Regulus

Newsletter of the RASC Kingston Centre

Vol. 52 No. 9 October, 2025

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Centre Events for October, 2025:

Oct 1: Zoom Social Meeting
Oct 18: Monthly meeting 7pm at Queens University
Room 226, Ellis Hall,
58 University Avenue, Kingston
Oct 15: Zoom Social Meeting
Oct 16: Astro-101 comets
Oct 22: Zoom Social Meeting
Oct 29: Zoom Social Meeting
Nov 2: Deadline for October issue of Regulus

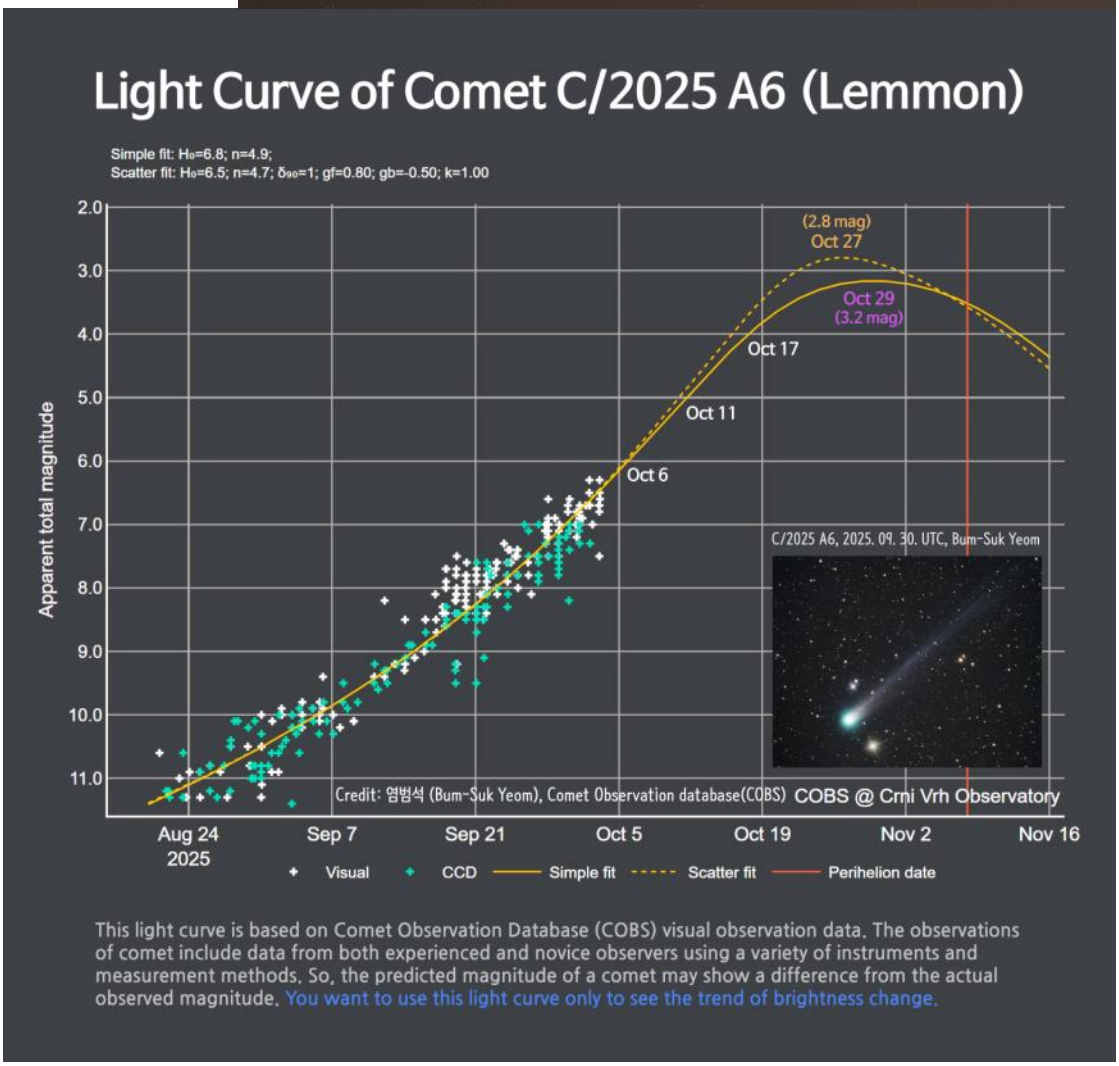
President's Report

Malcolm Park

Greetings,
The month of October is upon us and as we transition into fall, the Equinox has brought gifts! Aurorae have been quite active and if not always naked eye visible, at least they have made for some nice photos. I captured one such outburst on September 30. This image is part of a time-lapse sequence, with a Nikon DSLR.

