Skynews

Royal Astronomical Society of Canada ✦ Victoria Centre

this month

Dr. Jim Nemec

Observing with the World's Best Telescope

March 12th, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic

This talk will be about Jim's December 2007 observing trip to Cerro Tololo Inter-American Observatory to observe the globular clusters NGC2210 and NGC2257 (in the Large Magellanic Cloud) with the SMARTS 0.9-m telescope.

Bio:
Jim Nemec holds a Ph.D. from the University of Washington in Seattle. The subject of his thesis was Extragalactic RR Lyrae Stars (co-supervised by Prof. Paul Hodge at UW and Dr. James Hesser at DAO). He was an NSERC postdoctoral fellow at the California Institute of Technology and UBC, and a University Research Fellow at UBC in Vancouver. He was on the faculty at the University of Washington, Caltech and Washington State University before coming to Camosun College 11 years ago where he teaches Astronomy and Physics courses. He has published over 60 research papers on such topics as variable stars inside and outside our Galaxy, close binary systems, blue stragglers, SX Phe stars, period-luminosity relationships, double-mode RR Lyrae stars, mixture models for studying stellar populations, and extragalactic globular clusters (in M87 and M49).

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next month

April 9, 2008, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic
Dwarf Galaxies - Dr. Alan McConnachie, Postdoctoral Fellow in Astrophysics in the Department of Physics and Astronomy at UVic.
Galaxies are thought to be formed through violent, dynamic processes, in which small galaxies form first and merge together to form larger galaxies. As such, dwarf galaxies occupy a unique niche in galaxy formation models, as the objects which were first to form. I will review our understanding of galaxy formation, with particular attention paid to the role of the dwarf galaxies. I will show how detailed observations of some of the smallest galaxies in the nearby Universe are contributing to our understanding of the formation of our home, the Milky Way galaxy.

on the cover

John McDonald
Horsehead and Flame Nebula
23 February 2008

Date and location - 2008-02-23, Backyard in Victoria.
Equipment - 105mm f7 refractor, modified Canon 350D camera and HEQ5 mount.
Exposure 92 light and 40 dark frames, 58s each at ISO 1600 plus 20 flat frames for calibration.
Processing in Images Plus and Photoshop.

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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

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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 Quennville 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 Quennville for info.

President’s Report

President’s Message
March, 2008

Observatory Project
The roof is on the observatory, and the building phase of the project is coming to an end. There are a few details to take care of, then the installation of the steel pier will happen. At that point, we move into the next phase of our Observatory Project - deciding on a telescope, and installing our Paramount ME along with the computer systems. We continue to be under budget and on time for this project, thanks to our dedicated group of volunteers. See http://www.victoria.rasc.ca/observatory/Default.htm for more information.

Observing
The Total Lunar Eclipse on Feb 20th was a wonderful event. Several Victoria Centre members setup at Cattle Point in Oak Bay, and there were several other dedicated observers setup at other locations. The Moon rose in the east already partially eclipsed, with totality beginning at 7:00pm PST. The weather cleared literally an hour before the Moon rose, so I believe everyone saw a very good show. Check out http://rascvic.zenfolio.com/p214319020/ for photos and observing reports from several of our members.

On a personal note, I have just returned from observing in Costa Rica. Gary Seronik, Contributing Editor for Sky and Telescope magazine (and a Victoria Centre member) has coordinated a five day “Southern Sky Fiesta” tour at a dark site on the Pacific coast of Costa Rica for the last five years. I decided to travel down there this year. The site is indeed very dark (magnitude 6 or better), and since the location is only 10° above the equator, a good portion of the southern hemisphere’s sky is visible. It was a real treat to observe wearing a t-shirt in February! For those of you who want more details, please read my JoeTourist blog http://joetourist.blogspot.com/ - click on the “First week...” link on the right side.

