

Regulus

Newsletter of the RASC Kingston Centre

Vol. 50, No. 7

July 2023



The Moon - Mare Imbrium

On the Horizon

Centre Meetings
Summer break!

Centre meetings occur on the second Wednesday of every month at 7pm EST from September through to June.

Queen's Observatory
Open House - Ellis Hall

15 July 2023

RASCKC Member
Retreat

22 July 2023

For more information visit us online
<https://kingston.rasc.ca>

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Summer is in full swing temperature wise. As for clear skies there have been a few but fighting cloud then smoke seems to be the way this summer, but not to fear on July 22, 2023, members John & Peggy Hurley have opened their home to a Potluck gathering. Bring your chairs, dishes & cutlery, a dish to share and bug spray! Hats and sunscreen too! Time to show up will be around 15:00 (3:00 pm). The BBQ will be available for use or warming up your dishes. A map and directions have been sent out with the June announcement of Regulus and

events. Please check your email for notification. There are also some summer events happening that we have been invited to help out with.

July 15, 2023, is the Queen's Open House at the Observatory. August 10, 2023 -The free Family Night Event is 'A Night Under the Stars' on August 10 at 7:30pm at Elbow Lake Environmental Education Centre. It aims to bring families together for an evening of fun, education, and exploration of the cosmos. They host events every Thursday in July and August. They are free for the public to attend, with the goal of providing opportunities for families to connect with nature and science without a barrier of cost.

<https://elbowlakecentre.ca/events/>

We are looking for volunteers to help out. The Centre has handouts that we can supply. If you're interested in helping out, please let us know at kingston@rasc.ca

Rick Wagner is helping out RASC Ottawa Centre via Parks Canada at Newboro Lock Station Astronomy Night August 19th. Rick is looking for anyone who would like to bring their telescope to help out with the Public. IF interested please send an note to kingston@rasc.ca and will forward on to Rick.

Summer means Star Parties. The RASC Star party page has been updated by the webmaster <https://rasc.ca/star-parties>. StarFest August 17-20th is brought to you by the North York Astronomical Association. Check out the <https://www.nyaa.ca/index.php?page=/sf23/sf.home23> for all the Speakers and events! With less than one year to go for the Total Solar Eclipse, there will be lots of information to share at this Star Party. Registration is now open! Fall'N'Stars is set for September 15-17, 2023, at Johnson's R.V. Park in Prince Edward County. Check out <https://rascbelleville.ca/fallnstars/> for details. This year it is Belleville's lead on the joint Star Party with the RASC Kingston Centre.

Have a Safe and Happy Summer! Clear skies, take your Sky map, lounge chair and red covered flashlight, and look up! Enjoy the night skies!

Editor's Eyepiece

Andrew B. Godefroy

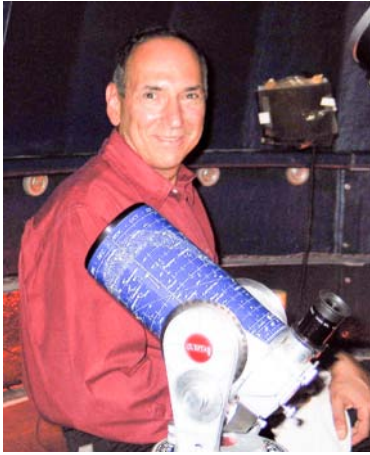


For just over 50 years now the Regulus Newsletter has served as the publication of record for the activities of the RASC Kingston Centre. It's a great place to share news, highlight our member's projects and interest, and showcase some of their fantastic astrophotography. But Regulus needs your help! We have over 70 members in the Kingston Centre but it seems we only hear from a fraction of folks. We would love

to hear from more from the rest of you! What are you observing these days? Working on a project or RASC observing program? Bought a new piece of kit for your rig?

