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CMO 2005 Mars Report #19

OAA Mars Section

NOW the 2005 apparition of Mars has come to the final stage. We here treat the observations made during the one-month period

from 16 March (λ=026°Ls) to 15 April 2006 (λ=040°Ls)

during which the angular diameter δ decreased from 6.3" to 5.3"; being very tiny and naturally the number of observations reported has thus decreased. However the surface characteristics should be said interesting because the central latitude φ began from 6°S, and it passed the Martian equator on 7 April and went up to 2°N on 15 April. The climate of the north polar region should be moderate at this Baum plateau season if normal, and so an accumulation of data was expected. The phase angle ι decreased from 37° to 34°. The apparent declination was maximal at a little over +25° around 12 April: so at the sunset time the altitude of the planet was very high enough.

The weather here at Fukui remained poor. On 25 March, it was warmer at the sunset time (the temperature rose first as high as 12°C), but it was generally cold even in April, and the full blossom of the cherry trees came quite late (around from 12 April at Fukui).

♂……愈々2005年接近も終盤に近づいた。今回は**16 March (λ=026°Ls)**から**15 April (λ=040°Ls)**の一ヶ月の觀測を振り返るが、視直徑δは6.3"から5.3"に落ちてきて、觀測數は少なくなりレヴューも難しい。中央緯度φは6°Sから始まったが、7Aprilに赤道を通過して、期間末には2°Nになった。位相角ιは37°から34°になっている。視赤緯は13Apr邊りで+25°強と最大値になった。從って、日没時には高い火星が見られるのであるが、福井で見る限り、相變わらず氣壓配置が好くない。25Marの日没時は12°Cあり、助かったが、南風が入るとシーイングが壞れる。櫻は四月12日に滿開となった様だが、2002年(ビーシュ氏が來日したとき)、2004年(墨堤の櫻を見に行ったとき)に比べて相當遲かった。

♂……The following list shows (a total of 11) observers who observed and contributed this period (in the semi-month period of peak during 16 Oct - 30 Oct we received from 75 observers).

♂……この期の觀測報告者は次の通りである(十一名):

AKUTSU, Tomio 阿久津 富夫 (*Ak*) 菲律賓 Cebu, the Philippines
1 Set of *RGB* (+*IR*) Images (8 March 2006) *f*/33⊗20cm SCT with Bitran BJ-41L*

AMADORI, Vittorio ヴィットリオ・アマドリ (*VAm*) 義大利 Soiano del Lago, Italia
1 *R* CCD Image (14 April 2006) 27cm *F*/5 spec with Vesta Pro

CHAVEZ, Rolando ロランド・チャヴェス (*RCv*) 喬治亞 Powder Springs, GA, USA
1 CCD Image (19 March 2006) *f*/33⊗35cm SCT with a ToUcam

HERNANDEZ, Carlos E カルロス・ヘルナンデス (*CHr*) 佛羅里達·邁阿密 Miami, FL, USA
1 Set of Colour Drawings (27 March 2006) 270× 23cm Mak-Cass

MAKSYMOWICZ, Stanislas スタニスラス・マクシモヴィッチ (*SMk*) 法國 Ecquevilly, France
12 Sets of Drawings (17, 18, 19, 27, 30 March; 1, 3, 5, 7, 10, 12, 14 April 2006) 250×10cm refr|270×15cm refr

MELILLO, Frank J フランク・メリッロ (*FMl*) 紐約 Holtsville, NY, USA

1 Set of CCD + 1 Colour +3 *R* Images (18, 24, 27* March; 3, 6* April 2006) 20cm SCT with Starlight Xpress MX 5/ ToUcam II*

MINAMI, Masatsugu 南 政 次 (*Mn*) 福井 Fukui, Fukui, Japan

19 Drawings (25, 27 March; 3, 7 April 2006) 600, 630×20cm Goto ED refractor* *Fukui City Observatory 福井市自然史博物館天文臺

NAKAJIMA, Takashi 中 島 孝 (*Nj*) 福井 Fukui, Fukui, Japan

3 Drawings (14 April 2006) 600×20cm Goto ED refractor* * Fukui City Observatory 福井市自然史博物館天文臺

PARKER, Donald C ドン・パーカー (*DPk*) 佛羅里達·邁阿密 Miami, FL, USA

1 Set of *RGB* Image (30 March 2006) *f*/47⊗41cm *F*/6 spec with Lu075M

PEACH, Damian A デミアン・ピーチ (*DPc*) 英國 Loudwater, Buckinghamshire, UK

3 Sets of CCD Images (18, 22 March 2006) *f*/40⊗35cm SCT with Lu075

PELLIER, Christophe クリストフ・ペリエ (*CPl*) 法國 Seine-St-Denis, France

4 Sets of *RGB* Images + 1 *B* + 1 *IR* (19 March; 1, 5 April 2006) *f*/63,65⊗ 21cm Mewlon with Lu075M

♂·····**The NPC:** This period it was difficult to measure the size of the north polar cap (npc) since δ was already tiny, but its rigid appearance suggested it was normal. We comment in the following as to the appearance of the npc if any observation is cited below. --- If we go back to the apparition in 1990/1991, the situation around λ=040°Ls (on 1 Apr 1991) was quite similar, that is δ=6.1" and φ=0°N, while in 1992/1993, λ=040°Ls visited on 14 Feb 1993 when δ=11.7" and φ=4°N: MORITA (***Mo***) so described the npc clearly by TP2415 (at ω=165°W). Next λ=040°Ls came on 2 Jan 1995 when δ=11.2" (before opposition), while the tilt was φ=22°N so that the npc looked large and brilliant to any eye.

♂·····**The SPH:** A nicer description of the south polar mist or hood (sph) was provided by PEACH (***DPc***) on 22 Mar (λ=029°Ls, φ=4°S) by the images at ω=237°W. In B, the nph hangs down to Ausonia with a thicker patch at the afternoon limb. This B image also shows the npc quite clearly, and does delicately a faint morning mist to the north of the just coming Syrtis Mj. The composite image shows Elysium light with a fine structure, as well as an interesting light-and-shade between the Ætheria dark patch and N Alcyonius. Utopia is very dark bounding the npc. PELLIER (***CPl***)'s images on 5 Apr (λ=035°Ls, φ=2°S) at ω=113°W & 116°W show the sph at the quite opposite side of the npc (more explicitly on B at ω=114°W). As to the sph, further mention shall be made each when we cite the contributed observations in the following.

♂·····**Cloud Patch at the Limb following Argyre:** No ccd image was obtained showing the Argyre cloud, while ***CPl***'s images on 1 Apr (λ=033°Ls) at ω=154°W show the limb cloud patch which is brighter than the sph, and this must have been the cloud following the Argyre one (maybe comparable with the limb cloud one ***DPc***'s on 20 Feb (λ=015°Ls) at ω=161°W(B)). The present writer (***Mn***) observed this kind cloud on 25 Mar (λ=030°Ls) at ω=076°W and the following. AKUTSU (***Ak***)'s B image on 28 Mar (λ=031°Ls) at ω=077°W also shows this. MAKSYMOWICZ (*SMk*) must have seen this on 10 Apr (λ=037°Ls) at ω=068°W~072°W and so on.

♂·····**ω=260°W~290°W:** Observations now were not enough to cover the whole angles, while several repeatedly covered the angles from ω=260°W to ω=290°W: On 18 Mar (λ=027°Ls, φ=5°S) we had ***DPc***'s images at ω=274°W where Nilosyrtis was seen faintly, and the npc was bright to the north of the dark Utopia, but the npc is vaguer in B than on the aforementioned ***DPc*** B image on 22 Mar (λ=029°Ls). The sph is also weak in B but seen down to Hellas. ***SMk***'s drawing at ω=276°W also shows the npc and Utopia. On 19 Mar (λ=027°Ls), ***CPl*** produced a set of good images at ω=276°W, where the npc appears pure white, but the sph does not show to have well developed. On 27 Mar (λ=031°Ls) HERNANDEZ (***CHr***) visually observed at ω=290°W (00:40GMT) that the npc was brilliant in Int and also thru W38A, although the sph was obscure (or down to Trinacria?). One round after, MELIL-

LO (***FMl***) took a ToUcam colour image at ω=268°W (23:48GMT) where the npc is apparent and the sph is also roughly seen (thicker at the afternoon side?). On 30 Mar (λ=032°Ls) PARKER (***DPk***) produced a set of images at ω=264°W whose B image shows excessively the npc + a halation. The composite does not show the sph so thickly. Trinacria is free from the condensate. The afternoon Elysium near the limb looks to be whitish.

♂·····ω=315°W: Images where Syrtis Mj is on the afternoon side are only a few. ***FMl*** took a contrasty W25 image on 24 Mar (λ=029°Ls) at ω=316°W where Syrtis Mj and S Sabæus are dark while no npc is visible. Libya is light near the limb, and Hellas dull. ***Mn*** observed at ω=315°W on 7 Apr (λ=036°Ls) where the npc was apparent, and the northern deserts showed a tint of orange: Libya was light but differed in colour from Hellas and the sph. The spc was dull whitish, but has a lighter patch at the afternoon limb. The sinking M Tyrrhenum was dark.