Events
International Astronomy Day will be celebrated on May 10, 2008. The venue for this year’s event will be the Centre of the Universe (CU), atop

Observatory Hill. In past years we have held the daytime event at the Royal BC Museum and the night time event at the CU, but this year we will run the whole day at the CU. This represents a fresh start for this annual event, so please stay tuned (or check-out http://www.victoria.rasc.ca/events/AstroDay/Default.htm) for more information about the exciting program we have planned for this year. As always, we will need lots of volunteers to make this day special for the public (as well as ourselves), so please mark this day on your calendar.

Upcoming Events

Night Sky Viewing - March 17 at Sir James Douglas School - the public is invited to Astronomy Cafe.

Monthly Victoria Centre Meeting - April 9, 7:30 PM, Elliott Lecture Theatre, Rm 060, UVic. Dr. Alan McConnachie, Postdoctoral Fellow in Astrophysics in the Department of Physics and Astronomy at the University of Victoria will speak on Dwarf Galaxies.

Sunday Sun Day - April 20, 12 noon to 2 pm, Gonzales Observatory. As part of his day job Scott Mair is hosting a drop-in solar observing event to celebrate the timekeeping history of the observatory. Any RASCals that would like to drop by with their telescopes would be very welcome.

Astronomy Day - May 10 at the Centre of the Universe. Exhibits on display from 10 am - 4 pm. Public observing from 7 pm - 11 pm.

Monthly Victoria Centre Meeting - May 14, 7:30 pm, Elliott Lecture Theatre, Rm 060, UVic. Speaker to be confirmed.

Monthly Victoria Centre Meeting - June 11, 7:30 pm, Elliott Lecture Theatre, Rm 060, UVic. Member's Night.

Celebrating Solstice - June 21, 11am - 2 pm, Beaver Beach - co-sponsored by CRD Parks and Victoria Centre**.**

Island Star Party - July 4-5, Hosted by our friends Cowichan Valley Star Finders; location is the Victoria Fish and Game Association, Malahat, BC.

RASCals Star Party - August 20-31, (tentative date) Hosted by Victoria Centre; location is the Victoria Fish and Game Association, Malahat, BC,

Royal Astronomical Society of Canada ✦ Victoria Centre

Invisible Spiral Arms

by Patrick Barry

At one time or another, we've all stared at beautiful images of spiral galaxies, daydreaming about the billions of stars and countless worlds they contain. What mysteries—and even life forms—must lurk within those vast disks?

Now consider this: many of the galaxies you've seen are actually much larger than they appear. NASA's Galaxy Evolution Explorer, a space telescope that "sees" invisible, ultraviolet light, has revealed that roughly 20 percent of nearby galaxies have spiral arms that extend far beyond the galaxies' apparent edges. Some of these galaxies are more than three times larger than they appear in images taken by ordinary visible-light telescopes.

"Astronomers have been observing some of these galaxies for many, many years, and all that time, there was a whole side to these galaxies that they simply couldn't see," says Patrick Morrissey, an astronomer at Caltech in Pasadena, California, who collaborates at JPL.

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The extended arms of these galaxies are too dim in visible light for most telescopes to detect, but they emit a greater amount of UV light. Also, the cosmic background is much darker at UV wavelengths than it is for visible light. “Because the sky is essentially black in the UV, far-UV enables you to see these very faint arms around the outsides of galaxies,” Morrissey explains.

These “invisible arms” are made of mostly young stars shining brightly at UV wavelengths. Why UV? Because the stars are so hot. Young stars burn their nuclear fuel with impetuous speed, making them hotter and bluer than older, cooler stars such as the sun. (Think of a candle: blue flames are hotter than red ones.) Ultraviolet is a sort of “ultra-blue” that reveals the youngest, hottest stars of all.

“That’s the basic idea behind the Galaxy Evolution Explorer in the first place. By observing the UV glow of young stars, we can see where star formation is active,” Morrissey says.

