# Regulus

## Newsletter of the RASC Kingston Centre

Vol. 52 No. 10 December, 2025


**In this issue:**



**Centre Events for November, 2025:**

Dec 3: Zoom Social Meeting
Dec 10: Monthly meeting **5pm** at **The Mandarin**
1300 Bath Road, Kingston
Please bring a Door Prize.
Dec 17: Zoom Social Meeting
Dec 24: Zoom Social Meeting
Dec 31: Zoom Social Meeting
Jan 7: Zoom Social Meeting
Jan 14: Monthly meeting via **Zoom Only**

# President's Report

## Malcolm Park

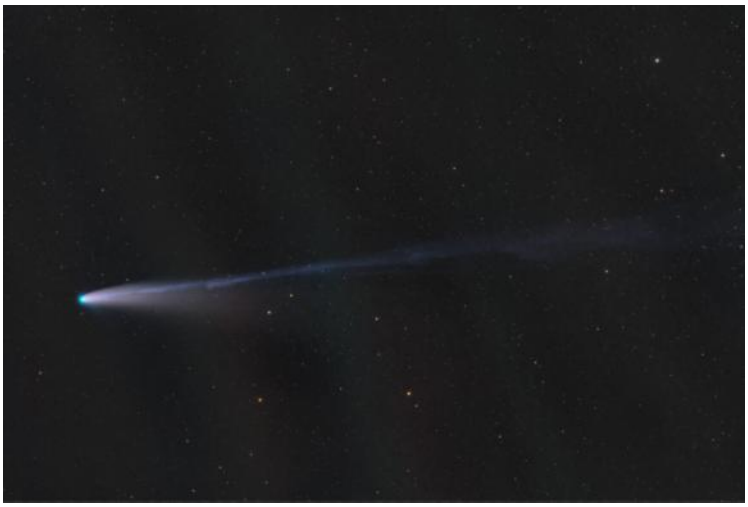
As the year draws to a close, I am looking forward to the annual holiday dinner at the Mandarin restaurant, on December 10th 5pm in Kingston. This will be our last in person get-together until March 2026. Bring along a door prize donation and enjoy a nice evening out celebrating the season. We look forward to seeing you there!

Reflecting on the year that was, in 2025 we really did accomplish many of our goals. We have much to be proud of in our Centre of the RASC. And I am grateful to have the opportunity to contribute in my own way and I would like to thank the Awards Committee for selecting me for the A.Vibert Douglas Award in 2025. I am just one of a long list of contributors to the Kingston Centre.

On December 11th, 2025 the Astrophotography-101 series continues with a session on the popular, and free image processing tool SIRIL. This meeting will be held by Zoom only, and it will be recorded for those that want to watch it later. Rick Wagner will be presenting.

I would like to remind you about the 2025 Geminids Meteor Shower, which provides amateur astronomers with a spectacular year end celestial send-off, making a chilly mid-December night under the stars profoundly rewarding. Peaking around December 13th and 14th, this shower has consistently high meteor-rates—often exceeding 100 meteors per hour under ideal conditions. Crucially, the moon will be a waning crescent, meaning dark skies if it's not cloudy. I know the idea of being out in the cold at this time of year can be difficult to do, but keep it in mind. If conditions are good it's worth a look.

A Year-End Message from Your Club President
As we look ahead to 2026, I want to thank every member of our Centre for their participation in meetings, in volunteering and in outreach. It is the active membership of the Centre that makes the club what it is. Keep your eyes on the skies and I hope to see you at the Mandarin. Did I mention the door prizes? There will be door prizes! Wishing you and yours clear skies and happy holidays!



# The Editor's Keyboard

**Roger Hill**

As I write this, we're into the final couple of days of November. It's been an interesting month, as I tried to solve a couple of hardware issues, used the Centre's Seestar S50, had a visit from the 5 year old daughter of a good friend who is really keen on astronomy, and missed an auroral display. On a personal note, I visited my cardiologist, who's happy with the way my heart continues to work. I also saw my GP a couple of days after that, and he's happy with all the tests he ordered done on my blood. They did both state that I should exercise more and lose some weight. I wonder if this is part of the Hippocratic Oath: First, Do No Harm. Second, tell your patient to exercise more and lose weight. Third…

I'm really annoyed at missing the great display of northern lights. The reason why is a little convoluted, so I hope you'll bear with me. My home office is in my basement, and has but a single small window, and even that looks out on the space underneath our back deck. This means that hours can go by without realizing what the weather is like outside. So, I took an old Wyze camera, and reflashed the firmware to use a free program called Thingino. This lovely bit of freeware make the camera produce an RTSP video stream, which can be viewed by VLC and other software. It worked nicely, and so I installed the camera from above my back deck, looking south-east toward the Excited States of America. I can view this stream on one of my monitors. It is sensitive enough to pick up the stars in the belt and sword of Orion.

All well and good. So on the evening of November 11th, after freezing outside that morning when I escorted my wife to a Remembrance Day ceremony, where she laid a wreath, I spent some time in my office in the afternoon and evening. I checked outside every now and then, but no stars were seen. The Clear Sky Chart also predicted clouds, so this wasn't a surprise.

What was a surprise were the reports of aurorae coming in from Ontario just before 11pm. I went outside and sure enough, it was mostly clear, and there was a nice display going on.

