#### COMMUNICATIONS IN

#### 東亞天文學會「火星通信」since 1986

# MARS

No. 314
25 December 2005

#### **OBSERVATIONS**

Published by the OAA Mars Section

- CMO 2005 Mars Report #15 ———

- OAA Mars Section -

T HE planet Mars has begun to go away. We here review the CMO Mars Observations made during the one month period

from 16 November 2005 ( $\lambda$ =325°Ls) to 15 December 2005 ( $\lambda$ =341°Ls).

The apparent diameter  $\delta$  went down from 19.1" to 14.4" on 15 December. The tilt  $\phi$  of the north pole was further away from 17°S to the maximum 20°S. The phase angle was mere 08° on 16 November, but rapidly increased to 28° on 15 December. The apparent declination was around +15° + $\alpha$  (this will further increase).

Unfortunately however we here in Japan suffered from a terrible weather condition especially this December: Instead the following data shows that the observers in England look to have enjoyed nice skies during this period. Dave TYLER (*DTy*) improved his scope from a 28cm SCT to a 36cm SCT from the present period.

で・・・・・今回から一ヶ月毎のレヴューとし、今回は2005年16Nov( $\lambda$ =325°Ls)から15Dec( $\lambda$ =341°Ls)迄の観測を扱う。だいぶ北半球の春分に近づいてきた。視直徑 $\delta$ は19.1"から十二月中旬には14.4"に落ちた。中央緯度 $\phi$ は17°Sから20°Sとなり、北邊は難しい。位相角も未だ十一中旬にはまだ衝に近く、08°であったが一ヶ月で急激に増え、28°になった。視赤緯は+15°臺を保った。

問題は冬季に入っての天候で、英國では好い天氣に恵まれたようであるが(タイラー(DTy)氏はこの期より28cmSCTから36cmSCTに昇格させた)、日本では十二月に入って早めに西高東低が強くなり、條件は例年になく不好であった。關東では晴天に惠まれたようで、Nr氏は十二月前半の二週間に九日の觀測日があり42葉のスケッチをこなしているが、福井は1Decに晴れただけで、あとは全滅であった。高氣壓はこの一日のみで、あとは西高東低であったと思う。從ってシーイングは表日本でも期待出來なかったのではないかと思う。十二月にこれだけ寒氣が入ったのは珍しく、2005年と同じ状況の1990年には筆者は福井で7Dec、8Dec、9Dec、10Dec、12Dec、13Decで好シーイングに恵まれ、51葉のスケッチを得ている(1Decから6Dec迄は大津での觀測で晴れている。十二月前半全體で84葉)から雲泥の差となった。

decreased if compared with the period of peak during 16 Oct - 30 Oct when we received from 75 observers).

今回の觀測報告者は次の如くである。觀測者數は今回は未だ五十六名の寄與があるが、最接近日を含む16Oct~30Octには七十五名、1Nov~15Novには六十四名であったから、十名程ずつ減少している。現在、このシーズン觀測を寄せた觀測者は百三名ほど登録されている。

ADCOCK, Barry バェリイ・アドコック (BAd) 墨爾本 Melbourne, Australia

1 Colour CCD Image (20 November 2005) 36cm Schiefspiegler with ToUcam Pro

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

2 Sets of CCD Images (2, 8 December 2005) f/34 & 23cm SCT with a ToUcam

- AKUTSU, Tomio 阿久津 富夫 (Ak) 菲律賓 Cebu, the Philippines
  - 8 Colour CCD Images (20, 23, 24 November; 4, 8, 9 December 2005) f/28 \omega 20cm SCT with ToUcam
- AMADORI, Vittorio ヴィットリオ・アマドリ (VAm) 義大利 Valvestino, Italia
  - 2 Colour CCD +7 R Images (18 November; 7 December 2005) 20cm spec with Vesta Pro
- ANDERSON, David デヴィッド・アンダーソン (DAd) 南卡羅萊納 nr Greenwood, SC, USA
  - 4 Sets of CCD Images (19, 26 November; 1, 7 December 2005) f/38,48 ⊗ 40cm spec with ToUcam 740
- ARDITTI, David デヴィッド・アーディッチ (DAr) 英國 Stag Lane, Edgware, G London, UK 5 Sets of (I)RB Images + 18 Colour Images
  - (16\*, 17/18\*, 19/20\*, 21\*, 21/22, 24/25\*, 25, 29 November; 4,~6, 8, 10, 12, 13 December 2005) f/20,30,32,40,48⊗25cm D-K Cass with mono ToUcam/ATK-1HS II\*
- ASADA, Tadashi 淺田 正 (As) 福岡·宗像 Munakata, Fukuoka, Japan
  - 10 Sets of CCD Images (20, 27 November 2005) 30cm SCT with a Lu075M
- BEISH, Jeffrey D ジェフ・ビーシュ (JBs) 佛羅里達 Lake Placid, FL, USA
  - 10 Drawings (16, 17, 24, 25, 27 November; 3, 4, 6, 15 December 2005) 335, 500, 1005×41cm F/6.9 spec
- BIVER, Nicolas ニコラ・ビヴェール (NBv) 凡爾賽 Versailles, Yvelines, France
  - 5 Colour Drawings (16, 17, 18 November; 10 December 2005) 700×41cm speculum
- BOLZONI, Simone スィモーネ・ボルツォーニ (SBI) 義大利 Busto Arsizio, Italia
  - 2 CCD Images (20, 22 November 2005) 20cm SCT with ToUcam Pro II
- BOSMAN, Richard リシャルト・ボズマン (RBs) 尼徳蘭 Enshed, Nederland
  - 1 Set of CCD Images (18 November) 28cm SCT with an ATK-2HS
- BUDA, Stefan スティーファン・ブダ (SBd) 墨爾本 Melbourne, Australia
  - 7 Sets of CCD Images (16, 20, 30 November; 5, 10 December 2005)
    - f/35⊗40cm Dall Kirkham with ToUcam 740
- BUNGE, Robert ボブ・バンジ (RBg) 馬里蘭 Bowie, MD, USA
  - 4 Drawings (19 November; 1, 8, 14 Decmber 2005) 210. 270×13cm F/10 spec
- COOPER, Jamie ジェミー・クーパー (JCp) 英國 Northampton, UK
  - 2 CCD Images (16 November; 10 December 2005) f/35 \otimes 36cm SCT with a modified ToUcam
- DeGROFF, Kent ケント・デグロッフ (KGr) 亞利桑那 Scottsdale, AZ, USA
  - 14 Colour CCD Images (17, 18, 21, 22\*, 29, 30 November; 1, 4, 6 December 2005)
    - $f/62 \otimes 25$ cm spec |  $f/35 \otimes 20$ cm spec\* with ToUcam 740
- DICKINSON, William H ビル・ディキンソン (WDc) 維吉尼亞 Glen Allen, VA, USA
- 4 Colour CCD + 2 IR Images (16, 19, 26 November 2005) f/50 ⊗ 20cm SCT with a ToUcam Pro II FLANAGAN, William D ビル・フラナガン (WFI) 徳克薩斯·休斯敦 Houston, TX, USA
- 8 Sets of CCD Images (21, 22, 23, 30 November; 6 December 2005)
  - f/36⊗35cm SCT with a Lu075M
- GRAFTON, Edward A エド・グラフトン (EGf) 徳克薩斯・休斯敦 Houston, TX, USA
  - 1 Set of CCD Images (23 November 2005) f/39⊗35cm SCT with an ST402
- HEATH, Alan W アラン・ヒース (AHt) 長伊頓 Long Eaton, Nottingham, UK
  - 6 Colour Drawings + 9 Drawings + 12 Notes
    - (17, 18, 21, 23, 29 November 4, 6, 11, 13 December 2005)
      - 180, 280×25cm speculum|90,150×7.5cm Refracror
- HEFFNER, Robert ロバート・ヘフナー (RHf) 名古屋 Nagoya, Aichi, Japan
  - 1 Colour CCD Image (26 November 2005) f/50 \otimes 28cm SCT with Lu075C
- HERNANDEZ, Carlos E カルロス・ヘルナンデス (CHr) 佛羅里達·邁阿密 Miami, FL, USA
  - 6 Sets of Colour Drawings (17, 25, 27 November; 8/9, 13, 13/14 December 2005)
    - 250,290,300,350×23cm F/13.5 Maksutov-Cass

- IWASAKI, Tohru 岩 崎 徹 (Iw) 小倉 KitaKyushu, Fukuoka, Japan

5 Drawings (21, 27 November 2005) 400×21cm speculum

JOHNSON, Keith ケース・ジョンソン (KJh) 英國 Durham, UK

1 CCD Image (19 November 2005) 14cm Maksutov-Cass with a ToUcam Pro II

JUSTICE, Mark マーク・ジャスティス (MJs) 墨爾本 Melbourne, Australia

2 Colour CCD Images (20, 30 November 2005)  $f/40 \otimes 25$ cm D-K with ToUcam 840

KARRER, Michæl ミハエル・カッレル (MKr) 奥地利 St Radegund, Österreich

1 Colour CCD Image (8 December 2005) f/44 \omega 18cm Meade Refraktor with a DBK 21AF04

KOWOLLIK, Silvia シルヴィア・コヴォッリク(SKw) 徳國 Ludwigsburg, Deutchland

22 Colour CCD Images (25 November; 1, 5, 6, 10, 11 December 2005)

f/41 \otimes 15cm spec with a ToUcam 740

KUMAMORI, Teruaki 熊森 照明 (Km) 堺 Sakai, Osaka, Japan

27 Colour CCD Images (18, 19, 21, 23, 24, 25\*, 26, 27 November;

1\*, 6, 9, 10\*, 11, ~13, 15\* December 2005)

f/50, 88⊗20cm Dall-Kirkham with a ToUcam | f/50⊗60cm Cass\* with an ATK-2C \*ソフィア堺天文臺 Sakai City Observatory

- LOMELI, Ed エド・ロメリ (ELm) 加利福尼亞 Sacramento, CA, USA
  - 19 Sets of CCD Images (17, 20, 22, 24 November; 6 December 2005) 23cm SCT with a ToUcam Pro
- MAKSYMOWICZ, Stanislas スタニスラス・マクシモヴィッチ (SMk) 法國 Ecquevilly, France

6 Sets of Drawings (25 November; 5, 8, 10, 11 December 2005) 200×10cm refractor

- MELILLO, Frank J フランク・メリッロ (FMI) 紐約 Holtsville, NY, USA
  - 14 Colour CCD Images (20, 21, 26 November; 1, 5, 9, 11, 14 December 2005)  $f/20 \otimes 20$ cm SCT with a ToUcam
- MINAMI, Masatsugu 南 政 次 (Mn) 福井 Fukui, Fukui, Japan
- MOBBERLEY, Martin P マーチン・モッバーレィ (MMb) 英國 Cockfield, Suffolk, UK

6 Sets of CCD Images (16, ~20, 29 November 2005) f/44⊗36cm SCT with Lu075M

- MORITA, Yukio 森田 行雄 (Mo) 廿日市 Hatsuka-ichi, Hiroshima, Japan
  - 10 Sets of *RGB*+10 *IR* Images (18, 22, 24 November; 1, 3, 14 December 2005) 25cm spec with a Lu075M
- MURAKAMI, Masami 村上 昌己 (Mk) 藤澤 Fujisawa, Kanagawa, Japan
  - 31 Drawings (16, 21, ~23, 25, 27 November; 8, 9, 14 December 2005) 320×20cm F/8 Saheki speculum
- NAKAJIMA, Takashi 中島 孝 (Nj) 福井 Fukui, Fukui, Japan
- NARITA, Hiroshi 成 田 廣 (Nr) 川崎 Kawasaki, Kanagawa, Japan
  - 96 Drawings (17, 18, 20, ~25, 27, 28 November; 1, 5, 6, 8, 9, 12, ~15 December 2005) 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
  - 15 Sets of CCD Images (17, 24\*, 25\*, 27 November; 4, 5, 14\*\*, 15 December 2005)  $f/55 \otimes 41$ cm F/6 spec with an ST9XE/ATiK 2C\*|  $f/43 \otimes 25$ cm Meulon\*\*with ATiK 2C
- PEACH, Damian A デミアン・ピーチ (DPc) 英國 Loudwater, Buckinghamshire, UK
  - 22 Sets of CCD Images (16, ~21, 25\*, 26\*, 29 November; 4, 6, 8, ~11 December 2005)  $f/40 \otimes 35$ cm SCT |  $f/40 \otimes 23.5$ cm SCT\* with Lumenera Infinity 2-1/075M

- PELLIER, Christophe クリストフ・ペリエ (CPI) 法國 Noisy-le-Grand, France
  - 13 Sets of *RGB* + 11 *IR* +5 *Violet* + 1 LRGB Images (16, 17, 18, 22 November; 10, 11 December 2005) f/53, 65 ⊗ 21cm Mewlon with Lu075M
- PHILLIPS, Jim ジム・フィッリプス (JPh) 南卡羅萊納 Charleston, SC, USA
  - 4 Colour CCD Images (19, 24\*, 25\* November; 10 December 2005)
    - 20cm F/9 TMB | 20cm F/8 Flourite\* with an ATiK Color
- ROEL SCHREURS, Eric エリック・ロエル (ERI) 墨西哥 México
  - 6 R + 1 Colour Images (20, 21 November; 2 December 2005) 25cm TEC Mak with Lu075M
- ROSOLINA, Michael マイケル・ロゾリーナ (MRs) 西維吉尼亞 Friars, WV, USA 1 Colour Drawing (27 November 2005) 200, 250, 340×20cm SCT
- San EMETERIO SANTOS, Francisco (FEm) フランシスコ・サン・エメテリオ Sandanter, España 5 Colour CCD Images (17, ~19, 21 November 2005) 18cm Maksutov with an ATiK 1C
- SÁNCHEZ, Jesús R ヘスス・サンチェス (JSc) 西班牙·科爾多瓦 Córdova, España
  - 5 Colour CCD Images (16, 30 November 2005) f/30, 50⊗28cm SCT with a ToUcam
- SCHULZ, Robert ロベルト・シュルツ (RSz) 奥地利 Wien, Österreich
  - 1 Set of CCD Images (11 December 2005) f/31⊗32cm spec with Lu075M
- SHARP, Ian イアン・シャープ (ISp) 英國 West Sussex, UK
  - 9 Colour CCD + 3 Sets of Images (17/18, 18\*, 20, 28 November 2005) f/40,48 20cm spec with ATiK-1HS /ToUcam Pro\*
- SIEGEL, Elisabeth エリサベト・シーゲル (ESg) 丹麥 Malling, Danmark 6 Drawings (16, 19, 27, 28 November; 1, 12 December 2005) 330×20cm F/10 SCT
- TATUM, Randy ランディ・テータム (RTm) 維吉尼亞·里士滿 Richmond, VA, USA
  - 2 CCD Images (16, 27 November 2005) 25 cm spec with a ToUcam Pro
- TEICHERT, Gérard ジェラール・タイシェルト (GTc) 法國 Hattstatt, France
  - 4 Drawings (17, 19 November; 1, 9 December 2005) 330, 350×28cm SCT
- TYLER, David デーヴ・タイラー (DTy) 英國 Flackwell Heath, Buckinghamshire, UK
  - 14 Sets of CCD Images (16, 17, 19, ~21, 26, 29 November; 3, 5, 6, 8, 11 December 2005) f/47,50⊗35cm SCT with Lu075
- VALIMBERTI, Maurice モーリス・ヴァリムベルティ (MVI) 墨爾本 Melbourne, Australia 8 Colour CCD + 1 Set of CCD Images (19, 20, 23 November; 1, 10, 14 December 2005) f/31,44⊗35cm SCT with a ToUcam Pro
- VANDEBERGH, Ralf ラルフ・ファンデベルフ(RVb) 尼徳蘭 Nederland
  - 9 Colour CCD + 8 *B* Images (18, 21, 22/23, 28 November; 9, 10 December 2005) f/35 \omega 25cm spec with ATK-1HS
- WALKER, Sean ショーン・ウォーカー (SWk) 馬塞諸薩 Methuen, Ma, USA
  - 3 Colour CCD Images (26 November; 13 December 2005) 18cm Mak-Newton with a ToUcam 740
- WARELL, Johan ヨハン・ヴァレッル (JWr) 烏普薩拉 Uppsala, Sweden
  - 1 Set of CCD Images (30 November 2005) 36cm F/15 refractor with ToUcam
- WARREN, Joel ジョエル・ウォーレン (JWn) 徳克薩斯 Amarillo, TX, USA
  - 14 Sets of CCD Images (17, 19, ~24 November 2005) f/30 ⊗ 20cm SCT with ToUcam Pro
- O····· Dust Streak at Xanthe on 23 Nov ( $\lambda$ =329 °Ls): Ed GRAFTON(*EGf*)'s excellent images on 23 Nov ( $\lambda$ =329 °Ls) at  $\omega$ =059 °W show a bright dust streak at Xanthe. WARREN (*JWn*)'s image on the day at  $\omega$ =089 °W also proves clearly its existence while it was not so clear on his preceding images at  $\omega$ =058 °W. We received later clearer images made by FLANAGAN (*WFl*) at  $\omega$ =060 °W (partially shown here) and at  $\omega$ =067 °W. On this day, there were not so many images but the earlier images made by VANDEBERGH (*RVb*) on 22/23 Nov at  $\omega$ =003 °W, 009 °W,

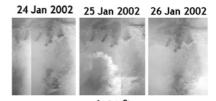
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016°W look to show a bright areaa (not-so-definite) in Xanthe and hence it is considered that it must have been onset early in the Martian morning. On the preceding 22 Nov, however, no trace of dust can be found on the images by JWn at  $\omega$ =054°W, by De GROFF (KGr) at  $\omega$ =061°W and by WFl at  $\omega$ =071°W and 085°W. On the other hand, the images on 24 Nov for example those by JWn at  $\omega$ =020°W, 037°W, 088°W, by Jim PHILLIPS (JPh) at  $\omega$ =036°W, by Don PARKER (DPk) at  $\omega$ =051°W, and by Ed LOMELI (ELm) at  $\omega$ =065°W, 069°W, 076°W don't show any longer a condensed dust at Xanthe. Such a one-day dust must be similar to the one that was observed by the MGS-MOC in 2002 on 25 Jan ( $\lambda$ =316°Ls). Here we list MOC's



swaths on 24 Jan, 25 Jan, and 26 Jan 2002 to be compared with WFl's image here or with EGf's original image. Note that the dust streak on 25 Jan, which may correspond to a gust-front or the outer ring of a meso-high

downburst at M Acidalium, was diminished on 26 Jan, but looks to obscure some other structures. No morning image by MOC however. We should note in the present case that Niliacus L/M Acidalium was faiter than usual on 23 Nov and JWn's, KGr's and WFI's images on the preceding 22 Nov show a bright spot between Niliacus L and Nilokeras at  $\omega$ =054°W,  $\omega$ =061°W and  $\omega$ =071°W/085°W respectively: The latter reminds us of the



λ=316°Ls NASA/MSSS/MGS-MOC images

case of the 13 Oct ( $\lambda$ =306°Ls) Chryse-Eos dust when a similar bright spot was observed on the preceding day 12 Oct (as observed by KOVACEVIC (ZKv) and KARRER (MKr) at  $\omega$ =002°W and  $\omega$ =010°W respectively).

