Regulus

Newsletter of the RASC Kingston Centre

Vol. 52 No. 10 November, 2025

In this issue:

Centre Events for November, 2025:

Nov 5: Zoom Social Meeting
Nov 12: Monthly meeting 7pm at Queens University
Room 226, Ellis Hall,
58 University Avenue, Kingston
Nov 13: Astrophotography 101 7pm via Zoom:
NINA and image capture
Nov 19: Zoom Social Meeting
Nov 26: Zoom Social Meeting
Dec 3: Zoom Social Meeting
Dec 10: Annual Banquet at the Mandarin

President's Report

Malcolm Park

I would like to begin my report by thanking the Board of Directors of the Centre, the non-elected officers and volunteers and all members, for making 2025 such an enjoyable experience in amateur astronomy.

Among the Centre's goals, we aim to promote and foster a greater awareness, understanding, and appreciation of astronomy and allied sciences among the public at large, particularly among our youth and in schools, and with any other group/individual who request our assistance. This is only possible with our volunteer's hard work and dedication.

2025 Highlights:
We have monthly in person meetings and have kept Zoom for the winter months of January and February to minimize the risk of driving in poor winter conditions. Prior to our meetings, we have been going to the Portsmouth Tavern for supper. This has consistently been a popular part of our meeting nights. Mike Hanes volunteered to be our social convener, and we are grateful to him for taking this on.

Susan Gagnon has been recording our in-person meetings for upload to the YouTube channel. We hope that this provides members with a way to stay connected and enjoy the meeting if they can't attend in person.

Susan has also been the Treasurer for the Centre for many years. I would like to thank Susan on behalf of the Centre for her contribution as Treasurer, and a Director. Susan's term ends this year and she has indicated that she will not stand for re-election.

Mark Kaye has taken on the role of primary host for the Wednesday Social Chats on Zoom, with help from time to time from John Hurley and Susan.

Our meetings have been well attended, and we have had a good mix of presentations over the year. I would refer you to the detailed report from our Secretary, Elena Zanetti, but some of the highlights include presentations by Mike Karakas, Winnipeg Centre, Alan Dyer from Alberta and we even had the National Director, Jenna Hinds give us a presentation on the recent history of the RASC.

Thanks to Bruce Murray for his role as the Centre's Auditor this year.

Elena Zanetti does a wonderful job as the Secretary, providing us with an excellent record and accounting of the meetings and activities of the Centre.

John Hurley is our National Council Representative and keeps us informed on all things to do with the National Organization.

Kim Hay has the dual role of Vice President and Librarian. Kim's term as Director is up for lection this year, and Kim has stated that she will stand for re-election for another. Thank you, Kim, for all you do.

With regards to the Centre's Newsletter Regulus, there is a new Editor in chief in 2025, Roger Hill. Thank you, Roger, for your contribution to the Centre as a Director, and the Editor of Regulus.

Rick Wagner (Past President) continues to present his very thorough and informative What's Up in the Sky at our monthly meetings.

Kevin Kell and Walter McDonald keep the website up to date and filled with relevant current information. There has been chatter about updating the website and moving away from the current software. Stay tuned!

Thank you, Kevin Kell, for your contributions to the Center as a Director at large, and for being the equipment coordinator. The SEESTAR S50 has proven to be very popular, and Kevin ensures that everyone gets a turn with it.

And we are grateful to have our Honourary President David Levy. David is present at most of our Zoom socials and begins the meeting with poetry and quotations.

2025 RASC Kingston Centre Outreach:
Our RASC KC team continues to help at Queen's University Observatory Open House, led by Laurie Graham with Susan and Elena. Rick Wagner and Rose-Marie Burke volunteered at a Rideau Lakes event, and The Science Rendezvous Team was once again actively involved. Our Secretaries Report has more information, with a list of participants, but many thanks to all volunteers.

Astrophotography 101 Courses
Throughout 2025, a number of courses were presented on different aspects of Astrophotography. Intended to help people get the most out of the hobby, topics included: Wide Field imaging, Equipment setup, software, Processing images, Mosaics, Planetary and Solar, and Comets. We had special guest presentations from Kerry-Ann Lecky-Hepburn on Wide-field DSLR astrophotography, and from Benjamin Law on Planetary and Solar imaging.