I took some images with my cell phone, saw the clouds in the west that were headed my way, and checked the GOES -19 satellite. I also checked the feed from my north pointing Most-Sky camera and it was showing a lovely display.

What had happened? Since the south-east camera had recently been installed, I used that, and the skies were milky in that direction. I mistook the haze from auroral display overhead and toward the south for clouds. If I had checked the all-sky camera, as I would have done a couple of days prior to this, I'd have spotted the display instantly.

I've taken star trail pictures in both the Northern and Southern hemispheres but I've wanted a long one with Orion rising. There is a relatively short window to allow this, because you want clear skies for 12-13 hours overnight, no moon, and you want Orion rising after it has gone dark. This means you have a few days every November...one of the worst months of the year for clouds.

When I set up my old astro-modified Canon T1i camera to take long time-lapse exposures, I use a windows tablet to run the camera, so it will record the images it takes on both the memory card inside it AND to the hard drive of the tablet. However, I could not run the camera in Tethered Mode, as Windows reported that the device that last connected to the tablet was unknown. After spending a few hours trying to get the camera to work, I finally went old-school and used a remote shutter device to take a 30 second exposure every 35 seconds. This worked really well, but in my haste to get everything set up, I forgot to turn on the anti-dew strap on the fisheye lens, and so it fogged over around 9pm, about an hour after Orion rose. There were a couple of nights after that, but clouds rolled in shortly after Orion rose, or afterwards, or I thought it was cloudy.

And now the Moon is interfering, and will until after the first week of December, when I'll try again. I'm hoping the result will look good enough for Brian McCracken's Members Gallery.

The issue with the camera is that the mini-USB socket on the camera makes intermittent contact with the circuit board. Make Kaye told me about a guy called Don Banks in Enterprise who repairs cameras. I hope to drop it off to him in the first week of December.

So, those are my tales of woe for this month. Have a Most Excellent holiday season, and

Clear skies to you!

Roger Hill

As tho' a star, in inmost heaven set,
Ev'n while we gaze on it,
Should slowly round his orb, and slowly grow
To a full face, there like a sun remain
Fix'd--then as slowly fade again,
And draw itself to what it was before;
So full, so deep, so slow, …
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Tennyson,--Eleanore, circa 1830.

This Christmas article begins with an excerpt from Eleanore, one of the early poems written by Alfred Tennyson. It is one of the finest pieces of verse I have ever encountered. The poem tells a story about a youthful Eleanore, who falls in love. But at a point in the final third part of this poem, he turns his tale into a sermon about variable stars. How could young Tennyson possibly know anything about stars that change in brightness? The American Association of Variable Star Observers, better known by its famous acronym AAVSO, would not be founded for 81 years, in 1911.

Young Tennyson was almost certainly familiar with the work of Friedrich Wilhelm Argelander, who today is accredited with launching the study of variable stars. It is probably that familiarity that led the young poet to insert his little lecture on variable stars.

Some of Tennyson's early poetry, published in the early 1830s, was reviewed in the Journal Quarterly Review: It went badly: "We pass by two – what shall we call them? – tales, or odes, or sketches, entitled "Mariana in the South" and "Eleanore", of which we fear we could make no intelligible extract, so curiously are they run together into one dreamy tissue – to a little novel in rhyme, called "The Miller's Daughter". Miller's daughters, poor things, have been so generally betrayed by their sweethearts, that it is refreshing to find that Mr. Tennyson has united himself to his miller's daughter in lawful wedlock, and the poem is a history of his courtship and wedding."

Apparently Tennyson was sensitive to this sarcastic and negative criticism, and he was so affected and hurt by this review that he stopped publishing for almost a decade. His colleagues and friends feared that he had given up writing, and possibly his life, but, as he later told his son Hallam, he was busy revising his older poems, and "in silence, obscurity, and solitude he perfected his art."

I believe that the 1830s review was grossly unfair. It was mean. I suspect that these reviewers were using poetry they didn't like to demonstrate how brilliant they were. These reviewers are all long forgotten; I know of nobody who has not heard of Tennyson. I know of many people, besides me, who are just as sensitive to criticism as he was. (By the way, partly as a result of this ,I am not an objective reviewer. I think that if someone has the guts to write for publication, she or he deserves every possible encouragement.)

When I recited this extract to my friend Jean Mueller, a well-known discoverer of 15 comets and 107 supernovae during the 29 years she worked at Palomar Observatory, she noticed the variable star connection the minute I read it to her. She agrees: "Was there a specific variable star that he might have had in mind?" These lines teach their readers about variable stars, stars that change in brightness. Such a star does "slowly grow/To a full face" (its maximum brightness) and then "fade again,/And draw itself to what it was before" (its minimum).

I have been an active observer of variable stars for many decades. As Leslie Peltier wrote on page 69 in his autobiography Starlight Nights, "A variable star was a completely new experience; it was not just something that was THERE, it was something that was HAPPENING!" On the evening of 30 August, 1975, my interest in variable stars entered a new high when I independently discovered Nova Cygni, a 1.6 magnitude exploding star, and then three years later a second Nova Cygni. Variable stars are magical to me, but this little poem from Tennyson is the first one I have found that directly addresses the observation of stars that regularly change in brightness.

