

MARS

No. 304

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OBSERVATIONS

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CMO 2005 Mars Report # 05

OAA Mars Section

♂.....The present report deals with the period from 16 March to 15 April 2005: The Martian season proceeded from $\lambda=176^\circ\text{Ls}$ to 194°Ls during the period. The central latitude ϕ went up from 14°S to 21°S , while the angular diameter δ is slowly rising from $5.5''$ to $6.3''$. The phase angle increased ι increased from 35° to 40° . The apparent declination increased from $-21^\circ40'$ to $-16^\circ30'$ at the area of Capricornus.

今回は16Marから15Aprilの一ヶ月の観測を扱う。季節は $\lambda=176^\circ\text{Ls}$ から南半球の春分を挟んで 194°Ls まで進捗した。中央緯度 ϕ も 14°S から 21°S も急激に動いた。但し視直径 δ は $5.5''$ から $6.3''$ と動きは鈍い。位相角 ι は 35° から 40° と増加した。赤緯は $-21^\circ40'$ から山羊座に入って $-16^\circ30'$ と可成り高くなって来た。

♂.....The planet is just observable no more than one hour before dawn if the seeing is good. The seeing condition here is not preferable yet, and MORITA (Mo) tried on 4 April but failed to make images and so on. At Fukui, the weather was also changeable though it has become warmer.

観測者数は δ も6秒を越えたというのにどうしてか増えない。ただ、未だ朝まだき一時間の余裕がなく、シーイングが優れないこともあるのかも知れない。森田(Mo)氏は4Aprなども撮像を試みているようだが、好くなかったそうである。7Aprの像もGalleryには挙げてはいない。阿久津(Ak)氏は二ヶ月の予定でフィリピンであるが、まだ仕事が忙しいのであろうか。リストでは福井は状況が好いように見えるが、矢張り氣流に苦しんでいる。8Aprが中でも正常という程度である。

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

20 Drawings (19, 20, 26, 31 March; 1, 5, 8, 9, 13, 14 April 2005) 400,630×20cm refra*

MORITA, Yukio 森田 行雄(Mo) 廿日市 Hatsuka-ichi, Hiroshima, Japan

5 Sets of CCD Images (13 March; 7, 13 April 2005) 25cm spec with an ST-5C

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

12 Drawings (31 March; 1, 9, 13, 14 April 2005) 400, 600×20cm refractor*

PUJIC, Zac ザック・プジッチ(ZPj) ブリスベン Brisbane, Australia

5 CCD Images (23, 28 March; 3, 11, 14 April 2005) $f/28 \otimes 31\text{cm}$ spec with a ToUcam II

RIVAS ROMERO, David ダビ・リバス=ロメロ (DRv) リマ Lima, Peru

5 CCD Images (16, 18, 25 March; 7, 9 April 2005) $f/30 \otimes 20\text{cm}$ SCT with a ToUcam II

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

♂.....In March, the high pressure did scarcely come over Fukui, and so we could not cover the whole surface. On 19 Mar ($\lambda=178^\circ\text{Ls}$) at $\omega=164^\circ\text{W}$, and on 20 Mar ($\lambda=179^\circ\text{Ls}$) at $\omega=154^\circ\text{W}$ we just saw the spc and the southern dark band, while Tharsis looked whitish near the terminator. MORITA (Mo) at Hiroshima took images on 20 Mar ($\lambda=179^\circ\text{Ls}$) at $\omega=158^\circ\text{W}$, 163°W which don't show definite markings but the colour is quite natural.

The southern spring equinox was attained around 23 March. On 31 Mar ($\lambda=185^\circ\text{Ls}$) we (*Nj* and *Mn*) had a high air and observed around from $\omega=030^\circ\text{W}$ to $\omega=054^\circ\text{W}$: S Sabæus was seen at the evening side, and area around M Erythræum was dark, while M Acidalium looked faint. Chryse was not bright in particular. The spc was evident and the nph indefinite. The season of the 2001 great dust storm was thus reached. As another month come in, the conditions on 1 Apr and 5 Apr however remained poor. *Mo*'s condition on 7 Apr ($\lambda=189^\circ\text{Ls}$) at $\omega=337^\circ\text{W}$ was also not good; just showing the area of M Serpentis to be dark. At Fukui, the sky improved for the better on 8 Apr ($\lambda=189^\circ\text{Ls}$), and it was observed at $\omega=310^\circ\text{W}$, 320°W & 330°W that M Serpentis remained wide and dark as in 2003 showing a brownish tint. Hellas was much less bright than the spc, and Syrtis Mj and Hellespontus looked dark; as well as the area of Depressiones Hellesponticæ. Noachis looked light. *Mo*'s images on 13 Apr ($\lambda=193^\circ\text{Ls}$) at $\omega=274^\circ\text{W}$ & 281°W show Syrtis Mj near the CM, and Hellas is weak. The IR image at $\omega=281^\circ\text{W}$ shows the darkened Hellesponticæ Depressiones. On 13 Apr ($\lambda=193^\circ\text{Ls}$), and 14 Apr we could also observe at Fukui: Visually at $\omega=264^\circ\text{W}$ Syrtis Mj was weak, while a bit more apparent at $\omega=274^\circ\text{W}$; rather M Cimmerium looking darker near the terminator. The npr whitish. The spc evident. However we cannot deny if the west of Syrtis Mj might be dusty.

From abroad PAZIC (*ZPj*) and RIVAS-ROMERO (*DRv*) contributed from Australia and Peru respectively: *ZPj*'s images on 23 Mar ($\lambda=181^\circ\text{Ls}$) at $\omega=098^\circ\text{W}$, and 3 Apr ($\lambda=187^\circ\text{Ls}$) at $\omega=355^\circ\text{W}$ look just to show markings in R (without B). In fact the image on 28 Mar ($\lambda=183^\circ\text{Ls}$) at $\omega=048^\circ\text{W}$ is taken by Wr25 showing Nilokeras. The images on 3 Apr ($\lambda=187^\circ\text{Ls}$) at $\omega=355^\circ\text{W}$, on 11 Apr ($\lambda=191^\circ\text{Ls}$) at $\omega=276^\circ\text{W}$, and on 14 Apr ($\lambda=193^\circ\text{Ls}$) at $\omega=249^\circ\text{W}$ all show markings in R but the spc is not white and the tinge of npr is unknown.

DRv's image on 16 Mar ($\lambda=176^\circ\text{Ls}$) at $\omega=052^\circ\text{W}$ shows Nilokeras but in R. The following on 18 Mar ($\lambda=178^\circ\text{Ls}$) at $\omega=028^\circ\text{W}$ shows how and why the R image is insufficient: The image proves nicely that the north of Niliacus L is vacant, but we cannot say whether it is because of the prevalence of condensate or dust. Cautioned by us, *DRv* improved his image on 25 Mar ($\lambda=182^\circ\text{Ls}$) at $\omega=324^\circ\text{W}$ where B well works, so that the spc is quite white. It is good that Hellas near the terminator is lightly shot. Furthermore this image must be the first piece which shows the present status of M Serpentis, and this can be regarded as a continuation of the series-images at $\omega=328^\circ\text{W}$ in 2003 (see the *Façade* of the CMO-Web; 2003 News Headlines *F* where images of *DPk*, *CPl*, *Mo*, and *Km* are compared from 26 June 2003 to 2 Dec 2003). *DRv*'s image on 7 Apr ($\lambda=189^\circ\text{Ls}$) at $\omega=196^\circ\text{W}$ has nice colour showing M Cimmerium, and the one on 9 Apr ($\lambda=190^\circ\text{Ls}$) at $\omega=173^\circ\text{W}$ looks also good.

— 月中の福井の天候は日替わりで高気圧は減多に來なかつたから、未だうまく全領域をカバー
 — 出來ない。19Mar($\lambda=178^\circ\text{Ls}$) $\omega=164^\circ\text{W}$ 、20Mar($\lambda=179^\circ\text{Ls}$) $\omega=154^\circ\text{W}$ では、最大級の南極冠と南半球の暗帯が見える程度であるが、夕端のタルシスはやや白く見える。Mo氏の20Mar($\lambda=179^\circ\text{Ls}$) $\omega=158^\circ\text{W}$ 、 163°W では南極冠がシッカリしないが、マレ・シレヌムの邊りが出ている。色合いはナチュラルである。23Marには南半球の春分となった。福井の31Mar($\lambda=185^\circ\text{Ls}$)は最初の高気圧と言え、Nj氏と $\omega=030^\circ\text{W}$ 邊りから $\omega=054^\circ\text{W}$ まで観測が出來た。シヌス・サバエウスが夕端に見え、マレ・エリュトウラエウム邊りが濃い。マレ・アキダリウムは然し弱く見える。クリュセは特別明るくはない。南極冠は明白だが、北極雲の方は不定形。そろそろ、2001年の大黃雲の季節になるのだが、覺束つかない。四月に入って、やや暖かくなって観測が樂になった(今年の足羽山の櫻は15日前後が満開で、昨年、一昨年より遅れている)。1Apr、5Aprは冴えなかつたし、Mo氏の7Apr($\lambda=189^\circ\text{Ls}$) $\omega=337^\circ\text{W}$ もシーイングが悪い由で、模様シッカリしないが、マレ・セルペンティスの邊りだけが濃く残っている様に思われる。福井は8Apr($\lambda=189^\circ\text{Ls}$)に高気圧に入って、これまで最高の氣流が來た。 $\omega=310^\circ\text{W}$ 、 320°W 、 330°W でヘッラスは南極冠より遙かに落ち、デプレッシオネス・ヘッレスポンティカが暗く、シュルティス・マイヨルとヘッレスポントゥスが濃いというか、マレ・セルペンティスの擴大と濃化が續いているのが確認された。褐色系の色合いである。ノアキスはやや明るい。Mo氏の13Apr($\lambda=193^\circ\text{Ls}$) $\omega=274^\circ\text{W}$ 、 281°W ではシュルティス・マイヨルが南中、ヘッラスの弱さが好く出ている。後者のIR像には朝方デプレッ

