

skynews



this month

Dr. Patrick Côté

Astrophysics Astronomical Activities at HIA

February 13th, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic

The National Research Council of Canada's Herzberg Institute of Astrophysics (NRC-HIA) manages Canada's involvement in major astronomical observatories. NRC-HIA operates optical and radio telescopes in Victoria and Penticton, and participates in four major international observatories in Hawaii and Chile. NRC-HIA also supports space astronomy missions through funding from the Canadian Space Agency, while its scientists and engineers play leadership roles in developing concepts for future national observatories on the ground and in space.

In this talk, I will summarize these multifaceted efforts, present some exciting science discoveries from the NRC-HIA research staff, and describes future "state-of-the-art" astronomy projects in whose development Canada and NRC-NIA are participating, including the James Webb Space Telescope (JWST), the Thirty Meter Telescope (TMT), the Atacama Large Millimeter Array (ALMA) and Square Kilometer Array (SKA)."



Bio: Dr. Cote received his Ph.D. degree in 1994 from McMaster University. Following postdoctoral appointments as a Plaskett fellow at the Herzberg Institute of Astrophysics (HIA) in Victoria and as a Sherman Fairchild fellow at the California Institute of Technology in Pasadena, he worked as a professor in the Department of Physics and Astronomy at Rutgers University from 2000 to 2004.

In 2004, he returned to Canada as a senior research astronomer at HIA. The author of more than 60 papers in scientific journals, he is a frequent user of the Hubble Space Telescope, the Chandra X-ray Observatory, the Spitzer Space Telescope, the W.O. Keck Observatory and Gemini Telescope in Hawaii, and the Very Large Telescope in Chile. His research interests include the study of dark matter, galaxy evolution, supermassive black holes, and galactic nuclei."

on the cover

**Bruno Quenneville and his camera's timer
Bruno and John Looking for Clear Skies at
the New Victoria Centre Observatory**
27 January 2007

Despite the cold weather work the observatory project is progressing well. For more information on the observatory project see page 9, or visit <http://victoria.rasc.ca/observatory> for more details and photographs of observatory construction at the old 16" site at the Dominion Astrophysical Observatory.

observers group

RASC Victoria Centre and the NRC have signed a License to Use Land Agreement which gives members of Victoria Centre expanded access to NRC property on Observatory Hill.

If you are a member in good standing of Victoria Centre RASC, consider yourself an "active observer", and wish to take advantage of this opportunity, please send an email to the 1st or 2nd Vice President. More information on this program see: <http://victoria.rasc.ca>

*next month and beyond***March 12, 2008****Teaching Astronomy - Teacher's perspective**

Dr. Jim Nemeč

April 9, 2008**Dwarf Galaxies**

Dr. Alan McConnachie, Postdoctoral Fellow in Astrophysics in the Department of Physics and Astronomy at the University of Victoria

President's Report

President's Message
February, 2008

Observatory Project

As promised by our Project Manager Bruno Quenneville, the project is now at the "lockup stage". This means some minor finishing outside may still need to be done, but the door and lock are installed, and the siding and roofing are in place, and the roll-off roof rolls! The observatory will now be able to dry out, so we can proceed with the next stage.

NRC's contractors have installed the wiring conduit from the pole to the observatory. The metal pier is currently being fabricated, and installation of a power panel and work on the inside of our observatory will come next.



I encourage you to browse the photo gallery on the Observatory Project web page <http://victoria.rasc.ca/observatory>. We knew that building during January would present some challenges for us, and mother nature didn't spare us. As our dedicated group of volunteers will attest, the project continued through sleet and rain, snow and freezing cold! A big thank you to all our volunteers for showing up when you promised to, and for your ungrudging commitment to this project.

In addition to coordinating volunteers and working on the building phase himself, Bruno has done a terrific job of obtaining support from our suppliers. Many local companies have stepped up to the plate and either donated services and/or materials outright, or given us their rock bottom prices which they normally reserve for their best customers. We will be recognizing these corporate contributors within the next few weeks, so stay tuned. As you will see by referring to the budget on the Observatory Project web page, we continue to be under budget on the expense side.