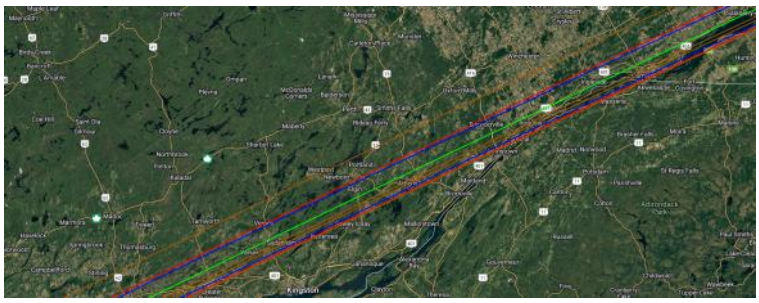
In a way I wish I had known Tennyson. But I am glad I do not, because that would mean that I am at least 175 years old. But I do know the famous and highly regarded astrophysicist Jonathan Tennyson, Alfred's great great grandson, and we have been friends since I met him at University College London a number of years ago. The Tennyson family is warm and friendly, and I think the poet from long ago would have enjoyed that, and that an appreciation for science still runs in his family. Alfred Lord Tennyson had the ability to take a scientific fact, that some stars vary in brightness, and turn it into a verse that etches itself forever into our hearts.

# The Sky This Month

**Rick Wagner**

Any night of the week offers up a broad range of viewing wonders. A Past President of the Kingston Centre, Rick Wagner keeps an eye on the sky each month, sharing some of the best viewing opportunities as well as timings to catch your favourite night sky target at its best.

01 Dec Comet 24P/Schaumasse (2026) (mag ~10) crossing Leo in the morning sky, Moon interferes 5-17 Dec
01 Dec Comet 210P/Christensen (2025) (mag ~11) low in Virgo before morning twilight, Moon interferes 5-17 Dec
03 Dec Moon transits Pleiades – occns start ~20:30EST
04 Dec Full Moon (18:14EST)
05 Dec (78741) 2002 TN272 occults UCAC4 582- 024918 (mag 11.0) for Yarker, Sydenham, Morrisburg (21:47EST)



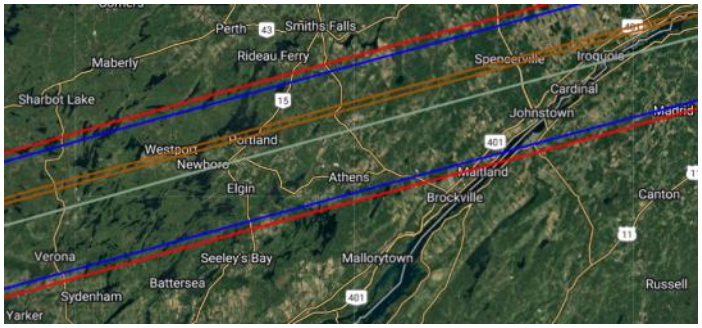
05 Dec comet C/2025 T1 (ATLAS) (mag ~10) moving Sagitta to Aquila, Moon interferes after 22 Dec
06 Dec Mercury (mag -0.5) at GEW low in SE at nautical dawn
07 Dec Moon, Jupiter, Castor, Pollux in pre-dawn sky or watch them rising in the evening
10 Dec Comet C/2025 K1 (ATLAS) (mag ~11, dimming rapidly) circumpolar in Cassiopeia moving southwards, culminates early evening.
08 Dec – (865) Zubaida occults TYC 4899-289-1 (mag 9.2) for Morrisburg (01:23EST)

08 Dec Minor planet (16) Psyche at opposition (mag 9.4)
10 Dec Moon squeaks by Regulus (01:30EST)
11 Dec Last Quarter Moon
12 Dec (2877) Likhachev occults UCAC4 563-042836 (mag 11.2) for Cardinal (00:16EST)

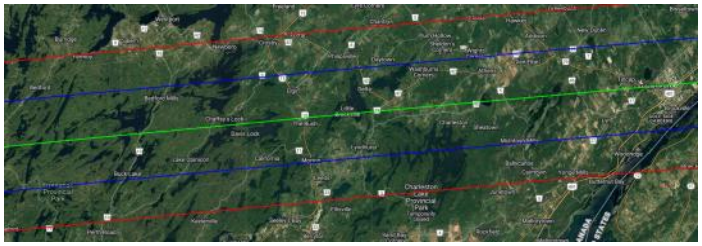

13 Dec (1540) Kevola occults UCAC4 626-037357 (mag 11.3) for Harrowsmith and Kingston southeast to eastern Prince Edward County (04:40EST)


14 Dec Geminid meteor shower peaks 03:00EST
16 Dec (31817) 1999 RK134 occults UCAC4 543-044648 (mag 11.6) south of Battersea to Kingston waterfront (03:46EST)


19 Dec New Moon (20:43EST)
21 Dec winter solstice (10:03EST)
22 Dec Ursid meteor shower peaks before dawn
22 Dec (1844) Susilva occults TYC 1307-525-1 (mag 10.2) for Bellrock, Elgin, Athens, Cardinal, Morrisburg (18:58EST)




