

# Saskatoon Skies

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

Vol. 36, No. 5

May 2005

## ASTRONOMY DAY 2005



A "gaggle" of kids flocking to Ron Waldron's telescope to view Jupiter on Friday, April 15th at the Public Star Night held in front of the Lakeview Civic Centre.

— PHOTO BY JEFF SWICK

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### Saskatoon Centre

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Saskatoon, SK S7N 4J8

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# Membership? It's never too late to join!

**Regular: \$58.00/year    Youth: \$31.25/year    Lifetime: \$1000**

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      Secretary – Al Hartridge  
 Vice-President – Garry Stone      Treasurer – Norma Jensen



**Light Pollution Abatement website at:**  
[www.ras.sk.ca/lpc/lpc.htm](http://www.ras.sk.ca/lpc/lpc.htm)

## 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:

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

## About this Newsletter...

Newsletter Editors – *Tenho Tuomi, Linda Janzen*  
 Copy – *Brian Friesen & WBM*  
 Collate – *Brian Friesen, Walter Essar, Jim Young, Les & Ellen Dickson, Yannis Pahatouroglou*  
 Labels & Temps – *Mike Clancy*  
 Web Posting – *Gord Sarty*

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*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.




## Bottle Drive & Canadian Tire \$

by Darrell Chatfield

Canadian Tire Money donations of \$13.00 from Ellen D. and \$2.25 from Barb added to our fund raising efforts. Thanks to all contributors. Please bring your bottles and Canadian Tire Money to the General meetings. I will collect them after the meeting concludes. If you cannot make it to the meeting but would like to contribute, please call me at 374-9278.

## 2005 RASC Calendar of Events

| DATE           | EVENT   | CONTACT                   | TELEPHONE      |
|----------------|---|---------------------------|----------------|
| May 16         | <b>Executive Meeting</b> – 6:30 p.m., 175 Physics, U of S   | Ron Waldron               | 382-9428       |
| May 16         | <b>General Meeting</b> – 7:30 p.m., 175 Physics, U of S – program TBA   | Ron Waldron               | 382-9428       |
| May 20-23      | <b>RASC General Assembly</b> – Kelowna, BC – <a href="http://www.rasc.ca:8080/rasc">www.rasc.ca:8080/rasc</a>   | Jim Failes                | (250) 763-6962 |
| May 22         | <b>Noctilucent Cloud Season begins</b>  | Rick Huziak               | 665-3392       |
| May 23/24      | <b>Moon Occults Antares</b> – 2 a.m.  |                           |                |
| June 3         | <b>Oberservers Group</b> – Sleaford Observatory   | Bill Hydomako             | 384-4781       |
| June 20        | <b>Executive Meeting</b> – 6:30 p.m., 175 Physics, U of S   | Ron Waldron               | 382-9428       |
| June 20        | <b>General Meeting</b> – 7:30 p.m., 175 Physics, U of S – program TBA   | Ron Waldron               | 382-9428       |
| June 30-July 4 | <b>Stargazing Manitoulin</b> – Manitoulin Island, ON – <a href="http://www.gordonspark.com/astronomy.html">www.gordonspark.com/astronomy.html</a>   |                           |                |
| July 7-10      | <b>Alberta Star B-Q</b> – Eccles Ranch Obs. Caroline, AB – <a href="http://www.syz.com/rasc/starbq2005.htm">www.syz.com/rasc/starbq2005.htm</a>   | Roland Dechesne           | (403) 246-4498 |
| July 30-Aug. 7 | <b>Mt. Kobau Star Party</b> – Osoyoos, BC   | Jim Failes                | (250) 763-6962 |
| Aug. 4-7       | <b>Saskatchewan Summer Star Party (SSSP'05)</b> – Cypress Hills Inter-provincial Park, <a href="http://www.usask.ca/psychology/sarty/rasc/starparty.html">www.usask.ca/psychology/sarty/rasc/starparty.html</a> | Les Dickson               | 249-1091       |
| Aug. 11-14     | <b>Manitoulin Star Party</b> – Manitoulin Island, ON – <a href="http://www.gordonspark.com/astronomy.html">www.gordonspark.com/astronomy.html</a>   |                           |                |
| Aug. 12        | <b>Noctilucent Cloud Season ends</b>  |                           |                |
| Sept. 1-4      | <b>Alberta Star Party</b> – Eccles Ranch Obs. Caroline, AB – <a href="http://www.syz.com/rasc/asp2005.htm">www.syz.com/rasc/asp2005.htm</a>   | Roland Dechesne           | (403) 246-4498 |
| Sept. 9-11     | <b>Northern Prairie Starfest</b> – Black Nugget Lake, AB – <a href="http://edmontonrasc.com/nps.html">http://edmontonrasc.com/nps.html</a>  | Warren.Finlay@Ualberta.ca |                |



