



NOVA

NEWSLETTER OF THE VANCOUVER CENTRE RASC

VOLUME 2006 ISSUE 4

JULY/AUGUST 2006

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Looking Ahead

Remember, you are always welcome to attend meetings of Council, held on the first Thursday of every month at 7:30pm in the G.M.S.O.

Jul. 13: Victoria RASC member Chris Gainor on "What Apollo Taught Us About the Moon."

Aug. 10: Chris Blake of UBC: "The New Atlas of the Heavens - How to Map a Million Galaxies."

Sept. 14: Members' Night.

Next Issue Deadline

Material for the September Nova should be submitted by Monday, Sept. 4, 2006. Please send submissions to:

Gordon Farrell
(gfarrell@shaw.ca)

Sir John Herschel is Alive and Well and Living in Vancouver

by Brian Morse

It seems that most days as we stumble along dealing with life's daily trials and tribulations that we often say to ourselves, "You know I just can't seem to win." The traffic jams... the bills... the parking tickets... etc... etc...

Then there is the odd day when everything just seems to work out right when we least expect it.

I had a phone call last week from a lady called Joanne, who lived nearby, that had just built a brand new sundeck from Red Cedar and had treated it with a clear wood stain. She was having problems with the deck and had been told by someone at UBC, where I do research on wood chemistry and wood coatings, that I might be the person who could help her out. I called her back and went over to her house to see what the problem was. Despite all the care that had been lavished on

the deck—and a fair amount of money, too!—the deck had turned black and didn't look too great. I took a piece of the deck back to UBC and after some analysis, managed to come up with a formula to fix the problem. I called her back and told her that I would make up a few gallons of the formula for her if she would like to drop by and pick it up. A few days later, she and her husband came by our house and happened to notice the observatory dome on the garage. She told me that she was interested in astronomy and before we knew it we were all up in the dome playing with the telescope and looking at 'daytime stars' and Jupiter, such as it was. For most people who have never seen a computerized telescope slew to a target before, the effect is always one of amazement that such technology exists in the

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Socialising with the Stars

by Suzanna Nagy

When compared with years past, a recent number of members have expressed dismay in the loss of the social aspect of the RASC. So let's address this disappointment and start "socializing with the stars" again.

Our intention is to start small and expand an already existing event. We invite all members, new and long-standing, young and old, to bring their scopes down to the GMSO for public viewing on Friday and Saturday evenings (clear skies of course). Along with Mike and Dan who are our regular GMSO volunteers and large scope operators, Suzanna (Membership Director) and Simon (Public Relations Director) have been bringing their personal scopes and setting up outside the GMSO, thus pro-

viding a welcome addition to the long lines-up that the large scope encounters on summer weekend evenings.

Join us in sharing the wonder and amazement of the night sky with the adults and children visiting the GMSO. If members

the GMSO visitors. It is incredible to me how many Vancouverites have never viewed the moon through a telescope, let alone the beauty of Saturn and Jupiter or the brilliance of M13. My favourite comment by a visitor has been,

"Is that really Saturn or have you taped a picture to the end of your telescope?" What a great pleasure it is to share your knowledge and love of astronomy with interested newcomers.

The stars welcome your attention and I look forward to meeting all members participating. If you would like further information,

could attend the GMSO one evening a month (dusk to midnight), it would give us all a chance to become re-acquainted with each other as well as a fun way to spend an evening meeting and greeting

please contact me through our website. (Note: Wayne Lyons will be coordinating something similar in Maple Ridge for our Tri-City members). ★



President's Message

On June 16th, the RASC hosted a Star Party for a group of aspiring young astronomers at the GMSO. The proximity to the summer solstice meant a late start by the time all the participants arrived. As might be expected, a less than accommodating blanket of clouds also showed up (it is Vancouver, after all) so, over the course of an hour, the youngsters played hide and seek with a limited selection of celestial objects. Still, there was considerable excitement and we may well have attracted some future members.