We have also been gifted with comets. Yes, comets plural. Interstellar comet 3I/ATLAS has been cruising through the solar system from who knows where, to who knows where, and surprise Comet C/2025 R2 SWAN has dazzled in the Southern Hemisphere, but Comet C/2025 A6 Lemmon is brightening and might become borderline naked eye visible near the end of October.

There will be an Astronomy 101 workshop on comet image capture and processing on the 16th of October, by zoom at 7:00pm. The meeting will be recorded if you want to watch at a later time. I was able to capture this image of comet SWAN remotely and I will use this data in the workshop.



I hope to cover some capture methods, and some processing methods. There are so many options when it comes to this topic but the timing is right for this and we will try to cover all the bases.

Good luck comet hunting this fall!

The Editor's Keyboard

Roger Hill

I love Fall'n'Stars. There have been many people who have been to far more than I have, but this perfect little star party has become one of my annual astronomical favourites. And the 2025 edition lived up to it's standard.

I've been to other "small" star parties, too. The Syracuse Summer Seminar in the mid-seventies was my introduction to these sorts of events. The NYAA's Starfest that I attended from 1991 to 2004, along with the Texas Star Party in 2007, are amazing events that are rightly among the finest of such things on the planet. I've always enjoyed the smaller events. I've been to the Frozen Banana Star Party in Powassan, near North Bay, and two different star parties on Manitoulin Island.

One of these years, I'd like to go to Stellafane in Vermont, Cherry Springs in Pennsylvania, and the Winter Star Party in Florida. These events will have to wait a few years, though.

As has become my custom, I went a day early, arriving after 4pm on Thursday afternoon. Les Nagy, my astronomical partner in crime, arrived a few minutes after I did, and before long, my trailer was set up and we were all ready to go.

After a meal of my wife's chile and some crusty bread, we set to work setting up our respective mounts.

I had tested it a few times before Les noticed a problem with it when I used it for a time lapse of the lunar eclipse earlier this year. He offered to take the mount and get rid of the problem. I had tested the mount a couple of times before taking it to Fall'n'Stars, and while it seemed to work well, this was going to be a full-on test.

I used APT (AstroPhotography Tool) to get a good polar alignment. The camera I was using was a ZWO ASI071MC-Pro camera I bought from a guy at Starfest, while the 'scope was my 80mm f/7 triplet. APT got the camera focused using a new ToupTek electronic focuser I had installed when it arrived from Montreal a day earlier, so the images were quite sharp. I didn't try guiding the mount, but 30 to 60 second exposures essentially showed no trailing. Using Cartes du Ciel, I pushed the mount around the sky, used APT to plate solve, and the mount performed very well.

Les and I retired around 2am after a long day and a fun evening.

I have an adapter so I can use Canon lenses with the new camera, and since my son had printed off a couple of rings for the camera using black PETG filament, I planned to use the camera on the Friday night with an 8mm fisheye.

The wind had different ideas, though, and while I had thought that I had managed to achieve a very good focus, the wind blew the camera and lens around so much, that I didn't get a single sharp image. I had set the camera to point at Vega, and took a series of 60 120-second exposures. I should have taken 600 12 second exposures, I guess.

One of the great joys of star parties is the people you meet, and with our strategic location close to the washrooms and showers, Les and I had many visitors. We had some great chats with Susan, Kevin, Rick, Mike and Peter among them. We enjoyed helping Susan with choosing the pizzas and introducing her to how different two Scotches can taste, or being unable to help Peter with his new SeeStar 50. I also have to note Siobhan, a new member of the Kingston Centre.

Over the years, I have met, and sometimes helped, people new to amateur astronomy. Some stay, some go, some become good and valued friends and others disappear into the night. All of them, however, can re-ignite that sense of wonder that is at the heart of so much that we do.

The talk I gave at Starfest and Fall'n'Stars (I'm getting tired of typing the mix of capital letters and apostrophes...it'll be FNS in future) was an attempt to distill six decades of astronomical experiences into a single informative and entertaining talk. I hoped that newcomers to the hobby would find other areas to explore; while old hands would find a kindred spirit, and our long-suffering significant others might get a glimpse into that which so captivates us. The reaction to it has been unexpectedly and overwhelmingly enthusiastic...even being mentioned by Mario Carr, a fellow who does a weekly 2 minute long astronomy segment on CHCH-TV in Hamilton as the best thing at this years StarFest.