We are past the peak of the current Solar Cycle, and Solar activity seems to be slowing. We have had some CME's from time to time, but nothing like last year. However, at the fall equinox activity did pick up. This image was from my backyard near the end of September.

Fall'N'Stars was held as usual at Johnson's RV Park, in Prince Edward County in September and a great time was had by all. Pizza, salad, swap table, door prizes, group photo. Fall'N'Stars has it all.

RASC KC Observatory
The Centre found a home for the materials stored on Tessa Clark's property. Centre member Kevin Wenkoff offered to take possession of the dome materials and a Big Move was organized in July. John Hurley supplied the muscle vehicle, and we loaded up a trailer and hauled everything up to Bellrock. Thanks to Kevin's wife Karen for hosting a lovely lunch after the move. We look forward to hearing how Kevin makes out.

C/2025 A5)Lemmon)
Comet Lemmon brightened towards the end of October 2025

T Corona Borealis:
We are still waiting for it to blow! It was anticipated that this might be a big story in 2024, and then in 2025! it may yet be.

The Annual Astro-Photography Gallery
Brain McCracken is compiling the best of 2025 RASK Kingston Centre Astro-photo gallery.

25" Obsession donated to the Centre
The Estate of Attilla Danko donated his 25" Obsession dobsonian telescope to the RASC Kingston Centre for use in outreach programs. This wonderful instrument will be deployed to the Lennox and Addington Dark Sky Viewing Area. The opportunity to offer the large numbers of attendees to see the universe with such a high-quality instrument is very exciting. The plan is to have a shed constructed on-site, so that the telescope can be stored fully assembled. There will be a grand opening event in April or May to celebrate the donation and the first light at L&A DSVA.

Finally…
Amateur astronomy clubs are volunteer organizations. We have a position opening on our Board of Directors at the AGM in 2025. The new Director will be asked to take on the role of Treasurer of the Centre. Many Centres do not have the active membership base to fill their Board, and so the same members continue to do the same things until they burn out. 2 out of 7 of our Board are relative newcomers. This is great! I hope we can find another new member to be Treasurer. I encourage you to volunteer. The Centre only exists if we volunteer to help run it.

My term is also expiring this year as President, and I am willing to stand for re-election.

The RASC Kingston Centre has a diverse and active membership base, with expertise in a wide array of astronomy disciplines to help newcomers get started. It is a pleasure to be a member of the Society, and I thank you all for your contributions.

Malcolm Park,
President, RASC Kingston Centre

The Editor's Keyboard

Roger Hill

The clouds of November are coming. The period of the year with the most cloud cover generally runs from late October to late May, while the clearest part of the year is from late May to late October. However, we do have something to celebrate in November, which is the return of Standard Time! The front cover image is a celebration of this.

Have you had a good time following Comet Lemmon? I must admit to having had a mixed time of it, as I was using my 80mm triplet with the ASI071 One Shot Colour camera I picked up at Starfest.

Initially, it looked like an excellent match. The camera has an APS-C sized sensor, although it's a few years old now, and the scope is a Barska 80mm f/7 ED Triplet Apochromatic with a MoonLite focuser and a ToupTek automatic focus motor. Focusing is a breeze, and the stars are incredibly sharp. Visually, with an 11mm Televue Nagler, it's a treat to use. Even so, I added a Williams Optics Minus Violet filter just to take care of any deep blue chromatic aberration.

Using Astrophotography Tool (APT), the focus was tack sharp, and so I set off to take dozens of exposures. In fact, the first night, I tried very short (5 second) exposures to try to cut down on the number of satellites I was seeing. I figured I could remove the Musk-polluted images, and still have enough exposure time left over to have enough to stack.

It didn't work out. The stars in my images were all bloated.

I tried again a couple of nights later, doing longer images this time, but the murk down so near to the horizon defeated me. I did, however, take some images of the Pleiades and M33, but again, the stacked images were all soft.

I re-did my darks, flats, and dark-flats, but that didn't help.

The next clear night, I took a very long exposure, and noticed that some stars had red halos. This is something I should have noticed, but my colour vision is faulty, and I hadn't noticed the halos until they were obvious due to the 120+ second exposures I tried. I took some long exposures and adjusted the focus slightly each time to try to find out how much, and in which direction, I should offset the camera from what OPT said was perfect focus.

I also tried using a Neodymium filter, but that didn't help, either.