The event developed in response to an email from a local production company responsible for a children's TV program called *Heads Up*, hosted by the gregarious and enthusiastic Bob McDonald, well known for his CBC program, *Quirks and Quarks* (I think Bob makes science accessible and fun). The story line of this segment involved an introduction to the night sky, telescopes and groups that could help interested youngsters find out about the heavens before deciding to own a telescope. Three of our members' children participated along with some professional child extras recruited for the

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About RASC

The Vancouver Centre, RASC meets at 7:30 PM in the auditorium of the H.R. MacMillan Space Centre at 1100 Chestnut St., Vancouver, on the second Thursday of every month. Guests are always welcome. In addition, the Centre has an observing site where star parties are regularly scheduled.

Membership is currently \$58.00 per year (\$34.25 for persons under 21 years of age) and can be obtained by writing to the Treasurer at the address below. Annual membership includes the invaluable Observer's Handbook, six issues of the RASC Journal, and, of course, access to all of the club events and projects.

For more information regarding the Centre and its activities, please contact our P.R. Director.

NOVA, the newsletter of the Vancouver Centre, RASC, is published on odd numbered months. Opinions expressed herein are not necessarily those of the Vancouver Centre.

Material on any aspect of astronomy should be e-mailed to the editor or mailed to the address on page 5.

Advertising

Nova encourages free use of its classified ads for members with items for sale or swap. Notify the editor if you wish your ad to run in more than one issue.

Commerical Rates

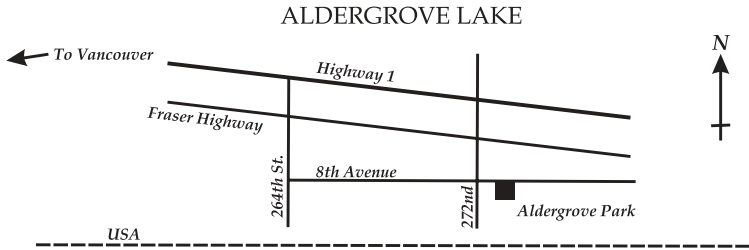
1/4 Page: \$15.00 per issue

1/2 Page: \$25.00 per issue

Full Page: \$40.00 per issue

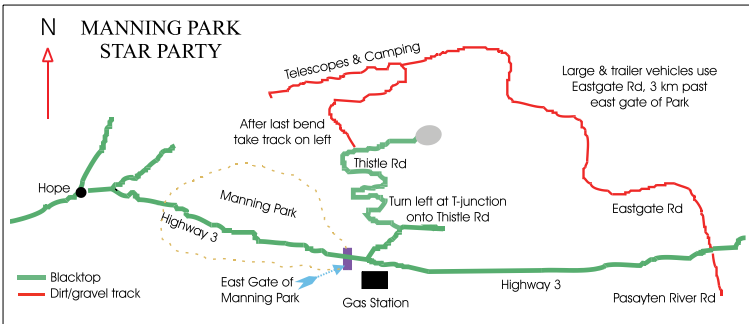
Rates are for camera-ready, or electronic files. Payment, by cheque, must accompany ad material. Make cheque payable to: RASC Vancouver Centre.

Observing Sites

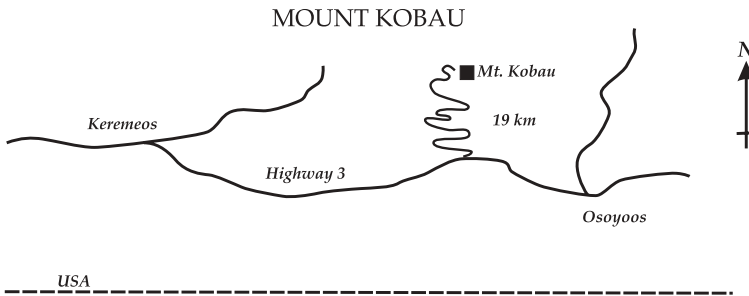


Dale McNabb Observatory in Aldergrove Lake Park (RASC Vancouver Centre's regular viewing site)

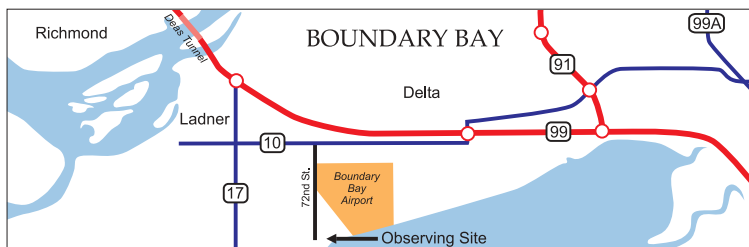
Contact Mike Penndelton (604-888-1505) or Howard Morgan (604-856-9186)



Site of the annual star party organized by the RASC Vancouver Centre



Site of the annual Mt. Kobau Star Party organized by the Mount Kobau Astronomical Society



Site of the regular Saturday night star party. On the dike at the foot of 72nd St.

