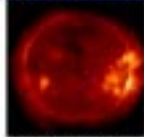




Updated: 2003 Nov 11 1900 UTC (Nov 11 1200 MST) [Events/Announcements](#)

**SXI Solar X-ray Imager**



Nov 5 1202 UTC

SDI is currently not available.

**NOAA Scales**

Geomagnetic Storms  
Solar Radiation Storms  
Radio Blackouts

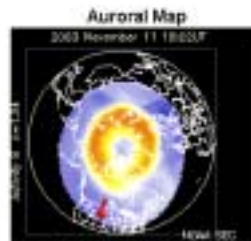
**Maximum in past 24-hours**

moderate  
none  
minor

**Currently**

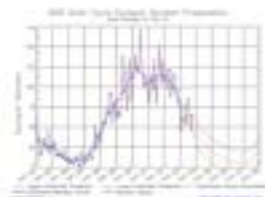
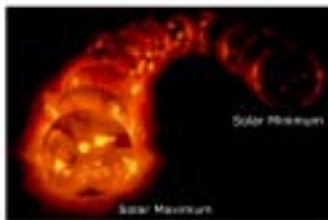
minor  
none  
none

**Real-Time Solar Wind Pages**



Estimated time of new data: 1821 UT

[Today's Space Weather](#)   [D-region Absorption](#)   [Solar Image References](#)  
[Latest Alert](#) November 11 1446 UTC EXTENDED WARNING: Geomagnetic K-index of 5 expected  
[Last Advisory Bulletin](#) EXTREME SOLAR FLARE, issued November 04, 2003



<http://www.sec.noaa.gov/SWN/index.html>

# Skynews



November 2003

Number 249

<http://victoria.rasc.ca/>

*This Month*

**Greg.Fahlman**

Greg Fahlman is the new Director General of the NRC Herzberg Institute of Astrophysics (NRC-HIA). "Dr. Fahlman has a well-established international track record as a scientific leader. He began his professional career as a Post Doctorate Fellow at NRC in 1970 and joined the faculty of the University of British Columbia (UBC) a year later. Since 1999, he has held the position of Executive Director at the CFHT, a collaboration of NRC, the Centre National de la Recherche Scientifique of France (CNRS), and the University of Hawaii."

Dr. Fahlman has authored or co-authored approximately 150 scientific articles in many areas of stellar and extragalactic astronomy. His research has been characterized by deep physical and analytical insight, as well as originality. In recent years, he has been recognized for highly cited research on the properties of the oldest star clusters and individual stars in the halo of the Milky Way galaxy, as well as on the richest of the younger star clusters in the disk of the Milky Way.

Dr. Fahlman also demonstrated great awareness and sensitivity to the diverse multicultural environment in which CFHT has operated so successfully. He negotiated, for example, arrangements to bring Korea and Taiwan into a partnership with CFHT that enabled the development of the Wide Field Infrared Camera, WIRCAM.

Cover Image by Henk

*Contact Us On-Line*

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**Email Lists:** [rascvic-list@Victoria.rasc.ca](mailto:rascvic-list@Victoria.rasc.ca)  
**Skynews:** <http://victoria.rasc.ca/resources/email/skynews-list.htm>  
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**RASC Victoria Council**

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Members at Large:  
 Bill Almond, Li-Ann Dorrance,  
 Jim Hesser, Ed Maxfield,  
 Frank Ogonoski, Blaire Pellatt,  
 Bruno Quenneville, Colin  
 Scarfe

New Members Liason:  
 Sandy Barta

On  
**CLEAR**  
 Fridays

**Astronomy Cafe**

At Sandy Barta's, 2949 Michelson Road,  
 Sooke, BC  
 Call 642-0205 for more information or  
 directions.

And you **WILL** need directions!  
 Newcomers are most welcome.

Come and enjoy!

**Note:**

**The Café will no longer  
 be every Friday night.**



**Please:**

**Call or check our website to find out  
 if it's likely to be clear.**

Nov  
 28

**New Observer's Group  
 At Sid Sidhu's:**

1642 Davies Road (off Millstream Lake  
 Road) at 8:00 PM.  
 Call 391-0540 for more information or  
 directions

Dec  
 10

**December Meeting**

Room 060  
 Elliott Building, UVic

Nov  
 19

**Back by Popular Demand**

**Every 3<sup>rd</sup> Wednesday  
 Astro Imaging at  
 Bill Almond's**

354 Benhomer Drive  
 478-6718

**Yes, We post important,  
 timely, member-related  
 news to our email list.**

Online information about the RASCvic  
 and Skynews email lists:  
<http://victoria.rasc.ca/resources/email/>

*Future Meetings*

**General Meeting—December 10**

Ernie Pfannenschmidt will talk about 'telescopes, eyepieces and such' and you will learn all about those curious instruments we use when we cast adrift into the universe.

