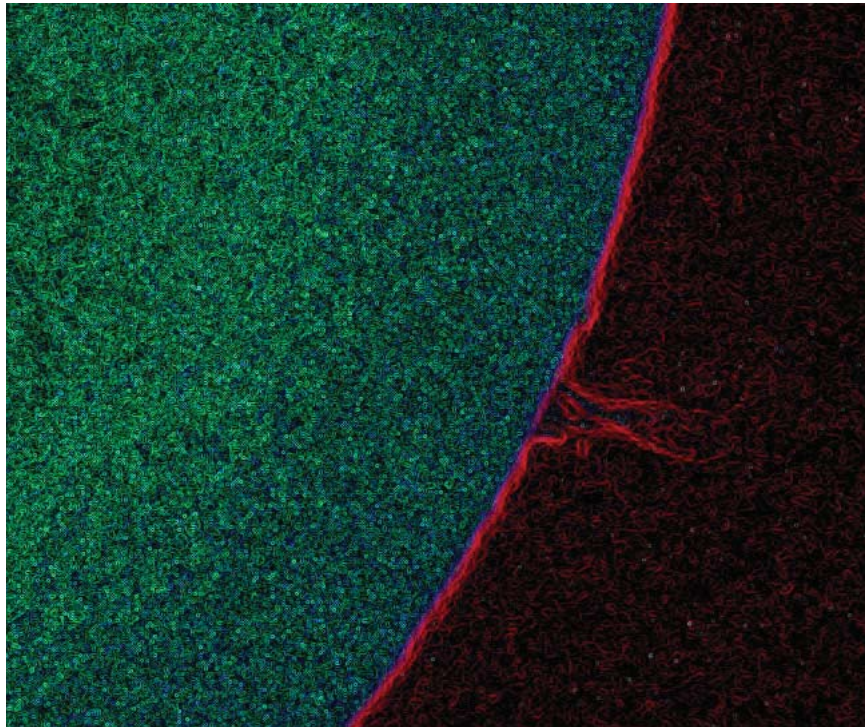


# skynews



*this month*

## Members Night

September 9th, 7:30 PM, Elliott Lecture Theatre, Rm 061, UVic

**Garry Sedun, HIA** - The Making of "From the Earth to the Universe" video (with video clips)

**Lauri Roche** - What we did on our Summer Vacations - a compilation of IYA and other activities

**John McDonald** - IYA address from Bob Thirsk on the International Space station

**David Lee** - New Books for Your Perusal

**Tyler Gamsby** (if time permits) - Newest Video from the Vancouver RASC

*contact us on-line*

**Web Site**

[www.victoria.rasc.ca](http://www.victoria.rasc.ca)

**New Members**

[newmembers@victoria.rasc.ca](mailto:newmembers@victoria.rasc.ca)

**General Inquiries**

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250-743-6633

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*on the cover*

**Joe Carr**  
**The Sun in Ha & a large solar prominence**  
**August 31, 2009, 4:34 pm PDT, Victoria, BC**

This photo shows a large wispy and intertwined solar prominence.

Equipment: Canon 50D dSLR a-focal through a 2.5x Powermate & Lunt LS60THa + LS50FHa solar telescope mounted on an HEQ5 tracking mount.

Processing: ACDSee Pro 2.5 - Sobel edge detection & modest contrast stretch, crop, resize.

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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 Vice President. More information on this program see: <http://victoria.rasc.ca>

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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](mailto:nationaloffice@rasc.ca)

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

*President's Report*

**President's Message**  
**September, 2009**

Summer seemed to fly by for me this year. Busy summers seem to do that and this one was exceptionally full. Much progress has been made on the observatory and some really fine sessions were held on both Monday and Friday evenings for our “Active Observers”. The 14” Meade on its Paramount ME is a joy to use and will point to anything in the sky with ease. Outside the shed, a great 20” Dobsonian can pull in a dazzling array of faint objects when the sky is dark. If you are not currently listed as an Active Observer you are welcome to become one – just contact Lauri Roche.



Our summer Star Party was held in conjunction with the Cowichan Valley Star Finders this year and it proved to be especially successful. Thanks to great organization by both clubs and an attractive new day pass for visitors, there were many more guests than usual and great weather also contributed to a fine weekend for all.

The summer has been filled with successful IYA events thanks to the continuing generosity of members who keep volunteering their time. There were so many activities this summer they cannot all be listed in this space, and it took a real team effort to run them. Because of the hard work of our members, all our expectations for success were met or exceeded. I understand that we are on track to meet our ambitious goal of 20,000 Galileo Moments for the Victoria Area community. Well done everyone.

The fall's IYA roster is shaping up to be the “Mother” of all finales so keep up the great work.

