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EPSC-DPS Joint Meeting in 2011

By

Christophe PELLIER

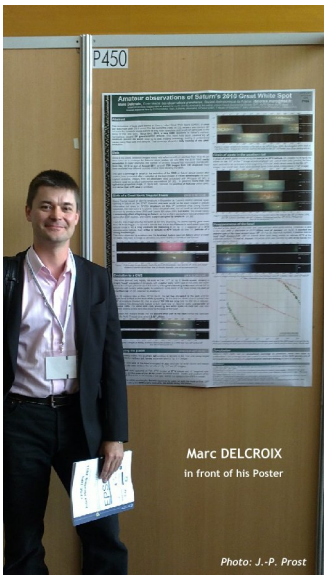
The European Planetary Science Congress (EPSC) meeting takes place every year in a european city – it's organized by the association Copernicus meetings (Ref. 1). The 2011 event took place in Nantes at the *Cité internationale des congrès*, from october 2nd to 7th, and it was special because it was a «joint meeting» between the EPSC and the Division for Planetary Science (DPS) of the American Astronomical Society. I live in Nantes now since last december so it was a chance for me to attend the meeting. The CMO/ISMO Editor kindly asked me to give my impressions and I'm glad to do so, because it was very interesting.

What struck me when I entered the meeting for the first time, and that was confirmed on the following days, is that the place was fully crowded. The conference center was invaded by so many people that it was sometimes hard to access to posters or to find friends. Not only professionals were there; the large number of younger persons showed that many planetology students were also attending the meeting. Of course the fact that it was a joint EPSC-DPS meeting contributed to this. The program book stands that almost 1700 abstracts has been received, doubling the amount received at the 2010 EPSC. For planetary science, this joint meeting looks to have been a real success.

The EPSC-DPS meeting has two separated kind of programs. One is an oral conference program; where in auditoriums or smaller rooms, scientists give talks on some system solar topics. The number of conferences was so great that

only 10 minutes were allowed for a speech. The speeches covered a wide variety of topics spanning the whole solar system bodies as well as specific missions or science techniques. The program books for less than a week counted around one hundred pages... if many conferences were a bit too tough to understand for an amateur, some were easier to catch, at least partially. Some of the conferences I listened to about the giant Saturn storm of last apparition, or the 2009-2011 SEB fading and revival on Jupiter, brought much interesting information clear enough for my understanding.

The other program is a poster conference one. Outside the auditorium, many boards were set up for people to present a wide-format poster on a given topic. Again, there were many to read. This also allowed people to talk with the author of the poster in a more informal and direct conversation. The interesting news about this is that the poster program was opened to non-professional astronomers. Some of us amateur planetary observers were actually presenting a poster or two: the SEB revival was covered by posters from John Rogers, the BAA Jupiter section's director, and Manos Kardasis, from the Hellenic amateur astronomy association (Ref. 2). Marc Delcroix had a poster about some recent amateur observations of Saturn of the giant 2011 storm and the imaging of the famous spokes in the rings (Ref. 3). Those poster did bring interest to many people, from what I have seen !



Finally, one thing important to note is the existence of real links between professional astronomy and amateur astronomy. Amateur images have an importance because they are now of great quality, and because they are numerous. This was enlightened by professionals themselves. On the wednesday evening, we had an informal meeting between the International Outer Planet Watch (IOPW) members, and this was an occasion to meet and talk to professionals that are actively using amateur data, like the team working with Agustin Sanchez-Lavega in Spain (that one that maintain the Planetary virtual observatory and laboratory (Ref. 4)), Georg Fischer from Austria, Glenn Orton from the USA, Padma Yanamandra-Fisher from Australia, Nicolas Biver from France... The relations between both «worlds» are more dynamic that we may think at first glance.

This shows that there is still room for high quality amateur work. All is required for us is to keep on observing and learning about planets. Our passion is worth the investment.

***Acknowledgements**: The author would like to thank John Rogers and Marc Delcroix for having sent the photos for this ISMO publication.*

(Ref. 1) http://meetings.copernicus.org/
(Ref. 2) Manos's poster can be read on his website: http://www.hellas-astro.gr/images/Jupiter_SEB-Revival2010_MKardasis-small.jpg
(Ref. 3) Marc's poster can also be found on his homepage (see Posters): http://astrosurf.com/delcroix/index2_en.htm
(Ref. 4) PVOL : http://www.pvol.ehu.es/pvol/

Letters to the Editor

●……***Subject: Mars observations last 15th***
Received: Sat 15 Oct 2011 17:11 JST

Dear sir, I have re-installed the cassegrain of 305mm and used it this last night on Uranus and Mars. Here are the reports communicated to the CMO/ISMO Mars Section. ・・・・・

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111015/SMk15Oct11.jpg

The north cap is bright, well visible and darkly bordered as shown. Chaos is not clear and whitish Libya appears bright and Syrtis Major rises with contrast attenuated.

Amazonis Olympica appears clear in bluish color;

Eridania appears bright at the first look.

Generally the limb of Mars appears hazy (all colors) and Syrtis Major area remains on attenuated contrast level (all colors, rather in blue-green).

Generally speaking images were rather good sometimes to average mainly. For your perusal.

○……***Subject: Mars of this morning***
Received: Fri 21 Oct 2011 2:07 JST

Dear sir,

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111020/SMk20Oct11.jpg

Here is my contribution about Mars observed this morning with the MC150mm before going to office. The North cap well whitish and brilliant. Elysium rising. Zephyria seems hazy in yellow-green. South polar area seems hazy both colors. Difficult to say more. For your perusal. Faithfully

○……***Subject: Mars last 1st Nov.***
Received: Tue 1 Nov 2011 20:18 JST

Good morning, Please find my last observations about: ‥‥ *Mars:*
performed with the 305mm cassegrain and 340×.