The images obtained by WFl on 30 Nov ( $\lambda$ =333°Ls) at  $\omega$ =359°W, 002°W, 005°W are quite interesting in that it shows a distinguished sandy colour from the southern half of S Sabæus to Deucalionis R, and further to Margaritifer S (obtained by the use of Lu075M and interference filters). Compared with the images by CPl on 18 Nov ( $\lambda$ =326°Ls) at  $\omega$ =003°W or by DPc on 16 Oct ( $\lambda$ =307°Ls) at  $\omega$ =001°W, WFl's image shows that a part of Margaritifer S is further dusty. TES's image on 18 Nov looks to show a lesser dust pall at Margaritifer S than on 30 Nov, but the rather constancy of the dusty colour spread may suggests a fallout of dust or precipitable dust over the particular DeucaionisR/Margaritifer S region (to be considered again in off-season). TES shows a high latitude air-borne dust spread down somehow to the northern deserts crossing over S Sabæus, while the NW stick-like boundary part of S Sabæus remains to appear quite dark. SIEGEL (ESg) detected visually its spike to the west direction on 19 Nov ( $\lambda$ =326°Ls) at  $\omega$ =345°W.

 $\vec{O}$  · · · · · · End of the Opposition Effect of Olympus Mons: The phase angle read  $\iota = 08^{\circ}$  on 16 Nov. RTm's image on 16 Nov ( $\lambda = 325^{\circ}$ Ls) at  $\omega = 114^{\circ}$ W shows Olympus Mons, while it can be said the period of the brightening of Olympus Mons ceased. It is notable it was never observable from Japan, since the period when  $\iota < 08^{\circ}$  is no more than about 20 days, and this is an example of the case where a special opposition effect or a shorter

lived phenomenon is not necessarily observable at any particular region.

Solis L, it was possible that the Arsia evening cloud might have been recovered. *ELm*'s sequence of images on 17 Nov ( $\lambda$ =325°Ls,  $\iota$ =09°) at  $\omega$ =142°W, 152°W, 156°W and 173°W looks timely taken, and its B images seem to show the area of Arsia Mons brighter than on its R images. See also *KGr*'s image at  $\omega$ =145°W. KUMAMORI (*Km*)'s excellent image on 25 Nov ( $\lambda$ =330°Ls,  $\iota$ =15°) at  $\omega$ =177°W proves that the evening limb at around Arsia Mons is whitish light. It needs however a further discussion since the TES Dust Loading image at 25~30km on 25 Nov proves that the Arsia Mons summit was affected by a rather thick dust. The Local Time of Arsia Mons at  $\omega$ =177°W under this  $\iota$ =15° was over 2 o'clock PM near to 3 o'clock, and so not so different from the time of the MOC. The B image on 8 Dec ( $\lambda$ =337°Ls,  $\iota$ =24°) made by *DPc* at  $\omega$ =178°W however certainly shows that it was covered by a typical water condensate. The Martian Local Time was 2 o'clock PM. See also *DPc*'s images on 9 Dec ( $\lambda$ =338°Ls) at  $\omega$ =175°W. On 15 Dec ( $\lambda$ =341°Ls,  $\iota$ =27°) *DPk* showed the evening condensate strongly at  $\omega$ =180°W (B). Note however it will be henceforward difficult to check the cloud because the phase angle will much increase.

images, there followed images at  $\omega$ =003°W (*CPl*), 005°W(*NBv*, *ISp*), 006°W(*CPl*), 010°W(*CPl*, *DPc*, *RBs*), 011°W(*VAm*), 017°W(*ISp*), 021°W(*VAm*), 023°W(*MMb*), 034°W(*NBv*), 036°W(*CPl*), 040°W (*RVb*), 078°W(*KJh*), where *NBv*=BIVER, *RBs*=BOSMAN, *VAm*=AMADORI and *KJh*=JOHNSON. On 19 Nov ( $\lambda$ =327°Ls), *DPc* took at  $\omega$ =353°W, 357°W, 360°W, 007°W, *DTy* at  $\omega$ =010°W, *MMb* at  $\omega$ =013°W, and ARDITTI (*DAr*) at  $\omega$ =034°W, 042°W so on. Angles are not enough to compare, but a difference is seen from the other day configurations. After 22 Nov the region was watched from the US, but not so systematically observed: However on 24 Nov ( $\lambda$ =329°Ls), *JWn* took at  $\omega$ =020°W, 037°W, 088°W, and *JPh* 



at  $\omega$ =036°W, DPk at  $\omega$ =051°W. On 25 Nov ( $\lambda$ =330°Ls) DPk took at  $\omega$ =024°W, and JPh at  $\omega$ =038°W, and on 26 Nov ( $\lambda$ =330°Ls) SWk at  $\omega$ =024°W, 034°W, FMl at  $\omega$ =036°W, 050°W, and WDc at  $\omega$ =047°W.

Incidentally the famous William R DAWES observation of the phenomenon in 1864 on 14 November, as cited in CMO #305, was considered to be produced at the season around  $\lambda=336^{\circ}Ls$ , and so the present period corresponded. See <a href="http://homepage2.nifty.com/~cmomn2/2005Coming\_9.htm">http://homepage2.nifty.com/~cmomn2/2005Coming\_9.htm</a> (while our case in 1990 was at the season  $\lambda=320^{\circ}Ls$ : <a href="http://homepage2.nifty.com/~cmomn2/1990Oct\_npc.gif">http://homepage2.nifty.com/~cmomn2/1990Oct\_npc.gif</a>). However unfortunately when it came down to the area of Japan, the weather was too dismal to make any nice observation. Masami MURAKAMI (Mk) watched the areas on 8 Dec ( $\lambda=337^{\circ}Ls$ ) at  $\omega=040^{\circ}W$ , 050°W, and on 9 Dec ( $\lambda=338^{\circ}Ls$ ) at  $\omega=011^{\circ}W\sim41^{\circ}W$ , and intensively waited for good seeing moments to visit, but was not able to detect a dark hole inside the nph while Niliacus L was very apparent. As to the ccd images, see those by BUDA (SBd) on 5 Dec ( $\lambda=335^{\circ}Ls$ ) at  $\omega=062^{\circ}W$ , and on 10 Dec ( $\lambda=338^{\circ}Ls$ ) at  $\omega=014^{\circ}W$ . No sequence of observations.

 $olimits_{O}$  · · · · · · The NPH (at the Utopia Area): The nph was clearly shot to the north of Elysium on the image by VALIMBERTI (*MVl*) on 19 Nov ( $\lambda$ =327°Ls) at  $\omega$ =230°W, and by *SBd* on the following day 20 Nov ( $\lambda$ =327°Ls) at  $\omega$ =211°W, 215°W. The former can be compared with *DTy*'s image later made on 5 Dec ( $\lambda$ =336°Ls) at  $\omega$ =232°W. One of *SBd*'s images can be with ADELAAR (*JAd*)'s on 8 Dec ( $\lambda$ =337°Ls) at  $\omega$ =216°W. Not so much different yet.

As to the nph to the east of Utopia, HEFFNER (*RHf*)'s image on 26 Nov ( $\lambda$ =331°Ls) at  $\omega$ =162°W excellently shows the perimeter. On the other hand the nph at the west end of Utopia can be checked on the following images on 29 Nov ( $\lambda$ =332°Ls): *MMb*'s at  $\omega$ =272°W, *DPc*'s at  $\omega$ =273°W, *DTy*'s at  $\omega$ =286°W, and *DAr*'s at  $\omega$ =295°W.

of Syrtis Mj on 30 Nov ( $\lambda$ =333°Ls) based on his images at  $\omega$ =272°W, 299°W, 300°W. If so it must have been a kind of dust originated from the north polar region. Unfortunately however no other images were obtained on the day and the image of the nph is not proper. If this is so, the British observations on the preceding day (29 Nov) of the nph behaviour just described above must have been quite suggestive.

A.....Morning Mist at the South High Latitudes (to the West of Argyre): CPl's B images made on 16 Nov ( $\lambda$ =325°Ls) at  $\omega$ =023°W, 039 °W (by B+SP-4) and 048°W show that there is seen a morning mist at the southern high latitude terminator, and as well a preceding one suggested a bit on Argyre. JSc's images on the day at  $\omega = 023^{\circ}\text{W} \sim 063^{\circ}\text{W}$  also suggest the same phenomena. CPl's images on 18 Nov ( $\lambda = 326^{\circ}\text{Ls}$ ) at  $\omega = 003^{\circ}\text{W}$ , 006°W, 010°W, 036°W show a further complicated configuration of the morning mist, and especially at ∞=003°W there is a hole of mist near at Nereidum Fr. At  $\omega$ =010°W it moved more inside to be blurred. (*CPI*'s images on the day were all excellent especially in describing the area around M Erythræum and so on.) On the preceding 17 Nov ( $\lambda$ =325°Ls), EHd's at  $\omega$ =006°W and ISp's at  $\omega$ =007°W may also show the aspect, but lack the B images. On 19 Nov (λ=327°Ls) DPc put forward B images at ω=355°W, 004°W, and DTy at ω=010°W. MMb also produced good images at  $\omega$ =013°W. Visually, ESg observed at  $\omega$ =345°W and already saw the terminator mist (may be at Argyre) with a slightly yellowing tint. The morning dark wine-coloured hole among morning mists at around Nereidum Fr was watched from the US further inside on 24 Nov ( $\lambda$ =329°Ls) as shown on JPh's image at  $\omega$ =036°W, and also was conspicuous on the images on 25 Nov ( $\lambda$ =330°Ls) by *DPk* at  $\omega$ =024°W, and by *JPh* at  $\omega$ =038°W. The morning mist itself was still complex and thick near the terminator as shown by DPk's images on 24 Nov ( $\lambda$ =329°Ls) at  $\omega$ =051°W as well as on the following sequence of ELm's images at ω=065°W, 069°W, 076°W, 083°W, 087°W, 108°W (also see JWn's at  $\omega$ =088°W on the day). Further on 30 Nov ( $\lambda$ =333°Ls), we have nice B images of WFl at  $\omega$ =359°W, 002°W, 005°W: The southern terminater mist can interestingly compared with those shown on *DPc*'s on 19 Nov.

Norning Canon LAU Phenomenon: In 2003, as was pointed out in CMO#279, Canon LAU (CLa) clearly showed a roundish de-concentration and its dispersion of the morning mist at the early morning Amazonis (around  $\Omega$ =160°W) by a series of images on 9 Sept 2003 ( $\lambda$ =257°Ls,  $\iota$ =11°) at  $\omega$ =061°W, 077°W, 088°W, 098°W, 127°W. (See http://homepage2.nifty.com/~cmo/2790AA/index.htm). This was also previously depicted on images by Km and MVl on 3 Sept 2003 ( $\lambda$ =253°Ls, t=7°). The same phenomenon, which should be caught after opposition because it's an early morning phenomenon, was nicely caught by WFl at Houston on 21 Nov (λ=328°Ls, t=12°) this apparition by a series of images at ω=080°W, 092°W, 094°W. Taking into account the phase angle, we can easily estimate the de-concentration hole at ω=094°W was located just after the sunrise by nearly one hour, quite the same chance as the case of CLa. WFl's images on the following 22 Nov ( $\lambda$ =328°Ls) at ω=071°W, 085°W show that it had been dispersed as the area moved more inside. FWl's work proves that the de-concentration persists quite long if the season proceeds normally: In 2003, there were reported many times the phenomena as on 27 Oct 2003 ( $\lambda$ =269°Ls,  $\iota$ = 24°) by *DPk* and *EGf* (see CMO #280), on 2 Oct 2003 ( $\lambda$ =272°Ls) by WARELL (JWr), 6 Oct ( $\lambda$ =276°Ls) by MVl, and Ak, and on 8 Oct ( $\lambda$ =276°Ls) by Km (see CMO #281), and further on 8 Nov 2003 (λ=295°Ls) and on 13 Nov (λ=298°Ls, τ=40°) by Km, MVl, and MORITA (Mo) (see CMO #283). So the present WFl observation at  $\lambda=328^{\circ}$ Ls added a new data of the later season. The early local times of  $\Omega=160^{\circ}$ W are expected to be in pursuit also at the beginning of 2008 (after opposition).

 $olimits_{\bullet}$  ····· Morning Cloud Belt at the South High Latitudes (along Phænthontis, Electris, Eridania): The above cited *ELm*'s images on 24 Nov ( $\lambda$ =329°Ls) at  $\omega$ =076°W, 083°W, 087°W, 108°W show

strongly a morning mist over Phæthontis which seemed to survive at this season if it moved much more inside. SBd's images on 30 Nov ( $\lambda$ =333°Ls) at  $\omega$ =118°W show similar morning mist at the further west. DPc's B image on 8 Dec ( $\lambda$ =337°Ls) at  $\omega$ =171°W shows thickly the morning mist at Eridania to Ausonia, and CPt's sequence of images on 10 Dec ( $\lambda$ =338°Ls) at  $\omega$ =133°W, 140°W, 145°W, 150°W, and on 11 Dec ( $\lambda$ =339°Ls) at  $\omega$ =141°W, 145°W, 151°W show the condensate cloud belt from the morning to the evening Phæthontis side (see also DPc's at  $\omega$ =142°W (on 10 Dec), and 134°W (on 11 Dec). This is also seen on KOWOLLIK (SKw)'s long sequences of images on 10 Dec ( $\lambda$ =338°Ls) at  $\omega$ =156°W $\sim$ 190°W, and on 11 Dec ( $\lambda$ =339°Ls) at  $\omega$ =151°W $\sim$ 181°W. On 12 Dec ( $\lambda$ =339°Ls), ESg saw the east end of the cloud at the terminator at  $\omega$ =110°W, but no subsequent observations. DPk's B images on 15 Dec ( $\lambda$ =341°Ls) at  $\omega$ =181°W, 190°W clearly show this cloud belt along the southern continents.

 $olimits{o}^{-1}$  ······ Morning Mist at the South High Latitudes (from Hellas Area to Noachis): As to the morning Hellas mist, Mn watched the area on 17 Nov ( $\lambda$ =326°Ls) at  $\omega$ =245°W and others, and on 20 Nov ( $\lambda$ =327°Ls) at  $\omega$ =194°W ~ 236°W, but it was not so thick; the situation was similar to the one seen on Mo's images on 22 Nov ( $\lambda$ =328°Ls) at  $\omega$ =222°W, 230°W, 240°W. More inside situation was caught by ESg on 27 Nov ( $\lambda$ =331°Ls) at  $\omega$ =271°W. The B images of DPc resp DTy on 26 Nov ( $\lambda$ =331°Ls) at  $\omega$ =286°W resp 289°W show the area around M Serpentis near the terminator was rather free from the morning mist (wine-coloured in RGB). See also WFI's B on 6 Dec ( $\lambda$ =336°Ls) at  $\omega$ =294°W. The westward aspect of mist at the southern Noachis was already caught by DPc on 21 Nov ( $\lambda$ =328°Ls) at  $\omega$ =320°W, and DPk also emphasised its east on 4 Dec ( $\lambda$ =335°Ls) at  $\omega$ =292°W, 305°W. See also DAd's B image on 7 Dec ( $\lambda$ =336°Ls) at  $\omega$ =298°W. More interesting southern high latitude morning mist was caught by EIm on 6 Dec ( $\lambda$ =336°Ls) at  $\omega$ =327°W, 331°W, 334°W; from morning southern Noachis to the circumpolar region, there exists a morning cloud depicting an arc like a front which is best apparent on B image at  $\omega$ =334°W. KGr's image at  $\omega$ =330°W also suggests it. This roundish morning mist looks different from the one on the just-cited B images by DPc on 21 Nov ( $\lambda$ =328°Ls) and by CPl on 22 Nov ( $\lambda$ =329°Ls) at  $\omega$ =329°W. The B image by SBd made later on 10 Dec ( $\lambda$ =338°Ls) at  $\omega$ =014°W shows it had been quite deformed.

Morning Syrtis Mj: After opposition, we can completely watch whole of the morning Syrtis Mj and hence it is interesting to check the colour graduation of Syrtis Mj underneath the morning mist. On 17 Nov  $(\lambda=326^{\circ}\text{Ls})$ , the present writer tried to watch the colour at  $\omega=216^{\circ}\text{W}$ ,  $\sim$ 245°W, while its colour was not vivid though the mist was apparent. On 20 Nov  $(\lambda=327^{\circ}\text{Ls})$  he also tried to detect the colour at  $\omega=214^{\circ}\text{W}$ ,  $224^{\circ}\text{W}$ ,  $236^{\circ}\text{W}$ ..., and saw its slim string at  $\omega=224^{\circ}\text{W}$  and chased it while it soon became darker.  $\iota=11^{\circ}$ . Unfortunately not so many ccd images of the morning Syrtis Mj: Just SBd took on 20 Nov  $(\lambda=327^{\circ}\text{Ls})$  at  $\omega=215^{\circ}\text{W}$ , and DAr and FMl show a morning Syrtis Mj already dark on 5 Dec  $(\lambda=336^{\circ}\text{Ls})$  at  $\omega=252^{\circ}\text{W}$  and on 14 Dec  $(\lambda=340^{\circ}\text{Ls})$  at  $\omega=249^{\circ}\text{W}$  respectively. On the other hand, the present writer was communicated from Laurie HATCH at Mt Hamilton on her observations of the morning Syrtis Mj on 13 Dec  $(\lambda=340^{\circ}\text{Ls})$  and on 15 Dec  $(\lambda=341^{\circ}\text{Ls})$  by the use of the Grand Refractor: Her judgement was that the morning Syrtis Mj showed not any light-blue tint, but "a very subtle, pale steel blue tint" and a part was "less steel blue and more violet" (see LtE). According to ANTONIADI, this expression of steel blue colour was employed by Australian observer Walter F GALE in 1920 ("La couleur de Syrtis Mj se montra bleue, teinte d'acier à Gale" though the season of Gale's case was around  $\lambda=130^{\circ}\text{Ls}$ ).

 $oliminate{O}$  · · · · · · The South Polar Cap: The spc is now a residual polar cap: on 10 Dec (λ=338°Ls) there were obtained nice ccd images of a definite small spc from the angles: ω=013°W (MVI), ω=014°W (SBd), ω=132°W~149°W (CPI), ω=141°W (DPc). DPk's images on 14 Dec (λ=340°Ls) made at ω=188°W prove that a thick morning haze, more highly located in latitudes than the Eridania cloud belt just mentioned, follows the spc;



J BEISH's image of the spc on 27 Nov 2005 \lambda=331°Ls ω=340°W

this implying we should now be attentive to the appearance of the south polar hood (sph) meantime.