Observing

There is a Total Lunar Eclipse coming up on Feb 20th, so mark your calendars, since we will have to wait another 35 months before the next one occurs! The Moon will rise in the east already partially eclipsed, however totality begins at 7:00pm PST, so it should be a very good show. January weather didn't give us the greatest observing conditions, however Victoria Centre members' productivity for observing and photography

was pretty impressive. Check out the Zenfolio RASC Victoria Centre Astrophoto Galleries (<http://rascvic.zenfolio.com/f304720064>) for the latest astrophotos and sketches showcasing asteroids, nebulae, planets and a lunar conjunction.

Events

Although the 7th Annual RASCALS Star Party doesn't occur until August 24-26, 2008, we are already doing preliminary planning. We are also still looking for a Star Party Coordinator, so if you are interested in helping Victoria Centre stage this event, please contact Sid Sidhu or myself. I always look forward to this event, since the speakers are interesting, and I have lots of fun with the social aspect of this popular event!

I will miss chairing the Feb 13th Regular Meeting, however Patrick Côté will be giving an update on activities at the HIA. Patrick is a terrific speaker, and HIA's scientists and engineers play leadership roles in developing concepts for future national observatories on the ground and in space, so please plan to attend this event.

Speaking of leadership roles, I'm happy to report that Charles Banville's astrophotography work was chosen to appear on the back cover of the current issue of the national Journal (JRASC) - see <http://rascvic.zenfolio.com/p1064835983?photo=h2B6C12E9#728503017>. I was happy to formally congratulate Charles at a recent Astronomy Café for being the first Victoria Centre member to be so honored.

job jar

If you are a member and wish to volunteer for one of these jobs, please contact the Council member indicated below.

Star Party Coordinator Victoria Centre's Annual Star Party is planned to be held August 29-31, 2008 at Victoria Fish and Game Association's property atop the Malahat. We need someone to act as overall coordinator for this event, and to report to Victoria Centre Council on a regular basis. Bruno Quenville is our former Star Party Coordinator, and is willing to help the new person for the first year
Skills: people and organizational skills. 2 hrs/mo, 3 full days during the event. See Bruno Quenville for info.

Spectacular Sky Show: Venus, Jupiter and the Moon

By Joe Rao SPACE.com Skywatching Columnist

The most spectacular celestial sights over the next couple of weeks are reserved for the early morning sky. Two bright planets will converge, then be joined by the moon.

In the final days of January and the first days of February will be an exceptional time for predawn sky watchers with a beautiful pairing of the two brightest planets, Venus and Jupiter. They will appear closest together in the dawn sky of Friday, Feb. 1, and a few mornings later, the waning crescent moon will later drop by to join them.

Dazzling "double planet"

For the past several months, dazzling Venus has been prominent in our morning sky. And about a week ago, brilliant Jupiter also began to emerge from out of the glare of the Sun.

The two planets are currently rising out of the east-southeast horizon about two hours before sunrise.

From now through the end of January, the gap between the two will noticeably close, until on Feb. 1 they'll be separated by just over one-half degree, which is roughly the apparent width of the moon (The width of your fist, held at arm's length roughly corresponds to 10 degrees). Jupiter will shine brilliantly at magnitude -1.9, yet it will appear only 1/7 as bright as Venus, which will gleam at magnitude -4.0.

Together they will make for a spectacular "double planet" low in the dawn twilight. In the mornings thereafter they will appear to slowly separate, but before they have a chance to get too far apart the moon will join the picture.

Celestial summit meeting

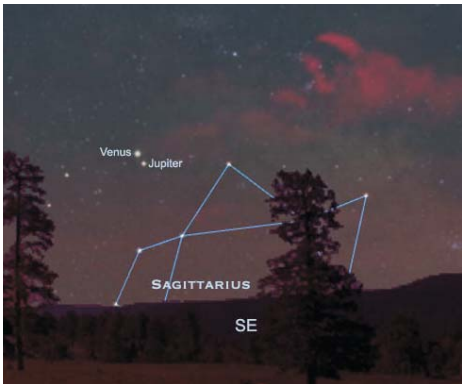
At last quarter (half) phase on Jan. 30, the moon will stand alone, high toward the south at sunrise. But with each passing morning, as it wanes to a slender crescent, it will shift toward the east, ultimately into the same region of the sky as our two planets.

