

# Regulus

Newsletter of the RASC Kingston Centre



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April, 2026



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## Centre Events for April, 2025:

- Apr 1: Zoom Social Meeting
- Apr 8: Pre-meeting get together at the  
Portsmouth Tavern, 96 Yonge Street, Kingston
- Apr 8: Monthly Public meeting 7pm at Queens  
Room 226, Ellis Hall,  
58 University Avenue, Kingston
- Apr 15: Zoom Social Meeting
- Apr 22: Zoom Social Meeting
- Apr 29: Zoom Social Meeting



April opens with a bang — literally.

On April 1st, Artemis II is set to launch from Kennedy Space Center, sending four astronauts on a ten-day journey around the Moon and back. Among them is Canadian Space Agency astronaut Jeremy Hansen, who will become the first non-American to travel beyond low Earth orbit.

It's a genuinely historic moment for our country.

That said, the broader picture for Canada's space ambition is more complicated. NASA's recent decision to shelve the Lunar Gateway in favour of a surface base leaves Canadarm3 — MDA's billion-dollar next-generation robotic arm — without a confirmed home, and CSA also cancelled Canada's lunar rover project, developed by Canadensys Aerospace. The CSA says discussions are ongoing, and MDA is exploring alternative applications, but it's an uncertain chapter for a programme that was supposed to be Canada's flagship contribution to lunar exploration.

On a brighter note, the federal government announced a \$305-million investment in domestic launch capability, including a \$200-million lease agreement for Spaceport Nova Scotia near Canso. Maritime Launch Services already flew its Baracuda rocket from the site last November, and more launches are planned for this spring. Canada having sovereign access to orbit is a welcome development.

Closer to home, the Kingston Centre would welcome a volunteer to take on the role of Light Pollution Abatement Officer — if you have a passion for preserving our dark skies, please reach out to the Board.

Our next monthly meeting is Wednesday, April 8th, from 7:00 to 9:00 PM in Ellis Hall 226 at Queen's University. I won't be there myself, but Laurie Graham will MC the proceedings. Clear skies!

Clear skies!  
Malcolm Park  
RASC Kingston Centre

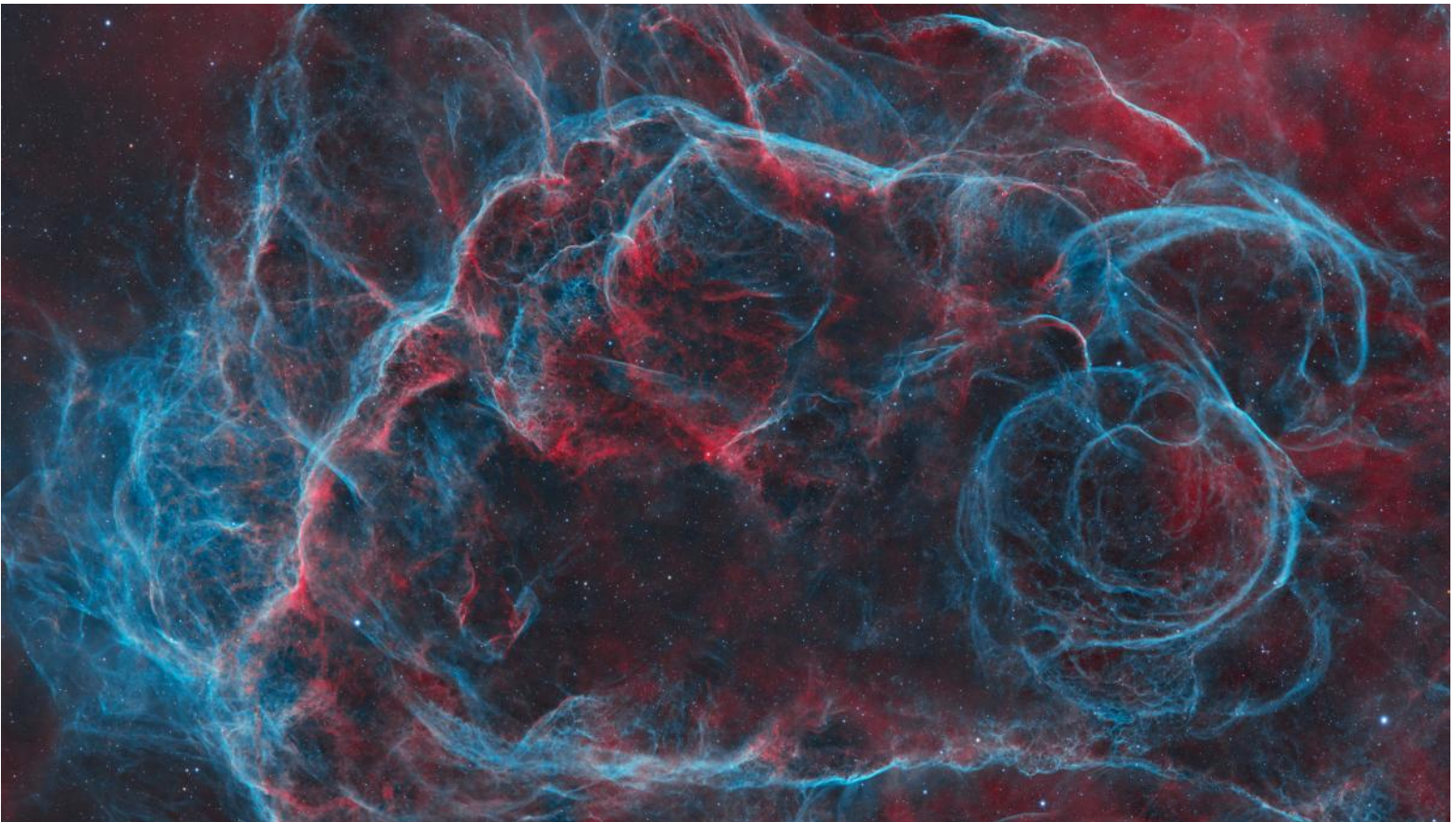


image: Vela Supernova Region. It is a 4 panel mosaic, 80 hours of image capture time, in an HOO palette.

