



August 2019 - Volume 14, Number 8

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

► [News @ RASC.ca](#)

News from the Society Office

by [Randy Attwood](#), RASC Executive Director

The *Observers Calendar* and *Observers Handbook* will be available for pre-order 2019 September 1. Pre-orders can be placed online through the RASC webstore, or by downloading an order form on rasc.ca. Make sure to secure your copy!

The 2020 RASC General Assembly

by [Hayley Miller](#), Chair RASC Vancouver GA 2020

The RASC is pleased to announce that the Vancouver Centre will be hosting the 2020 General Assembly!

The 2020 GA will take place Friday, June 5 to Sunday, June 7 at the Executive Inn Hotel and Conference Centre in Coquitlam, with the Helen Sawyer Hogg Lecture taking place at Simon Fraser University, home of the Trottier Observatory.

The Executive Inn is located close to the Millennium Line of the Lower Mainland's SkyTrain system and to major traffic routes. The GA will be the first one in the Vancouver area since 2003.

Although this GA is still in early stages of preparation, the organizers are planning to hold a green GA.

“We are working on some exciting speakers and new activities for the GA,” said Hayley Miller, Chair of the 2020 GA Organizing Committee. “We will be making some exciting announcements about our plans in the coming months.”

Green Laser Pointer Update

by **Dennis Lyons**, GLP Committee Chair

The RASC now has a global Green Laser Pointer permit from Transport Canada for sites outside of the 10-kilometre exclusion zones around certified airports. The permit can be found at <http://rasc.ca/authorisation>. Any RASC sponsored event is covered under this permit for sites outside the certified airports zone. It is important that you comply with all the requirements of the permit for it to be in place. In order to use this authorization you will have to have met the following requirements:

- a. Confirm your site is outside the certified airport zone
- b. Confirm that both the person who is using the GLP and the spotter are trained. The training program will be posted to the RASC website shortly. It will consist of a *Powerpoint* presentation and an exam.
- c. The event is approved by the local Centre council. For example, one Centre council is simply asking that members organizing an event with GLPs send an email to that council stating when, where and who is running the event. If everything is okay it is considered “approved.” The council requires at least 24 hours notice of the event.
- d. How your council conducts the training and “approves” the events is up to them. It is important that the council keep a record of the events as a condition of the permit is that once a year a report must be submitted to Transport Canada on the events.
- e. The person using the GLP and the spotters must have proof of their RASC membership with them. You can print yours after signing in to the RASC website and finding your own membership information.
- f. You are familiar with the authorization and any other things it might require. I suggest you have a copy with you for your events.

Transport Canada has been very cooperative and has made it relatively easy for all of our compliance. If you have any questions please let me know at dennis.lyons.3@gmail.com

The GLP committee will be working on a formal policy for the Board to review and looking at how it can be made easier for applying for a permit within the 10 kilometre certified airport zone.

I would like to thank those on the GLP committee for providing valuable feedback in a very short period of time. The RASC is very fortunate to have such volunteers.

RASC Fundraising Forum

by [Lisa Di Veto](#), RASC Fundraising Associate

Questions at the General Assembly about RASC finances, budgets and what's considered charitable activity reflected incorrect interpretations of Canada Revenue Agency (CRA) rules and regulations. Last fall, an outline of RASC charitable practices was circulated by President Chris Gainor and Treasurer Catherine Carr to help clarify internal misunderstandings. It appears timely to share this information again, as well as an update on new developments. It's vital to our ability to financially sustain and strengthen operations that members support RASC's charitable initiatives.

Revenue Reporting

Membership, publication and charitable revenue are tracked separately in order to allocate fees to Centres and calculate income for reports. Having three revenue streams led to the belief that expenditure must be drawn from a related revenue source. That's not correct; there's no CRA or legal requirement to do so. It was also suggested that CRA changes in 2004 mandated a separation in membership, publication and donation revenue and expenditure. They did not. In fact, RASC minutes of a meeting with lawyer Susan Manwaring (engaged to ensure CRA compliance) made the opposite point. She advised there's no differentiating between "non-charitable money and charitable money – it doesn't matter where

the money comes from.”There are no CRA stipulations on how income is spent, other than revenue is allocated as per the charitable mandate.