♂·····ω=010°W~030°W: ***FMl*** took another W25 image on 18 Mar (λ=027°Ls) at ω=024°W, where Niliacus L is dark and Chryse bright, but the npc is not explicit. CHAVEZ (***RCv***) took a ToUcam image on 19 Mar (λ=027°Ls, φ=5°S) at ω=015°W, with few graduation of colour and no apparent condensate, but the npc is seen and the following area of M Acidalium is clear cut. Deuteronilus is seen to run to EN from Niliacus L. AMADORI (***VAm***) made a W25 image on 14 Apr (λ=039°Ls, φ=2°N) at ω=026°W where the npc looks to have grown because of φ. Despite W25, Chryse is light in the morning. On the same day, ***SMk*** observed at ω=040°W that Chryse was light. ***Mn*** observed on 3 Apr (λ=034°Ls, φ=1°S) at ω=016°W: The npc was evident, Niliacus L was as dark as s Sabæus, and Chryse was morning light (misty). The sph was faintly large at the spr, while looks thicker at the afternoon limb and near the morning terminator. Utopia still a bit seen. Chryse was seen whitish light from the stage of ω=347°W.

♂·····Alba Patera: The images taken by ***CPl*** on 5 Apr (λ=035°Ls, φ=2°S) at ω=113°W, 116°W show a roundish Alba Patera (centred at Ω=110°W, Φ=42°N) near the CM. The B images do not show it and hence it must have been ground-lit (cf ***CPl***'s *LtE*).

♂·····北極冠：λ=000°Ls~040°Lsの北極冠はほぼ豫想通りの形で捉えられている。以下引用の觀測について箇々の姿を述べる。但し、φが未だ微妙で勘定は出來ない。過去に遡ると、1Apr1991 (λ=040°Ls)にはδ=6.1"、φ=0°Nで似たような状況であった。然し、1992/1993年期には14Feb1993にλ=040°Lsが實現したが(衝後)、このときδ=11.7"、φ=4°Nで、森田行雄(Mo)氏がTP2415で北極冠を上手く描出している(ω=165°W)。その次は2Jan1995にλ=040°Lsが訪れているが(衝前)、このときはδ=11.2"で、φ=22°Nであったから北極冠は大きく燦然としていた。

♂·····南極雲：南極雲の描寫が適切であると思われるのは22Mar(λ=029°Ls、φ=4°S)のピーチ(DPc)氏のω=237°Wの像であろう。Bではアウソニア邊りまで下りている南極雲とその夕方にやや濃い塊が出ている。このBには北極冠も明るく出ているほか、朝方シュルティス・マイヨルの北に淡い靄が出ている。このときの合成像にはエリュシウムが明るく、内部構造も出ているほか、アエテリアの暗斑とノドゥス・アルキュオニウスの間に濃淡が出ている。ウトピアは濃い。5Apr(λ=035°Ls、φ=2°S)のペリエ(CPl)氏のω=113°W、116°Wでは北極冠の對蹠點(たいせき)を中心に南極雲が好く擴がっている(SP470によるω=114°WのB像には南極雲は可成り濃い)。南極雲については以下に採り上げる像(複數)にも見られるので、チェックする。

♂·····アルギュレ雲：アルギュレ雲そのもののccd畫像はないが、CPl氏の1Apr(λ=033°Ls)ω=154°Wにはアルギュレより後方に殘っているリムの明るい雲塊が南極雲より著しい(これは前號で見たDPc氏の20Feb(λ=015°Ls)ω=161°W(B)に出ているものと同質であろう)。筆者(Mn)は25Mar(λ=030°Ls)ω=076°W以降でこれを見ている。阿久津(Ak)氏の28Mar(λ=031°Ls)ω=077°W(B)の像にも出ている。マクシモヴィッチ(SMk)氏も10Apr(λ=037°Ls)ω=068°W~072°W他で見ていると思う。

♂·····ω=260°W~290°W：既に全面を覆うようには觀測が揃わないのであるが、この角度には比較的像が出揃っている。18Mar(λ=027°Ls、φ=5°S)にはDPc氏のω=274°Wでの良像があり、ニロシュルティ

スが稍見え、濃いウトピアの北には北極冠は明白、但し、B像では22Marの像より曖昧。南極雲もB像が悪く、淡いがヘッラスまで下りている。同日SMk氏のω=276°Wでもウトピアと北極冠は見えているようである。19Mar(λ=027°Ls)のCPl氏のω=276°Wも良像で、北極冠は純白に近いが、南極雲は發達しているようには見えない。27Mar(λ=031°Ls)ω=290°W(00:40GMT)にはヘルナンデス(CHr)氏の眼視に依れば、北極冠は輝いている様で、W38A(青)でも同様に見える様である。南極雲は不明だが、トリナクリアの方に下りているかも知れない。一回り後のω=268°W(23:48GMT)のメリッロ(FMl)氏の像では北極冠も明白で、南極雲も全體に出ている(夕方が濃い)模様である。30Mar(λ=032°Ls)ω=264°Wの唐那・派克(DPk)氏の像では北極冠は過剰なB像の所爲でやや霞掛かっているが、合成像では南極雲は然程ではない。トリナクリアは晴れている。一方午後のエリュシウムは縁効果か白霧が出ている模様である。

♂‥‥‥**ω=315°W**：シュルティス・マイヨルが午後の像は少ないが、FMl氏の像に24Mar(λ=029°Ls)ω=316°Wがある。W25のコントラストの強い像で、シュルティス・マイヨルとシヌス・サバエウスは濃く出ている。北極冠は出ないが、リビュアが午後端で明るく、ヘッラスの方はやや暗い。筆者は7Apr(λ=036°Ls)にω=315°Wを刻んでいるが、北極冠は明らかで、砂漠はオレンジ色、リビュアは明るいが色はヘッラスも含めて南極雲の色と違っている。南極雲は鈍白だが、南高緯度午後端は稍明るい。沈むマレ・テュッレヌムも濃い。

♂‥‥‥**ω=010°W~030°W**：この角度ではFMl氏が18Mar(λ=027°Ls)ω=024°WでW25のコントラスト像を得ているが、ニリアクスが濃く、クリュセは明るいが、北極冠は出ない。チャベス(RCv)氏は19Mar(λ=027°Ls、φ=5°S)にω=015°Wで撮っている。色に階層がなく水蒸氣は寫らないが、北極冠は見え、マレ・アキダリウムの更に朝方は潰れていない。ニリアクス・ラクスからデウテロニルスが東北に走っている。アマドリ(VAm)氏は14Apr(λ=039°Ls、φ=2°N)ω=026°Wで單色光で撮っているが、φが北を向き北極冠は大きくなって見える。W25の像だがクリュセが朝方で明るい。同日のSMk氏のω=040°Wでもクリュセは明るいようである。筆者は3Apr(λ=034°Ls、φ=1°S)ω=016°Wで觀測しているが、北極冠は明白、ニリアクス・ラクスとシヌス・サバエウスが同じように濃く、クリュセは朝霧で明るい。これはω=347°Wから見えている。南極雲は南極方向で淡く大きいが、午後端と朝縁では稍濃く見えている。ウトピアも少し殘っている。

♂‥‥‥**アルバ・パテラ**：CPl氏の5Apr(λ=035°Ls、φ=2°S)ω=113°W、116°Wの像にはアルバ・パテラ(Ω=110°W、Φ=42°N中心)が圓く見えている。ここは大きな高臺で、Bに出ていないからその地肌であろう。

♂‥‥‥In the next issue we shall review the observations made during a one-month period from 16 April 2006 (λ=040°Ls, δ=5.3") to 15 May 2006 (λ=053°Ls, δ=4.6").

南　政次　M MINAMI

■CMO 2005 Mars Note (1)

Encircling of the October Dust

十月黄雲の大域化

■　南　政次　M MINAMI

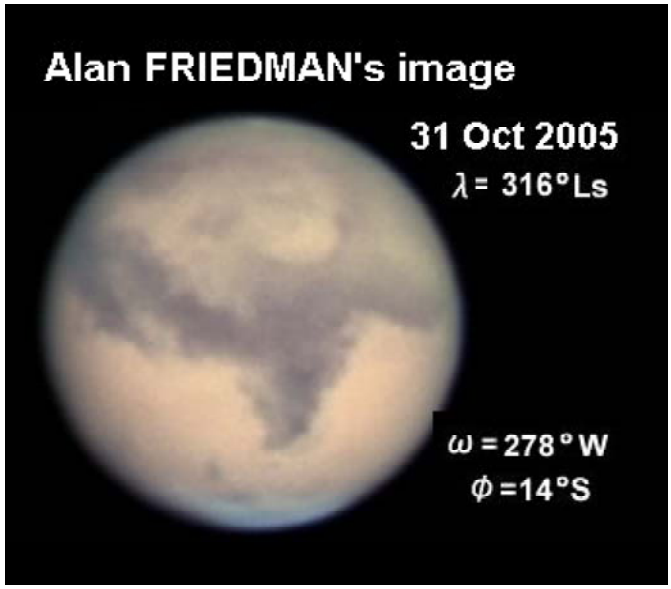
WHEN any dust storm occurs it is more important to pursue the behaviour of the possible dust veil at the higher atmosphere than to dig out the surface markings. The secondary behaviour of the dust at the higher altitude should be said to be more related with the meteorology of the Martian atmosphere. It is interesting and pertinent to observe the quantum jumps of the dust cores, but we should say there should follow several observations at different levels associated with the preceding dust disturbances.

In the case of the dust affaires in October 2005, when the disturbance jump occurred on 21 Oct 2005 (λ=310°Ls) at the area near Solis L, it was thought that the new phase of variation should occur on the upper atmosphere: If a core of dust lifting stays for a few days at one place, since it implies it works also at night so that the stratosphere does not come down to the surface but ad-

mits a convection at night, and the more spread of dust, laterally and vertically, is expected. On 22 Oct, 23 Oct (λ=311°Ls), it was apparent the dust core at the area of Solis L brought an expansion to the middle of Noachis, as reported in CMO #312, but this was occurring at the rather lower altitude. Here we want to suggest that at that time at the higher altitude a thinner dust veil splashed more widely, not only to the east but also went westward also. By the end of October, the dust veil looked more accumulated at the higher atmosphere.