サンテに黄塵のスジが冩っている。ウォッレン(JWn)氏の同じく $\omega$ =058°Wには不明確だが、 $\omega$ =089°W には明白である。後にフラナガン(WFI)氏の $\omega$ =060°W、067°Wを得た(圖は英文の部参照)。これが最も鮮明である。この日は觀測數が少ないが、前夜22/23Novのファンデベルフ(RVb)氏の $\omega$ =003°W。009°W、016°Wには同じ處が明るくなっているので、朝から出ていたと思われる。但し、前日22Novには例えばJWn氏の $\omega$ =054°W、デグロッフ(KGr)氏の $\omega$ =061°W、WFI氏の $\omega$ =071°W、085°Wには出ていない。一方、24NovのJWn氏の $\omega$ =020°W、037°W、088°Wの影像やフィッリプス(JPh)氏の $\omega$ =036°W、パーカー(DPk)氏の $\omega$ =051°W、ロメリ(ELm)氏の $\omega$ =065°W、069°W、076°Wの各影像には既にクサンテでは不鮮明で擴散してしまっている。こうした一日黄塵の詳細は2002年の25Jan( $\lambda$ =316°Ls)にMGSが撮ったものに類似して居るであろう。英文の部に24Jan、25Jan、26JanのMS-MOC像を並べてある。26Janには擴散している。25Janの黄塵は前線に沿ってるのかも知れないが、マレ・アキダリウム域のメソハイによるダウンバーストに因るかも知れない。朝方の觀測の欲しいところである。今回の23Novの場合はマレ・アキダリウムが淡くなっているようである。なお、22NovのJWn氏の $\omega$ =054°WやKGr氏の $\omega$ =061°W、WFI氏の $\omega$ =071°W、085°Wにはニリアクス・ラクスとニロケラスの間に明るい部分があることを指摘しておく。これは既に指摘したように13Oct( $\lambda$ =306°Ls)のクリュセ・エオス黄雲に先立って、12Octに見えていたものに對應する(コヴァチェヴィッチ(ZKv)氏の $\omega$ =002°Wやカッレル(MKr)氏の $\omega$ =010°Wほか)。

**♂・・・・・・黄雲の殘存活動**:23Novのクサンテ黄塵は上に述べたように擴散した。然しながら、上に 擧げた24Novの影像では、エオスからアルギュレに掛けて必ずしもクリアではなく、25Nov(λ=330°Ls) のDPk氏の $\omega$ =024°WやJPh氏の $\omega$ =038°Wでは(後に觸れる)朝靄と混じって低地の黄塵の擴散運動がある 如くである。TESの25Novの上空のDustLoadingを24Novのそれと比べるとマルガリティフェル・シヌス 以東の黄雲が薄くなっている。 $26\text{Nov}(\lambda=330^{\circ}\text{Ls})$ のウォーカー(SWk)氏の $\omega=024^{\circ}\text{W}$ 、 $034^{\circ}\text{W}$ の良像では、 カプリ・コルヌが黄塵によって現出しているように見えるし、アルギュレにも水蒸氣混じりのスジが 見えるので、未だ低地の局所活動はあるのかも知れない。26Novには他に、ディッキンソン(WDc)氏 のω=355°W、038°W、047°W、アンダーソン(DAd)氏のω=006°W、メリッロ(FMI)氏のω=036°W、050°W などのエオスなど参照。カプリ・コルヌ擾亂については27Nov( $\lambda$ =331°Ls)のDPk氏の $\omega$ =000°W、テータ ム(RTm)氏のω=015°W、ヘルナンデス(CHr)氏のω=018°W參照。興味があるのはWFI氏の30Nov(λ=333°Ls) ω=359°W, 002°W, 005°Wの畫像で、Lu075Mと好い干渉フィルターの組み合わせで好い色合いが出たの かも知れないが、シヌス・サバエウス南半分からデウカリオニス・レギオ、マルガリティフェル・シ ヌスに掛けて砂色が目に附く。CPI氏の18Nov(λ=326°Ls)ω=003°WやDPc氏の16Oct(λ=307°Ls)ω=001°Wと 比較すると、マルガリティフェル・シヌスの一部の被りが強いように思う。30NovのTESの上空浮遊 黄塵の像を見ると、18Novに比べてマルガリティフェル・シヌスのあたりは確かに薄いようだが、こ こからデウカリオニス・レギオの邊りはFalloutがあって、殆どは固定されているように思う。但し、 これは今後の精査の對象である。尚、TES像では上空浮遊黄塵はシヌス・サバエウスを越えて北半球 (低緯度)まで及んでいる。然し、シヌス・サバエウスの北西端の棒状の部分は相變わらず濃く、シー ゲル(ESg)さんの19Nov( $\lambda$ =326°Ls)ω=345°Wで肉眼でこの部分の西端の突起を捉えている。

**ず・・・・・オリュムプス・モンスの衝効果・終焉**: 16Novで $\iota=08°$ になった。テータム(RTm)氏の16Nov( $\lambda=325°Ls$ )  $\omega=114°$ Wには未だ見えているが、衝効果は終焉に近い。結局日本からはオリュムプス・モンスの衝効果は觀測されなかった。 $\iota=08°$ 以下の期間が廿日程に過ぎない譯であるから、當然觀測不可能な地域が出る道理で、一地域の觀測だけでは獨善的になる証左である。

**オ・・・・・アルシア・夕景**: 一方、アルシア雲は、黄雲の減衰に從って、回復する可能性があった。ELm 氏の17Nov( $\lambda$ =325°Ls、 $\iota$ =09°)の連續像 $\omega$ =142°W、152°W、156°W、173°Wはタイムリーで、そのB畫像ではアルシア・モンスの邊りがR像に比べて明るく出ている。他にKGr氏の $\omega$ =145°W參照。25Nov ( $\lambda$ =330°Ls、 $\iota$ =15°) $\omega$ =177°Wの熊森(Km)氏の良像では、縁白霧の外に稍明るく出ている。然し、TES の25Novの25~30kmのDust-Loading像に據ればこの日はアルシア・モンスにダストが強く掛かっている

ので、もう少し議論する必要がある。 $\omega$ =177°Wではアルシア・モンスは午後2時を越えて3時に近いが MOCと然程違いはない。その點、8Dec( $\lambda$ =337°Ls、 $\iota$ =24°W)のピーチ(DPc)氏の $\omega$ =178°WにはB像があり、アルシアは水蒸氣らしくみえる。この時點ではアルシアは午後2時になっている。DPc氏の9Dec ( $\lambda$ =338°Ls) $\omega$ =175°Wも参照。15Dec( $\lambda$ =341°Ls、 $\iota$ =27°)にはDPk氏が $\omega$ =180°WのB像で強く出している。以後位相は増えるのでアルシアの觀測は難しくなる。

**♂・・・・・・北極雲(マレ・アキダリウム域)**: 北極雲とマレ・アキダリウムとの面白い絡みは既報のよ うに何度も觀測されているが、今回は先ず17、18、19Novにヨーロッパで追跡されている。 17Nov(λ=326°Ls)の場合シャープ(ISp)氏の連續觀測を中心にω=006°W(EHd)、008°W(ISp)、021°W(CPI)、 026°W(DTy, ISp), 027°W(DPc), 030°W(CPl), 032°W(DPc), 035°W(MMb), 042°W(ISp), 044°W(ISp), 063°W(ISp) と觀測されているが、マレ・アキダリウムの内部の濃淡が興味深い。18Nov(λ=326°Ls)にはCPI氏を中 心にω=003°W (CPI)、005°W(NBv、ISp)、006°W(CPI)、010°W(CPI、DPc、RBs)、011°W(VAm)、017°W(ISp)、 021°W(VAm)、023°W (MMb)、034°W(NBv)、036°W(CPI)、040°W(RVb)、078°W(KJh)と得られている。 19Nov(λ=327°Ls)にはDPc氏がω=353°W、357°W、360°W、007°W、DTy氏がω=010°W、MMb氏がω=013°W、 アルディッチ(DAr)氏がω=034°W、042°Wなどで撮っている。殘念ながら角度が殆ど揃っていないが比 較すると面白い(EHd=ヒダルゴ氏、CPl=ペリエ氏、DTy=タイラー氏、MMb=モッバリィ氏、NBv=ビヴ ェール氏、RBs=ボスマン氏、VAm=アマドリ氏、KJh=ジョンソン氏)。22Nov以降は美國で見られる ようになったが、系統的な觀測は多くない。24Nov(λ=329°Ls)にJWn氏がω=020°W、037°W、088°Wで撮 っているほか、JPh氏のω=036°W、DPk氏のω=051°Wがある。25Nov(λ=330°Ls)にはDPk氏のω=024°W、JPh 氏の $\omega$ =038°W、26Nov( $\lambda$ =330°Ls)にはSWk氏の $\omega$ =024°W、034°W、FMI氏の $\omega$ =036°W、050°W、WDc氏の ω=047°W等がある。ところで#305で引用したドーズの1864年の觀測(14Nov1864)はλ=336°Ls邊りであっ たと考えられるから、今回の期間に入るわけであるが、殘念ながら東洋に移ってから、少なくとも日 本の天候は好くなく良質の觀測がない。村上(Mk)氏はそれでも8Dec(λ=337°Ls)ω=040°W、050°W、 9 $Dec(\lambda=338^{\circ}Ls)$   $\omega=011^{\circ}W\sim41^{\circ}W$ でよいシーイングを待ったが、南極雲内にマレ・アキダリウムに孔は 見ることが出來なかった。好い像としてはブダ(SBd)氏の5Dec(λ=335°Ls)ω=062°W、10Dec(λ=338°Ls) ω=014°Wに得られているが、連續像は無い。

**北極雲(ウトピア域)**: エリュシウムの北で北極雲はヴァリンベルティ(MVI)氏に依って 19Nov( $\lambda$ =327°Ls) $\omega$ =230°Wに、またSBd氏によって翌日20Nov( $\lambda$ =327°Ls) $\omega$ =211°W、215°Wにクッキリ撮られている。前者はDTy氏の5Dec( $\lambda$ =336°Ls) $\omega$ =232°Wと趨勢を比較できる。後者はアデラール(JAd)氏の8Dec( $\lambda$ =337°Ls)  $\omega$ =216°Wと比較すると好い。大勢は變わっていない。ウトピアより東ではヘフナー(RHf)氏の26Nov ( $\lambda$ =331°Ls) $\omega$ =162°Wの北極雲がクッキリしている。ウトピア西端での様子は29Nov( $\lambda$ =332°Ls)のMMb氏の $\omega$ =272°W、DPc氏の $\omega$ =273°W、DTy氏の $\omega$ =286°W、DAr氏の $\omega$ =293°Wが面白い。

**オ・・・・・リビュアの砂塵?**: サンチェス(JSc)氏は30Nov(λ=333°Ls)ω=272°W、299°W、300°Wの像からシュルティス・マイヨルの前方に黄塵があると主張する。残念ながら同時期の觀測が揃わないが、もし、これが北極域に端を發するものならば、前項の29Novの北極雲との関わりが出てくる必要がある。**オ・・・・・南半球高緯度朝霧(アルギュレ以西域)**: CPI氏の16Nov(λ=325°Ls)ω=023°W、048°WのB、ω=039°WのB+SP-4を見ると、南半球高緯度の朝縁に霧が出ており、アルギュレにも少し殘っているかも知れない。JSc氏のω=023°W~063°Wにも窺い知れる。CPI氏の18Nov(λ=326°Ls)ω=003°W、006°W、010°W、036°Wには更に朝霧は複雑な様子で、特にω=003°W邊りではネレイドゥム・フレトゥム邊りと思しきところには朝霧の懸からない様子が捉えられている。ω=010°W以降では中に入って惚けている(この日のCPI氏の像はマレ・エリュトゥラエウムの邊りの描寫など秀逸である)。前日17Nov(λ=325°Ls)のEHd氏のω=006°WやISp氏のω=007°Wにも出ているかも知れないが、B像がない。19Nov(λ=327°Ls)にはDPc氏にω=355°W、004°WのB像があり、DTy氏もω=010°Wを得ている。MMb氏のω=013°Wも良像。ESgさんは眼視でω=345°Wでアルギュレ方面の朝端に少し黄色味の朝霧を見ている。ネレイドゥム・フレト

ウム邊りから西への暗帶は美國に移って24Nov( $\lambda$ =329°Ls)では奥深くまで濃く見えるようになり、JPh氏の $\omega$ =036°W、25Nov( $\lambda$ =330°Ls)のDPk氏の $\omega$ =024°W、JPh氏の $\omega$ =038°Wでは顕著である。朝霧全體も24Nov( $\lambda$ =329°Ls)のDPk氏の $\omega$ =051°Wに見られるように複雜で、續くELm氏の $\omega$ =065°W、069°W、076°W、083°W、087°W、108°W、またJWn氏の $\omega$ =088°Wに見られるように縁雲は濃い。30Nov( $\lambda$ =333°Ls)にはWFl氏の $\omega$ =359°W、002°W、005°Wの像があり、19NovのDPc氏の像と比較出來る。

**オ・・・・・劉佳能朝方現象:** CMO#279(http://homepage2.nifty.com/~cmo/279OAA/index.htm)で指摘した事だが2003年には9Sept(λ=257°Ls、ι=11°)ω=088°W、098°Wで劉佳能(CLa)氏が明確に示した様にアマゾニス(Ω=160°W)邊りに朝霧の圓形脱凝縮が見られた。實際には3Sept(λ=253°Ls、ι=7°)のKm氏やMVI氏の像にも現れている。これが今回、衝後朝方日の出直後が見えるようになって、WFI氏の21Nov(λ=328°Ls、ι=12°)ω=080°W、092°W、094°Wで首尾良く捉えられた。ω=094°Wでιを考慮すれば概算で、日の出後一時間弱となるが、ιがCLa氏の場合と殆ど同じなのでタイムリーであった。なお、22Nov(λ=328°Ls)のWFI氏のω=071°W、085°Wでは可成り中に入って擴散している。この朝方の圓形脱凝縮現象は從って長く續く様で、2003年には27Oct(λ=269°Ls、ι=24°)のDPk氏やEGf氏の像にも現れ(CMO #280)、その後も2Oct(λ=272°Ls)2003のヴァレッル(JWr)氏や、6Oct(λ=276°Ls)のMVI氏、Ak氏、8Oct(λ=276°Ls)のKm氏(以上CMO#281)、8Nov(λ=295°Ls)、13Nov(λ=298°Ls、ι=40°)などでKm氏やMVI氏、森田(Mo)氏などが觀測している。今回はその延長になる。2007/2008年衝後の觀測課題にもなる。

**3・・・・・南半球高緯度帶雲**(パエトンティス・エレクトリス・エリダニア):上記ELm氏の24Nov( $\lambda$ =329°Ls)の $\omega$ =076°W、083°W、087°W、108°Wにはパエトンティス上の朝霧が強く出ているが、これはこの時期可成り中にまで入って健在であったようである。30Nov( $\lambda$ =333°Ls)のSBd氏の $\omega$ =118°Wは更に西の朝霧を描く。8Dec( $\lambda$ =337°Ls)のDPc氏の $\omega$ =171°WのB像にはエリダニアかアウソニア上の朝霧が強く出ているが、CPI氏の10Dec( $\lambda$ =338°Ls)の連續像 $\omega$ =133°W、140°W、145°W、150°W、11Dec( $\lambda$ =339°Ls) $\omega$ =141°W、145°W、151°Wにはどれにも朝方から夕方のパエトンティスまで聯なる水蒸氣の帶雲を描き出している(兩日のDPc氏の $\omega$ =142°W(10Dec)、134°W(11Dec)像も参照)。コヴォッリク(SKw)さんの10Dec( $\lambda$ =338°Ls)  $\omega$ =156°W~190°Wの連續像、11Dec( $\lambda$ =339°Ls) $\omega$ =151°W~181°Wにも出ているかと思う。12Dec( $\lambda$ =339°Ls)にはESgには $\omega$ =110°Wの縁で見ているが、後続がない。15Dec( $\lambda$ =341°Ls)のDPk氏の $\omega$ =181°W、190°WのB像にもこの大陸帶雲は好く出ている。

**オ・・・・・シュルティス・マイヨルの朝**:衝後になってシュルティス・マイヨルの朝がマルッポ見えて來たので、朝霧に下のシュルティス・マイヨルの色合いが氣になるところであった(實際には衝前の方が淺葱色は見易いかも知れない)。17Nov( $\lambda$ =326°Ls)に筆者は $\omega$ =216°W~245°Wなどで注視したが、朝霧は見えるものの色は鮮やかではない。20Nov( $\lambda$ =327°Ls) $\omega$ =214°W、224°W、236°W・・・と見たが、 $\omega$ =224°Wで捉えたものの、色は鮮明ではない。 $\iota$ =11°。この期、SBd氏の20Nov( $\lambda$ =327°Ls) $\omega$ =215°WやDAr氏の5Dec( $\lambda$ =336°Ls) $\omega$ =252°W、FMI氏の14 Dec ( $\lambda$ =340°Ls) $\omega$ =249°W等があるものの連續像が無く、後者は最早

濃度が強くなっていて色は冴えない。衝前、筆者はリックで一度試みたが、このときも綺麗な色は得られていない。朝霧の純度や濃度にも関係するのであろう。 $13 \text{Dec}(\lambda=340^{\circ}\text{Ls})$ と $15 \text{Dec}(\lambda=341^{\circ}\text{Ls})$ にリックの90 cm鏡でハッチ(Laurie HATCH)さんが可成りのシーイングのもとで觀測したところでは、淺葱色ではなくa very subtle, pale steel blue tint、また或る部分はless steel blue and more violet 色を見せた由である(LtE参照)。スチールブルー(暗青灰色だろう)はアントニアディに依れば1920年に澳大利亞のWalter GALEという觀測家が使った色である。但し、季節が違うし、朝との關係は分からない。

**オ・・・・・・南 極 冠**: 南極冠は残留極冠になっているが、 $10 \text{Dec}(\lambda=338^{\circ}\text{Ls})$ には好い像が揃って、MVI氏 $\omega=013^{\circ}\text{W}$ 、SBd氏 $\omega=014^{\circ}\text{W}$ 、CPI氏 $\omega=132^{\circ}\text{W}\sim149^{\circ}\text{W}$ 、DPc氏 $\omega=141^{\circ}\text{W}$ 等の方向から明確に撮られている。 $14 \text{Dec} \ (\lambda=340^{\circ}\text{Ls})$ のDPk氏の $\omega=188^{\circ}\text{W}$ の像を見ると、先述のエリダニアの帶雲より遙かに濃い朝霧が南極冠に續く高緯度極地に出ているのでそろそろ南極雲の發生を考えなければならない。

Meteorologically (on the Earth), from this December, the whole of Japan remained pinched by the low pressure mass-air to the east and the high pressure mass-air to the west so that a cold wave severely hit our lands from north. In a sense, this configuration is quite typical in winter and brings a snowy weather to the districts facing to the Siberia like Fukui, but this winter this began quite earlier than expected and was extraordinarily strong. At Fukui in December we just had a high pressure air no more than on 1 December ( $\lambda$ =333°Ls). This was very unusual, and was in very contrast with the case in 1990 when the present writer (Mn) was able to observe 84 times from 1 December ( $\lambda$ =343°Ls) to 13 December ( $\lambda$ =349°Ls), out of which 51 drawings were obtained at Fukui. (However the sky of the opposite side facing to the Pacific Ocean is usually sunny in this pressure configration, and this winter NARITA (Nr) at Kanagawa enjoyed nine nights from 1 December to 15 December, but we hear the seeing conditions were very poor because of the dry and cold air from north crossing over the central mountain range.)

 $\delta$  ······In the next issue we shall review the observations made during a one-month period from 16 December 2005 ( $\lambda$ =341°Ls,  $\delta$ =14.4") to 15 January 2006 ( $\lambda$ =357°Ls,  $\delta$ =10.4").

南 政 次・村上 昌己 M MINAMI & M MURAKAMI, the OAA Mars Section

#### 便 り

Letters to the Editor

• · · · · · · Dear Masatsugu, Enclosed may Mars observations to date. Not a lot I am afraid and the seeing has been generally poor.

