**
Subject: Re: Mars colour processing guide.

Hi Damian, Excellent article, I have appreciated each single word. I would only add one thing maybe - from my own experimentations, one unexpected problem with the R (G)B technic is that it will sometimes fail to reach the same level of resolution than true RGB. Indeed, the sG image is partly made from the B image which is always the less defined because of poorer seeing. The behavior of the image through the G filter looks much closer to R than B to my eyes and so a true G is likely to be better defined than sG, this being especially true during nights of poor seeing. Here is an example :

<http://www.astrosurf.com/pellier/testRsGB> (this is taken from the SAF Mars report that will be published in a few days, but in french). Thanks, and use RGB.

○ ······ **Date: Mon, 05 Nov 2007 23:31:57 +0100**
Subject: Re: Mars - Changes over Electris.

Hi Damian, This could also be the "simple" result of winds ? I believe that the albedo markings can evolve slowly even without dust clouds because of that. Solis Lacus during the 80-90's has changed slowly maybe without storms (because on the other side, Syrtis Majors looked much steadier). Just an hypothesis. Or polar cap edge dust clouds did played a role during autumn/winter 2007 before the Rosetta flyby - If I'm not mistaken the image has been taken around Ls 180.

○ ······ **Date: Tue, 06 Nov 2007 20:05:24 +0100**
Subject: Re: Mars colour processing guide.

Hi Damian,

Damian Peach a écrit :

> Hi Christophe,

> Thanks. I had re-read your article on this issue last week as David

> Tyler and Myself having been discussing this subject in great detail

> the last few weeks so your original work gave me some thoughts :-)

So this why I agreed so much with your article :-). To be fair, the first time I became aware of the RRGB problems was after having read some Masatsugu's comments in 2001 - he wrote once that this processing was an issue for a good atmospheric rendition. To note it was remarkable for someone who is not an imager himself: I'm quite happy that you published this as you must be more easily heard than me on this topic.

○ ······ **Date: Fri, 9 Nov 2007 10:41:00 +0100**
Subject: Re:FW:Mars_2007/11/05

Dear Masatsugu, The birth of this dust cloud is very typical of what happens regularly above Mare Acidalium and corresponds perfectly to what has been described on my CMO note last year. But not only the atmosphere in autumn/winter there is always occupied by a rigid scheme of one low and one pressure system (respectively north-east/south-west) ; it looks like the area where dust clouds appear preferentially is very small, very precise, above what I would call the "Nilokeras corridor". Very interesting and very typical - the martian climate is seriously governed by topography ! Best wishes

○ ······ **Date: Sun, 18 Nov 2007 17:46:55 +0100**
Subject: Cap or not under the hood ? More elements

Hi all, Rolf made a very interesting animation yesterday with one of his image and one from Damian :

<http://users.xplornet.com/~skywatch/pages/images/nph.gif>

The images show several permanent bright spots that are for me frosted craters inside the ground cap. This motivated me to propose you some elements to evaluate if the cap is formed or not, and when. My personal opinion is that is formed during winter well before the vernal equinox... The brighter point can be identified as a crater located near 57°N, 8°W (maybe it has a name?). It's more evident here :

http://www.damianpeach.com/mars07/m2007_11_05rgb02_dp.jpg
 I have made a montage of that region from MGS images taken in 2002 on a very wide seasonal range (from Ls 320 to Ls 30) :

http://www.astrosurf.com/pellier/MGS_2002_NPR_small

The crater is well recognizable - a bigger one is located further north but it's certainly too close the limb to be identified (for the moment) on amateur images. I am personally seeing the cap as being completely formed already from Ls 320 on this montage. All the details identified on the ground near Ls 350 can already be observed at Ls 320-330 so its nature has not evolved: the CO₂ ice has settled earlier. The edge of the cap is found southerly of our crater and shrinkage is observable at Ls 350. The edge passes the crater around Ls 0 and it's defrosted between Ls 20-30. Compare the environnement of the crater between Ls 320 and Ls 30 : albedo features are not seen at Ls 320 (by the way

note also polar fronts, dust fronts, and the permanent summer cap remnant). Now some professional processing of MGS data of the same year (MOC weather reports) - 15-22 january, Ls 309-313, even sooner : the frosted craters and the edge of the cap are visible :

http://www.msss.com/mars_images/moc/weather_reports/15_22JAN2002/011902_weather_rpt_v3.jpg

