

Skynews



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Swan Lake Nature Sanctuary**

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A104 Bob Wright Building*

**June 9th
Dr. Walter Hilse
A Tour of Select Constellations**

Guest Speaker

New Star Formation

Scott Schnee, HIA- Plaskett Fellow



Star formation is an on-going process in our galaxy, with perhaps a few stars forming each year somewhere in the Milky Way. In this talk I will explain how we know where new stars are forming and what the stages of star formation are. I will also describe how new facilities, both ground based and satellites, have enabled rapid progress in the field of star formation and will continue to reveal new insights in the near future.

Scott Scott is a research officer (Plaskett Fellow) at HIA, where he has been since September 2009. Prior to his job here, he was a CARMA Fellow at Caltech, where his postdoctoral advisors were Anneila Sargent and John Carpenter. He was a graduate student at Harvard University in the astronomy department, working with Alyssa Goodman.

On the cover

Astronomy Day by Malcolm Scrimger

April 24, 2010
Swan Lake Nature Centre

This year's Astronomy Day was held at the Swan Lake Nature Centre where RASC volunteer members provided telescopes and displays for the public. Many guests were delighted to see the Nature Sanctuary and the Swan Lake Nature displays and Astronomical items.

Displays consisted of telescope making, a planetarium display, a poster board with photographs and an automated slide show of Astronomical images taken by members and professionals alike. There were tele-

scopes setup outside showing visitors the sun.

The weather varied from sunny periods to wind and rain which resulted in some members covering their telescopes or bringing them inside from the rain.

That same evening RASC members brought their telescopes for night time viewing to Cattle Point where members of the public were encouraged to come to view the planets and some deep sky objects with an almost full Moon.

That same evening Charles Banville photographed a relatively new comet in the sky. (see page 9.)

Contact us on-line

Web Site	www.victoria.rasc.ca
New Members	newmembers@victoria.rasc.ca
General Inquiries	info@victoria.rasc.ca

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.

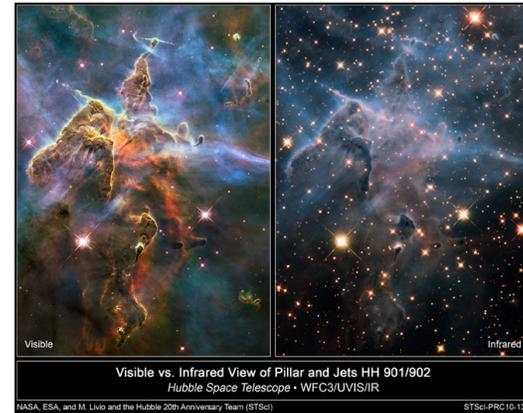


If you are a member in good standing of Victoria Centre RASC, consider yourself an “active observer”, and wish to take advantage of this opportunity, please send an email to the 1st or 2nd Vice President.

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

20th Anniversary of Hubble

As the Hubble Space Telescope achieves the major milestone of two decades on orbit, NASA and the Space Telescope Science Institute, or STScI, in Baltimore are celebrating Hubble’s journey of exploration with a stunning new picture and several online educational activities. There are also opportunities for people to explore galaxies as armchair scientists and send personal greetings to Hubble for posterity.



NASA is releasing a new Hubble photo of a small portion of one of the largest known star-birth regions in the galaxy, the Carina Nebula. Three light-year-tall towers of cool hydrogen laced with dust rise from the wall of the nebula. The scene is reminiscent of Hubble’s classic “Pillars of Creation” photo from 1995, but even more striking.

NASA’s best-recognized, longest-lived and most prolific space observatory was launched April 24, 1990, aboard the space shuttle Discovery during the STS-31 mission. Hubble discoveries revolutionized nearly all areas of current astronomical research from planetary science to cosmology.