Chryse Xanthe Tharsis Thitonius Tempe area with attenuated contrast levels both with the yellow and the light blue filters. The north cap is well defined and bordered from Ismenius to Mare Boreum. Argyre appears at the first look whitish.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111101/SMk01Nov11.jpg

All for your perusal.

Weather now still cloudy rainy sky well closed. Hope to catch a period for uranus with the MC value of 300 degrees. Faithfully

Stanislas MAKSYMOWICZ
(Ecquevilly, FRANCE)

●……***Subject: mars 13 oct.***
Received: Sun 16 Oct 2011 08:43 JST

Hi, Under average condition I took one image. PLS see them.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111013/SGh13Oct11.jpg

○……***Subject: mars 22 oct***
Received: Sun 23 Oct 2011 12:52 JST

Hi, On 22 October the seeing in Tehran was good so that I took one image. PLS see it.

○……***Subject: mars 4 nov***
Received: Sat 5 Nov 2011 00:04 JST

Hi, After big RAINSQUALL on 4 November, the seeing condition was average so that I took one image of Mars. PLS see it.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111104/SGh04Nov11.jpg

Ciao

○……***Subject: mars 5 nov***
Received: Wed 9 Nov 2011 08:15 JST

Hi, Under an average condition, I took one image. PLS see it.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111105/SGh05Nov11.jpg

B.W

Sadegh GHOMIZADEH (Tehran, IRAN)

●……***Subject: Mars 2011/10/16***
Received: Sun 16 Oct 2011 18:09 JST

Hello, Here is Mars on 2011/10/16

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111016/JPp16Oct11.jpg

Regards

○……***Subject: Mars 2011/10/17***
Received: Mon 17 Oct 2011 19:16 JST

Hello, Here is Mars on 2011/10/17

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111017/JPp17Oct11.jpg

Regards

○……***Subject: Mars 2011/10/21***
Received: Fri 21 Oct 2011 17:06 JST

Hello, Here is Mars on 2011/10/21

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111021/JPp21Oct11.jpg

The seeing was average. T = -1°C. Regards

Jean-Jacques POUPEAU (Essonne, FRANCE)

●……***Subject: Mars Ak15Oct11***
Received: Wed 19 Oct 2011 16:14 JST

MINAMI-sama, At the beginning of October, I stayed a while in Japan because I felt I was not healthy. Consulting a hospital I found unfortunately I was suffering from the high-blood-pressure, and became to take a medicine.

Now after a Typhoon went out from the Philippines, the weather these days has been extraordinarily fine (the first time ever since I came here), and I have got a set of Mars Images the other day.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111015/Ak15Oct11.jpg

○……***Subject: Re: RE: Mars Ak15Oct11***
Received: Thu 20 Oct 2011 17:29 JST

MINAMI-sama, Thank you very much for your kind advice. I am taking a kind of medicine which

I was given from the hospital in Japan, and it seems to work: the blood pressure is going down. As you say, perhaps I must take the medicine for ever. I feel now I have been physically weakened.

As to the planet Mars, it became difficult to observe because the time becomes quite different from Jupiter time. This morning I got up early, but it was cloudy.

Visually, the npc appears very bright. If the seeing is good we can catch some more details. It will become more comfortable if the altitude of Mars is high up. I will try surely to take pictures when the following day is holiday.

Take care your health also since it will became soon cold in Japan. Regards.

○……***Subject: Mars Ak22Oct11***
Received: Sun 23 Oct 2011 13:12 JST

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111022/Ak22Oct11.jpg

These are set of the Mars images from this morning though the seeing was not good. It seems that there is a long (dust?) cloud to the south of the npc, and furthermore the npc seems to show a dust disturbance inside.

○……***Subject: Mars Ak05Nov11***
Received: Tue 8 Nov 2011 22:04 JST

MINAMI-sama, I caught Mars on 5 Nov:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111105/Ak05Nov11.jpg

Work in the daytime is so busy that I feel my physical strength is really declining.

I reduced the *F*-value.

Tomio AKUTSU (Cebu, the PHILIPPINES)

●……***Subject: Re: Mars 2011/10/21***
Received: Fri 21 Oct 2011 17:11 JST

Very nice Jean-Jacques, it seems that you have caught the Tharsis orographic clouds!

○……***Subject: Re: May I ask a favour of you?***
Received: Mon 24 Oct 2011 01:51 JST

Dear Masatsugu, No problem, I can write a review about the EPSC meeting, indeed, it will be worth talking about it; although I have mostly followed information about the gas giants, not Mars (too little free time).

I'm sorry I have not sent any Mars images yet this season, but due to the unfavourable orientation of my current location, I can not see it before it reach south meridian at or before sunrise, and this is currently not the case... fortunately Jean-Jacques is producing fine images for Europe! Best wishes,

○……***Subject: Re: [marsobservers] Re: Mars 11/2, excellent seeing***
Received: Mon 7 Nov 2011 22:35 JST

To: marsobservers@yahoogroups.com
Cc: Masatsugu MINAMI<vzv03210@nifty.com>, Masami MURAKAMI<cmo@mars.dti.ne.jp>

Hi Jim, Although I agree with you that it looks like dust, there is something curious about this - the same detail was visible during several days in early december of 2007 (check any image gallery, images from the "Barbados team" for example). The line did not seem to move as days passed.

I would go for a mixed atmospheric phenomena (dust+water vapor) trailed by the springtime polar jetstream, in a geographical corridor closed at south by Tharsis relief...