Expense Reporting

Pro-rating operating costs to programs is an established charitable practice. RASC has not previously identified charitable programs in its financial statements. Instead, wages, occupancy costs, insurance etc. have been listed as lump sums. This can create the unfavourable impression of high administrative costs rather than worthy charitable program expenditure. In future, RASC will be assigning a portion of expenses to member services, Centre support-public outreach, national operations and programs such as the robotic telescope, youth outreach, education etc. These are paper allocations of the estimated value of staff time, office expense and operating costs to program areas. Amounts will be assigned to activities in proportion to the resources expended in each area.

Membership Fees

RASC membership fees are not directly linked to the actual cost of member benefits, the face value of benefits provided or internal allocations of expenses such as staff and computer costs incurred serving members. Consequently, fee increases are simply the result of higher operating costs – everything from the price of paper, to rent increases and new program activities. 2018 membership fees represented 27.8% of total operating expenditure. The 2019 budgeted amount equals 28.3% of the total budget, a difference of less than half of one per cent. Initiatives to increase revenue from all sources are being diligently explored to help strengthen financial sustainability; 2018 publication revenue of 30% is projected at 33% of the total budget in 2019; donation and grant revenue increases from 24.7% to 33% of 2019 expenditure.

2019 Budget

At the GA, two significant donations were announced. One was a bequest pledge of \$1.5 million from Mr. Rudolph Dorner to establish the Dorner Telescope

Museum. As this generous gift will be realized in the future, Mr. Dorner made an immediate donation of \$25,000. Carswell Family Foundation President Allan Carswell announced a first year contribution of \$100,000 for a 3 year funding commitment. \$75,000 in year two Trottier Family Foundation funding was also confirmed. Consequently, 2019 budget projections were revised to \$862,425 revenue, \$876,203 expenses, \$13,778 deficit. Regarding deficits, members referred to a difference in net results depending on cost allocations. Net proceeds are not affected by the program an expense is allocated to - the bottom line is the same regardless of assigning an expense to one area or another.

CRA T3010s

As a result of not previously recognizing charitable expenditure in its statements, RASC's annual T3010 financial report to CRA significantly understated charitable program expense at 11%. The advice of the auditor was to increase the amount in increments. Therefore, 2017 charitable programming was reported at 58% and 2018 was 69%. This assessment is moving towards a more typical allocation of between 70% and 85% in charitable programming expenditure.

Charitable Operations Summary

Revenue: There are stringent CRA rules for issuing charitable tax receipts and RASC complies with all requirements. Membership fees, publication and merchandise sales are earned revenue and because no tax receipt is issued for these revenues, income can be expended without restriction as per the charitable mandate.

Expenses: A charity's expenses must support its mandate and RASC expenditures fully comply. There are no CRA or legal requirements that restrict allocation of expenses as the charity wishes, other than that expenses comply with the mandate. Allocating pro-rated expenses to charitable program areas is a standard industry practice providing a donor friendly presentation of program costs. This paper allocation helps prevent a perception of high administrative expenses. RASC will be assigning a portion of operating costs to programs in future.

Net Proceeds: The difference between total revenue and expenses is not impacted by the allocation of expenses to one program or another. The bottom line would be the same.

In conclusion, I hope this update is helpful. Please don't hesitate to contact me at 519-754-1803 or ldiveto@rasc.ca with questions or comments. The continued success of RASC is dependent on member understanding of, and support for, RASC's vital charitable operations and mandate. Thank you for your valued consideration.

Observing Committee Update

by **Blair Stunder**, Chair, Observing Committee

Observing Certifications

Currently in 2019, ten members have earned a RASC Observing Certificate:

Explore the Universe:

Cole Beselaera - Sarnia
Berta Beltran - Edmonton

Explore the Moon: - Telescope

Randy Enkin - Victoria
Henry Leparskas - London
Larissa Awad - Mississauga

Messier:

Ingrid G. de Bude - Ottawa
Chris Vaughan - Toronto
Dennis Pilon - Regina
Westcott Loudon - Calgary

Isabel Williamson Lunar:

Kirby Alguire - Unattached

The announcements of earned certificates will continue to be posted online on the respective RASC Observing sub-page, in the Bulletin, in the National Newsletter, in the RASC section of the *SkyNews*, on the @RASC Twitter account and the @theRoyalAstronomicalSocietyofCanada Facebook page.