It is a shame the seeing has not been better as the planet is nicely placed for observers in England and is of a decent size.

In the mean time, I optimistically hope for better skies before Mars departs. Well, I can but hope!

On a sad note, I expect you will have heard that Harold Hill died recently following a stroke. He will be missed by his many friend and family and whilst in his mideighties, he still observed regularly with his Lunar South-pole Survey as well as Mars.

Hoping all is well with you,

Very Best Wishes, Yours Sincerely

*PS:* I am sorry the b/w copies are so poor. Our local printers have now gone digital and it is nowhere near as good as the previous machine. I can no longer buy slide film, not even in Nottingham and our local camera shop has closed due to digital photography. Progress?

(17 November 2005)

#### Alan HEATH (アラン・ヒース Long Eaton UK 英國)

#### • · · · · · · Date: Thu, 24 Nov 2005 22:54:49 +0000 Subject: Tomio Akutsu's Address

Hi Masatsugu, I am writing a Mars article for Astronomy Magazine and would like to use one of Tomio Akutsu' images. His e-mail address has apparently changed. Do you have his e-mail address? I need to ask his permission.

Hope all is well with you. Am getting tired of Mars!!  $\bigcirc \cdots \bigcirc Date$ : Fri, 25 Nov 2005 22:23:26 +0000 Subject: Thank You

Dear Masatsugu, Thank you for the information. I have e-mailed Tomio.

You are right... I forgot to put Christophe on my list. We correspond, but that is an oversight. I have corrected it.

I am sorry to hear that you are not feeling well. I think part of that is getting older. I find that getting out and setting up the scope is about as much fun as having a tooth pulled! I am afraid to admit that I have missed a number of good nights being just too tired to go out. Jeff Beish feels the same way, but he is now finally making some observations. We have all been at this for many, many years.

Remember, you have to be tough to get old!

Many thanks again, and great continuing work on the

CMO. Best

#### O····· Date: Fri, 25 Nov 2005 22:44:28 +0000 Subject: Mars Images

Hi All, I have attached some Mars images from 25 November. Seeing was a bit better. Note the very dark feature near the AM limb well south if Erythræum. this is especially dark in blue and also appears of Rolf Meir's images. It reminds me of anomalous dark features seen in blue light in Amazonis in 1997. Best

#### O····· Date: Mon, 28 Nov 2005 03:45:58 +0000 Subject: Mars Images

Hi All, I have attached some Mars images from 27 November. AM limb (terminator) discrete clouds persist in high southern latitudes. Best

I will be out of town through 2 December.

#### O···· Date: Sun, 04 Dec 2005 22:34:23 +0000 Subject: Mars Images

Hi All, I have attached some Mars images from 4 December. Poor seeing persists, but some decent clouds and surface details in Hellas are seen.

#### O····· Date: Tue, 06 Dec 2005 01:05:51 +0000 Subject: Mars Images

Hi All, I have attached some Mars images from 5 December. High Southern latitude clouds persist. Best

# O · · · · · · · Date: Tue, 20 Dec 2005 05:27:29 +0000 Subject: Mars Images

Hi All, I have attached some Mars images from 14 and 18 December. Arsia orographic cloud plus some high southern latitude clouds. Best,

Don PARKER (唐那・派克 FL 美)

# ••••• Date: Fri, 25 Nov 2005 13:11:46 +0900 Subject: mars image on 23.24 Nov.2005

火星画像添付します。セブ島では乾季季節に入り、日増しに晴れる日が多くなってきました。 気流の良くなってきました。日中は32℃位の気温となり、日本の十一月末の気温と正反対です。 暑くてエアコンが必要です。

火星も少し小さくなってきました。遠ざかる 火星は毎回、寂しい思いがします。

# O····· Date: Sat, 10 Dec 2005 10:36:20 +0900 Subject: mars 051208.051209

朝方に濃い雲状が見られます。天気が思ったよりも不安定で、雲の合間での観測です。

#### O····· Date: Tue, 20 Dec 2005 13:12:13 +0900 Subject: mars and saturn image on 19 Dec.2005

セブでは先週一杯、熱帯性低気圧のため全く 天気が悪くて夜は星が見えませんでした。しか し昨日から雲がなくなり、スカッと晴れ出して きました。気流は今までは最も良く、S=8-9と安 定し明け方の土星は極めて良く見えていました。 25日は日本へ戻り,正月はゆっくりする予定で します。年明けて10日にはセブ赴任の予定です。 今後一年間はセブ滞在となります。

Dear observers; I attach here images of Mars and Saturn taken last night under a better condition. I will return back to Japan on 25 December, and come back again to Cebu on 10 Jan 2006. I will be forced to stay here at Cebu, the Philippines for another year to work.

阿久津 富夫(Tomio AKUTSU セブ The Philippines)

#### • · · · · · · · Date: Fri, 25 Nov 2005 20:58:56 +0000 Subject: Mars Nov. 24-25

Difficult conditions last night with a lot of wind and

mediocre seeing, but high transparency.

The middle image is taken with an ATK camera, the outer two with a mono-chipped Toucam. I am satisfied there is no noticeable difference between the two, and I will use the Toucam in the future as it is easier to handle

For the last shot I tried the technique of creating a colour image with just R, B and synthesised G, and adding an IR Luminance. An advantage of this is that it puts the R and B shots closer together in time so there is less tendency to the production of difficult-to-remove colour fringing in the aligned composite. Colours are less well rendered of course than with LRGB or LIGB.

# O····· Date: Sun, 27 Nov 2005 19:20:20 +0000 Subject: Mars 21 Nov

Here are some images from both ends of 21 Nov, in poor seeing (particularly the last blue!)

The earlier ones were taken with an ATK, the later with a mono Toucam. The performance of these cameras seems to be more or less the same. In the first set I employed a synthesised Green technique, which is frowned upon by some, but I find it is a possible way to get a result out of a poor session. (I have forced the colours to be fairly consistent.)

In the later images, a dawn haze is visible.

1500 frames per colour, processing in Registax and Photoshop.

### O····· Date: Sun, 27 Nov 2005 20:56:00 +0000 Subject: Mars 25 Nov

A little bit of imaging was possible on the evening of the 25th before cloud closed in. Poor seeing and windy conditions.

Image with synth. G layer and IR Luminance using a mono Toucam. 1500 frames per colour, stacked in Registax and combined in Photoshop.

# O····· Date: Thu, 01 Dec 2005 20:19:57 +0000 Subject: Mars Nov. 29

Rather a soft Mars mage from poor seeing around midnight 29/30 Nov.

However, in the same night I did image clouds on Venus in UV around sunset and do my best image of Saturn so far in the early morning, so, all in all, OK. It is interesting how variable seeing can be from one location during the course of one night.

#### O····· Date: Mon, 05 Dec 2005 20:01:45 +0000 Subject: Mars Dec 04

Half an hour in the life of Mars, poorish seeing, some cloud. I took so many because I was experimenting with collimation, but didn't come to any profound conclusions.

One can see Olympus Mons as a bright spot in the N following, and more of the N polar Hood comes on as the time goes on.

#### O····· Date: Tue, 06 Dec 2005 20:37:03 +0000 Subject: Mars Dec05

Cloud cleared late last night to some extent, here is Mars 2.5 hours after transit. After doing a lot of complaining to the locals about the seeing here, the result is not bad. JJ, maybe you don't need to move to the "sticks".

This side of Mars at the moment looks like it has been "combed" N-S.

Saturn results for this night to come. Thanks to Dave Tyler for all his excellent advice.

# O.... Date: Tue, 13 Dec 2005 19:08:13 +0000 Subject: Mars Dec. 06

Here are some belated Mars images from the 6th. Rath-

Ser2-0302 CM0 No. 314

er soft focus, the most interesting feature is the raised areas of Elysium casting a shadow towards the terminator, and the two brighter points in Elysium, one of which presumably is Elysium Mons, but the other does not correspond to a mountain.

# O · · · · · · · Date: Tue, 13 Dec 2005 23:03:01 +0000 Subject: Mars Dec. 08

Very poor seeing on this night. I should say has been pointed out to me by Richard McKim that the darkness following Elysium (near terminator in N), also visible here, is not a shadow as I wrote before, but the "Ætheria secular darkening", and it has looked the same since 1980.

1980 I think was the first year I observed Mars, using a 4-inch reflector with a spherical mirror stopped down to about 3 inches to reduce aberration, and an absolutely impossible altazimuth mounting. Obviously I did not pay close enough attention then.

#### O····· Date: Wed, 14 Dec 2005 19:51:44 +0000 Subject: Mars Dec. 10

These two images were actually taken at different f ratios, then scaled in Photoshop to look the same. This demonstrates clearly the effect to anyone who was in doubt - even in poor seeing, you are only exploiting the Toucam properly on bright planets with a focal length of at least 250 inches (6.25m). The earlier, low f image does however show blue haze on the S limb well, and both images show Olympus Mons faintly. It certainly doesn't look like it did at opposition.

#### O····· Date: Fri, 16 Dec 2005 21:56:01 +0000 Subject: Mars Dec. 12

Seeing has been very bad this week; some have blamed it on the fire and fallout from the oil depot in Hertfordshire about 15 miles (10km) away from here.

Here is an image taken early in the evening (before the WOLAS meeting) the day after the incident. Solis Lacus is just past the CM. Yours,

David ARDITTI (デヴィッド・アーディチ Greater London 英)
<a href="http://www.davidarditti.co.uk/">http://www.davidarditti.co.uk/</a>

#### • · · · · · · · Date: Fri, 25 Nov 2005 19:59:48 -0600 Subject: Image of morning mists/Mars

Greetings all, The morning hazes and mists have been increasing over the past few weeks as Don Parker and Christophe Pellier's images have been showing. I caught a long delicate cloud of mist on the 24th. A high contrast enlargement shows its shape very well, along with a second, smaller cloud to the south of it and a third cloud just north of the SPC on the limb.

http://marswatch.amaonline.com/11-24-000600.jp

.....Date: Tue, 20 Dec 2005 21:48:06 -0600
Subject: Mars Image 12-21-05 02:20 UT

Hello all, After a month of no imaging, I finally had conditions that permitted it. As Don Parker has been imaging and pointing out, there are quite a few high southern latitude clouds, seen best in blue in my images.

Also, as Don picked up in his image from the 14th, Amazonis now seems to be having quite a bit of cloud cover. Don's 16 inch scope shows the clouds much better of course, but if you compare color channels, you can see them in my image. Olympus Mons appears as a faint dark dot. Even its surrounding flat plains can be seen as a lighter area. I'll keep imaging as long as conditions permit and my 8 inch scope allows capture of useful detail. Image is attached and linked below.

http://marswatch.amaonline.com/12-21-050220.jpg

Regards and Merry Christmas to all,

Joel WARREN (ジョエル・ウォーレン TX 美)

# • · · · · · · Date: Fri, 25 Nov 2005 21:27:34 -0600 Subject: Mars Nov 26, 2005

Here is an image from tonights view of Mars:

http://members.verizon.net/~whd/images/20051126\_whd.jpg

O · · · · · · Date: Fri, 23 Dec 2005 16:18:51 -0600 Subject: Mars Dec 23, 2005

Here is an image of Mars taken last night under poor seeing conditions.

http://members.verizon.net/~whd/images/20051223\_whd.jpg

Unfortunately the seeing here in Richmond Virginia has been quite poor throughout the month of December. Happy holidays,

Bill DICKINSON (ウィリアム・ディキンソン VA 美)

#### • · · · · · · · Date: Sat, 26 Nov 2005 12:49:17 +0100 Subject: Re: Tomio Akutsu's Address

Dear Masatsugu, I feel sorry to learn that you feel tired to write on Mars, although I can understand it, morevoer you must get lost in data! You're maybe not tired of reading on Mars though, and I was wondering if you knew the following pages by Huiqun WANG, a professional that worked on MGS data:

#### http://www.gps.caltech.edu/~hqw/

On the PhD Thesis page you will find four word documents describing the pattern of martian climate for the first two mapping years of the probe (the second being the famous 2001-2002 season). The fourth one deals with the 2001 great dust storm. You will find amazingly interesting data there.

The 2005 season on Mars has been great for me, I was fearing a very bad weather during the key monthes of october and november but they finally came out to be very good. During the last years, the same period was often very poor. A very cold weather is sometimes forecasted for western Europe - and today it's snowing, there's more than one centimeter on the ground, this is rare at the end of november in Paris!! Yours

#### O····· Date: Tue, 29 Nov 2005 22:31:49 +0100 Subject: Re: Venus Nov 29

Hi David (ARDITTI), this UV image definitely shows markings. My hypotesis for the ghost Venus, unless I'm wrong, is that it's an IR leak of the filter. Modern UV filters such as Baader and Schuler are corrected for IR leaking, but there is one nonetheless; if I look to the setting Sun through mine, I see it pink, a color that disappear if I add an IR-cut glass. Usually this leakage is too weak to be perceptible, but the low Venus is in a similar situation... Both images are not

confunded because of strong atmospheric refraction.

You could try to use any IR-blocking glass in addition. An IR-cut filter might cut a part of the UV light also unfortunately; but some blue filters (like BG12 or Astronomik) could be more efficient, just try that.

#### O····· Date: Sat, 10 Dec 2005 13:26:55 +0100 Subject: Mars, november 22th

Hi all, I'm late for these but here are my "latest" images. Seeing was just fairly good.

#### http://www.astrosurf.com/pellier/M051122-CPE

There seems to be a long dusty streak near the NPH (see 2nd G image for example, and its cream color in RGB). Just a note about the discussion we had on the list about true and synthetic green images, if you look at that RGB sequence, it's clear that the streak would have gone unnoticed with a RsGB composite as it's not clearly vis-

ible in red light! (and not present in IR).

The second sequence is taken with higher frame rates than usual (30 fps R and G, 15 fps B) and the 30 fps images again show the "ghost Mars" near the terminator.

.....Date: Mon, 12 Dec 2005 20:50:50 +0100 Subject: Mars, december 10th

Hi all, We had two nights with excellent conditions this week-end. Here are the results from the 10th:

http://www.astrosurf.org/pellier/M051210a-CPE (color sequences)

http://www.astrosurf.org/pellier/M051210b-CPE (IR, SP470)

The morning side of Mars is nicely misty (not only the southern hemisphere, but the veil is very subtle in the north). Olympus Mons and the Valhalla are again reddish, as we're now seeing them when they are shadowy. The Arsia cloud is there but almost invisible; the Olympus orographic is still not formed (therefore we could definitely eliminate the cloud hypotesis for its brightening near opposition). Best wishes

O····· Date: Sat, 17 Dec 2005 17:24:49 +0100 Subject: Mars, december 11th

Hi all, I'm now sending images from the 11th, seeing was very good.

http://www.astrosurf.org/pellier/M051211-CPE
.....Date: Mon, 19 Dec 2005 21:49:36 +0100
Subject: Re: Surface of Venus in near IR, 18th december 2005

Frank, the surface of Venus is very faint and it might be very difficult to catch it at F/20. I tried in 2004 with the C14 and a  $2\times$  barlow and didn't got anything even with exposures of 30 seconds... Another thing to consider is that because of the increased distance between the barlow lens and the CCD, the real focal ratio you get is certainly closer to F/25. In case you don't get anything, just try it next time at prime focus. It will be much easiyer!

frankj12@aol.com a écrit :

- > Christophe-
- > No I haven't process the images yet (I'm at work).
- > To give you an idea, I was using the adaptive optics at
- > f/20. I exposed 42 images with 10 seconds using the
- >Starlight Xpress MX-516.
- > Venus was taken in mid-twilight between 15 and 20 de-
- > grees above the horizon.
- > Maybe you said I should have done it at prime focus at >f/10???
- > Lets see what I will get from last night...

Frank J MELILLO (フランク・メリッロ NY 美)

O······Date: Fri, 23 Dec 2005 20:55:43 +0100 Subject: Saturn, december 18th - northern winter haze Hi all, last week-end conditions where very good: http://www.astrosurf.org/pellier/S051218-CPE

The images are interesting for the northern regions that are still currently in their winter. In color they are blue (as seen for example in Cassini's images). The UV image reveals the presence of a bright haze, almost as bright as the rings themselves. I've been waiting for this image for

Best wishes

Christophe PELLIER (クルストフ・ペリェ nr Paris 法)

# ••••• Date: Sat, 26 Nov 2005 17:20:24 +0100 Subject: mars from 25.11.2005

two years since I saw it first on older HST images:

Dear all, here my marspictures from 25. November 2005. First night with frosty temepereture (-3°C) and heavy wind... best wishes

O····· Date: Tue, 06 Dec 2005 05:12:58 +0100 Subject: mars from 5.12.05

Dear all, between clouds I could take just this mars at 21:41 GMT.

Elysium seems to be clear, over Mare Tyrrhenum and Iapigia I saw faint bluish clouds. NPH was smaller than days before, no South Ice Cap was seen. Mare Chronium was darkened, the evening limb very bright...best wishes 

.....Date: Wed, 07 Dec 2005 01:16:49 +0100 Subject: mars from 6.12.05

Dear all, here is my mars from 20:33 GMT.

I saw a huge but faint blue cloud over the south pole cap which had a triangle form and a second blueish cloud over Hesperia and a bright white Spot at the Evening Limb. best wishes

O · · · · · · · Date: Mon, 12 Dec 2005 02:57:03 +0100 Subject: mars from 10.12.2005

Dear all, here my marspictures from yesterday.

O····· Date: Mon, 12 Dec 2005 23:38:44 +0100 Subject: mars from 11.12.2005

Daer all, here my Marspictures from tonight. The whole south Part of Mars seams to be covered with weak blue clouds. best wishes

Silvia KOWOLLIK (シルウ ィア・コウ ォッリク

Ludwigsburg Germany 德)

# •••••• Date: Sat, 26 Nov 2005 08:59:43 -0800 Subject: Image for 26 Nov 2005

Attached is my image for 26 Nov 2005. Maybe a little dust in the eastern part of Mariners valley/Sinus Auroræ area

O····· Date: Wed, 7 Dec 2005 12:25:39 -0800 Subject: Image for 07 Dec 2005

Attached is my image from 7 Dec 2005. SPC is tiny but still visible.

David ANDERSON (デイヴィッド・アンダーソン SC 美)

# ••••• Date: Sat, 26 Nov 2005 17:03:19 -0000 Subject: Mars images (November 19th, 2005.)

Hi all, Here are some belated images from November 19th. Some very good seeing at times. An extensive morning mist extends across Chryse, Auroræ Sinus. The anomalous dark feature reported by Don Parker can also be clearly seen. Some interesting faint spots extending from Oxia Palus/Meridiani into Eden. Also some interesting details across Hellespontus up toward Mare Australe.

http://homepage.ntlworld.com/damian.peach/2005\_11\_19rgb\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_11\_19red\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_11\_19blue\_DAP.jpg

O····· Date: Sun, 27 Nov 2005 12:57:28 -0000 Subject: Mars images (November 17th, 2005.)