Participating in a larger project? Collecting data or looking to share it? Took a great photo? Found a great astronomy resource? All of these things and more are of interest to our membership and readership, so why not share what you're up to? You don't need to be a professional writer, just send me an email with a paragraph or two, or your latest image and details - I'll do the rest. We'd love to hear from more of our membership going into the fall. In the meantime, keep looking up!

On the cover: RASC Member and Regulus Editor Andrew Godefroy captured this single exposure of the Moon in its waxing gibbous phase on 28 May 2023 as a reference for visual observations being made to complete the RASC Isabel Williamson Lunar Observer Program (IWLOP). Taken with an iPhone 14 mounted on a Celestron 8 SE SCT through an 18mm Celestron X-Cel LX eyepiece supported by a 2x Barlow and a 0.9 Moon ND filter. No post processing.



A Little Religion, But Not Too Much...

As an undergraduate student at Acadia University, in the Canadian maritime province of Nova Scotia, my geology professor was trying to teach us about the water cycle. Despite reams of published evidence, the best document he could come up with was this beautiful line from Ecclesiastes:

All the rivers run into the sea,
 Yet the sea is not full,
 Unto the place whither the rivers go,
 Thither they go again.
 --Ecclesiastes 1.7.

Dr. George Stevens's comment had a profound impact on me. First, as a budding young scientist, it opened my mind to the relationship between the night sky and Scripture, and second, later as my passion for the arts grew, it reminded me of how ancient peoples viewed the night sky. From the "11 stars" symbolizing Jacob's brothers, to the line in Amos about "the seven stars" of the Pleiades, to his aggressive tone with Job (9:5-8): "Who removeth the mountains, and they know it not, (possibly referring to the evolution of the Earth); Who maketh the Bear, Orion, and the Pleiades? Who shaketh the Earth out of her place (a big earthquake or a major comet impact), Who commandeth the Sun, and it riseth not (if it rises during an eclipse like the event I saw in 1999 when only a thin crescent of sunlight rose). This is not to mention Joseph's dream "the Sun and the Moon and eleven stars bowed down" (Genesis 37:9-10.) It must have been a very cloudy or hazy night if all he saw was 11 stars instead of the 2500 to four thousand stars he should have seen from his obviously dark location.)

After a lecture I gave in 1994 at my childhood synagogue, The Shaar Hashomayim in Montreal, the associate Rabbi pointed out how the ancient Israelites

followed astrology, right from the line "And let there be lights in the heaven, to divide the day the day from the night; and let them be for signs, and for seasons, and for days and for years." (Genesis 1.14) He went on to emphasize that these people never worshipped the stars, but they followed astrology out of interest and fun. (Full disclosure: like most people who observe the night sky, I do not follow astrology, but perhaps unlike most of them, I do appreciate that were it not for the thousands of years of meticulous records kept by ancient astrologers, we would probably have no real astronomy, nor a Webb telescope, this evening in 2023.



David Levy stands with two telescopes used in his observing at Jarnac Observatory. The undesignated telescope on the right is used for astrophotography (which he does not do much of anymore) and the telescope on the left is Pegasus. It is used for visual observation. Pegasus is the highest quality telescope David has. Crafted with a personal touch, the Pegasus mirror was made by Aleka Herring, one of the most prominent telescope makers in the last century. Photo by the late Wendee Levy.

I did promise not too much, so I shall end here with a quotation from Psalm 19: with a new line added for fun, courtesy Peter Collins :)

The Heavens declare the glory of God,
 And the firmament showeth his handiwork.
 Day unto day uttereth speech,
 And night unto night revealeth knowledge
 So long as the sky is clear.

Centre News and Updates



Stop the press! Got news to share? Send your centre news, updates, pics, sketches, notes, and links to the Regulus editor!

