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Ian Levstein, Editor

We welcome your comments on the *Bulletin*. Email them to the Editor at bulletin@rasc.ca.

A PDF version of the *Bulletin* is available [here](#).

A Web-based version of the *Bulletin* is available [here](#).

► [News @ RASC.ca](#)

Invitation to the 2012 General Assembly

by [Luca Vanzella](#), Edmonton Centre



The Edmonton Centre is pleased to invite you to the 53rd General Assembly of the Royal Astronomical Society of Canada, 2012 June 28 to July 1 in Edmonton, at the University of Alberta. Despite the Winnipeg Centre's admonishment in their number one reason to attend the 2011 GA, the organizing committee for the 2012 GA notes that it will occur several months before the end of the world!

We are thrilled to announce that the Helen Sawyer Hogg Public Lecture will be given by **Dame Jocelyn Bell Burnell**, the discoverer of pulsars. Our other invited speakers are **Dr. Martin Connors** (Athabasca University) Invited talk, and **Dr. Christopher Herd** (University of Alberta) Banquet speaker.

We are pleased to offer such amenities as a hospitality suite, a single location for the majority of the conferences events and, most of all, a relaxed atmosphere to connect with old

friends, make new ones, and discuss our passion – astronomy. In addition, the University of Alberta is fully wheelchair accessible and mobility friendly.

Tours

Our tours are designed to offer fun for the whole family. Choose among three full-day tours and four half-day tours. Full-day tours: Whitecourt Meteorite Crater, Elk Island National Park & Beaver Hills Dark-Sky Preserve, Fort Edmonton Park. Half-Day Tours: Enjoy Centre, Jurassic Forest, Muttart Conservatory, TELUS World of Science – Edmonton.

Display Competition

We will have three display competitions, open as follows:

- Project displays (adult RASC members)
- Project displays (students – open)
- Photography and Visual Displays (open)

Call for Papers

We will have two sessions of papers where delegates can share their astronomical experiences, data, and insights. Deadline for the submission of proposals is 2012 April 1.

Here is a brief overview of the schedule:

- Thursday: National Council BBQ
- Friday: First National Council Meeting, Invited Lecture, Wine & Cheese Reception (including Murphy Images & Song Contest), Observatory Tours
- Saturday: Displays, Paper Sessions 1, Catered Lunch, Paper Sessions 2, Informal BBQ, Helen Sawyer Hogg Public Lecture, Reception
- Sunday: Annual Meeting, Second National Council Meeting, East vs West Game, Group Photo, Banquet
- Monday: Tours

For details visit our [Web site](#).

First Call for 2012 Public Speaker Program

by [James Edgar](#), RASC National Secretary

Three Trustees, **Hugues Lacombe**, Centre francophone de Montréal, **Bruce McCurdy**, Edmonton Centre, and I will accept and assess applications from Centres or Speakers for travel in the first half of 2012 -- January 1 to June 30.

The PSP Fund is for Centres to offset the cost of bringing speakers to your area. The money isn't for meals, hall rental, honoraria, or refreshments, but it is for "travel and accommodation." Such things as "automobile expenses, bus or train travel, transportation to and from an airport, airline travel, and hotel/motel accommodation" are covered, as per the [Society Travel Policy](#). We encourage Centres to billet speakers, when possible, to keep accommodation costs to a minimum.

