

MARS

No. 303

25 March 2005

OBSERVATIONS

Published by the OAA Mars Section

CMO 2005 Mars Report # 04

OAA Mars Section

♂.....Here we review the Martian surface observations made during the one-month period from 16 February ($\lambda=161^\circ\text{Ls}$) to 15 March ($\lambda=176^\circ\text{Ls}$) 2005. The apparent diameter was $\delta=4.9''$ on 16 February, but went up to $\delta=5.4''$ on 15 March. The phase angle ι increased from 31° to 35° . The central latitude ϕ varied from 6°S to 14°S . The Japanese islands were under a typical winter weather, and at Fukui no fine morning was found in February. The apparent declination was from -23.6° to -21.6° , and we should say it was advantageous for the observers active in the southern hemisphere.

♂.....今回は16Feb($\lambda=161^\circ\text{Ls}$)から15Mar($\lambda=176^\circ\text{Ls}$)迄の一ヶ月の観測を見る。16Febで $\delta=4.9''$ で、15Marで $\delta=5.4''$ であった。 ι は 31° から 35° に蔭が延びている。中央緯度 ϕ は 6°S から 14°S に動いた。季節上は面白いところだが、天候が充分でなく観測は揃っていない。福井では二月中観測は不可能であった。視赤緯は南緯 23° 後半から 2° 程上がったが、まだこちらからは低い。南半球から報告があるのは有り難い。期間中報告された観測は次の様であった。ccd像は何れもCMO-Webにuploadされている。

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

7 Drawings (5, 6, 9 March 2005) 400×20cm refractor*

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

2 Sets of CCD Images (5, 6 March 2005) 25cm spec with an ST-5C

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

2 Drawings (5 March 2005) 400×20cm refractor*

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

3 CCD Images (22 February; 4, 15 March 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

2 CCD Images (9, 11 March 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

♂.....We received an excellent image made by PUJIC (ZPj) at Brisbane made on 22 February ($\lambda=165^\circ\text{Ls}$) at $\omega=013^\circ\text{W}$. Dark markings are apparent with S Meridiani well separated. The sph is large and as shown in its B ingredient, it shows a projection to the outskirts. Also a condensate over the area around Auroræ S. On 4 March ($\lambda=170^\circ\text{Ls}$), ZPj also gave an image at $\omega=281^\circ\text{W}$ where Syrtis Mj near the CM and the duller Hellas were shown. Strangely this image has scarcely the B component. On 5 March ($\lambda=171^\circ\text{Ls}$) MORITA (Mo) produced a set at $\omega=302^\circ\text{W}$ where R and IR images show Syrtis Mj to S Sabæus. In the same morning, NAKAJIMA (Nj) and the present writer (Mn) were watching Mars at the Fukui City Observatory from 20:40GMT to 21:40GMT ($\omega=301^\circ\text{W}\sim 315^\circ\text{W}$): The markings were faint, but we judged the spc was popping out partially. Hellas was dull to Mn

while it was rather lighter than expected to *Nj*. It was impossible to discriminate the boundary of the two lighter areas. On 6 March ($\lambda=271^\circ\text{Ls}$), *Mn* observed at $\omega=291^\circ\text{W}$, 301°W , and *Mo* shot at $\omega=299^\circ\text{W}$. As the seeing improved, the spc/sph was clear. Depressiones Hellesponticæ looked dark. S Sabæus was seen. The northern limb was whitish light. On 9 March ($\lambda=173^\circ\text{Ls}$) *Mn* observed three times at $\omega=252^\circ\text{W}$, 262°W , 271°W : The spc sometimes shined. M Tyrrhenum was dark, and Hellas was dull. Finally Syrtis Mj was the darkest. The disk generally showed an orange hue. On the same day, RIVAS (*DRv*) at the reverse hemisphere in Peru produced a good image in the dawn blue sky at $\omega=124^\circ\text{W}$. The spc is seen. *DRv* produced another clear image on 11 March ($\lambda=174^\circ\text{Ls}$) at $\omega=101^\circ\text{W}$ where the spc stands still, and a shadowy area is shown around Solis L. On 15 March ($\lambda=176^\circ\text{Ls}$), *ZPj* shot at $\omega=179^\circ\text{W}$: The dark marking and the spc are evident, while the B component shows nothing (why?).

♂……………22Feb($\lambda=165^\circ\text{Ls}$)にはブリスベーンのプロジッチ(*ZPj*)博士から良好なToUcam画像がやってきた。 $\omega=013^\circ\text{W}$ で、シヌス・メリディアニなどが分離している。北極雲が強く、Bで見ると吹き出しも見えるし、アウロラエ・シヌスの辺りにも白雲が出ているようである。4Mar($\lambda=170^\circ\text{Ls}$)には $\omega=281^\circ\text{W}$ で、シュルティス・マイヨルがまん真ん中だが、ヘッラスが弱いのが特徴。ただ、奇妙なことにこの像にはB成分が殆ど無い。5Mar($\lambda=171^\circ\text{Ls}$)には森田(*Mo*)氏が $\omega=302^\circ\text{W}$ で撮っている。R、IRでシュルティス・マイヨルからシヌス・サバエウスの模様が出ている。同じ頃20:40GMTから21:40GMTまで($\omega=301^\circ\text{W}\sim 315^\circ\text{W}$)、福井で中島(*Nj*)氏と筆者が観測していた。模様は淡いのであるが、南極冠が部分的にも出て来ていると判断した。筆者はヘッラスは相当鈍いと思ったが、*Nj*氏はヘッラスの方が夕方で見ると見ているようだ。この二つは*Mo*氏の像でも確認出来る。但し両者を隔てる境界を見るのは難しい。6Mar($\lambda=271^\circ\text{Ls}$)には、筆者が $\omega=291^\circ\text{W}$ 、 301°W で観測、*Mo*氏が $\omega=299^\circ\text{W}$ で撮像した。シーイングが向上すると南極冠は可成りハッキリしている。デプレッショニス・ヘッレスポンチカエ邊りが暗い。シヌス・サバエウスが確認出来る。北縁が明るく黒いスジがその縁に出ているか。福井では9Mar($\lambda=173^\circ\text{Ls}$)には $\omega=252^\circ\text{W}\sim 271^\circ\text{W}$ まで三回観測可能であった。南極冠は可成り大きくときどき輝く。マレ・テュッレヌムが午後側で濃く、ヘッラスは鈍い。最終ではシュルティス・マイヨルが最も濃い。像はシーイングがよいとオレンジ色。この日、ペルーのリバス(*DRv*)氏が薄明か日の出後に $\omega=124^\circ\text{W}$ で撮像している。南極冠が出ていると思う。彼は11Mar($\lambda=174^\circ\text{Ls}$) $\omega=101^\circ\text{W}$ で綺麗な像を撮った。南極冠の据わりがよく、砂漠の色も好い。ソリス・ラクスの邊りが翳りとなっている。15Mar($\lambda=176^\circ\text{Ls}$)には*ZPj*氏が $\omega=179^\circ\text{W}$ の像を撮った。南半球の暗色模様と北極冠が出ているが、これもB成分が酷く弱い。

♂……………In the next issue we shall review the observations made during the period from 16 March ($\lambda=176^\circ\text{Ls}$) to 15 April 2005 ($\lambda=194^\circ\text{Ls}$, $\delta=6.3''$).

♂……………次号では16 March ($\lambda=176^\circ\text{Ls}$) から15 April 2005 ($\lambda=194^\circ\text{Ls}$, $\delta=6.3''$)迄の一月間を扱う。

南 政 次 Masatsugu MINAMI

Forthcoming 2005 Mars (6)

The Case of the 1990 Apparition (1990年接近の場合)

Masatsugu MINAMI

南 政 次(Mn)

0° Introduction: The apparition of Mars this year is the next one of the so-called great apparition, and so the 2005 Mars must be similar to the case we observed in 1990 which was really the next one to the 1988 great apparition. However, there is a slight difference: The

planet Mars was at opposition in 1990 on 27 November ($\lambda=340^\circ\text{Ls}$), while this year it will be at opposition on 7 November ($\lambda=329^\circ\text{Ls}$). This is less different than the cases of 1988 and 2003 apparitions where the oppositions were widely different since they occurred at λ

=277°Ls in 1988 while at $\lambda=250^\circ\text{Ls}$ in 2003. Here in 2005, the separation decreased to 20 days, and the difference of Ls also reduced by half.

We here so, for the sake of the 2005 observations, look back on the case of the 1990 apparition how we experienced. It is recommended for the readers to refer to the Ls values and compare them with the coming values in 2005.

1° General Review: The CMO treated the reports of the observations in 1990/91 twenty times (once or twice a month) from CMO #086 (5 April 1990 issue) to #105 (25 May 1991 issue). The domestic (Japanese) observers who contributed to the CMO was 18 in number and quite less than the total domestic contributors, 34, in 1988. The number of observations also reduced to 2700, 20% fewer than the 1988 results. Among them however, Tohru IWASAKI (*Iw*) obtained a total of 400 drawings during the season, and Takashi NAKAJIMA (*Nj*) produced a total of 498 drawings that were the best he had given in those years (he was 51 of age in 1990: *Nj* produced further a total number of 591 drawings later in 1999). The present writer (*Mn*) obtained 888 drawings (285 at Otsu and 503 at Fukui), quite less than those in 1986 and 1988.