Hi all, Here are some belated Mars images from back on Nov 17th. Good seeing. The Chryse hemisphere was nicely placed for this session. Some nice evening mists across Solis Lacus. Also a weak mist over Argyre. <a href="http://homepage.ntlworld.com/damian.peach/2005\_11\_17rgb\_DAP.jpg">http://homepage.ntlworld.com/damian.peach/2005\_11\_17red\_DAP.jpg</a>

O····· Date: Sun, 27 Nov 2005 16:04:28 -0000 Subject: Mars images (November 18th, 20th, 21st.)

Hi all, Here are some images from the 18th, 20th and 21st. Fair seeing on the 20th, but terrible seeing conditions on the 18th and 20th. I cant complain after two good nights though:-).

http://homepage.ntlworld.com/damian.peach/2005\_11\_18rgb\_DAP.jpg

http://homepage.ntlworld.com/damian.peach/2005\_11\_20red\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_11\_21rgb\_DAP.jpg .....Date: Sun\_27 Nov\_2005\_23:12:22\_0000

O····· Date: Sun, 27 Nov 2005 23:12:22 -0000 Subject: Mars images (November 25th, 2005.)

Hi all, Here are some images from Nov 25th. Take under very poor seeing using a new Lumenera Infinity 2-1 camera attached to the 9.25" telescope. Weather has been poor recently. Not much to comment on in these. Some morning mists are present in Blue. Best Wishes

O····· Date: Mon, 28 Nov 2005 13:50:51 -0000 Subject: Mars images (November 26th, 2005.)

Hi all, Here are some images from Nov 26th. Seeing again terrible. Mare Serpentis is strikingly dark in Blue light - much dark than Syrtis. Best Wishes

O····· Date: Thu, 1 Dec 2005 14:09:14 -0000 Subject: Mars images (November 29th, 2005.)

Hi all, Here are some images from the 29th. Some unexpected good seeing. Syrtis Major is well presented.

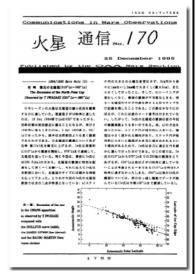
# TEN YEARS AGO (124)

#### ----CMO #170 (25 December 1995)----

巻頭は"1994/1995 Mars Note(5)"で、「岩崎徹氏の北極冠(010°Lsから080°Ls)」と題して、火星北半球の春分過ぎからの北極冠の縮小する様子を取り上げた。岩崎(Iw)氏の今回接近時のスケッチから北極冠の雪線緯度を測定して、Lsを追ったグラフと北極から見たスパイラル図に纏めて、ドリュフス氏(A Dollfus)・ジェームス氏(P James)・ボーム氏達(W A Baum et al)の過去の結果と比較して考察している。長期継続の岩崎氏の観測から良い結果が得られた。

K稿「5.ムーアはふたり?」が掲載され、Patrick Moore氏のBAAジャーナル(JBAA 83 (1972) 31)の論文での1973年の黄雲発生予測と後の著書("Guide to Mars" 1977)での全く相反する記述をとりあげ、このMoore氏は二枚舌か、全く前の論文を忘れてしまったか、または、全く別な人間の書いたものであるとしか思えないとしている。英文でも充分に書き込んでいて、国外の読者を意識してのもので、当時の南氏は血気盛んであった。以前にも書いたが、K稿のKは"Kenka"の頭文字とのことである。

夜毎餘言(LI)●西洋化か自立化か●は加藤周一氏の若い頃の著作を紹介して、年齢と生活環境の変化で低下していく知的生活のこと、もう一つは諸外国との交流に関してで、南氏の本文を引用すれば、「日本が西洋化を夢見、あらぬ方向を見ていた為に、隣国を忘れ、



最も切磋琢磨すべき近隣の眼差しの重要性を顧みず、結局、・・・の機會を逸して居るということであろう」。欧米とも一方的な繋がりであって、彼らの眼には我々は映らないという内容が述べられている。我々が当時当面していた惑星観測の情報交換という一分野に限って見ても同様で、特にアマチュアの間での交流は、欧米にのみ目を向け自己の評価を"西洋化"により向上させようとするようなことがある。そうではなくて自分達のスタイルを確立し、交流は双方向で、出来るだけ一方的・従属的でない方がよいということが述べられている。前号までのマッキムRMk氏とのやりとりを幾らか踏まえているかも知れないが、当初から『火星通信』は観測の情報を、国内のみならず外国との交換を目的に英文付きで創刊されたものであった。当時『火星通信』は発刊十年に達していて、次の171号は十周年記念号である。その十年で南氏の感じられていたことが述べられているのだと思う。果たしてそれからの此の十年、インターネットの発展で火星観測の世界も情報交換はすばやく、容易にはなったが、本当に双方向か、本質や事情と変わったのだろうか。相変わらず双方向と自立性を兼ね備えたような観測者やグループは案外国外・国内ともに依然として見られないのではないだろうか。なお、最近は中国や韓国に対して政治の機会さえ失っているから、上の加藤周一流交流一般論は十年昨日の如しである。

LtEには、マイエル氏 Wolfgang MEYER (Germany)から追加観測報告、木村精二氏からは前号のRMk氏からの返事に関しての感想、岩崎徹氏からの近況、筆者の便りが採り上げられている。

OAA MARS SECTION には追加の観測報告が取り上げられ、マイエル氏から送られてきたドイツのメンバーの衝(Feb 1995)前後の観測が紹介されている。 村上 昌己 (Mk)

25 December 2005 Ser2-0305

Most striking of all is the very dark Mare Serpentis in Blue light.

This is my 80th night of Mars images this apparition. Still a long way to go yet!....

http://homepage.ntlworld.com/damian.peach/2005\_11\_29rgb\_DAP.jpg

# O · · · · · · · Date: Mon, 5 Dec 2005 13:26:30 -0000 Subject: Mars images (December 4th, 2005.)

Hi all, Here are some images from last night. Fair to good seeing. Lots of faint morning mists along the limb. The SPC is hardly visible now at this longitude. Elysium Mons appears as a small bright spot.

http://homepage.ntlworld.com/damian.peach/2005\_12\_04rgb\_DAP.jpg
.....Date: Mon, 12 Dec 2005 23:02:58 -0000
Subject: Mars Images (December 6, 8, 9, 10, 11th.)

Hi all, Here are five sets of Mars images obtained during the last week. Seeing mostly very poor, aside from fair on the 6th, and very good on the 10th (but poor transparency.)

Mars is shrinking fast now. No images possible tonight as the seeing is degraded to a horrendous degree, mostly likely due to the plume of smoke drifting over my site from the massive oil explosion that occured yesterday which is 20 miles to the NE of my site. The bang was so loud it woke me up at 6am!. The fire is still burning nearly 2 days later....

http://homepage.ntlworld.com/damian.peach/2005\_12\_06rgb\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_12\_08rgb\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_12\_09rgb\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_12\_10rgb\_DAP.jpg http://homepage.ntlworld.com/damian.peach/2005\_12\_11rgb\_DAP.jpg Best Wishes

Damian PEACH (デミアン・ピーチ Bkh UK 英)

# ••••• Date: Sun, 27 Nov 2005 08:46:52 +0900 Subject: Mars-2005-11-25-KUMAMORI

ソフィア・堺の市民観望会の後での撮影です。 観望会の前半は雲の往来が激しくシーイングも 悪かったのですが後半、雲が無くなった後に良 く見えるようになりました。

O····· Date: Sun, 27 Nov 2005 10:36:37 +0900 Subject: Mars-2005-11-26-KUMAMORI

穏やかそうな日中でしたが、やっぱり?シーイングは好転しません。寒さはちょっと和らぎました。

O····· Date: Sun, 27 Nov 2005 23:12:08 +0900 Subject: Mars-2005-11-27-KUMAMORI

何とか晴れたのは良いのですが、また少し寒くなり時雨気味です。シーイングは悪い。

O····· Date: Sat, 03 Dec 2005 22:00:18 +0900 Subject: Mars-2005-12-01-KUMAMORI

少し落ち着いたシーイングの時ががありましたが、変動は激しく全くピントを合わせられない時もありました。

O····· Date: Wed, 07 Dec 2005 07:57:56 +0900 Subject: Mars-2005-12-06-KUMAMORI

寒波で一気に寒くなりましたが、シーイングの 方は思ったより落ち着いていました。

O····· Date: Fri, 09 Dec 2005 22:02:38 +0900 Subject: Mars-2005-12-09-KUMAMORI

寒波も風も強く、望遠鏡は強く揺れていました。

O····· Date: Mon, 12 Dec 2005 09:35:08 +0900 Subject: Mars-2005-12-10&11-KUMAMORI

十二月10日、11日の画像を送付いたします。不 安定な天候と悪気流でなかなか思ったように撮 影できません。11日は撮影サイズを小さくして、 シャッター速度を上げてみましたが、写りはも う一つです。

O····· Date: Mon, 12 Dec 2005 21:34:37 +0900 Subject: Mars-2005-12-12-KUMAMORI

今年一番の寒さでしょうか、今にも雪の降り そうな雲が飛んでいますが、何とか晴れていま す。しかし、冷たい風で望遠鏡は揺れ、シーイ ングもがたがたです。

O····· Date: Tue, 13 Dec 2005 21:40:43 +0900 Subject: Mars-2005-12-13-KUMAMORI

12日よりは風が収まりましたが、まだまだ強烈な寒さです。

O····· Date: Thu, 15 Dec 2005 20:57:25 +0900 Subject: Mars-2005-12-15-KUMAMORI

日中は晴れ間も多くシーイングが良くなる事を 期待していたのですが、夕方から雲が多くなり 雨もぱらついてきました。雲間からの撮影です。

O····· Date: Sat, 17 Dec 2005 07:56:34 +0900 Subject: Mars-2005-12-16-KUMAMORI

市民観望会の後の撮影ですが、雲が多くシーイングも不安定でした。

O····· Date: Sun, 18 Dec 2005 21:27:44 +0900 Subject: Mars-2005-12-18-KUMAMORI

大阪にとっては強烈な寒さです。雪がチラチラ舞いましたが、晴れ間もあり何とか撮影できました。

O····· Date: Wed, 21 Dec 2005 00:19:59 +0900 Subject: Mars-2005-12-20-KUMAMORI

昼間は寒気も緩んで晴れたのですが、夕方から 曇ってきました。雲間からの撮影です。

O····· Date: Sat, 24 Dec 2005 07:35:42 +0900 Subject: Mars-2005-12-22-KUMAMORI

堺でも一日中雪が降ったり止んだりの天候で、 一時うっすらと雪が積もりましたがすぐに溶けてしまいました。夕方から晴れたのですが、シーイングはがたがたでした。

熊森 照明 (Teruaki KUMAMORI 堺 Osaka)

# ●・・・・・・ Date: Sun, 27 Nov 2005 12:03:12 +0900 Subject: Re: カンパ拝受

先日は、メールありがとうございます。 たり、ケダの便で沖縄た路よ、現地味間

本日、午後の便で沖縄を発ち、現地時間の遅い時刻にハノイに到着します。明日、大使館や今回の業務の委託元のJICA事務所へ顔を出した後、ホーチミン市へは11月29日に入ります。

火星は11月半ばから天気が悪くなり、全く撮像出来ませんでした。昨晩、久しぶりに少し小さくなった火星を眺めました。

追伸:キャパや澤田教一の写真は、前回、ベトナムを訪れた時も幾度となく目に しました。

宮崎 勲 (Isao MIYAZAKI うるま Okinawa)

### • · · · · · · Date: Sun, 27 Nov 2005 04:45:32 -0500 Subject: Mars Observation (November 27, 2005)

I made a pair of observations of Mars on November 27, 2005 (03:00 and 04:00 U.T.) under average to good (5-7/10) seeing conditions. Much detail was noted over the southern hemisphere, especially between Sinus Sabæus and Mare Erythræum. I welcome any comments that you may have on my observations. Notes: ••• Mare

Erythræum appeared dark to dull (3-5/10) and mottled with bright (7/10) streaks within it (Pyrrhæ Regio?). Argyre appeared bright (7/10) over it's north-following sector whereas the rest of the albedo feature appeared dusky to dull (4-5/10).

# O · · · · · · · Date: Sun, 27 Nov 2005 04:45:32 -0500 Subject: Mars Observation (November 27, 2005)

I made a pair of observations of Mars on November 27, 2005 (03:00 and 04:00 U.T.) under average to good (5-7/10) seeing conditions. Much detail was noted over the southern hemisphere, especially between Sinus Sabæus and Mare Erythræum. I welcome any comments that you may have on my observations.

# O····· Date: Fri, 9 Dec 2005 16:17:00 -0500 Subject: Mars Observation (December 8-9, 2005)

I made an observation of Mars on December 8-9, 2005 (23:45 and 00:15 U.T., respectively) under average to good seeing conditions (5-7/10). Detail was noted over the southern hemisphere. I welcome any comments that you may have on my observation.

# O · · · · · · Date: Tue, 13 Dec 2005 16:12:20 -0500 Subject: Mars Observation (December 13, 2005)

I made an observation of Mars on December 13, 2005 (01:45 and 02:15 U.T.) under average seeing conditions (5/10). Detail is still noted over the Martian southern hemisphere as recorded. Elysium was prominent on the CM. I welcome any comments that you may have on my observation

# O····· Date: Tue, 13 Dec 2005 21:34:08 -0500 Subject: Mars Observation (December 13-14, 2005)

I made an observation of Mars on December 13, 2005 (23:45 U.T.) and December 14 (00:15 U.T.), 2005 under average seeing conditions (5-6/10). Detail was noted over the Martian southern hemisphere between Mare Sirenum and Mare Cimmerium. Elysium was visible over the north-following limb. I welcome any comments that you may have on my observation.

# O····· Date: Sun, 18 Dec 2005 17:20:04 -0500 Subject: Mars Observation (December 17, 2005)

I made an observation of Mars on December 17, 2005 (01:00 U.T.) under average seeing conditions (5-6/10), but had to peek through "holes" in the clouds passing overhead. The weather did not allow me to make a blue light (W38A) observation. I welcome any comments that you may have on my observation.

I welcome any comments on my observation. *Happy Holidays and a Happy New Year!* Regards,

Carlos HERNANDEZ (カルロス・ヘルナンデ ス FL美)

#### • · · · · · · Date: Sun, 27 Nov 2005 18:53:23 +0000 Subject: mars 11-27-2005

Dear Masami, Attached is an image from last evening. Seeing was 5/10 and trans. 3/5. I used a 25.4 cm f/12 refl., 3×barlow, UV/IR block, ToUcam Pro, Registax 3, and Photoshop Elements. Sincerely,

Randy TATUM (ランディ・テータム VA 美)

# ●・・・・・・ Date: Mon, 28 Nov 2005 15:03:08 +0900 Subject: 11月27日の画像

南 様(cc 村上 様):昨日撮影した画像をお送りいたします。各色の明るさに注意して

みました。文字のフォントもこれでよろしかったでしょうか? 最初のセットでは曇ってしまい、B光の撮影ができず、最後のセットでは操作ミスからR光の撮影ができませんでした。シーイングがだんだん悪くなってきた様ですが、12月

初旬の小春日和に期待したいと思います。

### ○·····Date: Sat. 10 Dec 2005 08:23:47 +0900 Subject: ありがとうございます

・・・・・・ボーナスも出ましたので少しばかり余裕ができました。Lu075Mは良いカメラだと思います。最初の撮像で予想より良い画像が撮れたので、その後を期待していたのですが、シーイングに恵まれず、残念に思っています。B光の撮像がうまくいきませんが、今後の課題とさせていただきたいと思います。取り急ぎ、お礼まで。

淺田 正 (Tadashi ASADA 宗像 Fukuoka)

#### • · · · · · · Date: Mon, 28 Nov 2005 10:13:28 +0100 Subject: mars 25.11.05

Dear sirs, Please find a sketch of mars done with: refractor 102mm F10 at  $200\times$ 

location: Ecquevilly, France (49°N, 2°E)

Sketch: on 25th.11.05 LCM=289°W (20H40UT)

filter W80A Seeing 6/10 Transparency 4/6

Notes: The NPH is always present and a white brilliant dot is located at the northest location. The SPC is visible at the limit and not actually white, a dark collar around in moment of good seeing is visible. Hellas is not not clear as usual. Sunset edge exhibit brilliant haze as shown. In green light (W56) and yellow light (W8), bright area are present north of Sinus Meridiani and sinus Sabæus (not visible with W38A), on Lybia . Except these, the pattern remains highly contrasted and clear to see. W38A filter allows to see the more prominent features (S Meridiani, S Sabæus, Margaritifer S, M Cimmerium and Syrtis Mj) and whitish area (NPH and white dot, north S Meridiani, north M Cimmerium).

Have good receipt of the present. Best regards.

#### O····· Date: Sun, 11 Dec 2005 14:57:53 +0100 Subject: Mars observation 10th dec.

Dear sirs, Please find my last observations of Mars performed on 10th Dec. with my 102mm refractor.

I wish you receive all in good conditions for the Mars patrol. Weather in France is good now and planetary observations on Mars can be lead again efficiently because temperature is down 0°C here. Best regards

#### Stanislas MAKSYMOWICZ

(スタニスラス・マクシモウ゛ィッチ Ecquevilly France 法)

#### • · · · · · · Date: Mon, 28 Nov 2005 12:32:53 -0300 Subject: Mars November 24-25, 2005

Hell All, I had a wonderful trip to my farm for Thanksgiving. Great food and even greater Family and Friends. I'm stuffed!! I was able to get bout with my new TEC 200 *F*/8 Flourite. Unfortunately the seeing was poor to fair at best. On the 24th I was able to image the NPH as it looked through the eyepiece. On the 25th I'm not sure. FYI.

# O····· Date: Thu, 01 Dec 2005 11:54:15 -0300 Subject: RE: Mars images (November 29th, 2005.)

Really magnificent images Damian. Excellent quality. You will be able to image Mars Long after opposition at this rate. In fact I'm not sure you will even need to wait around for the next opposition, just keep imaging! Congratulations!

Jim PHILLIPS (ジム・フィリップス Charleston SC 美)

# • · · · · · · Date: Tue, 29 Nov 2005 12:00:34 -0000 Subject: Mars images (Nov 28th, 2005)

Hi all, Here are 3 images from last evening. Quite happy with these, especially the first which was taken

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just after sunset, with Mars only 32 degrees Alt - nice detail in bright Northern hemisphere around Chaos. Still my usual inconsistent colouring! Best Regards

lan SHARP (イアン・シャーフ West Sussex UK 英)

#### • · · · · · · · Date: Thu, 1 Dec 2005 22:49:19 +1100 Subject: Mars image from 30th of Nov.

The wind stopped blowing after 10 days but the seeing was hopeless. Images attached.