I was also getting some stars in the corners that were obviously non-stellar, too. I then realized that t he last time I had rotated the focuser, to move the focus motor to vertical, rather than horizontal so it was out of the way, I had not tightened down the screws. This helped a lot with the stars in the corners, and another set of images was taken, along with a further set of flats.

The red halos remain, though. I think I'm going to try using the ASI071MC camera with camera lenses for wide field, or the 6" RC for smaller objects.

However, I'll wait until I try out the Centre's SeesStar S50, and perhaps that will satisfy my astrophotography wide field astrophotography needs, and I'll keep the Barska triplet for outreach activities.

Or maybe try a different filter!

This is issue #10 for me, and marks the end of my first year of producing Regulus. I've really enjoyed myself getting back to doing a monthly Centre newsletter, particularly when there are so many people who send in material for me to collate and present to you. Not only does it make my life easier, but it gives a wider range of viewpoints and interest when multiple people send in material.

Regulus is not just the official voice of the Kingston Centre, it is the authentic voice of the Centre, too.

And I am deeply honoured to have been entrusted with it.

Clear skies to you!
Roger Hill

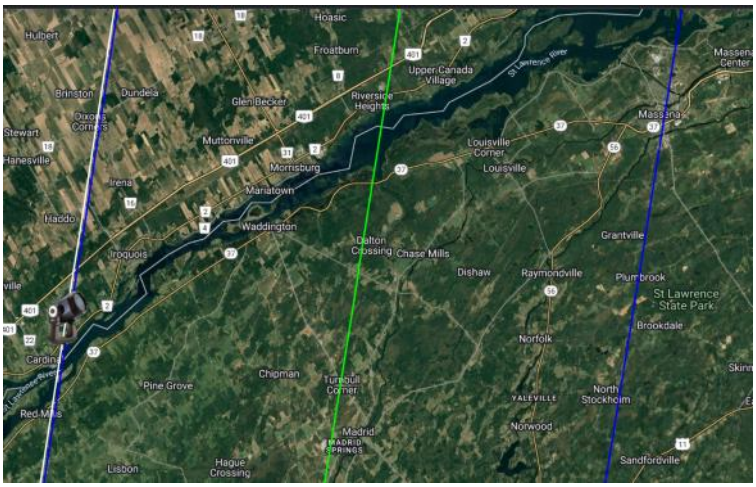
The Sky This Month

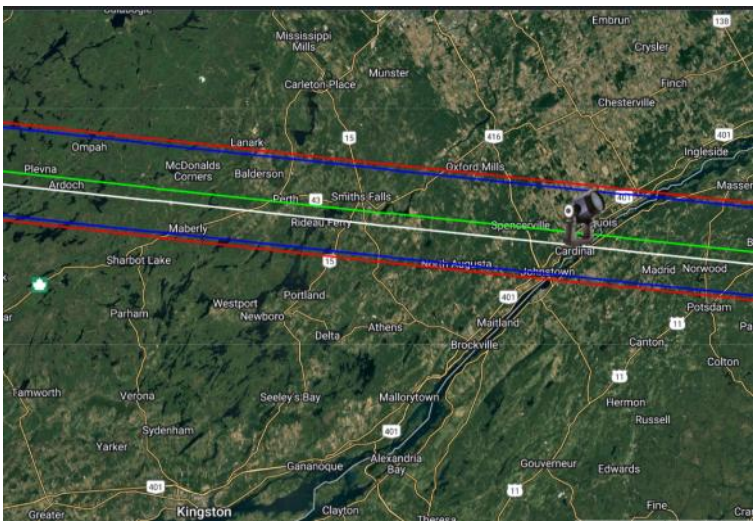
Rick Wagner

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 Nov – (12041) 1997 EQ25 occults UCAC4 486-008490 (mag 12.0) over Sharbot Lake about 06:21EDT
01 Nov – comets C/2025 K1 (ATLAS) (mag 10?) and 29P/Schwassmann-Wachmann (mag 12?) in eastern Virgo or southern Leo visible moderately high in the ESE before morning twilight for the next few days until the Moon interferes
02 Nov – DST ends (02:00EST)
03 Nov – (2179) Platzeck occults UCAC4 550-048997 (mag 12.5) over Yarker, Sydenham, Kingston, Gananoque about 03:54EST
05 Nov – Double shadow transit on Jupiter (01:15EST)
05 Nov – S. Taurid meteor shower peaks – minor shower, best before dawn
05 Nov – Full Moon (08:19EST; largest of the year)
05 Nov – minor planet 12 Victoria at opposition (mag 9.8)
05 Nov – comet C/2025 A6 (Lemmon) (mag 6?) visible low in the west shortly after sunset for the next week
09 Nov – comet C/2025 R2 (SWAN) (mag 8?) visible high in the south in early evening, free of bright Moon interference until 23 Nov
11 Nov – (262) Valda occults UCAC4 606-032822 (mag12.4) over Centreville, Yarker, and Kingston about 23:28EST (see map, lower left)
12 Nov – Last Quarter Moon
12 Nov – N. Taurid meteor shower peaks – minor shower, best before dawn
15 Nov – zodiacal light visible in eastern sky before morning twilight for the rest of the month

16 Nov – interstellar comet 3I/ATLAS (2025) (mag 12?) visible in medium to large telescopes low in the eastern sky before dawn for the next two weeks
17 Nov – Leonid meteor shower peaks – moderate shower, best before dawn
