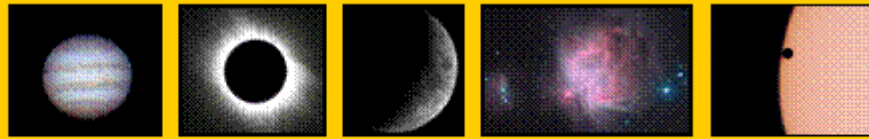


BULLETIN



OF THE ROYAL ASTRONOMICAL SOCIETY OF CANADA

February 2013 - Volume 8, Number 2

David Garner, 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](#).

➤ Editor's Notebook

by David Garner

February's Sky

According to the 2013 [Observer's Handbook](#), Mercury has its best evening apparition of the year during the first three weeks of February and reaches greatest elongation on the 16th, just before perihelion. Venus is very low in the eastern morning sky and vanishes by month-end. Mars is very low in the western evening twilight but will be lost in the solar glare by mid-month. Look for Jupiter on the northern edge of the Hyades and on the 18th, (for some observers) Jupiter will be occulted by the Moon. Saturn rises after midnight, Uranus is low in the western sky and Neptune is not visible. The next full Moon occurs on February 25th (UT).

➤ News @ RASC.ca

David Levy Speaking Tour

by [Randy Attwood](#), Past President, Mississauga Centre

The National Society Public Speaker Program was set up to encourage our Centres to organize and host public talks and presentations, by speakers from outside their local area, about astronomical and related topics.

This spring, eight centres will participate in a rare speaking tour by RASC member David Levy. A long time observer and author, David has been observing for most of his life, has discovered 22 comets, written 34 books and is an RASC Chant Medal recipient.

The dates are as follows:

- May 31 Ottawa
- June 1 Montreal
- June 3 Kingston

- June 5 Toronto
- June 6 Kitchener-Waterloo
- June 7 Mississauga
- June 8 Hamilton
- June 9 London

The Public Speaking Program is sponsoring David's travel to/from Canada as well as some of his travel within Canada. Centres are sharing in the total costs of his lodging.

Top 10 Astronomy Stories of 2012

by [Roland Dechesne](#), Chair, Membership and Promotion Committee

Once again, the membership of the RASC has voted for their top 10 stories of the year. The top two stories nearly tied, but the so-called "Seven minutes of terror" representing Curiosity's landing on Mars edged out second place, the incredibly rare Transit of Venus on June 5, which won't be repeated for another 105 years. In another close race, the passage of the interplanetary probe, Voyager 1, into interstellar space from the heliosphere narrowly topped the passing of legendary moonwalker Neil Armstrong at age 82. The "rogue" exoplanet, found far away from any star by Canadian and French astrophysicists was number 5 on the list. Confirmation that the Milky Way and the Andromeda Galaxy are fated to collide in the distant future was voted into the 6th position on the list.

Two very different stories tied for 7th spot. The existence of the Higgs Boson now meets a stringent 5-sigma standard; this means that there is a vanishingly small chance that the two experiments carried out to characterize the particle have measured a statistical fluke. The possibility of a cometary explosion over Canada being linked to local extinctions approximately 12,900 years ago also intrigued the RASC membership.

The final two stories on the list also tied. The November total solar eclipse, viewed by so many RASC members in Australia, tied with the digestive habits of the Milky Way's dark heart - a large cloud of gas and dust will soon fall into the supermassive black hole at the centre of the Milky Way.

The MAP Committee would like to thank Larry McNish of the Calgary Centre for assistance in creating the initial list and also to all those who voted for their favourites on the list. The three members, drawn randomly from those who voted, who will receive a copy of RASC "Skyways" are: Laurie Mersereau, Elaine Pelletier and Daniel Loas.

Total Solar Eclipse

by [Joe Carr](#), Victoria Centre

I observed the Total Solar Eclipse of 2012 November 13, while aboard the Paul Gauguin cruise ship, on the totality track south of New Caledonia in the South Pacific at position 26° 40' S 166° 46.9' E. Totality lasted 3 minutes and 1 second, so that was a particularly busy time, however I mostly sat back in my chair and concentrated on taking some photographs with my DSLR while visually observing. Totality was visually stunning and beautiful: the colours around the edge of the eclipsed Sun sparkled, and the coronal streamers coming off the Sun in all directions were mesmerizing. About 10 minutes before Second Contact, Venus was easily observed in the sky, and then as darkening continued Saturn also appeared between Venus and the Sun. There was a nice display of sunspots to observe during non-

totality as the Moon slid across the Sun. Diamond Rings visible at Second and Third Contact were very dramatic – this is when the crowd went wild aboard ship.

Joe's online observing report: <http://joetourist.ca/SolarEclipse2012/eclipse-day.htm>.



A Ring Around the Moon

by [Rick Stankiewicz](#), Peterborough Centre

Around midnight on January 23rd, I checked outside in my backyard near Keene, Ontario just before turning in for the day and upon looking up at the Moon, what did I see but a beautiful and complete Lunar Halo or ring around the Moon. This one was bright enough that I could see the colours (heavier reds) of a rainbow on the inside of the "ring," especially at the lower portion of the ring, but most of the colours are diffuse and scattered making the main ring appear whitish. Halos typically have a radius of 22 degrees, caused by refraction of light by randomly oriented hexagonal ice crystals. The added bonus this particular evening was the positioning of Jupiter right at the 4 o'clock position and right in the halo portion. Wow, what a nice coincidence to end the day. It was a little on the chilly side this evening too at -22 C, but it was calm and just the right amount of high thin cirrus cloud laden with random ice crystals to produce this atmospheric phenomenon.

Once again proving it pays to be "looking up," no matter what the time of day or weather outside.