FOR SALE

RASC MERCHANDISE

Available for purchase after meetings:

Calendars	\$14.00
Golf Shirts	\$30.00
Sweat Shirts	\$30.00
Centenary Mugs	\$ 7.00
Beginners' Guides	\$15.00
Observers' Guides	\$20.00
Cloth Crests	\$11.00
Lapel Pins	\$ 6.00
L.E.D. Flashlights	\$22.00

10" (250mm - f/15) Cassegrain telescope on equatorial mount with 2" focuser & homemade 80mm finder scope. This scope has been out of service and needs attention to restore it to operational condition. - \$500 OBO.

Please contact Wayne Lyons
Tel: (604) 467-2956

Wanted: The RASC-VC is looking for a good quality 6" to 8" Newtonian or Schmidt-Newtonian telescope on an equatorial mount for our Loaner Telescope Program.

Please contact Wayne Lyons
Tel: (604) 467-2956

ASTROCOMPUTING

SpaceBase™ (604-473-9358,59). Affiliated since 1992 with RASC Vancouver, our link to RASC Net, RASC Members only chat area. Future data distribution hub for CARO Project. Features include latest HST images, current world space news and astronomy programs.

LIBRARY

The centre has a large library of books, magazines and old Nova's for your enjoyment at the GSO. Please take advantage of this club service and visit often to check out the new purchases. Suggestions for future library acquisitions are appreciated.

RASC-VC on the Internet

<http://www.pcis.com/rascvan/> or
<http://www.rasc.ca/vancouver>

H.R. MACMILLAN SPACE CENTRE

The Pacific Space Centre Society is a non-profit organization which operates the H.R. MacMillan Space Centre and Gordon M. Southam Observatory. Annual Membership (\$30 Individual, \$80 Family) includes a newsletter, Discounts on Space Camps, special programs and lectures, Vancouver Museum Discounts, and free admission to the Space Centre. Admission to the Space Centre includes: Astronomy shows, Motion Simulator rides, multimedia shows in GroundStation Canada, and access to the Cosmic Courtyard Exhibit Gallery. For Membership information, call Mahi Jordao at 604-738-7827, local 237 for information. You can also reach them on the Internet at <http://www.hrsmacmillanspacecentre.com/>

MEMBERSHIP HAS ITS PRIVILEGES!

New members, did you know? The Vancouver Centre has 8 telescopes available for loan free of charge! We have telescopes ranging from 60mm to 10" diameter. For more information see Wayne Lyons, Director of Telescopes in the meeting room of the GSO *after* the members meeting. All telescopes are to be picked up and returned at the GSO. The loaner period is for one month, to be returned after the next meeting. Telescopes are not allowed to circulate outside of these meetings. You can now reserve 2 different telescopes per year and use what is left at the end of the meeting anytime. Wayne can be reached at 604-467-2956.

Your greatest opportunity as a member of the R.A.S.C. is to take advantage of the company of other enthusiasts to increase your knowledge, enjoyment and skill in astronomy.

The best thing you can do to gain the most from your membership is to get active! Take in the club meetings; engage other members with questions; come out to observing sessions (also known as "star parties"), and, by all means, volunteer to take part in our many public events.

Observing takes place at Boundary Bay on the dike at the south end of 72nd St. in Delta (see map on p. 4). We are there most clear Thursday/Friday nights. Contact Jason Rickerby at 604-502-8158.

RASC
1100 Chestnut Street
Vancouver, B.C.
V6J 3J9
604-738-2855

Upcoming Events

August

11-12 – Perseid meteor shower
19-27 – Mt. Kobau Star Party

October

13 – Sidewalk Astronomy (rain day Oct. 14)

December

12 – AGM

November

14 – 75th Anniversary of Vancouver Centre

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hands of amateurs and is happening right here on our own doorstep. After some time playing around with the telescope and Starry Night Pro, I asked her what her interest in Astronomy was, and then she dropped the bombshell... “Well,” she said proudly, her eyes sparkling, “my great uncle was an astronomer.”