18 Nov – comet C/2025 K1 (ATLAS) (mag 11?) visible in southern Ursa Major high in the east before morning twilight
18 Nov – 29P/Schwassmann-Wachmann (mag 12?) still in southern Leo visible moderately high in the SE before morning twilight
20 Nov – New Moon (01:47EST)
20 Nov – minor planet 68 Leto at opposition (mag 9.9)
21 Nov – Uranus at opposition
22 Nov – (24471) 2000 SH313 occults UCAC4 578-003057 (mag 11.3) over Morrisburg about 18:55EST (see map, upper right)
24 Nov – Saturn's rings reach minimal tilt of -0.37º from edge-on and start to open up again
24 Nov – (11683) 1998 FO11 occults J000319.58-052342.8 (mag 12.1) over Cardinal and Morrisburg about 20:48EST (see map, lower right)
28 Nov – First Quarter Moon
28 Nov – lunar Straight Wall (Rupes Recta) visible this evening





One of the best runs of the current Jupiter season 2025.

This was an early morning imaging run that I was lucky enough to have the clouds go away before sunrise.

22 Runs of Jupiter , imaging for 180 seconds each run with an exposure of approx 3.6ms.. getting a 150+ frames per second.

I processed all of them at 5%, then picked the best run (the last one) and also did it at 25%, just to keep checking that my best 5% is better than by best 25% of the frames. Yes.. 5% was definitely better (sharper, more detail) than the best 25%.

This is the best 5% of28K frames captured with Firecapture, processed with autostakkert! v4, Register, ImageMagick and gimp.

It was taken with a Celestron C9.25 (f10, D=235mm) with an Antares x1.5 Barlow and a ZWO ASI585MC camera, using a region of interest of 600x600 pixels and a Firecapture cutout box of 400x400 pixels. Autostakkert! used x1.5 drizzle to get a bigger absolute image (600 pixels instead of the cutout original 400 pixels). The mount is a Skywatcher AZ-EQ6GT mount on a concrete pier with a wooden adapter plate. The scope has a foamy dew shield of about 35cm, a Corrector plate Celestron dew heater ring. The focuser is a Pegasus Moonlight remote focuser. The dew strap on the back end of the OTA is no longer there, being replaced by the front corrector plate heater.

When one is out and about and one is from time to time, one might see a very interesting sign "Observatory".

So we saw the sign and quickly ran over to see what the observatory looked like.:

Stuff from Kevin (Continued)

This is the Douglas 25cm mirror and cell. As you can see it was held together with three big gobs of silicon adhesive on the bottom and three more gobs on the sides, as well as three screws of nylon.

We tried many tools to get these two apart, including but not limited to:
hacksaw blades, utility knife blades, three types of dental floss, a multi-vibrating tool, chisels and more!

What finally worked was this: a braided picture frame wire... We were aiming for a "wire saw" but the hardware store did not carry one.

Member Image Gallery

RASC-Kingston Centre 2025 Member Image Gallery

It is that time of year to start thinking about and looking at your 2025 images for submission to the RASC-Kingston Centre 2025 Member Image Gallery.

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.