According to the 1990/91 Report of the BAA given by Richard McKIM (*Rmk*) (*JBAA*, vol **102**, No 5, Oct 1992), the total number of the British Mars observers in 1990/91 was 33, and so very prevailed over us. Even then their total observers and observations were reported to have reduced by half compared with the British case of 1988.

The first observation of the present writer (*Mn*) was made on 4 January at Otsu, while the work was not yet on the right track. We however got off to a good start at the Observatory of the Fukui City Museum of Natural History as usual with *Nj* on 29 March ($\lambda=193^\circ\text{Ls}$). In April ($\lambda=195^\circ\text{Ls}$ on 1 April) and May ($\lambda=213^\circ\text{Ls}$ on 1 May), the spc was clear and it was a stimulus to us. In June it looked roundish ($\phi=23^\circ\text{S}$) and became smaller at the end of June ($\lambda=251^\circ\text{Ls}$). Depressiones Helleponticæ looked dark. In 2005, the deepest central latitude read $\phi=25^\circ\text{S}$ at the end of May ($\lambda=221^\circ\text{Ls}$, $\delta=8''$).

In 1990, the ccd imagers were not crowded, and in

our country (ccd none yet) the observations became active after the angular diameter exceeded 9 arcsecs in August. In August there were reported about 350 drawings and TP/colour photo sets. In mid-August, the season reached $\lambda=280^\circ\text{Ls}$, and so the spc was the main theme. At the end of September, two Typhoons (Nos 19 & 20) hit us, but in October the weather recovered rather fine. In mid-Oct, the angular diameter δ reached 15". (*As anybody remembers, the planet Saturn showed, after a cycle of thirty years, a big white oval which was detected by ISHADOH (Id) and WAKUGAWA(Wk) in Okinawa on 1 October, and the discovery was readily communicated to MIYAZAKI (My) to take a set of TP photos in an earlier stage.*)

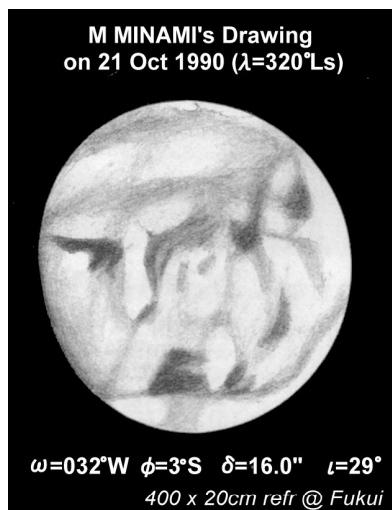
In November ($\lambda=326^\circ\text{Ls}\sim 342^\circ\text{Ls}$), 500 observations were produced by the domestic observers. N Alcyonius, Gyndes and Propontis I were all caught, while everybody felt it not easy to detect Iuventae Fons compared with the case in 1988. A detail of Nilokeras was still easy. In December, according to *Id*, the weather in Okinawa turned to bring just like a summer seeing to produce good results (see below). On the new year day in 1991, the Martian was near the southern autumn equinox $\lambda=358^\circ\text{Ls}$ with $\delta=13''$. (This time, on 1 January 2006, the season will read $\lambda=350^\circ\text{Ls}$ and $\delta=12.1''$.) *Iw* observed by chasing the nph until March 1991. At Fukui, the final observation was made by *Nj* on 7 May 1991 when $\delta=5''$, $\lambda=057^\circ\text{Ls}$, $\phi=10^\circ\text{N}$.

2° The First Dust: Even after the so-called season of the great dust storm (at those times we set the deadline to be around $\lambda=200^\circ\text{Ls}\sim 250^\circ\text{Ls}$), no great dust disturbance started. Eventually no southern great dust storm was found in 1990. The rainy season at the Hokuriku district (including Fukui and Noto) ended on 20 July, quite normal, and the coming summer proved to be a real hot summer: It was reported the Biwa Lake at Otsu, the largest lake in Japan, suffered from the shortest of water since 1939. The Solis L area was well observed from the breaking period of the rainy season and showed us three times until the opposition time. At the beginning of October, the central latitude went downward to $\phi=3^\circ\text{S}$: The spc was thus all the more difficult to observe, but it was quite clear at the latter part of October for the period

$\lambda=317^\circ\text{Ls}\sim 321^\circ\text{Ls}$ under good seeing.

On 4 October ($\lambda=310^\circ\text{Ls}$), Don PARKER (*DPk*) and Jeff BEISH (*JBs*) detected a dust disturbance from Chryse to Eos (IAUC #5116, see also BEISH's LtE on 6 October: CMO #095 p0808). This dust disturbance must be one of the dusts which originated from the northern district around the nph, as is recently the well-known topic of discussion about the MGS results. The aftermath was not clear at that time however, whether it dispersed before it faced to us in Japan or not. See a detail in *RMk's* article cited below. Just note the Martian season was $\lambda=310^\circ\text{Ls}$ similar to the MGS cases.

3° Activity of the nph: At the end of October, the nph was observed very disturbed at the area of M Acidalium. The present writer's continual observations from 20 October to 23 October ($\lambda=320\sim 321^\circ\text{Ls}$) were shown in schematic figures with 4×6 partial drawings in CMO #096 at p0816. This was also reproduced in *Mn's* article in "*Sky Watcher's Handbook*" (edited by J MUIRDEN, published by Freeman, Oxford, 1993). Here we cite a drawing on 21 October ($\lambda=320^\circ\text{Ls}$) at $\omega=032^\circ\text{W}$, $\phi=03^\circ\text{S}$, $\delta=16.0''$. A part of M Acidalium was seen through the nph, but this was not stable. It is still amazing to turn over the sketchbook at that period which



shows well realistically a *Sturum und Drang* of the nph around M Acidalium. There seem to exist sometimes mesohigh downbursts to the southwards from the edge of the nph, and they may suggest a starting of a dust

disturbance. It is thus important to chase the npr from $\lambda=310^\circ\text{Ls}$ (as pointed out by Christophe PELLIER (*CPI*), *private communication*, the December dust in 2003 must have also been originated from the higher northern latitudes at $\lambda=315^\circ\text{Ls}$), while in 2005 unfortunately the central latitude does not go down beyond $\phi=11^\circ\text{S}$: when $\lambda=310^\circ\text{Ls}$ (21 Oct) onward, $\phi=13^\circ\text{S}$ or southward. However angular diameter δ is about $20''$, and it may be

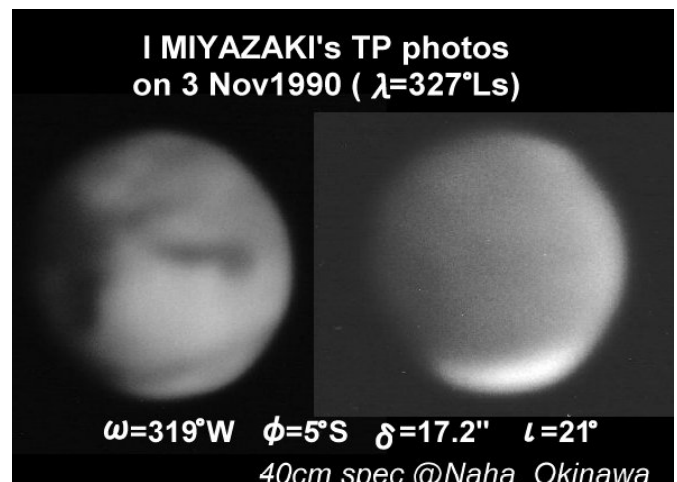
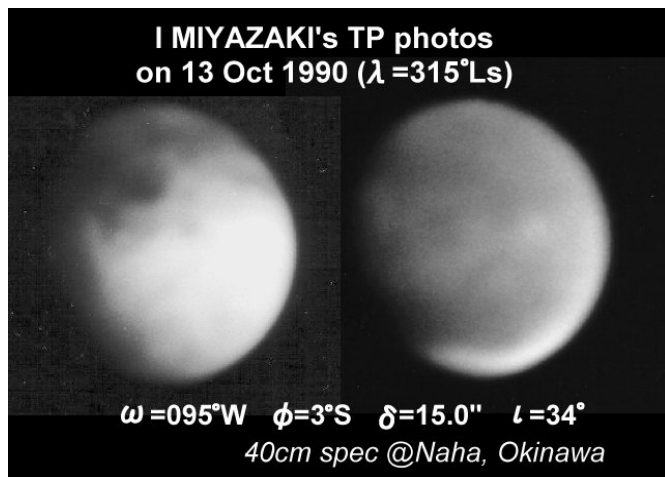
easier to watch the areas of Chryse and Utopia. In Japan, Chryse will face to us at midnight as November begins.