“What was his name?” I asked.

“Herschel,” she said. “Sir John Herschel. He was the Astronomer Royal, you know.”

Well, you could have knocked me over with a feather!!! I just couldn't believe that a relative of Herschel's should be living right here in Vancouver and here I was standing in this tiny eight foot dome sharing my astronomy experiences with her. She told me that she had old pictures and books at home and she would dig them out for me. I always remembered as a boy growing up in Liverpool when

I used to go down to the main city library to do my homework. I was interested in astronomy and often paused near the entrance to look at



Herschel's large telescope mirror that had somehow found its way there and was sitting in an old oak and glass case. I'd dream about how great the views must have been through that big mirror compared to my little 4" reflector that my parents had bought me for Christmas a few years earlier.

Today her husband, Sid, dropped by to see me and thanked me for helping them out with their delinquent deck and that the formula was working well. “Oh, by the way, I have a couple of books I'd like to give you as a present,” he said, “but I must confess that I only paid 25¢ for them many years ago and I'll never read them.” He handed me the two volumes dated MCM I (1901) *Outlines of Astronomy* by Sir John William Herschel, Part One, Volumes 19 and 20. Still in beautiful shape, with many drawings and formulas and first published in 1849. What a great present and a wonderful find.

Despite all, I guess it just goes to show that “some days you just can't seem to lose.” ★

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event (there is a career opportunity for those of you with young children or grandchildren).

The filming lasted well past my bedtime. For Bob McDonald, who had arrived from Toronto that evening, it was 4:00am EST by the time it was done. Still, he managed his lines with aplomb. The RASC had a featured spot and should get some good publicity when the series airs, beginning in September.

Radio station CISL and TV stations CBC and CTV also visited the GMSO in the last two months to explore various astronomical events. Dan Collier had the opportunity to talk about an asteroid occultation while Simon Johnston and Michael Jensen were able to show off the night sky with the half-meter telescope.

The Chris Graham Robotic Telescope project continues to move along. Software upgrades are nearing the point where the scope's operations can be fully automated. That means a viewing program can be set for a particular evening and the software will start up the scope; take darks, flats or biases as needed; do the imaging run, including deciding the best order based upon an object's lo-

cation and, finally, shut down the CGRT when the program is complete. With the installation of the filter wheel, we are now able to do high quality colour imaging as well. The data capture capability is considerable and we expect to be transferring as much as a gigabyte from the New Mexico Skies site after a successful imaging session. Arrangements have been made with CADK in Victoria to store the images for retrieval at our discretion.

We have about 20 people who are involved in various aspects of the CGRT project and we continue to invite anyone with an abiding curiosity to contact Bob Parry, Chair of the CGRT committee, or any of your council members for more information. The training sessions are being held in our operations room at the GMSO, usually on a Tuesday evening. The next stages in our training program will be for imagers and data analysts. Because of the technology overlap between the CGRT and GMSO equipment, there is an opportunity to acquire training applicable to both facilities.

The GMSO is open Friday and Saturday evenings, weather permitting. Suzanna Nagy, our membership coordinator, has asked members to

bring their scopes out for these events. Newcomers especially are encouraged to come out for a look at the summer skies. Because of the position of our own Milky Way this time of year, there are some wonderful views of nebulae and star clusters. Most of the public will have left the observatory by 12:30am so Michael, Dan, Howard and Simon (four of the regular volunteers) are more than pleased to handle requests to view particular objects or to share items of interest. Recently, Dan Collier hunted down XZ Cygni, a pulsating variable star described in detail by Richard Huziak in the latest issue of the *Journal*.

With more frequent clear and pleasant evenings, I encourage members to go out and enjoy the views. This is what we have been waiting for. Find a really dark site and get lost in the night sky!