Over the years, Hubble has suffered broken equipment, a bleary-eyed primary mirror, and the cancellation of a planned shuttle servicing mission. But the ingenuity and dedication of Hubble scientists, engineers and NASA astronauts allowed the observatory to rebound and thrive. Hubble is undoubtedly one of the most recognized and successful scientific projects in history,” said Ed Weiler, associate administrator for the

Science Mission Directorate at NASA Headquarters in Washington. “Last year’s space shuttle servicing mission left the observatory operating at peak capacity, giving it a new beginning for scientific achievements that impact our society.”

Hubble fans worldwide are being invited to take an interactive journey with Hubble. They can also visit Hubble Site to share the ways the telescope has affected them. Follow the “Messages to Hubble” link to send an e-mail, post a Facebook message, or send a cell phone text message. Fan messages will be stored in the Hubble data archive along with the telescope’s science data. For those who use Twitter, you can follow @HubbleTelescope or post tweets using the Twitter hashtag #hst20. The telescope’s crisp vision continues to challenge scientists and the public with new discoveries and evocative images.

The public also will have an opportunity to become at-home scientists by helping astronomers sort out the thousands of galaxies seen in a Hubble deep field observation. STScI is partnering with the Galaxy Zoo consortium of scientists to launch an Internet-based astronomy project where amateur astronomers can peruse and sort galaxies from Hubble’s deepest view of the universe into their classic shapes: spiral, elliptical, and irregular. Dividing the galaxies into categories will allow astronomers to study how they relate to each other and provide clues that might help scientists understand how they formed.

To visit the Galaxy Zoo page, go to <http://www.hubble.galaxyzoo.org>.

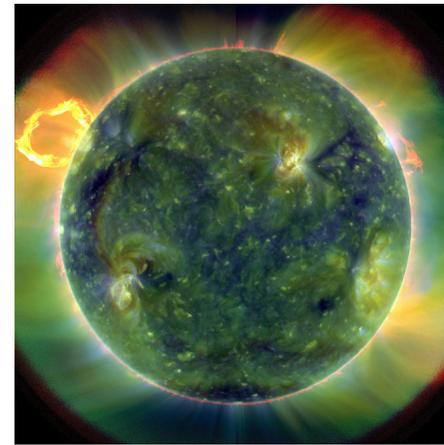
For educators and students, STScI is creating an educational web site called “Celebrating Hubble’s 20th Anniversary.” It offers links to facts and trivia about Hubble, a news story that chronicles the observatory’s life and discoveries, and the IMAX “Hubble 3D” educator’s guide. An anniversary poster containing Hubble’s “hall-of-fame” images, including the Eagle Nebula and Saturn, also is being offered with downloadable classroom activity information.

Visit the web site at http://amazing-space.stsci.edu/hubble_20.

To date, Hubble has observed more than 30,000 celestial targets and amassed more than a half-million pictures in its archive. The last astronaut servicing mission to Hubble in May 2009 made the telescope 100 times more powerful than when it was launched.

SDO - NASA’s New Eye on the Sun Delivers Stunning First Images

NASA’s recently launched Solar Dynamics Observatory, or SDO, is returning early images that confirm an unprecedented new capability for scientists to better understand our sun’s dynamic processes. These solar activities affect everything on Earth.



Some of the images from the spacecraft show never-before-seen detail of material streaming outward and away from sunspots. Others show extreme close-ups of activity on the sun’s surface. The spacecraft also has made the first high-resolution measurements of solar flares in a broad range of extreme ultraviolet wavelengths.

“These initial images show a dynamic sun that I had never seen in more than 40 years of solar

research,” said Richard Fisher, director of the Heliophysics Division at NASA Headquarters in Washington. “SDO will change our understanding of the sun and its processes, which affect our lives and society. This mission will have a huge impact on science, similar to the impact of the Hubble Space Telescope on modern astrophysics.”

Launched on Feb. 11, 2010, SDO is the most advanced spacecraft ever designed to study the sun. During its five-year mission, it will examine the sun’s magnetic field and also provide a better understanding of the role the sun plays in Earth’s atmospheric chemistry and climate. Since launch, engineers have been conducting testing and verification of the spacecraft’s components. Now fully operational, SDO will provide images with clarity 10 times better than high-definition television and will return more comprehensive science data faster than any other solar observing spacecraft.