RASC Observing Certificates & Pins

RASC Kingston Centre is pleased to announce the following awards:



RASC Kingston Member and Treasurer **Susan Gagnon** (joined 1999) proudly holds the Centre's prestigious RASC **Messier Catalogue** Observing Program Plaque. Having completed her observations a few years ago, Susan recently submitted her logs to earn her RASC Messier certificate and pin and have her name added to those Kingston Centre members who have completed the program since its inception in 1981.



RASC Kingston member and Regulus Editor **Andrew Godefroy** (joined 2019) completed his second Observing Program earlier this year, and received his pin and certificate for the RASC **Explore the Moon - Telescope (EtM)** program at the Centre's June meeting.

RASC 2023 Awards

Congratulations to Kingston and Montreal Centre member **David Levy** (joined 1965) who received a 2023 RASC Fellowship Award!

'David Levy is one of the Society's best-known members. A keen observational astronomer, he has discovered many comets, and has also compiled lists of unique deep-sky objects. In addition, he is an accomplished author and has written books on all aspects of astronomy.'

The award of Fellow of the RASC is to recognize the long-term and on-going contributions of members whose service to the Society has been exemplary and substantive for an extended period of time. Such contribution will far exceed the level required for our Service Award. Nominees may already hold the Service Award, but it is not a prerequisite for Fellowship.



Meeting Minutes - June 14, 2023

Starting at 7:00 p.m., Kim Hay, President, welcomed all guests and members to our hybrid Kingston Centre regular monthly meeting with 14 present at Ellis Hall and 16 Zoom guests (19 were registered). Beginning with our land acknowledgment, Queen's University is situated on the territory of the Haudenosaunee and Anishinaabek and we respect that land we meet on.

Announcements: RASC Annual General Meeting (AGM) is June 25. Members only and preregistration is required to attend and vote. <https://rasc.ca/agm-2023> for registration instructions and agenda.

Upcoming Events: July 6 – September 3, Josie Radoman is the featured artist at the Colborne Art Gallery, “Moon Dance, Celebration of the Night Sky”. <https://josie-arnold-radoman.com>

John and Peggy Hurley are hosting a summer gathering for members on July 22, 3pm on. Potluck, bring your own chairs, dishes, bug spray, telescope, binoculars, etc. Directions will be sent by email.

Starfest 2023 will be held August 17-20.

Members Wednesday social zoom will continue through July and August, to join email us at Kingston@rasc.ca.

David Levy reads Poetry: July 15, 1994, on the Today Show in New York, when asked, “So what do you think of comets?”. David replied, “Comets are like cats, they both have tails and they both do precisely what they want.” This came the day before the highlight of David’s professional life, the collision of Shoemaker-Levy 9 with Jupiter.

Solar Eclipse 2024: Bruce Elliott reported on an organizing meeting held at Queen’s involving different groups in the greater Kingston area. Discussion included solar viewing aids orders, arranging contacts with school boards, underserved schools, RMC, St. Lawrence College, and St. Lawrence Parks. A safety pamphlet is being developed in several languages by the Physics Dept. More info to come.

Guest Speaker: Blake Nancarrow, London Centre

member and Chair of the RASC Observing Committee, runs all three levels of the Stellarium courses and the Back Yard Remote Control software program. In his talk, “Get Certified”, Blake expertly runs us through the RASC observing program certificates available, support documents, acknowledged those of us who have completed and currently working on certificates, and challenged those of us who have an interest to start. This excellent presentation is available on our RASC Kingston YouTube channel beginning at 10:30.

Presentations: Andrew Godefroy received his certificate for Explore the Moon. Susan Gagnon’s name has been added to the Messier Certificate plaque. Congratulations to both!

Rick Wagner presents What’s Up in the Sky Jun – Aug 2023

Local Events

17 Jun – QUO Open House

15 Jul – QUO Open House

22 Jul – Member’s potluck at the Hurley’s

19 Aug – QUO Open House

AAVSO Webinars

08 Jul – Observing Sections webinar.

05 Aug – Observing Sections webinar.

02 Sep – How-to webinar

L&A Deep Sky Viewing Area (reserve in advance)

17 Jun – Astrophotographers Assemble

23/24 Jun – Laser-guided Sky Tour

15 Jul – Astrophotographers Assemble

21/22 Jul – Laser-guided Sky Tour

Continued from p.5...