The discovery of these extended arms provides fresh clues for scientists about how some galaxies form and evolve, a hot question right now in astronomy. For example, a burst of star formation so far from the galaxies’ denser centers may have started because of the gravity of neighboring galaxies that passed too close. But in many cases, the neighboring galaxies have not themselves sprouted extended arms, an observation that remains to be explained. The Galaxy Evolution Explorer reveals one mystery after another!

“How much else is out there that we don’t know about?” Morrissey asks. “It makes you wonder.”

Spread the wonder by seeing for yourself some of these UV images at www.galex.caltech.edu. Also, Chris Martin, principle scientist for Galaxy Evolution Explorer —or rather his cartoon alter-ego—gives kids a great introduction to ultraviolet astronomy at spaceplace.nasa.gov/en/kids/live#martin.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

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address change? information incorrect

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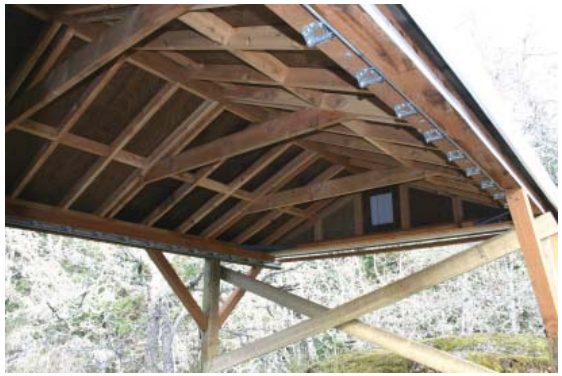
General enquiries - natonaloffice@rasc.ca

Observatory project

February 1, 2008 - the outside of the shed is nearly completed
Bruno returned to the site to place a proper rain tarp on the exposed plywood roof sheeting. The product we will use as water barrier is a high-end product that requires a dry surface and ambient temperatures of 10 C plus (won't happen anytime soon). Work on the shed proper is nearing completion with minor work on details remaining. Activity will now slow down, so future progress reports will be released when substantial milestones are reached ie: power installation, and the custom steel pier installation. The steel pier is now being fabricated by Camosun College, special thanks to Geoff Jones for his excellent efforts and the College's commitment to our project.



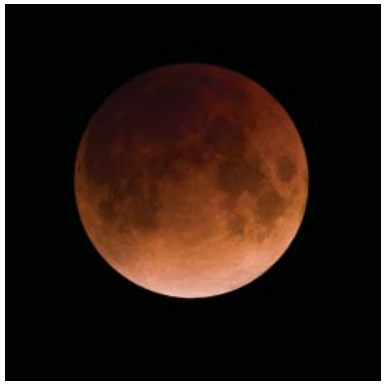
Inside view of extended roof

Again many thanks to our member volunteers for their dedication for this first phase of the RASC Victoria Centre Observatory. Project budgets for 2008 are being developed, pending on the results of the BC Gaming Commission funding to be announced soon. Please note that to date our actual RASC construction costs are $3,800 from a budgeted $7,180. Special thanks to all commercial business supporters for their generous donations which now exceed $2,800 (and growing).

February 7, 2008 - Building locked & steel pier in progress
The door lockset is installed, and the steel pier is constructed, and is in to be sandblasted and powder coated.

February 24, 2008 - the steel roof is on and the pier base and interior are in progress
Work on the Observatory progressed well this weekend with the roof system now complete, minus minor flashing. With a clear break in the weather, conditions were ideal for the installation of the roofing membrane and sheeting components. John McDonald, Geoff Jones and Bruno Quenneville were well focused to execute this delicate task.