Currently there are 27 Centres that are local Certification Centres for the Explore the Universe Programs. It would be advantageous to have all RASC Centres as certification Centres. I have been in contact the Centres not listed *convincing* them to participate in the certification program. I am pleased to announce that the newest RASC Centre, Sudbury is Certification Centre for the Explore the Universe Program.

The current Centres for the Explore the Universe can be found on the RASC website at: <http://rasc.ca/participating-centres>

Any RASC Centre with an active observing group should consider becoming a **Local Certification Centre**: The Centre must identify a member who will review and approve applications for the Explore the Universe certificate (ideally, that member would be an active observer who promotes RASC Observing Programs and mentors beginning observers). Send the name to the RASC Observing Chair for inclusion in the above list.

Advanced Observing Tips

<http://rasc.ca/observing/tips>

What to Look For—advanced ideas for deep sky objects (DSOs):

In General—All DSO Types

- How bright is the object?
- What magnification gives the best view?
- Describe the shape of the object.
- Estimate the size of the object (based on the field of view of your eyepiece).
- Does averted vision allow you to see more detail (if yes, describe the extra detail)?
- Does a filter improve the view?

Emission and Reflection Nebulae

- Compared to direct vision, how does the use of averted vision affect the view?
- Try using a Deep Sky and/or OIII filter. What effect did they have?
- Are the outer edges sharply defined?
- Is any part of the nebula brighter or more concentrated?
- Are there any voids, dark patches, or lanes?
- Are there any bright filaments or streamers in the nebulosity?
- Are there any stars involved with the nebulosity?
- Is there an associated open cluster?
- Can you detect any colour?

Clear Skies,
Blair Stunder
RASC Observing Chair
Prince George, B.C.

Nova East Star Party

by **Judy Black**, Chair, Nova East Star Party Planning Committee

Get Drawn In! Come to Nova East!



It's the Nova Scotia event you have all been waiting for and registration has begun! This year's logo depicts all the elements of our Star Party encircled by a black hole emission ring. Get drawn in! So much to see and do. Come to Smiley's Provincial Park on August 30 – September 2!

(<https://novaeast.rasc.ca/index.php/schedule/schedule>)

The Nova East Star Party has a speaker series that will intrigue astronomers of all interests. Our Public Talk on Saturday evening is being presented by Tiffany Fields, an M.Sc. student at St. Mary's University in Halifax. Dr. Roy Bishop will address the large Fundy Tides and lead us on a road trip to view the tidal bore as it arrives on two rivers. The potluck BBQ, Astronomer's Lounge, and the Astronomers' breakfasts on Saturday and Sunday morning will satisfy everyone's appetite. Telescope Medics will again assist with telescope woes. The sky tour and the binocular table will once again star in the evening agenda, along with this year's addition of a telescope plaza.

The Halifax Centre Astrophotography Contest and People's Choice Award will be hosted by Nova East. Prizes? Of course, there will be prizes – door prizes for all ages and for the Astrophotography Contest and People's Choice Award. For the new photography contest format, go to:

<https://novaeast.rasc.ca/index.php/contest>.

Not a camper? You can still register to attend the events! Take up residence for the week-end in a B&B or motel in the area. Or perhaps come to enjoy the daytime presentations. Join in the camaraderie. Hope to see you there!

How do you Register?

Go to our site: <https://novaeast.rasc.ca/index.php/registration>

Payment can be made:

- By cheque or money order *if mailed in with the completed registration form,*
or
- By cash, cheque, or money order *if pre-arranged with the Registrar to pay upon arrival at NE.*
- By e-Transfer to treasurer@halifax.rasc.ca

2019 Deadlines?

August 9 Submissions to Astrophotography Contest

August 17 Mail-In Registration

August 29 Email Registration (by midnight)

A thank you is extended to my fellow NEPC members for their ongoing work behind the scenes to ensure another successful Nova East – Dave Chapman, Melody Hamilton, Gregg Dill, Chris Young, Liz Greenough and consultants Pat Kelly, Paul Gray, John Read, and Mary Lou Whitehorne. A special thank you to John Read for a great job designing this year's logo.

RASC Centre Newsletter Roundup

by **Eric Briggs**, Toronto Centre

To Centres that publish newsletters that can be for the eyes of members of other Centres: please consider sharing your newsletters on the RASC website for members only at: www.rasc.ca/centre-newsletters

Please contact Eric Briggs (ebriggs733@gmail.com) if you have no access to upload your centre newsletter to the national RASC website, but would like to do so.