24 Dec (132968) 2002 TT136 occults UCAC4 588-011068 (mag 11.5) for Elgin, Athens, Brockville (00:31EST)



25 Dec Moon occults λ Aqr (mag 3.8)
27 Dec First Quarter Moon

# Target for Tonight: Cassiopeia

Susan Gagnon

Cassiopeia contains no Levy List objects. All objects can be found in Cartes du Ciel.
Note on WZ Cas: a carbon star is one that has reached a point in it's C/N/O cycle where the amount of carbon exceeds the amount of oxygen. Because of the relatively low mass of these stars (1.5 to 8 solar masses) this is pretty much the end of the excitement for them. They do not have the mass to make larger nuclei and they are destined to become planetary nebula. Pulsing more and more of their material into the surrounding space and leaving a white dwarf to illuminate the cast off material.

| Object | Description | RA | Dec | Mag |
|---|---|---|---|---|
| M103 | Open cluster | 1.5 | 60 39 | 7.4 (10 and 11 mag stars) |
| M52 | Open cluster | 23.5 | 61 36 | 6.9 (fainter stars than M103 giving a softer appearance. |
| Schedar | Star | 2.24 | | Casseopeiae's brightest. Alpha Cas is a red giant with a history of irratic variability as it reaches the end of it's evolution. |
| Finest NGC | | | | |
| 7635 | Emission nebula | 23.3 | 61 12 | 10<br>Central hot blue 9th n=mag star (SAO 20575) |
| 7789 | Open cluster | 24 | 56 43 | 6.6<br>large, rich, compressed |
| 185 | Elliptical Galaxy: | 0.6 | 48 20 | 9.2 Actually gravitationally bound to M31 |
| 281 | Emission nebula . | 0.88 | 56 37 | 7.8 Pacman Nebula; Hydrogen gas excited by a small star cluster IC1590 |
| IC 289 | Planetary Nebula: | 3.2 | 61 19 | 12.3 . oval, no obvious boundaries. |
| Deep Sky Challenge | | | | |
| IC 59 and IC63 | Emission nebula | 0.57 | 61 04 | Both very faint excited by Gamma Cas. |
| NGC 609 | Open cluster | 1.6 | 64 33 | 12.3 . Small; Near HD9811(mag 6.5) |
| IC1795 | Emission nebula: | 2.4 | 61 54 | Fish Head Nebula Appears as a drop down appendage to the Heart Nebula |
| Maffei I | Elliptical galaxy | 2.6 | 59 39 | 14 . Massive; Obscured by Milky Way gas and dust. |
| WZ Cas | Double Star HD 224855, HD 224869. | 01.3 | 60 21 | 7.8 for WZ, visual variable range of 1 mag.<br>Blue companion, Mag 8.4 HD 224855, deep red typical of a carbon star, with a visual companion HD 224869. Striking colour contrast. |
| HR 9094 | Double Star | 02.6 | 66 21 | 5.7 and 7.2; a bright pair, amber yellow and royal blue as described by Sissy Haas |
| Achird | Double Star | 49.1 | +57d 49m | A is mag 3.5 and B is mag7.4<br>A is a bright yellow with B described as purple, pale garnet as well as almond brown! So locating A can be done naked eye.<br>Orbital period 480 years. Separation: 35 to 110 AU |

# Stuff from Kevin

RASC-Kingston Center Minor Planet List Opposition update

https://kingston.rasc.ca/asteroids

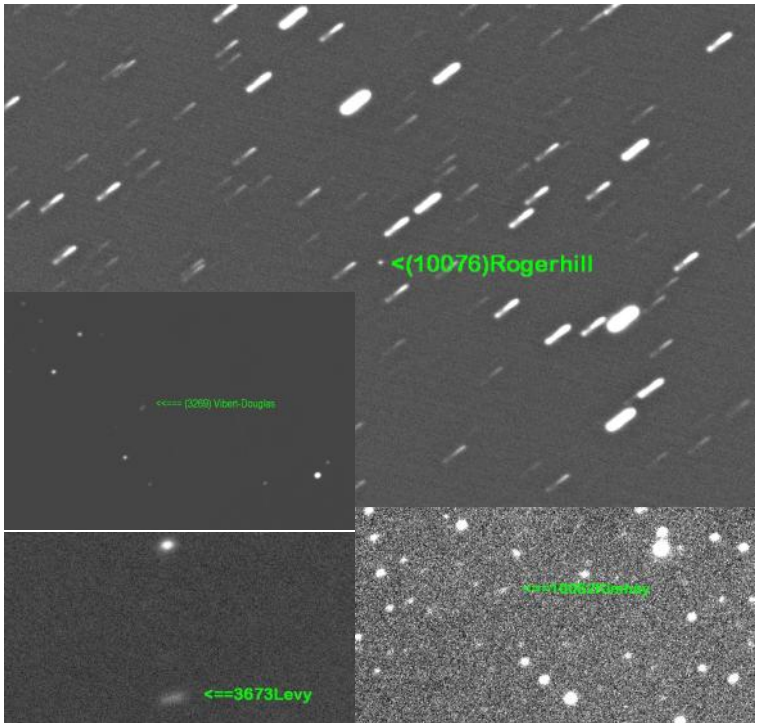
Page Created: 2021 November 11
Page Updated: 2025 November 26
By Kevin Kell

RASC-KC current members, past members and others local to the Kingston
area have had Minor Planets named after them for their contributions to
astronomy. The complete list appears at the bottom of this page.