**Stefan BUDA** (スティーファン・フ゛タ゛ Melbourne 澳)

# • · · · · · · Date: Thu, 01 Dec 2005 23:11:35 +1100 Subject: Re: CMO Notice #3/2005

Here the weather has been poor since the 23rd November. Tonight it is fairly clear, but the seeing is very bad. Attached is an image, taken in very poor seeing, from a couple of hours ago. Mars was 30 deg above the horizon at this time. Best wishes

#### O · · · · · · · Date: Sat, 17 Dec 2005 22:51:47 +1100 Subject: Mars 14th December

Here is a two image composite of Mars taken on the 14th December with average to poor seeing. A few days before these, Hellas seemed quite dusky on the evening limb; but apart from a slightly brighter northern Hellas, nothing seems unusual to me. Best wishes

#### Maurice VALIMBERTI

(モーリス・ウ゛ァリンヘ゛ルティ Mebourne 澳)

#### • · · · · · · · Date: Fri, 02 Dec 2005 12:47:56 +0100 Subject: Drawings in the mail

Dear Masatsugu, Just a note to tell you that I've posted some Mars drawings from the last half of November for you today. Best wishes,

Elisabeth SIEGEL (エリサヘート・シーケール Malling 丹麥)

### • · · · · · · Date: Fri, 2 Dec 2005 20:33:49 +0100 Subject: Mars 051202

Hi all, It's a while ago that I could post a new image. Imaging in the evening/early night is almost not done in autumn at my location due to lot of heat radiation in my direct neighborhood, thereby the fog from the river closeby and the depressing weather in november shuts down my enthousiasm to run outside but ok here a image from last night, gain almost total open to get some signal, Ir underexposed but could save the image;

# O····· Date: Fri, 9 Dec 2005 21:13:15 +0100 Subject: Re: brightning over Elysium

Here is the image, I do enclose a normal rgb from the ToUcam but still the colour looks intensified, regretly poor seeing with double limbs and so on but now and then a good frame best to all Jan

http://home.tiscali.nl/planetadelaar/mars051208.jpg
.....Date: Fri, 23 Dec 2005 17:52:59 +0100
Subject: Christmas card

The weather is still very cloudy no white christmas afterall predicted so I turn to another hobby as you imagined and count my blessing the almost past year best to all

Jan ADELAAR (ヤン・アデラール Arnhem Holland 荷蘭)

# ●·····Date: Fri, 2 Dec 2005 15:21:38 +0900 Subject: S&Tどうも有り難うございました

南政次様, 今年の夏は、暑さが長く続きそのせいか秋はあっという間に過ぎ去ったように思います。師走になりましたが、もうひとつ季節感が感じられないように思います。その後、お元気にお過ごしでしょうか。

さて、私の母も十月の後半より体調を高し入院のようででは、 をしておりまでそのでは、 をしておりまで、 をしておりまで、 ののがいるとのでは、 ののがいるとのでは、 ののがいるとのでは、 ののがいるとのでは、 ののがいるとでは、 ののがいるとでは、 ののがいるとでは、 ののがいるとでは、 ののがいるとでは、 ののがいるとでは、 ののには、 ののがいるといるが、 ののには、 ののには、

さて、松本達二郎様から南様、シーハンさん 執筆のS&Tのコピーを送って頂きました。翻訳し て、周りの人たちに読んで頂こうと思っており ます。G.スキアパレリ、P.ローエル、E.M.アント ニアジと比較しうるほどの業績を残したとの文 章を見れば、父がもし生きていれば、恐らく「わ しはそんなに偉くないよ」といった言い方をす るような気がしますが、どうでしょう。母も伊 達さん、前田さん、木辺先生、村山先生のこと はよく知っており、懐かしく喜んでおりました。 特に伊達さん、前田さんは結核で早くお亡くな りになられ、生きていれば父と本当によい友で あったのにという話は、母からよく聞いており ます。今なら、結核も簡単に直るのにと思うと、 戦後の一時期、残念な思いをされた方は多いと 思います。

今回、日本のみならず国際的な観点から、父のことをこれまでよく書いて頂いて本当にを出てでは、国地大力では、京都にコピーを送ってやったところ非常に喜んでおりました。 恭範についたところ非常に喜んでおります。 シーマで研究に励んでおります。シーマで研究に励んでお伝え下さい。 来年の2月22日は父がなくなり、丁度十年となります。十年祭を執り行いますので、その際によいております。

これから寒くなると思いますが、お身体御大切にご自愛下さい。

**佐伯 雅夫** (Masao SAHEKI 伊丹 Itami, Hyogo)

\_ Ser2-0308 \_\_\_\_\_\_ CMO No. 314

# • · · · · · · Date: Fri, 2 Dec 2005 14:30:35 -0000 Subject: Mars 29 November 05

Hi Guys, Here is an rsgb set of the diminishing planet still giving us a nice display of clouds and mist. C14@ f50, Lu075M, Best wishes

# O · · · · · · · Date: Thu, 1 Dec 2005 14:12:43 -0000 Subject: Saturn 30th November 2005

Hi Guys, We had some good seeing in the early hours of the 30th, resulting in a decent Saturn image.

There is a small spot in the South Polar Region that can be seen rotating in the animation, the three stills of which are included. These are over processed to clarify the spots.

Dark spots on the rings are the result of dust on the chip "scanning" back and forth on the image with turbulence and my manual guiding in RA. The three images have shifted in dec too.

The nice picture shows Saturn's current colour scheme in all its glory. Best wishes

# O · · · · · · Date: Fri, 2 Dec 2005 14:30:35 -0000 Subject: Mars 29 November 05

Hi Guys, Here is an rsgb set of the diminishing planet still giving us a nice display of clouds and mist.

O····· Date: Sun, 4 Dec 2005 11:49:06 -0000 Subject: Mars 3 Dec

Hi Guys, Here is Mars as seen from the UK yesterday. Seeing was fair in cloud gaps.

# O · · · · · · Date: Tue, 6 Dec 2005 10:33:34 -0000 Subject: Mars 5th Dec 2005

Hi Guys, Here's Mars from the 5th Dec. A lot of clouds are visible in the image, extending into Hesperia.

#### O····· Date: Fri, 9 Dec 2005 09:56:45 -0000 Subject: Mars 6-Dec

Hi Guys, Here are 3 sets from the 6th. There appears to be a build up of cloud and mist over the 49 mins imaging period. It might be real, it might be inconsistencies in seeing or my processing. Did anyone else note this? Is it actually possible? Does it often happen? I reprocessed the 19:55ut blue avi, which I then noticed that a lot of the frames were imaged through cloud. The result was the same. Best wishes

# O····· Date: Mon, 12 Dec 2005 22:22:16 -0000 Subject: Mars 8th and 11th Dec

Hi Guys, Here is a couple of Mars from the 8th and 11th, taken in extremely poor conditions. The f50 shot was with a  $3\times$  Televue stretched 90mm by the filter block and camera adaptor, the f48 was with a Celestron Ultima  $2\times$  stretched 120m. Best wishes

# O····· Date: Tue, 13 Dec 2005 22:58:12 -0000 Subject: Saturn SPR spot 11th Dec

Hi Guys, Saturn on the 11th shows the same spot in the SPR as was shown on my image of the 30th. I would put it at around 118 degrees in system 3 ref Jupos.

### O····· Date: Wed, 14 Dec 2005 10:42:16 -0000 Subject: Saturn's rotation in System 3

Hi Guys, An interesting little observation here. Using Jupos I estimated the position of the SPR spot as 118 degrees. Adding up the time interval between the two images previously put out, and then adding the 15 mins required to complete the rotation of the 11th Dec. I then divided that sum by 10hrs 40mins (the recognised rotation figure for high latitudes) this gave almost exactly 25 rotations. So, dividing the sum by 25 rotations gave the figure of 10hrs 39.3mins per rotation of the SPR in system 3. To me this indicates that the spot in the Nov 30 image is the same one as in the Dec 11 image.

O····· Date: Mon, 19 Dec 2005 13:07:08 -0000 Subject: Mars 17Dec 05

Hi Guys, Here are some mars images from the 17th, in jittery but quite detailed seeing. Best wishes

#### O · · · · · · Date: Fri, 23 Dec 2005 17:56:16 -0000 Subject: Mars 19th Dec

Hi Guys, Here are three sets of Mars over a 30minute period. lots of blue skies there I wonder what the seeing is like? · · · · Seeing fair, preceding good seeing for Saturn later on in the night. Best wishes

Dave TYLER (デヴィッド・タイラー Bkh UK 英) http://www.david-tyler.com/

#### • · · · · · · Date: Fri, 2 Dec 2005 20:38:19 +0100 Subject: Mars 1 Dec.: new Dust cloud

Hello: With bad seeing I attach new images. I think is very possible a new dust cloud near Syrtis Major with two components. Also Hellas appear brighter.

Jesús SANCHEZ (ヘスス・サンチェス Córdova 西)

# ● · · · · · · Date: Mon, 05 Dec 2005 15:21:29 +0900 Subject: 十一月後半の観測結果の報告について

十一月30日締めのスケッチのコピーを十二月1日午後に普通便で発送しました。既に届いていることと思います。たった五枚の報告で申し訳ありません。火星面の状況把握もできないうちに、スケッチ径を小さくするのは心苦しいのですが、手探りどころか場当たりのスケッチになってしまっています。CMO紙面でこき下ろしてくださって構いません。

今シーズンはことのほかシーイングが悪く、 佐賀にいた時よりもひどいのではないかと感じ ています。観測態勢を続けているのですが、晴 れてはいても雲の往来が頻繁だったりして、四 十分観測の体をなしていません。視直径が15秒 角以上のうちに、もうひと粘りするつもりです。

昨日から強い冬型気圧配置で、真冬並みの寒さです。お身体には充分お気をつけ下さい。

#### ○·····Date: Fri, 16 Dec 2005 11:50:40 +0900 Subject: 十二月前半の観測について

寒さの厳しい日が続いています。報道によると福井市は十二月としては記録的な豪雪とのことですが、博物館天文台での観測に支障が出ているのではないかと心配しています。北九州市も日本海側気候にあたり、この期間にスケッチをとることはできませんでした。ただ、観測態勢はまだ継続しますので、次回はご報告できるものと思っています。

それでは今回は、これにて失礼いたします。 岩崎 徹 (Tohru IWASAKI 北九州 Fukuoka)

### • · · · · · · Date: Tue, 06 Dec 2005 10:21:56 -0700 Subject: Mars

Hi, I am contributing some images of Mars taken earlier in the opposition which might be useful to fill in some gaps in your coverage. Regards,

O·····Date: Tue, 06 Dec 2005 22:32:35 -0700 Subject: Mars images

More late submittals.

Kent DeGROFF (ケント・デ グ ロッフ AZ 美)

### • · · · · · · Date: Sun, 11 Dec 2005 01:57:37 -0500 Subject: Mars from HST: November 7, 2005

Folks, With apologies for the delay, attached is an RGB composite of our HST WFPC2 images of Mars from

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November 7. A TIFF and JPEG are attached, and an annotated JPEG is also attached that provides some more information on features of interest.

The images that went into the composite were obtained through the F410M, F502N, and F631N filters from 04:27 to 04:33 UT on 2005-11-07, within about four hours of the lowest phase (difference between Sun-Mars angle and Earth-Mars angle) that Mars has had during the lifetime of HST (around 0.31 degrees--effectively zero because that's about the same angle that the Sun subtends from Mars). This is the most "Full Mars" anyone can ever see from Earth, and we're still trying to figure out if we saw the so-called "opposition effect" brightening in these images. It's hard to tell because HST only observed Mars twice this opposition, on Oct. 28 (phase angle around 9 degrees), and Nov. 7, and opposite sides of the planet were viewed. We have to compare these images to ones from the past decade of HST Mars images to figure it out... In our spare time...

The "divot" taken out of the right side of the planet near the equator is real, and might be related to the high volcano Arsia Mons being almost exactly on the limb and for whatever reason (weather, probably) having fewer clouds than the surrounding plains at this particular time. Interesting geometric/meteorologic effect. The smallest features resolvable in the image (small craters and wind streaks) are about 35 km across.

I would have sent this out sooner, but I've been swamped. I could try to make up some far-fetched story about being busy driving rovers on Mars, but no one would believe me. Actually, another interesting note on these images is that we timed imaging and spectroscopic observations of the atmosphere and the surface of Mars from the Spirit rover to coincide exactly with the time that these HST images were acquired. It was about 2:00 p.m. on a sunny afternoon in Gusev crater... You can't \*quite\* resolve the rover in these images, but it's there...

This image should appear on the STScI "Hubble Heritage" web site soon, I hope:

#### http://heritage.stsci.edu/2005/34/index.html

Dave Klassen: Could you please post these on your Marswatch 2005 site? Thanks... We owe a real debt of gratitude to the Hubble Heritage team for helping to collect these and the October 28 HST images. Without that program, there would have been no imaging of Mars by HST at all this year.

I have really been enjoying seeing all of your spectacular telescopic images of Mars this apparition. I'm glad I could contribute in a small way. Keep up the great work!

Jim BELL (ジ ム・ベット Cornell Univ 美)

# • · · · · · · Date: Mon, 12 Dec 2005 00:05:42 +0100 Subject: Mars: CCD-set 2005 Dec.11

Dear Mr. Minami & Murakami! Today was a nice clear evening, but cold (about -8°C) - I trained my Portaball telescope towards Mars and took the included images of the shrinking red planet. regards

Robert SCHULZ (ロヘールト・シュルツ Wien 奥)

# • · · · · · · Date: Tue, 13 Dec 2005 19:24:29 +0100 Subject: Mars: Dec. 10

Dear all, As for christophe, the seeing was relatively good saturday evening and here is a drawing I made. The following evening, with similar CML, there may have been a few changes (in cloud cover) in the south of M. Sirenum and also on the NPH (less extended close to

terminator?)

O·····Dear Masatsugu, I wish you a happy new year 2006, to you, your family, friends and all CMO team and contributors.

Thank you for continuing on sending me the CMO. This fall 2005 was very busy! I send printed copies of most of my drawings (also available on my web), most of which were sent by emails. I send also a copy of a scientific paper I wrote on mars radio observations if you are interested. Clear Sky! (24 décembre 2005)

#### Nicolas BIVER (ニコラ・ビヴェール Versaille 法) http://www.usr.obspm.fr/biver

(註) We are thankful to Nicolas for his contribution through colour drawings and his kind sending us a reprint of the article entitled "Wide-band observations of the 557 GHz water line in Mars with Odin" by BIVER, LECACHEUX, ENCRENAZ, LELOUCH, BARON, CROVISIER, FRISK, HJAHMARSON, OLBETG, SANDQVIST and KWOK (A&A 432 (2005) 765). Ever since the first detection of H2O in the Martian atmosphere by the use of the Doppler effect in 1963 at Mt Wilson (Caltech/JPL), several observations of water have been made from the ground, from balloons, and from space in the ranges of IR, or cm and mm. BIVER et al used in 2003 the sub-millimeter 110cm telescope on board the Swedish-Canadian-Finnish-French satellite Odin, and investigated the spectrum around 557 GHz of H2O in the Martian atmosphere. The observations were made during the periods 14 -18 June 2003 ( $\lambda$ =203°Ls~205°Ls), and 2 - 9 Nov 2003 ( $\lambda$ =291°Ls  $\sim$ 295°Ls) when the apparent diameter was near 14 arcsecs. (Mn)

#### • · · · · · · · Date: Wed, 14 Dec 2005 10:35:17 -0800 Subject: Syrtis Major

Good morning Minami-Sensei, I was not able to detect a distinctive blue greenish tint last night, I'm disappointed to report. We were able to open early, and the seeing was very good. So poor seeing is not to blame. However, Syrtis Mj did have a very subtle, pale steel blue tint overall, and it seemed more evident as it rotated into view. I would describe the color as being on the bluish side of neutral, as opposed to the reddish side of neutral. It was worthy of note, and I have recorded it to the best of my ability in the drawing, started at 1935 PST. There were no particular areas on Syrtis Mj that appeared more bluish than other areas, that I could discern. Whether this was due to mist, or to some other effect I am not at all qualified to even speculate. What do you think?

One other possibility: I do turn off my drawing light while observing, but I can't say that I was well dark-adapted -- so it may be that I was not able to detect a bluish color as accurately as if I had been well dark-adapted. I will keep my lamp off entirely while observing next time, before beginning the drawing.

And I did have another "aha" moment, last night. Wind was blowing the telescope, so the disc was wobbling about quite a bit. But there were moments of superb seeing, and the colors were spectacular, as is so often the case with this telescope. Even though I am alone in the dome, I burst out in exclamations of astonishment at what I'm seeing. I cannot begin to record the subtleties. Were Keeler and Barnard able to detect this extraordinary detail as well? I do wonder to what extent the refiguring of the lenses by UC optician Dave Hilyard in the late 1980's improved the image quality from the time those gentlemen were observing.

Tonight (Wednesday) looks like it might be clear, but unfortunately Rem and I have an engagement downtown

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and will miss Syrtis Mj's arrival at the terminator. Tomorrow is forecast to be "partly cloudy", which could mean anything here on Mt. Hamilton! We'll be gone again beginning Friday, on a weekend trip to Los Angeles. But maybe we can get back in time on the 18th to observe, humidity permitting. I'll keep in touch.

Thank you, as always,

# O····· Date: Fri, 16 Dec 2005 01:09:54 -0800 Subject: Syrtis Major 15 December

Dear Minami-Sensei, I am excited this morning! We had a very successful observation. The morning mist was somewhat more distinctive, although still subtle. It was more pronounced than the December 13 observation. Whether this is due to better dark adaptation on my part, or if the color was intrinsically more distinct I cannot say. However, even after I lost my dark adaptation after turning on my drawing lamp, the color remained easily discernible. Again, it wasn't spectacular, but I was very pleased to be able to see it clearly. Perhaps there is some element of my learning how to look for it as well. It is all so subjective!

The seeing wasn't quite as good tonight as on December 13, but it was still much better than most nights we've had since your departure. There were brief fractions of a second when the seeing was excellent. So I feel quite confident of the observation in that regard.

I began my observation at 2025 PST. The blueish color was evident on the terminator at that time. I was curious if the color might seem to intensify as Syrtis Mj rotated across the face. I don't believe it intensified, but the intensity did remain consistent for about half an hour. I began my drawing at 2055, although I wish I had started 5 or 10 minutes earlier. The color began to gently fade after about 10 to 15 minutes. I had to work very quickly to record it accurately. It extended inward toward the midline approximately as far as the area of Oenotria Scopulus. (Please forgive my inability to give you more precise coordinates. I do not know the proper words to describe what I see.)

Just to the south of the equator, close to the terminator, the color had a greenish tinge. I believe it was in the general region of Hellas Planitia. Extending north, through Syrtis Major Planum and into Arena Colles, the color was less steel blue and more violet, although that doesn't accurately describe it. The tint was very complex with great depth, more like a bluish tinge overlaying a soft reddish color. The dark blue edge of the terminator disappeared into the deep, bluish-charcoal depths of the moonlit sky. It was exquisite, and very challenging to transmit to the drawing paper.

I only did one drawing tonight -- Tony dropped by the 36" dome and we chatted for a while, and I showed him some of the drawings. He sends his best regards.

Rem and I will be leaving in six hours or so for Los Angeles. So I will close for now -- it's been a very long day and night!

Thank you again for your gracious and detailed tutelage. These observations are vastly improved by your expert and generous contributions.

Forthcoming 2005 Mars (15)

### Ephemeris for the Observation of the 2005/06 Mars. IX

February and March 2006

Masami MURAKAMI — 村上 昌己(Mk) ┛

◆As a sequel to Part VIII in CMO #313 where the Ephemeris for January 2006 was listed, here is given the Ephemeris for February and March 2006. The data are listed for every day at 00:00 GMT (not TDT). ω resp φ denotes the longitude resp latitude of the sub-Earth point.

The symbols  $\lambda$ ,  $\delta$  and  $\iota$  stand for the areocentric longitude of the Sun, the apparent diameter and the phase angle respectively. The apparent declination of the planet is also given. The data are based on The Astronomical Almanac for the Year 2006.