I am deliberately not singling out any of the many key contributors to our summer's successes because it was so obviously a team effort. I am proud to be on the Victoria Centre team and I extend thanks on behalf of our Centre to every one of our great volunteers.

## Astrobabble - The Sun

By Li-Ann Skibo



With the recent heat wave, I thought it appropriate to discuss the basics about the Sun. The sun is the closest star to Earth and is one of a 100 billion normal main-sequence G2 stars in our galaxy. G2, for the techies among us, is the Sun's designation in a stellar classification system based on the nature of a star's spectral lines and roughly corresponds to its surface temperature. The visible surface of the sun is called the photosphere where the temperature is a toasty 6,000C. It has a granular appearance because of convection currents. Dark blemishes are sometimes visible on the surface. These sunspots are concentrations of magnetic flux and at a balmy 4,000C appear dark only because they are cooler than surrounding areas. The chromosphere is a region above the surface where we can see faculae (bright hydrogen clouds that form above areas where sunspots are about to form) and flares (filaments of hot gas that emerge from sunspots). The corona is the outer part of the Sun's atmosphere consisting of charged particles that are carried far out into space. Temperatures in the corona can rise to over a scorching 1,000,000C. The corona is only visible during a total solar eclipse when you may also see solar prominences (immense clouds of glowing gas that erupt from the chromosphere).

The sun is driven by nuclear reactions at its core where temperatures reach 15,000,000C and pressures of 250 billion atmospheres. The reactions convert Hydrogen to Helium creating massive amounts of heat which is slowly (a million years slowly) carried to the surface where it is released as light and heat. This process has been occurring for 4.5 billion years and will continue for another 5 billion years until the hydrogen fuel is used up. Helium will then begin to fuse creating heavy elements and the sun will swell in size to well past Earth's orbit. This red giant stage will last for another billion years and then it will suddenly collapse into a white dwarf star cooling over the next trillion years.

Can I look at the sun? WARNING: You can go blind looking at the sun without proper filters! I watched a demonstration where a regular telescope was pointed at the sun and a pencil was held just behind the eyepiece. Within seconds the pencil began to turn black and start to smoke (think of an ant under a magnifying glass). To safely view the sun, special filters can be added in front of binoculars and telescopes to block most of the light.

## upcoming events

Sept 11 & 12, 2009 - **Open House- Astrophysicists Open Their Doors!** NRC-CNRC - celebrate International Year of Astronomy by taking a tour of the labs and telescopes on Observatory Hill. Activities for children; "Ask an Astronomer" table, self-guided tours of facilities, lectures, multimedia, demonstrations, telescope viewing.

Sept 13, 2009 - **Metchosin Day** - daytime astronomy display and viewing our Sun through special filters, as well as night time viewing (weather permitting). Held at the Metchosin Municipal Grounds near the intersection of Happy Valley Road and Rocky Point Road.

Sept 28, 2009 - **Fairfield Night Sky Viewing** - view the night sky at Sir James Douglas School in Fairfield.

Sept 29, 2009 7:30pm - **Free public lecture "Dark Matters" by Professor Joe Silk**, from the Department of Physics, University of Oxford at the Bob Wright Centre, Room B150, University of Victoria. This lecture will discuss ongoing efforts by astronomers and particle physicists to detect dark matter.

Oct 1-27, 2009 - **From the Earth To The Universe** at Mayfair Shopping Centre. Back in Victoria by popular demand. Celebrate the stunning beauty of the Universe on a spectacular journey through 13 million years of the evolving Universe. In addition to stupendous photographs of space created by international and Canadian astronomers both professional and amateur, this digital exhibit features artwork by Greater Victoria schoolchildren as well as universe-inspired art. Members of the RASC will be on hand Friday through Sunday at the following hours to answer any questions about the show. Fridays 3:00 to 7:00PM; Saturdays and Sundays 12:00 to 4:00PM.

Wednesday, October 14, 7:30 PM, Victoria Centre **Monthly Meeting**, Elliott Lecture Theatre, Rm 060, UVic. Speaker: David Lane, National President RASC (Topic to be announced)

Saturday, October 17, Early Music Society of the Islands, Alex Goolden Hall, Victoria. GALILEO'S DAUGHTERS Perpetual Motion.

Saturday, 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.

And for into the new year, Jim Hesser will probably do a talk on the review IYA for us on the 10th of February.

**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.**



*David Lee with young astronomer at Saanich Strawberry Festival*

*Lauri Roche sets up telescope at the Saanich Fair*



*John McDonald in the rain at the Saanich Fair*



*Dave Bennett checking out the donkeys on a cloudy Saanich Fair day*



## Summer Evenings with the Stars

1932 was the first year that the public was invited to attend Summer Evenings with speakers from the DAO and the Centre. They continued on a more or less regular basis until 1988. Courses were always well attended with a peak of 199 in 1952.