4° Second Dust: On 2 November 1990 ($\lambda=326^\circ\text{Ls}$) there was reported an observation of a dust near Aurorae S in Italy, T PLATT in England took clearly its ccd image on 3 November, and it was chased well in Europe. This is detailed in the aforementioned *RMk's* report (whose summary was made in CMO ##112 and 124), and finally a complete narrative of *RMk* was given in his masterpiece: *Memoirs of the BAA, vol 44 (1999) "Telescopic Martian Dust Storms; A Narrative and Catalogue"* (pp112~115). If we see the diagram and the original ccd images (at the Pic du Midi) made on 6 November ($\lambda=329^\circ\text{Ls}$), the dust was clearly seen also in the northern hemisphere, and hence it is quite possible it was also originated from the higher northern latitudes though observations were lacking.

According to the catalogue of *RMk*, there occurred three dust storms in 1990, and the final was also observed in Chryse during 4 December ($\lambda=344^\circ\text{Ls}$)~16 December ($\lambda=350^\circ\text{Ls}$). At any rate, the season from $\lambda=300^\circ\text{Ls}$ to 350°Ls is very important.

Writing up this way has inclined the present writer (*Mn*) to think that der *Sturum und Drang* at the end of October of the nph must have possibly been a precursor of the Chryse-Eos dust disturbance at the beginning of November. At that time we had never dreamt such a relation, but in view of the northern originating dusts, it is quite natural to think it was quite so. On the day of 2 November ($\lambda=327^\circ\text{Ls}$) when the dust was observed in Europe, the present writer observed starting from $\omega=242^\circ\text{W}$ (14:20GMT) to 19:40GMT (4:40JST) at $\omega=320^\circ\text{W}$ when M Acidalium was just coming up. On 3 November MIYAZAKI (*My*) also took a set of photos at $\omega=319^\circ\text{W}$ at 20:15 GMT (5:15 JST) (see below), but no further. The nph was strong as well. Unfortunately there still lies a vast vacant region from Japan to Europe.

5° Tharsis Ridges: The cloud behaviour of the Tharsis ridges as well as Olympus Mons before the opposition is an important objective to record: In 1990, the second peak at around $\lambda=310^\circ\text{Ls}$ of the cloud activity of Arsia Mons was clearly caught by MIYAZAKI (*My*) on 13 October ($\lambda=315^\circ\text{Ls}$) at $\omega=095^\circ\text{W}$, 123°W and



on 18 October ($\lambda=318^\circ\text{Ls}$) at around $\omega=110^\circ\text{W}$. One month later, it was quite near at opposition, but those Int, R and B shots by *My* were precious made on 18 November ($\lambda=335^\circ\text{Ls}$) and 19 November. Arsia Mons now proved to be less active than the previous case (as well as at $\lambda=280^\circ\text{Ls}$ in 1988) and showed the activity was minimal. Olympus Mons, without cloud, looked evident, however weaker than the case in 1988. In 2005, the region will be seen around from the end of October at $\lambda=315^\circ\text{Ls}$ in Japan (in the US in mid-October), and we should pay our attention to the area. It is just before opposition. One month before we should be on alert from the mid-September in Japan around $\lambda=290^\circ\text{Ls}$ (in the US at the beginning of September, and in Europe at the beginning of October). The second minimum will visit however after opposition, and so it will be rather difficult to prove (the first minimum is at $\lambda=225^\circ\text{Ls}\sim 230^\circ\text{Ls}$ while the angular diameter may be too small to prove).

6° Miscellaneous: The area of Solis L appeared in 1990 to be the same as in 1988 and 1986. Such a marking as Phasis was caught easily for example on MURAKAMI (*Mk*)'s TP photos taken by the use of a 10cm Nikon refractor (*Mk* secured 20 photos in October and 25 photos in November by the same object grass).

The apparition was suited to chase the final state of the spc, while it depended on the weather and the facing longitudes of the central meridian. At Fukui, the watching of the spc was only up until 21 November~23 November ($\lambda=338^\circ\text{Ls}$) where we could watch $\omega=020^\circ\text{W}\sim 080^\circ\text{W}$. Next occasion when we could catch the region came at the end of December, and already δ was under $15''$. In 1988, *My* and other chased it until $\lambda=340^\circ\text{Ls}$.

After October 1990, (we should say after $\lambda=325^\circ\text{Ls}$ in Japan), there was observed a strange cloud broad belt form the northern bottom of Hellas towards southward, while Zea L was apparent (see *My*'s photos on 3 Nov here, and CMO #113). This was also evident in December and even after the southern autumn equinox ($\lambda=000^\circ\text{Ls}$). It is expected to record further observations. In December, after Hellas came into the disk there observed a few thick cloud patches near the morning terminator: These were quite apparent on B photos by *My* and AKUTSU (*Ak*) on 6 December ($\lambda=345^\circ\text{Ls}$) and so on.

7° Finally: we note that the above description heavily depended on a review by NAKAJIMA and MINAMI "Mars Observations in 1990/91" published in "Bulletin of the Fukui City Museum of Natural History" No. 40 (1993). Of course some of the CMO were referred.

To sum up, der *Sturum und Drang* at the northern hemisphere after $\lambda=310^\circ\text{Ls}$ should be important to be watched, especially to the north of Chryse and Utopia. In these cases the ccd imagers should shoot the areas every 20 minutes to grasp the delicate motions of the cloud. The B ingredient is particularly important. As to a possibility of the southern dust storm around $\lambda=300^\circ\text{Ls}$ as in 1973, we shall review in a forthcoming article (the global dust storm in 1894 was onset possibly just before $\lambda=300^\circ\text{Ls}$, to be mentioned).

In 1990, it was cloudy at Fukui both the day (20 November) at opposition and the day (27 November) the planet was closest to the Earth. CMO #098 informs it was all the same all over Japan. However at the later fortnight in November it was fine for more than seven days. In December, the first ten days were good. On 7

December, Iw's sketch reached No 209 the season which corresponded to his 1000th drawing ever since he was enrolled as a Mars observer in 1984. On the note of the next drawing, watching the Huygens crater he wrote "this may be the last moment to see Grace's Fons, and I may not be able to see it until the 21 Century". Was it?

0° はじめに：今回の接近に似た接近で最も時期的に近いものは1988年の大接近の後の1990/91年接近である。但し、2005年の衝は7Nov($\lambda=329^\circ\text{Ls}$)であるのに對し、1990年には27Nov($\lambda=340^\circ\text{Ls}$)であったから、やや違っているのだが、これは1988年の大接近が2003年のそれと火星の季節も視直径も相当違っていたことから頷ける。但し大接近は一ヶ月も違っていた(衝のLsは 277°Ls (1988年)と 250°Ls (2003年)と大幅な違いであった)のに對し、今回は廿日に縮まり、Lsの差も半減である。というわけで、2005年の観測のために少し1990年の接近を振り返る。以下、日附より、 λ 値に注意すると好い。出来れば、今年の火星暦をひろげて参照されたい。

1° 概況：『火星通信』は1990年四月五日號(#086)から1991年五月二十五日號(#105)まで月一回乃至二回のReportで廿回に亘って追っている。国内のレギュラーな観測者は18名だが、1988年の34名より減っていることは確かである。観測数も約2700点と前回比20%減であった。ただ、岩崎徹(Iw)氏は400枚の観測数をコナした。中島孝(Nj)氏もこれまで最高の498枚のスケッチを残している(当時51歳、Nj氏の最高枚数は1999年に来る)。筆者(Mn)はこの年、888枚だが、1986年、1988年より減らしている。中島氏の好調は、夏場に観測が捗ったのと福井市自然史博物館が改築されてから準備室の居住性が増したことに據ると思う。

尚、BAAの理查・麥肯(RMk)氏の1990/91年接近の総合報告(JBAA, vol 102, No 5, Oct 1992)によると英国内の観測者数は33名で、われわれを凌いでいる。それでも1988年に比べ、観測者も観測数も半減した様である。

観測の開始は、筆者の場合大津で4Janからだが、軌道に乗るのは三月末からで、福井市自然史博物館天文台では29Mar($\lambda=193^\circ\text{Ls}$)からNj氏と協同観測を開始している。以下、やや詳しく述べると、四

月、五月と南極冠が明確でこれは励みになっている(1Aprilで $\lambda=195^\circ\text{Ls}$)。六月には圓くこぢんまりとして($\phi=23^\circ\text{S}$)、月末には小さくなる。デプレッショニス・ヘッレスポンティカエが濃い。2005年にも五月下旬 $\phi=25^\circ\text{S}$ 近くになる。 δ は8"に近い。

當時前半はccdは活躍してなくて、矢張りわが国でも観測が活発になったのは δ が9"角を越えた八月からである。八月中だけでスケッチ・写真併せて約350点寄せられている。八月中旬に $\lambda=280^\circ\text{Ls}$ になっているから、南極冠が話題である。九月後半には颱風19、20號がやって来て奮わないが、十月には天候は回復し、中旬に $\delta=15''$ に達した。(10Octには土星に三十年ぶりの巨大白斑が出て、沖縄の伊舎堂(Id)氏、湧川(Wk)氏などが発見し、宮崎(My)氏が直ぐTPで撮影したのはこの年である。)