Editors Note: With the weather we've been having, 80 hours of image capture works out to a couple of months of clear skies. One of the joys of going to an on-line version for Regulus means I'm not getting angry letters from people who are really annoyed at the amount of ink an issue consumes! RH

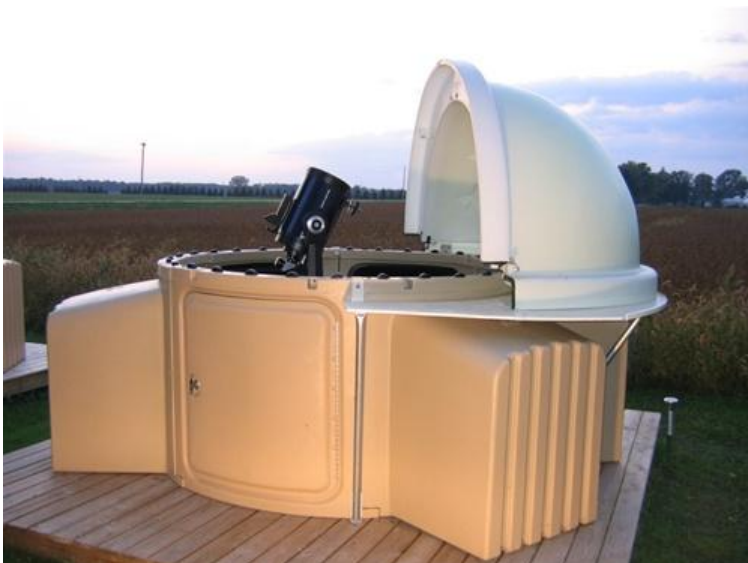


Ahhh...April, when many of the nights will be above freezing, Orion is sinking into the west, Galaxy season is in full bloom, and the summer Milky Way is available for those who can stay awake! It's very much a time for optimism, and despite the shortening hours of darkness, it's a lovely time for spending under the stars. The mosquitoes are missing and you can shed your winter gear.

For lunar observers, the days just before and after first quarter have the Moon high in the sky, with the terminator almost impossibly full of detail. If the seeing is good, hunting for items like the craterlets on the floor of Plato, Hadley Rille or the rille in the Alpine Valley, the central peaks of Copernicus, with the area around Aristarchus and Schroter's Valley also a feast for the eyes. For those who love imaging planets, the Moon offers spectacular vistas, and even if you're waiting for the Moon to get out of the way, it can offer truly amazing views.

For myself, I'm going to be doing some major surgery on my observatory this summer. The one big problem with the Sky-shed POD is that it can be difficult to observe the zenith. Much like pushing a Dobsonian around the sky, looking within 10 or 15 degrees from straight up can be frustrating. Typically, your telescope on a German Equatorial scope is not exactly centred in the middle of your observatory, and this means having to move the half-dome a lot to make sure that it does not compromise the entire aperture of your telescope.

Since I'm planning on an increase in the size of my 'scope (from a 12" SCT to a 14" RC), I'm going to be installing a POD Zenithal Table like the one shown below.



The usual mounting brackets that keep the half-dome on the top of the walls of the observatory are replaced with Quick Release Brackets, allowing you to push the entire two parts of the dome on to a table or other support structure (I'll be posting details of this in or around June, when I plan to build it).

Normally, the table is built on the north side, allowing full access to the sky from north east to north west, but my major source of light pollution is to the south-west. The prevailing winds come from the west as well, so my favoured position for the PZT will be to block off the lights of Cardinal, and have the dome still act as a wind-block much of the time.

I'm planning on doing this in June, when the nights are shortest, and around the time when the new scope arrives.

What else is going on around Seaway Observatory?

Well, I've been playing around with NINA, because it will allow me to create a sequence that will image a series of asteroids, just using the asteroid number. My preferred imaging software, APT that can use scripts to image objects that don't move, but does not work with things that do. I could use a website like JPL's Horizon system at [https://ssd.jpl.nasa.gov/horizons/app.html/#/](https://ssd.jpl.nasa.gov/horizons/app.html#/) to look up the RA and Dec for an asteroid, but since asteroids move, the position is only good for a limited amount of time.

NINA, though, has a plug in that allows the input of an asteroid number, and it either gets the orbital parameters from the Minor Planet Center to calculate the position, or it gets the position from somewhere else.

What this allows me to do is to run the same script multiple times, even a few days later, if needs be.

And since I want to get photometric data, this makes things a lot easier.

Finally, I'd like to say a little about the Service Award that was presented to Malcolm Park at the March Public meeting (see page 4). It speaks highly of the Kingston Centre that of the nine people who are current recipients of this major RASC award, that 4 different RASC Centres are actually represented: Hamilton, Kingston, London, and Ottawa. Further, all continue to be active in the Kingston Centre.

Clear skies to you!

Roger Hill

# RASC Service Award Winner 2025 Malcolm Park

As a volunteer-driven organization the Royal Astronomical Society of Canada relies heavily upon the talents and contributions of its members to deliver programs and services. The Service Award was instituted in 1959 to recognize the contributions of members who, at either the National or Centre levels, have made a significant contribution to the life and vitality of the Society. The award is a bronze medal engraved with the winner's name and year of presentation.

The Service Award is a major award of the Society, and is given to a member in recognition of outstanding service, rendered over an extended period of time, where such service has had a major impact on the work of the Society and/or of a Centre of the Society. The Award is given only by resolution of the Board of Directors, on recommendation of the Awards Committee.