No Centres have uploaded newsletters in the past month that haven't been regular contributors, but several centres, such as Vancouver (<https://rasc-vancouver.com/nova-newsletter-archive/>) and Calgary (<https://calgary.rasc.ca/starseeker.htm>), have great newsletters that can help motivate RASC members across Canada.

The RASC has a long tradition of sharing resources between Centres. Centre newsletters are made available here (5,145 issues as of September 2018) to assist Newsletter Editors to freely share content with one another and for Members to find out more about activities in neighbouring Centres.

This growing archive (dating back to 1948) also serves to document the history of RASC Centres and astronomy clubs in Canada.

New Member of the RASC Board of Directors

by **Chris Gainor**, RASC President

The RASC Board of Directors has a new member - Eric Briggs from the Toronto Centre. Eric is filling the spot on the board that came open when Dr. Rob Thacker's term came to an end.

Eric is a longtime active member of the RASC, who most recently has been Chair of the RASC National Council. He also serves the Toronto Centre as the editor of *Scope*.

"We on the board are delighted to welcome Eric to our ranks," RASC President Chris Gainor said. "Eric has a thorough knowledge of the society and of astronomy, and I have come to rely on his counsel when I have worked with him on National Council."

Eric's move to the board means that National Council will have to name a new Chair.

The RASC Board includes Chris Gainor (President - Victoria Centre), Robyn Foret (First Vice President - Calgary Centre), Charles Ennis (Second Vice President - Sunshine Coast Centre), Catherine Carr (Treasurer - Toronto Centre), Roger Nelson (Secretary - Calgary Centre), Colin Haig (Past President - Hamilton Centre), Heather Laird (Calgary Centre), Michael Watson (Unattached), Eric Briggs (Toronto Centre), and Randy Attwood (Executive Director - Mississauga Centre).

CASTOR Contest Winner

by **Chris Gainor**, RASC President



A winner has been chosen for a contest supported by the Royal Astronomical Society of Canada and the Fédération des astronomes amateurs du

Québec to create a logo for a planned new Canadian astronomy satellite, CASTOR, the Cosmological Advanced Survey Telescope for Optical and ultraviolet Research.

After a four-month contest period that ended in March, a panel of professional and amateur astronomers chose from 16 entries the winning design from the mother-and-son team of graphic arts designer Sylvie Hénault-Brunet of Repentigny, QC, and professional astronomer Vincent Hénault-Brunet of Halifax, NS.

CASTOR is being planned to provide unique data in the ultraviolet part of the spectrum to complement data from upcoming space telescopes such as the *James Webb Space Telescope*, assisting in the search for dark energy. It would also challenge and stimulate Canadian industry and Canadian science.

CASTOR is currently designed to have a primary mirror of a metre in diameter inside a spacecraft weighing about 500 kg. Its camera is planned to have a similar resolution to Hubble, but it would be able to cover a much larger part of the sky than Hubble does.

"The logo symbolically captures CASTOR's panoramic ultraviolet imaging capabilities from low-earth orbit," Hénault-Brunet explained. "It also outlines some of the transformational science that CASTOR will enable, from the characterization of exoplanets and Milky Way stars, to the measurement of shapes and photometric redshifts of very distant galaxies. The bright stars in the foreground trace part of the constellation Gemini, and the layout is inspired by and reminiscent of a nickel, featuring Canada's national animal."

In April, the CASTOR team completed a successful 15-month Science Maturation Study sponsored by the Canadian Space Agency last April. Discussions are now underway with prospective partners, including Jet Propulsion Laboratory and Caltech, India, the United Kingdom and Japan, about possible contributions, as the CASTOR team prepares for the next stage of mission development.

In the meantime, technical work on some key mission components, such as detectors and spectrographs, is being carried out to raise the overall technology readiness level of the mission.