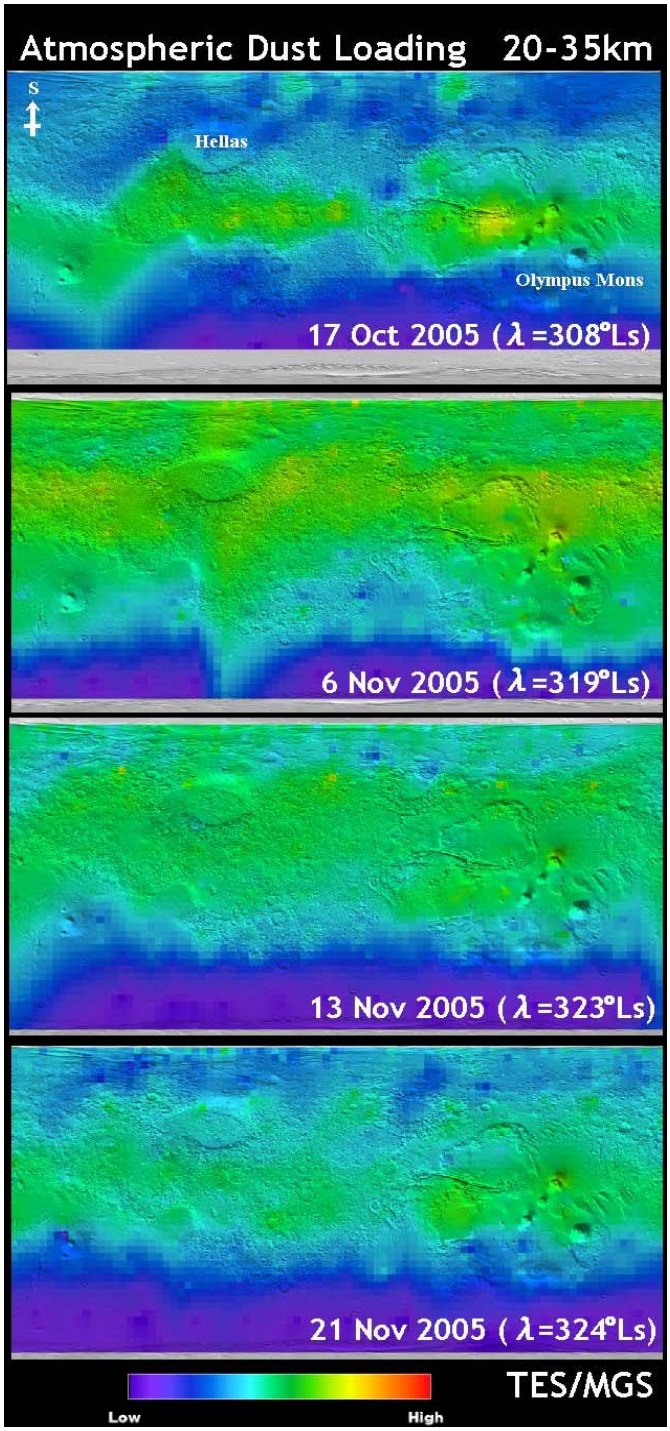
Here we pick out an interesting image taken by Bill FLANAGAN (*WFl*) on 29 Oct (λ=315°Ls) at ω=323°W, and compare it with Damian PEACH (*DPc*)'s image on 17 Oct (λ=308°Ls) at the same angle. This comparison is made not because of the dust disturbance at Margaritifer S on one side, but just to make the readers convince that the dust veil reached to the terminator side even to the Trinacria area. We also assume that the dust veil has already encircled the planet on the days.

Another image we cite here is of Alan FRIEDMAN (*AFr*) produced on 31 Oct (λ=316°Ls) at ω=278°W and this apparently shows that the whole hemisphere was covered by the dust veil which looks to be already uniform. As to this image, Christopher PELLIER (*CPl*) exquisitely wrote “Hi Alan, your image is one of the very few that show the yellow dust haze. This is a proof of excellence!" We readily agreed with *CPl*. If *CPl* felt there were few observers to elaborate on the description of the dust haze, it was possible that only a few could check the preceding furious dust disturbances at the Solis L area as well as chase its succeeding influences, and *AFr* must have been one of only a few.



Even if one witnesses the dust core but if the core have sent out the sand aloft and vanishes, he may judge the dust have dissipated. If one sees a blurred surface, he may regard it's because of the poor seeing. And once the seeing improves much, he may processes out the dust veil in order to dig out the minor markings.

We are now in a position to cite the TES dust loading image on 6 Nov (λ=319°Ls) here (from TES Web Site). It shows the dust veil already encircled the planet (except for the northern higher latitudes). In particular the southern higher latitude belt is rather thickly dusty to the south of Solis L up to Eridania through Phaethontis. The TES dust image on 4 Nov also shows that the thicker



belt nearly encircled except at the Hellas area. Around the day, our CMO Gallery contains 15 image files on 5 Nov, 18 files on 6 Nov and 17 files on 7 Nov (at opposition), and we may check some are describing the dust veil, while others are not. The brightly shining Olympus Mons was even through the dust veil, and even if one could have caught Caralis Fons (Newton crater) it did not imply the clear weather.

The 2005 apparition was unfavourable to the observers at Melbourne, but Maurice VALIMBERTI (*MVl*) and Stefan BUDA (*SBd*) did not try to enhance the details if they were annoyed by the lower seeing. See for example *MVl*'s image on 4 Nov 2005 (λ=318°Ls) at ω=022°W and *SBd*'s on 13 Nov 2005 (λ=323°Ls) at ω=284°W: they all suggest the dust veil prevalence.

It is difficult to fix the dust optical depth visually unless the polarisation method is used, and the image processing must be carried out very carefully to show the optical thickness. We should however be convinced that the observation of the dust veil as well as the degree of the mixture of dust and water vapour/condensate since the non-local expansion of the dust and water vapour is inevitable to the study of the atmosphere or meteorology of the planet. In comparison, the fluctuation of one or two stains on the surface should be said less valuable.

We are of the opinion that the idea of size of the dust storm to classify to the local, the regional, and the global dust sounds childish: Classification of dust disturbance should not only be restricted to the width or area, but we must also take account of the vertical motion. The dust on Mars is variable; some being of a strum-und-drang furious type, and some quiet but large and effective.

The yellow cloud was being relegated to the secondary until the 1956 strum-und-drang dust storm was found and chased. Since then we should say the yellow dust has rather been regarded as something to show a size and to be checked only by the Red filter. To the real observers, however, the dust disturbances on Mars have continued to show several aspects with several levels hitherto (these 50 years!). Even then some statements are made based on some old legends.

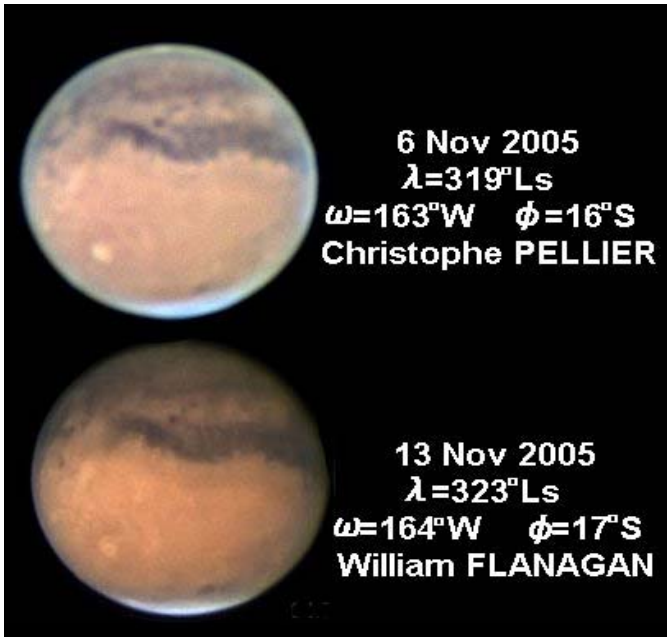
As to the dust at the higher altitude, we remember some absurd discussions made on the case of the 2001 great dust storm. We could judge already on 1 July 2001 (λ=188°Ls, δ＝20.5") or on 2 July that the dust storm was global. Truly the situation did never lead us to the conclusion that the totally dusty landscape on the western hemisphere below our eyes could never admit any dusty influence on the opposite hemisphere, since the dust on our hemisphere had already been brought quite aloft. Even then on 12 July (still δ＝19.5") it was discussed at an American Yahoo Site whether the dust was global or not, perhaps because they could dig out some markings like Syrtis Major. However already on 6 July

António CIDADÃO (*ACd*)'s image, for example, clearly showed that the area of Syrtis Mj was already covered by the (never weak) dust veil:

http://www.mars.dti.ne.jp/~cmo/ds2001/ds_image/0706/ACd06July01.jpg

The 2001 global dust (said later a complete dust since even the spc was dusty) was different from the 1956 dust storm and also from the present 2005 October dust. In 1956, it started near at the southern summer solstice, so that the wind system was from pole to pole, and the strong easterly blew at the higher altitude, while in 2001 the westerly prevailed since it occurred just after the southern spring equinox. In 2005, the seasonal situation was different from both and occurred between the southern summer solstice and the autumnal equinox.