十一月($\lambda=326^\circ\text{Ls}\sim 342^\circ\text{Ls}$)には500点の観測が報告された。ノドゥス・アルキュオニウスやギュンデス、プロポンティスI等が捉えられている。ただ、ユウエンタエ・フォンス等は1988年に比して難しくなった。但し、ニロケラスの雙葉型などはまだ容易である。十二月に入って沖縄は夏の様な天気であったようである。1991年一月(元旦で $\lambda=358^\circ\text{Ls}$)には $\delta=13''$ に落ちたが、まだまだシーズンである。2006年元旦($\lambda=350^\circ\text{Ls}$)にも $\delta=12.1''$ の視直径である。1991年はIw氏は三月まで北極雲を追っている。福井ではNj氏の7May1991が最後になった。 $\delta=5''$ 、 $\lambda=057^\circ\text{Ls}$ 、 $\phi=10^\circ\text{N}$ であった。

2° 第一の黄雲：1990年には大黃雲の季節に入っても、大黃雲は観測されていない。北陸の梅雨明けは七月20日で標準、この年は久しぶりの夏らしい夏となった。琵琶湖が1939年以來の渇水という報道があったし、大阪も眞夏日が續き1939年の記録を更新したらしい(尤も1994年には猛暑が来る)。ソリス・ラクスは梅雨明けぐらいから好く観測されるようになり(ソリス・ラクスはシーイングに依存し、寧ろ小接近の時の方が見えやすいことがある)、十月迄に三度眺められた譯である。但し、十月初めには $\phi=3^\circ\text{S}$ 迄下がったから、南半球は難しくなったのだが、下旬には南極冠が $\lambda=317^\circ\text{Ls}\sim 321^\circ\text{Ls}$ で明確に捉えられている。この時期北半球が好く見えるようになったことで、4Oct($\lambda=310^\circ\text{Ls}$)にパーカー(DPk)氏とビーシュ(JBs)

氏がクリュセからエオスに掛けて黄塵の擴がりを観測しているが(IAUC5116他、ビーシュ氏のLtE on 6 Oct: CMO#095 p0808)、これは最近MGSの結果などから注目されている北半球起源、南半球へ廻る黄塵であった様である。ただ然程の規模でなく日本でもいろいろ観測はあったがハッキリしない。

3° 北極雲の活動：十月下旬にはマレ・アキダリウム方面での北極雲の活動が激しく観測されるようになり、注目された。筆者の連続観測はCMO#096p0816で20Oct~23Octの動きを二十四圖で示している($\lambda=320\sim 321^\circ\text{Ls}$)。尚、J MUIRDEN編の"*Sky Watcher's Handbook*" (Freeman, Oxford, 1993)の筆者の稿にも此の圖を入れた。英文の部では21Oct($\lambda=320^\circ\text{Ls}$)、 $\omega=032^\circ\text{W}$ 、 $\phi=03^\circ\text{S}$ 、 $\delta=16.0''$ のスケッチを引用した。マレ・アキダリウムの一部が北極雲を透かして見えるのであるが、毎日様子が異なる。このときのスケッチブックをあらためて見ると、この頃は氣流も好く、南極冠等も恒常的に見えているが、北極雲は毎日毎回實に激しい動きをしていることが記録されている。多分、南端の方にはダウンバーストがあり黄塵混じりの動きがあったかも知れない。此の $\lambda=310^\circ\text{Ls}$ 以降の北極域の観測は重要なのであるが(2003年の $\lambda=315^\circ\text{Ls}$ の黄雲も北極域起源であることはペリエ(CPI)氏が指摘している)、然し、2005年の場合、1990年と違って、 ϕ が 11°S 迄しか行かない。 $\lambda=310^\circ\text{Ls}$ (21Oct)以降は $\phi=13^\circ\text{S}$ より南になる。尤も、 δ は $20''$ 近くになってクリュセやウトピアの監視には問題ない。但し日本からクリュセが夜半に見えて来るのは十一月に入ってからである。

4° 第二の黄雲：尚、もう一つ日本からは縁遠い話であったが、2Nov($\lambda=326^\circ\text{Ls}$)にイタリアでアウロラエ・シヌス邊りに黄雲が出たという話があった後、3Novにはプラッツ(T PLATT)によってccdでキャッチされ、ヨーロッパで追跡されている。これは明確な痕跡を残している。様子は先に引用のRMk氏の報告に詳しい(これらのレポートの要約はCMO#112、#124参照)が、もっと整理されたものは矢張りRMk氏のMemoirs of the BAA, vol 44 (1999) *Telescopic Martian Dust Storms; A Narrative and Catalogue*にある。6Nov($\lambda=329^\circ\text{Ls}$)での圖を見ると(特にPicで撮られている)北半球にも及んでいるの

であるが、案外これも北半球起源の黄塵かも知れない。尚、RMk氏の整理によるとこの年は三個黄雲が観測された様で、三番目は矢張りクリュセに4Dec($\lambda=344^\circ\text{Ls}$)~16Dec($\lambda=350^\circ\text{Ls}$)。何れにしても、この時期($\lambda=300^\circ\text{Ls}\sim 350^\circ\text{Ls}$)は重要である。

とここまで書いて、實は十月下旬の北極雲の激しい動きは、周邊に黄塵混じりの嵐を呼んで、十一月上旬のクリュセ-エオス邊りの黄雲の前兆であったのではないか、と思われてきた。當時は考えもしなかったが、黄雲がヨーロッパで引っ掛かった2Nov($\lambda=327^\circ\text{Ls}$)には筆者は天津で14:20GMTから始めて19:40GMT迄つまり $\omega=320^\circ\text{W}$ まで追っている他、My氏も3Novに同じ角度で撮っている(英文の部で引用したTP写真参照)。マレ・アキダリウムが出てくるかというところであるが、残念ながらここ迄であった。北極雲は依然相當強かったのである。アジアからヨーロッパ迄の観測地帯の空白は依然困ったものである。

5° タルシス山系：ところで衝前のタルシス山系の動きは注目される場所であるが、幸いアルシア・モンズ活動の第二のピーク期に当たる $\lambda=310^\circ\text{Ls}$ 邊りは例えば18Oct($\lambda=318^\circ\text{Ls}$)に宮崎(My)氏によって $\omega=110^\circ\text{W}$ 等で明白に捉えられている(英文の部では13Octの圖を引用)。もう一周り後はギリギリに衝前に来て、My氏の18Nov($\lambda=335^\circ\text{Ls}$)、19NovのInt、R、B光は貴重である。アルシア・モンズはB光で前回や1988年の $\lambda=280^\circ\text{Ls}$ 邊りの鋭さはなく、活動が「どん底」であることを示している。一方、雲のないオリュムプス・モンズも明確である。ただ、1988年の時の如き輝きはない様に思った。尚、2005年には十月末 $\lambda=315^\circ\text{Ls}$ 邊りで日本からこの邊りが見えるので注意する。但し、衝直前である。一周前の九月中旬から待機するなら $\lambda=290^\circ\text{Ls}$ 邊りが狙える。尤も、第二のどん底は今回は衝後になるので難しい(第一のどん底は $\lambda=225^\circ\text{Ls}\sim 230^\circ\text{Ls}$ 邊り。視直径が8"臺でこれも難しい、というのも無いものが無いと証明するのは數段難しいのである)。

6° 雑題：序でに1990年のソリス・ラクス近邊は1986年、1988年型で、前回観測している人たちには有利に働いている。パシスなど村上(Mk)氏の10cmでのTP写真にも出ている(Mk氏は十月20枚、十一月25枚のTP像を得ている。但しBが無いナ)。

この接近は南極冠の最終状況を見るのに適しているのであるが、 ω や天候などで必ずしも完全ではない。福井では21Nov、23Nov($\lambda=338^\circ\text{Ls}$)邊りが最後になった。 $\omega=020^\circ\text{W}\sim 080^\circ\text{W}$ 邊りであった。次にこの邊りが見えたのは十二月下旬で最早 δ も $15''$ 以下で適わなかった。1988年にはMy氏などが $\lambda=340^\circ\text{Ls}$ まで追っていた筈である。

1990年の十月以降、日本からは $\lambda=325^\circ\text{Ls}$ 以降になるが、ヘッラス西部から南に掛けて幅広い明るい帯が記録されるようになった(My氏のTP写真参照、CMO#113)。南半球の秋分($\lambda=000^\circ\text{Ls}$)を越えても見えていた様である。今回も詳細な記録が望まれる。また、特に十二月になってから、ヘッラスが出て来た後の朝縁に白雲の塊が三つほど見えるということがあり、6Dec($\lambda=345^\circ\text{Ls}$)等の宮崎(My)氏のB光には明白に出ており、前後して阿久津(Ak)氏等のB光にも窺える。

7° 終わりに：取り敢えずは以上、一應、大事なところはCMOを参照したが、主に福井市自然

史博物館研究報告第40號(1993年)「1990/91年火星観測概況報告(中島孝、南政次)」に據った。

尚、1990年、福井では、最接近の日(20Nov)も衝の日(27Nov)も天気が悪く観測が適わなかった。CMO#098のレポートを見ると、日本は何處でも同じであったようである。但し、十一月後半の二週間で、七日から九日間は晴れていたようで、十二月は、前述したように沖縄では夏場のシーイングであった由であるが、Iw氏のところ(宮崎市)も好く、筆者も大津と福井で1日から10日まで連続して観測している。福井の冬は今年(2005年)のような場合、どう仕様もない感じであるが、1990/91年の時期は比較的と好かったように思う。

尚、Iw氏は7Dec、この年209枚目のスケッチで、1984年の火星観測開始以来1000枚に達したとある。まだ髪もフサフサで三十歳になっていなかった。7Decの210枚目には次の名文句がある：「Grace's Fonsとはこれで21世紀にまでお別れかも知れない。」多分、そうなったと思うが、扱て、廿一世紀に入ってご覧になっていましたっけ? ■

便り

Letters to the Editor

●.....Date: Sat, 26 Feb 2005 17:36:40 +0100
Subject: Jupiter, february 26th 2005

Hi all, I attach some images taken under below average conditions. It seems that the SEQ disturbance is still there isn't it? There is a kind of "stretching" of the SEBn, associated to a brighter EZs in UV light.