In 2026, one of the recipients of the award is Malcolm Park.

Here is the nomination letter that was sent to the RASC Awards Committee:

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No stranger to the Astro-Photography world, with an image on the back cover of the 2026 Observers Handbook of M16 also images in the Nicole Mortillaro's book Night Sky Almanac, to his own website where he sells his images, has multiple postings to Instagram, Facebook and many more platforms.

*Right: Roger Hill and Kim Hay applaud Malcolm Park after presenting him with a paper copy of the Service Award, as the medal that goes with it had not yet arrived.*

With a remote telescope hosted in San Pedro de Atacama Chile he images the Southern wonders and studies the sky for Asteroids with ID number X15. Not forgetting the Northern skies, he images an also chases Aurora's and weather storms.

A members of the RASC since 2014 but with being with Kingston since April 2020, he as always stepped up and helped out where he could.

Always spearheading projects with presentations and connections. Reaching out to Peter Cerevolo to assist in discussions on a mirror project for the RASC Kingston Centre, to creating an Astro-photography 101 class via ZOOM that helps others who are interested in doing Astro-photography. There have been three classes so far, and special guest speakers, Kerry-Ann Lecky Hepburn and Ben Law. It has been a very well presented program with so much information and teachings.

He was the Vice President from 2022-2024 and when asked to become the President he agreed, and is still the President of the Kingston Centre. He was one of the key people to help steer the Board through the administration process of the By-laws and ONCA government paperwork, not an easy job.

The latest project has been to help spearhead and bring together a donation of the 25" Obsession Attila Danko telescope for outreach work, in connection with the Lennox and Addington Dark Sky Preserve. Plans are underway for minor fixes and the County of Lennox & Addington will be building a storage facility for the Telescope of use in the spring of 2026.

He was also past President and VP of the NYAA, and is a primary person in helping to organize Canada's largest Star Party- Starfest.



*Left: Current Kingston Centre members who are recipients of the RASC's Service award.*



*From left to right: Roger Hill (1998), Kim Hay (2009), Rick Wagner (2019), Susan Gagnon (2014), Mark Kaye (2006), Kevin Kell (2006), and Malcolm Park (2026)*

*Absent: Walter McDonald (2009), Mike Hanes (2019)*



Of Mario Motta, Jean Mueller, the late Russell Porter, a Lunar Eclipse, and me.

On the morning of 3 March, 2026, a total eclipse of the Moon darkened the night sky over all of the world that was in night. The eclipse was fabulous. During its total phase, the Moon was not really its usual coppery red color but more of a greyish-brown. On the Danjon luminosity scale, I gave it about a 1.5 on the scale of 0 to 5. I was lucky to view this eclipse during the inaugural session at the San Diego Astronomical Association's newest acquisition. I do not recall an eclipse that was more fun than this one. And I have viewed 104 eclipses ranging from penumbral lunar to total solar.

On 1 March of this year, Dr. Mario Motta, a nationally known cardiologist and an expert on the history of Stellafane and light pollution, and I, travelled to San Diego, in order to view the total lunar eclipse and to meet Jean Mueller. We wanted to see it from the American west coast, where we could view the entire predawn affair with the Moon well above the horizon. We were viewing it with Jean, world renowned as an observer at Palomar Mountain Observatory. She has discovered 15 comets, 13 asteroids, and 107 supernovae in far-off galaxies. The combined accomplishments of these two viewers of the night sky are truly spectacular. But what was even better were her stories about life at Palomar, her work there at the Samuel Oschin 48-inch on the Second Palomar Observatory Sky Survey, and later at the 200-inch. She spoke to a group that was unequivocally spellbound. Jean was delightful. Mario built and uses a wonderful 32-inch f/6 telescope which peeks far into the Universe from the sky above the eastern United States.

Mario is an accomplished deep-sky observer, and has spent a lifetime learning about and living the history of his beloved Stellafane. In fact, during the drive westward we were also driving back in time and there was Russell Porter, sitting in the back seat, sharing tales and laughing with us.

As we waited for the first penumbral tinge of Earth shadow to touch the Moon, Mario admitted that he "hates" the Moon because it prevents him from more enjoyment of his cherished remote galaxies, clusters, and other deep sky objects. He and I enjoyed a verbal joust about the Moon right during the eclipse! I love the Moon, but he appeared to be winning until I offered a comeback. It was from Leslie Peltier's Starlight Nights, where Leslie introduced me to a nursery rhyme. We ended up turning this into a standing joke to which we laughed all the way back to my Arizona home.

"Lady Moon, Lady Moon, where are you roving?"  
"Over the sea, over the sea."  
"Lady Moon, Lady Moon, whom are you loving?"  
"All that love me, all that love me."

As joyous as the total eclipse was, our visit to Palomar the afternoon before the eclipse was truly magical. Again, Russell Porter was right with us. There, Jean recalled her many years there, first as an observer for the Second Palomar Observatory Sky Survey, then operating the mighty 200-inch telescope.

While there I finally got to complete a dream. In my 77 years I have delivered more than 3150 lectures. I like to imagine that the very first lecture was at the opening of the great telescope. Mueller, as versed in the history of Palomar as Motta is with Stellafane, told us that the telescope was dedicated on 3 June 1948. Was my first lecture (Lecture zero) delivered that day? I was twelve days old. On this day, 77 years later, I finally turned that into a reality. I gave a brief lecture near the wonderful 200-inch mirror, and another lecture at the visitor center near the 18-inch Schmidt camera which I used with Gene and Carolyn Shoemaker for seven wondrous years.