シオネス・ヘッレスポンティカエが黒く出ている。この日13Apr($\lambda=193^\circ\text{Ls}$)、翌日14Aprには福井でも観測しているが、眼視では $\omega=264^\circ\text{W}$ では朝方のシュルティス・マイヨルは甚だ弱く、 $\omega=274^\circ\text{W}$ で漸く判明という感じで、寧ろ夕方のマレ・キムメリウムの邊りが濃い。北邊は白い。14Aprも南極冠は明確であったが、シュルティス・マイヨル以西で少々のダストがあっても似たような様相になるであろうと思われた。

海外からは、オーストラリアのZPj氏と秘魯のDRv氏だけである。前者は殆ど日本と同じ角度、後者はフロリダなどと同じである。ZPj氏の23Mar($\lambda=181^\circ\text{Ls}$)は $\omega=098^\circ\text{W}$ 、3Apr($\lambda=187^\circ\text{Ls}$)は $\omega=355^\circ\text{W}$ で撮られていて、後者のシヌス・サバエウスなど明確だが、像はR系に着色したようなもので、感心しない。実際28Mar($\lambda=183^\circ\text{Ls}$) $\omega=048^\circ\text{W}$ はR光で撮られている。ニロケラスが明確。3Apr($\lambda=187^\circ\text{Ls}$)は $\omega=355^\circ\text{W}$ 、11Apr($\lambda=191^\circ\text{Ls}$)は $\omega=276^\circ\text{W}$ 、14Apr($\lambda=193^\circ\text{Ls}$)は $\omega=249^\circ\text{W}$ で撮られていて、そこそこに模様は出ているが、R系で、南極冠などの色も冴えず、北邊なども分からない。

DRv氏の16Mar($\lambda=176^\circ\text{Ls}$) $\omega=052^\circ\text{W}$ はアウロラエ・シヌス、ニロケラスなど出ているが矢張りR系。18Mar($\lambda=178^\circ\text{Ls}$) $\omega=028^\circ\text{W}$ も好く模様が出ていて、ニリアクス・ラクスが北邊と分離している様子は重要だが、全くR系に色を着けただけであるから、白雲かダストかの判断が出来ない。この點は本人に注意した。お陰で、25Mar($\lambda=182^\circ\text{Ls}$) $\omega=324^\circ\text{W}$ はB光も働いて南極冠も白く出て好い像になった。夕方のヘッラスが淡く出たのも好い。この像はマレ・セルペンティスの様子を伝える今期最初の像と言える。而も、CMO-Webのファサードに出た $\omega=328^\circ\text{W}$ のシリーズ(26June2003から2Dec2003のDPk, CPl, Mo, Km氏の連続像)の續きになる。7Apr($\lambda=189^\circ\text{Ls}$) $\omega=196^\circ\text{W}$ も色彩は好く、マレ・キムメリウムが出ており、9Apr($\lambda=190^\circ\text{Ls}$) $\omega=173^\circ\text{W}$ も好い像と思う。

♂.....In the next issue we shall review the observations to be made during the period from 16 April ($\lambda=194^\circ\text{Ls}$) to 15 May 2005 ($\lambda=212^\circ\text{Ls}, \delta=7.2^\circ$).

南 政 次 Masatsugu MINAMI

Forthcoming 2005 Mars (7)

Urgent: Start of Parva & Magna Depressiones (パルワ・デプレッションの出現)

Masatsugu MINAMI

南 政 次(Mn)

This is just a remark to invite the readers to an urgent observation of the spc in the coming month, as was already somewhat cautioned in #301 (25 January 2005) at page Ser2-0029.

As remarked there, the Lowell team in 1894 started on 22 May at 16:25 Mountain Standard Time (or 23 May at 11:25 GMT). In fact on the day W H PICKERING detected a dark spot inside the big spc; this being important because it was a starting of LOWELL's idea of the polar sea. Percival LOWELL stated in his first book on Mars (1895) as "On the first night that Professor W. H. Pickering observed it, on May 22, with the six-inch telescope, he suspected a rift crossing the cap from longitude 330°W to 170°W . This rift grew more and more evident, until, in the early part of June, it was unmistak-

able." (Mars, p85). Since PICKERING's observing note on 22 May just goes as follows: "I cannot be sure whether there is really a mark in the snow or whether the effect is due to shading as one approaches the terminator." (Ann. Lowell Obs. vol 1, 1898), it is not certain it was really a complete rift from the outset, but presumably A E DOUGLASS might have minutely checked it later: If we compare the polar map of LOWELL with the one made by E M ANTONIADI, the rift LOWELL assumed must have been partially a straightened Rima Australis. Near it there are two dark Depressiones called Magna Depressio and Parva Depressio (both named by ANTONIADI).

The date 23 May 1894 implies the Martian season $\lambda=210^\circ\text{Ls}$, and the very season will come this year on 12

May, and so it may be urgent and interesting to try to search it. In 1894 the apparent diameter was slightly over 8", but this year it is only 7.5", and so less convenient, but considering the telescope PICKERING used was a 15 cm refractor we should say it is well possible that the present day ccd image will well produce the dark spot inside the spc.

We here recall that the apparition in 1894 looks quite similar to the one in 1973. Shotaro MIYAMOTO at the Kwasan Observatory, Kyoto, really detected dark spots inside the spc on 14 May 1973 ($\lambda=206^\circ\text{Ls}$): He noted: "Dark markings inside the cap". The apparent diameter was 7.3" on the day and the observation was made at $\omega=213^\circ\text{W}$. The drawing printed in his article (*Contri. Kwasan and Hida Obs, Kyoto Univ No 217, 1974*) is not so clear, but two dark spots are seen inside the spc. If we compare with the Antoniadi polar map, they look to correspond to Magna Depressio and Parva Depressio. According to ANTONIADI, both appear quite at the same season, and his 1924 observations showed they were first observed at $\eta=292^\circ\sim 294^\circ$ (p214; here η being the heliocentric longitude) and so it was really at about $\lambda=207^\circ\text{Ls}\sim 209^\circ\text{Ls}$.

The observations in 2003 also revealed a dark spot and the associated rift as reported in CMO Mars Report #11 in CMO #276 where drawings and ccd images are compared with each other, each being caught from $\omega=123^\circ\text{W}\sim 129^\circ\text{W}$ during the period of season from $\lambda=207^\circ\text{Ls}$ to 223°Ls . The angle $\omega=123^\circ\text{W}\sim 129^\circ\text{W}$ implies the dark spot must be Parva Depressio or its low angle superposition with Magna Depressio. Here is shown an excellent image by VALIMBERTI (MVI) made on 24 June 2003 ($\lambda=209^\circ\text{Ls}$) at $\omega=127^\circ\text{W}$. Note however that the apparent diameter is very different this year.



So we recommend the readers in alert to watch the inside of the spc around from 6 May 2005 ($\lambda=206^\circ\text{Ls}$) in the range of $\omega=100^\circ\text{W}\sim 300^\circ\text{W}$. On 7 May, the angles may be watched from 0 hrs to 14 hrs GMT and on 14 May from 5 hrs to 18 hrs GMT. Thus the chance does not come to Japan unfortunately, but it is possible to face the angle from Europe and the US. Since on 17 May ($\lambda=212^\circ\text{Ls}$) at 5 hrs JST the angle $\omega=303^\circ\text{W}$ comes and so we may begin to catch it from Asia.

今回 は一般論ではなく、また既に#301 (25 Jan 2005号) Ser2-0029頁で述べたことであるが、目前に迫ったのでもう一度注意する。

★1894年のローエル・チームの最初の観測は 22May 16:25 Mountain Standard Time(実際には23May 11:25現行GMT)にピッカリングによって行われていて、このとき、南極冠内に暗点を認め、これは後にローエルの polar sea という考えに直結するのである。ローエルは最初の本『火星』(1895年)の85頁に次のように書いている: "On the first night that Professor W. H. Pickering observed it, on May 22, with the six-inch telescope, he suspected a rift crossing the cap from longitude 330°W to 170°W . This rift grew more and more evident, until, in the early part of June, it was unmistakable." 実際は22Mayのピッカリングのメモには "I cannot be sure whether there is really a mark in the snow or whether the effect is due to shading as one approaches the terminator." (*Ann. Lowell Obs. vol 1, 1898*) とあるだけで、完全な rift であったかどうかは不確かだが、後にダグラスの細かな観察があって、このようにローエルは整理したのであろう。アントニアディの南極圖と比較すると彼の言っている rift はリマ・アウストラリスを直線にした様なものである。この邊りには、マグナ・デプレッションとパルワ・デプレッションの二つの暗斑がある(どちらもアントニアディの命名)。

★23May1894の季節は $\lambda=210^\circ\text{Ls}$ であったと思われる、今年は12Mayにやってくるから、観測を奨めたい譯である。1894年には視直径は8秒を越えていたが、今回は7.5秒ほどであるから、少し不利であるが、ピッカリングは15cm屈折であったから、今回はccdでは大丈夫と思われる。★1894年の接近は1973年の接近によく似ているのだが、宮

本正太郎氏は14May1973($\lambda=206^\circ\text{Ls}$)に南極冠内に暗部を見ている("Dark markings inside the cap")。視直径は7.3"であった。 $\omega=213^\circ\text{W}$ で、印刷されたスケッチからは明確ではないのだが、二つほど暗斑が並んで見られ、アントニアディの圖と対照するとデプレッショ・マグナとデプレッショ・パルワが並んでいるのかも知れない。★アントニアディによれば、どちらとも同じ時期に顕れるようで、1924年の彼の観測では $\eta=292^\circ\sim 294^\circ$ となっているから(p214)、 $\lambda=207^\circ\text{Ls}\sim 209^\circ\text{Ls}$ ということになる。