The present October 2005 dust storm was similar in season to the great dust storm in 1973 which started at λ=300°Ls, and the pattern was quite similar. Just the optical depth was shallower this time than the previous 1973 case. The season was slightly later in the 2005 case by 10°Ls, and in 1973 the Daedalia-Claritas area following Solis L was largely dark; the sand there having been washed out, and hence the heat absorption must have been more affective in 1973 around there. Furthermore in 1973 there occurred two cores while in 2005 just only one. The ascending air in 1973 was more powerful (more summery) to send it higher to load on the easterly, while in 2005 the ascending power was moderate and the dust stayed a bit lower and tended to be brought eastward (more autumnal). Because of this, no ground disturbance occurred at the area of M Sirenum and the followers. We may say however some part was brought much higher to send westward as shown on the TES image on 6 Nov.



Since the optical depth was shallow, the decay time was shorter than the case in 1973. The TES image looks to suggest the decay began around from 4 Nov (λ=318°Ls), but it needed another month to retrieve the preceding state in October. We here cite *WFl*'s image on 13 Nov (λ=323°Ls) (to compare with *CPl*'s image on 6 Nov) and *DPc*'s image on 21 Nov (λ=328°Ls) to compare with the TES images. As to the decay mode of the 1973 dust, see CMO #261:

http://homepage2.nifty.com/~cmo/261Note7.htm

黄雲が發生した場合、その根元の掘り出しと二三日の動向の觀測も重要だが、その後の大域的な變化を追うことも重要である。二次的な傳播の方向や黄雲の擴散する(移動する、ではない)様子を調査することも大事な觀測の要素であろうと思う。通常は黄雲のコアを追うだけになり勝ちであるが、多階層的に觀測が必要になる。

十月黄雲の内、21 Oct 2005 (λ=310°Ls)にソリス・ラクス周邊に擾亂の舞臺を移してからは、數日に亙って一箇所から黄塵の播き揚げが起こっているから、この邊りで大氣の様子に大きな變化が豫想された。一箇所に黄塵の根元が數日存在する場合、既に夜に入っても成層圏は地上までは降りて來ないから、對流が起こり、擴散を手助けする。22Oct、23Oct(λ=311°Ls)では明らかにソリス・ラクスを起源とする可成りの低空の濃い黄雲がノアキスの途中まで擾亂を齎していた。このことは既に#312で述べた通りであるが、ここで注意したいのは、上空の薄い黄雲のヴェールは、東西に可成りの距離を走っていたのではないかということである。月末までにノアキスの見える範囲に限っても、濃度が上がってきているのがccd像を連ねても明白である。

ここには29Oct(λ=315°Ls)のフラナガン(WFl)氏のω=323°Wを17Oct(λ=308°Ls)のピーチ(DPc)氏の同じ角度の像とを並べるが、これはマルガリティフェル・シヌスの邊りを比較する爲ではなく、ノアキスからトリナクリアに掛けての様子の比較の爲に

作ったものである。この時點では既に殆ど上空で黄雲のヴェールは全周(encircling)していたのではないかと考えられる。

更に引用するアラン・フリードマン(AFr)氏の31Oct(λ=316°Ls)ω=278°Wの像では明らかにアウソニアまで達していて、そこで途切れるという感じではなく、既にその先まで均一化していると考えた方が自然である。このAFr氏の像はAFr氏自身が稍遠慮がちに送られたものであるが、直ぐにペリエ(CPl)氏がいみじくも" アラン殿、貴殿の像は黄色いdust hazeを描寫する希有の像の一枚です。これはこの像が秀逸であることの證據です!"と述べている、ことに筆者も賛成である(アランさんよりペリエさんの方が遙か若造であるが)。このことはAFr氏がソリス・ラクス邊りの黄雲の様子を捉えていたから、この描寫が可能であったことと、CPl氏はそうでないような描寫が、特に黄雲の掘り出しに與らなかったヨーロッパ側の像に多く見られたことを意味していると思う。

黄塵のコアが消えると、黄雲が終息に向かっていると考える觀測者がいるのと同じで、模様が朧にも見えるとそれを増感して全體のバランスを崩してしまう觀測者も多いと思う。これはシーイングにも據って判斷が難しいのだが、逆にシーイングが好いと微細模様まで像に現れるために無理押しし強調處理を行ってしまうという結果になるのであろう。

もう一つ英文の部にTESの畫像を擧げてあるが、6Nov(λ=319°Ls)には最早淡い上空の黄雲は北半球高緯度を殘して隈無く擴がっているのが分かる。特にソリス・ラクス南部を中心に東西に稍濃度の高い帶状の擴がりを見せていて、マレ・シレヌムからパエトンティス、エリダニアの方向まで延びている。寧ろ4NovのTES像ではヘッラス周邊を除いて擴がっているという風に見える。6Novの前後、5NovにはCMOのGalleryには十五ファイル、6Novには十八ファイル、7Nov(衝時)には十七ファイルほど登録されているが、一見してヴェールが被っていると思われる像とそうでない像がある。輝けるオリュムプス・モンスもヴェールを透してのことであろうし、ニュートン・クレータも見えるから天氣晴朗というわけではないわけである。濠大利亞のヴァリンベルティ(MVl)氏とブダ(SBd)氏は程良いヴェールの描寫をしているが、南半球は高度が低くてシーイングが悪いからだとは言えないであろう。MVl氏の4 Nov 2005 (λ=318°Ls) ω=022°W やSBd氏の13 Nov 2005 (λ=323°Ls) ω=284°W をはじめ十一月の像には可成りの詳細が出ていながら、ヴェールの存在を窺わせる。

黄雲の光學的深さを肉眼で正確に云々することは出來ないし、畫像處理でも餘程の調節と統一がなされなければ難しいであろうし、本格的には偏光觀測が必要であろうが、然し、觀測では黄雲の混じり具合は重要な要目であるし、詳細構造にのみ目を奪われるのは不埒な觀測である。なぜなら、火星に氣象に係わるのはたとえ薄くても大域的な黄雲の存在であって、斑點の一つの増減は氣象の結果であっても當面は關聯性は薄い。

黄雲はどういうわけか、local、regional、globalと分類され、或いは出世魚の様にこの間を發展するような記述も見られるが、面積だけの分類など子供じみているし、高さの概念が含まれない。怒濤型の黄塵もあれば、強く上空に昇り静かに氣象に影響する黄雲もある。黄雲の重要性が1956年まで認識されなかったのは(勿論短期間の觀測に依存した事も理由になろうが)、黄雲が多階層的でノアキス型の特別な現象が追跡されるまで、ポイントが分からず取り留めがなかったからであろう。然し、今に至るも多階層的なポイントが良く掴めているとは言えない、ということである。

この點で思い出すのが2001年のグローバル黄雲のときの歐美で見られた馬鹿げた言動である。日本からは1July2001(λ=188°Ls、δ＝20.5")或いは、2Julyの段階でこれはグローバルな黄雲だという認識がなされたが、黄雲は模様を隠すものだという一面の信仰からか、12July(まだδ＝19.5"もあった)になってもYahooのあるサイトではこれはグローバルであろうか、そうではあるまい、などという議論がなされていたのである(この議論に參加した人たちは忘れたかのように今も元氣である。然し、ここでは明かさない)。すでに1Julyの段階で西半球は完全に黄雲まみれであったのだが、既に黄雲は高く昇り、これが東半球に影響を齎していない筈はないのである。例えば、6Julyのポルトガルのシダダン(ACd)氏の像には淡いとは言えない程

の黄雲がシュルティス・マイヨル領域でも支配的なのは明白ではないか。

http://www.mars.dti.ne.jp/~cmo/ds2001/ds_image/0706/ACd06July01.jpg

(餘談だが、この論議に加わらなかった人にムーア(DMr)氏がいる。彼は21July迄このYahooのサイトを知らなかった様なのである。そして、8Augになって、皆さんOAAのGalleryを見ようではないか、と言っている。尤も12Julyの議論などはOAA火星課に言及してOAAは間違っていると言っているのだから、ご本人達は知っていた筈であり、CMOのAlertは逐次送られているメンバーである。Mk氏に調べて貰ったところ28Juneの最初のCMOのAlertはDMr氏にも送られているそうである。)

今回の黄雲は2001年型とは全く違うし、1956年型でもなかった(1956年はは夏型に近く大氣循環は極-極型に近かったが、2001年は南半球の春分直後であった)から、比較にはならないが、観測上の心得という點では淡い上空の静かな黄雲のヴェールに關して、同じ様な事が言えると思う。

今回の黄雲は時期的には1973年のλ=300°Lsに發生した十月黄雲に近く、同じパターンだと思う。然し、今回は黄雲の光學的深さが可成り違っている(擴がりより、深さが黄雲の分類の目安であると言うこと)。考えられる理由は今回は10°Ls遅いということの他に、1973年當時はダエダリア-クラリタスの砂が取っ拂われた状態で熱吸収が強かったであろう事、外見的には今回のように一つ玉ではなく二つ玉であったことがある。1973年の上昇氣流は更に強いもので、上空の偏東風に乗ったと思われるが、今回は上昇力は然程ではなく、秋型で東への傾度が強かったと考えられる。その爲、マレ・シレヌム方面での地上擾亂は齎されなかったのであろう。然し、上空では偏東風に乗った部分があったはずで、6NovのTES像にはこれが出ていると思う。