○.....Date: Tue, 1 Mar 2005 19:49:57 +0100
Subject: Re: Jupiter, february 26th 2005

Hi Jesus, I don't recall exactly the former manifestations of LRS but they might be associated with south tropical dislocations and I don't think there has been one in the past years (?). Also, being so dark in near-IR its color is likely to be brown or deep brown (recent color images I have seen do sustain this). Preceding images may prove it's merely a kind of structure "escaped" from SEBn, or something like that...

○.....Date: Tue, 1 Mar 2005 22:55:51 +0100
Subject: Re: Jupiter, february 26th 2005

Hi John, thanks for your confirmation - let's see if the

associated SEBn rift is still visible this season !
Hans-Joerg gave a second measure to me last week-end for the SEQ dist. longitude at the beginning of the year at sys. 1 = 280. Best wishes

----- Original Message -----

Date: Tue, 1 Mar 2005 19:11:01 -0000

From: "Dr John Rogers" <jhr11@cam.ac.uk>

Subject: RE: Jupiter, february 26th 2005

> Hi Christophe and Jesus,

> Little Red Spots have occasionally arisen in this location, as
> you say, but in recent years there have also been slow-
> moving dark (not red) spots in STropZ. This one does not
> appear red (yet) but will be interesting to watch. The same
> applies to the brown oval ~40 deg. p. the GRS, which is inter-
> acting with retrograding jetstream spots.

>> Christophe, I also agree that your images on Feb.26 probably
> showed the old S.Eq. Disturbance; Hans-Joerg's chart does
> seem to show it was at L1~0 at the start of 2005 (as he said at
> first). Best wishes,

> John

○.....Date: Fri, 4 Mar 2005 19:54:41 +0100
Subject: Re: Saturn, february 27th 2005

Hi Paolo, well if we look at very reasonably good true-colors images that have been produced recently, we'll note that mine is globally correct, I mean, for example a pink belt on my image won't go green on another image. And this include your color shots ;-)

There is still some hue variations, but I must say I have rarely seen any Saturn image matching exactly the color I see at the eyepiece, unlike Mars and Jupiter.

----- Original Message -----

From: "Paolo R. Lazzarotti"

<paololazzarotti@astromeccanica.it>

Sent: Friday, March 04, 2005 10:28 AM

Subject: Re: Saturn, february 27th 2005

> Hi Chris,

> What a wonderful set from you, maybe your best one to date!

> Congratulations! But I do not yet love so much the color

> rendition with your RGB filter set, I can do nothing! :-)

> During that night you had a light 25 m/sec jetstream, a very

> acceptable value. I had fair seeing even with 30 m/sec. but

> this is the max threshold acceptable, an higher value makes

> images slightly blurred.

○ ······ Date: Fri, 4 Mar 2005 21:27:37 +0100

Subject: Saturn, february 28th 2005

Hi all, here is my best color Saturn to date. As my harddrive was almost full from my feb. 27th observations, I decided to go back to imaging with the IR-cut filter; and surprisingly enough for me it gave an excellent result. My previous experience was, the IR-cut filter always give a less steady image than with a color filter and so should be avoided. But, when seeing is very good like that night, it might outperform even a red filter, it seems. Note the quick slope of resolution in a deeper IR band such as 780 nm. Again that night, the jetstream was more or less present; although a high-pressure band was transiting in a north-south direction. I have always identified those "bands" as an excellent source of good seeing in northern France. Best wishes

○ ······ Date: Sun, 6 Mar 2005 17:50:46 +0100

Subject: Re: Saturn, february 28th 2005

Hi Paolo, I completely agree with your analysis -1500 frames have been stacked for the luminance (from 3000).

Regards

----- Original Message -----

From: "Paolo R. Lazzarotti"

Subject: Re: Saturn, february 28th 2005

> Very congratulations for your wonderful Saturn image!!

> When you take images with a coloured filter you have

> always a steadier image because of a narrower bandpass than

> IRcut filter do. But when seeing is very good, the white light

> luminance is the best solution possible!

> How many frames did you stack for the luminance?

○ ······ Date: Sun, 6 Mar 2005 17:57:07 +0100

Subject: Jupiter, february 27th 2005

Hi all, two images under poor/fair seeing. My Toucam Pro looks dead, I can't make color Jupiter images for the moment; sorry ! Best wishes

○ ······ Date: Wed, 9 Mar 2005 21:23:29 +0100
Subject: Saturn, march 6th 2005

Hi all, seeing was just barely good for these. Best wishes

○ ······ Date: Sat, 19 Mar 2005 12:33:29 +0100
Subject: Jupiter march 18th 2005

Hi everyone, here is my first good Jupiter images of the season, seeing was reasonably good. The UV and 1-micron images are my best ones, it's quite a shame that no more raw frames can be obtained (170 at 1 second exposure), these are 5 mn avi files ! Regards

○ ······ Date: Sun, 20 Mar 2005 23:57:21 +0100
Subject: Saturn on march 15th 2005

Hi all, here is the first image of six consecutives nights on Saturn. For this one seeing was good but the transparency poor (clouds). Regards

○ ······ Date: Mon, 21 Mar 2005 23:28:10 +0100
Subject: Saturn 16th and 17th March 2005

Hi all, here are two more sets. The first one under fair/poor conditions. The W47 image was an experience, to see if there was any difference with the usual B band - not on the globe, but ring B is closer to an UV image (bright). The second one under a good sky, but without spots. Regards

○ ······ Date: Wed, 23 Mar 2005 21:13:24 +0100
Subject: Saturn 18th March 2005

Hello ! Here is another set from last week, still good seeing. Some interesting structures are caught in red light in the SEBs as usual. This filter looks best to catch those spots. Regards

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

● ······ Date: Sat, 26 Feb 2005 11:58:41 EST
Subject: Re: 1999 Obs. No.1

Dear Masatsugu, Thank you for the samples of your 1999 work, from which I will certainly select some illustrations for the report.

Two files, perhaps because they had strange characters in the filenames would not open. But all the others (9 in all) were fine.

The email to which you refer was of no great value. It just stressed the danger of inferring martian climate changes from NASA press releases where the scientific text had been altered by their press office! ···

If you have any measures of the NPC latitude from your drawings, especially the early ones, I would find

them useful in my analysis. With best wishes,

○……………Date: Sun, 6 Mar 2005 07:13:29 EST
Subject: Re: MARS drawings

Dear Masatsugu: Thanks for your reply. If you have

time to measure the drawings for NPC latitude (using the latitude of the cap on the CM, rather than the E-W dimension) that would be good, but any scans will be welcome too. I must leave it to you of course. No special

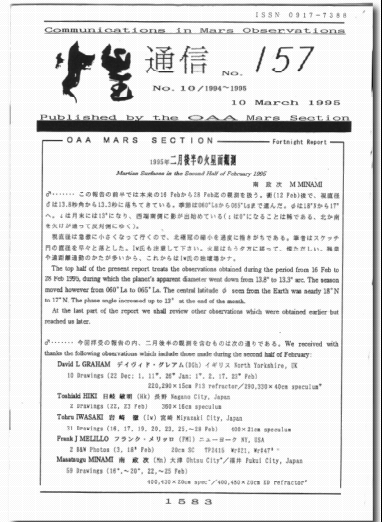
TEN YEARS AGO (115)

