# this month

# Variable Star Research at the Abbey Ridge Observatory Dave Lane, National President, RASC October 14th, 7:30 PM, Elliott Lecture Theatre, Rm 061, UVic

The ARO observes variable stars (mainly Cepheids and suspected Cepheids) and bright open clusters. This work is being done with Daniel Majaess and David Turner of Saint Mary's University Astronomy and Physics. All observing and photometric processing is done automatically based on data and observing lists provided by Daniel. The ARO also observes variable stars and submits observations to the AAVSO. The focus has been to contribute to specific observing campaigns or to observe newly discovered objects or objects undergoing outburst (catacalysmic variables, etc.).







# on the cover

### David Lee M27 The Dumbbell Nebula in Ha and OIII September 26, 2009

I finally had a chance to image with some narrowband filters last night at the VCO. I've been intrigued by narrowband ever since I read about the lack of dependency on urban sky conditions and the possibility of more extensions to human vision. I chose M27 for my first object as it is one of the popular objects for this technique. It's amazing how different each band looks and the structures it reveals. M27 is a planetary nebula marked by an interesting pattern of knot-like structures in the central area.

Telescope and Mount: NP127 on Paramount guided by Orion guider Sensor: Atik 16IC-S with Astronomik 13nm Ha; Astronomik 15nm OIII;

Astronomik L-UV/IR Block filters

Capture: Nebulosity 2

Image Processing: Background stars shot as luminance with L filter; Narrowband images combined with Maxim DL5; final adjustments Adobe

Photoshop CS2

# Outreach

Now you can find the Space Place on Twitter! Did you ever wonder what happened in space twenty years ago today? Well, Space Place did and we're tweeting these amazing pieces of space trivia and history to all of our followers!

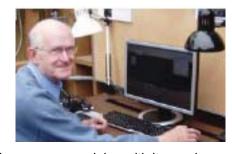
Go to <a href="http://twitter.com/nasaspaceplace">http://twitter.com/nasaspaceplace</a> and sign up to follow us on twitter. The early bird gets the worm! We have a very limited number of Earth Science Week packets, and we'd love to share them, particularly with our NASA Space Place Twitter fans. After signing up, please send us an e-mail as well as your snail mail, and we will ship out your Earth Science Week packets immediately. Don't forget to include your contact information -- name, address and club name.

We hope to hear from you soon, so Tweet away!

Colleen Barboz, Space Place Coordinator Phone: (818) 393-5936 FAX: (818) 354-9068 President's Report

## President's Message October, 2009

This month I want to outline plans for the Victoria Centre Observatory (VCO) in the next while and highlight the work of our Tech Committee and Members-in-Charge (MICs). The facilities at the VCO continue have evolved to the point that we have an outstanding observatory for visual



and photographic work. The experience we are gaining with its use is moving us quickly to the point where we will be able to operate remotely but that has to be done with care to ensure safety and reliability. My thanks go out to all the members of the Technical committee for their A group of ten MICs have made the VCO available for members who want to observe, photograph and generally enjoy the sky from Observatory Hill. These MICs have been responsible for meeting Active Observers at the gate, letting them in and hosting scheduled sessions twice a week since the beginning of the summer whenever weather permitted. In addition, MICs have often offered unscheduled sessions. The scheduled evenings have emphasized visual observing for the attendees until around midnight with opportunities for individual observing and/or astrophotography after that. On a few occasions a MIC has offered training in astrophotography for those attending and on other nights a MIC has held outdoor sessions on the observing pad or at the Centre of the Universe (CU). From all reports the sessions have been very successful, and I want to thank all of our hard working MICs for a job well done. For the next few months the CU is closed in the evening hours, however we will continue to have scheduled sessions at the VCO every Friday and Saturday (weather permitting). Watch for go/nogo messages from the MIC responsible. These messages are posted on the Active Observers e-mail list usually late in the afternoon of the scheduled session. Any member not currently on the Active Observers list who wishes to become an Active Observer should review the procedures and then contact Vice President, Lauri Roche. In order to avoid burnout on the part of the existing MICs, I have asked for permission to add an additional 5 to the group, and the DAO has agreed. As of the time of writing this we have 4 new MICs.