Enter Russell Porter, who seemed to accompany us throughout this visit. We got to have a really special visit with the person who designed the telescope and whose sketches are among the finest in the world. Even though

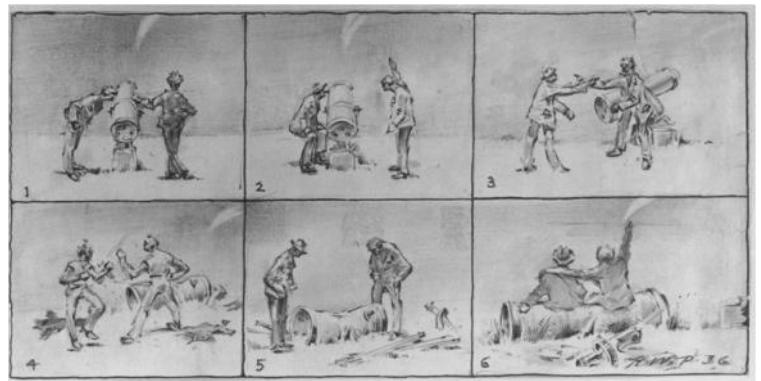
Russell Porter died before Mario was born, and when I was but a year old, it felt as though he had been recalled to life for us. Had he been alive I would have asked him, "In Berton Willard's biography of your life, he explained how you accepted Hale's offer of a position designing the 200-inch telescope. How many seconds did it take you to accept this life-changing proposition?" "Less than 3.14159 seconds," Porter might have replied with his trademark wide grin.

Porter's original sketched design needed revision. I envisage the meeting where that design was turned down, and what the other committee members said about it. "We reject this design, but we love your sketches; they are splendid, magnificent!" Porter's later design was accepted. In a stroke of genius, he took his now-famous design of a small garden telescope with its split-ring mounting, and upgraded it to the horseshoe mount we know and love.

What might have surprised the Palomar engineers in Porter's time was the elegance of the 200-inch design. It was, and still is, simplicity itself. The split-ring of its design descends directly from the split-ring he used in his wonderful garden telescope; I love to think of the mighty 200-inch as being the largest Porter garden telescope ever built. Finally, in the hallway surrounding the telescope are mounted many of Porter's sketches, among the finest artistry I have ever seen. But according to Jean, Russell Porter did much more than design the Hale telescope. He also chose the locations of the buildings that dot the Palomar mountaintop, from observatories to the offices and the houses. This mountain belongs to Russell Porter.

The only negative aspect of Porter's move to Palomar was the possible loss of his close friends at Stellafane, the amateur telescope makers event he founded in 1925. But according to Mario, Porter managed to return to his cherished Stellafane every summer. In my lifetime, I have been privileged to visit Stellafane many times, and once a month for seven years, I considered Palomar my second home. On this visit, the place displayed its rich times past like a brilliant full Moon, after the eclipse, lighting up the sky. The precious words he inscribed on the front gables of Stellafane's pink clubhouse inspire us to this day and this night: From the first line of Psalm 19: "The heavens declare the glory of God."

The first picture shows the Russell Porter-designed pink clubhouse with its inscription. The second is a Porter series of sketches about a fight over a comet. Notice the shape of the telescope in the fifth sketch. Pictures used with the kind permission of Dr. Mario Motta.



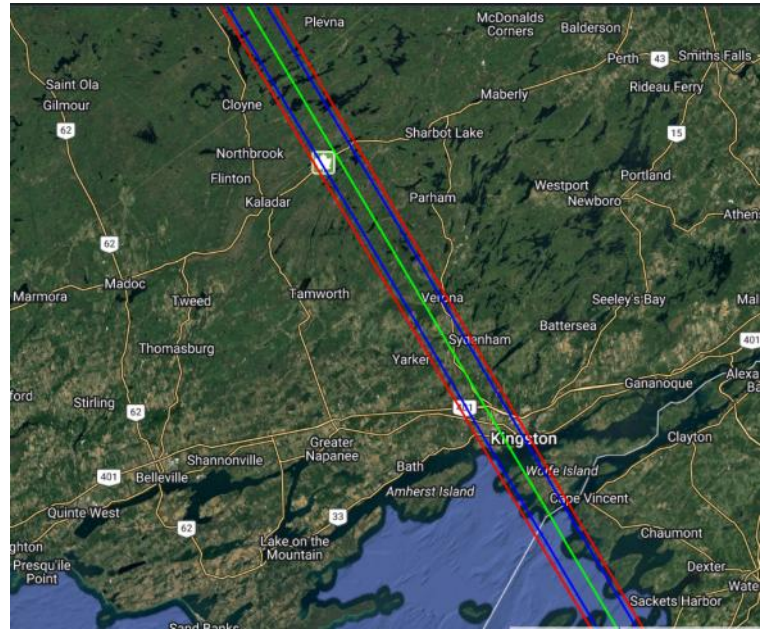
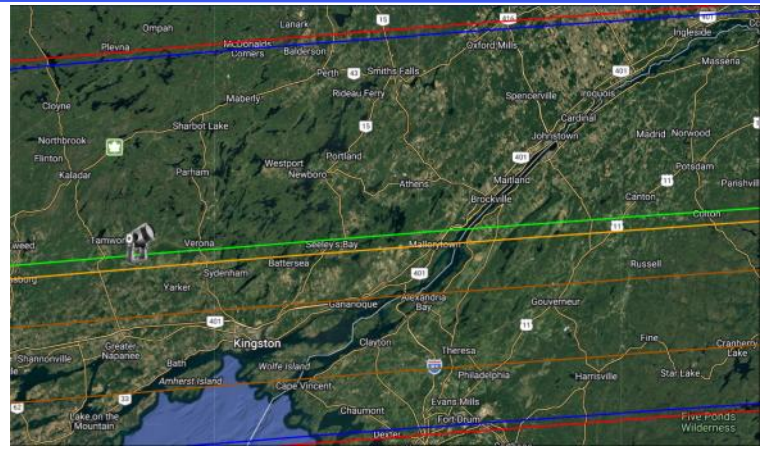
# The Sky This Month: Rick Wagner



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.