Imaging Minor Planets
Minor planets are best imaged when they are at opposition (180° from the
Sun). See this great online calculator for minor planet oppositions—it
is helpful in planning!

https://doncarona.tamu.edu/apps/minorbody/opposition/

Upcoming Oppositions
2025-12-11 minor planet 20021 kevinkell mag 16.8
2025-12-19 minor planet 273987 greggwade mag 20.5
2026-01-11 minor planet 3673 levy mag 15.2
2026-01-28 minor planet 9070 ensab mag 19.3
2026-03-05 minor planet 5457 queens mag 16.6
2026-03-11 minor planet 5272 dickinson mag 17.9
2026-03-31 minor planet 6115 martinduncan mag 17.3
2026-04-10 minor planet 100623 kimhay mag 17.9
2026-04-26 minor planet 10076 rogerhill mag 18.1
2026-07-24 minor planet 5424 covington mag 15.7
2026-07-05 minor planet 10065 greglisk mag 17.9
2026-10-13 minor planet 22426 mikehanes mag 18.9
2027-02-13 minor planet 3269 vibert-douglas mag 16.9
2027-02-19 minor planet 20022 dontown mag 18.5




# Member Image Gallery

Folks,

If you haven't done so already please look through your 2025 astroimages for your favourite image for inclusion in the RASC-Kingston Centre 2025 Member Image Gallery.

To date I've received nine images for the image gallery and I would like to see your favourite image added to the collection.

I am requesting your "best" image from 2025, along with a paragraph description of: "why it is your best" and some "technical specs" (also what it is, name? designation, etc).

You can find examples in the previous Member Image Galleries at:

https://kingston.rasc.ca/kc-gallery-2024
https://kingston.rasc.ca/kc-gallery-2023
https://kingston.rasc.ca/kc-gallery-2022
https://kingston.rasc.ca/kc-gallery-2021
https://kingston.rasc.ca/kc-gallery-2020

The Fine Print…

1. Your image was taken in 2025.
2. You are a member in good standing of The RASC-KC as of Dec 31, 2025.
3. Preferred image format is JPG or PNG, resolution no more than 2K x 2K (they will be shrunk to 1080p for the publication)
4. Email submissions to Brian McCracken at doc963@gmail.com, preferably with a subject line of "RASC-Kingston Centre 2025 Member Image Gallery" or something close.
5. I will confirm reception of your submission the same day or next.
6. Deadline for submissions is Sunday noon, January 4, 2026.

If you have any questions please email me at doc963@gmail.com.

Thank you!
Brian McCracken

Two of the naked eye visible planets will be lost in twilight by mid month, both Mercury (low in the SE in the evening) and Venus (very low in the ENE in the morning). Mars is still in solar conjunction, which means it is on the far side of the sun from us. Jupiter will rise in the NE before 7 PM, transits (crosses the mid line) about 2 AM and will be low in the W by dawn. It takes Jupiter about one Earth year to pass through a zodiacal constellation. It takes 12 of our years for Jupiter to complete it's orbit. This year it is in Gemini.

Saturn is further away from us than Jupiter, so it's orbit around the sun takes almost 30 years. l During that time, both Earth and Saturn change the angles from which they are seen. So things like the rings can appear to be like a doughnut around a hole, or flat like a DVD. Right now Saturn's rings are almost flat (-0.76* on the 25th). Saturn will be high in the S at dusk, transit before 7 PM and set in the W around midnight.

The tides will be King Tides the first week of December. This means the Sun, Earth and Moon align in a configuration called syzygy This often happens when there is a full Moon in the first week of December. And this month that happens on December 4 (Rivers Freezing Over) and the Moon is at perigee (it's closest approach to Earth). The Moon passed just N of the Pleiades on the 3rd.

December 7 has Jupiter just S of the Moon and Mercury is its furthest from the Sun. On the 10th, Neptune will appear stationary and the Moon will occult Regulus at 2 M. Regulus is the bright star at the end of the backward question mark in the constellation Leo. This is something you can easily see with just your eyes, Last quarter Moon is on the 11th and the Geminid Meteor shower on the 13th. Remember, to best watch a meteor shower, look away from the Radiant (where the meteors appear to be coming from). So, look away from Jupiter this year. On the 17th, the Moon will be at apogee (it's furthest away point) and the New Moon will be on the 19th. The Ursid Meteor shower (radiant in Ursa Minor near the pointer stars) is on the 21 as is Winter Solstice.

Winter Solstice is when the sun appears to rise in the same place for about three days. In the Northern Hemisphere it means we have the fewest hours of sunlight visible to us. Earth is physically closer to the sun, but in the Northern Hemisphere we are tilted away so we don't get warm.

The first quarter Moon will be on the 27th with Saturn and Neptune (not naked eye visible) near the Moon. On the 31st the Moon will be just N or the Pleiades

There are lot's of things that change in the night sky. The. Planets are always in a different position and you may be able to see Moons, rings or storms on some of those. Our Moon shows the mountains, craters and plateaus at the Terminator — the line between light and dark. With a small telescope you can see seasons on Mars. Binoculars will show the inner planets going through the same phases as the Moon. Space is a vibrant place and even stars change.