Meeting Minutes - June 14, 2023

29 Jul – Up Close with the Moon

12 Aug – Perseid meteor shower – SOLD OUT!

18/19 Aug – Laser-guided Sky Tour

26 Aug – Up Close with the Moon

09 Sep – Astrophotographers Assemble

NF DSP

18 Jun – The Nearest Star: Our Sun (13:00-16:00)

16 Jul – Hercules, His Great Globular and More

12 Aug – Perseids

13 Aug – Sagittarius: Nebulae and Star Clusters Galore

3-4 Sep – Moons: Ours, Jupiter's and Saturn's

Sky Events – June

16 Jun – very old very thin crescent Moon before sunrise

18 Jun – New Moon 00:37EDT

21 Jun – summer solstice 10:58EDT

22 Jun – crescent Moon, Mars, Venus

26 Jun – First Quarter Moon

Sky Events – July

03 Jul – Full Moon

06 Jul – Earth at aphelion (152093251km)

07 Jul – Venus GEE

10 Jul – Last Quarter Moon

17 Jul – New Moon

20 Jul – Moon, Mars, Venus, Mercury in bright twilight

22 Jul – Pluto at opposition

25 Jul – First Quarter Moon

29 Jul – Southern Delta Aquariid meteor shower

Sky Events – August

01 Aug – Full Moon

08 Aug – Last Quarter Moon

12 Aug – Perseid meteor shower peaks

16 Aug – New Moon

24 Aug – First Quarter

24 Aug – Moon occults Antares

27 Aug – Saturn at opposition

31 Aug – Full Moon

Small Bodies

16 Jun – minor planet 20 Massalia at opposition (mag 9.9)

07 Jul – 15 Eunomia at opposition (mag 8.7)

10 Aug – 10 Hygeia at opposition (mag 9.6)

26 Aug – 8 Flora at opposition (mag 8.3)

Member's Observing Reports

Susan will be working on Explore the Moon certificate as well as having bits of other certificates done. Laurie will be working on the Explore the Moon certificate. Steve had his 10" Dob out and looking at the moon, planets and bright deep sky objects. Will be back imaging soon. Mark D. had much cloud cover but did happen to see a Starlink trail, light a string of pearls. Mike enjoyed the new moon in May, M3, M65, M66, M105, Sombrero M104, M10, M12, M14, M81, M82, M101, M109 and the owl, M13 and M57. In all 27 Messiers and some NGC's.

Keith has been solar observing when the weather cooperates. Jeannette enjoyed the full moon rise.



Any night of the week can offer up a broad range of viewing wonders. RASC KC Past President Rick Wagner keeps an eye on the sky, sharing some of the best views each month.

As we head into the summer months, members will be stepping away from writing for a little bit to get more time outside. Thus, for the latest on what's up in the sky throughout the summer, please see the June 14th meeting minutes in this issue (pp.5-7), which includes a forecast of activities for the period of June through to the end of August. Rick's monthly column and forecast will return in the fall!



Rick is building an all-sky camera and shared a video of images taken overnight. Working with software by Thomas Jacquin, available on github, adjusting settings, the all sky camera will be ready to mounted soon. Andrew is working on the Isabel Williamson Lunar Observing Program, very challenging and approaches it in small chunks to have it done well. Andrew recommends "Atlas of the Moon" by Antonin Rukl. Kevin is rebuilding his all-sky camera and shared images of his equipment, Raspberry Pi, and housing components. Kim has been solar imaging in Ha when not cloudy. Peter is heading to Sandbanks with his gear and hoping for clear skies. Fred has been cleaning his observatory when the skies have been too smoky.