Anyway, I hope everyone has a great time under the stars before the cold and clouds of November arrive,

Clear skies to you!
Roger Hill

Targets for Tonight: Capricorn and Aquarius

Susan Gagnon

There are two constellations this month as one is very light on targets. What I add this month are some observations made by Gus Johnnson, a Kingston member from long ago. Capricorn has no Levy objects, no Challenge objects and no finest NGCs. ETU takes note of the constellation in general and bright stars of note are Algedi (easily split with binoculars) and Dabih, which both form multiple star systems. These are both part of the Double Star list as well.

Another double is Omicron Capricornus which is close by.

The only other object listed is Messier 30, a globular cluster at RA: 21h41m 34.9s DE:-23°04'56". Gus Johnson's observation of this cluster is 'located near a bright star with 2 star chains of member stars leading into it from the north' September 17, 1979. There are other objects in this constellation but they did not make it onto the observing lists. This does not mean they are not worth pursuing.

Aquarius is the second constellation with many more targets but no objects listed for Double Stars or ETU.

If you have found M30 in Capricorn you can move eastward to find NGC finest 7293 (PN: RA: 22h31m04.3s DE:-20° 42') . GJ noted that with a 12.5 inch scope a hint of a dark centre could be seen. My observation, with binoculars very diffuse.

Editors note:
The top photo is M2, from the Hubble Space Telescope
Bottom photo is NGC 7009—The Saturn Nebula,
It was made by u/spastrophoto on Reddit.

Object	Type	RA	DEC	Mag
M2	Globular Cluster	21h33m 27.0s	-00°49' 24"	6.4
M30	Globular Cluster	21h40m 22.1s	-23°10' 48.5"	7.2
M72	Globular Cluster	20h53m 27.9s	-12°32' 13"	9.4
M73	4 star asterism	20h58m 56.0s	12°38'08"	9
NGC 7009	Planetary Nebula	21h05m 35.8s	-11°21'48”	8.0
NGC 7184	Galaxy	22h03m 51.1s	-20°42' 35"	11.2
NGC 7723	Galaxy	23h40m04.0s	-12°50' 33"	11.2
NGC 7721	Galaxy	23h39m 55.3s	-06°23' 56"	11.6
NGC 7727	Galaxy	23h41m00.6s	-12°10' 27"	10.6

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.

02 Oct - Dwarf planet (the only one visible in small tele scopes) 1 Ceres (mag 7.6) at opposition
04 Oct – Double shadow (Io and Europa) transit on Jupiter 03:00EDT); Io & Europa overlap lightly as they cross Jupiter's limb
06 Oct - transit of Titan's shadow across northern edge of Sat urn's disk 00:30 - 02:30EDT (last one until 2038-11-18!)
06 Oct – Full Moon (23:48EDT)
09 Oct – waning gibbous Moon transits the northern Pleiades occulting many bright stars (23:30 –01:30EDT on the 10th) especially watch the reappearances on the dark l imb starting about 00:30EDT on the 10th
10 Oct - comet C/2025 R2 (SWAN) spends the rest of the month passing rapidly through Ophiucus, Scutum, Aquila and Aquarius as it moves from low in the SW to the meridian after sunset; predicted 9.3mag and fading slowly.
19 Oct - comet C/2025 R2 (SWAN) closest approach to Earth (0.26AU)
19 Oct – zodiacal light visible in the east before dawn for the rest of the month
20 Oct - Double shadow (Io and Ganymede) transit on Jupiter (02:30EDT)
21 Oct - Orionid meteor shower peaks, best from midnight to dawn
21 Oct - New Moon (08:25EDT)
27 Oct – dark limb of the Moon occults τ Sgr (Namalsadireh II, mag 3.3) low in the SSW (19:35EDT)
29 Oct - First Quarter Moon
29 Oct - Mercury (mag -0.2) at greatest elongation east very low in the west shortly after sunset
30 Oct – waxing gibbous Moon occults δ Cap (Deneb Al giedi, mag 2.8) in the SSW, disappearance on the dark limb (21:00EDT), reappearance on the bright limb at :15EDT
11 Oct - Double shadow (Io and Europa) transit on Jupiter (very close to Great Red Spot? 04:45EDT) (Io & Eu ropa only 1.4" apart at 02:00EDT)
13 Oct - Last Quarter Moon
17 Oct - C/2025 R2 (SWAN) passes <1o from M17 during the evening.