Regards, Christophe

Le 06/11/2011 06:29, jtmelka a écrit :

Hi Sean, You really had some seeing! Yes, I don't know what else would cause that long bright streak other than dust. The blue probably indicates that there is water vapor mixed in with the dust. And that might be expected since the seasonal NPC is subliming water ice to vapor now and high winds can occur in those regions. Things look clear to the South and Solis Lacus is dark as coal! These images deserve a lot of study. Keep em comin. Thanks. Jim MELKA

○……***Subject: Re: [marsobservers] Re: Mars 11/2, excellent seeing***
Received: Wed 9 Nov 2011 18:46 JST

To: marsobservers@yahoogroups.com
Cc: Masatsugu MINAMI, Masami MURAKAMI

Hi Roger, Yes these are clever objections. Here are some elements I would bring to discuss them:

1) Warming and dust.

The warming of the atmosphere is indeed a key in the development of big storms, by the "feed-back" mechanism: more dust = warmer temperatures = stronger winds = more dust. However, I don't think that temperature is a relevant cause for small, local dust clouds. Local winds do lift dust from the surface so we don't need more explanation for this (moreover, at first place, I think that this is the dust that causes the warming, and not the warming, that causes the dust). At the boundary of the polar circulation, there are a lot of small dust clouds.

2) Obscuration

A very important point. But, if the dust cloud is small and if it circulates over a surface free from dark markings, there is no possible obscuration... this is the case here.

3) Movement. In this case, we don't see any movement in latitude. But, nothing proves that there is no movement in longitude either, and this is my theory.

4) For the correspondence of the paths of dust and winds: on Mars, the topography plays a strong role, and in the case here, the curious line is found due north of the Tharsis bulge. From everything I have seen from high-res probe images or scientific theories (as well as amateur images), the circulation here is confined in a pure west-east direction because of this topography.

There are more elements to be found in the "cross-equatorial storms" model, that shows that polar winds are going to be able to go southward only after they have passed the Tharsis bulge, when they arrive above the lowland of Acidalia. If you remember my conference at the IWCMO meeting in 2009 :

http://www.hida.kyoto-u.ac.jp/~cmo/cmomn5/2009Paris_Meudon_Talks_CPl.htm

where there was this model map :

http://www.hida.kyoto-u.ac.jp/~cmo/cmomn5/2009Paris_Meudon_Talks_CPl.files/image007.jpg

Here are MGS blue images taken near equinox in 2002, showing long strips of white clouds moving at the boundary of the polar circulation (surely at the polar jetstream):

http://www.msss.com/mars_images/moc/weather_reports/23_29APR_02/2002_04_23_29_60perc.jpg

Damian's images from december 7th, 2007, showing identical white strip and the curious "dusty" line:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2007/071207/DPc07Dec07.jpg

(there are many more from the same days from various observers)

Finally, talking about "dust cloud" is maybe too exaggerated here. I would say this is just a lifting of dust carried out by a polar jetstream that is mainly "made of" white clouds.... Regards, Christophe

Le 09/11/2011 04:53, Roger Venable a écrit:

Christophe, Jim, and Sean --

I find this all a bit confusing. There are objections to every way of looking at it.

Sean's image reminds me of John Hood's images of Elysium taken on Oct 25 and Oct 26, 2011. The interesting features -- Elysium in John's image and an E-W band in Sean's image -- are brightest in red, less bright in green, and faintly visible in blue. This is the way that dust is supposed to look, except that dust is often completely invisible in blue. (Of course, two of the cardinal features of dust are (1) that it is an obscuration of darker features, and (2) that this obscuration moves. Neither John's nor Sean's image clearly shows these two characteristics of dust.)

I'd be more satisfied that these were dust if they were invisible in blue.

As for the possibility of mixed cloud and dust, is this not problematic? Dust results in rapid warming of the atmosphere by absorption of insolation. Clouds occur in cool areas of the atmosphere where crystals form out of supersaturated air. The presence of dust should make clouds unlikely in the same province.

Also, it is hard to imagine how dust's location and movement would correspond so closely to that of cloud. Dust is mostly in the "mixing layer" of the atmosphere, which is the lowest 10,000 feet. In contrast, water vapor clouds are much higher in the atmosphere. Wind directions at low elevations are often very different from wind directions at high elevations. For example, Earth's jet streams' directions often have little resemblance to the directions of the surface winds directly under them. And, a low pressure area at low elevations corresponds to a high pressure area at high elevations, and these two have nearly opposite wind directions.

So, I am puzzled by the images. And I do not have confidence in the explanations that I've seen. But maybe we'll figure this out.-- Roger VENABLE (ALPO)

○ ····· ***Subject: Re: May I ask a favour of you?***
Received: Wed 9 Nov 2011 02:29 JST

Dear Masatsugu, Please find attached photos from John and Marc. There are photos of people as well of the congress, you can make your choice!

Best wishes,

○ ····· ***Subject: Re: On EPSC-DPS***
Received: Fri 11 Nov 2011 07:24 JST

Dear Masatsugu, Please find attached again the Essay, with the information you requested in the first paragraph.

Yes this is Marc on the photo in front of his Saturn poster. The photo has been taken by Jean-Pierre Prost (Jean-Pierre is one the very best french planetary imagers - it looks like the ISMO never received Mars images from him, when the next season start I will tell him about us!). All other photos have been taken by John, unless he appears himself on them.

We have been informed a few days ago on the HST Jupiter list about the passing of Don's wife... this is a very sad news; she was quite young... this disease is really terrible. My mother had the same more than ten years ago now but it has been discovered quite early and she's still well today.

I will answer about the recent Mars discussion later; what about writing a note again about this? I

had noted this strange aspect before, but did not make any enlarged research until these past days. Did we publish something in ISMO or CMO in 2007 already? Best wishes,

Christophe PELLIER (Nantes, FRANCE)

●……***Subject: Mars 2011/10/18-Kumamori***
Received: Fri 21 Oct 2011 22:46 JST

Masatsugu MINAMI-sama, I am sorry I have not written to you for a while.