少なくとも、4Nov邊りから光學的深さは減衰に入ったと思うが、減衰は緩やかで十月中旬の段階に入るのは十二月に入ってからであった。尚、比較のため、WFl氏の13 Nov (λ=323°Ls) の像(とCPl氏の6Novの像)及びDPc氏の21Nov(λ=328°Ls)の像を引用した。TES像に對應する。1973年などの減衰については既にCMO#261に述べてあるので參照されたい:

http://homepage2.nifty.com/~cmo/261Note7.htm

便り
Letters to the Editor

●・・・・・・・***Date: Sat, 25 Mar 2006 18:55:35 +0700***
Subject: Re: ご機嫌いかがですか。

明日３月26日の深夜便で、ベトナム・ホーチミン市から帰国します。今回は４ヶ月の滞在でしたが、テト（旧正月）が明けてからは毎日が忙しく、あっという間に時間が過ぎ去りました。

こちらは毎日暑いです。今季は１ヶ月遅れて乾期に入り、１月からは毎日が夏晴れ。雨は殆ど降りませんでした。冬場冷え込み、天気が愚図つく北部の首都ハノイに比べ、南部のホーチミン市（旧サイゴン）は常夏です。特にテト（旧正月）が明けてからは、日中の気温が35℃を越えるようになりました。

ベトナムにいても日本の情報はいろいろ入るもので、ホテルの部屋のテレビではNHKの国際放送が見られます。（ただ、スポーツは相撲を除いて放送権の関係から動画を見ることができません。）また、日本の新聞も衛星版が出ており、ホテルのロビーで朝日や読売などを読むことができます。さらに、12月中旬からホテルの各部屋でADSLが自由に使えるようになりました。

沖縄へ帰ると、また慌ただしい生活が始まります。しかしながら、今年の秋には、またベトナムへ戻ることになっております。

○・・・・・・***Date: Sat, 01 Apr 2006 17:00:33 +0900***
Subject: 帰国しました

予定どおり、３月27日に帰国しました。沖縄は新緑の季節を過ぎており、もうすぐ“うりずん”と呼ばれる若夏の季節なのですが、真夏のサイゴンから帰るとさすがに薄ら寒く感じます。

この土日は、荒れた庭の手入れや、家庭菜園を耕し夏野菜の植え付けの準備をして過ごしています。

宮 崎 勲 (Isao MIYAZAKI うるま Okinawa)

●・・・・・・・***Date: Sat, 25 Mar 2006 21:26:18 +0100***
Subject: Mars, 19 march

Hi all, a new set from the 19th.
http://www.astrosurf.org/pellier/M060319-CPE

○・・・・・・***Date: Fri, 07 Apr 2006 20:38:24 +0200***
Subject: Mars, april 5th

Hi all, had some excellent seeing on the past two nights, here are some Mars images.
http://www.astrosurf.org/pellier/M060405-CPE

Solis Lacus is coming into view. There is a strange white spot south of the NPC, seen in both R images ? This is not the longitude of Nix Olympica...

○・・・・・・***Date: Fri, 07 Apr 2006 22:53:16 +0200***
To: marsobservers@yahoogroups.com
Cc: Masatsugu Minami, Richard McKim
Subject: Re: [marsobservers] Mars, april 5th

Hi Joel, well I have found the answer... ! This is the circular bright area near Alba Patera (we have been talk-

ing about it here about some of Ralf's images last autumn)... Olympus Mons lies at the following (west) size. The simulation by WinJupos, much more precise than Mars Previewer, is very clear. We might not forget that since last autumn, the declination of Earth (De) has come very close to the martian equator, and this spot lies too
close to the NPC to be Olympus ! Therefore, it's not bright in blue because it's purely floor albedo. In blue it's dark...

J. Warren a écrit :

>Greetings Christophe and list,
> Christophe, I just put your data into the Mars Previewer, and it sure looks close to where Nix Olympia would be. But then why would it be showing up bright in Red and not Blue? Do you think Nix Olympia should be further West or East? Regards,
>**Joel WARREN**

○・・・・・・***Date: Sat, 08 Apr 2006 18:52:20 +0200***
Subject: Jupiter, april 6th 2006

Hi observers, conditions were excellent for the altitude.
http://www.astrosurf.org/pellier/J060406-CPE
The images show quite well the reddening of oval BA. It's very dark in blue light. Here is a montage showing how BA looked like on the previous years (from 2003) :
http://www.astrosurf.org/pellier/BA-recap

○・・・・・・***Date: Tue, 18 Apr 2006 20:59:30 +0200***
Subject: Mars, april 17th 2006

Hi all, again some very good seeing yesterday evening...
http://www.astrosurf.org/pellier/M060417-CPE
We're now facing the northern hemisphere of Mars and its large springtime NPC. Mars will be there for the 2010 january opposition ! Note some thick morning mists over Chryse (see B image) Best wishes

○・・・・・・***Date: Fri, 21 Apr 2006 20:54:58 +0200***
Subject: Jupiter, april 6th 2006

Hi all, a night with some variable seeing, sometimes very good :
http://www.astrosurf.org/pellier/J060418a-CPE
(RGB set)
http://www.astrosurf.org/pellier/J060418b-CPE
(multispectral set)
I would like to bring your attention on the UV image who shows some interesting things despite its poor quality :
- BA is a very dark patch near the S-E border. Over the last years it was still white in UV. This is the result of the red color...
- The most curious detail is what appear as a kind of continnuum between the Equatorial band and the northern SEB ! No clear limit is seen. But a better image will be necessary to confirm that. The contrast between SEBn and SEBs is very strong. Best wishes

○・・・・・・***Date: Sun, 23 Apr 2006 12:14:28 +0200***
Subject: Mars, april 22nd

Hi all, again some good conditions last night -
http://www.astrosurf.org/pellier/M060422-CPE
I may see a kind of streak crossing Hellas in R and G. Do you see it ? If not an artefact it could be dust, the TES page will tell us more about that in the coming days (http://tes.asu.edu/dust/) Best wishes

○・・・・・・***Date: Sun, 23 Apr 2006 16:30:29 +0200***
Subject: Saturn in short wavelenghts, april 2006

Hi all, please find attached a comparison of various filters used on Saturn this month.
http://www.astrosurf.org/pellier/2006satshortwave-pellier
The images show how the globe becomes darker and darker as the wavelenght shortens. Saturn is covered by a high altitude haze that absorbs strongly in the short wavelenghts, like Jupiter, but much thicker. To the contrary of Jupiter, the near-UV filter might not penetrate the haze as the pattern of belts in visible light is not seen anymore. Note that the W47 filter reproduces a quite dark Saturn globe. This filter is very interesting and is more efficient that classical blue filters, although difficult to use. The bright winter northern haze follows an opposite behaviour and becomes brighter as the wavelenght shortens. I think that such filters might reveal long-term seasonal changes on the planet (in a range of years) ; and so a long-term imaging run is valuable.
Best wishes

○・・・・・・***Date: Mon, 24 Apr 2006 19:45:44 +0200***
Subject: Jupiter 22/23 april

Hi all, a night with very good seeing, I wasn't hoping it at a so low altitude :-))
http://www.astrosurf.org/pellier/J060422_23a-CPE
(RGB)
http://www.astrosurf.org/pellier/J060422_23b-CPE
(R+IR, R, G, B)
The inner red circle inside BA is just barely perceptible. I have added a focus on the "new" red spot in various bands and a comparison in blue light from 2004 when it was white. Best regards

Christophe PELLIER (ｸﾙｽﾄﾌ･ﾍﾟﾘｴ *nr* Paris 法)

●・・・・・・***Date: Tue, 28 Mar 2006 21:25:50 -0500***
Subject: Mars Observation (March 27, 2006)

I made an observation of Mars on March 27, 2006 (00:40 and 01:00 U.T.) under good seeing (6-7/10) seeing conditions. Although subtending an apparent diameter of only 5.9 arc-seconds I was able to make some detail over the Martian surface and atmosphere. I welcome any comments that you may have on my observation.

Date (U.T.): March 27, 2006
Time (U.T.): 00:40 (left image) and 01:00 (right image)
CM: 290.2 (left image) and 295.1 (right image)
Ls: 30.7 (Mid-Northern Spring/Southern Autumn)
De: -2.9, Ds: 12.4, p: 0.90, Dia: 5.9"
Instrument: 9" (23-cm) *F*/13.5 Maksutov-Cassegrain
Magnification: 271×
Filter: Klee OPS Barlow
Seeing (1-10): 6-7, Antoniadi (I-V) II
Transparency (1-6): 5

I hope that you all were able to observe and hopefully image this incredible event. Regards,
http://homepage2.nifty.com/~cmons/2005/index_CHr.html

○・・・・・・***Date: Sun, 2 Apr 2006 00:50:30 -0500***
Subject: Moon-Pleiades Occultation

I was fortunate to have observed the occultation of the Moon and the Pleiades (M45) tonight (April 2, 2006 at 01:05 U.T.) under clear weather conditions. The sight was spectacular to behold as I watched the Moon pass over the jewels (stars) of the Pleiades. I made a rendering at the midpoint of the occultation and I hope that you like it. The stars of the Pleiades (M45) that were visible (not occulted) were, in a clockwise direction, Taygeta (4.28m), Electra (3.71m), Merope (4.12m), Alcyone

(2.84m), Atlas (3.59m). and Pleione (5.03). North is to the right and west is at the bottom.

I hope that you all were able to observe and hopefully image this incredible event. Regards,

Carlos HERNANDEZ (ｶﾙﾛｽ･ﾍﾙﾅﾝﾃﾞｽ Miami FL 美)

●・・・・・・・***Date: Sun, 2 Apr 2006 01:28:07 EST***
Subject: Re: Moon-Pleiades Occultation

Thanks Carlos for your report and your drawing.

Earlier in the evening, I saw some stars in Pleiades occulted by the moon. It was half clear and half cloudy. So, it was like a peekaboo show.