Fred writes an article for North Frontenac News monthly for past 15+ years <https://www.frontenacnews.ca/regular-columns/what-s-up-in-the-sky> and takes part in the Maberly Fairgrounds Annual Pie in the Sky event July 1st. Peggy and John are preparing the patio for their July member's event. Elena will start work on the Explore the Universe and

the Moon certificates. Bruce has been observing at Lemoine's Point and having good success with the go-to feature. With coaching from Susan, Bruce has been star hopping and focusing in on double stars in Ursa Major. Blake is interested in imaging double stars using the Burke-Gaffney Observatory and his own telescope and has been visually observing planets.

We are at Kingston.rasc.ca, on Facebook – RASC Kingston Centre Group and on YouTube at RASC Kingston Centre.

Our next hybrid meeting, Wednesday, September 13th, 2023, live at Queen's U. Ellis Hall room 226 and on Zoom.

Meeting ended at 9:20 p.m. with Kim thanking all.

Created by Elena Zanetti.



SSD, graphics intel HD 530 , HDMI 1920*1080. This had more RAM, faster solid state drives, and most importantly USB3.

Observatory Configuration:
Serial-USB Adapter (Prolific PL-23xx)
Mount: Skywatcher AZ-EQ6GT
Telescope Vixen VC-200L
Camera: ZWO ASI290MC
Remote Focuser: PCFC JMI?
Skywatcher Synscsn Hand Controller

This is the list of software that needed to be installed and configured to get the observatory operational again.

(Editor's Note: This article is a continuation of Kevin's adventures to reposition and improve the Serenity II Observatory at Starlight Cascade Gardens and Observatories - see last month's issue for more!)

The existing laptop has been used as a telescope mount control and image capture for a few years. It has had its issues...

USB2 only (not USB3 which most astro cameras use these days), and it intermittently locked up for seconds at a time.

So a refurbished (from Amazon) mini computer came along to replace it, at under CDN\$200.

Tech specs as follows: HP Elitedesk 800 G3 mini
CoreI5@2.5GHz, 16GB DDR4, 256GB NVME, 480GB

prolific serial-usb adapter PX23XX v206, configured to com11 in my case

Ascom Platform v6.61 – file ascomplatform661.3673.exe
the file

synscan_hand_controller_ascom_driver606262setup.exe
dated 2021-07-26 has installed an ascom telescope chooser that says skywatcher! (this was the critical piece)

ZWOASI_camera driver v3.2

Firecapture v2.7.12 (imaging program)

skychart v4.2.1-4073 (primary sky chart and telescope controller).

With the observatory repositioned and the computer upgraded I'm ready to get back to work!

Member's Photos



Photo Left: Centre member **Brian McCracken** captured this shot of the summer solstice on 21 June 2023, showing Mars and Venus within just 4.5 degrees of each other, accompanied by a poignant crescent Moon.



What's On



2023 STAR GAZING EVENTS

*** Everyone is welcome ****
Events are free and begin at sunset
Don't forget to bring your binoculars and telescopes if you have them.

All events are hosted at the:



5816 Road 506
Plevna, ON K0H 2M0

April 22 nd	Lyrids - A Minor Meteor Shower
May 20 th and 21 st <small>(Victoria Day Weekend)</small>	Galaxies Galore
June 17 th <small>(Father's Day Weekend)</small>	Solar Gazing 4:00pm-6:00pm <small>followed at sunset by</small> Lots of Galaxies and Nebulas
July 15 th	Messier and Nebulas
August 12 th -13 th	Perseid Meteor Showers
September 15 th -17 th	2nd Annual FESTIVAL OF STARS
October 7 th -8 th	Jupiter, Saturn and Neptune