**Monday, May 16, 7:30 PM**  
**Room 175 Physics, U of S**

### Saskatoon RASC Web Page Relocated

The computer currently hosting the RASC Saskatoon web pages will be scrapped this summer. So the RASC web pages have been moved to:

<http://www.usask.ca/psychology/sarty/rasc/>

The pages at the old location are still there but will be replaced by a re-direction page soon; that page will disappear when the host computer does. – Gordon Sarty

### Who said this?

– Ellen Dickson

“No one in his senses, or imbued with the slightest knowledge of physics, will ever think that the earth, heavy and unwieldy..., staggers...around its own center and that of the sun; for at the slightest jar of the earth, we would see cities and fortresses, towns and mountains thrown down.”

**16th Century French philosopher Jean Bodin**

### BOOKS FOR SALE

*by Bruce Brandell, Sales Coordinator*



Some of the items are left from the Star Party. All will be available at our next meeting on May 15/05. Call 249-1119, or email <[bruce\\_brandell@yahoo.com](mailto:bruce_brandell@yahoo.com)>

| Title                                | Author              | No. Avail.  | Price Cdn\$ |
|--------------------------------------|---------------------|-------------|-------------|
| Calendar, RASC 2005                  | Rajiv Gupta, Editor | 1           | \$ 5.00     |
| Messier Cards, laminated             | Sky Publishing      | 4           | \$ 6.00     |
| Messier Poster, colored              | Sky Publishing      | 2           | \$20.00     |
| Milkyway Poster                      | Sky Publishing      | 2           | \$25.00     |
| A Short History of Nearly Everything | Bill Bryson         | 3           | \$17.00     |
| The Moon Map                         | Sky Publishing      | 1           | \$15.00     |
| The Mars Map                         | Sky Publishing      | 1           | \$15.00     |
| Astrophotography                     | G.N. Patterson      | 27          | \$ 5.00     |
| RASC Centennial Mug                  |                     |             | \$ 8.00     |
| RASC Stickers, blue or white         |                     | <b>NEW!</b> | \$ 1.00     |
| Pins SSSP 2004                       |                     | 14          | \$ 5.00     |
| Pins SSSP 2003                       |                     | 2           | \$ 4.00     |
| Pins SSSP 2002                       |                     | lots        | \$ 4.00     |
| Pins SSSP 2001                       |                     | lots        | \$ 4.00     |

### 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.

## Minutes of the EXECUTIVE MEETING

April 18, 2005, 6:30pm – Rm 175 Physics, U of S

1. Meeting called to order at 6:30 p.m.
2. Approval of Minutes of previous meeting. Mike Clancy seconded by Rick Huziak and carried.
3. **Treasurer's Report:** Three five-thousand-dollar term deposits have been established.
4. **Sleaford Insurance Update:** All arrangements have been completed and meet with the U of S requirements.
5. **Events Committee Report:** The Lakewood star night was a real success. Astronomy day star night was clouded out. Display was quite well attended. PA astronomy day display was very well attended.
6. **Fundraising Committee:** A steak night will be held on April 30th. An application to the centennial fund has been made. A raffle will be organized.
7. **Sleaford:** A new door is required for the toilet. A motion was made by Bill Hydromako, seconded by Les Dickson and carried, that \$200.00 be made available to purchase a new door.  
Les Dickson has donated an indoor/outdoor thermometer to Sleaford.
8. **SSSP:** Ivan Semenuk will be guest speaker. The usual Thursday evening wiener roast will go ahead. A cheque to the resort is due to hold lodgings.
9. **Light Abatement Committee:** The all park DSP has been stalled. All managers are in favor but it has been stalled at a higher level. Norma Jensen has joined Rick's committee.
10. Meeting adjourned at 7:30 p.m.