- 13 march, on the same season observed in 2007 november (Ls 341-344) - the big cap is well seen :

http://www.msss.com/mars_images/moc/weather_reports/13_19MAR02/2002_03_13-19.jpg

Finally I would like to say a word about Don's historical image taken on oct. 25th, 1992. Don and Jeff concluded from this image that as albedo features were detected through the hood, it was a clue to say the cap was not formed at that time. I am making a different analysis of that image. Measuring the latitudes of the albedo features beneath the hood, we found from around 53° to 65° N. This is for me too low in latitude, formed or not the cap can't go that far south so it is normal to see albedo features. Luckily enough, the HST took some images only five days after Don's shot :

http://www.astrosurf.com/pellier/HST_DPk_1992

The HST data is very clear and show the same big polar cap than seen on MGS images. We see a circular feature with a sharp and regular edge that can not be a cloud cover. I think that Don's image, although amazing at that time, is simply not resolved enough to show things clearly - but for me, the image did record the cap on a brighter part (arrowed). All the best latest amateur images from 2007 show the same sharp and regular "edge" on the NPR that must be the edge of the cap. Cloudy parts of the polar hood can be identified floating above but we may understand the the hood is much thinner than we believed, especially after Ls 330-340. Hope this helps on this passionant question ;)

Best wishes

Christophe PELLIER (クリストフ・ペリエ *nr* Paris 法)

●.....Date: Fri, 02 Nov 2007 11:28:57 +0000
Subject: Mars, November 02, CM341

Hi all, Here's an earlier than usual (for me anyway) capture of Mars with the planet just 41 degrees above the horizon. Despite the fact that Mars was some way off optimal height, the seeing wasn't too bad at all. Moments later, thick fog rolled in and obscured everything! Best regards,

○.....Date: Sun, 04 Nov 2007 11:50:52 +0000
Subject: Mars 2007-11-04, CM35.7

Hi all, Please find attached my first Mars from the morning of the 4th November taken under reasonable seeing conditions. Best regards,

○.....Date: Mon, 05 Nov 2007 16:39:56 +0000
Subject: Early Mars, Nov 05, CM 331.6

Hi all, This morning's effort was something of a battle with fatigue so I decided to do one capture earlier than normal and retire to bed. Seeing degraded through the capture but the image was well supported by a nice red.

○.....Date: Mon, 19 Nov 2007 15:58:55 +0000
Subject: Mars, November 4th 2007, CM 38.3

Hi all, Catching up with some Mars sequences taken at the start of November, here's one of Mars taken on the 4th under good seeing. Best regards,

○.....Date: Fri, 23 Nov 2007 15:27:45 +0000
Subject: Mars images (November 22nd, 2007.)

Hi all, Here's an image from this morning's run. Clouds forced an early session and the seeing wasn't at its best by a long shot. Some interesting bright disk patches noted in the blue channel.

http://www.digitalsky.org.uk/mars/2007-11-22_23-58-Mars_800n.jpg

Best regards,

Pete LAWRENCE (ヒート・ローレンス Selsey 英)

●.....Date: Fri, 2 Nov 2007 03:31:02 -0700
Subject: Mars 31 October 2007

Excellent conditions on Halloween. Details in image.

○.....Date: Sun, 4 Nov 2007 05:06:09 -0800
Subject: RE: Martian storm

Beautiful David-doesn't look as strong or condensed today. Attached is a revision of my 10/31 image, with RGB images presented seperately. I believe it shows possible dust and ice mix in the NPH, as mentioned in the CMO friday..

○.....Date: Thu, 8 Nov 2007 10:20:22 -0800
Subject: Mars 2007/11/8

Poor seeing this morning. Nothing anomalous today at this CM.

○.....Date: Mon, 19 Nov 2007 08:18:38 -0800
Subject: Mars 11/19, 6:09 UT

Fair conditions before the clouds (and snow!) moved in. Details within the image.

○.....Date: Mon, 19 Nov 2007 16:12:21 -0800
Subject: RE: Mars images 17th nov

I tend to agree David- it shows in the same spot on my images from 11/19:

<http://www.masil-astro-imaging.com/SWI/Mars%2007-11-19.jpg>

Sean WALKER (シヨーン・ウォーカー S&T 美)