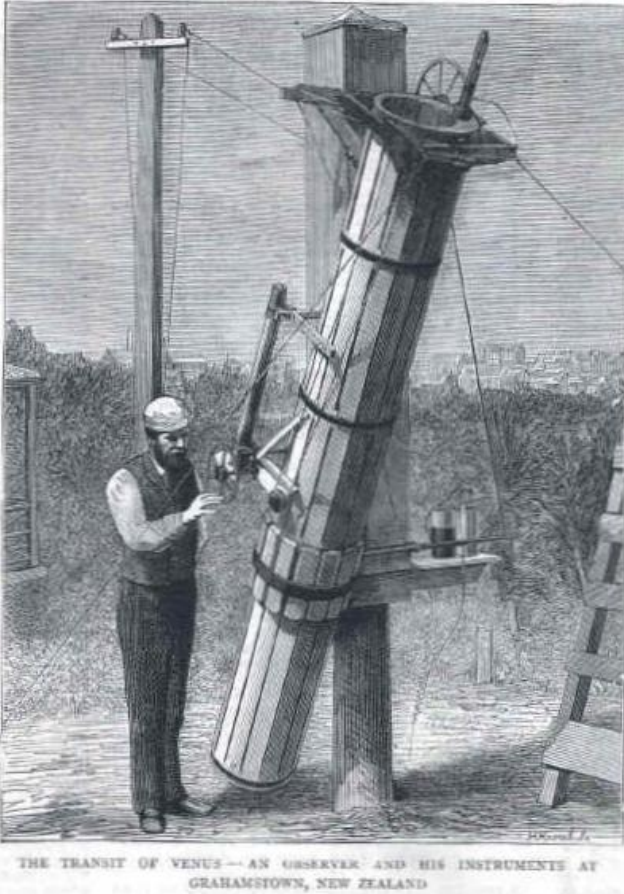
The program policy, requirements, and application form can be located [here](#).

The deadline for the first half of 2012 is **2012 January 15**.

Sunset Transit - What an EPO Opportunity

by [Ron Macnaughton](#), RASC Education Committee Chair

2012 June 5 will have one of the rarest astronomical events, possibly second to finding clear skies right after a new telescope has been brought home. At sunset on that Tuesday in Canada, Venus will be crossing the Sun, with more of the transit visible as you go west and north.



The transit of Venus – An observer and his instruments at Grahamstown, New Zealand

I think this is a wonderful opportunity for outreach, on a par with the close approach of Mars in 2003.

Several things make this event particularly special:

Rarity: The next one will come along in 105 years, the last one was 8 years ago. A kid seeing the '04 and '12 transits might be the first in history to see three transits when reaching 113+ years of age.

Timing: It's in the evening in Canada, so more people will come to public events than for 2004's morning transit.

Duration: For those seeing the whole thing at Hawaii's longitude (or the Yukon), the 6 h 40 min passage will be the longest duration between 1639 and 2255.

Easy to See: All someone needs are eclipse glasses, solar scope, or a monitor on a solar telescope – and a place with a good view towards the western horizon.

Fireworks on the Sun: With the Sun's current activity, there's a good chance we can see sunspots and prominences.

Dance of the Planets: We have a chance to

explain details of the Solar System such as the higher speed of inner planets and tilts of orbits, and that transits (and eclipses) occur near nodal points.

History: A few centuries ago, the size of the Solar System was measured by timing the duration of transits at various places around the world.

Exoplanets: Transit detection is the most sensitive technique to find Earth-sized planets around other stars. Two spacecraft - Kepler and COROT - are observing thousands of stars for years at a time to find repeated characteristic dips in brightness from transits.

The RASC is working on resources to help Centres run activities for this special event. Details to come.

Certificate Applications -- Just Send E-Mail

by [Chris Beckett](#), RASC National Observing Chair

The Observing Committee is pleased to announce observing certificate applications via e-mail. Simply go [here](#) and click on your program of choice. At the bottom of each program page you will find PDF application forms that now have text fields allowing data input without printing to paper. Simply click into the text fields to enter details, save it to your computer, then e-mail it as an attachment to [here](#), or print

it and mail in the old-fashioned way.

Observing logs and other materials are also accepted digitally, as well as through the regular mail process.

Our hope is that electronic applications will reduce waste, increase the number of certificate recipients, and add convenience for our membership.

Thanks to **James Edgar** for his work in the creation of these forms and **Jack Milliken** for his suggestion.