Early on Sunday morning, Feb. 3, the moon will sit well off to the west (right) of the planets. On the following morning, Monday, Feb. 4, the

show will reach its peak when, about 45 minutes before sunrise, Venus, Jupiter and the moon — the three brightest objects of the night sky — will form a striking isosceles triangle, with the two planets 3 degrees apart and the moon marking the vertex of the triangle just over 5 degrees below the “dynamic duo.”

Imagine the astrological significance that the ancients might have ascribed to a celestial summit meeting such as this!

You might want to check your southeast horizon in advance to make sure that there are no tall trees or buildings that might obstruct your view of the moon which will be sitting very low to the horizon.



Like a painting, this celestial tableau might, at first glance appear rather flat and one-dimensional. But by gazing at this scene long enough, our minds can perhaps picture these objects strung out across the solar system, along our line of sight as they really are.

Beyond our moon — figuratively a stone’s throw away at 247,000 miles (397,000 kilometers) — we first reach Venus, about 510 times farther out, or 126 million miles (203 million kilometers) from Earth. The lesser gem flanking Venus — Jupiter, largest of all the planets — is nearly 4 and a half times more distant than Venus at a distance of 560 million miles (901 million kilometers).

Generally speaking, at least for the immediate future, conjunctions between Venus and Jupiter will come in pairs. The first conjunction takes place in the morning sky, followed about 10 months later by another in the evening sky. Then, after about two and a half years, Venus and Jupiter are again in conjunction, again in the morning sky.

When Venus and Jupiter next get together, it will be in the evening sky late next fall, on Dec. 1. After that, we’ll have to wait until May 2011 (morning sky) and Mar. 2012 (evening sky) for the next set of Venus-Jupiter conjunctions.

Introduction to the Night Skies



January 29 - February 26, 7:00 - 8:30 pm
Shoreline Community School in View Royal

In these information-packed sessions topics covered will include: basic astronomy, equipment, seasons, lunar phases, creating planispheres, movement of objects in the sky, the solar system, Milky Way, astrophotography and on-site observations using high-powered telescopes provided by the Royal Astronomical

Society of Canada (RASC) - Victoria Centre.

Fee: \$80 - 5 sessions; includes a one year membership in RASC Victoria Centre, a one year subscription to the Canadian Skynews astronomy magazine, one Observers Handbook, the RASC Journal, the Skynews centre newsletter, and access to telescopes and other equipment through Victoria Centre.

Please register through Shoreline Community School - <http://www.sc-ssd61.bc.ca/regist.htm>

contact us on-line

Web Site
New Members
General Inquiries

www.victoria.rasc.ca
newmembers@victoria.rasc.ca
info@victoria.rasc.ca

address change? information incorrect

Contact the National Office

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Fax - 416.924.2911
Email - nationaloffice@rasc.ca
Post - RASC, 136 Dupont Street, Toronto, ON M5R 1V2
General enquiries - nationaloffice@rasc.ca

Observatory project

January 5, 2008 - frame bolted

Charles Banville, Malcolm Scrimger and Bruno tackled the placement of the building's anchor bolts. A total of 17 anchors were placed, each having a 3,000 lb. capacity (that should be enough to handle high wind conditions experienced lately). Despite heavy showers around 2:30 pm, Malcolm and Charles executed a great clean-up and moved our plywood stock closer the building. As usual our volunteers performed well! Project wise, we're right on target.



January 9, 2008 - track run-outs

We accomplished the final placement and anchoring for the track run-outs. Present on site were Steve Pacholuk, Chris Gainor, Bill Almond, John McDonald, Michael Wheatley and Bruno Quenneville. Many special thanks to Michael for giving us a hand on very short notice. He provided the 12" sono tube along with the expertise to transfer the topographic profile and cut the tube for a perfect fit! By the end of the day Bruno was able to grout the rebar in place and make ready for a concrete pour this weekend.

January 11, 2008 - roof track hardware delivered on-site

Roof tracks and roller system was delivered on site today (Special Delivery - see photo!). Harbour Door Services Ltd. of Victoria understood our needs and provided us with commercial grade components. Many special thanks to Val Hollingshead (owner) for supporting our project and minimizing costs by giving us their maximum trade discount.

January 12, 2008 - roof trusses in place

Today saw completion of the roof framing segment, and also the concrete was poured for the bases for the roof rolloff supports. Many thanks again to Nelson Walker, Charles Banville, Bruno Quenneville, and Malcolm



Scrimger. The weather cooperated in only allowing light rain & mist to keep the crew cool and motivated.