– Ron Jerome ★

Observing

by Wayne Lyons

On June 24th, five members of RASC-VC were fortunate enough to get a long-awaited break in the weather and enjoy an observation session at a lookout in the backwoods of UBC's Malcolm Knapp Research Forest. The site is behind two locked gates on a difficult twelve-kilometre logging road at an elevation of about 600 metres well away from direct sight of Fraser Valley lighting. It is in a Class 4.5 Zone on John Bortle's Light pollution Scale:

Class 4: Rural/suburban transition

Fairly obvious light-pollution domes are apparent over population centers in several directions. The zodiacal light is clearly evident but doesn't even extend halfway to the zenith at the beginning or end of twilight. The Milky Way, well above the horizon, is still impressive but lacks all but the most obvious structure. M33 is a difficult averted-vision object and is detectable only when at an altitude higher than 50 degrees. Clouds in the direction of light-pollution sources are illuminated—but only slightly so—and are still dark overhead. You can make out your tel-

escope rather clearly at a distance. The maximum naked-eye limiting magnitude is 6.1 to 6.5, and a 32-cm reflector used with moderate magnification will reveal stars of magnitude 15.5. Modest to serious impact to deep sky observing and imaging.

Class 5: Suburban sky

Only hints of the zodiacal light are seen on the best spring and autumn nights. The Milky Way is very weak or invisible near the horizon and looks rather washed out overhead. Light sources are evident in most if not all directions. Over most or all of the sky, clouds are quite noticeably brighter than the sky itself. The naked-eye limit is around 5.6 to 6.0, and a 32-cm reflector will reach about magnitude 14.5 to 15.

This text is from *Sky and Telescope* magazine's website: http://skyandtelescope.com/printable/resources/darksky/article_84.asp

Our local light pollution map can be found at: <http://cleardarksky.com/lp/McDnldPkBClp.html?Mn=focuser>

Highlights of my Observing logbook:

UBC-MKRF Lookout, Maple Ridge, BC (longitude W122.5, latitude N49.4):

Universal Time -7h

Saturday: 20060624 - 20:00 – 20060625 - 05:00 PST

Cloud: 0%

Transparency: 4/5

Seeing: 4/5

Darkness: 5.5+ LVM

Wind: slight

Humidity: 40% - 45%

Temperature: 15°C to 20°C

Session Notes:

Arrived at site at around 21:00 and set scopes up before sunset. The objective of the session was to evaluate how useful this observation site might be. The Evening was one of the best for a long time. Most of the time was spent comparing views from the different scopes present. Highlight of the evening was picking up the Veil Nebula both West (Veil) and East (Network). Attempted to observe the North American Nebula but was unsuccessful. List of objects viewed is only partial as the session was more a social session than keeping serious records of objects viewed. The session ended with the beginning of twilight on Sunday and we made our way back to civilization by sunrise.

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Objects Viewed:

Jupiter, M5, M57, M56, M27, the Coathanger (Collinder 399), M29, Crescent Nebula (NGC 6888), Western Veil Nebula (NGC 6960), Network Nebula (NGC 6992/95), Andromeda Galaxy (M31/32/110), Blinking Planetary Nebula (NGC 6826), Owl Cluster (NGC 457), NGC 7789, M81-82, M51, Epsilon Lyrae, Iota Cassiopeiae,

Albireo, NGC 869/884, M34, M76.

I am working at getting permission to access an observation site in the Pitt-Addington Marsh at Pitt Lake on the North side of the Valley. Although the southern sky is affected by our city lights, the northern and north-eastern skies are well worth viewing. The site is also within forty minutes of the Coquitlam Shopping Centre. Please keep

an eye on the Observing section of the RASC-VC website for postings about viewing in this area.

RASC-VC Observing website:

http://qp.pcis.com/QuickPlace/rascvan/PageLibrary88256C7200249125.nsf/h_Toc/c11e12df8a83b288256c72002a2acc?OpenDocument *

RASC-VC Telescopes

by Wayne Lyons

The Vancouver Centre has been fortunate in recently receiving generous donations of two 8" Schmidt Cassegrain telescopes. These scopes will be used for Public Education Programs and are available to

RASC-VC members at the GMSO only and under direct supervision of a Member of Council.

There are many wonderful objects that may be observed in our Vancouver skies with the scopes available at the GMSO.