---CMO #157 (10 Mar 1995) & #158 (25 Mar 1995)---

1995年三月も二號出ている。10日號のCMO#157の巻頭は二月後半($\lambda=060^\circ\text{Ls}\sim 065^\circ\text{Ls}$)の観測報告で、九頁に亙る。二月11日が最接近であったから、報告は遅れた分も含めて二十三名が列挙されている。期間中日本からはマレ・アキダリウムからエリュシウム迄で、マレ・アキダリウムの朝霧などの記録があるが、ウトピアの斑状の明暗が注目されたようだ。マレ・キムメリウム、ヘスペリアの邊りもよく観測されたが、シュルティス・マイヨルの朝の浅葱色の記述もある。アエリアの衝前との比較もある。海外からは、メリッロ(FMI)氏やシーゲル(ESg)さん等からの報告があるが、FMI氏は当時青色光も撮っていたようで、アルバの異常を認めてLtEで村上(Mk)氏の観測に觸れている。ESgさんのところは1°Cで結露で困るようである。森田行雄(Mo)氏のTPは二月前半だけで合計で137點からなっている(努力賞、セットでは18點)。アルバが明白。10Febの合同観測日にはMo氏は13:21($\omega=342^\circ\text{W}$)から19:31GMT($\omega=073^\circ\text{W}$)迄頑張っている。他にケーヴ(TCv)さんの観測で、マレ・ボレウムがこんなに濃いのは五十五年の観測で初めてというのがある。なお、トロイアニ(DTr)氏やパーカー(DPk)氏のリマ・テヌイスの観測らしいものなどの報告引用がある。困ったものであるとあるが、今日では、あれは北極冠の縁から中に入った黄塵のスジであろうというのが普通の見解である。SWb氏のヴァージニアでは1mの積雪があったようだが、日本は暖冬であった。はや19、20、21Marがお別れウォッチングとなった。LtEにはMk氏の九段高校天文部の昔話が詳しいが、成田家の火災の第一報が入っている。日岐(Hk)氏が長野市から伊那の方に引越すのもこのときである。

#158は火星曆表から始まる。次がLtEで、JWr氏のテネリフェへ行った話、AHt氏のフィリッパ師の話、ドイツのマイヤー(WMy)氏のMEPCOの話などがあるが、ディジョン(JDj)氏も登場し、ccdを使うという話がある。頼武揚さんの短歌が三月17日の『朝日』の「折々のうた」に載ったことを長谷川一郎氏が傳えている。筆者も氣付き新聞丸ごと臺灣へ發送した。この短歌も「春の夜に」で始まるが、Mk氏のLtEには16日附けで「いよいよ春めいて、沈丁花の香りも漂うようになり、庭の梅も遅咲きの紅梅が満開」とある。今年(2005年)は24日になっても未だ大雪の予報である。観測報告は三月前半($\lambda=065^\circ\text{Ls}\sim 072^\circ\text{Ls}$)を扱っている。十五名(153點)と追加報告が六名である。衝を過ぎると模様について兎や角言うのは面倒といいながら十頁小言が續く。この期間はエリュシウムからタルシスに掛けて、ケブレニア、プロポンティスIなど北半球を中心に好く観測されている。Mk氏やIw氏はじめアルバなどに注目だが、Mo氏のTPは特にB光がよく働いている。オリュムプス・モンスが朝方に見える($\lambda=071^\circ\text{Ls}$)とあるが、観測のトビでIw氏も含めて好い追跡が無く、次回の課題としている。北極冠は小さくなったが、ドルフス氏の例など挙げて、離れ小島のオリュムピアなどに注意するよう呼び掛けている。アメリカではシュルティス・マイヨル中心である。SWb氏から17枚の報告があった。ヨーロッパはリビュア、ヘスペリア、エリュシウム邊りである。ESgさんはトリウィウム・カロンティスを見ている。お別れウォッチングは、少なくとも福井は三日間とも天気が良かった様である。但し、Ns氏はコレラのバリ島に新婚旅行中。報告は次回から月一回に戻るとある。ヤレヤレ。

南 政 次 (Mn)



longitudes would be needed, because I think that the slight asymmetry of the NPC even early in the recession will bias the results. The more results the better! I have a good number of accurate early drawings from several observers, but more will give a greater statistical weight. Anything from 1998 and even early 1999 will help in that respect.

I have compared our records with those of the Marswatch 1999 site. The site is useful and interesting but it has many blank days. Most of the gaps are filled in by our records, but not all of course.

Thanks for the magnification data. I have now chosen all the illustrations for the report, and it will be good to reproduce the excellent CCD work in colour again.

We have had an unusually cold time here, with snow on and off for the last fortnight. With regards

○ ······ **Date: Mon, 7 Mar 2005 16:26:18 EST**
Subject: Re: MARS drawings

Dear Masatsugu, My thanks for the Murakami drawing and the montage (I think you sent the montage in 1999, actually, but not the individual drawing). There were some UK observations of the HST's 'cyclone' too, but at lower resolution. It has been possible to describe similar clouds around Baltia in some detail for 1997, in the apparition report just finished.

I agree there is a region of the world where there is a gap in the ranks of Mars observers. However, this is really only experienced when far from opposition. For instance, I had some gaps in trying to draw daily maps of the large regional dust storm at the close of the 2003/4 opposition. I have read the paper you cite about the IPPP, and agree with your remarks about it.

I look forward to further scans if you have the time (and energy!) to do them.

I cannot recall if you and your colleague did a report in the 'Fukui City Museum Mars series' for 1999?

With regards

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

● ······ **Date: Sat, 26 Feb 2005 14:22:45 -0500**
Subject: Saturn 25 Feb

Hello everyone..., I have attached a set of Saturn images taken on the 25th of February. Transparency and seeing

were good, 4/5 and 3/5 respectively. I used the 30cm SCT@f28 to capture these images. The IR, methane and UV frames were taken with the ATK-1HS long exposure camera, and the RGB image is from the ToUcam. There is a false colour images which used the methane/IR/UV band images to create the colour image. ···

○ ······ **Date: Mon, 21 Mar 2005 22:06:01 -0500**
Subject: Jupiter 19 March 2005

Hello everyone..., I have attached a set of images from last Friday night (19 March UT). Seeing was average to good, with good transparency. There is one complete set of Luminance/Red/Blue/IR/Methane/UV images taken between 04:13 and 04:32 UT. The second set between 05:45 and 05:55 UT is missing the Luminance and UV data. There is a colour image from both sequences using the red and blue channels to synthesize a green image. I also have a RGB image from the first set taken with the ToUcam and a false colour image using Methane/IR/UV as the RGB components.

Telescope: 30cm SCT @ f28

Camera: ATK-1HS, 320 x 240 mode

Filters: Lum - Schuler Clear w/IR Rejection, 45 sec @ 20fps

Red - Schuler Red, 45 sec @ 20fps

Green - composite from Red/Blue data

Blue - Schuler Blue, 60 sec @ 20fps

IR - Schuler IR Pass 830nm cut-on, 60 sec @ 5fps

Methane - Custom Scientific 889nm, 18nm FWHM, 50x3 sec

UV - Schuler UV 340nm, 50 x 3 sec

Image Capture via K3CCD Tools

Image Processing via Registax 3.0

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

● ······ **Date: Sun, 27 Feb 2005 12:23:29 -0600**
Subject: Re: RE:Re: RE:Re: Asking for permission

Dear Masatsugu, Thanks for yours -- I shall look forward to hearing of the recovery of your health and energy. I have meanwhile been nursing mine, and have dropped my cholesterol level drastically by adhering to a strict dietary regimen and medications. My fish intake has increased but is still below Japanese levels, alas; also, I have not had Sushi since I left Japan. (I almost bought an octopus at the market today but my wife Debb dissuaded me from it.)

···· California is in the PST time zone. We should perhaps even arrive earlier so we can examine the Syrtis Major region but the Tharsis region is essential. I shall

compute the CMs we shall be concerning ourselves with. Usually August and September are fine at Mt. Hamilton.

Meanwhile, I have started working on a new Mars book, for University of Arizona Press. It will be completely different from **The Planet Mars**, and more personalized. I shall send as an attachment the first (prefatory) section for your compliments or criticisms. One of the chapters I hope to include will be one on Japan and Mars, including the influence of Percival Lowell (and reminiscences of our journey to *Noto* last year) and the important Japanese observers of Mars. I will also have a chapter on observing with the 36-inch refractor in 2003 and 2005 -- some of your drawings, I hope, will be included. You shall have a great deal to draw at Mt. Hamilton if the seeing is as it was for us in 2003.

I do wish you, your wife, and all the friends I made last year the best wishes, and have thought often, recently, of our adventures, which shall not be forgotten as long as I live.

○ ······ **Date: Sat, 5 Mar 2005 08:47:19 -0600**
Subject: Re: Mars at the turn of century

Dear Masatsugu, I am writing briefly now -- and will write more later -- in response to your beautiful and extended comments which were provoked by the introductory chapter that I sent you to the new Flammarion.

Of course, I was too uncritically accepting of the Lowell Director's comments. As you say, groundbased observations of Mars are not yet the legacy of a vanished era, but in documenting atmospheric phenomena it remains an important task that has been abandoned prematurely.

That is sad. As a result, we do not yet know (the HST observations were too scattered) with complete certainty the nature of the polar cap recessions or the answer to the question whether dust storm activity has changed significantly from the nineteenth century to the mid-twentieth century, apart from what we can still glean from the observational record. We do not know whether global warming has taken place on Mars (and that is apart from the question of human-related activity contributing to recent global warming on Earth which is clearly not paralleled in the world of Mars -- and that question we can regard as settled except among those who, like Senator Jim Inhofe of Oklahoma, believe global warming

on Earth is a hoax perpetrated by the U.N. and are not, perhaps, satisfied of the evidence as to the Earth's rotundity or the non-existence of witches).