upcoming events

October 1st-27th – From Earth to the Universe. Astronomy image display at Mayfair Mall. Experts available Friday 4:00 pm - 7:00 pm, Saturday and Sunday 12:00 - 4:00 pm

October 14, 7:30 PM, Victoria Centre **Monthly Meeting**, Elliott Lecture Theatre, Rm 061, UVic. Speaker: David Lane, National President RASC **Variable Star Research at the Abbey Ridge Observatory** 

October 16th – **Galileo as Artist and Scientist.** Free public lecture by Dava Sobel, award winning author of Galileo's Daughter, Longitude and other books The International Year of Astronomy celebrates the 400th anniversary of Galileo's first telescopic observations. While he used his scientific skills to build and refine his telescopes, he needed his talent in perspective drawing to interpret what he saw through them. His musical ability, acquired from his composer father, also figured in some of his experimental designs. UVic, Bob Wright Building B150, 7:30pm

October 17th – **Galileo's Daughters**. Music of 17th century Italy is complemented by spectacular projected images of the cosmos and the narration of best-selling author Dava Sobel. <a href="www.earlymusicsocietyoftheislands.ca">www.earlymusicsocietyoftheislands.ca</a> Alix Goolden Hall at 8:00pm. Weather permitting, telescopic viewing of Jupiter before the concert.

October 19th – **Free movie night** *Contact* – NRC is hosting a movie night for National Science and Technology Week. If you want to learn the science behind the classic film, bring your lawn chair as we bring this film on the dome of the mighty Plaskett Telescope at 6:30pm <u>www.nrc-cnrc.gc.ca</u>

October 23rd – **An Astronomer's Life**. For kids. NRC's Dr Alan McConnachie speaks on the life of a scientist, why people might spend their life looking at stars, galaxy cannibalism, black holes and how the Milky Way came to exist. Nellie McClung Library 2:30-3:30 pm

October 24th – **How we find planets around other Stars**. For kids. NRC's Dr Brenda Matthews discusses how astronomers discover new planets in their quest to answer the age-old question "Are we alone?" Emily Carr Library 10:30-11:30am

October 25th - Music of the Spheres. Concert for kids. Take a

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Michel Michaud, Sherry Buttnor, Dirk Yzenbrandt and Nelson Walker. These new MICs will be trained and begin to share in MIC duties later this fall. Thanks to all of them for being willing to volunteer their time. As we gain experience with the VCO we are also refining our procedures for use of the facility. In addition to the 2 scheduled nights per week, MICs will continue to offer sessions on some of the other nights. Until now we have not had any way for MICs and Active Observers to "book" the facility for their own "Special Sessions". For the next few months we would like to make opportunities for "Special Sessions" available on many of the unscheduled nights. To make this work we need to have a booking protocol, so we will try the following to see if it meets our needs. In all cases at least one of those who book a "Special Session" will have to be a MIC:

MICs may book a hosted session open to all Active Observers up to one week

Special Sessions can be booked on a first-come first-served basis up to 3 days ahead by posting a message to the Active Observers list and listing the MIC responsible and other Active Observers planning to attend.

Occasionally the VCO will be unavailable as a result of maintenance and upgrades. Every effort will be made to schedule these times more than a week in advance.

Hopefully every member who wishes to use our new observatory will find a session that suits their needs over the next few months.

# 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 Vice President. More information on this program see: <a href="http://victoria.rasc.ca">http://victoria.rasc.ca</a>

ROYAL ASTRONOMICAL SOCIETY OF CANADA + VICTORIA CENTRE

Victoria Centre History

musical adventure through space in Music of the Spheres with the Victoria Symphony. Written and conducted by Music Director Tania Miller. Astronomy activities and instrument petting zoo start at 1:30pm. See <a href="https://www.victoriasymphony.ca">www.victoriasymphony.ca</a> for details.