Please come and help to share these sites and show the public that it is not too late to curb the growth of pollution in our night skies. Regular viewing sessions will be held on Friday and Saturday evenings (weather permitting). *



Brian Morse

75 Years of History

by William C. Fearon

Yes, the Vancouver Centre of the RASC is 75 years old this year. While the anniversary date is in November, I wish to hear from any members about anything special involving members of the RASC Vancouver Centre and astronomical events such as eclipse expedi-

tions and astronomical discoveries.

Please e-mail me at williamfearon147@hotmail.com or write to me at:

William Fearon
252 Lebleu St.
Coquitlam, BC V3K 5Z3

I do not wish to take any of your remembrances by telephone as I do not know shorthand and my writing resembles chicken scratching at best. Thank you for your cooperation. A selection of these memories will be printed in a special Nova issue in November. ★

The Book Report

by William C. Fearon

In this issue I will report on one of the staples of many astronomers' bookshelf. It is a three-volume set of books known as *Burnham's Celestial Handbook (An Observer's Guide to the Universe Beyond the Solar System)*.

Despite being first printed in 1966 (my copy is from 1978), it is a valuable asset to have. The only drawback to the book is that the co-ordinates in the books are all epoch 1950.0 and thus are not useful without correcting for the procession of the equinoxes (which means that you will have to offset by a small amount to find the object—making even those with goto scopes do a little star-hopping ☺).

Now to get to the meat of the report. I will simply use a sample constellation to provide an example of what the book has to offer. I have chosen a constellation that is above the horizon as soon as it is dark and that is Cygnus (The Swan or the Northern Cross). Cygnus passes overhead for Vancouver at about midnight, now, and it con-

tains many things for the amateur to see.

The Cygnus section starts on page 735 and ends on page 816, indicating the amount of information in this section. It starts with a listing of all the reachable Double and Multiple stars in the constellation. Taking up 9 pages the list provides: Proper Name, Separation Distance (in arc seconds), Position Angle, Stellar Magnitudes, Notes and Right Ascension and Declination.

Next comes 2 pages of variable star listings. Provided are the Name, Magnitude Variation, Period of Variability (in days), Notes and RA & Dec.

Next comes a section on clusters, nebulae and galaxies that may be seen in Cygnus. While only 2 pages long, this small amount is due to the fact that Cygnus is in the plane of the Milky Way galaxy and thus hides most of the distant deep-sky objects from us. This list starts with the objects NGC number, Other Designation if known, Type of Object, a Descriptive Summary and the RA & Dec.

Next comes a section which provides descriptive notes for a selection of objects in Cygnus such as Albireo (Beta Cygni, a beautiful double star), Chi Cygni (a variable star), 61 Cygni (a double star only 11 light years away from Earth), M 29 (a small open cluster of stars), NGC 7000 (The North American Nebulae, an incredible object to be seen) and Cygnus A (a distant eruptive galaxy that is an X-Ray and radio source as well). Included are for most of these are either pictures of the object and the surrounding starfield or finder charts for finding the object in question.

Also gracing this section on Cygnus are 21 pages of black-and-white photographs of various objects in the constellation.

I will close by saying that I have a copy of these books in my personal library and we have a copy of the books in the Vancouver Centre Library for members to borrow. If you want a copy, I would suggest haunting the used bookstores in town (which is where I got mine). ★

Members' Gallery

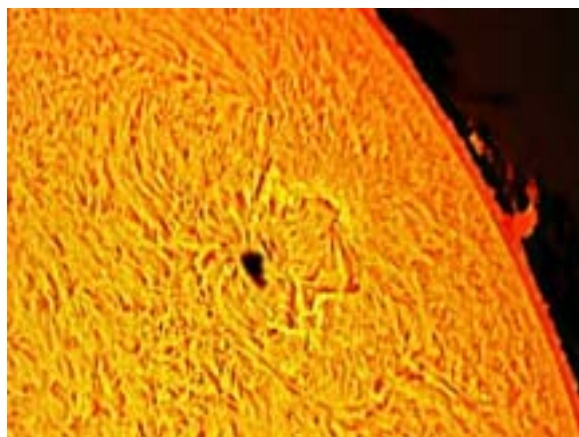


Brian Morse

Horsehead Nebula (top)

Moon - 30 January, 2004 (left)

Sunspot - 26 April, 2005 (bottom)



Proud To Serve Vancouver's Astronomical Community



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