At 7:22pm (0:22 UT Apr. 2nd), Merope went behind the dark limb of the moon. It disappeared instantly. Several fainters stars were occulted afterward. I missed Alcyone, the brightest star of the Pleiades, occultation due to the clouds. But at 1:50 UT, I saw Pleione and Atlas occulted within a couple of minutes of each other. Just before that Merope reappeared but it was seen with some difficulty on the sunlit limb. Also as the moon got lower, the seeing condition got worst.

Although, it was a fairly good show. But the sky could have been a lot better.

○・・・・・・***Date: Sat, 22 Apr 2006 00:32:05 EDT***
Subject: Mars: Apr. 20, 2006

Hi - Here is my latest image of Mars Apr. 20, 2006 to be posted. Many Thanks,

Frank J MELILLO (ﾌﾗﾝｸ･ﾒﾘｯﾛ NY 美)

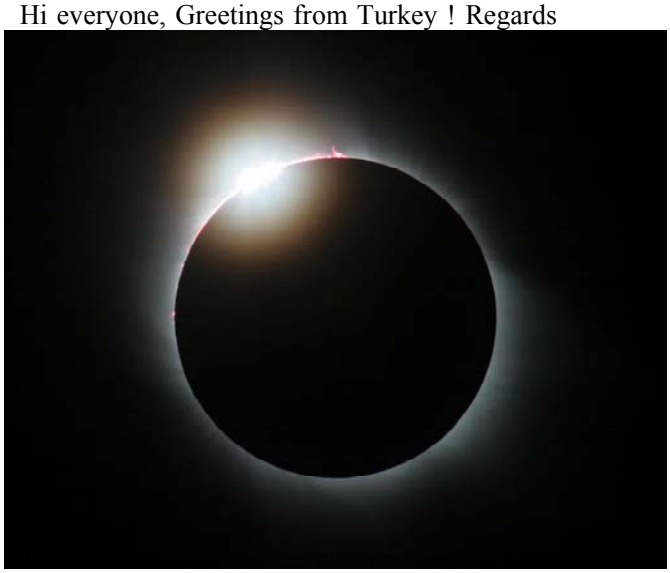
●・・・・・・・***Date: Wed, 29 Mar 2006 18:00:23 +0900***
Subject: Mars image 28 March 2006

火星画像:火星も5秒台と小さくなってしまいましたが、BJ-41Lでは何とか捉えています。

阿久津 富夫 (Tomio AKUTSU セブ The Philippines)

●・・・・・・・***Date: Thu, 30 Mar 2006 20:32:38 +0100***
Subject: Eclipse

Hi everyone, Greetings from Turkey ! Regards



○・・・・・・***Date: Mon, 3 Apr 2006 16:07:06 +0100***
Subject: Turkish Delight

Hi everyone, Back home now after an amazing week in Turkey observing and imaging a wonderful total eclipse. I sent some preliminary images out while in Turkey but now have the chance to look over the data and process the images more carefully. I took a hand held GPS unit out with me and recorded my precise location on the beach just to the west of Side on the south coast of Turkey. (Side can be seen on this google map as a small peninsular with a man made harbour just visible at its tip). I was curious to know my exact location as I am sure it was very close to the exact centre line of the shadows track. Images to follow...

Best wishes

J COOPER (ｼﾞｪﾐｰ･ｸｰﾊﾟｰ Northampton 英)

●・・・・・・・***Date: Fri, 31 Mar 2006 18:15:59 +0900***
Subject: 今シーズンの観測終了のお知らせ

すっかりご無沙汰してしまい申し訳ありません。年度末を迎え、仕事の忙しさはピークに達しています。もろもろの雑事にかまけて、望遠鏡を運び出す気力がわかないまま、二月、三月を過ごしてしまいました。

7Janの観測をもって今シーズンの終了とさせていただきたいと思います。一シーズンたった17枚のスケッチとは、お恥ずかしい限りです。何のサポートにもならない散発的な報告となってしまい、申し訳ありませんでした。

まだ寒い日があることと思います。お身体には充分お気をつけ下さい。

岩 崎 徹 (Thoru IWASAKI 小倉 KitaKyushu)

●・・・・・・・***Date: Sun, 2 Apr 2006 18:36:16 -0500***
Subject: Mars Images

Dear Masatsugu, Attached are the rest of the images I have for the month of November 2005 that I would like to submit to the CMO Gallery. There are five sets of images from November 02, 06, 13, 14, 15 and 17.

Please let me know if you have any questions or problems regarding the images.

I hope to send you some more images from the month of October 2005 during the next couple of weeks.

http://homepage2.nifty.com/~cmons/2005/index_WFI.html

○・・・・・・***Date: Wed, 5 Apr 2006 09:23:56 -0500***
Subject: RE: Mars Images

Dear Masatsugu & Masami, Thanks for posting my images to the CMO Gallery.

I also would like to thank Masatsugu for his reply on April 3rd.

I tend to agree with his opinions about the G exposure helping discern some of the subtle features on Mars. Actually I feel that making the actual green exposure is easier than trying to synthesize one and it doesn't seem to introduce any bad artifacts from Mars' rotation. So I will continue to shoot Mars with the green filter.

Thanks also for the discussion and references on the Blue images. I'm still trying to absorb as much information as I can about imaging Mars. I found getting good B exposures and images was always the most difficult part. It wasn't until December that I finally adjusted my exposure and frame rates to start getting B images that I liked.

Hopefully I will be better prepared for the next Mars apparition. Thanks again for your help and direction!

Regards,

p.s. I bet the visual observations of Mars through the Lick refractor where amazing! There is still something amazing about making visual observation. Seeing with your own eyes makes it seem more real and more inspiring!

○・・・・・・***Date: Fri, 21 Apr 2006 22:15:02 -0500***
Subject: RE: CMO Minami asks

Dear Masatsugu, Attached are two color images I took on 29 October 2005. One is for 06:44 UT (I noticed I

mislabled the time by 1 minute on the HAS site if that really matters) and one for 06:23 UT.

I also have some from 30 October which I can I will send to you as soon as I get a chance to process them.

Right now I am preparing to leave for the Texas Star Party tomorrow. Maybe I'll get some time out there to process some of these images. I try to send you the 30 Oct ones as soon as possible. I also try to get you the complete set with the R,G,B exposures.

When I get a chance I will go back and review the November 6th image and see if I have "processed out" the dust veil. Regards,

Bill FLANAGAN (ｳｨﾘｱﾑ･ﾌﾗﾅｶﾞﾝ Houston TX 美)

●･･･････***Date: Mon, 03 Apr 2006 20:34:59 +0000***
Subject: Mars Images 30 March

Hi All, I have attached some Mars images from 30 March. The Elysium cloud is very prominent on the PM limb. Best,

Don PARKER (唐那・派克 Miami FL 美)

http://homepage2.nifty.com/~cmons/2005/060330/DPk30Mar06.jpg

●･･･････***Date: Tue, 4 Apr 2006 11:32:55 +0100***
Subject: Eclipse summary

Hi all, I've now updated my eclipse summary page (are you fed up with the eclipse yet ;-)?)...

http://www.digitalsky.org.uk/solar/tse-20060329/tse.html

Highlights: The page on Earthshine exposures shows

TEN YEARS AGO (128)

----CMO #174 (25 April 1996)----

先ずLtEの中から、Sam WHITBY氏のお便りを抜粋する："**I am sorry for the loss of Mr Tsuneo Saheki. As you probably know, he also was an early contributor to the Mars Section of the ALPO, adding some his status as an observer to that organization. His observation of an unusual gray cloud on Mars in 1950 has become part of our folklore, and I am sure that other observers in this part of the world also mourn his loss. ･･･ I sometimes relax by thumbing through old issues of *Sky and telescope* at the RAS Observatory. Yesterday I found and re-read an article on Mars in the Feb 1955 issue. The article included drawaings by Ebisawa, Antoniadi and Maéda, as well as the author's. ･･･(9 April 1996)**"他に三月25日に7×50の双眼鏡で百武(Hyakutaké)彗星を見たことなどがある。LtEには他に日岐氏が佐伯先生ご逝去に關してOAA編集部に弔文を送ったとある。成田氏には火災で失ったCMO舊號を四十三冊を送ったらしく、その礼状がある。松本直弥氏のLtEには22Marの百武の写真がカットとして入っているが、印刷では尾が潰れて仕舞って申し譯ない。135mmと400mmレンズにFujicolor G800である。海外からはWARELL氏が北極冠の測定について、またAKPのNIECHOY氏から一通、最後はMk氏の23AprのLtEだが、未だ暖房が必要と書いている。百武彗星は15Apr以降は捉えられないそうである。


Communications in Mars Observations
火星 通信 No. 174
26 April 1996
Published by the ... Mars Section
1523

扨て、巻頭は1994/1995 Mars Note (10)で"*Mere Hellas but No Mean Hellas*"としてλ=062°Lsから125°LsまでのCMOの觀測を集めている。いつからHellasが白く輝くかという問題であった。メインディッシュは「ときどきSomething Old」(懐かしい)の(9)で、"**The npc in the early 1980s observed at the Kwasan and Hida Observatories**"。岩崎恭輔氏から頂いたレプリントにより解説したものである。圖が七枚あり、P B JAMES氏達の結果との比較もあるので、これはこれから北極冠の季節を迎えて再読を奨めたい。もし、原稿がFDか何かに保存してあればWebに載せたいと思っている。