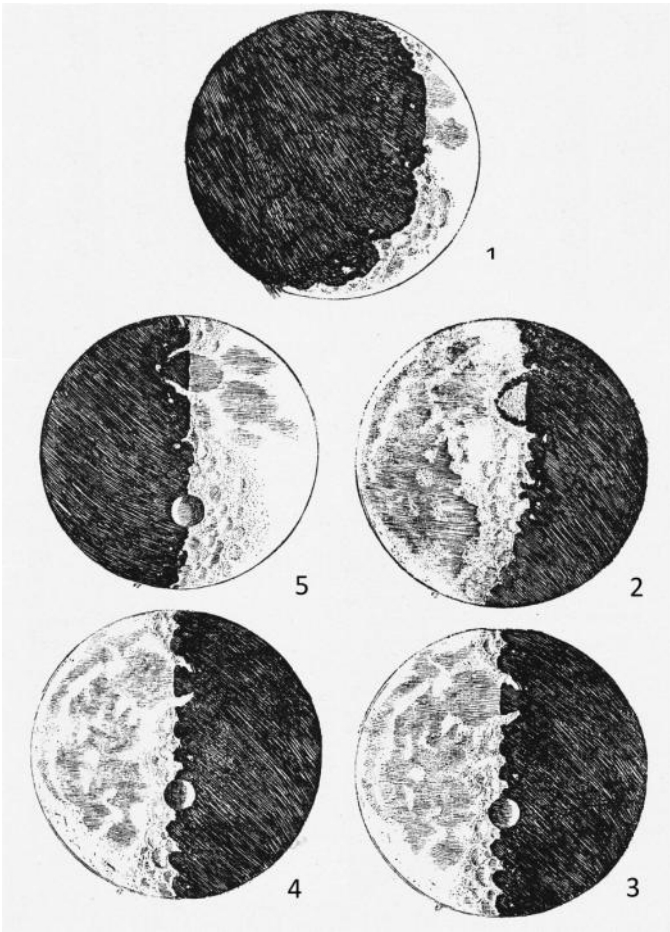
Thank you!
Brian McCracken

Comet Atlas is near Venus, Comet Swan has moved across the southern sky and now in the SE, and Comet Lemmon is approaching Ophiuchus. The Orionid Meteor shower is still happening and there are three more Meteor showers in November. Lots to try to see. Winter constellations are rising early in the morning sky.

Mercury will be very low in the ENE in the evening sky. It will become easier to find as the month moves on. Venus, on the other hand, will be visible in morning twilight low in the ESE. Mars will not be visible again this month. Jupiter will be rising after 9 PM in the ENE. It will transit (cross the imaginary centre line of the sky) before 5 AM and be high in the S by dawn. Saturn's rings are appearing to tilt as seen from Earth. This makes them look very thin, like a line not a handle.

During the week of November 2, the tides will be large due to the Supermoon's gravitational tug. Saturn and the Moon will appear near each other and if you have a telescope, you might add Neptune to that group. If you are observing the Moon with binoculars or telescope, you might be able to see Wargentin Pancake on the limb on the Moon. The name does describe it. The Full Moon, (Animal Fattening), will be on the 5th and the closest approach of the year. This is now called a Supermoon (356832 km). Even I would be hard pressed to tell the difference in size or gravity but oceans certainly can. On the 6th, the Moon will be just N or the Pleiades (an Open Star Cluster forming the shoulder of Taurus, the Bull). This grouping is often mistaken for the 'little dipper' because it is a similar shape and much smaller than the other two 'dippers'. You should notice some fuzziness around these stars as there is some of the star forming material being lit by the stars that have already formed. This group can be used to judge how dark your skies are by how many of the stars can you see. These are an Open Cluster because they were born of the same nebula and are now moving apart.

As this group reminds people of the dippers it inspires a story. The Pleiades is also called 'the Seven Sisters' (and for those who are counting, there are seven stars in the Big Dipper). Now the story goes that the Seven Sisters were married to the Seven brothers in the big Dipper. All but one couple were unhappy and did not want to remain married. So the Gods separated them forever making the two Asterisms. What happened to the two who wished to remain together, you ask? Mizar and Alcor remain as a visible double star, second from the end of the handle of the Big Dipper. Seeing this pair as a pair was an ancient eye test. When they were seen with telescopes, they turn out to be Double Doubles. A visible double means that they appear together from Earth but are really very far apart. But each of those stars has another orbiting with it.