## Astronomy This Month – April 2026

- 01 Apr – Full Moon (22:12EDT)
- 03 Apr – Mercury (mag 0.4) at greatest elongation west very low in the eastern sky before sunrise
- 03 Apr – zodiacal light visible in the western sky after evening twilight's end
- 04 Apr – Comet C/2026 A1 (MAPS) perihelion, very near the Sun, very low in west at sunset – reaches mag -1??
- 06 Apr – Fang (mag 2.9) 3.5' N of Moon's limb (00:50EDT)
- 10 Apr – Last Quarter Moon
- 15 Apr - (4063) Euforbo (mag 16.1) occults TYC 1451-00474 -1 (mag 11.0) over much of SE Ontario (2050EDT)
- 15 Apr – (24302) 1999 XP242 (mag 19.2) occults TYC 2477-01033-1 (mag 8.32) over Kingston (2200EDT)
- 17 Apr – New Moon (0752EDT)
- 18 Apr – thin crescent (1.5d old) Moon 6° right of Venus (mag -3.9) during evening twilight
- 22 Apr – Lyrid meteor shower peaks mid-afternoon, best mid night-dawn and again starting late evening; minor shower, ~15 meteors/hour
- 23 Apr – First Quarter Moon
- 25 Apr – Moon narrowly misses Regulus by 2 arcmin (21:00EDT) *(the image to the lower left shows the grazing line. Observers to the north of it do not see an occultation. –ed)*
- 26 Apr – Comet C/2025 R3 (PANSTARRS) at perihelion just south of Sun, – reaches mag -1??probably invisible





With Spring upon us, this will be the last of the Winter constellations. I hope there is a chance to get a look at these objects so late in the season. All targets can be found in Cartes du Ciel. The bulk of the targets (all but numbers 5,7,10) are located from the head/horn of the Unicorn to the feet of Gemini, a great concentration for a star hop. Once again, I have not observed *all* these objects but it follows how I plan an observing session.

**NGC 2264**, The Christmas Tree Cluster: lots of added value here! The Christmas tree shape is actually upside down but may be set upright by your optics. The brightest star, 15 Monocerotis, is at the base of the tree. Also near the base is Sharpless 273 aka Fox Fur Nebula. At the top of the tree, pointing toward the base is the Cone Nebula. This object has no catalogue number other than its being part of NGC 2264

**IC 2177** is almost due south from M50, a large nebula, requiring 8 inches or more of aperture and a nebula filter would help although the 'head' region is said to be 'bright'.

**T Monocerotis** Bright variables like this are great for binocular work!

**M50** is an open cluster, dominated by blue and white stars, personal log, 'bright, tight cluster'.

**NGC 2237** (Rosette Nebula) and 2244 (the star cluster within the annulus). The whole of the nebulosity we know as the Rosette was discovered piecemeal over the 1880s and 1890s, and has been recorded as NGC 2237+2238+2239+2246. The photo supplied by Shelly Jackson is not what you will see at the eyepiece but with a dark sky you may see some fuzziness. NGC 2244 however is a cluster of ~100 stars with a collective magnitude of 4.8 according to Stephen O'Meara. More stars are suspected of being part of the cluster but are obscured by the nebula.

**NGC 2261**, or Hubble's Variable Nebula, also Caldwell 46 is reported as a bright nebula. It was discovered by Wm. Herschel but the variability was recorded by Hubble. Visually it may look like part of a star pair as its shape is compact. Studies at the CFHT suggest the source of its variability to be the star R Monocerotis which is probably a binary system whose young hot primary star has matter accreting onto its surface.

**11 Mon or Beta Mon** (HIP 30867) is on the Double Star list but it is in fact a triple. Colours recorded as white or pale white(!). Wm. Herschel, the discoverer in 1781 described it as 'one of the most beautiful sights in the heavens'. The A component is also thought to be a close binary due to the radial velocity.

Object	Description	RA hr: min	Dec deg:min	Mag
NGC 2245	Levy:Nebula, reflection nebula.	06:33	+10:10	11, with a 7.6 mag star on the periphery
NGC 2252	Levy: OC 'rope of stars'	06:35	+05:23	7.7 Sparce
NGC 2254	Levy: OC with star chain	06:37	+07:40	9.1 Fainter than 2252 but denser.
NGC 2264	Levy: Christmas Tree cluster.	06:41	+09:53	3.9
IC 2177	DSC: Emission/Reflection nebula	07:05	-10:42	Large, faint with bright patches. The Seagull Nebula
T Mon	Classical Cepheid Variable.	06:25	+07:05	5.6-6.6. Period ~27 days. Near the Rosette
M 50	Messier: OC	07:00	-08:16	6.0
NGC 2237 and 2244	Finest: Open cluster NGC2244 surrounded by NGC2237, the Rosette Nebula! (see front cover—ed.)	06:29	+04:40	NGC 2244 brightest star 5.9
NGC 2261	Finest: Hubble's Variable nebula	06:36	+08:46	
Beta Mon	Double Star: (3 stars!)	06:29	-07:02	5.3, 5.0, 4.6



RASC Light Pollution Abatement Committee workshop notes (2026, March 28)

There was a national RASC Light Pollution Abatement Committee workshop yesterday via zoom with 33 participants from across Canada. It was also over 5 hours long :)

Under the auspices of Bob King (Calgary) and Bernie Hasselman (Ottawa) it was a good session reconnecting with the LPA across the country and individuals in particular: Richard Huziak, Roland Duchesne. Also good to see were Don Towne and Steve Burr (Belleville).