★一方、2003年の観測でも内部の暗斑が観測されていて、これはCMO#276の報告#11で扱っている。 $\lambda=207^\circ\text{Ls}$ から 223°Ls まで、 $\omega=123^\circ\text{W}\sim 129^\circ\text{W}$ の方向から見たccd像や圖を比較してあるが、ここ

にある暗斑は方向からパルワ・デプレッショであろう。或いは、後半は両方が重なるかも知れない。モリス・ヴァリンベルティ(VMI)氏の24 June 2003($\lambda=209^\circ\text{Ls}$) $\omega=127^\circ\text{W}$ は参考になるであろう。但し視直径は相当異なるから注意する。

★以上、6May2005で $\lambda=206^\circ\text{Ls}$ であるから、この頃から $\omega=100^\circ\text{W}\sim 300^\circ\text{W}$ の範囲で監視をすると好いのだが、1 May at 20hrs GMT (5hrsJST)でやっと $\omega=101^\circ\text{W}$ である。7Mayとするとこの範囲は0hrs \sim 14hrsGMT、14Mayで5hrs \sim 18hrsGMTとなって日本からは宜しくない。今回はヨーロッパやアメリカ大陸が適しているようであるが、17May($\lambda=212^\circ\text{Ls}$) 5 hrs JSTで $\omega=303^\circ\text{W}$ になるから、このころから本腰を入れよう。

Forthcoming 2005 Mars (8)

Ephemeris for the Observation of the 2005 Mars. IV

May and June 2005

Masami MURAKAMI

村上 昌己(Mk)

◆As a sequel to Part III in #302 where the *Ephemeris for the Physical Observation of Mars* usable in March and April 2005 was given, here is given the *Ephemeris* in May and June. 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 2005*.

Date (00:00GMT)	ω	ϕ	λ	δ	ι	Declination
01 May 2005	159.61°W	23.1°S	202.78°Ls	6.7"	42.0°	-13°01'
02 May 2005	149.74°W	23.2°S	203.38°Ls	6.8	42.1	-12 46
03 May 2005	139.87°W	23.3°S	203.98°Ls	6.8	42.2	-12 32
04 May 2005	130.00°W	23.4°S	204.59°Ls	6.9	42.4	-12 17
05 May 2005	120.12°W	23.6°S	205.19°Ls	6.9	42.5	-12 02
06 May 2005	110.25°W	23.7°S	205.79°Ls	6.9	42.6	-11 48
07 May 2005	100.37°W	23.8°S	206.40°Ls	6.9	42.7	-11 33
08 May 2005	90.49°W	23.8°S	207.00°Ls	7.0	42.9	-11 18
09 May 2005	80.62°W	23.9°S	207.61°Ls	7.0	43.0	-11 03
10 May 2005	70.74°W	24.0°S	208.21°Ls	7.0	43.1	-10 48
11 May 2005	60.86°W	24.1°S	208.82°Ls	7.1	43.2	-10 33
12 May 2005	50.98°W	24.2°S	209.43°Ls	7.1	43.3	-10 17
13 May 2005	41.10°W	24.3°S	210.03°Ls	7.2	43.4	-10 02
14 May 2005	31.22°W	24.3°S	210.64°Ls	7.2	43.5	- 9 47
15 May 2005	21.34°W	24.4°S	211.25°Ls	7.2	43.6	- 9 31
16 May 2005	11.46°W	24.5°S	211.86°Ls	7.3	43.8	- 9 16

Date (00:00GMT)			ω	φ	λ	δ	ι	Declination
17	May	2005	1.58°W	24.5°S	212.47°Ls	7.3"	43.9°	- 9°00'
18	May	2005	351.70°W	24.6°S	213.08°Ls	7.4	44.0	- 8 45
19	May	2005	341.82°W	24.6°S	213.69°Ls	7.4	44.1	- 8 29
20	May	2005	331.93°W	24.7°S	214.31°Ls	7.4	44.2	- 8 13
21	May	2005	322.05°W	24.7°S	214.92°Ls	7.5	44.3	- 7 58
22	May	2005	312.17°W	24.7°S	215.53°Ls	7.5	44.4	- 7 42
23	May	2005	302.29°W	24.8°S	216.15°Ls	7.5	44.5	- 7 26
24	May	2005	292.41°W	24.8°S	216.77°Ls	7.6	44.6	- 7 10
25	May	2005	282.53°W	24.8°S	217.38°Ls	7.6	44.7	- 6 55
26	May	2005	272.65°W	24.8°S	218.00°Ls	7.7	44.8	- 6 39
27	May	2005	262.77°W	24.8°S	218.62°Ls	7.7	44.9	- 6 22
28	May	2005	252.89°W	24.8°S	219.24°Ls	7.7	45.0	- 6 07
29	May	2005	243.01°W	24.9°S	219.85°Ls	7.8	45.1	- 5 51
30	May	2005	233.14°W	24.9°S	220.47°Ls	7.8	45.2	- 5 35
31	May	2005	223.26°W	24.9°S	221.09°Ls	7.9	45.3	- 5 19
01	June	2005	213.39°W	24.8°S	221.72°Ls	7.9	45.4	- 5 03
02	June	2005	203.51°W	24.8°S	222.34°Ls	7.9	45.4	- 4 47
03	June	2005	193.64°W	24.8°S	222.96°Ls	8.0	45.5	- 4 31
04	June	2005	183.77°W	24.8°S	223.58°Ls	8.0	45.6	- 4 15
05	June	2005	173.90°W	24.8°S	224.21°Ls	8.1	45.7	- 3 59
06	June	2005	164.03°W	24.7°S	224.83°Ls	8.1	45.7	- 3 43
07	June	2005	154.16°W	24.7°S	225.45°Ls	8.2	45.8	- 3 27
08	June	2005	144.30°W	24.7°S	226.08°Ls	8.2	45.9	- 3 11
09	June	2005	134.43°W	24.6°S	226.70°Ls	8.3	46.0	- 2 55
10	June	2005	124.57°W	24.6°S	227.33°Ls	8.3	46.0	- 2 40
11	June	2005	114.71°W	24.5°S	227.95°Ls	8.3	46.1	- 2 24
12	June	2005	104.86°W	24.5°S	228.58°Ls	8.4	46.2	- 2 08
13	June	2005	95.00°W	24.4°S	229.21°Ls	8.4	46.3	- 1 52
14	June	2005	85.15°W	24.4°S	229.83°Ls	8.5	46.3	- 1 36
15	June	2005	75.30°W	24.3°S	230.46°Ls	8.5	46.4	- 1 20
16	June	2005	65.45°W	24.2°S	231.09°Ls	8.6	46.5	- 1 05
17	June	2005	55.60°W	24.1°S	231.72°Ls	8.6	46.5	- 0 49
18	June	2005	45.76°W	24.1°S	232.34°Ls	8.7	46.6	- 0 33
19	June	2005	35.92°W	24.0°S	232.97°Ls	8.7	46.6	- 0 18
20	June	2005	26.08°W	23.9°S	233.60°Ls	8.8	46.7	- 0 02
21	June	2005	16.24°W	23.8°S	234.23°Ls	8.8	46.8	+ 0 13
22	June	2005	6.41°W	23.7°S	234.86°Ls	8.9	46.8	+ 0 29
23	June	2005	356.58°W	23.6°S	235.49°Ls	8.9	46.9	+ 0 44
24	June	2005	346.75°W	23.5°S	236.12°Ls	9.0	46.9	+ 1 00
25	June	2005	336.93°W	23.4°S	236.76°Ls	9.0	47.0	+ 1 15

Date (00:00GMT)	ω	ϕ	λ	δ	ι	Declination
26 June 2005	327.10°W	23.3°S	237.39°Ls	9.1"	47.0°	+ 1° 30'
27 June 2005	317.29°W	23.2°S	238.02°Ls	9.1	47.0	+ 1 45
28 June 2005	307.47°W	23.1°S	238.65°Ls	9.2	47.1	+ 2 00
29 June 2005	297.66°W	23.0°S	239.29°Ls	9.2	47.1	+ 2 15
30 June 2005	287.85°W	22.9°S	239.92°Ls	9.3	47.2	+ 2 30 == =

便り Letters to the Editor

●.....Date: Fri, 25 Mar 2005 14:06:34 +0900
Subject: Re: 地震お見舞い

お気遣いありがとうございます。年度末の忙しさにかまけてご返事が遅くなってしまったことをお詫びいたします。

自宅は築七十年のボロ屋にも係わらず、とりあえず何の被害もありませんでした。震度4の地震は宮崎の独身寮にいた時に経験しています。平成四年頃ではなかったでしょうか？反射的に望遠鏡の鏡筒を支えたことを記憶しています。

毎年九月1日の「防災の日」に、地震防災訓練と称して職員の徒歩、または自転車による出勤と、管内の国道の安全点検を実施しているのですが、休日の昼間に地震が発生することを想定しておらず、現実はかなり職員の自宅にはいませんでした。携帯電話も、幹部職員の災害時優先通話契約分も含めてパンク状態につながりにくく、勢い「連絡のついた職員は全員出勤！」となってしまうました。管内の国道全線を巡回して安全を確認するのに約五時間かかり、「三連休の中日に緊急出勤では休んだ気がしない」との声が上がりました。

直下型でなかったのが不幸中の幸いで、火災の発生も長崎県で一件だけ。「本当に自宅が損壊したとき、家族を置いて出勤できるのか？」という話も、以前から出ています。自然の力の前には、人間は何と無力なのでしょう。

それでは今回はお見舞いのお礼まで。

岩崎 徹 (Tohru IWASAKI 北九州 KitaKyushu)
iwasaki-t8910@qsr.mlit.go.jp

●.....Date: Fri, 25 Mar 2005 05:39:56 -0500
Subject: Mars March 23 2005. zp200503231849

Hello, Here is an image of Mars for your records.