January 13, 2008 - wall sheeting and runouts

Plywood sheeting was completed, and the concrete footings are also in place for the roof runout. The runout framing was assembled, ready for final alignment, and work on the roof framing progressed well. This Sunday's crew included:

Geoff Jones, Bill Almond, Nelson Walker, Charles Bamville, and Bruno Quenneville. We are exceeding our projected schedule, thanks to our dedicated volunteer workers crews.



January 19, 2008 - the roof is rolling

The roof roller assembly was nearly completed today, and the roof system is running effortlessly! Alignment of the roof run-outs was finalized by John McDonald and crew. Sid Sidhu and Malcolm Scrimger focused on the wheel components and support beams. The field assembly was completed by Bruno Quenneville and the whole work party - we needed lots of hands to handle this demanding and heavy task. Special thanks to Michael Wheatley for picking up and delivering the remainder of the building materials to the site on Friday.



Clyde Donnelly, facility manager for the NRC reports that trenching and conduit for the main power and data underground feed should begin early this coming week. We are definitely on track...and rolling now! Again and again, many thanks to our dedicated volunteers for making Bruno's job as Project Manager so rewarding.

January 20, 2008 - the roof is rolling to the end of the track and the siding is mostly installed

The green steel siding and flashing progressed well today with 90%

of the walls now complete. The roof is rolling it's full distance now and is proven to be an excellent design with minimal friction (you can move it with 2 fingers!) Today's crew included, Bruno Quenneville, John McDonald, Malcolm Scrimger, Geoff Jones and Charles Banville. RASC Victoria Centre president Joe Carr stopped by to view first hand our successes to date. We will be meeting our construction deadline of January 31st for building lock-up. Great work was accomplished by today's volunteers and of special note, the Sun came out to cheer us on (it's been a wet 3 weeks thus far). Charles and Bruno started at 8 am and worked until 5:30 pm - a long day. BTW a great clean-up by Charles and Geoff, paving the way for the electrical work to begin this week by NRC's contractors.

January 21, 2008 - electrical trench dug & conduit in place

The trenching for the Power and Data cabling was in full progress today. NRC reports that all was covered over by the end of day and a service panel inside the RASC Observatory is soon to follow. Note our new custom fabricated steel door and frame assembly, donated by Shanahan's Building Supplies of Victoria. They are in full support of our Observatory Project.

January 26, 2008 - plywood sheeting for roof and gable ends

Work on the RASC Victoria Centre Observatory progressed well on our 9th day of construction. Framing for the gable ends and plywood sheeting is nearly complete. Plywood covering of the roof frame structure has also started. Today's crew included, Bruno Quenneville, Nelson Walker, Malcolm Scrimger and Charles Banville.

January 27, 2008 - gable ends and roof sheeting completed

Despite sub-zero temperatures and snowy conditions, work on the project continued without hesitation by our dedicated crew. The gable ends were completed with metal siding and flashing trim. Plywood sheeting of the roof is also complete, with metal sheeting to follow next. The facility interior should be drying up in the next few days in anticipation of the electrical power rough-in and activation. It was a long day for all, and in less than ideal working conditions - slippery slopes and frozen finger tips. Today's crew included, Bruno Quenneville, John McDonald, Geoff Jones and Charles Banville. Today's challenges were accepted head on, with little hesitation or slowdown caused by the weather, however by 3 o'clock work stoppage was called so we could all make it safely down the Hill and warm up at our favorite Tim's coffee shop.

RASC victoria council

this month

monday nights

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New Member Liaison

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newmembers@victoria.rasc.ca

Astronomy Cafe

Fairfield Community Centre,
1330 Fairfield, Victoria
7:30-11pm
Call John at 250.480.0928 for
directions and information.
New comers are especially
welcome. Come and enjoy!

**ASTRONOMY
CAFÉ**



second wednesday of the month

Monthly Meeting

7:30 PM, Elliott Lecture Theatre,
Rm 060, UVic.

as sky and interest dictate

New Observers Group

Hosted by Sid Sidhu.
1642 Davies Road, Highlands.
Call 391-0540 for information
and directions.

by email

Observer/CU Volunteers/ Members email lists

Contact Joe Carr to subscribe to
these email lists for important,
timely, member-related news.