



The Royal Astronomical Society of Canada NATIONAL NEWSLETTER

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RASC 150 THE YEAR OF THE SESQUICENTENNIAL

In 2018, the historical foundations of our advocacy of astronomical science provided a timely focus for our RASC 150th programming. The congratulations of our vice-regal patron, Governor General Julie Payette, on this milestone emphasized the connections between the science we encourage and the generations of our predecessors who did the same in their time.

We kicked off the year on January 27 with a national star party that involved our Centres countrywide and received greetings from the staff of the Canada-France-Hawaii Telescope and astronaut David Saint-Jacques on behalf of the Canadian Space Agency/Agence spatiale canadienne (<https://youtu.be/43RVyx4vFkQ>). A first for the RASC was the live cross-country linkup (<https://youtu.be/uN7IKkRwBK0>). Various RASC programs, three years in the making, were unrolled over the course of the year.

The **RASC Mosaic** project combined images that visually convey our Centres' core activities into a symbolic representation emblematic of our diverse national organization

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CONTACT US

We invite all Centres to contribute articles about their latest activities. Have you had any public star parties, award ceremonies, special events or observatory activities? Photos are welcome. Please send articles and pictures to newsletter@rasc.ca.

A quiet Sun displays a rather nice prominence at the 2 o'clock position. Image by Paul Campbell, Edmonton Centre.



PULL OUT NEWSLETTER TO VIEW SKYNEWS STAR CHART



OBSERVING NEWS

RASC Observing Certificates Earned in August-September 2018

More than 600 RASC members have distinguished themselves by earning observing certificates. For more details, see www.rasc.ca/certificate-programs.

Explore the Universe: Murray Campbell (Ottawa); Heidi Verheul and Ronnie Reid (Halifax)—Heidi and Ronnie observed and applied together, which we think is a lovely idea.

In the first nine months of 2018, the RASC issued 20 observing certificates. Thanks to all the local RASC volunteers who promote observing and mentor new observers.

New to Astronomy? It's Time to Explore the Universe

Explore the Universe is the “entry level” observing program of the RASC. It is open to all (even non-members) and can be completed using only a pair of binoculars. Most RASC Centres are Local Certification Centres, which means it's easy to apply and there are mentors who can guide your observing. The program documents have recently been translated into French. For those who would like a written guide to get started, the RASC has published the *Explore the Universe Guide* (2nd edition). For more information on Explore the Universe, see www.rasc.ca/explore-universe.

Follow Observing News via @RASC on Twitter

Using the @RASC account, with the hashtag #RASCobserving, the RASC Observing Committee now announces observing certificates as they are earned and posts noteworthy observing opportunities.

— Dave Chapman, Chair
RASC Observing Committee
and Emeritus Editor Observer's
Handbook (2012-16)



Many treasures reside in the RASC Archives, including these sketches made by Andrew Elvins in 1868. Top: Jupiter; left: Venus.

astronomy in cooperation with partner organizations in their local communities. Outstanding examples are **Out of This World: Art Inspired by All Things Astronomical**, produced by the RASC Archives and the Propeller Gallery Collective in Toronto; and **Science & Art: 150 Years of Astronomical Imagery**, presented by the Kitchener-Waterloo Centre and the Homer Watson House & Gallery in Kitchener.

The **RASC 2018 Podcast** explored the known and unknown facets of our history, revealing some stories with a surprising resonance with the present and the occasional flash of humour (www.rasc.ca/rasc-2018-podcasts).

Peering through telescopes was certainly not ignored. **Viewing the Moon Across Time** is an innovative program to experiment with the observing techniques and equipment of 150 years ago to experience the style of observing practised by the Society's pioneers (www.rasc.ca/viewing-moon-across-time). An archaeology of observing can be surprisingly enlightening of both the past and the present.

Beyond the national program for our sesquicentennial are the local initiatives and activities of the Centres and of individual members. This part of the RASC 2018 story is worth telling, for by celebrating 150 years of RASC history, we have created more of that history.

There is one more thing the RASC 2018 Working Group would like you to do. We want to hear about your Centre's sesquicentennial activities, and if you have supporting images or other media, we'd love to see them. This material will be compiled into a final report outlining what we accomplished together in celebrating how we have advanced astronomy and allied sciences over the past 150 years.

— R.A. Rosenfeld
(rosenfel@chass.utoronto.ca)

Sesquicentennial cont'd.

(www.rasc.ca/sites/default/files/5x6-banner-highres.jpg). The mosaic was unveiled at the General Assembly in Calgary.

Also featured at the General Assembly was **A Shared Sky: The RASC 1868-2018**, a symposium presenting commissioned research on the RASC's astronomical history and heritage (www.rasc.ca/rasc-2018-shared-sky-rasc-1868-2018). This was not the final result of this undertaking but, rather, the beginning, as this legacy project is scheduled to appear in book form.

Imagining the Skies was our astronomical imaging contest, conceived in the broadest terms to foster creative responses to our experience of astronomy through diverse approaches in a variety of media by enthusiasts with different levels of experience (www.rasc.ca/imagining-and-imagining-your-skies; <https://imaginingtheskies.ca>). The number and the quality of the entries we received underscore the strong interest in engaging with astronomical phenomena.

Cultural Connections bore fruit in encouraging Centres or other segments of the Society to develop projects in cultural

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CREATE A LOGO FOR CASTOR AND WIN!

Canadian astronomers have established themselves in space-based astronomy by using space telescopes such as Hubble and Chandra. In 2003, Canada's Microvariability and Oscillations of Stars (MOST) space telescope was launched, and now Canada is a full partner in the James Webb Space Telescope (JWST).