●.....Date: Sat, 3 Nov 2007 11:55:03 +0900
Subject: Mars-2007-11-02-KUMAMORI

寒くなってシーイングも冬型に近づいて来ました。晴れているときは目が覚めず、目が覚めたときは曇ってくるなどもう一つ調子上がりません。

火星の赤緯が上がってベランダの視界から外れそうですが、架台のフォークを短くする事によって、後しばらくいけそうになりました。

○.....Date: Mon, 5 Nov 2007 10:13:32 +0900
Subject: Mars-2007-11-03-KUMAMORI

昨日よりもシーイングは悪くなっていました。北極雲が明るくて一番目立っています。

○.....Date: Thu, 8 Nov 2007 19:20:38 +0900
Subject: Mars-2007-11-07-KUMAMORI

大きくぼやけるときが多く、なかなか火星像が落ち着きません。この悪いシーイングのまま、1 2月にはいるのでしょうか。

○.....Date: Thu, 15 Nov 2007 04:25:37 +0900
Subject: Mars-2007-11-13-KUMAMORI

シーイングは相変わらず大ボケで、ピントを合わせずのも大変でした。流石に寒くなってきました。ちょっと風邪をひきそうです。

○.....Date: Thu, 15 Nov 2007 05:29:36 +0900
Subject: Mars-2007-11-13&14-KUMAMORI

11/14はシーイングもまずまずとなりましたが、まだボケる時間も長く、どこかでシーイングの良いところがあるのではと思えるシーイングでした。

○.....Date: Mon, 19 Nov 2007 09:26:08 +0900
Subject: Mars-2007-11-16-KUMAMORI

シーイングが悪くてピントが合ってるかどうかもう良く分からない状態で、報告できそうな2画像の時間差を取ることができませんでした。

○.....Date: Fri, 23 Nov 2007 05:56:36 +0900
Subject: Mars-2007-11-22-KUMAMORI

冷たい季節風も弱くなり、シーイングも少し良くなりました。RGBの取得を、PHILIPS ToUcam PRO から DFK21AF04 に変更しました。

熊森 照明 (Teruaki KUMAMORI 堺 Osaka)

●.....Date: Sun, 04 Nov 2007 09:45:13 +0000
Subject: Mars 04-Nov-2007 CM=44.5

Hi all, Here's Mars from this morning just a dawn was

coming. Seeing was fair but deteriorating. Regards
<http://tinyurl.com/2lcydo>

○.....**Date: Mon, 05 Nov 2007 10:02:47 +0000**
Subject: Mars 05-Nov-2007 CM=006.5 V. Good Seeing

Hi all, The best view I've had of Mars all season in the eyepiece and on screen. <http://tinyurl.com/34yh2e>

○.....**Date: Fri, 16 Nov 2007 11:44:56 +0000**
Subject: Mars 16-Nov-2007 Good (UK) Seeing

Hi all, The best seeing so far. Lovely views through the eyepiece. CM=245.4. RGB: <http://tinyurl.com/2ymee4>

Colours: <http://tinyurl.com/ynkne8> Regards
Ian SHARP (イアン・シャープ WS 英)

●.....**Date: Sun, 4 Nov 2007 23:14:50 +0100**
Subject: Mars images

Hello. I send you my two first images of Mars with my chinese T250 newton. Do you need that I send you the images with a special name? Best regards.

○.....**Date: Tue, 6 Nov 2007 12:46:15 +0100**
Subject: Re: Mars images

Hello. Yes, is a Skywatcher 250mm reflector. I resend the images (an add a new one) with the times of observation. The observatory is located in Canyelles, near Barcelona, Spain. The camera is a B&W RCA plug camera similar to Watec camera. A surveillance camera with manual control over gain and exposure. No filters... Best regards

José Antonio SOLDEVILLA GONZALES

(ホセ=アントニオ・ソルデテヒョーヤ nr Barcelona 西)

●.....**Date: Tue, 6 Nov 2007 00:01:31 +0100**
Subject: Re: Mars colour processing guide.

Hi Damian and Christophe and other guys, thanks for your good article Damian. I must say I never use(d) an sG, I believe in the true RGB, so my preference is always RGB. I do believe what Christophe said, a normal G give mostly a good resolution, not so good as red, but it will do. Normal RGB give me the most natural look.

○.....**Date: Thu, 15 Nov 2007 22:29:08 +0100**
Subject: Re: Mars images (November 12th, 2007.)