Canada's Name the Exoplanet Contest

by [Sharon Morsink](#), Edmonton Centre

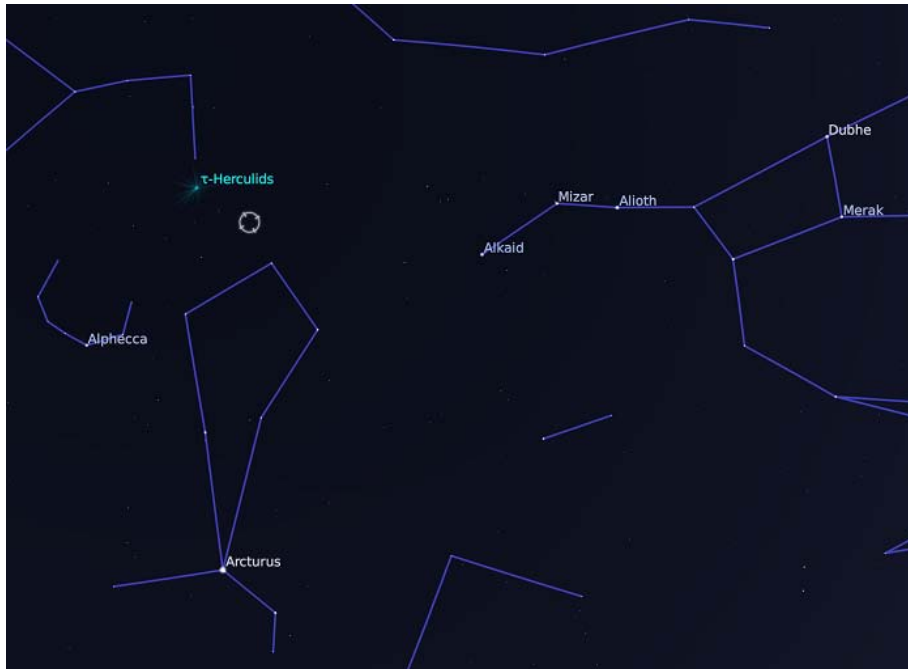
As part of the celebration of the 100th anniversary of the International Astronomical Union (IAU), the IAU is holding the worldwide Name ExoWorlds Contest (www.nameexoworlds.iau.org/). The IAU has assigned every country an exoplanet and a star, and ask that astronomers in that country hold a contest that will allow citizens to propose names for the star and planet. The assigned star is one that is visible through a small telescope from every part of the country.

Canada's contest will open in mid-August, and will be hosted on the Canadian Astronomical Society's webpage. At the moment the website and URL are not ready for viewing, but once they are, you will hear about it! During the first part of the contest, which closes on September 20, Canadians will be asked to propose names for the star and planet, and to give a short (100 words maximum) explanation for their proposed names. In the following weeks a panel of expert judges will choose a shortlist of the best names (eliminating "Planet McPlanetFace"). This shortlist will be made public in late October, and the Canadian public will then get to vote on their favourite names. The IAU will make the winning entry the new official name for the planet and star. We encourage teachers and youth-group leaders to submit names on behalf of their class (or club). The RASC is kindly donating some prizes (such as Star-Finders, Moon Gazer's Guides, and other publications) for the best entries.

The star assigned to Canada is HD 136418, which desperately needs a better name. It is a 7.85 magnitude star located in Bootes, near Ursa Major and Hercules, at the location of the cross-hairs in the finderchart (generated with Stellarium). The star has a surface temperature similar to the Sun's, and is thought to be a somewhat evolved subgiant. The planet is a Jupiter-like planet, with a radius that is 1.2 times larger than Jupiter's radius, and a mass that is 2.1

times larger than Jupiter's mass. It orbits the star on a very eccentric orbit at an average distance of 1.3 AU every 464.3 days. Since it is a gas giant, it is unlikely to be a host for lifeforms like us. However, if it has a moon, it is possible that the moon would be in the star's habitable zone.

I will provide an update on the contest in the September RASC bulletin!



Finderchart for HD 136418 (credit: Stellarium)

Montreal Centre Upcoming Events

by [Carl Jorgensen](#), Secretary, Montreal Centre

Saturday, August 3, 7:30 – 11:00 pm: Members off-site observing at Woolly Woods. Watch for the GO/NOGO on Saturday. Bring your binoculars or telescope and enjoy observing at our darkest off-site location. Members are welcome to take a view of astronomical objects through the Montréal Centre's 16" Dobsonian telescope(weather permitting).

Wednesday, August 7, 7:30 – 11:00 pm: Members observing at the Morgan Arboretum Conservation Center. The Bellevue Observatory is open. You can also bring your own telescope or binoculars to observe. If you do not have a telescope or binoculars, come and enjoy the views through your fellow RASCals instruments (weather permitting).