Chinese New Year is February 10

by [Roland Dechesne](#), Chair, Membership and Promotion Committee

A key aspect of Canadian society that differentiates us from other corners of the world is our multiculturalism. One large Canadian demographic are those of Chinese origin or background; representing about 4% of the population, or just over 1.3 million citizens. Chinese New Year is the most important of the traditional Chinese holidays and thus a large swath of the Canadian population is gearing up for a significant event. It turns out that the timing of the New Year is astronomically based as the underlying calendar is a luni-solar one and the upcoming event is commonly called the "Lunar New Year." Much like the Christian Easter, which is tied to Moon phases and the annual (solar) year, the date of the Chinese New Year shifts back and forth within a defined range of days. Find out more with this brochure: <http://www.calgary.rasc.ca/downloads>.

We would like to thank Deborah Thompson (National Office) and Larry McNish (RASC Calgary) for proofreading and especially Bing Hong (RASC Calgary) for his translation work!

RASC Membership Development News

by [Deborah Thompson](#), Executive Director

The RASC Membership Development News for January 2013 is available at: [RASC Member Development News Jan 13](#).

New RASC Member Presentation Now Online

by [Deborah Thompson](#), Executive Director

This presentation is now available at www.rasc.ca/resources/brochures under the RASC Member Area; Centre Resources; Brochures and Outreach; RASC Member Presentation.

As previously mentioned, the RASC Member presentation deck can be used by Centres at their meetings for information sessions to assist in the acquisition and renewal of members. Please feel free to custom fit the presentation with local logos, messaging, services and programs, images, fees, etc.

Thanks to all of you who provided improvements and feedback.

Environmental Impacts of Light Pollution and its Abatement

by [Robert Dick](#), Ottawa Centre, Chair, LPAC

This special report presents a selection of articles covering a few diverse aspects of lighting and light-pollution abatement (LPA) with authoritative summaries. We hope the range of topics in this article will carry you out of your knowledge comfort zone and expose you to additional issues and information. Light Pollution (LP) is not an issue only for astronomers—it fundamentally changes the world—for good and ill. This PDF can be freely downloaded at www.rasc.ca/sites/default/files/LPA_Special_Issue.pdf. No password required. We encourage people to order and distribute the Special Issue at their local level.

➤ Across the RASC

Ottawa Centre Announcements

by [Charles O'Dale](#), Ottawa Centre

Simon Hanmer's series on planetary geology has been updated to include Part 2 on Valles Marineris:

[Simon Hanmer's Planetary Geology](#).

The impact crater explorer's Web site of the Ottawa Centre has been updated in January to include all the impact structures in Saskatchewan. :

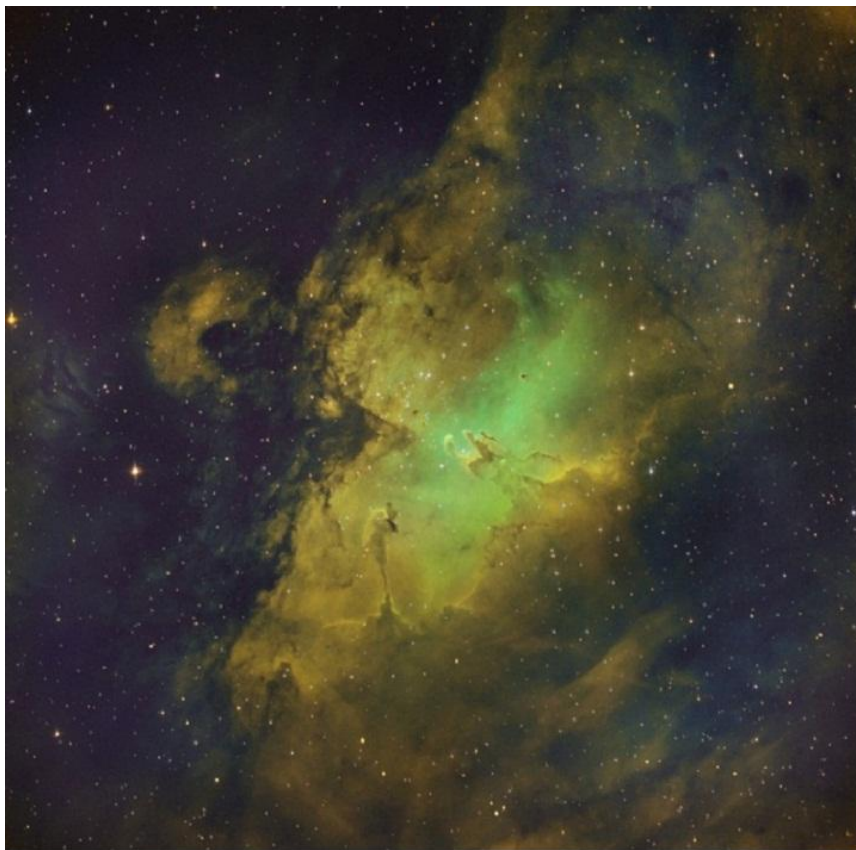
[Charles O'Dale's Articles](#).

► *Bulletin Photo of the Month*

Pillars of Creation

by [Brian McGaffney](#), Kingston Centre

This is a CCD image done here at Nuttwood Observatory. The plan was to come close to a previous Hubble image of the Pillars of Creation. So I used a special camera that can be used to display a hi-res image close up when expanded. Basically this image of M16 (the Eagle Nebula) was done using the HST (Hubble Space Telescope) palette. It is a false-colour image with Ha, OIII and SII changed just the way the Hubble made the shot a few years back. The equipment used was a 14 inch carbon-truss astrograph with narrow-band filters and with a liquid-cooled Apogee CCD camera. It's not quite the Hubble, but fairly good for dark skies of central Ontario.



► *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.



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