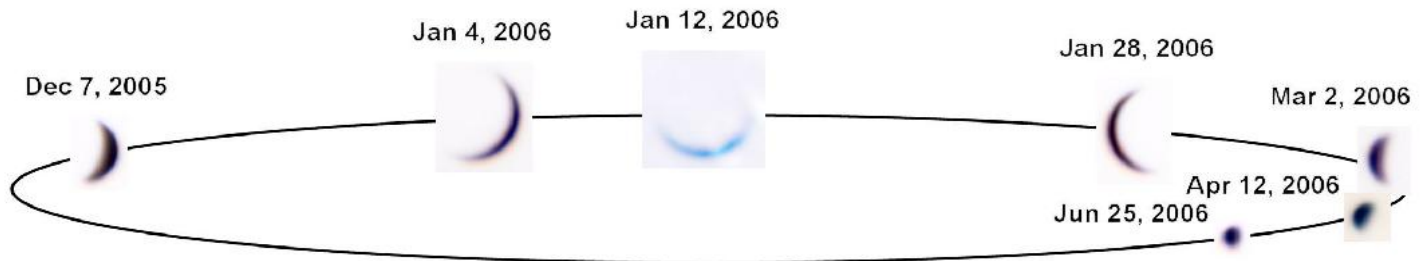


# Saskatoon Skies

Vol. 37  
No. 7/8  
July/  
August  
2006

The Newsletter of the Saskatoon Centre of the Royal Astronomical Society of Canada

## VENUS



## Changing Shape of Venus

Seven pictures of Venus as it went from an evening star to a morning star are placed over an idealized orbit of Venus to show how it changes shape and size as seen from earth. Here we are looking at the orbit from below for Venus passed above the sun in January. In October when Venus sweeps behind the sun to become an evening star, it will again pass above the sun contrary to what this picture implies for we will have changed our position in the orbit.

*Photo by Tenho Tuomi*

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# A Summer Sampler

# MEMBERSHIP? IT'S NEVER TOO LATE TO JOIN!

**Regular: \$65.00 /year    Youth: \$34.25 /year    Lifetime: \$1100**

The Saskatoon Centre operates on a one-year revolving membership. You will be a member for the next 12 months no matter when in the year you join. If you do not want to join at this time, ask to get onto our FREE 3-month Temporary Membership list. You will receive regular mailings of our Saskatoon Skies newsletter and will be invited to participate in Centre activities. Members are encouraged to renew early to avoid disruption in publications. Renew through the membership coordinator, Mike Clancy, or renew through the National Office and let Mike know that you did!

## Benefits of Membership in the Saskatoon Centre

- knowledgeable & friendly amateur astronomers
- use of the Sleaford Observatory
- use of the U of S Observatory (after training)
- Saskatoon Skies Newsletter
- Observer's Handbook
- The Journal of the RASC (bimonthly)
- SkyNews Magazine (bimonthly)
- use of the Centre library
- discounts to Sky & Telescope Magazine\*
- free, no-cost, no-obligation, 3-month temporary membership if you don't want to join right now!

*\* New subscription or renewal of Sky & Telescope? Send new info or renewal notice, plus credit card # to Norma Jensen, 128 - 4th Street East, Saskatoon, SK S7H 1H8, or fax 306-659-2170.*

## SASKATOON CENTRE'S MAIN OFFICERS:

**President** – Ron Waldron, 382-9428

**Secretary** – Al Hartridge, 373-0034

**Vice-President** – Garry Stone, 857-4707

**Treasurer** – Norma Jensen, 244-7360



## BOTTLE DRIVE & CANADIAN TIRE \$

by Darrell Chatfield

Thanks to \$4.20 from Al Hartridge we have collected \$182.70 in Canadian Tire Money! If you cannot make it to a meeting but would like to contribute, your Canadian Tire money please call me at 374-9278.

## U OF S OBSERVATORY

The U of S Observatory is open to the general public every Saturday of the year. Admission is free. The observatory is located on campus, one block north of the Wiggins Avenue and College Drive entrance. On clear nights, visitors may look through the vintage 6-inch and tour several displays. Current events are recorded on the Astronomy Information Line at 966-6429.