## Minutes of the GENERAL MEETING

April 18, 2005, 7:30pm – Rm 175 Physics, U of S

1. Meeting called to order at 7:30 p.m.
2. Minutes of previous meeting approved. Moved by Les Dickson, seconded by Tyrone Klassen and carried.
3. **Program:** Rick Huziak – The 3rd High Energy Astrophysics and the 94th Spring AAVSO Conference in Las Cruces.
4. **Door Prize:** Barb Wright demonstrated a table runner that herself, Myrna Stone and Marianne Hydromako designed and made for SSSP.
5. **Treasurer's Report:** Three five-thousand-dollar term deposits have been started.
6. **Insurance:** The Sleaford insurance has been updated at a cost of \$154.00 to fall in place with the U of S requirements.
7. **Fundraising:** Steak Night will be held on April 30th. An application has been made to the Centennial Fund. A raffle will be organized in the near future.
8. **Astronomy Day Draw:** Jeff Swick will contact the winner.
9. **Sleaford:** A new door for the toilet is needed. Bill has been allowed \$200.00 to purchase a new door.
10. **SSSP 2005:** Ivan Semenuk will be the guest speaker.
11. **Dark Sky Parks:** a problem has developed with the upper echelon of government.  
Rick will give a talk next week which hopefully will help to move things along. The problem as always is money.
12. **Newsletter:** Tenho wants reports on Astronomy Day, Messier Marathon, and Photos.
13. Meeting adjourned: 9:15 p.m.

## SSSP 2005 Update

by Les Dickson

This is the fourth in a series of articles on the Saskatchewan Summer Star Party, to be held August 4-7 at the Cypress Hills Interprovincial Park and Dark Sky Preserve.

Last month I mentioned that our Guest of Honour will be Ivan Semenuk, producer and astronomy columnist for Discovery Channel's *Daily Planet*. Also appearing on our Saturday afternoon program will be Alan Dyer and Paul Campbell. Paul will be talking about the AAVSO's Sudden Ionospheric Disturbance Program. Alan Dyer will be presenting some interesting astrophotos, including some time-lapse movies of the night sky, and talking about the April 8, 2005 total solar eclipse that he observed from on board a cruise ship in the South Pacific.

We always welcome people who want to give informal talks on Friday night. If you would like to be a part of our program, contact Les Dickson at 306-249-1091 or at dicksonl@sasktel.net.

As of April 27, we had 8 hotel rooms, 1 two-bedroom cabin and 3 three-bedroom condos left in our room block. We expect these accommodations to go quickly, so if you intend to come to SSSP but have not arranged your Resort accommodations, please do so soon. You can call the Resort at 306-662-4477. Be sure to mention that you want a room within our room block.

As usual, there is lots of room to camp at the Meadows Campground. If you wish to camp in the Meadows, you have to pay the usual camping fees. This year you will have the option of using an electrified site, which will cost extra. Please contact the Park's Reserve-A-Site at 306-662-5484 to confirm pricing. If you are leaving equipment set-up in the Meadows during the day, but staying elsewhere, there will be no charge, with the caveat that if you want to make use of power at the site, you will have to pay for it. We may be able to make arrangements so that several people can work off of one power tap using a power bar and share the costs. Contact us or visit our website for updates.

Current prices for early registration (before July 15) are: Singles, \$17; Couples, \$28; Families, \$34. These prices increase \$10 after July 15.

For more information, you can contact Les Dickson, or our Registrars Bill and Marianne Hydromako, at: Bill & Marianne Hydromako, 135 Manning Cres., Saskatoon, SK S7L 6J3; Phone (306) 384-4781; email: wm.hydomako@sasktel.net.