Because the apparent declination goes down, I become to be able to catch the planet Mars from our veranda. This is the first shot of Mars since I changed my telescope from 20cm home made Dall-Kirkham to a C11, and so the method is not well fixed, but this is the first report of this season.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111018/Km18Oct11.jpg

○……***Subject: Mars 2011/10/28-Kumamori***
Received: Sat 29 Oct 2011 09:39 JST

Masatsugu MINAMI-sama, good morning. It is now hard for me to get up early in the morning. The seeing is not also very good.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111028/Km28Oct11.jpg

Best wishes

Teruaki KUMAMORI (Sakai, Osaka, JAPAN)

●……***Subject: Mars 11/2/2011***
Received: Fri 4 Nov 2011 22:00 JST

Very good seeing conditions on the morning of 11/2 allowed use of very long imaging focal length. Note the cloud band along the northern hemisphere (+45°N), visible in each color channel; perhaps a bit of dust kicked up from the subliminating NPC.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111102/SWk02Nov11.jpg

Clear skies,

Sean WALKER
(Imaging Editor, *Sky & Telescope*, NY)

●……***Subject: Re: MoOct***
Received: Sat 5 Nov 2011 01:09 JST

Masatsugu MINAMI-sama, I send these I just processed.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111017/Mo17Oct11.jpg
http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111018/Mo18Oct11.jpg

○……***Subject: Mo08 27 Oct_11***
Received: Sat 5 Nov 2011 02:37 JST

Here are images on 08 and 27 Oct:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111008/Mo08Oct11.jpg
http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111027/Mo27Oct11.jpg

○……***Subject: Mo 03 Nov_11***
Received: Wed 9 Nov 2011 02:02 JST

Masatsugu MINAMI-sama, I think I become a bit accustomed. The seeing was rather good on 3 Nov: Elysium appeared well white.

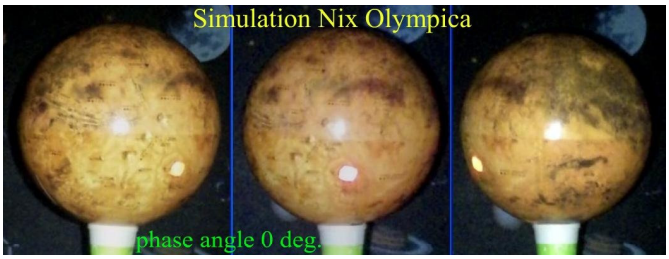
http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111103/Mo03Nov11.jpg

Regards

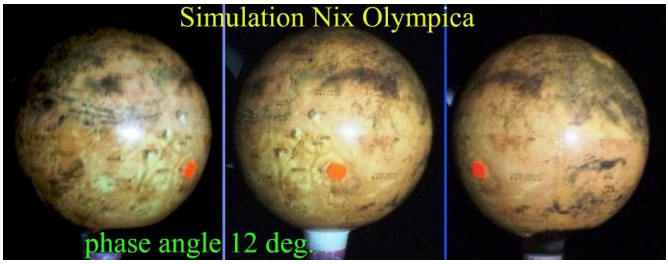
Yukio MORITA (Hiroshima, JAPAN)

●……***Subject: Retroreflectors on Mars***
Received: Tue 8 Nov 2011 23:51 JST

Dear all areoholics, Attached is the same montage as shown in my LtE in Japanese in the CMO Japanese version #389 (Web only) entitled "Nix Olympica; what shines is her bare skin? her makeup? or her thin clothing?"…That was a simulation to test how a huge Martian volcanic plateau covered with retroreflective material looks at opposition. A patch of retroreflective sheet (for bicycle reflector) was stuck on my Mars globe just to cover the Olympus Mons. Then the globe was lit with a collimated light and was photographed at full-Mars lighting conditions (ι=0°). You can see "Nix Olympica" shining from morning, through noon, till evening, irrespective of the changing tilt of "Olympus Mons" toward us/the Earth.



In response to Dr. Masatsugu MINAMI's request I am also attaching the montage with the simulation images taken at a larger phase angle condition (ι=12°). You'll no longer find "Nix Olympica" anywhere on the Mars globe.



I agree with Dr. MINAMI that the prominent antisolar brightening of Olympus Mons is a kind of "Opposition Effect". In explaining opposition effect "shadow hiding" generally comes first. When looking at a rough surface in a direction directly away from the sun, shadows are hidden by the objects (casting the shadows) themselves. The antisolar region looks brighter because it contains less shadow and more sunlit surfaces than the surrounding area.

As seen from the Earth at opposition, however, Mars' apparent size will be only 25 arc seconds or so at most, so small area (practically an "antisolar point") that we'll see whole the Martian disk shining glaringly by the shadow hiding effect. On that dazzling full-Mars, Olympus Mons stands out brilliantly to be Nix Olympica; this means we need different mechanisms than shadow hiding to explain the special antisolar brightening of the huge volcano.

"A Retroreflector on Mars Model" seems to be the most simple and effective solution for the various characteristics of the Nix Olympica Phenomenon; observable only in a short limited period centered around the opposition day, shining throughout the daytime wherever located on Martian disk with the gigantic plateau's varying angle viewed from the Earth, the brightness weakens significantly even under the least amount of misty covering matter,…etc, etc.

Dr. Masatsugu MINAMI has often suggested in the CMO issues that some special volcanic materials forming the flank of Olympus Mons might cause the prominent antisolar brightening at opposition. This may be called "Shining Bare Skin Hypothesis".