### Observatory Hours:

<b>January-February</b>	<b>7:30-9:30 pm</b>
<b>March</b>	<b>8:30-10:30 pm</b>
<b>April</b>	<b>9:30-11:30 pm</b>
<b>May-July</b>	<b>10:00-11:30 pm</b>
<b>August</b>	<b>9:30-11:30 pm</b>
<b>September</b>	<b>8:30-10:30 pm</b>
<b>October-December</b>	<b>7:30-9:30 pm</b>

LIGHT POLLUTION  
ABATEMENT  
WEBSITE AT:

[www.ras.sk.ca/lpc/lpc.htm](http://www.ras.sk.ca/lpc/lpc.htm)

**Newsletter Editors** – Tenho Tuomi, Ken Maher **Copy & Collate**– Les Dickson **Labels & Temps** – Mike Clancy **Web Posting** – Gord Sarty

Saskatoon Skies is published monthly by the Saskatoon Centre of the RASC. Distribution is approximately 100 copies per issue. Saskatoon Skies welcomes unsolicited articles, sketches, photographs, cartoons, and other astronomy or space science articles. Articles can be sent by mail in any format to the Centre's mailbox. Submitted materials can be returned upon request. Submissions may also be sent by e-mail – preferred as plain unformatted ASCII text files without line breaks. Images sent by e-mail should be attached .JPGs (.GIFs also accepted). Send e-mail submissions to the editor at <tuomi@sasktel.net>. Please send articles in “generic” formats with simple formatting – one tab at the beginning of paragraphs, one space after commas and periods. A separate by-mail subscription to Saskatoon Skies is available for \$15.00 per year. Saskatoon Skies is also posted on our Saskatoon Centre homepage as a .pdf file and can be downloaded free-of-charge. Members may choose to receive the newsletter by regular mail or via the Internet. Articles may be reprinted from Saskatoon Skies without expressed permission (unless otherwise stated), but source credit is requested. DEADLINE for submissions is the 26th of each month. Saskatoon Skies accepts commercial advertising. Please call the editor for rates. Members can advertise non-commercial items free of charge.

# RASC CALENDAR OF EVENTS

<b>August 18</b>	<b>Observers Group</b> - 10:00 p.m., Sleaford Observatory	Larry Scott	934-5801
<b>Aug. 24-27</b>	<b>Saskatchewan Summer Star Party</b> - Cypress Hills Inter-provincial Park <a href="http://www.usask.ca/psychology/sarty/rasc/starparty.html">http://www.usask.ca/psychology/sarty/rasc/starparty.html</a>	Barb Wright	249-1990
<b>Sep 1-4</b>	<b>Spruce Woods Star Party</b> , Spruce Woods National Park, MB <a href="http://www.mts.net/~rberard/html/spruce_woods_star_party.html">http://www.mts.net/~rberard/html/spruce_woods_star_party.html</a>	spruce.woods.star.party@gmail.com	
<b>Sep 18</b>	<b>RASC Executive Meeting</b> - 6:30 p.m., 175 Physics, U of S.	Ron Waldron	382-9428
<b>Sep 18</b>	<b>RASC General Meeting</b> - 7:30 p.m., 175 Physics, U. of S	Ron Waldron	382-9428
<b>Sep 22</b>	<b>Observers Group</b> - 9:00 p.m., Sleaford Observatory	Larry Scott	934-5801
<b>Sep 26-Oct 1</b>	<b>Northern Prairie Starfest</b> , Black Nugget Lake, AB	Doug Hube	jdhub@telus.net
<b>Oct 20</b>	<b>Observers Group</b> - 8:00 p.m., Sleaford Observatory	Larry Scott	934-5801

## MINUTES OF THE GENERAL MEETING June 19, 2006

by Al Hartridge

- Minutes of the previous meeting adopted as published.
- SSSP: Barb Wright mentioned that most of the speakers for the star party have been lined up.
- Fundraising: Darrell Chatfield stated that the quilt for the raffle has been assessed at \$2500.00, a 19" monitor and a moose picture by Whitzel both valued at \$500.00 each will also be raffled. Ticket prices are set at 3 for \$5.00.
- Sask Light Abatement Committee: Rick Huziak has met with the U of S regarding lights appearing on campus for roads and apartment blocks going up near the observatory.
- Observing Group: Larry Scott will be out to open the observatory at Sleaford this coming Friday with Saturday as a backup.
- Presentations:
  - The 95th AAVSO spring Meeting and Tour to Yerkes Observatory - Rick Huziak
  - The George Moore Astronomy Workshop - Tenho Tuomi
  - Videos:
    - Comet Hunter Bill Bradfield - Ron Waldron
    - Astronomy Day Coverage on Shaw TV - Chris Martin
    - Astronomy Conferences CASCA (Canadian Astronomical Society) and AAS (American Astronomical Society) covered by Christine Kulyk. Freelance Articles can be found at space.com
- Meeting Adjourned at 9:50 p.m.