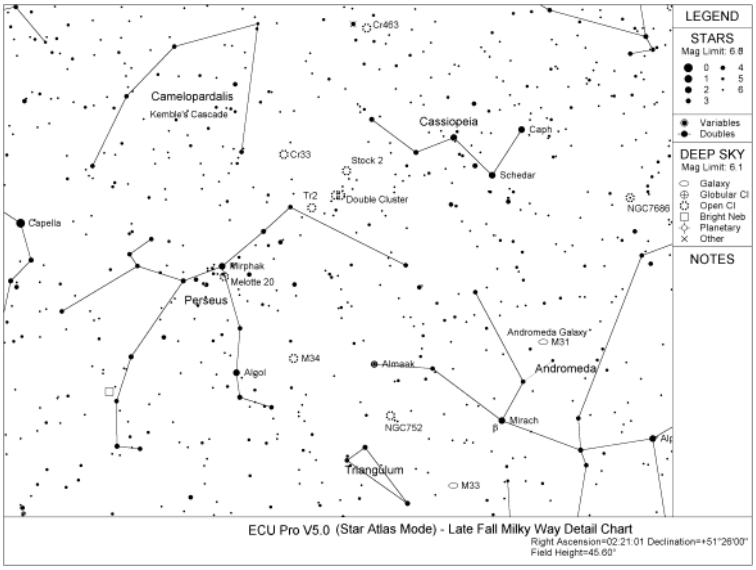
Variable stars are another area where Amateur Astronomers contribute to science. The AAVSO (American Amateur Variable Star Observers) collects information about a star's magnitude. This data base is available for Professionals and others to access. As our Sun is a star, the more we know about how they work, the better.

There are some variable stars that are naked eye visible. Algol is one of these. It is at the hip of Perseus, which will be high in the sky most of December nights. And it is possible to see it change brightness in one night. It brightens after a 10 hour period of eclipse. The star is part of the three star grouping. The centre two stars are what causes the dip in brightness.

The third star's effect is not naked eye. The rest of the time the star maintains the same magnitude. The period is almost three days. No wonder this was designated a Demon's eye!

Another naked eye variable is Betelgeuse. This is the red giant star that forms the right shoulder of Orion. This young star is already dying and is expected to Super Nova when its time is up.

Clear skies.



Nominations from the floor were requested for the Director position currently held by Malcolm Park who was willing to stand. None came forward. Acclaimed. Malcolm Park has accepted another 2-year term.

Nominations from the floor were requested for the Director position currently held by Kim Hay. Kim nominated Laurie Graham, seconded by Elena Zanetti. Laurie is willing to stand and no other nominations came forward. All approved and Laurie has accepted the position of Director for a 2-year term.

Nominations from the floor were requested for the Director position currently held by Susan Gagnon. Roger nominated Bruce Murray, seconded by Mike Haines. Bruce is willing to stand and no other nominations came forward. All approved and Bruce has accepted the position of Director for a 2-year term.

The next meeting of the Board of Directors will assign officer positions as per our By-laws which were passed by a special meeting of our membership, on July 31, 2024.

- **Auditor for 2025 – 2026**
  Nominations from the floor were requested. None came forward.

- Our 2025 – 2026 RASC Kingston Centre Board with positions to be confirmed at the next Board meeting:

| | |
|---|---|
| Malcolm Park | 2025-27 |
| Laurie Graham | 2025-27 |
| Bruce Murray | 2025-27 |
| Elena Zanetti | 2024-26 |
| Roger Hill | 2024-26 |
| Kevin Kell | 2024-26 |
| John Hurley | 2024-26 |

- **Presentation of Awards – Kim Hay**
  The Kingston Centre A Vibert Douglas Award is our Centre's major award to its most outstanding members, named after our founder of the Kingston Centre and awarded annually for their contributions or achievements. This year's recipient, Malcolm Park, is an accomplished astrophotographer, with images published in books, his own website and on social media. With a remote telescope in Chile, he images the southern wonders and studies the sky for asteroids. In the northern sky, he images and chases auroras and weather storms. A member of our centre since 2020, he is noted for helping other members, spearheading projects and presentations, and creating Astrophotography 101 and Photography 101. Also, Vice President from 2022-24 and President from 2024 to present, are among his many accomplishments. Presented by the Awards Committee, Kim Hay, Susan Gagnon, and John Hurley.

- **Motion to adjourn 20251112 – 5** | Moved by Malcolm Park | Seconded by Mike Haines |with thanks at 7:40 pm.

# November 12, 2025 Monthly Meeting Minutes

**Elena Zanetti**

The meeting began at 19:45EST. This is a continuation from the Annual General Meeting held prior at 19:00EST this evening with 30 in attendance.

**Speaker: Stephen Mallia** of Ontario Telescopes and Starfield Optics in Bolton. Stephen's presentation showcased equipment he offers for the astrophotographer in mind and still great for visual observing. His webstore may be found at ontariotelescope.com.