Hubble and Chandra are nearing the end of their missions, and JWST won't have the long lifetime of Hubble, so Canadian astronomers are already looking at what comes after JWST. The National Aeronautics and Space Administration is developing the Wide Field Infrared Survey Telescope (WFIRST), and the European Space Agency is building Euclid.

Like JWST, both WFIRST and Euclid will operate in the infrared, so ultraviolet and visible light capabilities in space will be lost when Hubble ceases operations. Because of this problem, many Canadian astron-

omers are supporting a proposal for a new Canadian space telescope: CASTOR, the Cosmological Advanced Survey Telescope for Optical and UV Research.

CASTOR will feature a one-metre-diameter primary mirror inside a spacecraft weighing about 500 kilograms. Its camera will have a similar resolution to Hubble's, but it will cover a much larger segment of the sky than Hubble.

CASTOR will provide unique data in the ultraviolet part of the spectrum, complementing data from JWST, WFIRST and Euclid and assisting in the search for dark energy. It will also challenge and stimulate Canadian industry and Canadian science.

The Canadian Space Agency (CSA) is conducting a study of CASTOR that Canadian astronomers hope will lead to approval of the mission. While the CSA would lead CASTOR, other space agencies would be involved, including NASA and the In-

dian Space Research Organisation, which would provide the launch vehicle.

Now Canadian astronomers are seeking a logo for CASTOR, whose name pays tribute in French to Canada's national animal, the beaver.

Members of The Royal Astronomical Society of Canada and Fédération des astronomes amateurs du Québec (FAAQ) are invited to submit designs for this logo.

Mail entries to RASC National Office, 203-4920 Dundas Street West, Toronto, ON M9A 1B7, or send entries by e-mail to nationaloffice@rasc.ca.

Entries will be judged by a panel of astronomers selected by mission scientists, the RASC and FAAQ.

The winner will receive a prize of merchandise from Ingenium — Canada's Museums of Science and Innovation.

Deadline for entries: February 1, 2019.

— Chris Gainor, President, RASC

RASC ROBOTIC TELESCOPE UPDATE

Development of the RASC Robotic Telescope Project continues. We had a wonderful response to our call for volunteers for the operations and astrophotography teams. Our members responded from across the country and abroad. Having team members in different time zones is especially beneficial to help manage operations and utilize windows of opportunity. The two teams have started their work, with the operations team beginning to train and the astrophotography team selecting targets for testing the automation, processing and infrastructure needs of a growing team. The new camera system is working well, and we hope to soon share some processed images. You can keep up to date with the telescope happenings at <http://rasc.ca/telescope-news>.

— Paul Mortfield
Robotic Telescope Project Manager



This single 3-minute exposure of the Rosette Nebula region was taken on October 14, 2018, by Paul Mortfield using a Canon EOS 6D DSLR camera and a 200mm lens.



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AWARDS DEADLINE REMINDER

SPECIAL PROJECTS PROGRAM UPDATE

The goal of the Special Projects Program is to make Society funds available for projects that further the RASC mandate (the advancement of astronomy and allied sciences), carried out by individual members or groups of members across all 28 Centres in Canada.

Funds (to a maximum of \$10,000 per year) are drawn from the Northcott Fund, with each application not to exceed \$2,000. The applications are assessed by three Special Projects Program trustees from different Centres: Katrina Ince-Lum, Howard Trottier and Charles Ennis.

A couple of minor changes in policy and procedures have recently been introduced. To encourage more Centres to apply, only one application a year is permitted for each Centre. Effective immediately, applications for Special Projects Program funds must be received by May 31 each year so that all applications for the year can be assessed together. If, after assessing these applications, additional funding is available, a call for more applications will be made later in the year.

It has been a pleasure to see the variety of projects that Centres from across the country are undertaking: from constructing observatories to organizing multimedia concerts and purchasing supplies for outreach events. We truly have a diverse and fascinating Society. If you or your Centre requires financial assistance for a project that falls within our mandate, please consider applying.

— Katrina Ince-Lum, Special Projects Program Administrator, RASC



Society Vice-President Charles Ennis, left, visits the Yukon Centre's new observatory at Takhini Hot Springs. Yukon Centre received funding from the Special Projects Program in 2018. Photo courtesy Charles Ennis and Vikki Zsohar.

The deadline to submit award nominations is fast approaching. Here is an outline of the awards and their criteria.

CHANT MEDAL This award is based on a significant body of work of lasting value to the astronomical community and is named after C.A. Chant, a noted astronomer at the University of Toronto who helped to found the David Dunlap Observatory there.

KEN CHILTON PRIZE Established in memory of Ken Chilton, this prize is awarded for a specific piece of astronomical research or work carried out or published recently.

SERVICE AWARD Established in 1959, this award is presented to RASC members who have made significant contributions at the national and/or Centre levels.

SIMON NEWCOMB AWARD Established in 1979, this award recognizes excellence in astronomical writing by an RASC member.

QILAK AWARD Established in 2011, this award is intended to recognize individual Canadian residents or teams of residents who have made an outstanding contribution during a particular time period either to the public understanding and appreciation of astronomy in Canada or to informal astronomy education in Canada and to promote such activities among the members of the sponsoring organizations.

FELLOW OF THE RASC Established in 2013, this award is given to recognize long-term commitment to the Society.

Please note: The deadline for submitting nominations is December 31, 2018.

Nominations for awards should be sent to the Awards Committee at awards20000@rasc.ca.

For more information on the awards, see <https://rasc.ca/rasc-awards>.



Order the Best for 2019

NATIONAL OFFICE

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