Fall'n'Stars 2025 Review

Susan Gagnon

A total of 35 people took some part in our annual fall camping weekend with Belleville Centre.

As always it is the people who make it a success. Thanks to all who contributed: chili, snacks, desserts and buns to the Friday night potluck, making it one of the best attended Friday night dinners in some time. Saturday enjoyed a splendid presentation by Roger Hill, giving a rundown of his observing highlights through the years. Saturday night dinner was also well attended and we enjoyed more than one round of door prizes! Thanks to all who contributed those. Les Nagy was our photographer for the group photo.

Sunday morning Kelly Burr sent us 3 flavours of warm-from-the-oven scones.

Despite the wind we enjoyed quite a bit of observing with no dew. As always it is great to see other folk's set ups and talk astronomy .There are always opportunities for those new to observing to get some tips and people with new equipment can benefit from other's experience. Socializing was rampant and even though we have monthly meetings, this venue provides a unique opportunity to share ideas and experience.

I would like to mention a few people in particular who tend to volunteer year after year and a bit under the radar at times. Steve Burr has been able to secure an excellent venue for several years. Larry donates coffee every year. Bob Mindenhal keeps the registration updated on the website. Kevin Kell is an excellent MC for door prize time, keeping it all orderly and above board.

Joanne Burns and John Carins are usually the last to leave on Sunday, having done a clean up and restoration of the barn to its original configuration for the winter. Many hands go into setup and clear away of meals and coffee making as well. These are not small things and are appreciated. I had a wonderful weekend and I hope to see everyone back next year including those who had to miss 2025.

Thirty-two years ago, Carolyn and Gene Shoemaker and I discovered a comet that was eventually named Shoemaker-Levy 9. It was the ninth periodic comet that we found together, although there were a few other non-periodic comets that we also located, plus the nine other comets I found on my own since I began my comet search in the fall of 1965. . The discovery of this particular comet and its subsequent collision with Jupiter, coincidentally my favorite planet, were the most important parts of my professional life, second only to my meeting Wendee. Sixteen months later our discovery the 21 pieces of this shattered comet collided with Jupiter, in one of the most decisive science stories of the twentieth century. I may not have been aware of how significant this was until, at this year's Adirondack Astronomy Retreat, I watched the July 16, 1994 press conference during which Gene, Carolyn, and I tried to express the significance of this event. I remembered how much smarter I might have been back then, being able to speak in complete sentences, compared to my waning personality now. What I was not aware of back then is that what we were witnessing might have been an example not only for our own lifetimes but for the vastly larger history of the Earth we live on.

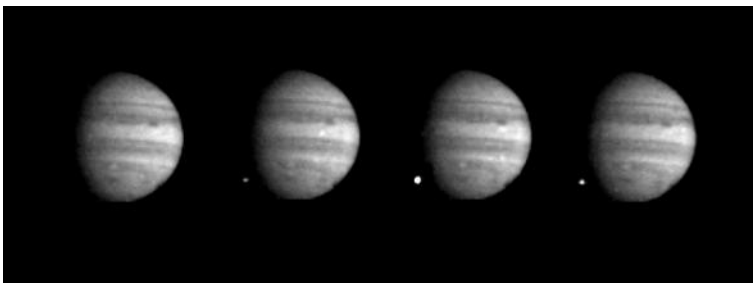
Sixty-six million years ago, the Cretaceous period of Earth's geologic history ended rather abruptly with the mass extinction of about three quarters of all the species of life on Earth. The theory proposed by Luis Alvarez and his son Walter was based on the large amount of iridium that was found, eventually at exposed rock sites all over the world. The discovery in the early 1990s of the 200-mile wide impact crater whose center was near the coastal town of Chicxulub Pueblo, in present-day Mexico, began a long stretch of evidence that leads most scientists to conclude that the impact of an asteroid (or less likely a comet) had a lot to do with the Cretaceous-Paleocene mass extinction.

More recently, some evidence has emerged that the impact in the Gulf of Mexico was not the only one that occurred at that time. The 15-mile wide Boltysh crater in Ukraine, and the 12-mile wile Silverpit crater in the North Sea, not far from Great Britain, might have been formed at about the same time. These structures, and others that have been found or speculated, are all between North latitude 20 and 70 degrees.

