



The Royal Astronomical Society of Canada NATIONAL NEWSLETTER

NOVEMBER/DECEMBER 2018 VOLUME 3, NUMBER 3

AN RASC 150 OBSERVING PROJECT

ROBOTIC TELESCOPE UPDATE

Our Robotic Telescope Project has a manager: Paul Mortfield. Paul has extensive experience using a robotic telescope at the Sierra Remote Observatories site. In fact, it is Paul's telescope that we purchased. The telescope has quite a history. It has been used to produce NASA Astronomy Picture of the Day images, cover shots for the RASC calendar and exoplanet photometry. Paul teaches astronomy and science courses at a Toronto college.

Equipped with a new large-chip SBIG STX-16803 CCD camera, filter wheel and Adaptive Optics unit, the telescope is already taking test images. In addition, riding atop the telescope is a full-frame Canon 6D DSLR with a 200mm f/2.8 lens for wider-field images.



A single 2-minute exposure of the region around NGC7000 (the North America Nebula) using the piggyback Canon 6D DSLR.

of email forum. And we need to find a lot of storage space for the terabytes of data the telescope will generate.

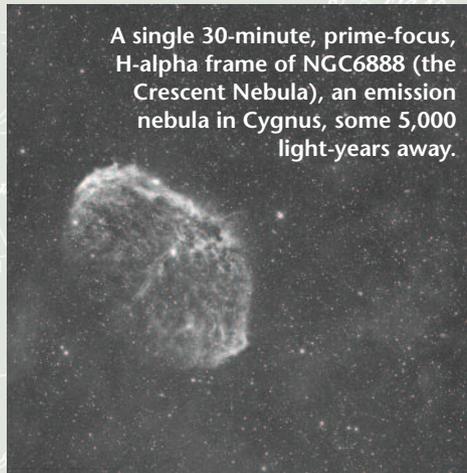
The astrophotography group will be set up first. After signing up, members will have access to raw data images from the telescope. To help those new to astrophotography, there will be training in how to process these images.

The science group will be formed next, followed by the public outreach group.

To whet your appetite, there are plans to provide access to the DSLR photos to all members as soon as we can establish a distribution mechanism.

For more information, updates and the latest photos, visit www.rasc.ca/telescope.

If you have any questions or wish to help with the setup of the project, please send an email to robotictlescope@rasc.ca.



A single 30-minute, prime-focus, H-alpha frame of NGC6888 (the Crescent Nebula), an emission nebula in Cygnus, some 5,000 light-years away.

— Randy Attwood, Executive Director, RASC



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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.

RASC FUNDRAISING NEWS

For 148 years, the RASC operated without a Fundraising Committee. Our Society is a registered charity and members occasionally donated, but no serious attempt was made to ask for donations. Annual donations rarely exceeded \$25,000.

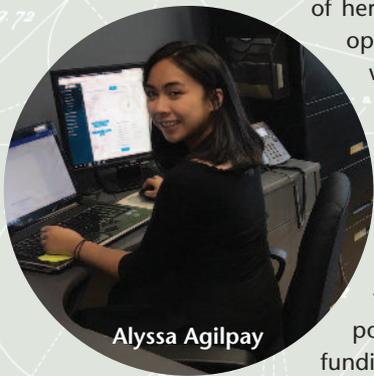
Two years ago, Society Director Heather Laird created a Fundraising Committee, and things started to change. With the assistance of the London Centre's Ryan Fraser, an expert in bequests, we developed the Society's first Gift Acceptance Policy to better define the process of receiving donations and bequests and to expand the means by which gifts could be made.

Last fall, the Society's Board of Directors hired a professional fundraiser, Lisa Di Veto.