Most of the workshop dealt with the large scale National Programs of Dark Sky Sites and a new category coming this summer.

A Dark-Sky Preserve is an area in which artificial lighting is very limited and strictly controlled, and active measures are in place to educate and promote the reduction of light pollution to the public and nearby municipalities. Sky glow from beyond the borders of the Preserve will be of comparable intensity, or less, to that of natural sky glow. Public are able to access the Preserve at night.

A Nocturnal Preserve is an area in which artificial lighting is very limited and strictly controlled, and efforts to engage municipalities in the reduction of light pollution are ongoing. The primary focus is to protect the nocturnal environment. Nighttime access for astronomical viewing may not be possible. The Preserve delivers public education programs about the night sky, nocturnal environment, and light pollution abatement.

An Urban Star Park is an area in which artificial lighting is strictly controlled and active measures are in place to educate and promote the reduction of light pollution to the public and nearby municipalities. Skies are generally brighter than other designations due to nearby urban areas, but are still usable for astronomy.

Many of us noted that the smaller Centres (Kingston included) with under 100 members often had only 10 or so volunteers shepherding the organization and that this level of Program was too much to even think about. That's why the National Organization looks after the big picture stuff.

After a break for lunch the focus shifted to small picture stuff. Things like the upcoming creation of a world class web repository of LPA material, content and links.

not having a lot of impact. Ideas like engaging with Birders, who have x100 or more of our members, and Naturalists (ie Kingston Field Naturalists) and Health organizations for the impact on human health and First Nations, as the first stewards of the land.

Windsor is still having issues with Greenhouses as well as the new Gordie Howe bridge uplighting. Many existing RASC certified Dark Sky Sites have not been submitting required reports...they may be at risk of loosing their status.

French Language issues continue, as they have for decades as well. Possible collaboration with the FAAQ (<https://www.faaq.org/>) (2000 members and 27 clubs and 9 corporate members) and better collaboration with CASCA is in the works.

Communication with Centres and between Centres have been worse than poor. Not good things were said about the current RASC email distribution list. RASC LPA will consider a newer, better system such as groups.io or Google... that would allow attachments, images and better communication.

The current LPA WebPages ([rasc.ca/lpa](http://rasc.ca/lpa)) are out of date and everyone is awaiting the rollout of the new [rasc.ca](http://rasc.ca) website. Links to Centre resource URLs have been found to be bad 404 errors...as many Centres (like ours) change up their websites and move content around. It was suggested that all centres have an LPA landing page like [kingston.rasc.ca/lpa](http://kingston.rasc.ca/lpa) and all outside sites direct traffic there, instead of specific links that may change. QR codes were brought up as an additional method of having URLs available to the public.

Another resource slated to roll out to Centres are prepackaged powerpoint (or open document format equivalent) presentations about LPA for public education and outreach. We also suggested shorter big picture overview and recent updates to show at Centre meetings twice a year or so.

An item submitted decades ago for consideration may be in the most recent budget request... a plan to cost share data logging Sky Quality Meters across all centres for long time baseline data. Centres could help contribute to the cost as well as possible grants to offset the large expense.

Another suggestion was an update and reprint of the 2009 IYA light pollution trading card set, from RASC Victoria. They received a grant to produce and Centres paid for shipping. These have been a great hit at outreach.

Paper handouts were discussed and inflation has hit B&W paper production as well. A two page back to back trifold brochure starts at around \$0.40 at Staples.

The last time RASC Kingston did an LPA brochure (images below) was back in 2008 and cost about \$0.02 to produce. Times have changed!

There was discussion about changing up terms like "Responsible Lighting" to "Respectful Lighting" and trying to engage with other organizations as after 30+ years of going with Dark Skies.. it just is

**Successes in Responsible Lighting**  
 \* Kingston Ontario - replacing all color head style street light fixtures with full cutoff light fixtures - starting 2001/October

**The Royal Astronomical Society of Canada - Kingston Centre**  
 PO Box 1700  
 Kingston, Ontario  
 K7L 5S6  
 Telephone: 613-377-6029  
 Monthly Public Meetings & Lectures  
 2<sup>nd</sup> Friday of each month at 7:30pm  
 Queen's University Student Hall, Theatre A  
 (enter from Butler Lane (University Queen's Campus))  
 Electronic Mail: [kingston@rasc.ca](mailto:kingston@rasc.ca)  
 Website: [www.rasc.ca/kingston](http://www.rasc.ca/kingston)

**2007-2008 Board of Directors**  
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**What can you do locally?**  
 \* Inspect your own outdoor lighting for lighting use it where you need it, shield it if necessary, trim trees (don't let your light trespass), cover/surge (do you really need 200 watts)? Try out 60 watts and see if it is enough, install a motion sensor if a light does not need to be on all night, or use photo-cell controlled fixtures so your light does not stay on all night AND day.

**Responsible Lighting**  
 Light Pollution is the Problem.  
 Responsible Lighting is the Solution

**Light Pollution view of Eastern North America**  
 This picture was taken in 1972 by satellite and is a composite from many images. As you can see, the night light that is produced can be seen from space.

**How much energy is wasted?**  
 With unshielded lights, about 40% of the light is directed to the sky, where it serves no useful purpose. Another 30-50% is reflected from bright ground sources. Since outdoor lighting consumes about 20% of our total electrical energy use, we are talking about large sums of money. YOUR MONEY.

**What is Light Pollution?**  
 Light pollution is a generic term that encompasses many different aspects of improper lighting. The three major components of light pollution are light trespass, glare, and urban sky glow.

**Bad Lighting - Light Trespass**  
 A photograph of the night shows a city's stars at all. They visible evidence of wasted light energy, away and in an adverse impact on the light environment and on our eyes of discomfort.