## The Planets at SSSP 2006

by Tenho Tuomi

At the Saskatchewan Summer Star Party, 2006, The Sun will set at 8:17 pm, it will be nautical twilight by 9:29 pm, and astronomical twilight by 10:19 pm. Because of the late date for the Star Party this year, we will be able to start observing an hour earlier than last year.

Jupiter will be the first object we will be looking at after sunset. However it will be low in the Southwest at an altitude of 8 degrees at 9:30 pm, only 3 degrees higher than it was last year at nautical twilight. It will set by 10:39 pm.

Uranus, Neptune and Pluto have all been favourable for viewing from the Star Parties in the last few years, and will be again. Uranus transits at 1:57 am, and Neptune at 12:20 am. Pluto, always a challenge, transits at sunset and sets at 1:19 am, but will still be at an altitude of 21 degrees at astronomical twilight at 10:15 pm.

The two planets of interest will be Venus and Saturn which will be in very close conjunction within an eyepiece field on Saturday and Sunday mornings. They will rise at 4:52 am. By 5:45 am (at civil twilight) they will be at 7 degrees altitude in the East-Northeast. The sun will rise at 6:25 am. Pick your observing site with a clear view in that direction. This one will be worth getting up early for. Find Venus first. Even though it will be on the other side of the sun from us and has shrunk to 10" it will still outshine Saturn by 5 magnitudes.



**REMEMBER: The Saskatchewan Summer Star Party runs from August 24 -27. REGISTER TODAY!**





## BOOKS FOR SALE

by Bruce Brandell, Sales Coordinator  
 All items will be available at our next meeting or call 249-1119, or email [bruce\\_brandell@yahoo.com](mailto:bruce_brandell@yahoo.com)

*Watch for major additions to this list in the September newsletter*

Title	Author	# Avail	Price
<b>Calendars</b>			
RASC 2006	RASC	1	\$5.00
<b>Books</b>			
The Backyard Astronomer's Guide	Dickinson & Dyer	2	\$45.00
Exploring the Sky by Day	T. Dickinson	1	\$9.00
Night Sky Atlas	R. Scagell	3	\$27.00
The Moon Observer's Guide	P. Grego	1	\$13.00
Firefly Astronomy Dictionary	Firefly	1	\$13.00
Skyways – Astronomy Handbook for Teachers	M.L. Whitehorne	2	\$20.00
The Beginner's Observer's Guide	L. Enright	1	\$19.00
Observer's Handbook 2006	RASC	4	16.00
Variable Star Charts [CD]	AAVSO	1	5.00
Astrophotography	G.N. Patterson	lots	\$3.00
<b>Miscellaneous</b>			
RASC Centennial Mug		2	\$5.00
RASC Stickers, blue or white		lots	\$1.00
SSSP 2001 Pin (Summer Triangle)		17	\$2.00
SSSP 2002 Pin (Comet)		29	\$2.00

### Astronomy at Adamson Lake

I always enjoy taking my telescope to our Church Camp at Adamson Lake. The skies are dark and there are many opportunities to show the skies to interested people. Jupiter was the early evening highlight this year in spite of its low altitude. On Thursday morning I observed the moon next to the M45 Pleiades open star cluster. On Friday Ken Maher joined me for a good night of public viewing and observing deep sky objects. Thanks Ken.

From Ken: *Thanks to Tenho and my trip out to Adamson Lake I was able to track down and identify Uranus and Neptune for the first time. Thanks Tenho!*

## SKY BUYS & MIRROR CELLS

*The Saskatoon Centre's Swap and Sale Page!*

**For Loan to Members:** Slide set for talks on general astronomy and light pollution. You can borrow this set any time you want to give a talk to your favourite group. Contact Rick Huziak at 665-3392.

### For Sale:

- One Celestron 8 inch Schmidt-Cassegraine telescope, black
  - heavy duty stand with motor
  - manual for scope
  - Barlow 2X lens
  - Telrad
  - Thousand Oaks sun filter
  - two hole focusing device
  - spotting scope attached to main barrel
- two large Terry Dickenson books - value \$100
- red light flashlight

Hardly used, mint shape. Asking \$1400.00.