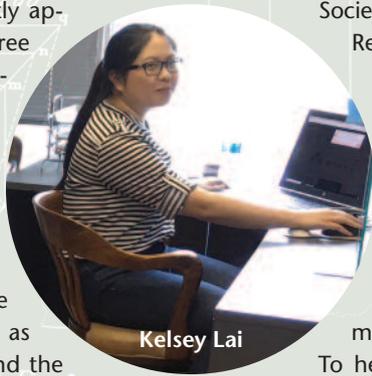
Following the acceptance of her Fund Development Plan, which recognized a low level of individual donations, Lisa began by looking for grant support. Federal funding of \$6,720

in wages was awarded for two student employees at the national office this past summer: Alyssa Agilpay and Kelsey Lai. They offered significant support to the Society's membership, media and fundraising portfolios. The Trottier Family Foundation recently approved \$225,000 over three years for an Astronomy Outreach Coordinator to help engage youth across the country in RASC activities. Other grant applications are pending.

Internal changes have also been made with the renaming of two funds as the RASC Legacy Fund and the



Alyssa Agilpay



Kelsey Lai

OBSERVING NEWS

RASC Observing Certificates Earned in June-July 2018

Dozens of active RASC members have distinguished themselves by earning observing certificates. See www.rasc.ca/certificate-programs for more details.

Deep Sky Challenge

Ted Wang (unattached, Taiwan). It is rare that anyone applies for this most challenging RASC observing certificate. Ted is only the ninth recipient of the certificate. He not only observed all 45 objects but sketched them! The RASC Observing Committee is very impressed with Ted's achievement. Observing from a mountaintop, he enjoyed excellent transparency and seeing and regularly worked with a smaller aperture than normally expected. Well done, Ted.

Explore the Universe

Charles White (Halifax)

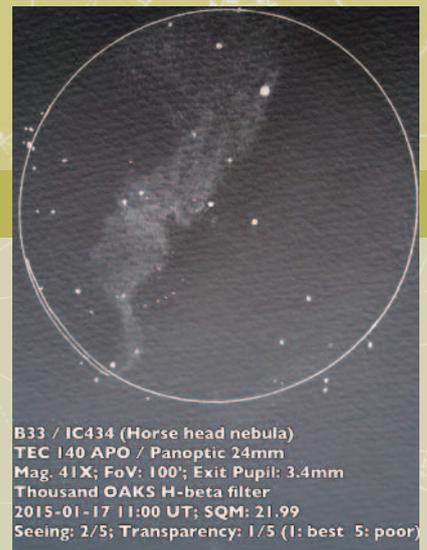
Explore the Moon—Binocular

Edward Essex (Thunder Bay) and Robert McLean (Thunder Bay)

Follow us on Twitter

Using the @RASC account, the RASC Observing Committee now announces observing certificates as they are earned, as well as noteworthy observing opportunities (use the hashtag #RASCobserving).

Ruth Northcott Education Fund. The Society's reports to the Canada Revenue Agency have been revised, with our charitable program expenditure more accurately reported as 58%, up from last year's entry of 11%. Members can now make donations of stocks or enroll in a monthly donation program. To help celebrate the RASC's



B33 / IC434 (Horse head nebula)
TEC 140 APO / Panoptic 24mm
Mag. 41X; FoV: 100'; Exit Pupil: 3.4mm
Thousand OAKS H-beta filter
2015-01-17 11:00 UT; SQM: 21.99
Seeing: 2/5; Transparency: 1/5 (1: best 5: poor)

This sketch of the Horsehead Nebula was made by Ted Wang as part of the requirements to receive his Deep Sky Challenge observing certificate.

New French Translation of Explore the Universe (EtU) Observing Program

The EtU observing program requirements (www.rasc.ca/explore-universe) were updated and reformatted in early 2018. Observers are encouraged to download this latest version (v 6). A few corrections were made, and the text has been clarified in many places (especially double stars), but the overall objectives remain the same. And thanks to Pierre Paquette, there is now a new French translation as well. The RASC Observing Committee continually revises all the observing program documents in response to information provided by observers, so please do not hesitate to contact us at observing@rasc.ca.