November 1st-2nd – **Holst The Planets**. Immerse yourself in the sights and sounds of Gustav Holst's dramatic masterpiece as visual artist Dr José Francisco Salgado's video suite is projected on a giant screen while the orchestra performs. Tania Miller conductor. See <a href="https://www.victoriasymphony.ca">www.victoriasymphony.ca</a> for details.

November 14, Gorge Vale Golf Course, **Annual General Meeting and Dinner**. Guest Speaker: Dr. Christian Marois, HIA. Dr. Marois will be speaking about his findings and imaging of extra-solar planets. Title and summary to follow.

For an up-to-date list, please visit the Centre website. If you would like to participate in any of the above events please call the event host.

contact us on-line

Web Site
New Members
General Inquiries

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

General Inquiries info@victoria.rasc.ca

#### **Nominations**

This year's 2009 Annual General Meeting and Dinner is scheduled for Sat. Nov. 14, 2009 at the Gorge Vale Golf Club in Victoria.

This announcement is to serve as formal notice of our elections. Positions on Council include: President, First Vice President, Second Vice President, Secretary, and Treasurer. Although incumbents have indicated they will stand for a second year's term, any other members seeking nomination and wishing to serve are ask to contact Past-President Joe Carr for further details.

#### THE FIRST FALTERING STEPS

Victoria was very early on the scene as far as Centres go. In fact, as early as 1907 a meteorologist by the name of E. Baynes Reed, who was working for the federal Meteorological Service weather station in Victoria, joined the RASC at the suggestion of his assistant, F. Napier Denison, who looked after the seismic equipment and the data.

Reed soon tried to establish a Centre on the Island, arranging for some meetings in 1907 with a small group, which by and large consisted of the more influential citizens in the Victoria community.

In 1907, a Victoria Daily Times article of June 28 carried a report that a Centre of the RASC had been formed with the following officers: Mr. E. B. McKay, president; Mr. S. A. Roberts, secretary; and Mr. E. Baynes Reed, acting treasurer. Other members were: C. Wenger, F. W. Denison, W. F. Challenor, F. P. Colley, O. C. Hastings, Rev. J. Grundy, W. W. Carter, C. M. Lugrin, C. Holmes, J. Nicholson, A. Gibson, A. W. McCurdy, Miss B. Peers, C. J. Burnett, Rev. P. Jens, F. W. Nolte. By 1909 some 20 members in the Victoria area were on record with the RASC but they were members in name only and for some unknown reason never got together in meetings or observing activities. Consequently, in 1910 a letter was sent to head office in Toronto by the secretary, S. A. Roberts, stating that the Centre was closing down and all fees collected by Centre were being refunded.

Shortly after this had taken place, Napier Denison was made the Super-intendent of Meteorology in Victoria and he quickly set about the task of securing better facilities for his scientific work. Denison met up with Arthur McCurdy, who was a member of the Natural History Society. McCurdy took up Denison's cause and succeeded in appropriating \$20,000 for a new meteorological and seismological observatory. It was to be built on Gonzalez Hill, overlooking Victoria and Juan de Fuca Strait, with work on it starting in 1913 and completion coming in 1914. Thus, the founding of this observatory and the subsequent Dominion Astrophysical Observatory on the Saanich Peninsula paved the way for the re-establishment of the Victoria Centre in 1914.

Bill Almond

## **LCROSS**

Observing

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October 9, 2009 4:30am PDT - The NASA LCROSS mission is to find water on the Moon. To that end, NASA purposely crashed two space vehicles into a crater on the south pole of the Moon on October 9, 2009, causing a plume to be ejected. Analysis of this plume should determine if water exists in this area. Amateur astronomers were encouraged to observe this event, since there was a possibility of seeing the plume through larger telescopes. Several members used the Victoria Centre Observatory to attempt to view this event.