Ten Years Agoは(4)となって、淺田正氏編集の1986年の#006と#007を村上(Mk)氏が紹介している。これはWebに出ているが、#007巻頭の「ヴァイキングの捉えた南極冠の様相」というのは淺田氏から最近送られて來た昔のファイルに殘っている様子なので、廿周年企畫としてWebで再現したいと思っている。#006には松本直弥氏の10May1984(λ=145°Ls)の火星写真からアルバ邊りの白斑の解析があり、これについてMk氏が感想を述べている。1986年の火星は既にδ=10"に達しているようだが、觀測は少ないとある。季節はλ=147°Ls~162°Ls。折しもハレー彗星の時で、Mk氏は12Apr1986に真鶴に出掛けたが、春霞の夜空に頭だけぼんやりと捉えただけとある。筆者の臺北では未だ四月というのに蚊取り線香を用意したとあるそうである。 **南 政次 (Mn)**

how tight the settings need to be to pull out this sort of detail. I'm still quite amazed at how blue the Moon looks when stretched...

http://www.digitalsky.org.uk/solar/tse-20060329/earthshineexposures.html

Stars visible during the eclipse - there weren't many but they were there...

http://www.digitalsky.org.uk/solar/tse-20060329/eclipsestars.htm

Bailey's Beads feature matching (thanks to Martin Andrews for his help on this one)...

http://www.digitalsky.org.uk/solar/tse-20060329/tse-featurematches.html

Coronal loops around prominences...

http://www.digitalsky.org.uk/solar/tse-20060329/tse-promloops.html

A sharp lunar limb profile in the inner corona shot (see the second picture in the sequence)...

http://www.digitalsky.org.uk/solar/tse-20060329/innercorona.html

More will be added to the page when I have time to do so. Best regards,

○・・・・・・***Date: Sun, 16 Apr 2006 10:07:20 +0100***
Subject: Reworked full range eclipse shot

Hi all, I have finally found a few hours to rework one of my composites from the March 29th eclipse. This version has been built from 7 coronal exposures and one for the Earthshine.

A larger version is available from here...

http://www.digitalsky.org.uk/solar/tse-20060329/fullrange.html

Best regards and happy Easter

○・・・・・・***Date: Sun, 23 Apr 2006 11:15:22 +0100***
Subject: Large prominence - April 22nd 2006 (PST)

Hi all, Some nice prominence activity on the 22nd April 2006. It's raining today (23rd) so I can't follow up to see if it's still there. Here's a 3× Barlow shot of the prom with a wider view available via this page:

http://www.digitalsky.org.uk/solar/ha-20060422.html.

Best regards,

Pete LAWRENCE (ﾋﾟｰﾄ･ﾛｰﾚﾝｽ Selsey WS 英)

●・・・・・・・***Date: Sun, 23 Apr 2006 07:04:23 -0400***
Subject: Re: Large prom - April 22nd 2006 (PST)

Nice Pete- it's cloudy here, but i managed to catch the sun friday.

Sean WALKER (ｼｮｰﾝ･ｳｫｰｶｰ *S&T* NY 美)

●・・・・・・・***Date: Tue, 11 Apr 2006 23:21:23 +0100***
Subject: Eclipse webpage

I have now recovered sufficiently to make a webpage of my eclipse observations and photos from the Explorers expedition to Libya.

http://www.davidarditti.co.uk/eclipse.html

Hope it is of interest.

David ARDITTI (ﾃﾞｳﾞｨｯﾄﾞ･ｱｰﾃﾞｨﾁ Greater London 英)
http://www.davidarditti.co.uk/

●・・・・・・・***Date: Fri, 14 Apr 2006 08:14:31 +0900***
Subject: 古いフロッピーが見つかりました。

南様：昨夜のメールは、メールは以下のようなものでした。添付したら同じ症状がでたので、今度は添付しないでお送りします。データはいづれ、CDにでも書き込んでお送りします。

"最近、Parkerさんが使っているAstronomikのフィルターを入手しました。テスト撮影をしたいのですが、天候が不順でイライラしています。

先日、私の部屋の押入れを捜索していたところ、古いフロッピーが見つかりました。『**火星通信**』関係のものを九国大で読み取って、圧縮して添付ファイルにしております。

実はもう一枚見つかったのですが、これは2DDタイプのため九国大では読めませんでした。しばらく時間をいただければ、なんとかしたいと思います。以上、ご連絡まで"

○・・・・・・***Date: Mon, 17 Apr 2006 00:42:14 +0900***
Subject: ちょっとスリムにして再挑戦

今夜は晴れていて、木星を撮影しています。Astronomikのフィルターを使うと拡大率を上げても、露光が半分ですみます。

前回お送りできなかったフロッピーの内容ですが、不要なものを消去してすこしスリムにして再度お送りしてみます。ダメだったら、もう少し小分けにします。

○・・・・・・***Date: Tue, 18 Apr 2006 02:07:24 +0900***
Subject: Re: 特性曲線

春霞と黄砂らしいですが、木星が暗く見えていますので、拡大率を下げ、露光を1/15秒にして、撮影しています。

Mn>木星の416jbb3にはおかしな二重輪ッカが寫っていますね。
>これは先に火星でピーチとタイラーの畫像に殆ど同時に
>でていて、火星面上のものといわれたものと似ているの
>ですが、もし木星にも出るとすれば、ゴーストでしょうね。
>原因は分かりますか？

先のメールにも書いたのですが、昨日は1/30秒露光で撮影していて、転送レートを30fpsに上げたところ、画像処理した結果にこのゴーストが入るようになりました。R光、G光にも入っています。転送レートをやや遅く(露光時間の倍の時間で1フレームを転送するように)したら良いのではないかと考えています。

画像の周りの白線も原因は良く分かりません。これも転送レートなのかも知れません。(昨年から使っていた、1/15秒露光と7.5fpsの組み合わせでは、ゴーストも白線も出ていませんでした。)

申し遅れましたが、特性曲線ありがとうございました。

○・・・・・・***Date: Tue, 18 Apr 2006 08:43:32 +0900***
Subject: Re: 特性曲線

Mn>CMO#311のser2-227頁に出ているピーチとタイラーの
>写真をご覧下さい。但し、印刷したものには出ません
>でしたので、Internetの方でPDFの#311を探して、この頁
>の写真を見てください。似ているんです。もし、逆に
>転送レートを変えながら人工的にいつでも出せるもの
>なら原因が分かるでしょうね。カメラの傾きとかにも
>dependするのなら尚面白い。ピーチとタイラーは同じ方

>法を採っていると思う。
ピーチの画像の右上ですね。良く似ています。タイラーの画像では私には良く分かりませんでした。昨夜の組み合わせ(1/15秒露光と7.5fps)ではこのゴーストは出ていない様です。ただ拡大率にも依存するのかもしれません。もう一度、透明度の良い夜に拡大率を上げて撮像してみます。
何か分かりましたら、またご連絡いたします。

○・・・・・・***Date: Thu, 20 Apr 2006 23:29:39 +0900***
Subject: Re: USBコンバーター

南 様：・・・・・先のメールでお問い合わせのあった抜けている分は私の手元の5インチ2DDの可能性もあります。本日、金沢の中嶋氏から旧式のPC9801を送ってもらったのでなんとかなる可能性もあります。明日は忙しいので無理ですが、土日に試してみます。 以上ご連絡まで。

浅 田 正 (Tadashi ASADA 宗像 Fukuoka)

●・・・・・・・***Date: Fri, 14 Apr 2006 23:05:37 -0500***
Subject: Re: From CMO/OAA

Greetings Mr. Minami,

Very nice to hear from you. You will always have my standing permission to use any of my images in any way that you like, so feel free to do with them what you will. I'm flattered you find them useful. I pulled down my 2003 images when I began the 2005 season, but I am planning on putting the 2003 images back up in the next few weeks and will certainly let you know when I do. I am already excited and looking forward to 2007/2008. I hope, but doubt, it will be as good as 2005/2006, but you never know. Once again, nice hearing from you and thanks for the work you do. Best wishes,

Joel WARREN (ｼﾞｮｴﾙ･ｳｫｰﾚﾝ Amarillo TX 美)
http://homepage2.nifty.com/~cmomn2/287JWn.htm

●・・・・・・・***Date: Mon, 3 Apr 2006 12:59:46 -0400***
Subject: Jupiters at elevation 31 degrees

Hi all - I wrestled with Jupiter twice last week. It is well placed as it crosses the meridian, passing between two thick power lines behind my back yard, elevation about 31 degrees. Hoping that some good seeing will allow better results as I am landlocked here for this apparition! steady skies to you,

○・・・・・・***Date: Sat, 15 Apr 2006 19:51:56 -0400***
Subject: Jupiter and Ganymede

Captured on Palm Sunday and worked on almost 'til Easter! This image taken with my 10" A/P mak and DMK 21BF04 webcam with RGB filters. Luminance is made from IR, R and G streams.
http://www.avertedimagination.com/images/jupiter040906.jpg
Happy Easter and Passover to all -

Alan FRIEDMAN (ｱﾗﾝ･ﾌﾘｰﾄﾞﾏﾝ Buffalo NY 美)

●・・・・・・・***Date: Wed, 19 Apr 2006 06:19:47 -0700***
Subject: Image for 19 April 2006

Attached is my image from 19 April 2006.