Thank you

○.....Date: Thu, 31 Mar 2005 04:58:42 -0500
Subject: Mars March 28, 2005 zp20050328_1845

Hello, Here is an image of Mars using the ToUcam in black/white mode and a Wratten 25 filter. All the best

○.....Date: Thu, 07 Apr 2005 09:36:17 -0400
Subject: Mars image April 3, 2005. zp20050403_1912

Hello everyone, Here is an image of Mars on April 3. I was careful to obtain an AVI which would not give a final image with any saturated areas. This means the brightening at the following limb (probably over Ganges) is real and may be frost/fog/cloud. The image is in unfiltered light.

○.....Date: Mon, 18 Apr 2005 02:43:21 -0400
Subject: Mars April 16 zp20050416_1818

Hello, Here are April 16 images of Mars. The high albedo feature in the north near the CM of the 18.18 UT image is most probably Elysium or cloud over Elysium. I tried observing with a Wratten 25A filter to determine if it was bright in red light but at 6.3 arcseconds, the image of Mars, visually, was difficult to observe.

Zac PUJIC (ザック・プジッチ Brisbane 豪)
rhineland@hotmail.com
www.bigpond.net.au/metaplace/home.html

●.....Date: Sat, 26 Mar 2005 00:00:21 +0900
Subject: Re: 問い合わせ

セブは27日(日)に行きます。帰国は五月末の予定ですが、メールアドレスは今までと同じです。セブから全く問題なく出来ます。C11の鏡筒は本日、航空便で送りました。どんな像が見られるか？楽しみにしています。ただ本家の仕事に高いハードルがあり、其れをクリアしないと観測までたどり着けません。少しの時間がかかります。

さて問題のToucamの火星像を見ましたが、確かにR光に着色をしたような感じでB光はありませんね。どうやったらできるのか？私にもわかりません。私の知るところではToucamのB光は木星

では感度も高く記録されています。火星ではIRブロックしていればあんなにケバイ火星にはならない筈です。画像処理で無理やりコントラストを上げてあんな色になってしまったのかも知れません。今回もB光はATKカメラで撮る予定です。次回はセブからメールを出します。ではまた。

阿久津 富夫 (Tomio AKUTSU 栃木 Tochigi)
akutsu@agate.plala.or.jp

●.....Date: Sat, 26 Mar 2005 14:03:21 +0100
Subject: Saturn 19th March 2005

Hi all, here are two LRGB images from last week.

Regards

○.....Date: Sat, 26 Mar 2005 21:21:59 +0100
Subject: Saturn 20th March 2005

Finally the 20th march set of images. This was a little experience as I have used a RVB photometric set of filters (from Schuler), to see if color were different from my usual Astronomik filters, but it doesn't seem so !

○.....Date: Sun, 27 Mar 2005 13:29:31 +0200
Subject: Jupiter on march 20th

Hi all, an image taken with poor seeing. This has been made with a Toucam Pro II, as my old Tuc I doesn't work anymore. The Tuc II looks noticeably noisier than the first version ! This is not a problem however as my plan is to use the webcam in color raw mode only. This image has been made this way.

Regards,

○.....Date: Thu, 7 Apr 2005 21:37:28 +0200
Subject: Jupiter april 5th

Hi all, some recent images, taken through a moderate "fast seeing" condition. I think that the last shots (especially IR) show the South equatorial disturbance in the f. part of SEBn. Regards

○.....Date: Tue, 12 Apr 2005 20:23:04 +0200
Subject: Jupiter april 10th

Hi all, here are some images attached ; seeing was very poor and I have reduced the focal at F/31. Then it worked not so bad. The IR images are realised through the IR leak of the W47 filter (along with the usual IR700 filter to block the blue light). Regards

Christophe PELLIER (ケルストフ・ペリエ nr Paris 法)
chrspillier@tiscali.fr

●.....Date: Sat, 26 Mar 2005 10:12:16 -0600

Subject: Re:RE:Re:RE:Re:RE:Re:RE:Re: As to Tharsis

Dear Masatsugu, I am hoping to hear of your better health and the end of the irregular pulse that must be weighing on your mind.

I agree with you entirely that the observations of Lowell and Barnard of fading in the dark areas in October/November 1894 suggest obscuration by a global dust storm, and this must also explain the unprecedented claim that was made at that time that the SPC disappeared entirely, as was then supposed because it was a warmer than usual summer in the southern hemisphere of Mars. (I have always felt somewhat skeptical about the latter claim.) Lowell did not suspect the possibility of Martian dust storms in 1894 -- he insisted on the remarkable clarity of the Martian atmosphere -- and continued, even as late as when writing *Mars and Its Canals* in 1906, to regard them as rare and quite localized affairs (like that which produced the projection at the terminator first seen by V. M. Slipher on the evening of May 25, 1903), more like dust devils. In 1894, he regarded the fading of the markings of the disk as due to the browning of vegetation in accordance with his vegetation-theory not the obscuration of dust. His failure to recognize the dustiness of the atmosphere also misled him when he attempted to apply his albedo analysis to estimating the thickness of the Martian air.

I think that your comments -- which are the first definitive scientific result of value of our Mt. Hamilton expedition this year, since they were prompted by our reanalysis of the observations in order to choose the best dates for our own study -- do lend strong support to the idea that there was a global dust storm in 1894, at least as great as that observed by Schiaparelli and others in 1877. It does appear to have had features similar to those of the 1973 dust storm. To have established that is important in itself, and further runs contrary to the notion that somehow the Martian atmosphere was notably clearer in the late 19th and early 20th century (on which some have built their case for secular Martian global warming). Your reanalysis of the 1894 data shows that in part the lack of recognition of Mars observers of the importance of dust in the changes in visibility of the albedo features explains the lack of reported observations of cloud phe-

nomena; in this case, evidence of absence is simply not absence of evidence, and that is even more the case for still earlier observations in the 18th and earlier 19th centuries.

.... I would also like for you to visit the point where Barnard set up the Bruce telescope in 1905 for his Milky Way photography, so we may not spend all that three weeks at Mt. Hamilton unless Mars is extraordinarily compelling and we enjoy good seeing. We can tackle the more remote image of Mars at an aphelic opposition which is when observations of frost-rimmed craters and the like in the Southern Hemisphere are most likely to be seen not at an opposition like this one that occurs with Mars during the Southern Hemisphere summer. I will write to Tony Misch so he can apply for and we can schedule time on the telescope.

This weekend I hope to write a draft of the Lowell in Japan and the Saheki articles for *S&T*, if my ambitions have the wings my wishes set for them. Ever,

○.....**Date: Sat, 26 Mar 2005 11:10:18 -0600**
Subject: the great planet-encircling dust storm of 1894

Dear Masatsugu, I note that according to Lowell's *Mars* (p. 79), the SPC disappeared entirely on October 13, "the spot where it and its girdle, long since grown too small for detection, had been become one yellow stretch." This was a few days after observers noted Syrtis Major was unusually faint and before the obscuration became extensive across Mare Cimmerium and Mare Sirenum.

○.....**Date: Mon, 28 Mar 2005 21:29:41 -0600**
Subject: Re: RE:Re: RE:Re: RE:Re: RE:Re: RE:Re:

Dear Masatsugu, I was prompted to go back over Barnard's observations and notes from 1894. I think he decisively established that 1) the canals as drawn by so many observers did not exist; 2) there were suggestions of marked relief on the planet not the flat globe Lowell presumed; and 3) clouds -- what we now consider dust storms -- obliterated large parts of the disk and caused changes in the features' contrast. Unfortunately, Lowell, whose drawings are mice next to Barnard's, came on the scene and produced a view of Mars that was in many ways a misinterpretation.

I am citing some notes below that Barnard recorded on scraps of paper -- I first discovered them at Yerkes;

they were never published.

The drawings of Barnard do show considerable fading out of the whole hemisphere including Mare Sirenum, Tyrrhenum, Syrtis Major -- note especially his drawings of October 22 and 29. ...I am inclined to think that the terms "planet-encircling" and "global" multiply distinctions; we should rather refer to dust storms as minor or Great -- and the 1894 dust storm was certainly Great.

I appreciate your comments about the similarity to the dust storm of 1973, though as you say, it did not become as extensive and seemed to die out more abruptly.

I have submitted for us the dates of October 3 to 24 and will await word from Tony Misch about our reservation of the telescope. We shall have headquarters on Mt. Hamilton for three weeks.

Here are Barnard's notes: (*Unpublished notes on Mars by E. E. Barnard, Yerkes Observatory archives; written ca 1911*).....

○.....**Date: Thu, 31 Mar 2005 19:48:39 -0600**
Subject: Re: BARNARD

Dear Masatsugu, Thanks for yours just over -- I have been working on the Lowell in Japan article -- hoping to make more progress this weekend; for which I have been in contact with Antoinette Beiser, the archivist/librarian at Lowell. I am hoping to get some of the photographs that Lowell took in Japan for side by side comparison with those we obtained last year (can it be just a year ago we were on our glorious trip together?)

I am also troubling her to take copies of Lowell's observing pages for the dates on which simultaneous observations were taken at Lick by Barnard and at Lowell by the observers there. It is my hope that we may publish these on our web site in connection with our own observations in October of the present year.

Since we have begun to correspond, I have been more closely studying Barnard's drawings, which you also have copies of (hopefully). I note that on October 7, Barnard drew what appeared to be a bright cusping on the limb, east of Solis Lacus; which corresponds in position to the suspected cloud seen by Lowell on the 13th. Barnard also draws a bright band in Solis Lacus which had not been shown on previous drawings. Certainly his drawing of October 7 suggests that perhaps dust activity began in the longitude of Icaria -- thereabouts. The Tharsis region is

also, I note, devoid of detail in its eastern part which makes me suspect that it was under an obscuration. . .