You can also visit our web site at:

<http://www.usask.ca/psychology/sarty/rasc/starparty.html>

# Astronomy Day

by Jeff Swick

Well Astronomy Day 2005 is in the bag. In spite of being clouded out on Saturday Night I think we had a great success. Ron and I were on "Sky Rover" on the CFQC news on Friday and I must say Ron and Jeff Rogstad play well off of each other. Don't be surprised if we see more of those two on air.

We kicked off with "Side Walk Astronomy" at the Lakewood Civic Centre Friday Evening.

I have to tell you that during the day we had gale force winds and I had visions of a low turn out from the public. The civic centre is a multi purpose facility containing a gym, swimming pool and our prime demographic...a library with a built in audience of curious people. We had 7 or 8 scopes set up for Saturn, Jupiter and the Moon. Few objects and many scopes worked well as there was a constant flow of people and waiting for viewing time was negligible. I was not disappointed. We had about 75 to 100 people over the evening.

I was impressed by questions from the kids like "why tonight?...Is there an alignment of the planets?". This from a young man who told me with pride and only one tooth that he was 8 years old. Another young man made Ron promise that he could look at Jupiter when he was done swimming because he was doing a report on it. One lady came up and said she came out and saw the telescopes and had to run home to collect her husband. From the feedback I received from everyone the consensus is that we should do more of this perhaps in the fall.



We followed up Saturday with a display at the Mall at Lawson Heights. Handouts were provided by *Sky News*, *Sky and Telescope* as well as by *Astronomy Magazine* who also provided a one-year subscription at no charge.



These photos by Tenho Tuomi.  
Other photos by Jeff Swick.



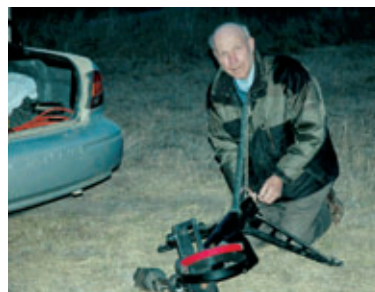
Saturday evening found us out at Beaver Creek with a frustrating a night as you can imagine. We had a nice variety of scopes and a wonderful temperature with no wind to move the massive cloud that settled in.

The conservation center was full of cub scouts that were more than anxious as well as a steady flow of people through the gates. In fact the facility manager commented on the amount of traffic and said to me "imagine if there were no clouds". He even brought out the facility's new scope and Jim Young set the finder scope and ran him through the basics. Needless to say they want us back as often as we are willing. Which brings me to an important point and that is our centre's public outreach.

This year Ken Maher and Kathleen Houston organized our first "Astronomy Day" in Prince Albert of which you will read more of elsewhere in the news letter. They were assisted by our centre's distant member co-ordinator James (yeah...I got a Nagler but call me Jim) Gorkoff and roving astronomy populariser and all round good guy Rick Huziak .

Two things to take forward are more public outreach in the way of schools and more sidewalk astronomy at community events. If there is enough volunteer interest I propose a couple of Side Walk astronomy events at such venues as Shakespeare On The Saskatchewan and perhaps the Fringe Festival...nice civic events with tons of folks and uniformed security to boot.

That's about it for this go around THANKS TO ALL WHO TRAVELLED. I'll leave you with a couple more photos of the weekend's events...see you all out at Bill's Observer groups sessions.



# PA-stronomy Day

by Ken Maher



As I finally sat down for only the third time that afternoon I took the last sip of my now ice cold double-double. And boy did it go down good! Looking around I could see Rick, Kathleen and Jim all busy with different groups of people around the display and Ron, who must have arrived sometime ago, while I wasn't looking. I was just about to roll up my rim to win, when I noticed parents standing beside a young boy who at the present moment was on his hands and knees trying to stare up into the tail-end of Rick's homemade scope. With a smile on my face I left the cup for another break and was back at it once again.