**Rick Wagner:** What's Up in the Sky

**Local Events**
13 Nov – Adrian Liu 21cm Cosmology
14 Nov – Diominique Segura-Cox Protoplanetary Disks
21 Nov – Rene Doyon Exoplanets
27 Nov – Leato Baidoo Cosmic Magnetism

**BAA Events**
06 Dec – Christmas Meeting (YouTube streamed)

**AAVSO**
15 Nov – SIGS in the Spotlight

**Sky Events – Nov and Dec**
12 Nov – Last Quarter Moon
15 Nov – zodiacal light visible in eastern sky before morning twilight for the rest of the month
17 Nov – Leonid meteor shower peaks – moderate shower, best before dawn
20 Nov – New Moon (01:47EST)
21 Nov – Uranus at opposition
24 Nov – Saturn's rings reach minimal tilt of -0.37 degrees from edge-on and start to open again
24/25 Nov – Mercury (mag around 2) and Venus 1.5 degrees apart very low before sunrise
28 Nov – First Quarter Moon
28 Nov – lunar Straight Wall (Rupes Recta) visible this evening
03 Dec – Moon transits Pleiades – occultations start around 20:30EST
04 Dec – Full Moon (18:14EST)
06 Dec – Mercury (mag -0.5) at GEW low in SE at nautical dawn
07 Dec – Moon, Jupiter, Castor, and Pollux in pre-dawn sky or watch them rising in the evening
10 Dec – Moon squeaks by Regulus (01:30EST)

**Comets**
Now – C/2025 A6 (Lemmon) (mag 6?) very low in SW after sunset
C/2025 R2 (SWAN) (mag 10?) rapidly dimming in Psc, setting after midnight
C/2025 T1 (ATLAS) (mag 11?) high in NE at nautical dusk
15 Nov – C/2025 K1 (ATLAS) (mag 10?) high in E at nautical dawn
19 Nov – 3I/ATLAS (mag 10?) low in SE as morning twilight starts

**T CrB**- Low in west after sunset, still faint

**Major Planets**
Mars (mag 1.5) very low in W
Saturn (mag 0.8) & Neptune (mag 7.7)
Uranus (mag 5.6) rises just after sunset
Jupiter (mag -2.4) rises early evening and up all night
Venus (mag -3.9) very low in E before sunrise
Mercury (mag -0.5) moving to GEW

**Small Bodies**
20 Nov – 68 Leto (mag 9.9) at opposition
08 Dec – 16 Psyche (mag 9.4) at opposition

**Holiday Dinner Plans** – **Mike Haines** has made a reservation at the Mandarin in Kingston, 5 pm. $36 plus tip and bring a door prize. Contact Mike to RSVP.

**Annual Astrophotography Image Gallery** – Brian McCracken reminds us to look through and submit our astrophotography images of 2025. If possible, include specs and your thoughts on taking the image.

**2026 Science Rendezvous, May 9 2026**– Bruce Elliott thanks all who helped in 2025 and invites people to volunteer for the 2026 event as well as for the FLA Science Fair March 26/27. Bruce shared images of Orion, a double rainbow and Comet Lemon.

**Roger Hill** – shared images of Comet Lemon with his processing journey.

**Kevin Kell** shared a video of aurora from his All-Sky Camera on Nov 11, images, including animated, of Jupiter over the last month, Comet Lemon, and of the November 4 Ariane rocket fuel dump.

**Announcements**:

- Astrophotography 101, topic NINA, November 13.
- Our monthly newsletter, Regulus, editor Roger Hill, is available on the RASC Kingston Centre website Kingston.rasc.ca. Facebook Group @RASC Kingston Centre Group. YouTube Channel @RASC Kingston Centre. Join at www.secure.rasc.ca/membership.
- On Wednesday's we have Zoom socials. Link is posted to Centre email list.

**Next meeting**, on Zoom only, January 14, 2026. In person meetings resume in March.

**Malcolm** thanked all for attending and the meeting ended at 21:25EST.

Elena Zanetti, Secretary.

# Executive Meeting Minutes

**RASC-KC Executive Meeting Tuesday, November 24, 2025, 9:00 am. EDT via ZOOM**

Present: Malcolm Park, Susan Gagnon, Kevin Kell, Kim Hay, John Hurley, Bruce Murray, Roger Hill, Laurie Graham, and Elena Zanetti.
Meeting commenced at 9:03 am. We have quorum.

**Reason for Meeting:**

A. Appointment of Officers
B. Determining bank signatories

**Confirmation of Directors:**

Motion 20251124-01 | The Board of Directors be filled as follows:

| | | |
|---|---|---|
| Malcolm Park | President | 2025-27 |
| Laurie Graham | Vice President | 2025-27 |
| Bruce Murray | Treasurer | 2025-27 |
| Regulus Editor | Roger Hill | 2024-26 |
| NC Rep | John Hurley | 2024-26 |
| Equipment Coord | Kevin Kell | 2024-26 |
| Secretary | Elena Zanetti | 2024-26 |

Moved by Malcolm Park | Seconded by John Hurley | All approved and carried.

**Confirmation of Officers:**

Motion 20251124-02: Officer Co-ordinator position be filled as follows:

| | | |
|---|---|---|
| Librarian | Kim Hay | 2025-26 |
| Equipment coordinator | Kevin Kell | 2025-26 |
| Science Rendezvous/FLASF | Bruce Elliott | 2025-26 |
| Annual Member Image Gallery | Brian McCracken | 2025-26 |
| Queen's Open House coord | Laurie Graham | 2025-26 |
| Web Team | Kevin Kell | |
| | Walter McDonald | 2025-26 |
| Social Convenor | Mike Hanes | 2025-26 |
| Email Chat List Moderator | Kim Hay | 2025-26 |
| Facebook Team | Kim Hay | 2025-26 |
| Fall'N'Stars KC coordinator | TBD | |

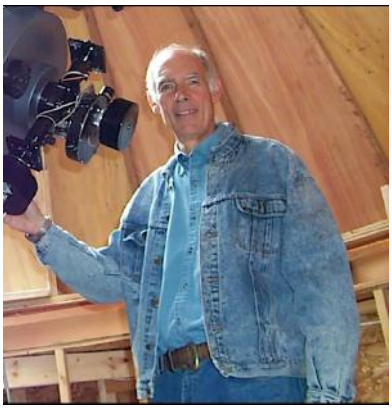
Moved by Malcolm Park | Seconded by Roger Hill | All in favour and carried.

