



The Royal Astronomical Society of Canada NATIONAL NEWSLETTER

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ANNOUNCEMENT

Start the Countdown to 150 Years of the RASC



2018 is a banner year for the RASC—it marks the 150th year since the Society's inception. And that's reason enough for Canada's leading association of amateur and professional astronomers to celebrate the past and future course of astronomy in this country. A number of celebratory events are under development to span 2018, and they will be announced during 2017. These events will highlight active engagement in what we do now, reveal to Canadians what we aspire to do in the future and show the roots of our astronomical advocacy and pursuits in a colourful and engaging past.

The 2018 Working Group is drawn from across our membership: Paul Delaney (Toronto Centre), Jim Hesser (Victoria Centre), Heather Laird (Calgary Centre), June MacDonald (New Brunswick Centre), Lauri Roche (Victoria Centre) and R.A. Rosenfeld (Unattached). We will also be reaching out to our partners in CASCA and the FAAQ to help us celebrate astronomy in Canada.

Our first announcement is the unveiling of the RASC 2018 logo. It is the creative work of Executive Director Randy Attwood and Janice McLean of SkyNews, with input from the Society's archivist, Randall Rosenfeld. A full description of the symbolism and its various elements can be found at rasc.ca/150th-anniversary-logo.

Its elements represent the observational work, discoveries and education and public outreach of our professional and amateur members over the century and a half since our founding. The logo will be featured on items that will be available from the RASC store.

We look forward to your participation in RASC 2018 as we celebrate our history and future together!

—Randall Rosenfeld
Chair, 2018 Working Group

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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.

 PULL OUT NEWSLETTER TO VIEW SKYNEWS STAR CHART

EDITOR'S CORNER

What you need to know about sky glow

Amateur astronomers frequently have two complaints: one, it's too cloudy to see anything, and two, there is too much sky glow to see anything.

If you live near any large bodies of water, as I do, November and December are not just cold, the skies are often clouded over—resolution and quiet acceptance are usually our standard, since there is no other alternative.

One would think that living just outside a small town might have some advantages for an intrepid observer. Those rare autumn nights when the sky is clear are very enticing. For the most part, I don't have to deal with streetlights or even the neighbour's lights. That doesn't guarantee dark skies, since I still have the sky glow from the nearby village of Mount Forest, Ontario.

If I can do something to reduce the light pollution, that would certainly be a step in the right direction. First, before I run to city council, I must educate myself: What kind of lighting is causing the sky glow? What do I need to know about white-light LED lighting?

Here is a start for you: Robert Dick is the Chair of the Light Pollution Abatement Committee. Have a look at his article, New Version of RASC Lighting Guidelines, on page 4. Perhaps you will be as surprised as I was.

—David Garner, Editor

FROM THE PRESIDENT

Although summer (it's August as I write this) is traditionally the time for vacations centred around the many star parties in Canada, the smooth running of the RASC does not take a break. Our staff members, Executive Director Randy Attwood, Business Manager Renata Koziol and Marketing Coordinator Julia Neeser, continue to impress with their focus and dedication not only to the day-to-day running of the RASC but to improving service delivery to our membership and to growing our membership numbers. In the past year, we've grown the RASC membership to the 5,000 milestone. A lot of that success has been through the efforts of our staff and a focus on member retention.

Growing and improving the organization further for our members and Centres will take a lot of focus from the Board and our Executive Director. Two components of that are 1.) to craft a Strategic Plan to carry us well into the future and 2.) to build a Fundraising Strategic Plan tied tightly to #1. Foundational work on both has been under way since the London General Assembly, and I'm looking forward to the discussions, consultations and input that will help us fully realize these plans. There were an incredible number of good suggestions and frank discussions at the Council session led by Denis Grey, and we want to continue to tap into the energy and ideas that flowed there. My sincere thanks to all who participated and continue to give freely of their time.

The Board meets monthly, and there are several projects on the go in publications, modernizing our IMIS system for a smoother and more efficient experience for users and our staff, developing information for Centres and much more. We'll be updating you on a number of these as milestones are met.

—Craig Levine, President, RASC



This 8-hour image of NGC1491 was taken with a Tele Vue NP127is telescope and a QSI 583wsg camera. Photo: Dan Meek

OBSERVING—FOR FUN AND PROFIT

This Newsletter was created in February 1970 to encourage and coordinate observing across the Society. As a variable star astronomer and an enthusiastic long-time member of the American Association of Variable Star Observers (AAVSO: www.aavso.org) and as editor of its *Journal*, I know that skilled amateur astronomers, by observing these “performing stars” by eye or with photometers or CCD cameras, make important contributions to thousands of research projects, including my own and those of my students. Skilled amateurs also discover novas and supernovas; count sunspots; monitor solar effects on the ionosphere and the aurora; chase (and sometimes catch) grazing occultations; discover and monitor comets and asteroids; measure exoplanet transits—and more. Canadian amateur astronomers have distinguished themselves in all of these fields. Check out the RASC website (www.rasc.ca) under “observing” for more information.