Observing Report: Very early this morning, October 9, our LCROSS observing team assembled at the VCO to observe and record the LCROSS impact experiment. Team members consisted of Sid Sidhu, John Mc-Donald, David Lee, Joe Carr, Nelson Walker, Steve Pacholuk, Charles Banville, and myself. Bruno Queneville was there as well doing his usual great job with the equipment but left early due to work commitments later in the morning. Joe brought donuts and coffee...the most critical component of any observing session. Thanks Joe!

The weather was milder than expected at around +9C, with bands of clouds passing through occasionally. We rolled the VCO roof back and spooled up the 14" Meade and David's video gear was attached and



Sherry

calibrated. The video signal was streamed into David's netbook for recording, then on to an LCD TV provided by John so all members could watch the impact easily. The club's 20" Dob was rolled out, Nelson set up his 15" Dob, Joe set up a small reflector, and I set up a small refractor. As the morning progressed, some members dialled in the video equipment while others used the outside scopes to look at the Moon and well as Jupiter, M42, the Pleiades, and so on to fill the time before the LCROSS impact time. The seeing was quite good visually; transparency was good, steadiness and low to mid magnifications was good. Due to the high magnifications used on the 14", however, the image on the LCD TV monitor was turbulent. Atmospherics aside, the overall quality of the video image was excellent. One desktop PC and two additional laptops for monitoring NASA updates rounded out the gearlist. About an hour before impact, the observers began to gather inside the VCO to begin the final countdown. The Meade was pointed at the exact correct region of the Moon and we all concentrated on the crater Cabeus, centred on the screen. David and Sid worked out key timing points for their recording routine, and I called those out as the countdown progressed. Keys were pressed, recording started, and anticipation grew. Impact time was 04:32:19 PDT. This came and went with all eyes focussed on the screen, but no discernible impact was noted. We watched and recorded for several minutes after the scheduled impact time. By then, it was clear that there was no major plume, at least visually on our screens. However, video frames will need to be examined more closely to determine if there was or was not any ejecta plume captured. (As I write this at 11:00am, it NASA is reporting that no earthbound telescopes have observed a plume, and studies of images and spectra are continuing.) As we all know, even an experiment that produces no -or unintendedresults is still successful, and our success came from gaining valuable

experience in using video astronomy equipment at the VCO. We were all tired. We quickly packed up and stowed all of our gear, locked up the VCO, and headed for the next-most anticipated phase of the event: sleep! Photos of the event are available on our website shortly.

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# address change? information incorrect

#### **Contact the National Office**

Telephone - 416.924.7973 or toll-free in Canada 888.924.RASC

Fax - 416.924.2911

Email - nationaloffice@rasc.ca

Post - RASC, 203-4920 Dundas Street, Toronto, ON M9A 1B7

Swan Lake Christmas Hill Nature Sanctuary presents

# Reach for the **stars**

A hands-on introduction to stargazing - telescopes provided

Wednesdays, 7 to 9 pm Oct 21, 28, Nov 4

Celebrate the 400th anniversary of Galileo pointing his telescope to the heavens by learning to use a telescope yourself. In this three evening course, we'll learn some simple techniques for making sense of the stars and learn what the night sky tells us about our place in the universe.

\$60 for sanctuary members \$80 for non-members Call 250.479.0211 to register



Swan Lake Christmas Hill Nature Sanctuary, 3873 Swan Lake Rd Victoria, BC V8X 3W1 250.479.0211 <u>www.swanlake.bc.ca</u>

# RASC victoria council

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#### **First Vice President**

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#### **New Member Liaison**

Bruno Quennville newmembers@victoria.rasc.ca

#### **Members at Large**

Bill Almond, Sandy Barta, Dave Bennett, Jim Hesser, David Lee, Steve Pacholk, Colin Scarfe, Malcolm Scrimger

# this month monday nights

#### **Astronomy Cafe**

Fairfield Community Centre, 1330 Fairfield, Victoria 7:30-11pm

Call Geoff at 250.592-2264 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 061, UVic.

as sky and interest dictate

#### **New Observers Group**

Hosted by Sid Sidhu. 1642 Davies Road, Highlands. Call 250.391-0540 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.

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