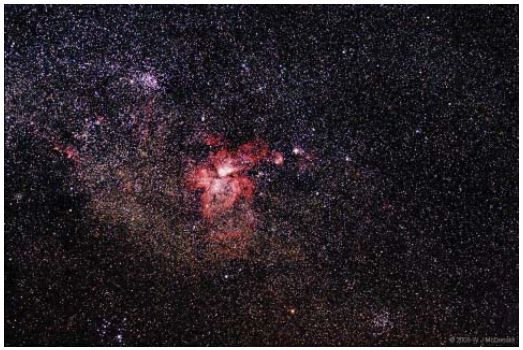
Astophotography



Jim Cliffe
2008 Lunar Eclipse
The moon during totality, 20 February 2008. I've got to work on the tone curves here, this is just a preliminary version.

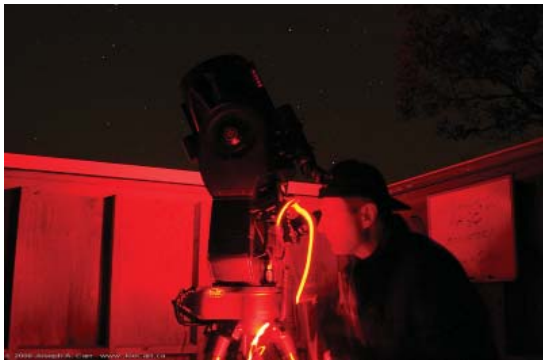
Taken from Cattle Point, Oak Bay . Olympus E-500 DSLR at prime focus on a Celestron C80ED (600mm fl).

John McDonald -
Eta Carinae Nebula
Early AM of 2008-02-05 at Ensenada Lodge, Costa Rica.



Equipment- Modified Canon 350D camera with 300mm lens on Astrotrack mount.

Exposure- 11 light and 40 dark frames at f/4 and ISO 1600 for 60s each with 20 flat frames added for calibration. Processing- Calibration, alignment, stacking and digital development in ImagesPlus. Some additional enhancement using Photoshop.

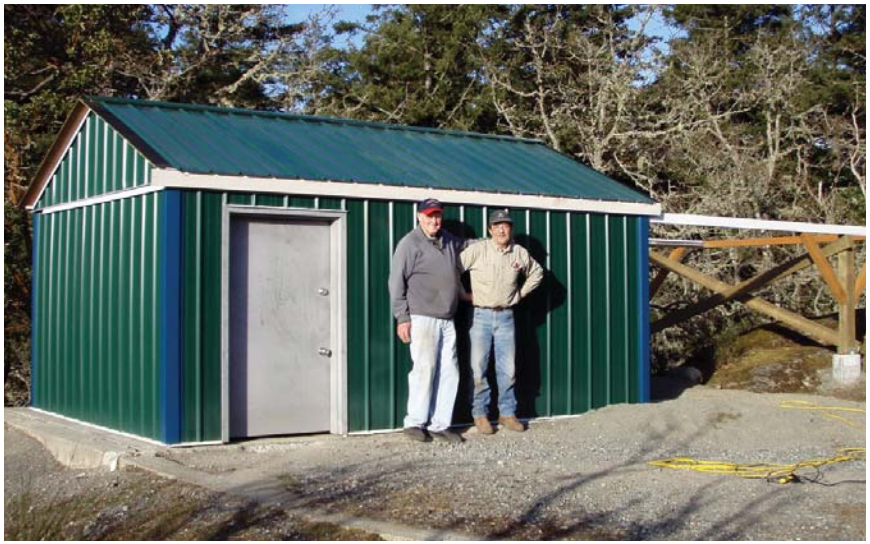


First light for RASC Victoria Centre Observatory
March 5, 2008

Joe Carr observing Mars through his Meade 8" LX200R

Joe Carr dropped by to see first hand the resulting Green Roof. We would like to thank the Langford - Home Depot for donating all of the metal sheeting and flashing materials to give our new Observatory a professional and durable finish.

In the past few weeks, progress was also made on: general clean-up, trenching for the mount cabling conduits, electrical panel rough-in, as well as bits of flashing and trim.



The roof is on - Geoff Jones and Bruno Quenneville - Happy volunteers

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this month

monday nights

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!

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.