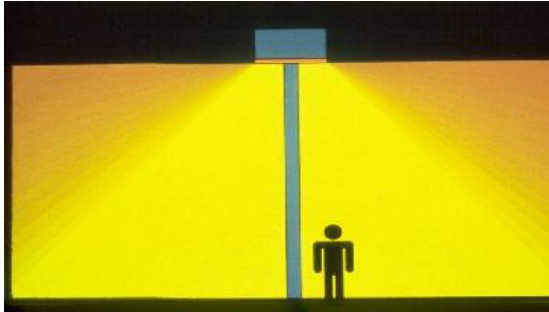
Garry Kohuch  
 Res: 306-497-2443  
 Mobile: 306-497-7488  
[Kohuch@sasktel.net](mailto:Kohuch@sasktel.net)



# Dark Sky Preserves: The Message is Getting Out There

by Mike Clancy

For those who don't know what Dark-Sky Preserves (DSP's) are, here is a synopsis: various initiatives are under way in our provincial and



regional parks to keep these nature preserves as dark as possible for all to enjoy our beautiful night skies. This is not only more enjoyable for people (what child does not delight in the Milky Way's majesty), but it is more energy efficient - you're putting light where it is required, not wasting it into space. Last and certainly not least, dark skies are more natural for the forest creatures who inhabit the parks, so it really is a "Triple-Win" situation. The first provincial park to adopt this ideal is the Cypress Hills Interprovincial Park, home to our very own Saskatchewan Summer Star Party; the first regional park to become a DSP is Rockin' Beach Regional Park, near Rock Glen (home to a Canadian Idol contestant; show your support for DSP's and vote for the lad!)

Okay, so on to the point of this article! My wife and I were giving a presentation on our new book "A Users Guide to Saskatchewan Parks" down in Buffalo Pound Provincial Park during which we normally mention DSP's and the park initiatives. The two park interpreters who attended our talk cornered me afterwards and interviewed me regarding DSP's, using that information for a talk they gave themselves later that night! I attended their talk and became an impromptu resource person, explaining in greater detail what technical aspects are required in becoming a DSP. The 40 or so people in attendance were fairly unaware of the entire initiative but were very supportive once they understood how they and generations to follow will benefit.

Furthermore, in an interview with John Gormley a couple of weeks ago I mentioned the park initiative and

he was completely unaware of the entire situation. He too was fairly impressed with the idea and gave us 5 minutes of his airtime to clarify it. Last on my list of recent developments is the creation of Saskatchewan's (and possibly Western Canada's) first Dark-Sky acreage development just east of Saskatoon, called Mission Ridge

Country Estates. While they cannot create laws governing exterior illumination, they can make suggestions to prospective buyers, people who generally are amenable to keeping things like their new acreage homes as natural as possible. The new development will require full cut-off yard lighting and recessed house lights in the new homes which are small steps forward but progress nonetheless.

So people, keep the initiative vibrant by talking about it. Educate your friends and families as to what DSP's mean for all our enjoyment and perhaps we will all be able to enjoy the splendour of the Milky Way and all those marvelous heavenly companions from the comfort of our own back yards.

## Noctilucent Clouds over Saskatoon



July 19, 10:42 p.m. from the 33rd Street Railway Bridge, Saskatoon.  
Shot with Olympus FE-115 digital camera, exposure 2 seconds.  
Photo by Rick Huziak

# Astronomy and the Native Plant Society

by Garry Stone



On July 7/06 I had some Native Plant Society members visit my observatory. They were camped at Douglas Provincial Park southeast of

Elbow near the Summit Dam [built at the same time as the Gardiner Dam, to prevent the water in lake Diefenbaker from flowing down the Qu'Appelle river system]. As one of them said, "We walk around all day looking down maybe we could spend a few hours looking up", so they came out here at the suggestion of Stan Shadick.