Some other highest Martian volcanoes also show remarkable brightening near zero phase angle frequently simultaneously with Olympus Mons; Montes Olympus, Ascraeus, Arsia, Pavonis and Elysium are ranked as the top five in order in the list of mountains on Mars by height, each one has shown considerable surge in brightness at certain opposition periods. Their extremely high elevations, I think, may contribute to the selective sedimentation of appropriately finer airborne dust particles thrown up in recent storms to produce stronger coherent backscatter by which highly efficient retroreflection can occur. This "Shining Makeup Hypothesis" may be indirectly testified by observing polarization properties of the Nix Olympica Phenomenon. Or the Martian dust samples brought back by the future manned landing missions may directly prove it. Good Seeing with Excellent Scopes!

Reiichi KONNAÏ (Fukushima, JAPAN)

●……***Subject: Mars 2011 Nov 6***
Received: Fri 11 Nov 2011 00:32 JST

Dear colleagues, I hereby contribute my first Mars image for this season.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111106/JWr06Nov11.jpg

It was obtained with an old scope of mine recently equipped with a new secondary. Best regards,

Johan WARELL (Skivarp, SWEDEN)

●……***Subject: Mars 2011 Nov. 7 0510 & 0650.***
Received: Fri 11 Nov 2011 20:46 JST

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111107/DGr07Nov11.jpg

With regards.

David GRAY (Durham, the UK)

☆ ☆ ☆

CMO/ISMO 2011/12 Mars Report #03

2011/2012 Mars Observations in October 2011

♂……This report treats the observations made in October 2011: During the period the planet moved from Cnc to Leo and the apparent declination D went down from 19°33'N to 14°48'N: However still it is soon higher up in the morning, and hence we should say it is now the beginning of the season. The Martian season λ proceeded from λ=009°Ls to λ=023°Ls, and the apparent diameter δ went up from δ=5.2" to δ=5.9". The central latitude ϕ moved from 17°N to 22°N so that the northern hemisphere largely faced to us. The phase angle ι was from 33° to 36°.

♂·····We received the observation reports as follows: Domestically 5 members, and abroad observers were counted 5 persons in number. We had no report in October from the US and the UK:

AKUTSU, Tomio (*Ak*) Cebu, the Philippines

2 Sets of *RGB* + 2 *IR* + 2 *Colour* Images (15, 25 October 2011)
36cm SCT @*f*/24, 55 with a DMK21AU04, DFK21AU04

GHOMIZADEH, Sadegh (*SGh*) Tehran, Iran

4 *Colour* + 2 *B* Images (2, 8, 13, 22 October 2011) (28cm SCT @*f*/37 with a DMK21AU04.AS)

KUMAMORI, Teruaki (*Km*) Sakai, Osaka, Japan

2 Sets of *Colour* Images (18, 28 October 2011)
28cm SCT @*f*/45, 55 with a DMK21AF04, DFK21AF04

MAKSYMOWICZ, Stanislas (*SMk*) Ecquevilly, France

3 Sets of Drawings (3, 15#, 20## October 2011)
290, 350×20cm RC, 340×31cm Cassegrain#, 300×15cm Maksutov##

MINAMI, Masatsugu (*Mn*) *Fukui City Observatory, Fukui, Japan

56 Drawings (1, 3, 7, 9, 11, 13, 16, 18, 19, 26, 28, 31 October 2011) 400×20cm Goto ED refractor*

MORITA, Yukio (*Mo*) Hatsuka-ichi, Hiroshima, Japan

11 Sets of *RGB* + 11 *LRGB Colour* + 11 *L* Images (8,~10, 17, 18, 25, 27 October 2011)
25cm speculum @*f*/80 with a Flea3

NAKAJIMA, Takashi (*Nj*) *Fukui City Observatory, Fukui, Japan

43 Drawings (1, 7, 9, 11, 16, 18, 19, 26, 28, 31 October 2011) 400×20cm Goto ED refractor*

POUPEAU, Jean-Jacques (*JPp*) Essonne, France

6 Sets of *RGB* + 2 *R* Images (1, 2, 14, 16, 17, 21 October 2011)
35cm Cassegrain with a SKYnyx 2-0

SMET, Kris (*KSm*) Bornem, Belgium

1 *Colour* Drawing (2 October 2011) 540×30cm Dobsonian

SUSSENBACH, John S (*JSb*) Houten, The Netherlands

1 *Colour* + 1 *R* Images (1 October 2011) 28cm SCT with a Flea3

♂·····At the end of October, δ=5.9", while the number of the observers was less than expected despite the fact that the Martian season was important and interesting because of the northern spring has begun. We suppose that this proves the observers' indifference toward the Martian season but just only toward the details of the markings. However, the planet soon rises up (in the northern hemisphere) and so it is now the season you should make many observations of Mars.

We cannot thus yet report globally because the number of observations is not enough. However, as to the initial status of the orographic clouds around Tharsis Montes and Olympus Mons, POUPEAU (*JPp*) observed timely on 21 Oct (λ=018°Ls); Especially it was clearly shown in the G light (note that G piece is important).

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111021/JPp21Oct11.jpg

On the other hand, the observations about Hellas are dull despite it is known that Hellas also behaves like Olympus Mons as well as Elysium Mons (SMITH & SMITH). SUSSENBACH (*JSb*) caught Syrtis Mj near the CM on 1 Oct (λ=009°Ls) at ω=288°W, but Hellas shows a mean colour as well as the npc. However *JPp* showed on the same day Hellas was whitish near the evening terminator:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111001/JSb01Oct11.jpg

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111001/JPp01Oct11.jpg

On 2 Oct (λ=009°Ls) at ω=309°W SMET (*KSm*) drew Hellas rather whitish. On the day, GHOMIZADEH

(*SGh*) took an image at ω=262°W where Hellas is at the morning side, but the processing looks no good (even the npc is not enough white). MAKSYMOWICZ (*SMk*) reported that on 3 Oct (λ=010°Ls), Hellas appeared slightly light in Wr#80A.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111002/KSm02Oct11.jpg