Sometimes good ideas are waiting just under the rim, so to speak. And with a little coaxing, you never know what might come into view. Astronomy Day in Prince Albert was one of those winning ideas. Maybe having been to only one of these things the year before (and that as a non-member visitor) I was naïve to think that such things just happen. And yet, from my blissfully simple vantage point, that still seems to me how best to describe it.

With the able help of Kathleen Houston, we booked the busy downtown mall for a day-long display and got permission to set up in a local park near the south edge of town for our star night. Jeff Swick and Richard Huziak were instrumental in getting us all the posters, rental scopes, and other materials that the Saskatoon'ers didn't want or need. Our cup was overflowing in no time!

On Saturday Rick and Jim Gorkoff drove up from Saskatoon to lend us a hand. They were kind enough to give us the full day, and without their help we couldn't have managed! Along with their two big scopes came a wealth of knowledge and enthusiasm. During the day we met hundreds of people and answered countless questions. We talked to children and seniors, parents and teachers, astronomers and birders. The mall security guards were particularly enamored by the 15x70

Bino's and all had to have a look or two. We even managed to sign up a dozen or so temporary members. We gave an interview with the local paper which ran on the Monday following complete with a huge picture of Rick and his scope. (I'm beginning to get the feeling that it's not really astronomy if Rick's picture isn't in there somewhere!) So much happened in the mall that, for me at least, the nine hours passed by like a caffeine-buzzed ninety minutes.



After packing up the mall display, we headed to the Maher house for a giant pot of Chili, kindly provided by fellow members Ron (and Laura) Thompson. The meal was so good, and the sitting such a welcome change of pace, that it was hard to motivate ourselves to head out for the star night in the park. I guess the all-encompassing cloud bank ten feet over our heads didn't help much either! We set up in Prime Minister's Park and had some lovely (and fuzzy) views of the moon until it too disappeared. The last of the dozen or so people who came out to meet us in the park got some splendid views of distant street lights in Rick's scope.

The response to our first ever Astronomy Day was so good that we here in Prince Albert are looking into a couple of public star nights (maybe even with some stars!) over the coming months to try and keep the momentum going.

When the last dregs of our Astronomy Day were drained, we were left a little wired, a whole lot tired and yet completely satisfied. Oh, yes ... and when the last of the mall display was packed up and everyone was heading out to their cars I found the Tim's cup I had set down hours earlier. And wouldn't you know it ... I won a donut! What more can I say.

# Astronomy Day – Loreburn Central School

by Tenho Tuomi

After trying for half a year to find a suitable day for a public star night at the Loreburn Central School, Garry Stone was finally able to arrange for one during Astronomy Week on April 12. Garry took his C8 and his 90-mm wooden refractor. I took my 8 inch Newtonian and my 80 mm refractor. We set our telescopes in the school playground where there seemed to be the fewest lights.

People started arriving shortly after the sunset. We showed the moon until it got dark enough by 8:30 p.m. to find Jupiter and Saturn. Then the children and their parents formed lines to watch those two planets. The most heard word was “cool.” And it was cool, with a brisk north wind blowing. Only a few hardy souls stayed to 9:00 p.m. when it got dark enough to show M42 and M44. In the end we estimated that over 30 children and parents had come. Garry says several came to him in the days after and want us to come back for they missed it the first time.

## Get Ready for Noctilucent Cloud Season

by Rick Huziak

Noctilucent clouds appear at the very top of the earth's atmosphere, about 80 kilometers up. Exactly how the clouds form is still not well understood, but the clouds consist of frozen droplets of water coating meteoritic dust swept up by the earth every day. Noctilucent clouds (or NLCs) likely exist all year round, but special circumstances make them easily visible during our northern summer. The NLCs become visible as they front scatter light as the sun sinks between 6 and 16 degrees below the horizon. Because of the shallowness of the sunsets in the summer, the sun stays within this band for much of June and July, ably illuminating the clouds all night long. Strong winds shape the clouds into complex herring-bone wave structures throughout, though they appear in many forms – billows, bands, veils and whirls, of a few different sub-types each.