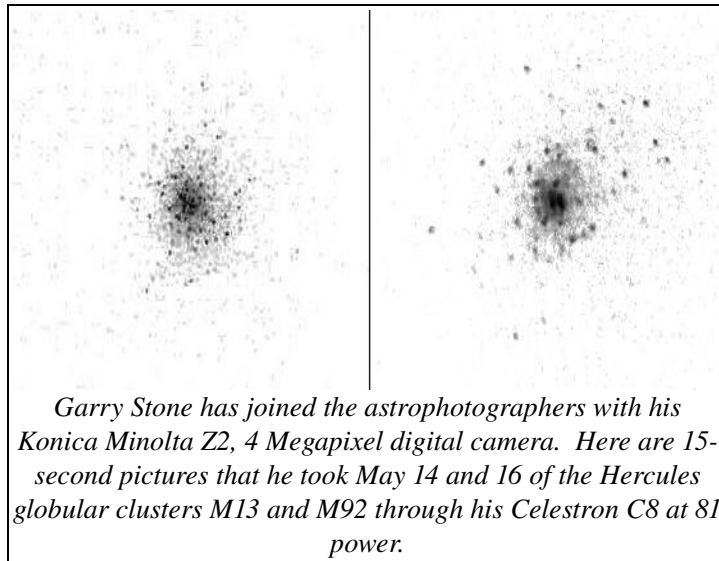
They got here at 10:05 p.m. local time and as luck would have it Europa had just transited Jupiter and it's shadow was almost exactly half way across, so that was the first thing I was able to show them. Most of them were able to focus my c-8 well enough to see the shadow. I also had my 90mmx 1300mm wooden tube refractor set up for

viewing the moon -- they were all very interested in the relief shown and all the crater details. After we had coffee and cake, the sky had become dark enough to show M27, M57, M13 and M92. After that I was able to point out some of the constellations. They were a very interesting group of young people -- I think some of them would be great members of our club. I will get in touch with them and see what happens. They had to leave shortly after 12:00 as they had a hike planned into the sandhills looking for some endangered species of native plants. It would be a pleasure to have them back again under darker conditions.

This is what I heard back from Candace Elchuk, Plant Species at Risk Technician, Canadian Wildlife Service - Environment Canada.

"There were 8 of us who came to visit you. We were all members of the Native Plant Society of Saskatchewan ([www.npss.sk.ca](http://www.npss.sk.ca)), and we were out at Douglas Provincial Park for the weekend for a multi-day plant tour. 3 of us were from Saskatoon, 1 from Tisdale, and 4 from Regina. We decided that it would be nice to do something a little different at night, as you can't see plants at that time obviously, and decided astronomical gazing would be fun. I know that everyone had a wonderful time. Some people in the group, such as our Executive Director, Garth Wruck,

had never looked into a telescope before and was astounded, as you'll remember, at how the moon looked. He was fascinated by the craters and the extent of the relief on the moon. I know other people in our group were thrilled to see Jupiter and its moons and were impressed that the cloud bands were visible, considering what you normally see is just a



*Garry Stone has joined the astrophotographers with his Konica Minolta Z2, 4 Megapixel digital camera. Here are 15-second pictures that he took May 14 and 16 of the Hercules globular clusters M13 and M92 through his Celestron C8 at 81 power.*

bright speck in the sky. I loved learning more constellations, and always enjoy looking a nebulae, as you typically can't even see these with the naked eye. My fiance, Chet, enjoyed hearing about how you built your own telescopes and was amazed at their quality. It was definitely a thrill for all of us and we really appreciate your hospitality and willingness to host us at your home for this event. If we are in the area again we will give you a call and hopefully will have more time to star gaze - its always a pain to have a commitment early the next morning when the good stuff is starting to show in the skies late at night!! Give our thanks to Myrna as well - her coffee and cake was appreciated by all, and very unexpected."



# Saskatchewan Summer Star Party

by Barb Wright

SSSP 2006 is coming up August 24 to 27 at Cypress Hills Inter-provincial Park. Early registration deadline is August 1, to take advantage of the early registration fees.

This year, you can pre-register for the Thursday BBQ, and you must pre-register for the Saturday banquet.

Thursday night is a special presentation of native astronomy co-sponsored by Cypress Hills Park and SSSP. Alan Dyer's workshop is already full.

There are a FEW hotel rooms left, be sure to tell the resort you are with the star party when you book your room.

See you in Cypress Hills for the 10th Saskatchewan Summer Star Party.



## July at Sleaford

by Norma Jensen

Thanks to Rick Huziak and Bill Hydromako's initiative, and to others who were initiated into grass cutting Sleaford style, the observing greens are being maintained. Bill installed a small fan in the warm-up shelter (sic!) that draws the heat outside.