On November 9, Mercury will appear stationary and on the 10th Jupiter will be just South of the Moon and will appear stationary on the 11th. The North Taurid meteor shower peaks in the predawn of the 12th. Zodiacal light may be visible in the morning sky from the 14th to 28th from a dark sky. On the 17th the Leonid meteor shower peaks in the predawn. On the 19th, the Moon will be at Apogee (furthest from Earth 406692 km). New Moon is on the 20th and Uranus may be bright enough this week to be seen without aid as it is at Opposition. Mercury and Venus will both be in the morning sky this week.

There are some interesting features on the Moon that will be visible at the end of the month. One way of keeping track is to draw what you see at the terminator line (separating day and night sides). Every day its different

Clear Skies.

Arizona

Roger Hill

When I was a kid growing up in Liverpool, I was interested in what the Americans and Russians were doing with their space programs. It was kind of cool to watch as various space probes crashed into the lunar surface, sending back pictures just before they smashed themselves to smithereens. I had a mild interest in astronomy, at that time, as many kids do, but then I got the teacher of a lifetime.

I wasn't a great student; okay, I wasn't even a good student, but Mrs. Cooper was nearing retirement and with her vast experience, she saw my nascent interest, and kindled it. She had a set of books at the back of the room, and she let me read them if I finished my work. One book was about the Chapman expedition to the Gobi Desert that found the first dinosaur eggs. Other books were by Percival Lowell.

I pored over those books every chance I got. I fell in love with the images that Lowell provided: an old and majestic civilization, hoarding its resources of water; Martians digging huge canals to spread this liquid life-giving fluid from the poles to the rest of the planet. Lord, what a story. And he had the evidence of what he had seen through his magnificent telescope to back him up.

Mariner 4 arrived at Mars after the school year ended, took a few pictures, and destroyed Lowell's visions utterly and completely.

Mars was an unbelievably arid place, with virtually no atmosphere to speak of. Craters were everywhere, and there was no trace of the fabulous canals. No possibility of a great and noble civilization fighting a valiant, but losing battle. Strange as it may seem, it was this…catastrophe…that turned a passing interest into a lifelong love of astronomy. Over the years, I have had the chance to travel, occasionally, on business. One trip to Chicago saw me telling my colleagues to drop me off at the Chicago Field Museum, as this was the place that funded the Chapman expedition to the Gobi desert in the 1920's and found the first dinosaur eggs. I entered the Museum (it was free that day), and asked where their dinosaur exhibit was. "Closed for renovations, come back in two years."

Two years later, I am back in Chicago on business again. This time I am a bit smarter…I phone the place and ask them about the dinosaur exhibit. "Come back in two weeks", they said. I was devastated. A trip to New York saw me at the top of the Empire State Building, but I passed on the Museum of Natural History. Which is a shame, because soon after getting back from New York, I found out it was this Museum, not the Chicago Field Museum that funded the Chapman expedition. Damn.

25 years ago, I traveled again, this time to Phoenix, Arizona. I asked on the RASClist for places to go observing. and Peter Ceravolo mentioned a site where he observes, or I could go down to Kitt Peak, or Mount Graham. Arizona is also home to the Grand Canyon, the Painted Desert, and the Petrified Forest…all places that were high on my "must visit" list. Alas, I knew I would have a day, at most, to do some traveling, and these places were either too far away, or would take more than a quick look to do them justice. A look at a map showed me two sites that suddenly moved to the top of the list: the Barringer Meteor Crater, and Flagstaff…home of the Lowell Observatory.

As a kid growing up watching the Apollo moon landings, I had seen many pictures of Gene Shoemaker wandering around a real crater. Not some minor ring shaped mounds, or a circular lake, but an honest-to-goodness lunar-like crater. Furthermore, it looked like I could reach Flagstaff with a two hour drive from Phoenix, and after that, the crater would be about an hour from Flagstaff. This looked do-able. Actually, this looked more like a pilgrimage.

I arrived in Phoenix at lunchtime, on Monday, and I had until lunchtime on Friday to get my work done. To ensure that I had Thursday off, I had to work like a dog. I managed!

Early Thursday saw me take the rental car and drive up the interstate. The batteries in my camcorder where charged up, and I had my 35mm with me, too, loaded with slide film. The people in our Phoenix office had told me that I must not miss a place called Sedona, which was sort of on the way to Flagstaff.