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111003/SMk03Oct11.jpg

From Japan, Hellas came into sight at the end of October: At Fukui NAKAJIMA (*Nj*) and MINAMI (*Mn*) saw at the southern limb a part of Hellas appeared bright on 26 Oct (λ=021°Ls), 28 Oct (λ=022°Ls) and 31 Oct (λ=023°Ls), and already on 18 Oct (λ=017°Ls) and on 19 Oct (λ=018°Ls) Hellas was bright in the evening. A band which bounds Hellas was dark. By ccd, MORITA (*Mo*) proved Hellas was faintly whitish bright near the CM on 27 Oct (λ=021°Ls): It is seen well in G and B.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111027/Mo27Oct11.jpg

Argyre was caught light at Fukui on 16 Oct (λ=016°Ls). *Mo* and KUMAMORI (*Km*) ccd observed on 18 Oct (λ=017°Ls): The former depicted Argyre in the morning at ω=014°W, and the latter showed Argyre near the CM at ω=034°W to be white near the southern limb:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111018/Mo18Oct11.jpg

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111018/Km18Oct11.jpg

We should also note that, according to the observations (by *Nj* and *Mn*) at Fukui, Syrtis Mj observed at the end of October looked quite fainter than the dark M Acidalium observed on 18 Oct (λ=017°Ls) and on 19 Oct (λ=018°Ls); the preceding side of Syrtis Mj was slightly darker than the following side. The area of M Serpentis should be much more watched about.

The north polar cap (npc) has been already definite, and the dark fringe covers the whole perimeter. AKUTSU (*Ak*)'s images on 15 Oct (λ=016°Ls) are important and suggest that there disappeared so much diffused disturbance around the npc near M Acidalium.

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111015/Ak15Oct11.jpg

However, his excellent set of images on 22 Oct (λ=019°Ls) at ω=356°W/358°W proves an existence of a water-vapourish dust along the perimeter of the dark fringe (invading M Acidalium):

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111022/Ak22Oct11.jpg

The MRO rotating image on the day surely shows a dust outside the npc. According to this *Ak*'s images, the inside of the npc is not uniform. (The aforementioned images of *Km* on 18 Oct seem also to suggest a disorder inside the npc due to his L image.) On the other hand, the opposite side perimeter of the npc is clear and *JPp*'s images on 16 Oct (λ=016°Ls) at ω=184°W, 17 Oct (λ=016°Ls) at ω=175°W show the bright npc, and the dark fringe is definite:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111016/JPp16Oct11.jpg

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111017/JPp17Oct11.jpg

We note further in these images the area of Phlegra to Trivium Charontis appears broad and shadowy so that the classical Elysium looks narrower: Elysium and Cebrenia makes a Y-letter shape light marking. As to the narrowness of Elysium is not definite because it was not trapped near the CM, and so it is a future interesting area to be watched. On 14 Oct (λ=015°Ls), *JPp* observed at ω=204°W where Elysium is nearer to the CM. *SGh* also observed on 8 Oct (λ=012°Ls) at ω=193°W:

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111014/JPp14Oct11.jpg

http://www.hida.kyoto-u.ac.jp/~cmo/cmons/2011/111008/SGh08Oct11.jpg

Observations are expected to be sent to the following two addresses at the same time:

vzv03210@nifty.com; cmo@mars.dti.ne.jp (*M MINAMI & M MURAKAMI*)

Ephemeris for the Observations of the 2011/12 Mars. V

December 2011

Masami MURAKAMI

AS a sequel to the preceding list of the Ephemeris for the physical observations of Mars, we here list up the necessary elements of the Ephemeris for period from 29 November 2011 to 2 January 2012: The data are shown for every day at 00:00 GMT (not TDT). The symbols ω and φ denote the Longitude and Latitude of the sub-Earth point respectively. The symbols λ, δ and ι stand for the Areocentric Longitude of the Sun, the Apparent Diameter and the Phase Angle respectively. We also add the column of the Position Angle *Π* of the axis rotation, measured eastwards from the north point: This is useful to determine the north pole direction from the *p*←. The Apparent Declination of the planet is also given at the final column (denoted *D*). The data here are basically based on *The Astronomical Almanac for the Year 2011 & 2012*.

Date (00:00GMT)	ω	φ	λ	δ	ι	*Π*	*D*
29 November 2011	043.97°W	23.9°N	036.18°Ls	6.99"	37.1°	15.0°	+10°23'
30 November 2011	034.40°W	23.9°N	036.63°Ls	7.03"	37.0°	15.3°	+10°14'
01 December 2011	024.84°W	24.0°N	037.08°Ls	7.08"	37.0°	15.5°	+10°06'
02 December 2011	015.28°W	24.0°N	037.53°Ls	7.13"	37.0°	15.8°	+09°57'
03 December 2011	005.72°W	24.0°N	037.99°Ls	7.18"	37.0°	16.0°	+09°49'
04 December 2011	356.18°W	24.1°N	038.44°Ls	7.23"	36.9°	16.3°	+09°40'
05 December 2011	346.63°W	24.1°N	038.89°Ls	7.28"	36.9°	16.5°	+09°32'
06 December 2011	337.09°W	24.1°N	039.34°Ls	7.34"	36.9°	16.8°	+09°24'
07 December 2011	327.56°W	24.1°N	039.79°Ls	7.39"	36.8°	17.0°	+09°16'
08 December 2011	318.03°W	24.1°N	040.24°Ls	7.45"	36.8°	17.3°	+09°08'
09 December 2011	308.51°W	24.1°N	040.69°Ls	7.50"	36.7°	17.5°	+09°00'
10 December 2011	298.99°W	24.2°N	041.14°Ls	7.56"	36.7°	17.7°	+08°52'
11 December 2011	289.47°W	24.2°N	041.59°Ls	7.61"	36.6°	18.0°	+08°44'
12 December 2011	279.97°W	24.2°N	042.03°Ls	7.67"	36.6°	18.2°	+08°37'
13 December 2011	270.47°W	24.2°N	042.48°Ls	7.72"	36.5°	18.4°	+08°29'
14 December 2011	260.97°W	24.2°N	042.93°Ls	7.78"	36.4°	18.6°	+08°22'
15 December 2011	251.47°W	24.2°N	043.38°Ls	7.84"	36.3°	18.8°	+08°15'
16 December 2011	242.00°W	24.2°N	043.82°Ls	7.90"	36.2°	19.0°	+08°08'
17 December 2011	232.52°W	24.2°N	044.27°Ls	7.96"	36.1°	19.3°	+08°01'
18 December 2011	223.05°W	24.2°N	044.72°Ls	8.03"	36.0°	19.5°	+07°54'
19 December 2011	213.59°W	24.2°N	045.16°Ls	8.09"	35.9°	19.6°	+07°48'
20 December 2011	204.13°W	24.2°N	045.61°Ls	8.16"	35.8°	19.8°	+07°41'
21 December 2011	194.68°W	24.2°N	046.05°Ls	8.22"	35.7°	20.0°	+07°35'
22 December 2011	185.24°W	24.2°N	046.50°Ls	8.29"	35.6°	20.2°	+07°29'
23 December 2011	175.81°W	24.1°N	046.94°Ls	8.36"	35.5°	20.4°	+07°23'