Hi all, nice to see Mars again, after a long period of many clouds. It's a RGB image taken with the C11 and ATK-2HS, poor seeing.

http://www.astrofotografie.nl/mars_2007_11_14.htm

○.....**Date: Sun, 18 Nov 2007 15:22:19 +0100**
Subject: Mars 2007/11/18 02h09 UT

Hi guys, Mars this morning. It seems that the NPH is changing in NPC. Regards

http://www.astrofotografie.nl/mars2007_11_18.htm

○.....**Date: Tue, 20 Nov 2007 08:10:19 +0100**
Subject: Re: Mars images 17th nov

I must agree with Dave and Sean snow region. Also to see on the image I was taken on 18th november.

http://www.astrofotografie.nl/mars2007_11_18.htm

Richard BOSMAN (リチャルト・ボスマン Enschede 蘭)

●.....**Date: Sat, 3 Nov 2007 22:12:00 +0100**
Subject: Mars 31 th octobre

Hi all, After the Holmes house, I had taken also an Mars image but seeing was poor, after taken the red and Ir channel it worsened even more. best

○.....**Date: Wed, 7 Nov 2007 21:49:04 +0100**
Subject: Re: Mars 31 th octobre

Hi all, had a clear night seeing started with average seeing but a gliding scale downwards was inevitable with the drop of the barometer, the duststorm at the morning limb lets say ...with a bit of goodwill. best

○.....**Date: Thu, 8 Nov 2007 22:34:59 +0100**
Subject: Mars 6 november

Hi fellows, here is an additional one, notice how the Mare

Erythraeum area brights up when it turns towards us best wishes

Jan ADELAAR (ヤン・アデアラール Arnhem 荷蘭)

●.....**Date: Tue, 06 Nov 2007 06:19:42 +0000**
Subject: Mars 4 November

Hi All, I have attached some Mars images from 4 November. Very poor seeing. Nialacus appears to be covered by dust. The NPH is fragmented with bright areas, possibly dust. Best,

○.....**Date: Wed, 07 Nov 2007 03:04:32 +0000**
Subject: Mars 6 November

Hi All, I have attached some Mars images from 6 November. The seeing was poor, but Mars looked pretty normal for the season. Best,

○.....**Date: Mon, 12 Nov 2007 06:49:21 +0000**
Subject: Mars 10 November

Hi All, I have attached some Mars images from 10 November. Some discrete terminator clouds were visible. Albedo features in Baltia showing through the NPH. Again, the morning side of the NPH was very bright. Best,

○.....**Date: Tue, 13 Nov 2007 22:47:10 +0000**
Subject: Re: JALPO Report

Hi Jim (JMI), Sorry ... I meant just to send me your own images in the future in addition to submitting them to the Yahoo group. However, I am missing your images from Sept 18 to Nov 10. Getting them off the Yahoo site is a pain. If not too much trouble could you also submit them to the OAA site (CMO) by sending them to cmo@mars.dti.ne.jp? They are very good and complete, plus the images are full-sized.

Am adding the November dust to Roger's article and making a few corrections -- will send it to you shortly -- I hope. I must confess that I am slowing down. The Earth is spinning much faster than it did a few years ago! Best,

At 12:55 PM 11/13/2007 -0800, you wrote:

>Hi Don,

>Please help me out; what particular images should I send you? Thanks.

>Jim

>>Donald Parker wrote:

>>>Hi Roger and Jim,

>>>I'm finishing the Mars quarterly report for JALPO. Will send it to you >>>guys tomorrow for your approval. I'm trying to use only ALPO data, but am >>>including Tyler's -- have written him to join anyway. I have also lost some >>>images due to a computer screw up but got most back from the OAA site.

>>>I want to include a couple of pics in the report but am having trouble >>>formatting that.. Maybe will just send Ken the images separately. I'm a >>>klutz when it comes to this stuff!

>>>Jim: Could you send me your images as jpg attachments. I find it hard to >>>get them off the Yahoo site, plus these are not named properly when Gaherty >>>puts them up. Best, Don

Don PARKER (唐那・派克 Miami FL 美)

●.....**Date: Fri, 09 Nov 2007 02:17:09 +0100**
Subject: UV-Venus Pictures needed...

Hi Guys, ESA started in 2006 an observing campaign of Venus with Amateur-Astronomers, which is still ongoing.

<http://sci.esa.int/science-e/www/object/index.cfm?fobjectid=38833&fbodylongid=1856>
 Since a few days the Venus Ground-Based Active Archive with pictures from Amateurs is online:

<http://www.rssd.esa.int/index.php?project=VENUS&page=Index>

Now I would like to invite you, to share your pictures with the scientific community. We all spend a lot of time, to capture and proceed these pictures, lets put them all together on the ESA Archive...

I was Beta-Tester for the upload procedure, if you have any comment, e.g. new or better keywords, let me know. The ESA Guys are very interested in making the procedure easier for us...