Follow the North Frontenac Amateur Astronomy Club on Facebook

Fall'N'Stars 2023

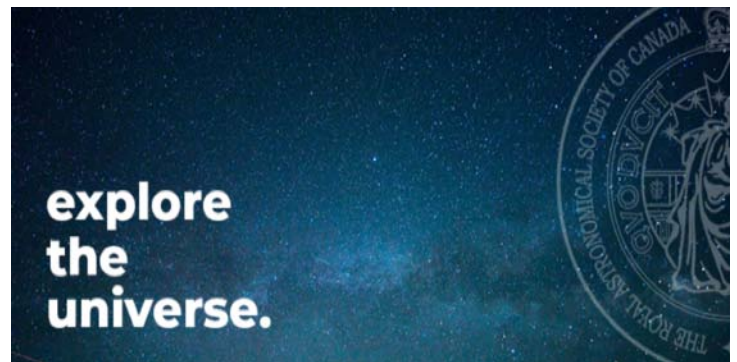
*For Those Attending Fall'N'Stars 2023
Please Review Our **Safety Plan***

Friday September 15 to Sunday September 17, 2023
Johnson's RV Park
3235 County Road 13, RR#3 Picton (South Bay), On K0K 2T0
(43 degrees 56' 20" N and 77 degrees 00' 56" W)

Welcome to Fall'N'Stars 2023, a gathering of amateur astronomers in Eastern Ontario held annually.

The Organizing Committee extends an invitation to amateur astronomers to join us for a rustic weekend of star gazing along with many social events including but not limited to: short astronomy related presentations, a catered dinner on Saturday night, nature walking trails, and most importantly, the chance to share with other like minded individuals the love of all things Astronomy.

Fall'N'Stars is a Rain or Shine event. In the case of inclement weather we have alternative events planned for an inside venue.