There have been a few regulars who have been coming to observe. I have been looking at globular and open clusters in Ophiuchus and Sagittarius. As always, Ursa Major yields her secrets slowly so I continue to make appropriate offerings. I learned about dark nebulae from Rick Huziak one evening and observed the double dark nebulae in Aquila B142-143. Bill Hydromako has supplied observations to us from the Universities 14" scope and his homemade refractor.

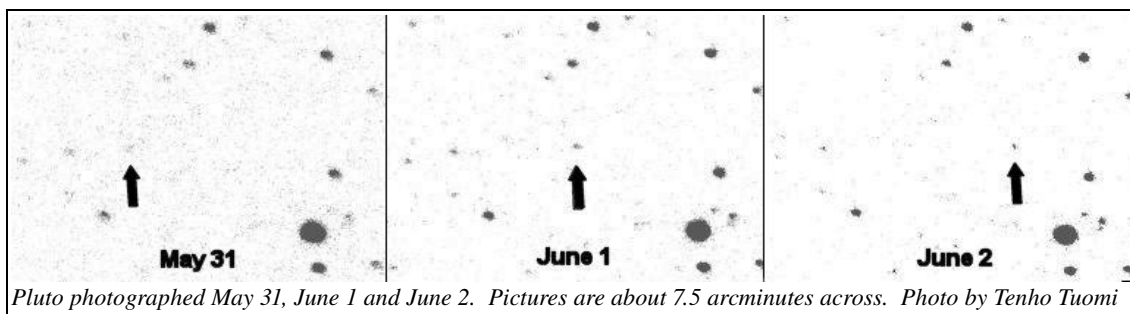
Larry Scott lined up Neptune and Uranus for viewing by myself and a new member Mike Schmidt. They were a marvel to see, discs of blue and white-green. Using his 12.5" he also toured us through representative open and globular clusters, nebulae and

galaxies. One was a very nice view of the irregular galaxy M82 in Ursa Major and M13 in Hercules displayed its fine brilliance.

Ron Waldron mentioned that the mosquitoes are as big as horseflies and to not forget to bring water to make coffee when you come to Sleaford or face the comments of .....

Ron and Larry plan or have already viewed the entire Veil Nebulae combining Ron's new 80mm refractor with Larry's 2" wide field nagler 26mm and UHC filter. The moon has cooperated recently by getting up late. Most evenings lately we see many meteors sparking through the sky.

August note - Several RASC members have congregated at Wanuskewin for Wanuskewin's "dog days of summer" event. We brought out the scopes to show the general public gathered there the wonders of the night sky. Keep looking up.



Pluto photographed May 31, June 1 and June 2. Pictures are about 7.5 arcminutes across. Photo by Tenho Tuomi



## Ask AstroNut

The Ask AstroNut column is an anonymous question and answer advice column, where you can ask any question you want, boneheaded or brilliant, and the editor will find someone who will give you a somewhat educated answer.

Dear AstroNut:

*Okay, I've done a lot of reading on telescopes over the last few months, but there are still things I haven't seen explained too well. I know and understand how collimation works. What I haven't seen, is how often does a dobsonian need this in general use? Thanks!!*

### AstroNut answers:

Depends on several things:

1) How often do you use it (i.e. how much is it knocked about)?

2) Do you 'care' if you are out of collimation a bit? (The result is slightly degraded resolution, slightly out-of-round stars, etc). Shouldn't matter as much on extended objects, but if you want to split close double stars, or see detail on planets, or see galaxy arms, then you better have good collimation. Equate this to a tune-up for your car - want good gas mileage, get a tune. Drive in between tune-ups? Of course. Doesn't mean the scope doesn't work, just means it is not perfect. Perfectly collimated scopes will always show 'airy rings' on stars. I have yet to see them with anything other than apochromatic scopes, though every scope is capable if completely collimated.

3) How well is your scope built? A crappy mirror cell or underbuilt (or minimalist) scope always goes out of collimation because the mechanics of the scope are inadequate for the task. Even 'flexing' the scope at different viewing angles can take the optics out of coll. The 12" dob at Sleaford hasn't been collimated for 6 years, because it has a very good cell. My scope gets tweaked up occasionally, even though it rides around in my car a lot, but the cell is a very good one, and the scope doesn't go out of coll much. Another

issue is how good the secondary spider cell is. Most dobs have under-strength spider veins and often poor adjusting screws - and so also go out of collimation at that end.