In Barnard's note on October 21 he notes that "everything seems to be obscured in a dull grey mist except the region sketched. No other details. This would include much of Mare Erythraeum as well as the polar cap.

The drawing of October 22 also shows significant obscuration and a fading not only of the region west of Syrtis Minor but also the Syrtis Major itself. The whole southern hemisphere, including the region beyond Hellas, appears faded, and there is a peculiar linear marking that he sketches which he identifies as new and is undoubtedly-

TEN YEARS AGO (116)

----CMO #159 (10 April 1995) & #160 (25 April 1995)----

1995年四月も二號出ているが、10Apr発行のCMO#159はExtra-Editionで「報告」は無く、修理後のHSTの25 Feb 1995 ($\lambda=064^\circ\text{Ls}$)の三像についての記録がある。当時、村上(Mk)氏からFDを送って貰ったり、岡野氏(Ok)氏からプリントを頂戴したりしているほか、新聞でどの様に扱われたか述べられている。このときの像は、タルシスやオリュムプス・モンスの雲などの描寫が優れていて、もう一度検討すべき感じである。記事(後で訂正したが、カスマ・ボレアレの誤記があるので注意)から、疑似リマ・テヌイスは火星の温暖化議論に使われた(われわれは懐疑的)とか、白霧が多いのは寒冷化だとか(これもホントか)などの議論があったことが分かる。四月1日のMk氏のLtEに、梅の花も散ったが「桜の開花も目前に春は足踏み」とある。

CMO#260 (25 Apr 1995)の報告は16 Mar ($\lambda=072^\circ\text{Ls}$)から15 Apr ($\lambda=085^\circ\text{Ls}$)の一ヶ月間を扱って、十一頁に及ぶ。然し、 δ は11.9"から9.3"と落ち、終焉感がある。気候は種やかだったのか、筆者は福井と大津で98枚、Nj氏が54枚、Iw氏が28枚、Mk氏が24枚等が多い方で、Ok氏が11Febと20Marのccd像を寄せていられる。珍しく理査・麥肯(RMk)氏の1995年に入ってから18枚のスケッチが届いている。RMk氏はリマ・テヌイスにも注意しているが、見えないとある。ただ、北極冠の周りの光斑を好く追っている。タルシスやアルバ、オリュムプス・モンスの明度測定も行っている。また、松本直弥(Mt)氏の年末からのカラー像、42葉の報告があった。当時Mt氏が踏襲したFujichrome RD100の観測である。Mo氏も遅れて追加報告の部類であるが、23Febから14Marまで174像を作っていて(一部#158と重複)、27Feb($\lambda=064^\circ\text{Ls}$)のエリュシウムなども含まれる。十一頁わたる報告をここで要約するのは不可能だが、当時 $\phi=17^\circ\text{N}\sim 19^\circ\text{N}$ であったから、北極冠に接するヒュペルボレウス・ラクスの検出などが話題になっている。その他、Mk氏やIw氏を中心にクリュセやアエリアの観察、ヘッラス(相当明るい)、もっと北ではウトピア邊りから、オリュムピアの探査まで、各自丁寧に追っている。エリュシウム、ケブレニアも話題だが、最後は再びテムペからマレ・アキダリウムの邊りまで目が届いている。19Mar、20Mar、21Marは第三屆のウォッチング・ナイトであって(未だMo氏の報告が届かないとしているが)おおむね成功で、それぞれ国内から20、33、32葉の観測が届いている。観測範囲は福井の観測を例にとると、 $\omega=296^\circ\text{W}$ から $\omega=065^\circ\text{W}$ と可成りの範囲である。その他、海外からホイットビィ(SWb)氏、ヴァレル(JWr)氏、シーゲル(ESg)さんの観測などもある。この頃はベルリンのWFSの報告があった。当時はケーヴさん(TCv)も健在で、ウィルソン山に出掛けたりしている。他にメリッロ(FMI)が今も同じの20cmSCTでTPとスケッチを行っている。LtEでは頼武揚さんからの「折々のうた」に関するお便り、木村精二さんのバース便り、永井靖二さんの神戸にも春が来たというお便り、メリッロ(FMI)が唐那・派克さんに初めて会ったという話、伊舎堂(Id)氏の31cmのトラブルの話などがある。岩崎(Iw)氏は諸富に転勤である。HST像は西日本新聞で見た由。JWr氏はCMOを精讀してコメントを寄せている。

南 政 次 (Mn)



ly related to the dust activity.

October 29 shows a great deal of fading of the features and Barnard notes that again the image is "*whitish hazy looking*." This is true also of his drawing of October 29. I believe that Barnard's drawings for the rest of the apparition show that the markings never quite recovered their former intensity; the fade-out from the dust was widespread, ···(except possibly the Sinus Sabaeus region), layered both hemispheres with dust, and covered the south polar cap creating the impression that it had melted completely away. The latter is a fact noted even in E. C. Slipher's *Mars: the Photographic Story*.

So I believe we have in this storm an unprecedented event --on a scale comparable to those of 1909 and 1924; greater than what we have seen in 1877. Interestingly, though Barnard's drawings document its origin and progress beautifully, it was almost entirely missed by the Flagstaff observers who were so busy playing "bouts-rimes" with dark spots and forming the interconnecting and largely illusory canals. It is hard to believe they were drawing the same planet!

····This will be a dream come true -- our ability to view Mars with the great telescopes during this favorable interval. Ever,

○·····*Date: Sat, 2 Apr 2005 13:41:51 -0600*
Subject: Re: BARNARD

Dear Masatsugu, I am attaching a draft of what I have been writing on Lowell in Japan -- it contains many notes transcribed from my notebook. It is not yet complete, and I have not yet structured it in form appropriate for publication (in *S&T*, we have been allotted 2000 words for the article, which includes that on the Japanese Mars observers; so we must be ruthless in paring back).

It has been gratifying to revisit all the places in mind among which we passed memorably last spring.

I continue to be interested in the Barnard drawings of Mars in 1894. It appears that a large storm was already underway when Barnard observed the planet on October 7, ... The storm appears to have developed sometime between the end of September and that date.

···· As you have said, because the Earth's atmosphere is so dense, it responds in a slow -- i.e., gradual -- manner to changes, such as the drop in temperature at

sunset. On Mars, the atmosphere is so razor-thin that day and night conditions are markedly different; temperature changes are abrupt. The dust storm activity seems to occur preferentially in areas destabilized by these day-night variants, but often to involve multiple loci (as beautifully demonstrated by Morita and Akutsu in the data they presented last year at Anamidzu for the 2001 storm).

The description of storms as local, regional, planet-encircling, global is confusing and I agree with you does not seem useful in understanding the meteorological conditions that lead to the development of dust storm activity on Mars. I would suggest that perhaps local and great might be more appropriate --

I am hoping to make arrangements for us to travel to Mt. Wilson for a night or two of observing with the 60-inch. ···· All the best, ever,

○·····*Date: Sat, 2 Apr 2005 13:49:00 -0600*
Subject: Re: BARNARD

Dear Masatsugu, I have been amused by the findings of the Commission to investigate the flawed intelligence information that was presented by various intelligence agencies prior to the Iraq War (which anyone at the time could see had been strongly biased to favor and provide a figleaf of support for the administration's already decided plan to initiate an invasion). In August 2003, I wrote an article on "*Planetary Intelligence*" for a talk I was asked to give at Harvard in association with the Grand Opposition and though it is not reworked I think you will find it intriguing, so I attach it as a document.

No evidence is ever possible to contradict a delusion.

○·····*Date: Sat, 2 Apr 2005 20:14:20 -0600*
Subject: Re: RE:Re: BARNARD

Dear Masatsugu, Your comments about dust storm activity in 1894 are most interesting to me -- I shall include this in the Mars book on which I am currently at work.

····It would be grand to see Mars with the sixty-inch closer to opposition. Ever,

P.S. Regarding why Barnard didn't make more drawings in October 1894, he only had access to the 36-inch refractor on two nights a week. Other nights it was assigned to other observers (Holden, Burnham, Schaeberle, Keeler).

○·····*Date: Sun, 3 Apr 2005 10:18:55 -0500*
Subject: Re: RE:Re: BARNARD

Dear Masatsugu, I agree with the comments about Allied governments not being able to rely on U.S. statements -- not only they, but the American people should not rely on them. . . . I am surprised the Japanese government is so obliging to the U.S. even after Japanese prison camps, Hiroshima and Nagasaki.

We must give careful consideration to whether we want to attend Mt. Wilson. It seems it may be quite a lot of hassle for us, and we may be better off simply continuing our series of observations with the 36-inch, but I want to know how much it would matter to you to use the 60-inch. I will certainly take you to Santa Cruz where the Mary Lea Shane archives are located; there are many things about Mars. However, the observing books, which contain Barnard's drawings, are in the plate vault on Mt. Hamilton. All the best,

○ **Date: Sun, 3 Apr 2005 12:29:39 -0500**
Subject: Re: RE:Re: BARNARD

Dear Masatsugu, I completed typing the notes from my journal pertinent to Lowell -- summarizing in most places what I actually had to say. It has been a pleasant time revisiting those scenes in memory.

Now here is what I have realized as of today: the importance of Noto and its connection to Lowell's Mars.

I realize that Lowell's Noto expedition of May 1889 can be considered a paradigm -- a dry-run, as we say -- for the Flagstaff expedition which began five years later.