**Good Lighting - Well Shielded and Aimed**  
 Light trespass can be described as the effects of light or illumination that strays from its intended purpose. Probably the most annoying and safety related aspect of light pollution is glare.

**Urban Sky Glow**  
 Urban sky glow is the result of stray light being scattered in the atmosphere by scattering the natural sky background level. This effect is extremely detrimental to astronomers.

**Basic facts for responsible lighting:**  
 Use light only where you need and use it.  
 Use full cutoff fixtures to see the light where you need it and no where else.  
 Use the appropriate wattage and use more than you need!  
 Use a motion sensor. (don't confuse the idea of lighting to when it is needed).

**References:**  
 RASC Kingston: <http://www.rasc.ca/kingston>  
 RASC LPA: <http://www.rasc.ca/lpa/>  
 IYA Greenhouse Dark Sky Association: <http://www.darksky.org/>  
 Membership Application forms are available at: <http://www.rasc.ca/>

## Observatory designs part 2 - Roll off Building

There are a great many different designs for observatories. I will attempt to go through a few of them and make comments on the various pros and cons, to help you decide what type you may wish to build in the future.

Part 1 - fold down roof

\*\* Part 2- roll off building

Part 3 - roll off roof

Part 4 - Dome style

This is the SCGO Serenity Mark 2 observatory. About the most minimal size and cost, a 4'x4'x4' cube.

A platform was built around 4' wide by 10' long with angle iron tracks. Inverted V-groove wheels were added to the bottom of the building. The opening roof flaps were closed and sealed. Wood pellet Plastic Bags were added to the roof but they soon disintegrated. A hardier Dupont material was used to cover the roof and make it watertight.

A concrete pier in a BigFoot form was added and it took a lot of back and forth to determine how high to make it so the telescope would clear the door opening. A wooden adapter between the pier and the telescope mount was built and added as well.

In addition, the idea was for the rolled off building to be used as a control station, so all of the computers, display, keyboard, mice, etc had to be mounted on the building itself, and yet still fit when the building was closed.

In the end it did need a lot of modification, addition and expense to turn from flip open roof to roll off building, but still less than building from scratch.

See the article on observatory designs Part 1 on why the decision was made to renovate.



Will Comet/2026 A1 MAPS survive its perihelion? Closest approach is expected April 4 and if the comet survives it should brighten. Predicted magnitude (apparent brightness) is -9, almost as bright as the full Moon (-12). Keep checking on this as it should clear the Sun's glare by April 7. Do not try to look at this while it is still in the Sun's glare. You don't want to miss the comet and get the Sun!

Referring to stars by Magnitude is something we've been doing since at least the ancient Greeks. The brightest stars were declared 'first magnitude' and it stuck. In 1856, N. Podgson decided that a first magnitude star would be 100 times brighter than the faintest star visible without a telescope. So that made 2nd magnitude stars 2.5 times less bright and 3rd are 2.5 times fainter still. Naked eye limit is around +5, binoculars +6.

How would you describe this comet, if it survives? Astronomers refer to altitude as an angle, degrees of length as well as apparent Magnitude. (How high, how wide and how bright) This isn't as hard to do as it might sound. Any of my art students might remember, the thumb is a great way to measure and check proportion. Use your arm fully outstretched, with elbow locked, so that length becomes a constant. Close one eye and look at what is covered by the thumb. That is two degrees (or four times the width of the Moon), a closed fist would be 10 degrees and a splayed hand (stretched hand from tip of thumb to tip of little finger) is 20 degrees. Directly over head is the Zenith at 90 degrees and ground level is zero, half-way is 45 degrees. Then make a guess at the altitude angle. If this comet does turn out to be spectacular you might want to remember what you personally saw. Take photos, and write it down.

This month the planets are putting on quite a show, all of the naked eye planets can be seen this month. Mercury will be low in the E in the morning, best during the first week. Venus will be low in the WNW during evening twilight. Mars will be extremely low in the ESE during morning twilight. Jupiter will be in the W and will set before 1 am. Saturn will rise in the morning twilight around 6 am. Remember, Uranus and Neptune need aide to be seen (magnitude 5.6 and 8 respectively)

We start with the Full Moon on April 1 (Maple Syrup Moon). The 3rd has Mercury at its furthest from the Sun. As the Moon's light becomes less intense, you might be able to see Zodiacal light after twilight for a couple of weeks. Sirius (Alpha Canis Major M -1.42) the brightest star, might be visible unaided before Sunset this week.

The Moon is at apogee on the 7th and Last Quarter on the 10th. The Lunar Curtis X is visible as well.

If you know where you are looking you could see Vega, the bright star in Lyra, after morning twilight this week.

Mars will be just N of Neptune on the 13th and maybe close enough to be seen together in an eyepiece?

On the 15th, Mercury will be 5 degrees N of the Moon, Neptune will be 4 degrees S of the Moon and Mars will also be 4 degrees S of the Moon. This is part of the dance of the planets.

On the 16th, Saturn is 5 degrees S of the Moon and Mercury is 1.4 degrees S of Neptune.

New Moon is on the 17th and the crescent should be visible right after sunset.

The Moon is at perigee on the 19th with Venus 5 degrees S of the Moon, Uranus 5 degrees S of the Moon and Mars 1.3 degrees N of Saturn.

On the 20th Mercury is 1.8 degrees S of Mars and 0.5 degrees S of Saturn.

The Lyrid meteor shower is on the 22nd, Jupiter is 4 degrees S of the Moon and it is the 25th Anniversary of Chris Hadfield's First Space Walk.

First Quarter Moon is on the 23rd.

Venus will be 0.8 degrees N of Uranus on the 24th.

Regulus, the brightest star in Leo, will be occulted (covered) by the Moon for Southern Canada (*see page 5. -ed*). Starts at 8:45 pm. The Lunar Straight Wall is visible on the 26th.