Date (00:00GMT)	ω	φ	λ	δ	ι	Π	D
24 December 2011	166.38°W	24.1°N	047.39°Ls	8.42"	35.3°	20.6°	+07°17'
25 December 2011	156.96°W	24.1°N	047.83°Ls	8.49"	35.2°	20.7°	+07°11'
26 December 2011	147.55°W	24.1°N	048.27°Ls	8.56"	35.0°	20.9°	+07°06'
27 December 2011	138.14°W	24.1°N	048.72°Ls	8.64"	34.9°	21.1°	+07°01'
28 December 2011	128.76°W	24.1°N	049.16°Ls	8.71"	34.7°	21.2°	+06°56'
29 December 2011	119.37°W	24.1°N	049.60°Ls	8.78"	34.5°	21.4°	+06°51'
30 December 2011	110.00°W	24.0°N	050.04°Ls	8.86"	34.3°	21.5°	+06°46'
31 December 2011	100.62°W	24.0°N	050.49°Ls	8.94"	34.2°	21.6°	+06°41'
01 January 2012	091.27°W	24.0°N	050.93°Ls	9.01"	34.0°	21.8°	+06°37'
02 January 2012	081.92°W	24.0°N	051.37°Ls	9.09"	33.8°	21.9°	+06°33'

TEN YEARS AGO (199)

-----CMO #253 (25 November 2001) pp3159~3182 ----

http://www.hida.kyoto-u.ac.jp/~cmo/cmomn2/cmo253/index.htm

This report (17th in 2001) is concerned with the observations made during the period from 16 October to 15 November 2001 when the planet Mars moved from Sgr to Cap and the apparent declination (D) gained -18°: Already the eastern quadrature passed and the observation began from the sunset, but since it got dark earlier, the observable time became longer. The season λ was from 253°Ls to 273°Ls: On 11 November the southern summer solstice (λ=270°Ls) passed. The apparent diameter δ went down from 9.7" to 8.1". The central latitude φ was from 11°S to 19°S. The phase angle ι was about 44°.

Reporters domestically were 7 with 212 observations and 7 members from abroad with 38 observations. The effect of the global dust was diminishing.

On 18 Oct, the surface was still slightly yellowish, while the morning white mist was observed on the morning side. On 24 Oct, Don PARKER (DPk)'s images showed the recovery of S Meridiani, though its western dark markings shows a series of dusty spots, and Argentius Mons was whitish. From Japan Olympus Mons looked a faint dark spot. At the end of Oct, the Dædalia dark patch and the dark small marking to the NW of Solis L was caught from Japan. Olympus Mons was no more distinct so that it was considered that the contrast effect by the dust diminished. Thaumasia and Ophir were visible light. The information of Hellas came from the US. On 31 Oct Argentius Mons was observed by MINAMI (Mn) at Fukui and by KUMAMORI (Km) at Sakai, and the form of the spc was apparent. As the next month came in, several observed Argentius Mons: The spc was inside the disk. On 7 Nov, Mn observed Hellas was bright on the afternoon side but there was no disturbance in Noachis. M Serpentis was broad: S Meridiani was seen but fainter. On 8 Nov, DPk observed M Cimmerium had recovered. On 10 Nov the inside of Hellas was not uniform in brightness. M Serpentis was still dark and broad. The morning Noachis showed a morning mist. On 11 Nov, AKUTSU (Ak) succeeded in unearthing the dark markings by IR when the Sun still shined. Everywhere in Japan the sky was so fine that every reported the aspects of Syrtis Mj, Hellas, M Serpentis et al. Up until the end of the period the evening side was covered by the white mists.

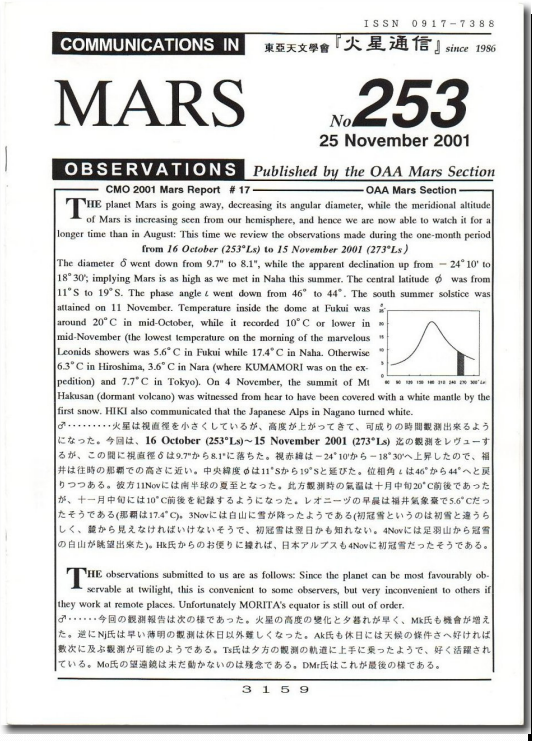
Hellas became also extraordinarily bright by the morning mists. This implied at the same time that Syrtis Mj was obscure because of the white mist at the morning side. The activity of the water vapour was thus recovering. From the US side, M Sirenum was caught but no more Olympus Mons.