To see these “space clouds”, begin observing the north horizon on every clear night about 1/2 hour after the sun has set and anytime thereafter until 1/2 hour before sunrise. The clouds are generally obvious when you see them, since they appear to shine or glimmer brightly. The clouds are usually silver-blue, and sometimes iridescent, or rainbow coloured. They are always brightest directly above where the sun is and follow the sun across the north horizon throughout the night. Capella can sometimes be seen immersed in NLCs. The clouds are usually seen up to about one-third of the way up the sky, but on rare

occasions can appear overhead briefly. Although they are naked eye objects, binoculars will help bring out details of the herringbone and swirls. The clouds are not always visible; the NLC period starts off with sporadic sightings low to the horizon and by mid-June and July, a few displays a week may be seen much higher in the sky. By mid-August sightings completely trail off. Because of the silver-blue clouds immersed in an orange sunset, the clouds create an opportunity for unique photos. Shoot these at f/2.8 or f/3.5 with ASA 400 and exposures of 5 to 20 seconds, depending on the brightness of the display.

Those interested in observing these clouds should contact the *NLC Can-Am Centre* and get an introductory package from Mark Zalcik, 9022 - 132A Avenue, Edmonton, Alberta T5E 1B3 or at <bluegrama@shaw.ca>. The package is free, and contains good information on the observation program, and a colour photocard showing several different NLC displays. If you begin to contribute observations, you will then receive the NLC newsletter *Quicksilver*, describing the year's sighting of the clouds, including your observations.

If you wish, you can call me immediately (665-3392) if you suspect you are seeing NLCs and want a confirmation. But I am certain that once you have seen your first display, and see how unique these clouds are, that you will then *always* recognize these Nocti (night) lucent (shining) clouds!

## Penumbra Lunar Eclipse April 24, 2005

by Tenho Tuomi



Pictures taken one hour apart from about 2 a.m. to 5 a.m. Maximum eclipse was at 3:55 a.m. The moon passed within 4.4' of the umbra with part of the moon remaining outside of the penumbra. During the eclipse maximum the moonlight was noticeably darker with a subtle dark edge on the moon. Maybe neither effect would have been noticed if a person had not known that an eclipse was taking place.

# Grand Alignment

by Garry Stone

On the morning of Apr 24 I tried to get a picture of the full moon setting at the same time as the sun rose [see page 29 of the Mar-Apr Sky News where Alan Dyer writes of being in the middle of a grand alignment of worlds]. To do this, I made up a split image device, first out of a pair of Jr. West Coast rearview mirrors from an old truck; then downsized to a pair of small pieces of front coated glass [thanks Jeff] mounted at right angles to each other on a small block, and a piece of plywood mounted onto a camera tripod. Now by aiming my digital camera at the junction of the mirrors it is possible to see objects

that are 180 degrees apart. At 5:30 AM I drove up on the local height of land, Swede Hill (or Cerro Suede...), about 2 miles northeast of my farm. The moon kept its part of the bargain, being clear to the horizon in the WSW but there was a small strip of cloud of about 2 degrees above the horizon in the ENE which unfortunately obscured the sunrise. However, in the shot I did get the moon right on the horizon and you can see where the sun would eventually peek above the clouds. It was worth a try anyway. Will try again on Oct 17, 2005.



Moon setting – Sun rising

Split image device

# Grazing Occultation of Eta Virgo {Zaniah}

by Garry Stone

In the evening of Apr. 21 I happened to notice the upcoming grazing occultation of a 3.9 mag. star printed in the Observers Handbook, which looked like it would be visible at my location. So I thought I should alert Tenho Tuomi as he is only 20.4 miles from here [as the crow flies]. His wife answered the phone, and I was told Tenho was out at his seedcleaning plant, and she would get him to phone when he came in. Tenho and I are not of the generation that have cell phones and walk around as though we had an earache or are keeping the cold out of our windward ear. Anyway Tenho phoned back a bit later – this time I was out so Myrna told him something was happening in a few hours – a grazing something of Jupiter? I think? [Myrna’s knowledge of such things is rivalled only by my knowledge of, say, Creme Brulee custard or “fold in two egg whites” whatever...] Finally Tenho and I connected and agreed to observe this event. As it turns out it was a very neat event – I put a 40mm eyepiece with lots of eye relief in my C8