Our knowledge of these classic questions about Mars and others as you describe will continue to rely on the work of careful groundbased observers.

I will rewrite the second half of that introduction to reflect your very keen observations. I am indebted, my dear friend, at your correcting the myopically American distortions of my vision.

I will fetch you at the airport, of course -- is it possible to fly to San Jose, or should I plan to find you in San Francisco? You will have accomodation on the mountain, but at this point I am hoping to retain the services of a rental car so I can take you on some trips -- I would like to introduce you to my friend Don Osterbrock, who was director of Lick and has encouraged my studies of history of astronomy especially and been instrumental in my obtaining use of the telescope at Mt. Hamilton, and perhaps we can see some sights around San Jose. We may be able to visit Dale Cruikshank at NASA Ames.

So at this stage I would ask if you can determine provisional information about the availability of flights from Japan to San Francisco or San Jose.

I am hopeful that you learned from your doctor the causes of the irregularity of your heart rate which has been a cause of deep concern to me. I have learned myself that I suffer from some advanced form of atherosclerosis which has been a byproduct ("collateral damage" as the phrase used by the military has it) of living in a fast-food culture and eating unhealthily for many years combined with a hereditary predisposition to high cholesterol and triglycerides. But I have adopted a very rigorous diet fit for a Buddhist monk and am trying, with less success, to reduce my stress. I should have stayed at the Buddhist monastery in Kyoto and taken the lessons in meditation.

I shall write soon presently, give my kind regards to Tadashi and Nakajima.

○ ······ **Date: Wed, 9 Mar 2005 18:49:52 -0600**
Subject: Re: Japanese Cooking Book

Dear Masatsugu, ····· Perhaps it would be best to postpone Flagstaff to another time -- perhaps next year -- as there will be enough to show you in California. · · ·

I do commend you entirely for your comments on the Mars book. I shall add a mention of Pickering who was, I now see, "father" of amateur astronomers of the Moon and planets here and in Japan. I suppose he was a greater man than is usually acknowledged. I do recall having seen the two volumes of Flammarion's "*La Planète Mars*" in the library of Saheki -- he had put a bookcover on them and signed his name; I even took a photograph and may include it in my book.

I also agree that it was foolish of Lowell Observatory to discontinue its Mars studies as it did, but I shall not be able to tactfully say so in public.

Finally, I shall order the book on Japanese eating -- I wish I could be observing Mars at this time with you and Nakajima-san.

For now: please forgive a brief message -- I have just returned from Minneapolis, where my parents are in very poor health and I have been called on to assist them perhaps with relocating here so they can be looked after.

All the best, yours,

○ · · · · · *Date: Fri, 11 Mar 2005 18:35:34 -0600*
Subject: Re: FW:Re: MARS drawings

Dear Masatsugu, I am starting to make better plans for our observations of Mars. I believe what I shall do is arrive in San Jose a day earlier than you -- take accommodation, get car rental sorted out, and then drive the next day to the airport to fetch you and also John Fletcher who is coming from the U.K. to join our expedition. The road up Mt. Hamilton is 365 winding turns (so they say; no one including even I myself have for certain counted them!) but I have driven that road and so believe I can manage it safely; even though you will find it exciting!

I hope to give some attention to all this over the weekend. I successfully made arrangements for my parents' elder care so I should be able to relax somewhat now. I propose getting some sake and sharing it with you vicariously for **March 13, the 150th anniversary of Percival Lowell's birth.**

Now if you can begin to explore what airflights you can successfully undertake to San Jose, I will begin to finalize my arrangements.

It will be a great delight to see you again. I have been

perusing again all the images of last year's visit of Japan and the memories are still very fresh and very warm.

I am also appending herewith my note to John Fletcher, who is one of Patrick Moore's protégés. Ever,

○ · · · · · *Date: Sat, 12 Mar 2005 14:48:12 -0600*
Subject: Re: As to Tharsis

Dear Masatsugu, Yes, congratulations on Percival Lowell! I have just been immersed in the same calculations, and have come to the same conclusion that perhaps we should extend our observations another week into October. It would be very impressive, I should think, to see Argyre, Valles Marineris and Tharsis Montes appearing under low sun illumination at the terminator of the planet. · · · · More soon, with my fond regards and looking forward to seeing you soon.

○ · · · · · *Date: Sat, 12 Mar 2005 14:54:36 -0600*
Subject: Re: As to Tharsis

Dear Masatsugu, Mine just sent crisscrossing your message -- It seems that perhaps if we extend our observations a little later in the season, rather than starting earlier, we may have a better chance to observe a dust storm developing. We would also then potentially have the opportunity to see the Tharsis volcanoes -- even if there is a dust pall, they would show as dark spots jutting above the pallor. · · · · ·

I agree that it would seem an awful shame to miss out on Mars when we have that large telescope only for sightseeing, and we can do some visiting of attractions like Lowell Observatory in 2006 when we do not have our heavenly cherry blossom to distract us. Ever,

○ · · · · · *Date: Sun, 13 Mar 2005 18:46:33 -0600*
Subject: Re: RE:Re: As to Tharsis

Dear Masatsugu, · · · · I enclose for your perusal -- as an attachment -- an essay that I have begun with Rodger Gordon on John E. Mellish's alleged observations of the craters of Mars with the Yerkes telescope when the disk was only 7".7 of arc across and only 89% illuminated. I believe Mellish saw Argyre and the Tharsis volcanoes as shadows and that this is what inspired his view of the craterous Mars long before Mariner 4. · · All the best,

○ · · · · · *Date: Sun, 13 Mar 2005 19:25:44 -0600*
Subject: Re: RE:Re: As to Tharsis

Dear Masatsugu, · · · · We will have a wonderful experience to look forward to assuredly! You will never forget those two weeks above the clouds.

○.....**Date: Mon, 14 Mar 2005 21:55:06 -0600**
Subject: Re: RE:Re: RE:Re: As to Tharsis

Dear Masatsugu, I see what you mean -- it is very hard decide the case. Let me think on it and I will return to you soon. Ever,

○.....**Date: Tue, 15 Mar 2005 21:44:05 -0600**
Subject: Re: RE:Re: RE:Re: RE:Re: As to Tharsis

Dear Masatsugu, In August and September 2003 we had extraordinary seeing -- even old hands such as Rem Stone and Tony Misch but also some of the staff astronomers noted that they had seldom seen such fine resolution. But that may have been atypical. I'm not quite sure when the season breaks and "monsoons" begin or snow to fall. I will consult with Tony when he gets back. Of course, each season is not the same, and the weather patterns are undoubtedly much different now from what they were in the 1890s -- among other things, we have global warming now. When I was at Mt. Hamilton in 2003 we were in the midst of an extreme drought and forest fires were burning in the distance around the observatory -- we were unable to open the dome one night because there was so much ash in the air, which would of course potentially fall onto and damage the lens or work its way into the finely tuned gear mechanisms -- and there was a brush fire (someone thought it was by arson but more likely carelessness) very close to Barnard's house, which is no longer safe for occupation and was damaged in the earthquake that interrupted the world series in 1988.

..... I quite agree with your interpretation of the dust storm activity that must have interfered with Barnard's observations in 1894. It seems that he was the chief observer of this activity and I had the pleasure of communicating Barnard's observations to McKim. Previously to my recovery of them at Yerkes in 1987 they had never been published. It seems that Lowell was not as aware of dust in 1894. It will be very interesting for us to compile a web page which will show simultaneously the drawings of Lowell, Pickering and Douglass in 1894 and those of Barnard together with our own at the upcoming post-perihelic opposition.....

Your weather sounds quite dreadful. I do think the large number of typhoons that have ravaged Japan are

proof that climate change is underway already in our lifetimes. I hope your health has been restored to its usual vivacity.

○.....**Date: Wed, 16 Mar 2005 16:49:43 -0600**
Subject: Re: RE:Re: RE:Re: RE:Re: As to Tharsis

Dear Masatsugu, Here's some info from Tony Misch, just back from Berlin.

○.....**Date: Tue, 22 Mar 2005 17:57:49 -0600**
Subject: Re: RE:Re: RE:Re: RE:Re: As to Tharsis

Dear Masatsugu, I've been mainly preoccupied with my parents' health issues but have been thinking more about Mars and my inclination is for us to specify the later dates -- in October --when Mars's disk is larger and perhaps try for relief features at a subsequent aphelic opposition. It seems a great waste to use a large telescope on Mars six weeks or two months from opposition when we will have a disk almost 20" across and good chances of favorable weather in October. Let me know if this sounds acceptable.

Sky & Telescope are asking me to do an article on Percival Lowell's travels in Japan -- especially Noto -- and perhaps on the influence of Lowell and Pickering on Japanese Mars observers. I will also include some information about Saheki in a sidebar. What I am wondering and hoping you will consent to do is collaborate with me on preparing such an article. I believe it will likely run in October or November of this year (I am also doing one on Mellish's Mars observations in November 1915 with Rodger W. Gordon).

Muse on this, and let me know if your response is favorable to a collaboration.