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

150th anniversary, a Robotic Telescope Project has been launched. These initial efforts have generated \$130,000 in donations this year to date, and \$150,000 has been pledged over the next two years.

You can help. Part of supporting a charity is contributing to it. Your gift of time and financial support is greatly appreciated and will help us continue for another 150 years. Please make your donation to the RASC.

— Charles Ennis, 2nd Vice President, Chair RASC Fundraising Committee



LAST OPPORTUNITY!



The solar system on display, left; taking a bite out of Earth, above.

RASC 150TH IMAGINING THE SKIES CONTEST

If inclement weather is keeping you indoors this fall, why not take the time to review the images or astronomically inspired artwork you did during 2018 and submit entries to the RASC's Imagining the Skies Contest. Entries are welcome through December 31, 2018. Please help ensure that this unique component of the RASC's sesquicentennial celebrations ends with a site full of creative astronomy endeavours, including yours, undertaken in 2018. And encourage the newcomers you mentored during 2018 to contribute too. Don't forget to vote for your favourites in each of the categories. There will be Viewers' Choice awards along with the juried awards. *To submit entries or to vote on the submitted entries, please go to imaginingtheskies.ca. (Note: This contest is not affiliated with the SkyNews Photo of the Week contest.)*

— Lauri Roche and Jim Hesser
Victoria Centre, RASC 150th Committee

NEW HONORARY PRESIDENT

The RASC has a new honorary President, Dr. Douglas P. Hube of the Edmonton Centre. Douglas joined the RASC in 1960 and served as President of the Edmonton Centre and later as Society President. He won the RASC Service Award in 1982.

A native of St. Catharines, Ontario, Douglas joined the faculty at the University of Alberta in 1969, where he mentored generations of astronomy students and RASC members and compiled an impressive record as a researcher. Along with his wife Joan, Douglas continues to take an active part in RASC activities. He succeeds Dr. John Percy of Toronto as honorary President, and his term will run for four years, until the General Assembly in 2022.

— Chris Gainer
President, RASC

NOVA EAST STAR PARTY 2018

Friday night was amazingly clear. By late evening, M33, M4 and the Coathanger were all visible to the naked eye. About 30 guests attended my sky tour and constellation talk. It was very easy to point out Jupiter, Saturn and Mars. The constellations also stood out in sharp relief. And we were treated to several bright meteors. The use of the high-beam torch instead of a green laser pointer worked well, but there was some light scatter.

Saturday's youth (of all ages) presentation went quite well; five young people and two adults tried their hands at making miniature versions of Mars. Using Hubble images from the planet's 2003 close approach, we turned Styrofoam balls into little red planets. Starting with a base colour coat, we overlaid the large bright areas in the northern half of Mars, matching each side of the Styrofoam ball to the Hubble images. We outlined the dark features (Syrtis Major, Terra Sirenum) by dabbing, then filled them in. With care, we painted the bright features, such as Hellas Planitia and Olympus Mons. Adding the south polar cap was the finishing touch. A few of the young people continued to make planets with the various-sized Styrofoam balls available. A fun event!

Because of ground fog on Saturday evening, we were unable to observe, but Sunday night was very clear. Two family groups (eight people) joined us during the evening to look through the telescopes and talk about the sky.

Sunday morning began with what I believed was a practical joke. Pluto had gone missing! As was my usual procedure, I had set up my model solar system behind my tent. At first, I thought that Pluto had been taken away because someone had mentioned that Pluto is no longer a planet so should not be with the other planets.

Then I noticed that Earth, too, was missing. However, the support stick was still in place. Looking around, I noticed a small blue ball on the grass a short distance away. Going over to it, I found that it was Earth, but it had been damaged. I began a more thorough search for Pluto but was not able to find it, even with the help of others. Looking closer at the damaged Earth, I realized that it had been bitten, not once but twice. Two small sets of HUMAN teeth marks were on opposite sides of Earth!! I now began to suspect that some little person may have thought the models of the planets were lollipops and had consumed Pluto.