**Bank Signatories and Treasurer Duties:**

Motion 20251124-03: Bank Signatories to be Bruce Murray, Malcolm Park, John Hurley and Elena Zanetti.
Moved by Bruce Murray | Seconded by Malcolm Park | All in favour and carried.
**Bruce** will coordinate bank appointment.
**Ontario Government** notification to be completed this week by Bruce Murray with assistance from Susan Gagnon.

**Next Meeting: January 2026**
**Meeting adjourned at 9:21 am**

# Obituaries



John "Jack" Borden Newton, a pioneering force in amateur astrophotography and a beloved luminary of the astronomical community, passed away peacefully on the afternoon of November 11, 2025, at his home near Osoyoos, British Columbia, surrounded by the love of his family and the vast canopy of stars he so cherished. He was 83 years old.

Joining the Winnipeg Centre of the Royal Astronomical Society of Canada (RASC) in 1958, young Jack immersed himself in the Moonwatch program and soon founded an astrophotography section, serving as Centre President from 1970 to 1972. His early ingenuity shone through in 1969 when he constructed a 32-cm reflector telescope, housed in a backyard observatory, pushing the boundaries of what backyard stargazers could achieve.

A man of restless curiosity and unyielding dedication, Jack balanced his professional career in retail management—with stints at Sears and Marks & Spencer—with his true calling under the night sky. Relocating to Toronto in 1973, he became President of the Toronto Centre from 1975 to 1976. By 1979, he had settled in Victoria, British Columbia, where he twice led the Victoria Centre (1980–1981 and 1990–1991) and was honored as a Life Member in 1978. It was here that Jack pioneered "cold camera" astrophotography, a technique that cooled film emulsions to enable dramatically longer exposures, unlocking unprecedented detail in deep-sky objects. His groundbreaking work extended to CCD imaging; in 1991, he became the first amateur to produce full-color RGB CCD images of celestial wonders like the Ring Nebula (M57) and Dumbbell Nebula (M27), images that graced the covers of Astronomy magazine and inspired a generation.


Andreas Gada posted this on November 29:
It is with profound sadness that I announce the passing of my wife, Bonnie Bird on Saturday November 29, 2025 around 8:30 am. She died at home after an almost three-year battle with cancer.

A Celebration of Life will be held in the near future at the MacCoubrey Funeral Home in Cobourg. Details will be announced once arrangements have been made.

# About Us

## The Royal Astronomical Society of Canada

The 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 RASC Kingston Centre

We are Kingston's Astronomy Club, a local centre of The Royal Astronomical Society of Canada, that was founded on June 2nd, 1961. We hold monthly meetings, on the 2nd Wednesday of each month from September to December and March to June via zoom videoconferencing and in person, from 7:00-9:00pm Eastern Time. Meetings are held in January and February, but are available by Zoom only.

- 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 our members with questions in astronomy and equipment use.
- We hold private observing sessions.
- We hold public sessions with Queen's University Observatory Open House, on the third Saturday of each month, at Ellis Hall, Queen's University. Details can be found at https://www.queensu.ca/observatory/
- We support the local Frontenac, Lennox & Addington County Science Fair (FLASF) with a prize in astronomy.
- We are happy to answer your questions on astronomy.

## Board of Directors & Officers for 2025-2026

**Directors:**

Laurie Graham, Roger Hill, John Hurley, Kevin Kell, Bruce Murray, Malcolm Park, Elena Zanetti

**Officers:**

| | |
|---|---|
| President | Malcolm Park |
| Vice President | Laurie Graham |
| Treasurer | Bruce Murray |
| Regulus Editor | Roger Hill |
| NC Rep | John Hurley |
| Equipment Coord | Kevin Kell |
| Secretary | Elena Zanetti |
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| Social Convenor | Mike Hanes |
| Email Chat List Moderator | Kim Hay |
| Facebook Team | Kim Hay |
| Fall'N'Stars KC coordinator | TBD |
| **Honourary President:** | David H. Levy |

The **Royal Astronomical Society of Canada Kingston Centre** was 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. Our CRA Registration: 827905720RR0001

## Benefits of Membership:

**RASC benefits:**

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

**Kingston Centre benefits:**

- Monthly Centre Newsletter – Regulus
- Weekly social videoconference chat for members and invited guests.
- On the 2nd Wednesday evening of the month, there are meetings are open to the public: In-person in March to June and September to December at Queens, July and August outdoors at Lake Ontario Park; and two in January and February that are video-conference only.
- Equipment loan program

**Front cover image**

Malcolm Park receiving the A.Vibert Douglas Award from Awards Committee Chair Kim Hay.