Speed limits on the interstates in Arizona were a civilized 75mph, and with Phoenix at about 1600 feet above sea level, and Flagstaff at 7200 feet, I was soon climbing high into mountains. I made really good time to the Sedona exit, passing through some spectacular country, and decided that I could spare the time.

If you ever get a chance to go to Sedona, do so. The drive from Sedona to Flagstaff through Oak Creek Canyon is breathtaking. I stopped several times to take some video, and I was awestruck by the scenery. I drove into Flagstaff, looking for a sign for tourist information, but saw one to Lowell Observatory instead. At 11:20 in the morning, I pulled into the parking lot atop Mars Hill. The observatory opened to the public at noon, so I had a few minutes to spare. As I waited in the spring sunshine, I kept thinking about how I ended up there. A kid from Liverpool inspired by a fellow in Flagstaff into a lifelong love of Astronomy. So much of who and what I am, of the places I have been, and the things I have seen can be traced back to this, and to a great teacher.

The Observatory opened, and I took a quick glance at a map of the grounds. Here is where the 24 inch Clark is, where Tombaugh photographed Pluto for the first time, where Slipher made his observations. It turns out that you cannot just

wander into the domes, you have to go on a tour. The only public observing with the Clark in the winter is on Saturday nights, so I did not get a chance to see through it.

o, I wandered the grounds until 1:30, when the tour started. I was taking some photographs of the various domes and other buildings, when I came across a small building with a dome that appeared to be made of black glass bricks. It was Lowell's mausoleum. In the shadow of the dome where the Clark 'scope is, I stood in front of Lowell's tomb, took off my hat, and said a silent thank you to Lowell, and to Mrs. Cooper.

I took the tour, but I did not finish it. I saw the big Clark, and a couple of other scopes, but I left before we were scheduled to see Tombaughs 'scope. I was worried about how long it would take me to get to the Meteor crater.

I pulled out of the parking lot and went looking for Highway 180. I followed an arrow that pointed me in its direction, and after a few miles, I saw a sign that said "Grand Canyon". I was going the wrong way. By the time I got on the right road, it was after 3 o'clock. I was now traveling over the high plains, and I could see for a long way.

Picture from Lowell Observatory website

After about 40 minutes, I could see an odd shaped hill, off in the distance. It was a low, flat-topped rise, and sure enough, a few minutes later, the exit appeared. At 4 pm, I purchased my ticket ($8, US!!). You have to pass through the inevitable gift shop to get to the crater rim, which stands about 30 meters above the surrounding countryside. I dashed through, turned a corner, and was greeted by a magnificent sight.

Like so many things, you have to see something with your own eyes to really get a sense of a place. Barringer Meteor Crater is no different. I have seen all sorts of pictures and TV programs, but nothing prepared me for the reality. I heard a couple of people grumble to each other that it was a lot of money to pay to look at a hole in the ground. I wanted to yell at them: "This is what PLANETS look like. This is what it looks like on the Moon, Mars, Venus, and so many other places. This is what most of the real estate in the universe looks like." It was awesome, and I just shook my head in disbelief that it could ever be "just a hole in the ground".

I bought a couple of souvenirs at the gift shop, and scooped a handful of pebbles from the craters rim. I took my photographs, my video, and when the place closed at 5 o'clock, I took my leave.

The journey back to Phoenix took just over three hours by taking the Interstates all the way. One sign I came upon indicated that the road would take a 6 % downward gradient in 13 miles. Nice of them to give so much notice, I thought, and then looked again, as I read "6% gradient FOR 13 miles!" Well, it was not quite the entire 13 miles, but it was most of it. A spectacular drive, as the sun went down. I would love to do it as a passenger.

I made it to Arizona several times after that, getting to see Grand Canyon, the Petrified Forest, the Painted Desert, BioSphere II. The drives were just as spectacular and the vistas were just as awe inspiring.

They just weren't pilgrimages.

Picture from Barringer Meteor Crater website

October 8, 2025 Meeting Minutes

Elena Zanetti

The meeting began at 7:00 pm and will be available on our centre YouTube page.

The RASC Kingston Centre acknowledges 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 with 23 in attendance. Other than meeting nights, we host Wednesday night Zoom Socials, with an invitation posted to the Centre's email list. Our AGM will be on November 12, the treasurer role will be vacant, please consider standing for this position.