Wednesday, March 11, 2026

Minutes of the RASC-KC Regular Monthly Meeting

Ellis Hall, Room 226, Queen's University, Kingston

**The meeting** began at 7:07 pm, with Malcolm Park stating that "We acknowledge that we are on the traditional homeland of the Anishinaabe, Haudenosaunee, and the Huron-Wendat and we thank these nations for their care and stewardship over these lands."

**Malcolm Park** welcomed Kingston Centre members and guests. Other than Public meeting nights, we host Wednesday night Zoom Socials, with an invitation posted to the Centre's email list. Our monthly newsletter, Regulus, can be found on the RASC Kingston Centre website <https://kingston.rasc.ca/>

**Malcolm Park** shared a brightness chart of Comet C/2026 A1 (MAPS), newly discovered and potentially a good target.

**Speaker: Dr. Laurie Graham**, 'Pretty Pictures from the James Webb Space Telescope: The Telescope and the Science Behind the Images'. Placed into orbit at the second Lagrange point with an approximate life span of 20 years and imaging in the infrared, Laurie discusses the engineering and science during the build through to the deployment in space. Comparing JWST images with the Liverpool Telescope, Hubble, and Spitzer telescopes among others, Laurie confirms the value of multi wavelength imaging.

**Kim Hay**, an RASC Service Award recipient, called on her fellow recipients: Roger Hill, Rick Wagner, Susan Gagon, Mark Kaye, and Kevin Kell, to welcome Malcolm Park to their ranks. The RASC Service Award is a major award for the RASC and is given in recognition of outstanding service to the Society and/or Centre. The nomination letter was written by Kim Hay on the recommendation of Roger Hill. Congratulations, Malcolm.

**Rick Wagner:** Astronomy this Month March 2026

12 Mar – QUARG – Anna Sligo, Neutrinos

14 Mar – Queen's Observatory Open House

26 Mar – QUARG – Will de Rocco, Ganymede and Dark Matter

02 Apr – QUARG – Wenzer Qin, SMBH Formation BAA Events

19 Mar – Education & Outreach Section

25 Mar – Special General Mtg (YouTube, 12:30)

## Sky Events – March

11 Mar – Last Quarter Moon

11 Mar – Gegenschein may be visible from very dark skies near midnight for next 2 weeks

18 Mar – New Moon (21:23EDT)

20 Mar – Spring equinox (10:46EDT)

25 Mar – First Quarter Moon (15:18EDT)

27 Mar – Moon occults k Gem (double star) (mag 3.6) (evening of 26th!)

## Sky Events – April

01 Apr – Full Moon (22:12EDT)

03 Apr – Mercury (mag 0.4) GEW

03 Apr – Zodiacal light

06 Apr – Fang (mag 2.9) 3.5 degrees N of Moon's limb (00:50EDT)

## Comets

C/2024 E1 (Wierchchos) (mag 11) low in SW after sunset

C/2025 R3 (PANSTARRS) (mag 11) low in ENE before sunrise

C/2026 A1 (MAPS) (mag 11) low in W after sunset

20P/Schwassmann-Wachmann (mag 13) – xtrm Srn Leo

## T CrB

Rises mid evening, transits at astronomical dawn. Still faint

## Major Planets

Saturn (mag 0.9) & Neptune (mag 7.8) too near Sun

Venus (mag -3.9) low in W after sunset

Uranus (mag 5.8) well up in W after sunset

Jupiter (mag -2.3) transits at nautical dusk, sets very early morning

Mercury (mag 1.1) very low in E before sunrise (GEW 04 Apr)

Mars (mag 1.3) too close to Sun

## Small Bodies

12 Mar – (1027) Aesculapia (mag 15.4) occults star UCA 551 -044990 (mag 10.1) (23:04EDT)

13 Mar – (222847) 2002 EL85 (mag 19.6) occults star J2203212.80+031330.4 (mag 9.6)

18 Mar – (82) Alkmene (mag 12.2) occults star TYC 1899-01592-1 (mag 9.5)

21 Mar – (20) Massalia (mag 8.9) at opposition

25 Mar – (15) Eunomia (mag 9.7) at opposition

**Bruce Elliott:** Reminder of two upcoming outreach events.

FLA Science Fair on March 26/27. Prior to the event, a project list will be posted to the chat list and feedback on astronomy related projects most welcome.

Planning for Science Rendezvous on May 9th is well underway. All volunteers, new and returning, must apply and Bruce will let everyone know when the application is available.

**Next meeting:** in person at Queen's University, Ellis Hall Room 226, on Wednesday, April 8th, at 7pm.

**Malcolm Park** thanked all for attending and the meeting ended at 8:43 pm.

# 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.



After Laurie Graham's spectacular talk about the James Web Space Telescope, I went looking for an image that would be appropriate this month. Etienne Klein, a research director at the EA&EAC in France noted on X (formerly Twitter) that this is a "Photo of Proxima Centauri, the closest star to the Sun, located 4.2 light years from us. She was taken by the JWST. This level of detail... A new world is revealed day after day."

## 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 Coordinator	Kevin Kell
Secretary	Elena Zanetti
Librarian	Kim Hay
Equipment coordinator	Kevin Kell
Science Rendezvous/FLASF	Bruce Elliott
Annual Member Image Gallery	Brian McCracken
Queen's Open House coord	Laurie Graham
Web Team	Kevin Kell and Walter McDonald
Social Convenor	Mike Hanes
Email Chat List Moderator	Kim Hay
Facebook Team	Kim Hay
Fall'N'Stars KC coordinator	Mike Hanes
<b>Honourary President:</b>	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

The Rosette Nebula in Monoceros, an emission and star forming region 5200 light years from Earth. This lovely image was taken by Shelley Jackson.