When he went to Noto, he selected romantically an object of his fancy; acquired a guidebook (accurate for the most part, though fatally flawed in suggesting the traversability of Harinoki-toge in winter) and a well-connected personal assistant or man-Friday as we should say, *Yeijiro*, as well as such porters and other supernumeraries and equipment as were necessary to his purpose.

He gave few indications that *Yeijiro* was more than a simple person -- a servant to his objectives.

When he went to *Noto*, he seemed always rushed, and hurriedly collected impressions, and published them in serial form in *The Atlantic Monthly* and later in form of the book whose first-edition I was glad to present to you.

In the case of Mars, Flammarion, whose first volume he acquired in December 1893, served as his guidebook

(it is remarkably good and thorough, but misled him in the matter of the canals), then found his man-Friday -- his *Yeijiro* -- in Pickering. (Pickering, who was a Beacon-Hill resident as he was and a strong personality, decided quickly he did not want the role of *Yeijiro*! The role then passed to Douglass, who also, eventually, shirked it off). He made a hurried passage at Mars -- he was only at the telescope intermittently some months, and missed important phenomena such as the "Great Dust Storm of 1894" ; it was a planet-encircling storm by virtue of the fact, as you point out, that the SPC disappeared, and comparable to the "Great Dust Storm of 1909" -- then he rushed his essays into print and then his book, **Mars**, which is the analog exactly of **Noto**.

Both books are written from a personal point of view -- what I call "the egotistical sublime" -- which makes them quite vivid and exciting. I'm sure Lowell expected to be hailed with as much deference and gratitude by the astronomical community as he had been by the community of amateur cultural anthropologists of the Far East. But this did not happen; the scientific community had different ideas of what were the appropriate methods of doing science, and Lowell's "Noto paradigm" did not fit their view. He was criticized as you know about the odd-ball (odd eyeball perhaps more appropriately being the way to say it) on Venus in 1896/7 the shock of which led to his nervous breakdown. When he reconstituted, he attempted a more scientific approach (spectroscopy and photography) to these problems of Venus's rotation and the existence of the canals of Mars, as well as initiating his "Planet X" search which employed quantitative mathematical methods that Le Verrier and Adams had pioneered in the calculations leading to the discovery of Neptune.

So we see Noto's importance as a prelude to Mars. This will be the purpose of my *Sky & Telescope* article to make clear.

○ **Date: Mon, 4 Apr 2005 20:37:33 -0500**
Subject: Re: RE:Re: RE:Re: BARNARD

Dear Masatsugu, All the wonderful remarks to hand -- I agree with the plan for reorganizing the article. I must admit that when I was Japan-trotting with you and Asada, it was difficult for me to comprehend the relations of the

various points on the map to those I was visiting and the others to Lowell -- but on revisiting all those places in my notes it all becomes clearer and now your outline makes it plain what direction I should follow in the article.

I think we can mention in our sidebar the connection between the name Saheki (that of the *Genial Inkyo*) and that of the great Mars observer, though I will explain the relation is that of marriage (and I feel fortunate to have met that grand lady Mrs. Saheki).

I have taken too much of your time -- selfishly -- when you have been in such discomfort; I am very sorry. I shall not detain you more now but will follow in a few days with what I hope may be a more finished article.

With my very best wishes,

○ **Date: Fri, 8 Apr 2005 15:39:30 +0000**
Subject: Re: Sakura

Dear Masatsugu, I have temporarily been suffering e-mail malfunctions at home so I am responding to your as always welcome message at work.

. I think we may try to reserve the 60-inch for October 7, which is during the new Moon time. We will have to diaphragm the mirror to 24 inches or so. It would be of interest to do some colorimetry estimates with a large speculum instead of a lens.

But I do not have my heart set on the expedition, and if it is not possible we shall manage quite well with our 36-inch glass!

I am only hoping to expand for you the experience of the United States beyond Mt. Hamilton and the Santa Clara Valley, as you so kindly did mine of Japan by taking me all over that beautiful country -- though I realize the difference is that Mars was not looming in the sky when I was in Japan.

I have redrafted the Lowell article now along the lines you so kindly suggested, and will have the final version ready I hope by the end of the weekend. Space limitations are a severe problem but I will publish an expanded version in the Mars book on which I am working presently. I shall surely mention the quote of Lowell on the cherry blossoms, which is as you say remarkable.

I have been receiving information on an almost daily basis from Antoinette Beiser, the archivist and librarian

at Lowell Observatory -- she has produced scans on a CD of all the Lowell Observatory drawings of Mars from 1894 corresponding to those by Barnard. I am hoping we can post them on a web site devoted to our intra-observatory collaborations this year. She is seeking help with identifying some of the plates taken by Lowell in Japan and assured her that you would be able to help with many of them, so this is yet another project for you!

Looking forward to your promise in the latest CMO to review the 1894 dust storm and will eagerly await your arguments that it was global, an assessment with which I agree fully. The importance of this dust storm has never been recognized completely, I believe because it was ignored at Lowell. The mystery you have identified about the increased visibility of canals after the dust appeared is very intriguing -- no one has noted that before. Perhaps you can suggest this as a problem for readers.

I am pleased to hear of the grandson of Saheki's beginning a fellowship at Rockefeller University -- he will no doubt pursue his interest in neuroscience. Please afford him and the family my congratulations! We must, as soon as I have the Lowell trip essay finished, tackle the sidebar on Japanese observers and give homage to the great Saheki. I shall always cherish the opportunity I had to see the Great Man's family and the warmth they showed to me on that occasion.

Finally, I would be very honored if you wished to include the talk on planetary intelligence on the web site -- it is the draft as I prepared it, and I could lightly edit it if you wish before it goes on the web site, or perhaps this would not so much matter to Japanese readers.

I will send the finished Lowell essay probably this weekend and hope by then to be once more on my regular e-mail service. With best wishes, yours,

○ **Date: Sun, 10 Apr 2005 19:26:17 -0500**
Subject: Re: RE:Re: RE:Re: BARNARD

Dear Masatsugu, For *Sky & Telescope* (given their space limitations), I had to drastically downsize the article to about 2,000 words. We must add a sidebar on Saheki and other Japanese Mars observers too.

Here's the latest draft. Let me know what you think.

With best wishes,

○ **Date: Tue, 12 Apr 2005 16:00:19 -0500**
Subject: Re: Concerning your Draft

Dear Masatsugu, All of those suggestions are excellent -- I assure you I shall adopt them. Antoinette Beiser of Lowell Observatory liked the draft very much, and she wishes our help in identifying some of the scenes of photographs for them.

I am hoping to get this finished in the next day or two, then will write more extensively. Your powers of expression in English are superb and I can only imagine your eloquence in Japanese!

Still no definites about Mt. Wilson or not but I have been in touch with a number of people about it. Either way -- go or stay at Mt. Hamilton -- Mars will be with us. All the best, ever,

○ **Date: Tue, 12 Apr 2005 16:24:53 -0500**
Subject: Re: Concerning your Draft

Dear Masatsugu, I appreciated all the annotations, and most of them have been incorporated now in the text.

I will send this version to Edwin Aguirre, who is the editor at *Sky and Tel*. I am glad to have included some very complimentary things on Noto which to me was much more pleasant than Tateyama!

Now we will do a sidebar -- it will be mostly about Saheki. A fuller explanation of the connection of Saheki with the Genial Inkyo will await a more liberal space (the Mars book currently being written).

With great admiration for your scholarship and appreciation for tweaking the article, which will so markedly improve it, With best wishes, yours,

○ **Date: Wed, 13 Apr 2005 17:35:39 -0500**
Subject: Re: RE:Re: Concerning your Draft

Dear Masatsugu, The latest suggestions to hand -- the article will be much better for them.

I had some communications today with Mike Simmons, who is one of the co-founders of the Mt Wilson Observatory Association. I am reserving the sixty-inch on October 7 (a Friday night), and even if seeing is indifferent for Mars, we can see some of the deep sky objects. We can visit some of the places in and around Los Angeles such as JPL -- *Cal Tech* -- as well as the mountaintop observatory. I think that Tony Misch would like to visit his long-time friend Larry Webster -- Tony used to be a night-assistant at Mt. Wilson. We can also compare the quality of the Martian globe in a large reflector with that in the large refractor.

More anon, but again, thanks for all your superb suggestions on the article -- I am embarrassed at the many changes you have had to mention.

Also thanks for the comments about the Saheki connections. With best wishes,

○ **Date: Thu, 14 Apr 2005 18:16:13 -0500**
Subject: Re: RE:Re: RE:Re: Concerning your Draft

Dear Masatsugu, Thanks for the further clarifications. I have received in the last 24 hours scans of many of Pickering and Lowell's drawings of Mars from 1894 so we can post them all (with Barnard's) on the OAA web site at some future time. Pickering was a much more acute observer than Lowell.

Meanwhile, I am sending some comments from Edwin Aguirre on the revised draft of the Lowell in Japan piece.

I am interested in what pictures you would recommend that we use -- . . . We may wish to include one of the Genial Inkyo and the record which includes the name Persibal Lowell. I am sure Antoinette Beiser would be glad to allow us to use any in the Lowell collection we wish --when we visit Lowell next year we can go through them and try to make definitive identifications.

The sixty-inch is the historic instrument built by Ritchey and until the 100-inch went into operation in 1917 the largest telescope in the world. It is the same that was used by Robert B. Leighton to photograph Mars in 1956 -- somewhere in *Sky & Telescope* Tom Dobbins and I have written about Leighton's planetary techniques, and I will try to find that article and send a copy to you. He is the same one as edited Feynman's famous lectures.

It will be a great pleasure for me to be able to show you this historic observatory and we will see all the great instruments including the 100-inch and observe Mars with the 60-inch on a moonless night so that if the seeing is bad for Mars we can turn it elsewhere.