*Address Change? Information Incorrect?*

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E-Mail: [rasc@rasc.ca](mailto:rasc@rasc.ca) Website: [www.rasc.ca](http://www.rasc.ca)  
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*President's Message*

On the last Saturday evening of October, a group of active observing members from the Victoria Centre drove up the winding road to the Dominion Astrophysical Observatory for a night of showing the universe to the public.

Because the days had already grown short, that evening's observing was longer than usual. Observing was in full swing around 7 p.m. and continued until the DAO closed to the public at 11 p.m. The Moon was new, so most of the observing concentrated on Mars, the Double Cluster, and the fuzzy wonders beyond our galaxy, including the Andromeda Galaxy, M13, and the Ring Nebula.

As usual, the members of the public who came up the hill to enjoy the programs at the Centre of the Universe (CU) visitor's centre at the DAO were impressed by the sights we had to show them. Perhaps some of those people will join our Centre, and maybe some of those younger viewers will work up at the DAO one day, or even venture into space.

That night was the last public observing session at the Centre of the Universe until next April, when the RASCals will resume their weekly (and sometimes even more frequent) treks up Little Saanich Mountain.

RASC members have done public observing at the DAO for many summers, and the last three have been based at the CU. This year was busy with the public interest in Mars' close passage to Earth this summer.

With the CU in its third year of operation, the DAO and the RASC are pausing to take stock in our very successful collaboration. One reason for this dialogue is that the makeup of the staff at the Centre of the Universe is undergoing major change.

In October, a first meeting to discuss the past and the future of the RASC-DAO collaboration was held. A second meeting is taking place this month. I am pleased to report that the discussions have been frank but very constructive.

Work is beginning to upgrade the performance of the 16-inch public telescope at the CU. We are looking forward to working with the new staff on improving observing conditions both for us RASCals and the public.

*Continued on page 3*

The deadline for the next issue of Skynews is

**November 28 2003**

Get your Skynews early and in colour. Tell Laura, our Treasurer, that you get Skynews on line and we won't mail you a copy.

*President's Message Continued*

We all agree that our public observing activities at the CU are vital to both the Victoria Centre and the DAO. We look forward to many more years of successful public observing.

I urge any members who have not taken part in this activity to join us next April when the days are getting longer and warmer, and Jupiter and Saturn will be wowing people getting their first looks through a telescope.

*Chris Gainor*

*Lunar Eclipse*

Victoria Centre held a Lunar Eclipse public event at Cattle Point municipal park, which has a very nice easterly view over the Strait of Georgia. While we were waiting for the moon to rise, we were awestruck by a plume of black smoke appearing from Mount Baker - likely a small eruption from this not-so-extinct volcano just south of the Canada-US border!

The eclipse was finally spotted at about 5:05pm. For us here on the West Coast, the Moon rose while it was in Total eclipse, 2nd contact. Totality lasted some 25 minutes before the Moon's western limb left the umbra. When first spotted, the eclipsed Moon appeared as a pinkish crescent peeking through the clouds and pollution of Vancouver, however it quickly took shape and assumed the more traditional coppery-red colour as it climbed into clear sky. The partial eclipse through 4th Contact entertained some 500 spectators and dozen RASC volunteers over the next couple of hours, as we watched the penumbra progress. The event was well attended by the media. Everyone wrapped up around 8pm, after some final glimpses of Mars.

All in all, a very successful public viewing event. We will have some Lunar Eclipse photos posted to our website within the next couple of days.

*Cheers, Joe Carr*



*Moon Image by David Lee*

*The Moon*

It was brisk by the ocean this evening and after 3 hours of photographing the eclipse both Brenda and I felt like Popsicles. At dusk we speculated that the Moon would rise either over or near Mt. Baker. The distant mountain had it's own surprise this evening with what appeared to be steam or smoke emerging from its top. Soon we could see the Moon approaching totality the bright rim slowly disappearing leaving a uniform orange ball. I even had a chance to see the eclipse through a telescope, a rare treat on these occasions since my telescope usually has a camera attached to it



*David Lee*



*Amateur Telescope Making*



Ivan Krastev has started a new digital amateur telescope maker's journal. The magazine is available in three different formats: Adobe PDF, MS Word and HTML and he will publish it six times a year (every other month).