Speaker: Stefan Jackson – 'Imaging the Sun in Ha'. Specific to processing Ha solar images, Stefan takes us through his equipment, processing methods including demonstrations, and software tools for capturing and processing Ha images and videos of the sun. Various telescope, mounts, and software options were discussed for optimal images. On our RASC Kingston Centre YouTube video, this starts at 9 minutes.

Astrophotography Gallery Submissions: Brian McCracken has made a call for astrophotography image submissions. One image per person from the last 12 months. An email will be going out with submission details and the photos will be shown at our February meeting.

Rick Wagner: What's Up in the Sky
Local Events
09 Oct – Jason Young (SETI) Galaxies
11 Oct – Queen's Observatory Open House
23 Oct – Anupam Ray (Queen's) Dark Matter theory
06 Nov – Steve Sclafani (UMD) IceCube Galactic Plane

BAA Events
29 Oct – AGM 12:00-15:00 (YouTube)
07 Nov. – detection of UHECRs and vs through their radio signals

L&A DSVA
18 Oct – Astrophotography
24&25 Oct – Laser Guided Tour

NFAP
17&18 Oct – Saturn, Mars, Orionids

Sky Events – October
09 Oct – Moon transits Pleiades
10 Oct – C/2025 R2 (SWAN) passing thru Ophiuchus, Scutum, Aquila, and Aquarius
11 Oct – Double shadow transit on Jupiter (04:45EDT)
13 Oct – Last Quarter Moon
17 Oct – C/2025 R2 (SWAN) passes <1 degree from M17 during the evening
19 Oct – comet C/2025 R2 (SWAN) closest approach to Earth (0.26AU)
19 Oct - zodiacal light
20 Oct – Double shadow transit on Jupiter (02:30EDT)
21 Oct – Orionid meteor shower peaks
21 Oct – New Moon (08:25EDT)
27 Oct – Moon occults tau Sgr Mag 3.3) (19:35EDT)
29 Oct – First Quarter Moon
29 Oct – Mercury (mag -0.2) at GEE
30 Oct – Moon occults delta Cap (mag 2.8) (21:00EDT)

Sky Events – Nov
02 Nov – DST ends
05 Nov – Double shadow transit on Jupiter (01:16EST)
05 Nov – S. Taurid meteor shower peaks
05 Nov – Full Moon (08:19EST)
12 Nov – Last Quarter Moon
12 Nov – N. Taurid meteor shower peaks

T CrB
High in west after sunset and still faint

Major Planets
Mercury (mag -0.2) too close to Sun
Mars (mag 1.5) very low in W, sets shortly after sunset
Saturn (mag 0.8) & Neptune (mag 7.8)
Uranus (mag 5.6) rises mid evening
Jupiter (mag -2.3) rises at midnight; transits at morning twilight
Venus (mag -3.9) low in E before sunrise

Small Bodies
02 Oct – 1 Ceres at opposition (mag 7.6)

Member Presentations:
Kevin Kell presented images from past few months. Saturn and transit passes, Jupiter, various photos from Fall'N'Stars, sunset from Saskatoon, and aurora from home. Mark Kaye shared images of Saturn and transits.

Volunteer hours to be sent to Susan and to include the event name and date. Astrophotography 101 October 16 at 7 pm via Zoom and will be recorded. This session is on comets, image acquisition, and processing. Our monthly newsletter, The Regulus, from our Editor Roger Hill, can be found on our website https://kingston.rasc.ca/

Our website is Kingston.rasc.ca. Facebook Group @RASC Kingston Centre Group. YouTube Channel @RASC Kingston Centre. Join us at www.secure.rasc.ca/membership.

Next in person meeting at Queen's on November 12th, 7:00 pm. AGM followed by our regular meeting with Steve Mallia from Ontario Telescopes speaking on gear.

Malcolm thanked all for attending and the meeting ended at 8:57 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.

Board of Directors & Officers for 2024-2025

Directors:

Susan Gagnon, Kim Hay, Roger Hill, John Hurley, Kevin Kell, Malcolm Park, Elena Zanetti

Officers:

President: Malcolm Park
Vice President: Kim Hay
Secretary: Elena Zanetti
Treasurer: Susan Gagnon
Regulus Editor: Roger Hill
Nation Council Representative: John Hurley
Librarian: Kim Hay
Past President: Rick Wagner
Loan Equipment: Kevin Kell
Webmaster: Walter MacDonald
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

Amateur astronomers are one of the few groups of people who are happy to see the arrival of Standard Time.