SDO will determine how the sun’s magnetic field is generated, structured and converted into violent solar events such as turbulent solar wind,

solar flares and coronal mass ejections. These immense clouds of material, when directed toward Earth, can cause large magnetic storms in our planet's magnetosphere and upper atmosphere.

SDO will provide critical data that will improve the ability to predict these space weather events. NASA's Goddard Space Flight Center in Greenbelt, Md., built, operates and manages the SDO spacecraft for the agency's Science Mission Directorate in Washington.

"I'm so proud of our brilliant work force at Goddard, which is rewriting science textbooks once again." said Sen. Barbara Mikulski, D-Md., chairwoman of the Commerce, Justice and Science Appropriations Subcommittee that funds NASA. "This time Goddard is shedding new light on our closest star, the sun, discovering new information about powerful solar flares that affect us here on Earth by damaging communication satellites and temporarily knocking out power grids. Better data means more accurate solar storm warnings."

NGC4565 Needle Galaxy, Joe Carr

Date: May 6, 2010 11:36PM PDT - May 7, 2010 1:16AM PDT
 Location: Victoria Centre Observatory



The Needle Galaxy is a magnificent spiral galaxy, and is likely similar-shaped as our own Milky Way galaxy, however we are viewing it edge-on. This galaxy lies in the faint constellation Coma Berenices and is the largest edge-on galaxy visible in our skies. This color image reveals the galaxy's bulging central core dominated by light from a population of older, yellowish stars. The core is dramatically cut by obscuring dust lanes which lace its thin galactic

plane. NGC 4565 lies about 30 million light-years away and is over 100,000 light-years wide. Smaller Galaxy NGC4562 is also visible in this field.

Presidents Message

Well, as every astronomer knows, keeping the equipment in good shape is important. I got a vivid reminder of this when one of my most important pieces of equipment needed attention recently. It was my left eye. The good news - I got some very prompt and effective medical attention for what turned out to be a detached retina and I am well on the road to a full recovery. The downside - I was not able to do some of my duties in the past while but thanks to Lauri who stepped in to chair the Light Pollution Committee meeting on May 5 and many others who made sure other things got done, all is well. Thanks.



Summer is fast approaching and the nights are starting later and later. The Rascal's star party will be at a new location this year and gives us a chance to see the southern sky from Metchosin. There is interest in light pollution abatement in that community thanks to the work of Bill Weir, Gary Seronik and others so having the star party there is a good opportunity to demonstrate to the citizens what a treasure they have in their dark sky.

Summer also means evening viewing at the CU and once again we are asking our members to consider being volunteers. It is fun and certainly a worthwhile contribution that any one who is willing can make. You don't have to be an expert. People appreciate it when they are able to ask a question that makes you think. If you need to consult another volunteer to get an answer do it. Your honesty will be much appreciated.

John McDonald

Public outreach activities

The Center volunteers were very busy during April, including a presentation by Dave Bennett and Chris Gainor to Elementary School students at Salt Spring Island. In total there were 8 public outreach activities scheduled April and four of these were night sky viewing sessions that had to be cancelled due to cloudy conditions. In addition to schools, Cubs and Brownie groups also took advantage of our outreach program. I was able to arrange with Dr. James Di Francesco for a presentation on April 26th which the grade 9 students at John Stubbs School enjoyed.

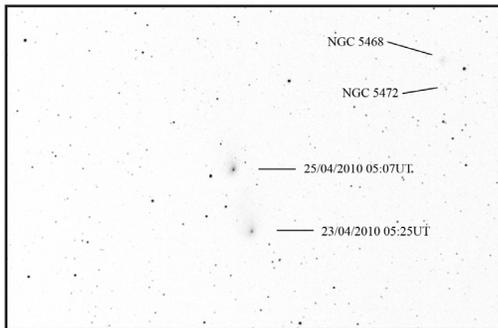
International Astronomy Day (IAD) was a big success again this year. During the daytime activities 200 public participants enjoyed visiting and interacting with our volunteers. IAD ended with night sky viewing at Cattle Point where 100 members of the public enjoyed viewing the planets and deep sky fuzzies. Thanks to Scott for his great organizing skill.