Ivan's journal will cover every imaginable facet (optics, telescopes and software) of

amateur telescope making and hopes to feature subscribers' projects, designs, and techniques. Subscribers have access to free software

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Ivan Krastev, Journal's Editor  
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Now available  
free sample issue 4, 2003



Current issue 5, 2003  
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*M27—the Dumbbell Nebula*

Dr. Kunihiko Okana and Robert Daly recently developed the luminance layering technique, the L in LRGB. Adding a luminance layer overcomes the poor quality signal-to-noise luminance of a normal red/green/blue trio of digital images. Layering a high resolution, high quality, unfiltered (except for infrared) greyscale image over the combined RGB images greatly enhances the final image. A bright object, such as M27, requires short red/green/blue exposures to capture the colour data, followed by a much longer greyscale image to record luminance data. The three RGB images are later registered and combined in Photoshop 6 to produce a full-colour digital image, which is then luminance enhanced by the introduction of the L layer. Calibration of the RGB filter wheel ratios, using a sun like star, 16 Cygni A, goes a long way to ensuring that stars are white and an object such as a planetary nebula shows as a teal colour. (See S&T, p. 128, July 2003).

Bill Almond



M27 imaged with RGB colour exposures and Luminance layering (LRGB).  
Equipment used: 12" LX200 at prime focus, f10; ST6 CCD with RGB dichroic filter wheel and infrared blocking filter. Exposures: 180s red, 234 s green; 360 s blue and 840 s greyscale luminance.

*The Space Place*



**Hurricane Team Work**

On a gray breezy day last month thousands of people got in their cars and reluctantly left home. U.S. east coast highways were thick with traffic. Schools were closed. Businesses shut down.

Perfect!

When powerful Hurricane Isabel arrived some 38 hours later nearly everyone in the storm's path had fled to safety.

Days later Vice Admiral Lautenbacher, in a briefing to President Bush, praised the National Atmospheric and Oceanic Administration (NOAA): "Without NOAA's excellent track forecasts, hurricane Isabel's toll on lives and property would have been even more devastating. This is NOAA's first year of providing 5-day forecasts-and the 5-day forecast for Isabel was as good as our 2-day forecasts have been over the last decade."

Many people in NOAA played a role. A team of pilots, for instance, flew Gulfstream-IV High Altitude Surveillance jets right up to the approaching hurricane, logging 25,000 miles in the days before landfall. Their jets deployed devices called dropsondes-little weather stations that fall toward the sea, measuring pressure, humidity, temperature and wind velocity as they plummet. The data were radioed back to the aircraft and transmitted to forecasters on shore.

While two Gulfstream-IV crews flew night and day around the storm, a NOAA satellite named GOES-EAST monitored Isabel from above. (GOES is short for Geostationary Operational Environmental Satellite.)

From an orbit 22,300 miles above the Atlantic Ocean, GOES-EAST had a unique view. "It could see the entire hurricane at once," says Ron Gird of NOAA. "Scientists used infrared spectrometers onboard the satellite to estimate the height of the storm clouds, their temperature and water content. GOES can also measure the temperature of the ocean surface-the source of power for hurricanes."

Constant streams of data from GOES and the Gulfstream aircraft were fed to supercomputers at NOAA's Environmental Modeling Center in Maryland

*Continued on page 6*

*The Space Place Continued*

where sophisticated programs, developed over the years by meteorologists and programmers, calculated the storm's most likely path.

Supercomputers. Satellites. Jet airplanes. Scientists. Programmers. Pilots. It took a big team using a lot of tools to predict where Isabel would go-accurately and with time to spare.

Says Vice Admiral Lautenbacher: "I hope everyone at NOAA shares the pride of being part of a team effort that so effectively warned the public of impending danger and enabled citizens to take action to protect themselves and their loved ones."

Well done, indeed.

To learn more about the GOES, see [www.oso.noaa.gov/goes/](http://www.oso.noaa.gov/goes/). For kids, the SciJinks Weather Laboratory at [scijinks.nasa.gov](http://scijinks.nasa.gov) has lots of fun activities and fascinating facts about the wild world of weather.



GOES-East satellite image of hurricane Isabel as it makes landfall on September 18, 2003 at 1715 UTC

*by Dr. Tony Phillips*

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