**Question:** *And do truss tube dobsonians need to be collimated more often than solid tube models?*

**Answer:** Yes - your optical path has to be maintained **\*\*precisely\*\*** - your mirror is good to about 1/10,000,000 accuracy - people talk about "1/20th wave" etc, yet don't think twice about disturbing their optical light path by removing big clunky poles, and worse yet, having their mirrors in slings that can also move sideways. How do you put it back together as perfectly as your optics are every time? Answer - you are (or should be) always collimating with break-down dobs. Professional and knowledgeable amateur astronomers will also 'index' their mirrors and lenses if they are removable, since even the rotation of your optics presents some alignment issues.

**Question:** *And what's the best way to collimate?*

**Answer:** There are many methods. You'll have to read up on your favourite. (*see note below*)

**Question:** *What about laser collimators?*

**Answer:** Good tools. You still have to understand **\*how\*** to collimate - the basic principles, laser or not.

---

Note: *Here are a few of websites to have a look at for more information on collimation:*

### Adventures In Collimation

<http://legault.club.fr/collim.html>

### The Collimation

<http://www.fpi-protostar.com/collim.htm>

### Collimation Myths and Misunderstandings

<http://web.telia.com/~u41105032/myths/myths.htm>



# Mars as Large as the Full Moon!

by Tenho Tuomi

The email that started its rounds in 2003 when Mars made its closest approach to earth, claiming that to the naked eye Mars will appear as large as the full moon, is making its rounds again, revised into a very nice Power Point slide presentation.

\*\*\*\*\*

As described by Michael Watson on the RASCals list: The text accompanying the usual images reads this way: "Mars - Known as the Red Planet, it's about to appear in spectacular fashion! So mark your calendar to watch throughout the month of August, but especially ... August 27, 2006



[next slide] Share this with your children and grandchildren. ... FOR NO ONE ALIVE TODAY WILL EVER SEE THIS AGAIN !"

\*\*\*\*\*



When I received that email, I sent this reply, "This email was a hoax when it first appeared in 2003 and it has made its rounds every July/August since then. Mars did make its closest approach in history to earth on August 27, 2003 but even then it NEVER appeared as big as

the full moon to the naked eye. This email is a mixture of fact and fiction, but even the facts apply to the wrong year. For us in Canada this year, Mars sets an hour after the sun in August but can't be seen due to the twilight. Mars will reappear as a morning star in December. I last saw Mars on June 19."

\*\*\*\*\*

[next slide] This month and next, Earth will catch up with Mars in an encounter that will culminate in the closest approach between the two planets in recorded history. The next time Mars may come this close: 2287. Due to the way Jupiter's gravity tugs on Mars and disturbs its orbit, astronomers can only be certain that Mars has not come this close to Earth in the Last 5,000 years. But it may be as long as 60,000 years before it happens again.

Geoff Gaherty on the RASCals list added this comment: It's worth mentioning to people that on 2006 August 27, Mars will be 2.5744 au away from Earth, or just about as far away as it's possible to get (2.6094 au a month later), and about seven times farther away than it was on 2003 August 27. How wrong can you get?!

[next slide] The encounter will culminate on August 27th when Mars comes to within 34,649,589 miles of Earth. It will be (next to the moon) the brightest object in the night sky. It will attain a magnitude of -2.9 and will appear 25.11 arc seconds wide. At a modest 75-power magnification.

The other bit of misinterpretation of the original email I've seen several times is that Mars will be easy to find because it will be right next to the Moon. That's a garbling of "It will be (next to the moon) the brightest object in the night sky." In fact, 2006 August 27 was new Moon, so Mars in opposition, was about as far away from the Moon as it could get!

[next slide] To the naked eye Mars will look as large as the full moon!

\*\*\*\*\*

[next slide] Mars will be easy to spot. It will look as large as the full moon to the naked eye. And by the beginning of August it will rise in the east at 10 p.m. and reach its azimuth at about 3 a.m.

Jim Kinnard on the RASCals list made a good observation: Statements from the email:

[next slide] By the end of August when the two planets are closest, Mars will rise at nightfall and reach its highest point in the sky at 12:30a.m. That's pretty convenient to see something that no human being has seen in recorded history. So, mark your calendar at the beginning of August to see Mars grow progressively brighter and brighter throughout the month.