Please, can you forward my message to other Amateurs

observing Venus in UV and IR-Light which are not included in my email? Best wishes

Silvia KOWOLLIK

(シルヴィア・コワロリク Ludwigsburg 徳)

●.....Date: Mon, 12 Nov 2007 01:57:41 EST

Subject: Mars: November 11, 2007

Hi! I have attached my latest image of Mars November 11, 2007 to be posted at CMO website. Thanks,

Frank J MELILLO (フランク・メリッロ NY 美)

●.....Date: Sun, 18 Nov 2007 19:16:42 -0000

Subject: Mars observation 2007 October 21

Dear Dr Minami, I enclose an observation of Mars made 2007 October 21d. Unfortunately, my subsequent attempts to observe the 'red planet' have been largely thwarted by poor seeing. I hope that matters improve in this respect, as opposition approaches in just over a month from now.

○.....Date: Wed, 21 Nov 2007 20:36:59 -0000

Subject: Re: RE:Mars observation 2007 October 21

Dear Matsatsugu, Many thanks for your kind sentiments - of course when I manage to achieve some further material worth sending, I shall copy and e-mail the observation(s) to the CMO. One of the rewards of receiving the CMO is to follow the activities of fellow enthusiasts, whom one has made the acquaintance of on a previous occasion, but not had the opportunity to maintain the contact with, a typical example for me being Dr W. Sheehan. I therefore welcome the regular correspondence that is published in the CMO between Bill and the contacts he has established in Japan, including your good self. I think that due to the barrier of language, the achievements of Japanese amateur astronomers are not as well known in the United States and Europe, as they deserve. The CMO has done much to rightly restore the balance and Bill has recognised this, with for example, the wish to include an oriental perspective concerning Jupiter in his latest book. Kind regards,

David GRAHAM (デイヴィッド・グレアム NYs 英)

●.....Date: Sun, 18 Nov 2007 21:48:28 +0900

Subject: Re: 續：宮森氏について

南政次様、「アサヒグラフ 1959年11月15日号」が「特集・月旅行時代の夜明」となっており、それに「昭和11年4月5日の夜、月面東端に近い場所を眺め

ているうちにこの谷を見つけました。佐伯さんがスケッチをして大英天文協会に送りました」とあります。なお、これには「宮盛作造」とあります。私は「宮森」と思い込んでいましたが---アサヒグラフのコピーは郵便でお送りします。なお、宮森(盛)さんはOAAの副会長をしておられたことがあったような記憶がありますが---藪さんに聞いてみます。また、アサヒグラフには「大阪女学院教諭」とあります。寒くなりました。お大事に!

佐藤 健 (Takeshi (Ken) SATO 廿日市 Hiroshima)

●.....Date: Tue, 20 Nov 2007 10:17:02 -0000

Subject: Miyamori's Valley/Thank you

Dear Dr. Minami, Bill Sheehan has very kindly passed on the information you supplied regarding Sakuzo Miyamori. This was precisely what was required, and I am greatly indebted to you for the kindness and courtesy you have shown.

I do receive the Mars Bulletins and find them of great interest always. My admiration for the energy and effort that goes into their production knows no bounds, and it is wonderful that you have the enthusiasm and professional skill to make them so valuable. Where would we be without this most useful of forums?

Following the death of my wife Audrey, things have been difficult and empty, but I was happy to have the book I was working on when she passed away published as 'The Haunted Observatory,' Prometheus, New York. A collection of essays on various obscure aspects from the observational history of solar system astronomy. I have also since published three papers in the JBAA while a fourth awaits appearance.

Again my sincere thanks and for taking time off from your busy schedule to supply a response to my request.

Very best regards

Richard BAUM (リチャード・ホーム Chester 英)

●.....Date: Wed, 21 Nov 2007 14:28:34 -0500

Subject: mars 11-21

Dear Masami, I attached an image from this morning. I had mild temperature and very good seeing. ...Sincerely,

Randy TATUM (ランディ・テナム VA 美)

☆☆☆

☆ **Kasei-Tsushin CMO** (Home Page: http://www.mars.dti.ne.jp/~cmo/oaa_mars.html)

『火星通信』 #338 (25 November 2007) 編集: 南 政次(Mn)、村上昌己(Mk)、中島 孝(Nj)

西田 昭徳(Ns)、常間地 ひとみ(Ts)

Edited by: Masatsugu MINAMI, Masami MURAKAMI, Takashi NAKAJIMA,

Akinori NISHITA and Hitomi TSUNEMACHI

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