David ANDERSON (ﾃﾞｲｳﾞｨｯﾄﾞ･ｱﾝﾀﾞｰｿﾝ SC 美)

☆ ☆ ☆

Forthcoming 2005 Mars (18)

Ephemeris for the Observation of the 2005/06 Mars. XI

May 2006

Masami MURAKAMI
村上 昌己(Mk)

◆ As a sequel to Part X in CMO #315 where the *Ephemeris* for April 2006 was listed, here is given the *Ephemeris* for May 2006 (final). 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 λ, δ and ι 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 May 2006	303.10°W	06.2°N	046.46°Ls	04.88"	31.7°	+24°39'
02 May 2006	293.43°W	06.4°N	046.90°Ls	04.86"	31.6°	+24°36'
03 May 2006	283.77°W	06.7°N	047.35°Ls	04.84"	31.4°	+24°33'
04 May 2006	274.12°W	06.9°N	047.79°Ls	04.82"	31.3°	+24°29'
05 May 2006	264.47°W	07.2°N	048.23°Ls	04.80"	31.1°	+24°26'
06 May 2006	254.80°W	07.5°N	048.63°Ls	04.78"	31.0°	+24°22'
07 May 2006	245.14°W	07.7°N	049.12°Ls	04.76"	30.8°	+24°18'
08 May 2006	235.47°W	08.0°N	049.57°Ls	04.74"	30.7°	+24°14'
09 May 2006	225.82°W	08.2°N	050.01°Ls	04.72"	30.5°	+24°10'
10 May 2006	216.15°W	08.5°N	050.45°Ls	04.70"	30.4°	+24°06'
11 May 2006	206.47°W	08.7°N	050.89°Ls	04.68"	30.2°	+24°01'
12 May 2006	196.82°W	09.0°N	051.33°Ls	04.66"	30.1°	+23°57'
13 May 2006	187.16°W	09.3°N	051.77°Ls	04.64"	29.9°	+23°52'
14 May 2006	177.47°W	09.5°N	052.21°Ls	04.62"	29.8°	+23°47'
15 May 2006	167.80°W	09.8°N	052.66°Ls	04.61"	29.6°	+23°42'

Date (00:00GMT)	ω	φ	λ	δ	ι	Declination
16 May 2006	158.12°W	10.0°N	053.10°Ls	04.59"	29.5°	+23°37'
17 May 2006	148.47°W	10.3°N	053.54°Ls	04.57"	29.3°	+23°32'
18 May 2006	138.79°W	10.5°N	053.98°Ls	04.55"	29.2°	+23°26'
19 May 2006	129.10°W	10.8°N	054.42°Ls	04.54"	29.0°	+23°20'
20 May 2006	119.44°W	11.0°N	054.86°Ls	04.52"	28.9°	+23°15'
21 May 2006	109.77°W	11.3°N	055.30°Ls	04.50"	28.7°	+23°09'
22 May 2006	100.08°W	11.5°N	055.74°Ls	04.49"	28.6°	+23°03'
23 May 2006	090.39°W	11.8°N	056.18°Ls	04.47"	28.4°	+22°56'
24 May 2006	080.72°W	12.0°N	056.62°Ls	04.46"	28.3°	+22°50'
25 May 2006	071.05°W	12.3°N	057.06°Ls	04.44"	28.1°	+22°43'
26 May 2006	061.35°W	12.5°N	057.50°Ls	04.43"	27.9°	+22°37'
27 May 2006	051.66°W	12.7°N	057.94°Ls	04.41"	27.8°	+22°30'
28 May 2006	041.97°W	13.0°N	058.37°Ls	04.40"	27.6°	+22°23'
29 May 2006	032.30°W	13.2°N	058.81°Ls	04.38"	27.4°	+22°15'
30 May 2006	022.59°W	13.4°N	059.25°Ls	04.37"	27.3°	+22°08'
31 May 2006	012.90°W	13.7°N	059.69°Ls	04.35"	27.1°	+22°01'
01 June 2006	003.21°W	13.9°N	060.12°Ls	04.34"	27.0°	+21°53'
02 June 2006	353.53°W	14.2°N	060.56°Ls	04.32"	26.8°	+21°45'

------CMO 2005 Notice #03-----

The following is the final CMO Notice sent out on 1 December 2005: The #02 was recorded in #314.

● · · · · · · · ***Date: Thu, 1 Dec 2005 09:38:54 +0900***
From: cmo@mars.dti.ne.jp
Subject: CMO Notice #3/2005
(*Emailed to the CMO members via BCc by the use of the CMO emailing list*)

Dear CMO Mars Colleagues

This is a note on recent Mars from Japan: Olympus Mons began to face to us in Japan, first after opposition, around from 20 November (λ=327°Ls, phase angle ι= 11°), and on 26 - 27 November (ι=16 – 18°) it came into sight on the CM. Because of the dismal weather we have not been able to check every angle, but we could catch the angles Olympus Mons should have been near the limb on 21 and 22 November (ι=13°): In any case it was dull and did not appear as a bright spot area. We suppose the results in Melbourne are quite the same.

The aureole of Olympus Mons which was shown up as an opposition effect was first checked explicitly in Europe on 29 October (λ=315°Ls, ι= 8°) by AMADORI at ω=188°W, and then on 31 October (ι= 6°) by HIDALGO at ω=187, 194°W. As the phase angle decreased, its brightness increased. PEACH's images on 3 November (ι=4°) at ω =170°W and on 6 November (ι=2°) at ω= 138°W belong to the most beautiful pictures ever taken of the brightening Olympus-Mons aureole as well as the summit.

http://homepage.ntlworld.com/damian.peach/2005_11_03rgb_DAP.jpg

http://homepage.ntlworld.com/damian.peach/2005_11_06rgb_DAP.jpg

On 6 November, it was first shot in the US by WALKER at ω=189°W and then lots of observers followed. Notable was that at those times the European observers caught it as a still bright spot on the morning side. After opposition, however, as the phase angle gradually increased, the brightening of aureole decreased. As a result, as stated above, perhaps no Japanese observers were able to see the brightening Olympus Mons this time since the phase angle was over 10° when it began to face toward us.

Note that Olympus Mons is located 28°N, while the slope of the flank has an angle of 20 to 30°, and so the area looks as if located more southward near the angle $(D_S + D_E)/2$. At opposition the surface is as if in a full-moon state, and the high albedo areas increased their brightness by some dozens per cent and so this difference of angles enhances the particular areas (originally the "opposition effect" was used to denote the brightening of the high albedo areas seen through the shorter wave lengths. Nowadays, the presence of the blue haze is regarded as dubious.) In 2003, $(D_S + D_E)/2$ was more southward about by 6°, and hence it was possible that the Olympus-Mons aureole was less bright in 2003 than this year if the airborne dust condition was the same at opposition.

There was few possibility that such a large diurnal brightening was caused by the so-called orographic cloud (as to another few possibility see below). The fact that any B ccd image showed a large roundish spot (that is, there was witnessed no irregularity of the shape common to the roll clouds) must have just implied that it was mostly sensitive to the white light. In this sense B 390 combined with TP2415 must have been more discrimi-

nating. See an example in 1988 (its (D_S + D_E)/2 at opposition was similar to that in 2003):
http://homepage2.nifty.com/~cmo/281OAA/index.htm

The activity of discrete white cloud at Olympus Mons was once reported by S A SMITH and B A SMITH: *Diurnal and Seasonal Behavior of Discrete White Clouds on Mars*, ***Icarus*** **16** (1972) 509, based on the data from 1963 to 1971 of the New Mexico State University Observatory supplemented by the data of the Lowell Observatory Planetary Data Center (going back to 1924) and IAU Data Center at the Meudon Observatory. According to their results, the cloud begins very faintly from around λ=325°Ls, and stays very weak from λ=000°Ls to about 050°Ls, and becomes very active around from λ=060°Ls. More recent result based on the MGS images was published by J L BENTON and others: *The seasonal behavior of water ice clouds in the Tharsis and Valles Marineris regions of Mars: Mars Orbiter Camera Observations*, ***Icarus*** **165** (2003) 34. According to their results, Olympus-Mons Cloud starts to rise from λ=350°Ls and increases steadily in size from λ=050°Ls to 085°Ls and shows a peak at around λ=120°Ls (data from June 2000 to July 2001). However they seemed to identify a smaller scale white matter than the Olympus-Mons aureole during a short period around λ=325°Ls (perhaps from the data at around March and April 2000, having an area of less than a few hundred km squared). So this kind of white matter (maybe frozen) must have possibly been mingled with the opposition effect this year also, but apparently the scale is very different from the usual orographic cloud (having usually an area of 5~800000 km squared). Note MGS's data are limited to the swath at the 2 o'clock PM while SMITH and SMITH's are supposed to be diurnal.

The high-altitude atmospheric dust scattered aloft by the several dust resonances observed from the end of October to the beginning of November looks to have much subsided though still the dark markings appear to be duller. However the airborne dust might have been used as water cloud condensation nuclei, and so the watching of the water condensates on the southern hemisphere will be next interesting:
http://homepage2.nifty.com/~cmomn2/2005Coming_14.htm

On the other hand, we should still be cautious about the dust disturbances which may occur on the northern high latitude areas eventually to cross the equator since the period B denoted in
http://homepage2.nifty.com/~cmomn2/2005Coming_9.htm
is still available (period B: λ=310 – 350°Ls). Incidentally just after the temporal onset of a dust streak in Chryse found by WARREN and GRAFTON on 23 November (λ=329°Ls)*, the area around of Eos Chasma appeared quite dusty light: See for example WALKER's images on 26 November
http://homepage2.nifty.com/~cmons/2005/051126/SWk26Nov05.jpg

The area is going to face toward us, and we hope the observers in the Oceania-Asian hemisphere to check the aftermath. Unfortunately however in Japan they say a cold wave will visit us this week end to the next week, and so we are not certain we will be able to obtain reliable results. How about in Melbourne?

With best wishes,

Masatsugu MINAMI
CMO/OAA

* Later we were informed that FLANAGAN had also taken the dust streak on the day.

シー・エム・オー・フクイ **中 島 孝 *Nj***

★今回はカンパがありませんでした。不一

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