- 1) Mars will appear 25.11 arc seconds wide.
- 2) At a modest 75-power magnification Mars will be easy to spot.
- 3) Mars will look as large as the full moon to the naked eye.

Rearranging, I get "When you view Mars, 25.11 arc seconds wide, at 75x magnification, the image is as large as the full moon appears to the naked eye". That sounds about right.

# The Messier, H-400 & H-400-II, FNGC, Binoc & EtU Club

*Join the Club! Observe all 110 Messier, 110 Finest NGC, 400 Herschel I or 40 Herschel II  
Explore the Universe, or 35 Binocular Objects and earn great OBSERVING CERTIFICATES!*

## MESSIER CLUB

### Certified at 110 Objects:

*R.Huziak, G.Sarty, S.Alexander,  
S.Ferguson, D.Jeffrey, D.Chatfield,  
B.Christie, K.Noesaard, M.Stephens,  
B.Hydomako, T.Tuomi, L.Scott,  
G.Charpentier, B. Johnson, M. Clancy*

Les Dickson	Done!	110
Brent Burlingham		107
Ken Maher		105
Brent Gratias		96
Mike Oosterlaken		93
Lorne Jensen		89
Margo Miller		77
Wade Selvig		75
Kathleen Houston		72
Garry Stone		57
Norma Jensen	Up!	56
Ellen Dickson		29
Brian Friesen		15
Barb Wright		6

## FINEST NGC CLUB

### Certified at 110 Objects:

*R.Huziak, D.Jeffrey, G.Sarty,  
D.Chatfield, T.Tuomi*

Larry Scott	Done!	110
Scott Alexander		97
Bill Hydomako		55
Sandy Ferguson		23
Mike Oosterlaken		20
Mike Clancy		7
George Charpentier		4

## Chatfield BINOCULAR CERTIFICATE

### Certified at 35 Objects:

*M.Stephens, T.Tuomi, M.Clancy,  
R.Huziak, K. Maher*

Brent Gratias		36
Mike Oosterlaken		32
Anna Clancy		24

## EXPLORE the UNIVERSE

### Certified for Certificate:

*M.Clancy, T.Tuomi*

## HERSCHEL 400 CLUB

### Certified at 400 Objects:

*D.Jeffrey, R.Huziak, D.Chatfield*

Gord Sarty		251
Tenho Tuomi		220
Scott Alexander		117
Mike Oosterlaken		68
Sandy Ferguson		18

## HERSCHEL 400-II CLUB

### Certified at 400 Objects:

Darrell Chatfield		268
Richard Huziak		211

The Messier & Finest NGC lists can be found in the Observer's Handbook. The Explore the Universe list is available on the National web site. The Herschel 400 list is available at the web site listed below. The Binocular List will be available at each general meeting or can be mailed out on request to distant members.



On-line Messier and Finest NGC lists, charts and logbooks - check out:

<http://www.rasc.ca/observe.htm>

On-line Herschel 400 List - check out the official site at:

<http://www.astroleague.org/al/obsclubs/herschel/hers400.html>

## RASC Observers Group Notes

by Larry Scott, "Interim" Observers Group Coordinator

Greetings all. Happy to report that the nights are finally getting longer. Our group meeting on June 24th consisted of only one hour of nearly dark. There were, however, some new observers, Lubos Kuzma and his friend Darina. Welcome to you both. The next group meeting was July 21st with pretty nice dark skies from 23:30-02:30 and (yahoo!) more new people. Ron Waldron brought some guests and another new member, Mike Schmidt, showed up on his own. I highly recommend cornering Mike and asking to try his binoculars. You will not be disappointed! Hopefully we'll have one more group meeting on August 18th before the SSSP. See you there.



Photo by Tenho Tuomi

## Jupiter and Ganymede

On May 11, I was experimenting with a Logitech QuickCam Pro 4000 webcam that I borrowed from Garry Stone, and took this picture 12 minutes after midnight of Jupiter with Ganymede just

leaving the edge of Jupiter, with Ganymede's shadow still on Jupiter. Talk about a lucky shot. This was not planned. Only minutes before, I had found out that Ganymede's shadow would be on Jupiter, and had found it with my eyes but did not see Ganymede itself.

This picture is stacked from a 64-second, 974-frame video at 640x480 pixels, taken through an 8 inch Newtonian and a 2x barlow.