They started off as weekly lectures and observational meetings, and were held at Boyd Bryden's Oak Bay Observatory during July and August 1932. However, the attendance was so large at the first meeting that the rest of the course was held at Victoria College, where a laboratory was available for use. The next year, 1933, the attendance was again so great that it was decided to charge a fee: \$1.00 for adults.

From 1934 to 1941, regular meetings were held in the Parlours of the YWCA. The 1939 session was notable as the most successful ever with a large number in attendance to that date.

The summer of 1934 saw the start of a programme, conceived by Dr. J. A. Pearce, to make members' telescopes available to the general public. They were set up in Beacon Hill Park on a few summer evenings and some hundreds of people came to view Mars and other easily viewed objects. Unfortunately, the Centre has no photographs of these or



any other gatherings.

During the war between 1940 and 1945, the Summer Evenings continued, with service men and women admitted without charge. The highlight the following year was a visit to the Dominion Astrophysical Observatory, arranged by the speaker for the evening, Dr. Pearce: an expression of debt made to Mr. Brydon for having made the original suggestion fifteen years earlier that such a course would be desirable. From 1947 on, the Summer Evenings never ceased to attract a good attendance, but for some unknown reason they stopped being held in 1989.

This is the last report we have on record, for 1988: "August--Our public lecture series Summer Evenings with the Stars was held weekly and featured a tour of DAO and keynote lectures by Jack Newton: A Colour Portrait of the Universe, Dr. David Crampton: Black Holes, and Dr. Michael Pierce: The Age and Size of the Universe." Over all those years Summer Evenings signups to the RASC successfully added scores of new members to our Centre.

Bill Almond

## For Sale

William Optics Megrez 110mm ED Refractor with mounting rings and Dovetail and a William Optics red dot finder.

### ADDITIONAL OPTICS INCLUDES

2 Inch William Optics Dielectric Diagonal, Carbon Fiber  
3 - 1 ¼ " TeleVue Eyepieces in an Olivon case for protection that consists of: 32 mm Plossl, 20mm Plossl, 11 mm Plossl 2 Inch Nikon photo adapter.

### MOUNTING SYSTEM

Skywatcher HEQ5 Pro Equatorial Drive with hand paddle controller, GPS accessory and Steel Tripod legs  
I am looking for \$1950 for the complete package, also open to offers.

**Malcolm Scrimger**  
Tel: 778 430 2804  
Cel: 250 514 5695  
email: telenet@shaw.ca

## Meteorite Found on Mars Yields Clues About Planet's Past

PASADENA, Calif. -- NASA's Mars Rover Opportunity is investigating a metallic meteorite the size of a large watermelon that is providing researchers more details about the Red Planet's environmental history.

The rock, dubbed "Block Island," is larger than any other known meteorite on Mars. Scientists calculate it is too massive to have hit the ground without disintegrating unless Mars had a much thicker atmosphere than it has now when the rock fell. Atmosphere slows the descent of meteorites. Additional studies also may provide clues about how weathering has affected the rock since it fell.



"There's no question that it is an iron-nickel meteorite," said Ralf Gellert of the University of Guelph in Ontario, Canada. Gellert is the lead scientist for the rover's alpha particle X-ray spectrometer, an instrument on the arm used for identifying key elements in an object.

The microscopic imager on the arm revealed a distinctive triangular pattern in Block Island's surface texture, matching a pattern common in iron-nickel meteorites found on Earth.

Opportunity found a smaller iron-nickel meteorite, called "Heat Shield Rock," in late 2004. At about a half ton or more, Block Island is roughly 10 times as massive as Heat Shield Rock and several times too big to have landed intact without more braking than today's Martian atmosphere could provide.

"Consideration of existing model results indicates a meteorite this size requires a thicker atmosphere," said rover team member Matt Golombek of NASA's Jet Propulsion Laboratory in Pasadena, Calif. "Either Mars has hidden reserves of carbon-dioxide ice that can supply

large amounts of carbon-dioxide gas into the atmosphere during warm periods of more recent climate cycles, or Block Island fell billions of years ago.”

Spectrometer observations have already identified variations in the composition of Block Island at different points on the rock’s surface. The differences could result from interaction of the rock with the Martian environment, where the metal becomes more rusted from weathering with longer exposures to water vapor or liquid.

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 www.swanlake.bc.ca

## RASC victoria council

*this month  
monday nights*

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vp@victoria.rasc.ca

### Second Vice President

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Bruno Quennville  
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### Members at Large

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

### 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.