and as the moon was still fairly low in the sky I had to turn the diagonal sort of sideways to get a comfortable viewing angle from my adjustable chair. At the predicted time of 3:23 UT the moon was nearing Eta Virgo and for the next 11 minutes I practically glued my right eyeball to the telescope and watched as it glided ever so tantalizingly close to the star. It appeared to follow about the same distance from the star for most of the next 9 minutes or so, giving the remarkable illusion of the moon rotating clockwise. I did not see any time when it blinked out here although I could see a slight difference in the distance from the star when there was a small crater near Pythagorus visible on the edge of the moon. It was the most interesting occultation I have witnessed – I highly recommend viewing them. At Tenho’s it was a complete occultation apparently so maybe I should have been out in the middle of Lake Diefenbaker or somewhere in between us to see a true graze!



# The Planets This Month, May 2005

by Murray D. Paulson, Edmonton Centre

**Mercury's** morning elongation at the end of April was a poor one. These spring time morning elongations are never any good! So Mercury will head back around the sun quite unnoticed by the majority of us. If you chase it down in the day time sky, the eyepiece view will be of a small waxing gibbous planet. In early May, you will see that 6.5" gibbous phase shining at magnitude 0.0. By the end of May, the planet shows a disk that has shrunk to 5.2" and shines at magnitude -1.6. Mercury will be in superior conjunction with the sun on June 3rd. At this time Mercury passes less than 1/2 degree above the sun.

**Venus** is now firmly an evening object. At the end of April, Venus sat 9 degrees from the sun, and was visible in the early evening twilight. At the beginning of May, Venus set 50 minutes after the sun and was at magnitude -3.9. It will show you a 9.9" disk in the eyepiece. On May 8th, a 19 hour old moon will join Venus in the evening sky. Look 2-1/2 degrees directly north of Venus, and slightly higher in the sky. Venus will help you locate where to look and help you focus on the slim crescent. Good luck! This will be a very difficult challenge. By early June Venus shines at -3.9 and will show you its 10.3" disk in the eyepiece. It now sets an hour and a half after the sun.

**Mars** has left Capricorn and has joined Uranus in Aquarius. In early May, it shows a gibbous 7" disk and shines at magnitude 0.6 in the morning dawn skies. It is actually big enough to be worth taking a look at when the seeing is good. The bad news is that the twilight zone is swooping up to catch the morning sky. Mars rises at 4:00 a.m. and the sun follows only an hour and 3/4 later. By early June, Mars has grown to 8.1" and brightened to magnitude 0.2. It now rises at 2:40 a.m. in eastern Pices, about 2-1/2 hours before the sun. We do have one interesting lunar conjunction on May 31st when the moon passes only 1-1/2 degrees below Mars. This is the night of May 30, morning of May 31 and they are at closest approach just around moonrise at 3:04 a.m. local time. This should be a good one. So set the alarm so you can watch the last quarter moon in this beautiful conjunction. The fly in the ointment is that the rest of this particular Tuesday will probably drag quite a bit.

**Jupiter** is quite low and makes me wish I had spent more time on it last year! I have yet to have a great night, but I have glimpsed festoons and blue hollows along the NEB, divisions in the equatorial belts and some belted structure in the polar hood. The Great Red spot is subtle, but still visible. On May 19 01:38 pm, the moon and Jupiter pass only 44' apart while below our horizon. By the time they rise and the sky darkens the pair are 3.5 degrees apart. I have included a number of Jovian events with a few high points. The night of May 14 at 5:12 UT (the night of May 13 at 11:12 p.m. local time) we get a Ganymede event with Jupiter occulting the moon, and later on, after the occultation is over, Ganymede slips into Jupiter's shadow. On June 8th, we get a

Ganymede transit event to commemorate the transit of Venus exactly a year from the date of the event last year.