This was confirmed at the afternoon Mars session, when one little girl recounted that her friend had eaten Pluto and bitten the Earth. She had been taken to the hospital by her parents but was doing fine.

After nine years of doing outreach with my solar system model, I will now have to remind people that the planets are not edible. I am currently rebuilding the Earth and hope to have it intact before there are any further cataclysmic events.

— Paul Heath, Halifax Centre



RASC NEWSLETTER



IN PRAISE OF RASC CENTRES

This year's RASC sesquicentennial celebrations have had a strong national focus, with projects such as commemorative coin and stamps, history and heritage publications and presentations. But one of the great strengths of the RASC is the exemplary balance between national and local (Centre) activities. Back when I was National President in 1978-80, I visited all the Centres (including one that, due to a communication breakdown, was not expecting me). The energy, achievements and diverse "personalities" of the Centres were impressive. I really enjoyed the experience.

This year, I made a special point of reading the Centres' annual reports in detail, and I urge you to do likewise. You will be amazed at and proud of what our Centres are doing, and you might even get some inspiration and ideas for your own Centre.

Centres serve their members through "inreach": meetings, lectures, publications, advice and mentorship, workshops and courses; print and electronic resources; star parties and access to observatories and loaner telescopes; motivation and recognition in the form of awards and certificates; and social events such as banquets, picnics, BBQs and just plain good fellowship. Centres communicate with their members and the wider public through websites, newsletters and other social media. Some Centres have special programs for their youth members, which is one way to resist the gradual "greying" of our membership. It also enhances our Society by promoting student interest in STEM (science, technology, engineering and mathematics).

Each year, Centres also inform and inspire hundreds of thousands of the general public, including students and teachers, through "outreach": lectures and courses; presence at festivals, malls and other special events and places; celebrations of Earth Hour, Astronomy Day and other national STEM-focused events; public star parties, sidewalk astronomy and visits to Centre observatories; presentations to classrooms and youth groups; science fair prizes and other awards and scholarships; teachers' workshops; events in hospitals, seniors' homes and other special-needs venues; appearances on radio and television and in the print media.

They wisely do all this in partnership with colleges and universities; museums, science centres, planetariums and observatories; government departments and agencies; other nonprofit organizations that promote STEM; individual scientists and educators (such as me); local, provincial and national parks; campgrounds and nature and conservation centres; First Nations, ethnic and heritage organizations; libraries; service clubs, tourism organizations and resorts—even wineries! That spreads the "cosmic web" even more widely.

Congratulations to our Centres for their part in making us the vibrant 150-year-old organization that we are today!

— John Percy, University of Toronto



There was a record attendance for the KW Centre's 2018 Perseid star party.

THE KW CENTRE PERSEID METEORS STAR PARTY

The KW Centre hosted a public star party to observe the Perseid meteor shower last August. The event was described as "outstanding," the best meteor party ever!

We held the club's annual star party for the Perseid meteor shower on the sports field at the Columbia Icefield Arena. A record 300 people came, and we gave them a show with four planets, satellites and meteors. Despite having 14 telescopes available, there were long lineups to observe the night sky.

A huge thank you to you and your team for making last night extraordinary! So many scopes, so much patience! Please pass along my thanks. Looking forward to next year already.

Heather Neufeld, University of Waterloo Science Outreach

Special thanks to all the members who showed up to help: Martina Featherstone, Larry Mitchell, Brian Hollander, Serge Mammoliti, Rick Burke, Maryanne Weiler, Clark Muir, Don Thomas, Marie Newham, Rockney Jacobson, Rene Sylvain, Ceyda Yetkiner and Ellen Papenburg. If I missed anyone, sorry. It was dark.

— Jim Goetz, Media Representative
Kitchener-Waterloo Centre

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