National Astronomy Blog Contest Now Open

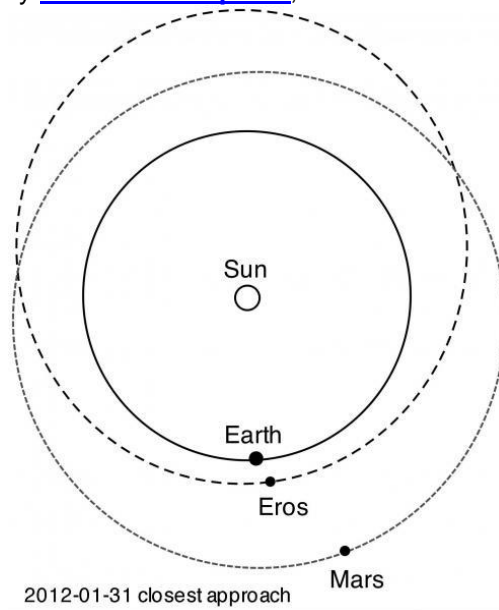
by [Denis Grey](#), RASC WebMaster

The RASC Web team is sponsoring a contest for members who want to publish their top astronomy experience of 2011. The contest closes 2012 January 15. To enter, just login to the national Web site and post a Personal Astronomy Blog.

For more details on the contest, click [here](#). There is also a video available on [YouTube](#) that shows how easy it is to post something to the National Web site. Fabulous prizes include RASC golf shirts, toques, and other cool swag.

Here Goes Eros!

by [Dave XVII Chapman](#), Halifax Centre



Another near-Earth asteroid (NEA) is on its way! If you had no luck finding 2005 YU55 on its very near, very quick, and very dim passage in November, why not try spotting 433 Eros, passing Earth on 2012 January 31? Compared with 2005 YU55, Eros will pass about 70 Moon-distances away (vs. $\frac{3}{4}$ Moon-distance), will brighten to magnitude 8.1 (vs. magnitude 11.1), and will be observable for several weeks (vs. one night!). The urban astronomer should easily snag Eros, even with binoculars. It also moves fast, so the motion should be obvious over an hour or so (see *Observer's Handbook* 2012, p. 250). The 10.8° tilt of the orbit of Eros makes for exciting observing, as the asteroid passes through the plane of the Solar System very near its perihelion point. When Earth is nearby, as in 2012, Eros plunges through $\sim 55^\circ$ of declination from north to south past the Sickle of Leo over a couple of months, about 1 degree per day! (See the finder chart [here](#)). The upcoming opposition is almost identical to that in 1931, like taking a time machine back 81 years to the first post-discovery close approach. Clear skies and good luck finding Eros!

► Bulletin Video of the Month

Jupiter at Conjunction

by [Kevin Kell](#), Kingston Centre



Here is the result of last night's imaging run (Monday/Tuesday 2011 Dec 12/13 Starting around 23:00UT and ending around 02:00UT)

The images were captured at 1x200 f-ratio=10 FL=2000mm, using the Meade LPI camera (640x480 pixels). Each of the 22 images is composed of approx 100 exposures automatically combined by the Meade LPI camera software. The images were manually cropped down to 120x120 pixels. Jupiter itself comes out around 60 pixels across.

The images were flipped vertically (using ACDSee Photo Manager v9 in a batch edit operation) to, hopefully, give accurate representation of actual orientation and movement through a Schmidt-Cassegrain optical system and a 90° eyepiece adapter and the camera itself. Jupiter appears to be rotating left to right with the dark storm spots on the upper side. Checking with the Stellarium software, this appears correct. Imagemagick convert (Linux software) was used to combine the 22 images into one animated .gif and .mpg.

If the video doesn't display properly, click [here](#).

► The Sky this Month

What's New in the Sky

Members are encouraged to check out the [Northern Skies](#) section of the RASC Web site. Thanks to **Gary Boyle** for keeping us all in the know.

► Dates to Remember

- **2012 January 1** - GA Online Registration Opens
- **2012 January 15** - Deadline for [Public Speaker Program](#) applications
- **2012 January 15** - Deadline for National Astronomy Blog Contest
- **2012 February** - Nothing reported
- **2012 March 10** - National Council Meeting, Toronto
- **2012 March 31** - [Earth Hour](#), 8:30 p.m.
- **2012 March 31** - Deadline for GA Early Bird Registration
- **2012 April 1** - Deadline for GA Paper Proposals
- **2012 April 28** - Astronomy Day
- **2012 June 5** - Transit of Venus



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