**Saturn** was great on Astronomy days, wonderful seeing and brilliant clear skies made it almost more than perfect. We were looking at the ringed planet at 350 power to thrill the public. A great evening, and a lovely view. On May 13th we get a conjunction of the moon with Saturn and again one lunar month later on June 9th. In the first event the pair are departing after sun set, and are just over 7-1/2 degrees apart. The June 9th event is better with a thin crescent well placed just under 4 degrees above the moon at 10:30 p.m. local time. Note: the dates are the local dates as well. Enjoy Saturn as it slips into summer and eventually behind the sun. This will be the last good month to watch Saturn until the early months of next year.

## Jovian Moon events:

| Day    | Hour UT | Moon | Event     |
|--------|---------|------|-----------|
| 7-May  | 4:16    | III  | Occ end   |
| 7-May  | 4:46    | III  | Ecl start |
| 7-May  | 7:19    | III  | Ecl end   |
| 7-May  | 9:39    | II   | Occ start |
| 9-May  | 3:56    | II   | Tra start |
| 9-May  | 5:32    | II   | Sha start |
| 9-May  | 6:36    | II   | Tra end   |
| 9-May  | 8:06    | I    | Tra start |
| 9-May  | 8:13    | II   | Sha end   |
| 9-May  | 8:53    | I    | Sha start |
| 14-May | 5:12    | III  | Occ start |
| 14-May | 7:46    | III  | Occ end   |
| 14-May | 8:45    | III  | Ecl start |
| 25-May | 5:04    | III  | Sha end   |
| 25-May | 6:09    | I    | Tra start |
| 25-May | 7:11    | I    | Sha start |
| 25-May | 8:13    | II   | Ecl end   |
| 25-May | 8:20    | I    | Tra end   |
| 25-May | 9:21    | I    | Sha end   |
| 1-Jun  | 4:38    | III  | Tra end   |
| 1-Jun  | 5:56    | II   | Occ start |
| 1-Jun  | 6:33    | III  | Sha start |
| 1-Jun  | 7:58    | I    | Tra start |
| 1-Jun  | 9:03    | III  | Sha end   |
| 1-Jun  | 9:05    | I    | Sha start |
| 8-Jun  | 5:40    | III  | Tra start |
| 8-Jun  | 8:22    | III  | Tra end   |
| 8-Jun  | 8:22    | II   | Occ start |
| 8-Jun  | 9:49    | I    | Tra start |
| 10-Jun | 4:17    | I    | Tra start |
| 10-Jun | 5:19    | II   | Sha start |
| 10-Jun | 5:28    | I    | Sha start |
| 10-Jun | 5:35    | II   | Tra end   |
| 10-Jun | 6:28    | I    | Tra end   |
| 10-Jun | 7:39    | I    | Sha end   |
| 10-Jun | 8:00    | II   | Sha end   |

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|------------------|--------|
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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.

*With Messier Marathon last month I expected more list updates than just from Les and Darrell. Darrell is still enjoying topping Rick's numbers, knowing full well that someday he will be surpassed by Rick.*

**On-line Messier List** – For those who'd like an electronic Messier list (with DSS images), check out:

<http://www.seds.org/billa/dssm/messier.html>

**On-line Finest NGC List** – For those who'd like an electronic FNGC list, check out the Edmonton Centre's version at:

<http://www.edmontonrasc.com/catalog.html>

**On-line Herschel 400 List** – For those who'd like an electronic Herschel 400 list, check out the official site at:

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



## RASC Observing Group Notes

by Bill Hydomako, Observing Group Coordinator

The Messier Marathon this year was cold, clouded out or both for all four nights we attempted it. The best night, April 2, there were eight club members. Seeing wasn't great and everybody had enough by 2:00 a.m. The only person that did any kind of count was Tenho Tuomi with a count of 31 for the evening. For May's observing session I plan a tour of the Messier objects in the Virgo region. June's observing session is planned for Friday, June 3 with Saturday, June 4 as a back up night. That night's session will be a stroll down the Milky Way from the Northern Cross to Sagittarius.



PHOTO BY TENHO TUOMI