Member's Photos

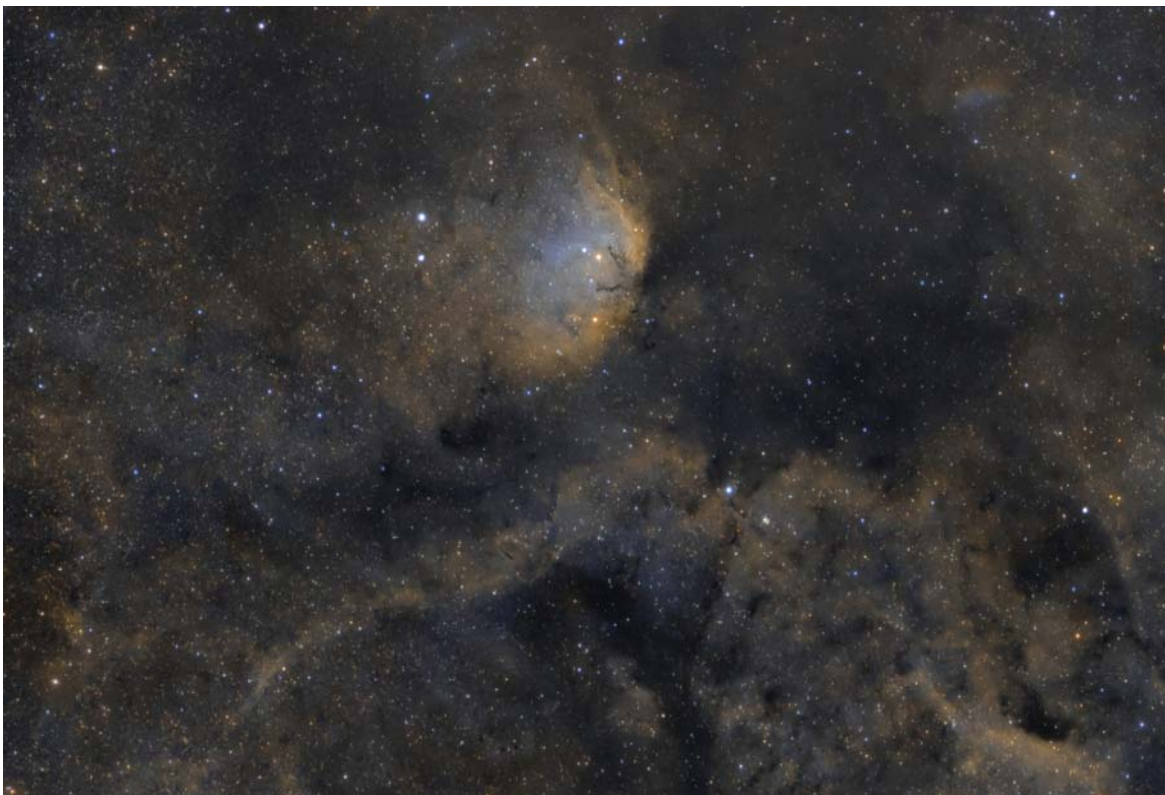


Photo Left: Centre member **Shelley Jackson** captured this beautiful shot of the **Tulip Nebula (Sh2-101)**, an H-II region emission nebula located in the constellation Cygnus. Tech specs: 81mm WO GT apo triplet; field flattener/.8 reducer; 50mm guide scope, zwo 120 mono guide camera; SkyWatcher EQ-6-R pro mount; ZWO ASI183MM CMOS camera cooled to OC; Pegasus focus cube and Falcon auto rotator; ZWO EFW; filters - SHORGB; Ismart mini - NINA - PHD2 guiding; Bortle 4 skies. Stacked and processed in PixInsight 183x120 RGB + 155x180 SHO.

About Us

The Royal Astronomical Society of Canada

RASC is a national, non-profit, charitable organization devoted to the advancement of astronomy and related sciences. Founded in 1868, The Royal Astronomical Society of Canada is Canada's leading astronomy organization, bringing together over 5000 enthusiastic amateurs, educators, and professionals. In addition to many national services, our 30 Centres offer local programs across Canada.

The Royal Astronomical Society of Canada Kingston Centre (aka Kingston's Astronomy Club)

We are Kingston's Astronomy Club, a local centre of The Royal Astronomical Society of Canada, founded on June 2nd, 1961. We hold monthly meetings, on the 2nd Wednesday of each month (September-June), via zoom videoconferencing and in person, from 7:00-9:00pm Eastern Time.

* We do public outreach programs in the form of helping the Cubs and Guides, teachers, Science Fairs and many public Education and Public Outreach events.

* We help out our members with questions in astronomy and equipment use, and hold private observing sessions, and also with Queen's University Observatory Open House, on the second or third Saturday of each month, at Ellis Hall, Queen's University.

* We support the local Frontenac, Lennox & Addington County Science Fair (FLASF) with a prize in astronomy.

* We are here to answer your questions on astronomy.

JOIN US!

<https://kingston.rasc.ca/join>

Board of Directors & Officers 2022-2023

Honourary President: David H. Levy
Past President: Rick Wagner

President: Kim Hay
Vice President: Malcolm Park
Secretary: Elena Zanetti
Treasurer: Susan Gagnon
Editor: Andrew B. Godefroy
Webmaster: Walter MacDonald
Librarian: Kim Hay
NCRep: John Hurley
Loan Equipment: Kevin Kell

The Royal Astronomical Society of Canada Kingston Centre provincially incorporated as a Not-For-Profit Corporation in September 2005 and has been a registered Charity with the Canada Revenue Agency since September 2006.

CRA Registration #827905720RR0001

Benefits of Membership to the RASC Kingston Centre

RASC Central based benefits:

- * Annual edition of the Observers Handbook
- * Bi-monthly RASC Journal (digital)
- * Monthly Bulletin of the RASC (digital)

Centre provided benefits:

- * Monthly Centre Newsletter – Regulus
- * Weekly social videoconference chat (members and guests only)
- * Monthly videoconference meetings (open to the public)
- * Equipment loan program