The next big event for us is the Annual Beaveree at Camp Bernard on May 29 from 10:00 to 16:00. Mostly it will be solar and daytime planet observing. If you have a telescope with a solar filter, or if even you don't have a telescope, we could use your help.

Sid Sidhu
250 391 0540

Comet 81P/Wild by Charles Banville

A collage of two images of comet 81P/Wild taken a little over 48 hours apart showing its motion.
Date: April 22 and 24, 2010
Constellation: Virgo
Location: Pearson College Observatory and Cattle Point, BC
Optics: Borg 77EDII at f/4.3 on Takahashi EM-11 Mount
Camera: Hutech modified Canon EOS 5D Mark II



2010 RASC General Assembly



Come and join us at the 2010 General Assembly of the RASC to be held in Fredericton, New Brunswick.

July 1 - 4, 2010

We are delighted that the 2010 RASC General Assembly has been awarded to the New Brunswick Centre of the RASC. The 2010 GA will be held in conjunction with the 10th Anniversary of the RASC New Brunswick Centre. This will be the first time the GA will be held in the province of New Brunswick and at the site of Canada's oldest existing observatory, the Brydone Jack Observatory/Museum which was built in 1851.

There are 3 tours planned at this time. The first being a guided walking tour of the William Brydone Jack Observatory and other related, historical sites of interest on campus. The second is a bus tour to the Bay of Fundy to see the world's highest tides in action and walk on the ocean floor. Included will be a stop in Alma for lunch and a drive through Fundy National Park and future Dark Sky Preserve. The third tour is a combined whale watching / sailing trip out of St Andrews by the Sea. With lunch in St Andrews and time in the famous Kingsbrae Gardens this will be a day of adventure and sightseeing.

Accommodations, social events and lectures will take place on the beautiful University of New Brunswick Campus overlooking the city of Fredericton and the Saint John River. All major event/meals will have a choice of seafood or non-seafood fare. If you are a seafood fanatic then you will enjoy the chance to have mussels, clams, fish and chips, lobster rolls, Atlantic salmon, and lobster.

Speakers are still being finalized and an open paper session will be held for RASC members. A poster display/contest as well as astrophoto contest will be held so bring your favorite images from the past year. The hospitality suite will be open nightly for after hours socializing.

We look forward to seeing you come east for a good old kitchen party!

Visit the website for more information <http://www.rasc.ca/ga2010/>

Summer Events

Star Parties

RASCals Star Party - August 13-15, 2010

Victoria Centre has held successful RASCals Star Parties annually from 2000 through to present. The new location is the Metchosin Cricket Field, located a few kilometres west of Victoria in a dark rural area.

Website <http://victoria.rasc.ca/events/StarParty/Default.htm>

Island Star Party - September 3-5, 2010

Our good friends at the Cowichan Valley Starfinders host this star party each year. This is the 15th annual ISP, so come help to celebrate this milestone event!. The new location is Bright Angel Park located south of Duncan in a dark rural area.

Website <http://www.starfinders.ca/starparty.htm>

Mount Kobau - August 7 - 15
<http://www.mksp.ca/>

Saskatchewan - August 12 - 15

HUBBLE at the National Geographic IMAX Theatre, Victoria, BC.



Narrated by Leonardo DiCaprio and vividly captured with IMAX technology, HUBBLE recounts the amazing journey of the most important scientific instrument since Galileo's original telescope and the greatest success in space since the Moon Landing - the Hubble Space Telescope. HUBBLE will also reveal the cosmos as never before, allowing viewers of all ages to explore the grandeur of the nebulae and galaxies, the birth and death of stars, and some of the greatest mysteries of our celestial surroundings, all in amazing IMAX.

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Jim Hesser, David Lee, Steve Pacholk,
Colin Scarfe, Scott Mair

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 CAFE



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.