See the messages attached below. With best wishes,

○ **Date: Sat, 16 Apr 2005 20:26:12 -0500**
Subject: Re: RE:Re: RE:Re: RE:Re: Concerning

Dear Masatsugu, I am attaching a text for the Saheki sidebar. As you will see, I have used too much space, but I could not restrain myself and have at least hinted at what a proper biography of Saheki should cover.

I think it is interesting that I have always pronounced Saheki's name in similar way to that of Secchi the great

Italian spectroscopist and pioneer observer of Martian colors. All best wishes,

○ **Date: Wed, 20 Apr 2005 18:35:53 -0500**
Subject: Re: Saheki

Dear Masatsugu, I will see if I can add something along the lines of the passage you suggested, which is excellent. I only worry that the editor at *Sky & Telescope* already is overwhelmed by all the material that I sent, as I have not heard from him for several days. I sent a large number of suggestions for illustrations -- he may not wish to include all of them. Perhaps we will have to include a more lengthy version of the Noto tour in the CMO.

I have been finalizing our plans for the Lick and Mt. Wilson trips -- Tony Misch would like to develop a web page -- would you care to assist? We can include the drawings both of Barnard and the Lowell observers as well as our own work. Perhaps we could begin with a prospectus of what inspired our plan -- our analysis of the 1894 results (and some of yours summarizing other oppositions that have been similarly post-perihelic) -- and what we expect to learn. Then we can post results as we obtain them. We may link this to the CMO web site as you did the 2003 drawings we made at Mt. Hamilton.

I am eagerly looking forward to seeing your drawings of Mars with this large instrument.

I shall send you drafts of the articles -- and the illustrations -- once I get them back from the *Sky & Telescope* editor to see if there are any last-minute changes we must make. With best wishes,

Bill SHEEHAN (ウイリアム・シーハン MN 美)
 sheehan41@charter.net

● **Date: Sun, 27 Mar 2005 13:07:37 EST**
Subject: Re: MARS drawings

Dear Masatsugu, My thanks in advance for the 1999 Fukui bulletin; I certainly don't have any after 1997. I also look forward to the 1998/9 Mars drawings. Meanwhile I have completed all the illustrations for that report, but I also have some Venus reporting to do and will probably not get to the 2001 Mars report just yet. I am preparing, with help from the Mercury & Venus Section assistants to the Director, a large report on the E and W elongations of 2004, and a major report covering ten

elongations from 1990-97.

We have had a fair amount of snow here, but it is now mild. I hope you will get the cherry blossom. My home is actually called '*Cherry Tree Cottage*' (though not by me) but today there is only an ornamental cherry tree in the garden.

As you will see from the February BAA Journal I have written the biography of Henry McEwen, a keen Mars observer from the early days of the BAA.

With regards

○ **Date: Sun, 10 Apr 2005 05:15:37 EDT**
Subject: Re: 1998npcNo.1file

Dear Masatsugu, I just returned from holiday to find your various attached files of NPC work from late 1998. The format and file size will be fine, so that if you can do so, please send others in the same format. Many thanks for the trouble to prepare these extra scans for my analysis.

I also found the reprints of Mars in 1999 from the Fukui City Museum series, that you told me you had forgotten to distribute. Thanks also for these. I was interested in the dusty streak across Mare Erythraeum that you observed then, as illustrated in the reprints, but do not recall seeing attention drawn to it at the time in the CMO. I must look again. I will look for confirmation in the Section's records too. With best wishes

Richard MCKIM (理查·麥肯 Peterborough 英)
 Director, BAA Mars Section
 RMckim5374@aol.com

● **Date: Wed, 30 Mar 2005 02:00:13 -0300**
Subject: 2005/03/25 Mars Image, 11h00m GMT...

Dear Mr. Minami, Last March 18th picture was an almost desperate attempt to capture the most detail I could in bad conditions. I ended up sending you a red Mars! This time I've learned the lesson, and after solving some problems with my internet connection (sorry for delaying!) I could at last send you my latest RGB picture I could take. Seeing is not good yet, but anyway it shows some detail. The picture info is the following:

Thank you very much ! Regards,

○ **Date: Thu, 31 Mar 2005 18:03:56 -0300**
Subject: Thank you very much...

Dear Mr. Minami, I feel happy to know your kind comments about my last image! I wish I could have an

ATK-1HS ! judging the pictures of those personalities with such a camera, I would take even better Martian pictures with it! Here in Peru there's a deep economical crisis, needless to say the reasons why I can't have one. I was studying the way of setting my ToUcam to Raw mode, but it seems that a Mac computer is needed for that task, so it's not possible either. Anyway, I'll be doing the best I can to get the best results with my ToUcam.

After all my last image speaks for itself ! I was lucky, I know (my seeing conditions are not being good lately) but I 'll keep on sending you my images; seeing permitting, and be sure I'll do my best as always to contribute with your prestigious Website. Thank you very much sir!

I'll be on the alert of any dust storm or whatever occurs on Mars! Regards,

○.....**Date: Fri, 8 Apr 2005 21:34:48 -0300 (ART)**
Subject: April 7 Mars image...

Dear Mr. Minami, Even though I imaged Mars between the clouds, it shows some detail. I can't wait to enjoy a better (clear and steady) night! Mars is better placed now (than it was at the beginning of my submitting) so a better Martian picture is up to a clearer and steadier night.(it's been cloudy almost every single night!) I guess my conditions are going to improve very soon.

Thank you very much sir! Regards,

○.....**Date: Sat, 9 Apr 2005 10:18:08 -0300 (ART)**
Subject: 2005/04/09 Mars Image, 10h43m GMT...

Dear Mr. Minami, I think I can do it even far better! (now all depends only on seeing!) Although a bit underexposed (clouds were crossing in front!), I could increase a little bit more the image scale. I hope you like it!

As always, thank you very much for the chance, sir!

Sincerely,

David RIVAS ROMERO (ダビエ・リハス Lima 秘魯)
david_rivasromero@yahoo.com.ar

●.....**Date: Wed, 30 Mar 2005 07:21:05 -0500**
Subject: Kyoto Treaty Hoax

http://www.junkscience.com/MSU_Temps/Kyoto_Count_Up.htm
DustyMars, "To one, science is an exalted goddess; to another it is a cow which provides him with butter."
...Friedrich von Schiller

Jeff BEISH (シエフリイ・ビッシュ FL 美)
dustymars@tnni.net

(註) The following is serious, and not to tease such a skeptic as Patrick MICHAELS but just to suggest that any scientific argument should not be based on trickery. We here refer to an episode told by James HANSEN which shows how this Pat is mere a junkscientist. James HANSEN, GISS/NASA, once wrote: "In late 1998, I was asked to debate the well-known greenhouse skeptic Dr. Patrick Michaels of the University of Virginia. . . . I agreed to participate in this debate with Dr. Michaels after learning that he had used (or misused) a figure of mine in testimony to the United States Congress. The figure showed the first predictions made with a 3-D climate model and time-dependent climate forcings - it was a figure from a paper that we had published in the *Journal of Geophysical Research* in 1988 and it had been a principal basis for testimony that I gave to the United States Senate in 1988. . . . It shows the simulated global mean temperature for three climate forcing scenarios. Scenario A has a fast growth rate for greenhouse gases. Scenarios B and C have a moderate growth rate for greenhouse gases until year 2000, after which greenhouse gases stop increasing in Scenario C. Scenarios B and C also included occasional large volcanic eruptions, while scenario A did not. The objective was to illustrate the broad range of possibilities in the ignorance of how forcings would actually develop. The extreme scenarios (A with fast growth and no volcanos, and C with terminated growth of greenhouse gases) were meant to bracket plausible rates of change. All of the maps of simulated climate change that I showed in my 1988 testimony were for the intermediate scenario B, because it seemed the most likely of the three scenarios. But when Pat Michaels testified to congress in 1998 and showed our 1988 predictions he erased the curves for scenarios B and C, and showed the result only for scenario A. He then argued that, since the real world temperature had not increased as fast as this model calculation, the climate model was faulty and there was no basis for concern about climate change, specifically concluding that the Kyoto Protocol was "a useless appendage to an irrelevant treaty". . . . Although scientists have a right to express personal opinions related to policy issues, it seems to me that we can be of more use by focusing on the science and carrying that out with rigorous objectivity. That approach seems to be essential for the success, as well as the "fun", of scientific research".

(<http://www.giss.nasa.gov/edu/gwdebate/>).

We should say such a junkscientist should be said not even a cow but a pig if whoever he or she receives funding from a lot of fossil fuel industry sources or is used by fuel company-funded front groups:.

<http://www.exxonsecrets.org/html/personfactsheet.php?id=4>
(Mn)

●.....いつも『火星通信』をお送りいただき有難うございます。また巡ってきました火星の年、観測者の皆さまのご活躍を祈念しています。

(1四2005)

松本 達二郎(Tatsujiro MATSUMOTO 兵庫 Hyogo)

●.....*Date: Sun, 3 Apr 2005 17:04:02 -0400*
Subject: Jupiter 27 & 31 March

Hello everyone... I have attached the last sets of images which I have taken. The Easter weekend gave us 3 nights of very good seeing in S. Ontario, and I managed not to be sick in bed on the 27th. A pair of fellow club members visited that evening, and we worked on evaluating a 25cm Newtonian for planetary work. Thanks to Gord and Scott for your help. I will distribute the images from the 25cm scope later. All of these images were with the 30cm SCT. I found that the images from the 27th are full of detail, and are my best images of the year, if not the past few years. Seeing was 8-9/10 with very good transparency.

The first 2 sequences worked well with a full set of filtered data. I began to have problems maintaining a connection to the camera during the 3rd and 4th sequences. I only recovered the IR/methane band video clips in the 3rd sequence and there is a 30 minute pause in the last sequence while the problems continued.