You can also make and preserve your observations for posterity in the form of awesome images and share these through *SkyNews*, *JRASC* and your Centre newsletter or website or hang them on your wall. Astrophotography truly lies at the intersection between science and art.

Or you can simply observe the sky for your own pleasure, knowing that you are making a direct eyes-on connection between your brain and the universe. Better still, share your experience with the public, especially young people. You never know when you will “turn on” a future astronomer, amateur or professional!

—John Percy, Honorary President, RASC

RASC NEWSLETTER



AT THE STORE

RASC Explore the Universe Guide

\$12.95 plus postage from the RASC eStore

If you are just starting out in astronomy, the *Explore the Universe Guide* is for you. This illustrated book answers questions about astronomical coordinates, constellations, eclipses, the Moon, major and minor planets, comets and more. It is also the companion guide for the RASC's Explore the Universe Certificate Program and is the perfect way to start learning your way around the sky.



RASC AWARDS: CALL FOR NOMINATIONS

The deadline for the RASC's National Awards Program—December 31, 2016—is rapidly approaching.

Here is an outline of the awards and their criteria:

CHANT MEDAL The Chant Medal is awarded 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 The Service Award, established in 1959, is awarded to RASC members who have made significant contributions at the National and/or the Centre levels.

SIMON NEWCOMB AWARD The Simon Newcomb Award was established in 1979 for 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.

FELLOWSHIP AWARD Established in 2013, this award is given to recognize long-term commitment to the Society.

Nominations for awards should be sent to the Awards Committee at awards20000@rasc.ca. For more information on the awards nominations, see www.rasc.ca/rasc-awards.

—James Edgar, Past President, RASC

BIG SCOPES AND BIG SKIES

Aurora at 2:30 a.m., taken at 2015 Starfest with the following equipment: Nikon D800, Nikon 24-70mm f/2.8 lens, ISO 4000, 8-second exposure.

—Malcolm Park, Kingston Centre





RASC NEWSLETTER



The increasing use of white-light luminaires (at right) in towns and cities is beginning to change the nature of urban sky glow.



Pole-mounted low-impact lighting along a rural road. "Low impact" does not necessarily mean dim. However, spectrum, brightness, shielding and uniformity must be well defined. Photos and chart: Robert Dick

NEW VERSION OF RASC LIGHTING GUIDELINES

There is a "sea change" in the sky. The proliferation of white-light LEDs is causing a swell of sky glow over our cities, and photographs are recording more whitewash between the stars. And following the installation of these lights comes a wave of complaints from many citizens.

Why is there such a backlash against lights that were promoted with so much promise? The answer, I believe, is a limited understanding of our visual perception, which is caused by a lack of experience in seeing at low lighting levels. And when I write "low lighting levels," I mean at levels where our daytime vision fails (1-3-lux) and our sensitive night vision takes over.

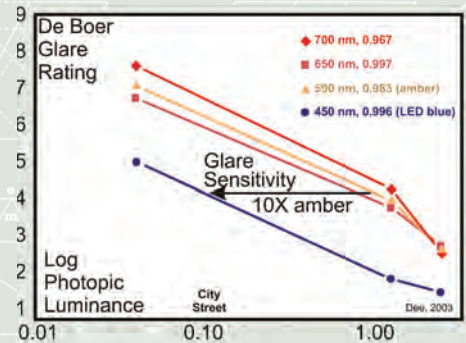
At the low light levels that are typical of an urban residential street, the blue spectral component inherent in white-light LEDs has up to 10 times the glare-impact as amber light.

Of concern to us in the RASC is the pressure that park managers are facing to adopt urban-style white-light LEDs—even in Dark-Sky Preserves. Distributors use the argument that these lights are "Dark Sky Friendly." However, this term was never trademarked by the International Dark-Sky Association (IDA) or precisely defined, so lighting companies are using it rather loosely. It is better for parks to specify RASC Guidelines for Outdoor Lighting (GOL) "compliant" lighting, especially if they are a Dark-Sky Preserve or plan to become one in the future.

To help counter this misinformation about LED lighting, we have added three sections to the RASC Dark-Sky Site Guidelines and submitted them to Parks Canada for its internal Guideline for Outdoor Lighting. These sections clarify the use of LED lighting in Dark-Sky Preserves, Urban Star Parks and Nocturnal Preserves. Download the document, and take a look (www.rasc.ca/dark-sky-site-guidelines).

The GOL is based on what is "needed" for human vision, not on what is "wanted." It is based on vision when lighting is "deemed to be required" and is limited by its biological impact. I think you will find the arguments and the lighting requirements useful for all types of parks and even residential streets in your neighbourhood.

—Robert Dick, Chair, Lighting Pollution Abatement Committee



Plot of "apparent glare" with respect to the brightness and colour of the light. Blue light has 10 times the perceived impact as amber light (Dee 2003).

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