Date (00:00GMT)	ω	φ	λ	δ	ι	Declination
01 February 2006	078.73°W	15.2°S	005.11°Ls	08.82"	38.2°	+20°00'
02 February 2006	069.20°W	15.0°S	005.60°Ls	08.74"	38.2°	+20°07'
03 February 2006	059.64°W	14.8°S	006.09°Ls	08.66"	38.3°	+20°14'
04 February 2006	050.08°W	14.6°S	006.58°Ls	08.59"	38.3°	+20°21'
05 February 2006	040.53°W	14.4°S	007.07°Ls	08.51"	38.4°	+20°28'
06 February 2006	030.99°W	14.3°S	007.56°Ls	08.43"	38.4°	+20°35'
07 February 2006	021.42°W	14.1°S	008.05°Ls	08.36"	38.4°	+20°42'
08 February 2006	011.85°W	13.9°S	008.53°Ls	08.29"	38.5°	+20°49'
09 February 2006	002.28°W	13.7°S	009.02°Ls	08.21"	38.5°	+20°56'
10 February 2006	352.73°W	13.5°S	009.50°Ls	08.14"	38.5°	+21°02'
11 February 2006	343.15°W	13.3°S	009.99°Ls	08.07"	38.5°	+21°09'
12 February 2006	333.56°W	13.1°S	010.47°Ls	08.01"	38.5°	+21°16'
13 February 2006	324.00°W	12.9°S	010.96°Ls	07.94"	38.5°	+21°22'
14 February 2006	314.43°W	12.7°S	011.44°Ls	07.87"	38.5°	+21°29'
15 February 2006	304.83°W	12.5°S	011.92°Ls	07.81"	38.5°	+21°36'

Declination	 200						Ser2	-0311
17 February 2006   285.66°W   12.1°S   012.8°S   07.68°   38.4°   -21°49     18 February 2006   226.50°W   11.9°S   013.36°T   36.7°   38.4°   -22°10°     19 February 2006   226.50°W   11.7°S   013.84°T   07.55°   38.4°   -22°10°     20 February 2006   225.90°W   11.4°S   014.32°Ls   07.49°   38.4°   -22°10°     21 February 2006   247.32°W   11.0°S   014.79°Ls   07.43°   38.3°   -22°14°     22 February 2006   223.74°W   11.0°S   015.27°Ls   07.37°   38.3°   -22°19°     23 February 2006   228.14°W   10.8°S   015.75°Ls   07.32°   38.3°   -22°210°     24 February 2006   218.53°W   10.6°S   016.22°Ls   07.6°   38.3°   -22°210°     25 February 2006   208.95°W   10.3°S   016.70°Ls   07.21°   38.2°   -22°32°     25 February 2006   199.36°W   10.1°S   015.27°Ls   07.10°   38.2°   -22°32°     27 February 2006   189.75°W   09.9°S   017.64°Ls   07.10°   38.2°   -22°49°     28 February 2006   180.14°W   09.7°S   018.12°Ls   07.10°   38.2°   -22°49°     29 Kerbrary 2006   180.14°W   09.7°S   018.12°Ls   07.10°   38.1°   +23°00°     20 March 2006   160.95°W   09.2°S   019.06°Ls   06.99°   38.1°   +23°00°     20 March 2006   153.2°W   09.9°S   019.06°Ls   06.99°   38.1°   +23°00°     20 March 2006   13.2°W   09.9°S   019.06°Ls   06.93°   38.0°   +23°10°     20 March 2006   132.1°W   08.5°S   020.01°1 s   06.88°   38.0°   +23°10°     20 March 2006   122.5°W   08.8°S   020.08°Ls   06.6°W   37.7°   +23°32°     20 March 2006   03.6°7°W   07.8°S   021.89°Ls   06.60°   37.7°   +23°32°     20 March 2006   09.36°7°W   07.3°S   022.35°Ls   06.60°   37.7°   +23°32°     20 March 2006   09.36°7°W   07.3°S   022.35°Ls   06.60°   37.7°   +23°32°     21 March 2006   09.45°W   07.8°S   022.35°Ls   06.60°   37.7°   +23°32°     22 March 2006   09.45°W   07.8°S   023.29°Ls   06.60°   37.6°   +24°41°     23 March 2006   07.45°W   07.8°S   023.29°Ls   06.60°   37.5°   +22°41°     24 March 2006   07.45°W   07.8°S   023.25°Ls   06.60°   37.5°   +22°41°     25 March 2006   07.45°W   07.8°S   023.25°Ls   06.60°   37.5°   +22°43°     24 March 2006	Date (00:00	GMT)	ω	φ	λ	δ	ι	Declination
18 February 2006	16 Februar	y 2006	295.25°W	12.3°S	012.40°Ls	07.74"	38.5°	+21°42'
19 February 2006   266.50°W   11.7°S   013.84°Ls   07.55°   38.4°   -22°01°	17 Februar	y 2006	285.66°W	12.1°S	012.88°Ls	07.68"	38.4°	+21°49'
20   February 2006   256.90°W   11.4°S   014.32°Ls   07.49°   38.4°   +22°08°	18 Februar	y 2006	276.10°W	11.9°S	013.36°Ls	07.61"	38.4°	+21°55'
21 February 2006	19 Februar	y 2006	266.50°W	11.7°S	013.84°Ls	07.55"	38.4°	+22°01'
22 February 2006		•	256.90°W	11.4°S	014.32°Ls	07.49"	38.4°	+22°08'
22 February 2006	21 Februar	v 2006	247.32°W	11.2°S	014.79°Ls	07.43"	38.3°	+22°14'
23 February 2006		-						
24 February 2006		•						
25 February 2006		-						
27 February 2006		•						
27 February 2006	26 Februar	v 2006	199 36°W	10 1°S	017 17°I s	07 15"	38 2°	+22 43'
28 February 2006		-						
02 March 2006 160.95°W 09.2°S 019.06°Ls 06.93" 38.0° +23°01' 04 March 2006 151.32°W 09.0°S 019.53°Ls 06.88" 38.0° +23°01' 04 March 2006 141.71°W 08.7°S 020.01°Ls 06.83" 37.9° +23°16' 05 March 2006 132.11°W 08.5°S 020.48°Ls 06.78" 37.9° +23°22' 06 March 2006 122.51°W 08.3°S 020.48°Ls 06.78" 37.9° +23°22' 07 March 2006 112.89°W 08.0°S 021.42°Ls 06.69" 37.7° +23°32' 08 March 2006 103.28°W 07.8°S 021.89°Ls 06.69" 37.7° +23°32' 08 March 2006 093.67°W 07.5°S 022.35°Ls 06.60" 37.0° +23°41' 10 March 2006 093.67°W 07.5°S 022.35°Ls 06.60" 37.0° +23°41' 10 March 2006 084.07°W 07.3°S 022.82°Ls 06.55" 37.5° +23°46' 11 March 2006 064.82°W 06.8°S 021.89°Ls 06.46" 37.4° +23°50' 12 March 2006 064.82°W 06.68°S 024.22°Ls 06.45" 37.4° +23°55' 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°59' 14 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°07' 15 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.3° +24°11' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.3° +24°11' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.1° +24°11' 17 March 2006 035.75°W 05.1°S 026.08°Ls 06.29" 37.1° +24°11' 17 March 2006 37.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 20 March 2006 337.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 21 March 2006 338.65°W 04.8°S 027.46°Ls 06.01" 36.9° +24°18' 19 March 2006 338.65°W 04.8°S 027.00°Ls 06.10" 36.9° +24°18' 19 March 2006 338.65°W 04.6°S 027.00°Ls 06.10" 36.6° +24°25' 22 March 2006 328.65°W 04.8°S 029.76°Ls 05.98" 36.1° +24°45' 22 March 2006 328.65°W 04.8°S 029.00°Ls 05.98" 36.0° +24°35' 24 March 2006 328.65°W 04.8°S 029.00°Ls 05.98" 36.0° +24°43' 22 March 2006 290.16°W 03.3°S 029.30°Ls 05.98" 36.0° +24°43' 22 March 2006 290.16°W 03.3°S 030.08°Ls 05.87" 36.1° +24°45' 22 March 2006 290.16°W 03.3°S 030.08°Ls 05.87" 36.1° +24°45' 22 March 2006 220.46°W 01.5°S 033.88°Ls 05.60" 35.5° +24°50' 30 March 2006 221.46°W 01.5°S 033		•						
02 March 2006 160.95°W 09.2°S 019.06°Ls 06.93" 38.0° +23°01' 04 March 2006 151.32°W 09.0°S 019.53°Ls 06.88" 38.0° +23°01' 04 March 2006 141.71°W 08.7°S 020.01°Ls 06.83" 37.9° +23°16' 05 March 2006 132.11°W 08.5°S 020.48°Ls 06.78" 37.9° +23°22' 06 March 2006 122.51°W 08.3°S 020.48°Ls 06.78" 37.9° +23°22' 07 March 2006 112.89°W 08.0°S 021.42°Ls 06.69" 37.7° +23°32' 08 March 2006 103.28°W 07.8°S 021.89°Ls 06.69" 37.7° +23°32' 08 March 2006 093.67°W 07.5°S 022.35°Ls 06.60" 37.0° +23°41' 10 March 2006 093.67°W 07.5°S 022.35°Ls 06.60" 37.0° +23°41' 10 March 2006 084.07°W 07.3°S 022.82°Ls 06.55" 37.5° +23°46' 11 March 2006 064.82°W 06.8°S 021.89°Ls 06.46" 37.4° +23°50' 12 March 2006 064.82°W 06.68°S 024.22°Ls 06.45" 37.4° +23°55' 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°59' 14 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°07' 15 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.3° +24°11' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.3° +24°11' 17 March 2006 035.75°W 05.8°S 026.68°Ls 06.29" 37.1° +24°11' 17 March 2006 035.75°W 05.1°S 026.08°Ls 06.29" 37.1° +24°11' 17 March 2006 37.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 20 March 2006 337.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 21 March 2006 338.65°W 04.8°S 027.46°Ls 06.01" 36.9° +24°18' 19 March 2006 338.65°W 04.8°S 027.00°Ls 06.10" 36.9° +24°18' 19 March 2006 338.65°W 04.6°S 027.00°Ls 06.10" 36.6° +24°25' 22 March 2006 328.65°W 04.8°S 029.76°Ls 05.98" 36.1° +24°45' 22 March 2006 328.65°W 04.8°S 029.00°Ls 05.98" 36.0° +24°35' 24 March 2006 328.65°W 04.8°S 029.00°Ls 05.98" 36.0° +24°43' 22 March 2006 290.16°W 03.3°S 029.30°Ls 05.98" 36.0° +24°43' 22 March 2006 290.16°W 03.3°S 030.08°Ls 05.87" 36.1° +24°45' 22 March 2006 290.16°W 03.3°S 030.08°Ls 05.87" 36.1° +24°45' 22 March 2006 220.46°W 01.5°S 033.88°Ls 05.60" 35.5° +24°50' 30 March 2006 221.46°W 01.5°S 033	01.34 1	2006	150 52011	00.400	010 5001	06.000	20.10	. 220001
03 March 2006								
04 March 2006 141.71°W 08.7°S 020.01°Ls 06.83" 37.9° +23°16° 05 March 2006 132.11°W 08.5°S 020.48°Ls 06.78" 37.9° +23°22° 06 March 2006 132.89°W 08.0°S 021.42°Ls 06.78" 37.9° +23°22° 08 March 2006 103.28°W 07.8°S 021.89°Ls 06.69" 37.7° +23°32° 08 March 2006 093.67°W 07.5°S 022.35°Ls 06.60" 37.6° +23°31° 10 March 2006 084.07°W 07.3°S 022.35°Ls 06.60" 37.6° +23°31° 10 March 2006 074.45°W 07.3°S 022.35°Ls 06.60" 37.5° +23°36° 11 March 2006 064.82°W 06.8°S 023.75°Ls 06.51" 37.5° +23°56° 12 March 2006 064.82°W 06.8°S 023.75°Ls 06.40" 37.4° +23°55° 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°55° 14 March 2006 045.61°W 06.3°S 024.82°Ls 06.37" 37.2° +24°03° 15 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°03° 15 March 2006 055.20°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07° 16 March 2006 016.74°W 05.6°S 026.68°Ls 06.37" 37.2° +24°11′ 17 March 2006 016.74°W 05.6°S 026.54°Ls 06.20" 37.1° +24°11′ 17 March 2006 016.74°W 05.6°S 026.54°Ls 06.20" 37.1° +24°11′ 17 March 2006 347.88°W 04.8°S 027.00°Ls 06.16° 36.8° +24°22′ 20 March 2006 338.26°W 04.8°S 027.00°Ls 06.16° 36.8° +24°22′ 20 March 2006 338.26°W 04.8°S 027.46°Ls 06.13" 36.7° +24°25′ 21 March 2006 338.26°W 04.8°S 027.46°Ls 06.13" 36.7° +24°35′ 22 March 2006 39.9°W 04.1°S 028.38°Ls 06.00° 36.6° +24°29′ 22 March 2006 39.9°W 04.1°S 028.38°Ls 06.00° 36.6° +24°29′ 22 March 2006 39.9°W 04.1°S 028.38°Ls 06.00° 36.6° +24°29′ 22 March 2006 39.9°W 04.1°S 028.84°Ls 05.98" 36.4° +24°25′ 23 March 2006 299.77°W 03.5°S 029.0°Ls 05.98" 36.0° +24°43° 24°41′ 24°41								
05 March         2006         132.11°W         08.5°S         020.48°Ls         06.78"         37.9°         +23°22'           06 March         2006         112.89°W         08.0°S         021.42°Ls         06.69"         37.7°         +23°32'           08 March         2006         103.28°W         07.8°S         021.42°Ls         06.60"         37.7°         +23°32'           09 March         2006         093.67°W         07.5°S         022.35°Ls         06.60"         37.6°         +23°41'           10 March         2006         084.07°W         07.3°S         022.82°Ls         06.55"         37.5°         +23°41'           11 March         2006         074.45°W         07.1°S         023.29°Ls         06.51"         37.4°         +23°50'           12 March         2006         064.82°W         06.8°S         023.75°Ls         06.46"         37.4°         +23°55'           13 March         2006         045.61°W         06.3°S         024.22°Ls         06.42"         37.3°         +23°50'           14 March         2006         035.97°W         06.1°S         025.15°Ls         06.37"         37.2°         +24°07'           16 March         2006         016.74°W         05.6°								
06 March         2006         122.51°W         08.3°S         020.95°Ls         06.73"         37.8°         +23°27'           07 March         2006         112.89°W         08.0°S         021.42°Ls         06.69"         37.7°         +23°32'           08 March         2006         103.28°W         07.8°S         021.89°Ls         06.64"         37.7°         +23°32'           09 March         2006         093.67°W         07.3°S         022.82°Ls         06.66"         37.6°         +23°41'           10 March         2006         084.07°W         07.3°S         022.82°Ls         06.55"         37.5°         +23°46'           11 March         2006         074.45°W         07.1°S         023.29°Ls         06.51"         37.4°         +23°50'           12 March         2006         064.82°W         06.8°S         023.75°Ls         06.46"         37.4°         +23°55'           13 March         2006         055.22°W         06.6°S         024.22°Ls         06.42"         37.3°         +22°55'           14 March         2006         035.97°W         06.1°S         025.15°Ls         06.33"         37.1°         +24°03'           15 March         2006         035.97°W         05.8°								
07 March 2006	05 March	2006	132.11°W	08.5°S	020.48°Ls	06.78"	37.9°	+23°22'
08 March         2006         103.28°W         07.8°S         021.89°Ls         06.64"         37.7°         +23°36'           09 March         2006         093.67°W         07.5°S         022.35°Ls         06.60"         37.6°         +23°41'           10 March         2006         084.07°W         07.3°S         022.82°Ls         06.55"         37.5°         +23°46'           11 March         2006         074.45°W         07.1°S         023.29°Ls         06.51"         37.4°         +23°50'           12 March         2006         064.82°W         06.6°S         024.22°Ls         06.46"         37.4°         +23°55'           13 March         2006         055.22°W         06.6°S         024.22°Ls         06.42"         37.3°         +23°59'           14 March         2006         035.97°W         06.1°S         025.15°Ls         06.33"         37.1°         +24°07'           16 March         2006         026.36°W         05.8°S         025.61°Ls         06.29"         37.1°         +24°11'           17 March         2006         016.74°W         05.6°S         026.68°Ls         06.24"         37.0°         +24°11'           17 March         2006         357.51°W         05.1°	06 March	2006	122.51°W	08.3°S	020.95°Ls	06.73"	37.8°	+23°27'
09 March         2006         093.67°W         07.5°S         022.35°Ls         06.60"         37.6°         +23°41'           10 March         2006         084.07°W         07.3°S         022.82°Ls         06.55"         37.5°         +23°46'           11 March         2006         074.45°W         07.1°S         023.29°Ls         06.51"         37.4°         +23°50'           12 March         2006         064.82°W         06.8°S         023.75°Ls         06.40"         37.3°         +23°55'           13 March         2006         045.61°W         06.3°S         024.68°Ls         06.37"         37.2°         +24°03'           15 March         2006         035.97°W         06.1°S         025.15°Ls         06.33"         37.1°         +24°07'           16 March         2006         035.97°W         06.1°S         025.15°Ls         06.29"         37.1°         +24°11'           17 March         2006         016.74°W         05.6°S         026.08°Ls         06.29"         37.1°         +24°11'           17 March         2006         357.51°W         05.1°S         027.00°Ls         06.16"         36.8°         +24°18'           19 March         2006         347.88°W         04.8°	07 March	2006	112.89°W	08.0°S	021.42°Ls	06.69"	37.7°	+23°32'
10 March 2006 084.07°W 07.3°S 022.82°Ls 06.55" 37.5° +23°46'  11 March 2006 074.45°W 07.1°S 023.29°Ls 06.51" 37.4° +23°50' 12 March 2006 064.82°W 06.8°S 023.75°Ls 06.46" 37.4° +23°55' 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°59' 14 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°03' 15 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 026.36°W 05.8°S 025.15°Ls 06.33" 37.1° +24°11' 17 March 2006 016.74°W 05.6°S 026.08°Ls 06.24" 37.0° +24°15' 18 March 2006 007.14°W 05.5°S 026.54°Ls 06.20" 36.9° +24°18' 19 March 2006 357.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 20 March 2006 347.88°W 04.8°S 027.46°Ls 06.13" 36.7° +24°25' 12 March 2006 328.65°W 04.3°S 025.84°Ls 06.09" 36.6° +24°25' 22 March 2006 319.02°W 04.1°S 028.84°Ls 06.01" 36.4° +24°32' 23 March 2006 319.02°W 04.1°S 028.84°Ls 06.01" 36.4° +24°35' 24 March 2006 309.39°W 03.8°S 029.30°Ls 05.98" 36.4° +24°38' 25 March 2006 299.77°W 03.5°S 029.30°Ls 05.98" 36.4° +24°38' 25 March 2006 299.77°W 03.5°S 029.30°Ls 05.98" 36.4° +24°38' 25 March 2006 270.88°W 02.8°S 029.30°Ls 05.98" 36.4° +24°38' 27 March 2006 270.88°W 02.8°S 031.14°Ls 05.88" 36.0° +24°48' 29 March 2006 270.88°W 02.8°S 031.14°Ls 05.88" 36.0° +24°48' 29 March 2006 270.88°W 02.8°S 031.59°Ls 05.80" 35.5° +24°52' 31 March 2006 241.99°W 02.0°S 032.51°Ls 05.50" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 032.51°Ls 05.70" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 032.51°Ls 05.70" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 032.51°Ls 05.70" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°52' 31 March 2006 222.74°W 01.5°S 033.42°Ls 05.60" 35.5° +24°50' 30.47°L 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.5° +24°50' 35.5° +24°50' 30.47°L 2006 203.48	08 March	2006	103.28°W	07.8°S	021.89°Ls	06.64"	37.7°	+23°36'
11 March 2006 074.45°W 07.1°S 023.29°Ls 06.51" 37.4° +23°50' 12 March 2006 064.82°W 06.8°S 023.75°Ls 06.46" 37.4° +23°55' 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°59' 14 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°03' 15 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +24°07' 16 March 2006 026.36°W 05.8°S 025.61°Ls 06.29" 37.1° +24°11' 17 March 2006 016.74°W 05.5°S 026.08°Ls 06.24" 37.0° +24°15' 18 March 2006 071.4°W 05.3°S 026.54°Ls 06.20" 36.9° +24°18' 19 March 2006 357.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 20 March 2006 347.88°W 04.8°S 027.46°Ls 06.20" 36.9° +24°25' 11 March 2006 328.65°W 04.3°S 028.38°Ls 06.05" 36.5° +24°22' 22 March 2006 328.65°W 04.3°S 028.38°Ls 06.00" 36.6° +24°22' 23 March 2006 328.65°W 04.1°S 028.38°Ls 06.00" 36.6° +24°22' 24 March 2006 39.39°W 03.8°S 029.30°Ls 05.98" 36.4° +24°32' 24 March 2006 309.39°W 03.8°S 029.30°Ls 05.98" 36.4° +24°35' 24 March 2006 299.77°W 03.5°S 029.76°Ls 05.99" 36.2° +24°41' 26 March 2006 280.52°W 03.3°S 030.22°Ls 05.99" 36.2° +24°41' 26 March 2006 290.16°W 03.3°S 030.22°Ls 05.90" 36.2° +24°41' 26 March 2006 280.52°W 03.0°S 030.68°Ls 05.87" 36.1° +24°46' 28 March 2006 270.88°W 02.8°S 031.14°Ls 05.83" 36.0° +24°41' 29 March 2006 261.25°W 02.5°S 031.59°Ls 05.90" 35.5° +24°50' 30 March 2006 221.64°W 02.3°S 031.59°Ls 05.90" 35.5° +24°50' 30 March 2006 222.74°W 01.5°S 032.97°Ls 05.70" 35.5° +24°50' 30 March 2006 222.74°W 01.5°S 032.97°Ls 05.60" 35.5° +24°50' 02.40ril 2006 223.36°W 01.7°S 032.97°Ls 05.60" 35.5° +24°50' 02.40ril 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50' 04.40ril 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50' 04.40ril 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.5° +24°50' 04.40ril 2006 203.48°W 01.0°S 034.79°Ls 05.57" 35.1° +25°02'	09 March	2006	093.67°W	07.5°S	022.35°Ls	06.60"	37.6°	+23°41'
12 March 2006 064.82°W 06.8°S 023.75°Ls 06.46" 37.4° +23°55' 13 March 2006 055.22°W 06.6°S 024.22°Ls 06.42" 37.3° +23°59' 14 March 2006 045.61°W 06.3°S 024.68°Ls 06.37" 37.2° +24°03' 15 March 2006 035.97°W 06.1°S 025.15°Ls 06.33" 37.1° +224°07'  16 March 2006 026.36°W 05.8°S 025.61°Ls 06.33" 37.1° +24°11' 17 March 2006 016.74°W 05.6°S 026.08°Ls 06.24" 37.0° +24°15' 18 March 2006 007.14°W 05.3°S 026.54°Ls 06.24" 37.0° +24°15' 18 March 2006 357.51°W 05.1°S 027.00°Ls 06.16" 36.8° +24°22' 20 March 2006 347.88°W 04.8°S 027.46°Ls 06.13" 36.7° +24°25'  21 March 2006 338.26°W 04.6°S 027.92°Ls 06.09" 36.6° +24°25' 22 March 2006 328.65°W 04.3°S 028.38°Ls 06.05" 36.5° +24°32' 23 March 2006 319.02°W 04.1°S 028.84°Ls 06.01" 36.4° +24°35' 24 March 2006 299.77°W 03.5°S 029.30°Ls 05.98" 36.4° +24°35' 25 March 2006 299.77°W 03.5°S 029.76°Ls 05.94" 36.3° +24°41'  26 March 2006 290.16°W 03.3°S 030.22°Ls 05.94" 36.2° +24°41'  26 March 2006 290.16°W 03.3°S 030.22°Ls 05.90" 36.2° +24°44'  26 March 2006 290.16°W 03.3°S 030.22°Ls 05.90" 36.2° +24°44'  27 March 2006 270.88°W 02.8°S 031.14°Ls 05.83" 36.0° +24°44'  28 March 2006 270.88°W 02.8°S 031.15°Ls 05.87" 36.1° +24°50'  30 March 2006 251.64°W 02.3°S 032.05°Ls 05.70" 35.5° +24°50'  31 March 2006 232.36°W 01.7°S 032.97°Ls 05.70" 35.5° +24°50'  31 March 2006 232.36°W 01.7°S 032.97°Ls 05.70" 35.5° +24°56'  40 April 2006 232.36°W 01.7°S 032.97°Ls 05.66" 35.4° +24°58'  40 April 2006 213.12°W 01.5°S 033.88°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'  40 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +24°50'	10 March	2006	084.07°W	07.3°S	022.82°Ls	06.55"	37.5°	+23°46'
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17 March 2006								
18 March       2006       007.14°W       05.3°S       026.54°Ls       06.20"       36.9°       +24°18'         19 March       2006       357.51°W       05.1°S       027.00°Ls       06.16"       36.8°       +24°22'         20 March       2006       347.88°W       04.8°S       027.46°Ls       06.13"       36.7°       +24°25'         21 March       2006       338.26°W       04.6°S       027.92°Ls       06.09"       36.6°       +24°29'         22 March       2006       328.65°W       04.3°S       028.38°Ls       06.05"       36.5°       +24°32'         23 March       2006       319.02°W       04.1°S       028.84°Ls       06.01"       36.4°       +24°35'         24 March       2006       399.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°35'         24 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°44'         28 March	16 March	2006	026.36°W	05.8°S	025.61°Ls	06.29"	37.1°	+24°11'
19 March 2006	17 March	2006	016.74°W	05.6°S	026.08°Ls	06.24"	37.0°	+24°15'
20 March       2006       347.88°W       04.8°S       027.46°Ls       06.13"       36.7°       +24°25'         21 March       2006       338.26°W       04.6°S       027.92°Ls       06.09"       36.6°       +24°29'         22 March       2006       328.65°W       04.3°S       028.84°Ls       06.01"       36.5°       +24°32'         23 March       2006       319.02°W       04.1°S       028.84°Ls       06.01"       36.4°       +24°35'         24 March       2006       309.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°38'         25 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°41'         26 March       2006       290.16°W       03.3°S       030.022°Ls       05.90"       36.2°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46'         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March	18 March	2006	007.14°W	05.3°S	026.54°Ls	06.20"	36.9°	+24°18'
20 March       2006       347.88°W       04.8°S       027.46°Ls       06.13"       36.7°       +24°25'         21 March       2006       338.26°W       04.6°S       027.92°Ls       06.09"       36.6°       +24°29'         22 March       2006       328.65°W       04.3°S       028.84°Ls       06.01"       36.5°       +24°32'         23 March       2006       319.02°W       04.1°S       028.84°Ls       06.01"       36.4°       +24°35'         24 March       2006       309.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°38'         25 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°41'         26 March       2006       290.16°W       03.3°S       030.022°Ls       05.90"       36.2°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46'         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March	19 March	2006	357.51°W	05.1°S	027.00°Ls		36.8°	+24°22'
22 March       2006       328.65°W       04.3°S       028.38°Ls       06.05"       36.5°       +24°32'         23 March       2006       319.02°W       04.1°S       028.84°Ls       06.01"       36.4°       +24°35'         24 March       2006       309.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°38'         25 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.80"       36.1°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46'         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50'         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°52'         31 March	20 March	2006	347.88°W	04.8°S	027.46°Ls	06.13"	36.7°	+24°25'
22 March       2006       328.65°W       04.3°S       028.38°Ls       06.05"       36.5°       +24°32'         23 March       2006       319.02°W       04.1°S       028.84°Ls       06.01"       36.4°       +24°35'         24 March       2006       309.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°38'         25 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°41'         26 March       2006       280.52°W       03.0°S       030.68°Ls       05.80"       36.1°       +24°41'         28 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46'         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50'         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°54'         01 April	21 March	2006	338.26°W	04.6°S	027.92°Ls	06.09"	36.6°	+24°29'
23 March 2006 319.02°W 04.1°S 028.84°Ls 06.01" 36.4° +24°35' 24 March 2006 309.39°W 03.8°S 029.30°Ls 05.98" 36.4° +24°38' 25 March 2006 299.77°W 03.5°S 029.76°Ls 05.94" 36.3° +24°41'  26 March 2006 290.16°W 03.3°S 030.22°Ls 05.90" 36.2° +24°43' 27 March 2006 280.52°W 03.0°S 030.68°Ls 05.87" 36.1° +24°46' 28 March 2006 270.88°W 02.8°S 031.14°Ls 05.83" 36.0° +24°48' 29 March 2006 261.25°W 02.5°S 031.59°Ls 05.80" 35.8° +24°50' 30 March 2006 251.64°W 02.3°S 032.05°Ls 05.76" 35.7° +24°52' 31 March 2006 241.99°W 02.0°S 032.51°Ls 05.73" 35.6° +24°54'  01 April 2006 232.36°W 01.7°S 032.97°Ls 05.70" 35.5° +24°56' 02 April 2006 222.74°W 01.5°S 033.42°Ls 05.66" 35.4° +24°58' 03 April 2006 213.12°W 01.2°S 033.88°Ls 05.63" 35.3° +24°59' 04 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +25°01' 05 April 2006 193.84°W 00.7°S 034.79°Ls 05.57" 35.1° +25°02'	22 March	2006	328.65°W	04.3°S		06.05"	36.5°	+24°32'
24 March       2006       309.39°W       03.8°S       029.30°Ls       05.98"       36.4°       +24°38'         25 March       2006       299.77°W       03.5°S       029.76°Ls       05.94"       36.3°       +24°41'         26 March       2006       290.16°W       03.3°S       030.22°Ls       05.90"       36.2°       +24°43'         27 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46'         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50'         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°52'         31 March       2006       241.99°W       02.0°S       032.51°Ls       05.73"       35.6°       +24°54'         01 April       2006       232.36°W       01.7°S       032.97°Ls       05.70"       35.5°       +24°56'         02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April	23 March	2006	319.02°W		028.84°Ls	06.01"	36.4°	+24°35'
25 March 2006 299.77°W 03.5°S 029.76°Ls 05.94" 36.3° +24°41'  26 March 2006 290.16°W 03.3°S 030.22°Ls 05.90" 36.2° +24°43'  27 March 2006 280.52°W 03.0°S 030.68°Ls 05.87" 36.1° +24°46'  28 March 2006 270.88°W 02.8°S 031.14°Ls 05.83" 36.0° +24°48'  29 March 2006 261.25°W 02.5°S 031.59°Ls 05.80" 35.8° +24°50'  30 March 2006 251.64°W 02.3°S 032.05°Ls 05.76" 35.7° +24°52'  31 March 2006 241.99°W 02.0°S 032.51°Ls 05.73" 35.6° +24°54'  01 April 2006 232.36°W 01.7°S 032.97°Ls 05.66" 35.4° +24°56'  02 April 2006 222.74°W 01.5°S 033.42°Ls 05.66" 35.4° +24°58'  03 April 2006 213.12°W 01.2°S 033.88°Ls 05.63" 35.3° +24°59'  04 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +25°01'  05 April 2006 193.84°W 00.7°S 034.79°Ls 05.57" 35.1° +25°02'						05.98"	36.4°	+24°38'
27 March       2006       280.52°W       03.0°S       030.68°Ls       05.87"       36.1°       +24°46′         28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48′         29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50′         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°52′         31 March       2006       241.99°W       02.0°S       032.51°Ls       05.73"       35.6°       +24°54′         01 April       2006       232.36°W       01.7°S       032.97°Ls       05.70"       35.5°       +24°56′         02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58′         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59′         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01′         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02′	25 March					05.94"		+24°41'
28 March       2006       270.88°W       02.8°S       031.14°Ls       05.83"       36.0°       +24°48'         29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50'         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°52'         31 March       2006       241.99°W       02.0°S       032.51°Ls       05.73"       35.6°       +24°54'         01 April       2006       232.36°W       01.7°S       032.97°Ls       05.70"       35.5°       +24°56'         02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	26 March	2006	290.16°W	03.3°S	030.22°Ls	05.90"	36.2°	+24°43'
29 March       2006       261.25°W       02.5°S       031.59°Ls       05.80"       35.8°       +24°50'         30 March       2006       251.64°W       02.3°S       032.05°Ls       05.76"       35.7°       +24°52'         31 March       2006       241.99°W       02.0°S       032.51°Ls       05.73"       35.6°       +24°54'         01 April       2006       232.36°W       01.7°S       032.97°Ls       05.70"       35.5°       +24°56'         02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	27 March	2006	280.52°W	03.0°S	030.68°Ls	05.87"	36.1°	+24°46'
30 March 2006 251.64°W 02.3°S 032.05°Ls 05.76" 35.7° +24°52' 31 March 2006 241.99°W 02.0°S 032.51°Ls 05.73" 35.6° +24°54'  01 April 2006 232.36°W 01.7°S 032.97°Ls 05.70" 35.5° +24°56' 02 April 2006 222.74°W 01.5°S 033.42°Ls 05.66" 35.4° +24°58' 03 April 2006 213.12°W 01.2°S 033.88°Ls 05.63" 35.3° +24°59' 04 April 2006 203.48°W 01.0°S 034.33°Ls 05.60" 35.2° +25°01' 05 April 2006 193.84°W 00.7°S 034.79°Ls 05.57" 35.1° +25°02'	28 March	2006	270.88°W	02.8°S	031.14°Ls	05.83"	36.0°	+24°48'
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01 April       2006       232.36°W       01.7°S       032.97°Ls       05.70"       35.5°       +24°56'         02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	30 March	2006	251.64°W	02.3°S	032.05°Ls	05.76"	35.7°	+24°52'
02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	31 March	2006	241.99°W	02.0°S	032.51°Ls	05.73"	35.6°	+24°54'
02 April       2006       222.74°W       01.5°S       033.42°Ls       05.66"       35.4°       +24°58'         03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	01 April	2006	232.36°W	01.7°S	032.97°Ls	05.70"	35.5°	+24°56'
03 April       2006       213.12°W       01.2°S       033.88°Ls       05.63"       35.3°       +24°59'         04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	-							
04 April       2006       203.48°W       01.0°S       034.33°Ls       05.60"       35.2°       +25°01'         05 April       2006       193.84°W       00.7°S       034.79°Ls       05.57"       35.1°       +25°02'	-							
05 April 2006 193.84°W 00.7°S 034.79°Ls 05.57" 35.1° +25°02'	-							
06 April 2006 184.21°W 00.4°S 035.24°Ls 05.53" 34.9° +25°03'	-							
	06 April	2006	184.21°W	00.4°S	035.24°Ls	05.53"	34.9°	+25°03'