Friday August 9, 8:00 – 11:00 pm: Arbo Public Event: Talk by Marc Ricard “Photographing a Meteor Shower” at the Arboretum Conservation Center. After the talk, the Moon, Jupiter and Saturn will be able to be observed. The Bellevue Observatory will be open, but members can also bring their own telescopes and binoculars for public viewing (weather permitting).

Monday, August 12, 7:30 – 11:00 pm: Public Event “The Perseid Meteor Shower”. Join RASC Montreal Centre for the most intense of the annual meteor showers. Beginning with a short presentation inside the Morgan Arboretum Conservation Centre, learn about meteors, annual “showers”, the origin of the Perseids and how to observe them. Weather permitting we will be able to enjoy nature’s fireworks in Montreal’s darkest skies beside our own Bellevue Observatory in the Arboretum. Bring a comfortable chair, blanket and bug spray.

Saturday, August 17, 7:30 – 11:00pm: Members Arbo Clubhouse at the Morgan Arboretum Conservation Centre. RASC members only. Talk with other members, show and tell, etc.. Maybe a short presentation by a member. The Bellevue Observatory will be open but you can bring your own telescope or binoculars to observe, if you wish (weather permitting).

Wednesday, August 21, 7:30 – 11:00 pm: Members observing at the Morgan Arboretum Conservation Center. The Bellevue Observatory is open. You can also bring your own telescope and binoculars to observe. If you do not have a telescope or binoculars, come and enjoy the views through your fellow RASCals instruments (weather permitting).

Saturday, August 24, 7:30 – 11: 00 pm: Members off-site observing at Thompson Park, 726 Rue Main Hudson. Bring your binoculars and telescope and enjoy observing at one of our dark off-site locations. If you do not have a telescope or binoculars, come and enjoy the views through your fellow RASCals instruments (weather permitting).

Wednesday, August 28, 7:30 – 11:00 pm: Members observing at the Morgan Arboretum Conservation Centre. Bellevue Observatory is open. You can also bring your own telescope and binoculars to observe. If you do not have a telescope or binoculars, come and enjoy the views through your fellow RASCals instruments (weather permitting).

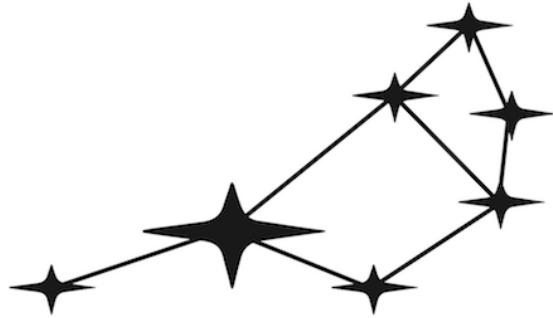
Saturday, August 31, 7:30 – 11:00 pm: Members off-site observing at Woolly Woods. Bring your binoculars and telescope and enjoy observing at our darkest off-site location. Members are welcome to take a view of astronomical objects through the Montréal Centre's 16" Dobsonian telescope (weather permitting). Watch for the GO/NOGO on Saturday.

All RASC members across Canada are welcome at our members events – email info@rascmontreal.org

Thank You to our Sponsors!

by **Madison Chilvers**, RASC Marketing Coordinator

The Royal Astronomical Society of Canada has a unique partnership with our friends in the astronomy industry. We are now offering companies the distinction of becoming a charter sponsor of the RASC, Canada's pre-eminent amateur astronomy organization. This offer is available only to those industry leaders who recognize the value in being associated with the amateur astronomy community. www.rasc.ca/rasc-sponsors.



SUBARU
D A R K S K Y

All-Star Telescope
www.All-StarTelescope.com

A horizontal banner with a dark, starry background. The text 'All-Star Telescope' is written in a white, cursive font. The planet Saturn is integrated into the letter 'o' of 'Telescope'. Below the main text, the website address 'www.All-StarTelescope.com' is written in a smaller, white, sans-serif font. A portion of a blue planet is visible on the left edge.

The Camera Store
Get the picture

A logo for 'The Camera Store'. It features a line-art illustration of a camera with a lens and a flash. Below the illustration, the text 'The Camera Store' is written in a serif font, and 'Get the picture' is written in a smaller sans-serif font below a thin red curved line.

Nikon

The Nikon logo, consisting of the word 'Nikon' in a bold, black, sans-serif font, set against a yellow square background with white diagonal lines radiating from the top left corner.



What's New in the Sky

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



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