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

●.....**Date: Sat, 26 Feb 2005 13:25:19 -0500**
Subject: Mars image for CMO

Hello, Here is a Mars image for the CMO. Thank you

Zac PUJIC (ザック・フジッチ Brisbane 豪)
rhineland@hotmail.com

●.....**Date: Tue, 1 Mar 2005 21:24:01 +0900**
Subject: 返信-阿久津

二月は一月同様に気流も悪く、画像を得ることが出来ませんでした。お問い合わせの件、詳しくは私にも分かりませんが、ATKのモノクロカメラで今期の火星を撮るにはIRとUVでいけると思っ

ています。H α のバンドパスはフィルターは意味が無いような気がします。UV画像に関して前回も試してみましたが、像が二重になってしまい、原因が分からず諦めてしまいました。多分口径にもよりますが、露出時間はかかるはずで。これで駄目ならば濃いBフィルター(B-390)でも良いですね。気流の良い夏のオーストラリアなら日本と違い良い画像が得られるでしょうね。

南様、三月下旬から(27日、29日か)セブ島出張が決まりました。今回は五月末迄の二ヶ月間です。今回は前回よりも長いので、惑星撮像をChristopher Go宅で行う心算で、彼にコンタクトを取っています。彼からは早くセブに来いとのお返事でした。彼の持っているC-8の画像はすばらしいのですが、できれば大きな口径と思うところです。彼にはToUcamで木星を撮って貰い、私はATK-1HSでUVやIR画像をとっています。勿論明け方の火星はIRとB画像でやるつもりです。毎週土曜日は彼とともに観測出来ます。アドバイス願います。

また火星の四~五月に情報をメールで流してください。今回からセブ島でもこのアドレスで通信できますので、得られた画像を送りたいと思っています。よろしく願います。

○……………Date: Thu, 10 Mar 2005 22:52:25 +0900
Subject: 依頼画像

ご依頼の火星画像2003年Oct06日の $\omega=142^\circ W$ はこれで良いのでしょうか？添付します。

セブ島は月末に参りますが、今回C-11(28cmシユミカセ)を送ることにしました。彼の架台に載せてもらい共同観測の予定です。

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

(註) AKUTSU stays at Cebu, Philippines in April-May.

●……………Date: Sat, 05 Mar 2005 16:07:36 +0900
Subject: Re: [Fwd: Re: 火星ダストストーム]

>Strausberg and othersの2001年黄雲の大論文、送っていた
>だきどうも有り難う。PDFは読めるのですが、ダウンロ
>ードに長い時間が掛かり、途中で止まってしまうので、
>何度か失敗しましたが、漸く落ちました。

サイズが大きすぎましたか。ご迷惑をおかけしました。

>この論文はプレプリではありませんね？ どのような配布の仕方がされるのですか？ カラーが入るのは好いし、PDFはrealです。

中島健介さんはJGRをオンラインで読む契約をしているそうで、年間四十本までの論文をpdfに

ダウンロードできるのだそうです。

○……………Date: Mon, 21 Mar 2005 08:26:05 +0900
Subject: Re: 地震お見舞い

メールありがとうございます。昨日は卒業式で、九国大の体育館にいたのですが、来賓の祝辞の最中にグラグラッときました。私の周りでは研究室の雑誌が何冊か落下したぐらいで、何も被害は無かったのですが、JRが止まってしまって、家に帰るのに一苦労しました。その後、余震は何度かありますが、家の方もまったく損害などありません。お心遣いありがとうございます。

PS: 五月の地球惑星の合同大会(幕張)へ行かれますか？火星のセッションもあります。

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

●……………Date: Sun, 6 Mar 2005 23:54:07 +0900
Subject: Mo 06 Mar 05

今朝は快晴でしたが気温は低く、風もあり、Seeingはあまり良くはありませんでした。久しぶりに見る事が出来たのですが、随分と大きくなった感じがしました。表面模様は薄っすらと確認できました。日の出が早くなって、撮像が難しくなりましたが、昇る時間も早くなり、少し早い時間からの撮像が出来そうです。もう少しましな像を撮りたいものです。

○……………Date: Wed, 23 Mar 2005 01:19:14 +0900
Subject: Mo 20 Mar_05

20Mar GMTは最近になく好Seeingで、南極雲や表面模様も良く見えました。気温も高く、観測しやすい朝でした。Seeingは6/10といったところでしょうか。もう20時30分すぎには観測可能になってきました。この日も40分後に撮ってはいりますが、画像の良いものを優先しています。

森田 行雄 (Yukio MORITA 廿日市 Hiroshima)
mo7797@ybb.ne.jp

○……………Date: Thu, 10 Mar 2005 18:16:00 -0300 (ART)
Subject: Mars, early attempt from Lima - Peru...

Dear Mr. M Murakami / M Minami: Having seen current Martian pictures in your web, I am encouraged to submit this shot which was taken in a bright sky (6:15 am): It shows subtle details as such a prominent South polar cap. Data as follows:

March 9th 2005 11:15 GMT Lima- Peru
Celestar 8" at f/30 ,ToUcam Pro II (I-R blocked), resampled at 2x . 350 frames stacked of 1500.

○.....Date: Fri, 11 Mar 2005 06:41:23 -0300 (ART)
Subject: RE:Mars, early attempt from Lima - Peru...

Dear Mr. Minami, I appreciate your swift reply as well as the data and instructions you sent me. ... Anyway, I'll do my best to send every Martian shot I'll be able to take. Thank you very much sir! I look forward to sending you all the Martian pics I can. Sincerely,

○.....Date: Thu, 17 Mar 2005 11:11:14 -0300 (ART)
Subject: 2005/03/16 Mars Image; 11h00m GMT...

After some cloudy nights and very poor seeing conditions, I could image Mars yesterday at last! Seeing was 5 (Pickering) and foggy. This morning I had the chance to image too, but conditions were really terrible! ...so I am still processing trying to do miracles... Anyway, These data below belong to March 16th (yesterday) :

I hope to enjoy a perfect night very soon, so that my pictures improve! Thank you very much! Sincerely,

○.....Date: Sat, 19 Mar 2005 02:09:55 -0300 (ART)
Subject: 2005/03/18 Mars Image, 10h40m GMT...

This is my latest picture. It was taken last March 18th.

On 18 March 2005 ($\lambda=177^\circ\text{Ls}$)
10:40 GMT ; $\omega=028^\circ\text{W}$ 、 $\phi=14^\circ\text{S}$
20cm SCT at $f/30$; ToUcam Pro II (IR-Blocked)

Thank you very much for posting! Sincerely,

David RIVAS ROMERO (タビ・リバス Lima 秘魯)
david_rivasromero@yahoo.com.ar

●.....Date: Mon, 14 Mar 2005 02:48:37 -0500
Subject: Mercury Observation (March 12, 2005)

I made an observation of the planet Mercury on March 12, 2005 at 23:40 U.T. using a 9-inch $F/13.5$ Maksutov-Cassegrain. I was surprised to detect a faint albedo feature (Admeti Vallis?) on the terminator over the northern half of the planet. This feature was glimpsed only when the seeing briefly steadied. The apparent diameter of the planet was 7.4 arc-seconds. I welcome any comments on my observation. Regards,

○.....Date: Tue, 15 Mar 2005 17:00:47 -0500
Subject: Jupiter Observation (March 13, 2005)

I made an observation of Jupiter on March 13, 2005 at 04:00 U.T. using a 9-inch $F/13.5$ Maksutov-Cassegrain under average seeing conditions (5-6/10). The Great Red Spot (GRS) was noted on the preceding limb. Complex bright (7/10) rift activity was noted following the GRS. The South Temperate Belt (STB) was prominent following the CM. A bright (7/10) rift system was noted to be bisecting the North Equatorial Belt (NEB). The North Temperate Belt (NTB) was prominent on the CM. I welcome any comments on my observation. Regards,

Carlos HERNANDEZ (カルロス・ヘルナンデス FL 美)
mars@ilcs.net

☆☆☆

シー・エム・オー・フクイ

中島 孝 Nj

★今回は編集部の村上昌己、南政次両氏より『天文観測年表』2005年版火星項の原稿料をカンパして頂きました(360)。現在、ローソンでB4一枚10円で印刷しています。従って16頁建ての場合郵送料(海外はSAL)を入れますと、一号実費200円+ α を必要としています。国内海外はほぼ同数ですが、海外へは情報交換のため無料で配布していますので、一号お一人400円+ α 見当で、引き続きご支援をお願いいたします。現在、保存用も含めて125部印刷しています。不一

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

『火星通信』#303 (25 March 2005) 編集 : 南 政次(Mn)、村上 昌己(Mk)、中島 孝(Nj)
西田 昭徳(Ns)、常間地 ひとみ(Ts)

Edited by: Masatsugu MINAMI, Masami MURAKAMI, Takashi NAKAJIMA,
Akinori NISHITA and Hitomi TSUNEMACHI

発行 Published by/for : 東亜天文学会 OAA 火星課 Mars Section

☆ Any e-mail to CMO is acknowledged if addressed to
cmo@mars.dti.ne.jp (Masami MURAKAMI at Fujisawa)

☆ 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)