#### -----CMO 2005 Notice #02----

• · · · · · · Date: Sat, 22 Oct 2005 23:13:03 +0900 From: <cmo@mars.dti.ne.jp> Subject: Dust Storm at Solis L (CMO Notice #2)

(Sent to the CMO members based on our mailing list by BCc) Dear Colleagues,

There is a possibility that a great dust storm may be onset from the Solis L area.

Last night (21 October GMT), as we first observed (here at Mt Hamilton), the Chryse area, which was brilliant with the dust on 18 October, looked recovered since it showed a usual reddish colour and the similar bright dust patch was no more than a roundish one found at an area following Argyre. Just it was quite natural the dust trend moved southward. The south circumpolar region however was wine-coloured and so looked dust free yet. However as the area of Solis L came into the inside, we saw the situation was not so simple since a brilliant core was observed on the eastern part of Solis L, the place having a considerable slope: This reminded us of the situation in 1973 and really in October 1973 nearly in the similar Martian season, a small core of bright dust on Solis L developed gradually to a great dust storm. So the next morning change of the dust core was interesting.

Tonight (22 October GMT), the area came into sight around from 6h GMT, and the clear dust core area was looked larger and showed a shape similar to the one we saw in 1973 in a developing stage. The dust area on Solis L (almost covered except for the western outline) has still a brilliant core at the lower part and so still energetic. The covering sands of lower Thaumasia must have been blown up since M Erythræum looked as if moved to westward. The eastern end of weaker dust covering was seen up to 350°W in Noachis tonight. Observations were made by the use of the 36" Lick refractor (stopped down to 50cm) with magnification 500×, tutored by Tony MISCH. Seeing was moderate.

The trend of the present Solis L dust storm will be fixed within a few days: The area of Solis L begins now

to come into view from the hemisphere of Oceania-Asia, and if the case is similar to the one in 1973, the following (westward) regions of Solis L are as well important, and so we hope the observers are on the alert. With best wishes

Masatsugu MINAMI

at Mt Hamilton on 22 October at 10h GMT

#### 常間地ひとみ俳句選

2005年

ハッブルの膨らむ宇宙冬珊瑚木枯やカムパネルラの星ひとつ 聖樹の灯いつしか星になるいのち 天狼や曲がつたままの母の指 さけばよし大オリオンのど真ん中母抱く日のおとづれし十三夜 現し世に母引きとざれら十三の 一の橋二の橋月の兎かな 流れ星猫は釦の眼(まなご)も 羽田行き最終バスや後の月

語んずる黄道星座夕端居 春荒や西へ馳せ堕つ馭者の星 オリオンの墜つる十萬億土かな

山古志の太郎眠らせ雪やまず 春天のJupiterスリーオクターヴ

2004年 這ひ上がる天狼あをきルミナリヱ

六聯星結びて雪の生れし頃 大オリオンけふの怒りを鎮めをり 兄すこし暗き雙子座窗の冬

星まぶり木菟の遠音に酔ふてをり

2003年 片降になを身焦がせし火星かな 炎星(ほのおぼし)せめて秋夢に入り來よ 瞬かぬ火星色なき風の中

http://homepage3.nifty.com/~cmomn4/Ts\_Haiku.htm

#### - シー・エム・オー・フクイ

•中島 孝 *Nj* ━

★前号報告以降、**尾代 孝哉**様(375)、**東亞天文学会**様(376)よりカンパを頂戴しました。 有難うございました。不一

★ KaseFistshin GNO (Home Page: http://www.mars.dti.ne.jp/~cmo/oaa\_mars.html)

『火星通信』<mark>#314</mark> (25 December 2005) 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,

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発行 Published by/for: 東亞天文学会 OAA 火星課 Mars Section 
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