The images from the 31st suffer from poorer seeing and strong, gusty winds. I captured these images while making maple syrup...grab a sequence of images, then go back to fire the evaporator and add sap. I would rate seeing this night a 5/10, with vg, transparency.

○.....*Date: Fri, 15 Apr 2005 21:19:11 -0400*
Subject: question/opinions

Hello everyone... I have images from 3 or 4 nights to send out, but would like some input before I proceed any farther. I am finding it a challenge to get the images processed, annotated, and shipped out...and the pace at work is only going to complicate this for the next 2 months.

My question is...is there value in the luminance frames which I have been posting, and in the false colour Methane/IR/UV image. Although the quality of the methane and UV is less than I would like to produce I have kept

them in the exposure sequence due to the limited number of observations made at these wavelengths.

Also, is the format that I e-mail the image sequences suitable to those who use them? Using this format produces some very large files once you group together multiple sequences of the 8 images in each set (6 mono and 2 colour)?

Please feel free to make any comments and or suggestions. Thanks,

Brian COLVILLE (ブライアン・コルヴィル Ontario 加)
maple@quicklinks.on.ca
www.quicklinks.on.ca/~maple

◆.....*Date: Mon, 18 Apr 2005 20:31:50 +0100*
From: "Dr John Rogers" <jhr11@cam.ac.uk>
Subject: RE: question/opinions

Dear Brian, Thanks for your message, and for those multispectral sets that you have sent.

>is there value in the luminance frames which I have been posting, and in the false colour Methane/IR/UV image.

In my opinion:

Luminance: Not really necessary, as all the features can be seen in the red images. **MIU false colour:** Not scientifically necessary, but interesting and attractive! If you don't have time to produce them, that's OK: I could always produce them from your monochrome images if I want any. **Methane:** Certainly useful -- though it is evident that you are having problems getting sufficient resolution and signal-to-noise ratio. (So, for example, it is not clear whether any NNTZ methane-bright spot(s) are present. Tracking these is one of the main uses for methane images at present, as well as monitoring long-term changes in the belts and zones.) **UV:** Ditto; but as these images do not usually attain sufficient resolution to see any spots other than the GRS, it would be sufficient to take just a few round-the-planet sets per apparition, to monitor the large-scale colours.

In general, if you found a way of increasing the image scale and resolution, that would be good. But it's great to have your images anyway, esp. the IR ones.

> Also, is the format that I e-mail the image sequences suitable to those who use them?

OK for me. You could keep the colour images in separate files, so the bulk of the images would be gray-scale giving 1/3 the present file-size. I prefer 'high' JPEG quality (rather than medium or maximum). If e-mailing them is a pain, you could just e-mail the web address and I could pick them up easily. many thanks!

John ROGERS (Director, BAA Jupiter Section)

●.....*Date: Tue, 05 Apr 2005 02:03:54 +0000*
Subject: CMO 302

Dear Masatsugu, I was disappointed by the way Dr. Sheehan discounted the work of the writer and Jeff

Beish in the CMO number 302. To state that our polar cap work is "not yet advanced enough to be relied upon" ignores the fact that it results from over 10,000 red lightbifilar micrometer and, later, red light CCD images. Several independent observers produced this data over a period of 42 years. The Martian meteorology study results from statistical analyses of over 24,000 observations -- drawings, photographs, and CCD images -- covering a period of three decades.

Both the polar cap and cloud studies have been presented at professional meetings and have been published in peer-reviewed professional journals. In addition, they have been referenced numerous times in the professional literature. We have been honored to work closely with Professor Iwasaki in providing him with polar cap measurements.

Like Dr. McKim's superb dust storm analysis, these studies are merely suggestive of a warming trend on Mars. This was recently supported at the Geological Society of America's November meeting, where the MGS lead investigator Michael Malin stated that "Mars is experiencing global warming. And we don't know why."

While it would certainly be presumptuous to declare that these studies parallel terrestrial climate trends, it would be irresponsible to dismiss them so lightly.

Best regards,

○·····Date: *Fri, 08 Apr 2005 01:31:00 +0000*
Subject: *Thanks*

Dear Masatsugu, Thank you for responding so thoroughly and promptly. PLEASE do not feel a need for apology! The CMO provides an excellent forum for discussion and needs no editing of ideas. My feelings are not hurt -- I am too old, fat, and mean for that! My only point was that I felt that our data was being discarded out of hand. I agree completely with you that we don't have enough data to show long term climate trends on Mars -- we will have to leave that to our great great grandchildren! However data, largely compiled by amateurs from the OAA, ALPO, BAA, etc., over the last century do show that the Martian climate does vary -- that's about all we can say right now.

I also agree with you that controversy is desirable -- it keeps people interested and provides new ideas for better

observing programs.

Christopher is to be commended for his input. We need more young people like him!

I have not been able to observe Mars as yet, and am feeling guilty! I had pneumonia in January and a severe case of tracheal viral inflammation until a few weeks ago. I have shot Jupiter a few times, but our seeing has been unusually poor. I will most likely not be able to image Mars until 1 May, since I will be out of town from mid-April until then -- giving Mars lectures!! I am about finished giving talks, since It is costing me observing time.

Thank you again for your comments. Hope all is well with you. Please give my regards to the other OAA Mars observers. Best,

Don PARKER (唐那・派克 Miami, FL 美)
park3232@bellsouth.net

●·····Date: *Thu, 07 Apr 2005 06:36:05 +0900*
Subject: *合同大会*

幕張メッセで開催される**地球惑星科学合同大会**のプログラムが公開されました。

<http://earth2005.jtbcom.co.jp/session/p092.htm>
ご検討下さい。

○·····Date: *Wed, 13 Apr 2005 18:43:45 +0900*
Subject: *Re: シーハンさん*

シーハンさんの原稿をお送りいただき、ありがとうございます。読んでみます。S&Tは何月号に載るのかご存知ですか？

○·····Date: *Wed, 20 Apr 2005 08:22:51 +0900*
Subject: *Re: 地震お伺い*

ご心配いただき、ありがとうございます。幸い三月の時よりは軽く、被害は全くありません。ライフラインも電話も大丈夫です。ただ前回同様JRが止まってしまって、今日講義があるのですが、どうなるのかなと心配です。お礼まで。

浅田 正 (Tadashi ASADA 宗像 Fukuoka)
asada@kiu.ac.jp

●·····Date: *Wed, 06 Apr 2005 21:04:04 -0400*
Subject: *RE: MINAMI asks a favour of you*

Dear Masatsugu, An English language poster might go something like this: ····

I am glad to be of some assistance. You are very wel-

information for Mars and a brief overview of what is going on with the current Mars spacecraft observations.

Again, welcome back and here's to a cloud-free observing season! Clear Skies!

The following table was generated using JPL's online ephemerides site.

The next NASA mission to Mars will be the Mars Reconnaissance Orbiter (MRO) which is slated to launch 10 August 2005.

The Mars Exploration Rovers just keep on going and going! ...
The most recent piece of bit news is that NASA has officially extended the mission for another 18 months. This is on top of the previous mission extension.

Speaking of missions that have been extended, the Mars Odyssey has begun working overtime after completing its primary mission.

The Mars Express, brought to us by the European Space Agency (ESA) has been in orbit around Mars since December 2003 and since then has been doing great work.

Mars Global Surveyor, which began its main mapping phase of Mars way back on 1 April 1999, is continuing to perform well. Its overall health after some 28,500 orbits is good. Among its latest images is one of the rover Opportunity; the the image we can clearly see the lander and the track made by the rover. There is also an image of Spirit at Bonneville crater where we can see

the lander, the tracks, and even the parachute and backshell.

David R Klassen (デーヴ・クラッセン NJ 美)

Department of Physics & Astronomy, Rowan University
klassen@rowan.edu

●.....Date: Mon, 11 Apr 2005 23:13:15 +0900

Subject: Mo07Apr_05

メール有難うございました。このところ天候が不順で、天気予報では晴れマークが続きますが

----- シー・エム・オー・フクイ -----

----- 中島 孝 Nj -----

★引き続き、松本 達二郎 様(361)よりご寄付を頂戴しました。有難うございました。不

★We are sorry but to save labour and expense we shall quit sending the CMO paper edition from the next to those who have not recently communicated with us. Thanks.

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

『火星通信』#304 (25 April 2005) 編集: 南 政次(Mn)、村上 昌己(Mk)、中島 孝(Nj)
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☆ Any e-mail to CMO is acknowledged if addressed to

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

☆ Usual mails to CMO are acknowledged if addressed to

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

e-mail: vzv03210@nifty.com

〒913-0048 福井県坂井郡三國町緑ヶ丘3丁目6-74 南 政次 (☎/FAX 0776-82-6222)



実際は朝方はほとんど曇ってしまっていて、9時すぎからびかびかの晴れになる場合が多く、ほとんど撮れていません。4月に入ってから、4日、7日と撮れてはいますがSeeingが悪く、出せる状態にないと言ったところ。処理しても良像は得られませんが、7日のものは表面模様が少し見えるので、一応送ってみます。

○.....Date: Mon, 18 Apr 2005 01:59:23 +0900

Subject: Mo13, 16 Apr_05

やっと13日と16日の処理が終わりましたのでお送りします。13日はかなりの好Seeingでした。16日は高度が上がるごとに良くなってきましたが、太陽が昇ってしまうと、Bが撮れなくなってしまうのが残念です。

森田 行雄 (Yukio MORITA 廿日市 Hiroshima)

mo7797@ybb.ne.jp

●.....Date: Sun, 24 Apr 2005 22:52:57 +1000

Subject: Mars 23rd April UT

Attached is an image of Mars taken early this morning with poor seeing...SPC was distinct with perhaps a hint of PM hazes?? Best Wishes

Maurice VALIMBERTI (モリス・ヴァリムバート)

Melbourne 豪)

maurice@wraith2.net

☆☆☆