LtE were sent from DPk (FL), N BIVER (the Netherlands), B COLVILLE (Canada), F J MELILLO (NY), Jef BEISH (FL), M VALIMBERTI (Australia), Phil DOMBROWSKI (CT), D MOORE (AZ), R McKIM (the UK), G TEICHERT (France), Ed GRAFTON (TX), Yuan LI (China), Bill SHEEHAN (MN), and R TATUM (VA). Domestically we received from KUMAMORI, ISHADOH, MORITA, AKUTSU, and OHBA. Mk's email on the 2001 Leonids with a photo was also cited. This year the Leonids shower was very active.

Ms TSUNEMACHI's 12th Essay also treated Leo, but this was concerned with a music by a Japanese composer who made a melody from the shape of Leo. She herself saw the Leonids at the Nasu heights in the Kwanto district. She was especially impressed with several meteors crossing Orion. As well she was fond of the composed music of Orion.

Another column picked out Director's report #10:
http://www.hida.kyoto-u.ac.jp/~cmo/cmo/ds2001/ds/d_repo.html

The planet Mars of twenty years ago was at conjunction on 8 November 1991 at Lib. TYA 075 shows so the situation in CMO#111 (25 November 1991): In this issue two Notes were cited; one is about "the detachment of Novus Mons in 1988" which occurred at around λ=250°Ls~252°Ls. The second Note is about the "Morning mist from 320°Ls to 330°Ls in 1990." As a result the morning mist was less thick than the one observed in 1988. DPk was trying to take picture of Mars by the use of a CCD camera: Several images of Saturn were sent. (Mk & Mn)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COMMUNICATIONS IN 東亞天文學會『火星通信』since 1986
MARS No.253
25 November 2001
OBSERVATIONS Published by the OAA Mars Section
CMO 2001 Mars Report # 17 — OAA Mars Section
THE planet Mars is going away, decreasing its angular diameter, while the meridional altitude of Mars is increasing seen from our hemisphere, and hence we are now able to watch it for a longer time than in August: This time we review the observations made during the one-month period from *16 October (253°Ls)* to *15 November 2001 (273°Ls)*.
The diameter δ went down from 9.7" to 8.1", while the apparent declination up from − 24° 10' to 18° 30'; implying Mars is as high as we met in Naha this summer. The central latitude φ was from 11°S to 19°S. The phase angle ι went down from 46° to 44°. The south summer solstice was attained on 11 November. Temperature inside the dome at Fukui was
around 20°C in mid-October, while it recorded 10°C or lower in mid-November (the lowest temperature on the morning of the marvelous Leonids showers was 5.6°C in Fukui while 17.4°C in Naha. Otherwise 6.3°C in Hiroshima, 3.6°C in Nara (where KUMAMORI was on the expedition) and 7.7°C in Tokyo). On 4 November, the summit of Mt Hakusan (dormant volcano) was witnessed from hear to have been covered with a white mantle by the first snow. HIKI also communicated that the Japanese Alps in Nagano turned white.
♂……火星は視直径を小さくしているが、高度が上がってきて、可成りの時間観測出来るようになった。今回は、**16 October (253°Ls)～15 November 2001 (273°Ls)** 迄の観測をレヴューするが、この間に視直径δは9.7"から8.1"に落ちた。視赤緯は－24°10'から－18°30"へ上昇したので、福井は往時の那覇での高さに近い。中央緯度φは11°Sから19°Sと延びた。位相角ιは46°から44°へと戻りつつある。彼方11Novには南半球の夏至となった。此方観測時の気温は十月中旬20°C前後であったが、十一月中旬には10°C前後を紀録するようになった。レオニーヅの早晨は福井気象臺で5.6°Cだったそうである(那覇は17.4°C)。3Novには白山に雪が降ったようである(初冠雪というのは初雪と違うらしく、麓から見えなければいけないそうで、初冠雪は翌日かも知れない。4Novには足羽山から冠雪の白山が眺望出来た)。Hk氏からのお便りに據れば、日本アルプスも4Novに初冠雪だったそうである。
THE observations submitted to us are as follows: Since the planet can be most favourably observable at twilight, this is convenient to some observers, but very inconvenient to others if they work at remote places. Unfortunately MORITA's equator is still out of order.
♂……今回の観測報告は次の様であった。火星の高度の變化と夕暮れが早く、Mk氏も機會が増えた。逆にNj氏は早い薄明の観測は休日以外難しくなった。Ak氏も休日には天候の條件さへ好ければ数次に及ぶ観測が可能のようである。Ts氏は夕方の観測の軌道に上手に乗ったようで、好く活躍されている。Mo氏の望遠鏡は未だ動かないのは殘念である。DMr氏はこれが最後の様である。
3159

C_M_O Fu_Ku_I — T NAKAJIMA (*Nj*)

★We first acknowledge a favour of Tatsujiro MATSUMOTO (450) for his kind donation. Secondly we thank Tohru IWASAKI (451) for his kind contribution to help our postage fund.

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CMO #391/ ISMO #17 (25 November 2011)

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