Could these structures be impact craters, and if they are, could they have formed in connection with the Cretaceous–Paleocene extinction? This suggests the possibility of near-simultaneous multiple impacts. But the operative word has to be suggests. The evidence is there, but it is speculative and not strong, that the Chicxulub impactor might have been just one of a series of impacts. According to a paper by Krisopher Dekan of the University of Gothenburg, "To conclude that a mass extinction of this sort is not associated with immense extraterrestrial impact is to break the rules of a respected scientist. There is too much evidence in favor of a least two large impacts and no other factor can explain the (Iridium) anomaly that is globally widespread in both sides of the paleomagnetism of that time, being normal and reverse near the K/Pg boundary."

We will never know what upended the Earth's biosphere 66 million years ago, because we were not there. But at this juncture I would like, not to ignore the methods of modern science, but to take science out for a walk in the desert. We will never know, but what if a Shoemaker-Levy 9-style multiple impact is what caused the elimination of most of the species of life on Earth?

What if? I think it is fun to speculate on this question. From my own perspective, as I take that fictitious walk in the desert, my decision to begin hunting for comets when I was a teenager in 1965 might have led to a personal communion with a major event on the planet that has given me so much pain, and so much more much joy.



It was late in the afternoon of 19 July, 1963. I was a 15-year-old patient at the time at the Jewish National Home for Asthmatic Children in Denver, Colorado, and had begun my association with the Denver Astronomical Society. The people running the Asthma Home had generously granted permission for me to return home for a week in order to see a total eclipse of the Sun that would occur on Saturday, July 20.

Late that afternoon the day before the eclipse, Dad awoke from a nap in a terrible mood. He turned towards Mom and said, "All David cares about are his damned stars." Obviously I was upset to overhear his words but I let them pass. His mood improved, and the next day we three saw a spectacular total eclipse of the Sun. Having a lifelong curiosity about history, Dad was flabbergasted when the eclipse, which had been predicted millennia earlier by the ancient Greeks, began right on time, to the second. The saros goes all the way back to the Chaldean astronomers in the centuries BCE, and was understood by Ptolemy, Pliny, and Hipparchus.

The only issue we had was at the start of totality. I took off my eclipse glasses, and my parents had fits telling me to put them back on. I had a choice. I could spend the sixty seconds of totality arguing with them that it is perfectly safe to witness the total phase without protection, or I could just put my glasses back on. I put my glasses back on. Then I turned away, took them off, and enjoyed the total eclipse.

Years later, Dad and I were walking together. "Do you remember," he inquired, "when I awoke from my nap and said that all you care about are your damned stars?" I admitted that I did remember. "May I take those words back?" "Why? You were right. That was all I cared about back then." "But if I had had the faintest idea what you were going to do with your damned stars, I would have been so much more supportive." (And he said that to me before I found my first comet.).

In the 41 years since I found that comet, I have had more joy that I can imagine. Never have I gone out to my observatory to look at the stars, and not felt better, far better, when I went back inside. My parents, and my wife, are gone, but I have a daughter, a son-in-law, two grandchildren, and a great grandson. When they ask me a question—even for a second, the charisma intensifies. And it is not just observing. My relationship with many astronomy societies, including the Denver Astronomical Society, which has continued over the years, has recently intensified. I am their poet laureate and get to share a poem at the start of their meetings.

Whether I am alone or with a group of people, for me, nights under the stars are an indescribable thrill.

LATE BREAKING NEWS: Three comets and a meteor shower may be naked eye visible before the end of the month! Early predictions expect October 21to be best viewing. C/2025 A6 Lemmon is closet to Earth Oct 21, C/2025 R2 Swan could be visible for the Northern Hemisphere (evening after sunset) and the interstellar comet 3i Atlas will be closest to the sun October 29th and may brighten. Peak night for the Orionid Meteor shower is October 21 and it is a New Moon.

Most of the planets are visible in the evening sky this month. The exceptions are Venus (low in ENE during morning twilight all month) and Mars (not visible at all). Mercury will be very low in the SW during evening twilight. Jupiter will rise in the ENE before midnight. It is presently in the constellation Gemini and close to the bright stars Castor and Pollux. Saturn will be high in the NE at dusk, will cross the zenith line before midnight and set in the W before 6 am. If you have binoculars or access to a telescope, Saturn's rings are nearly edge on, so well worth a view. You might even be able to see one of the moons.

The 'Mate Calling' Full Moon will be on October 6. Through that week you may be able to see the bright star 'Sirius' in the morning daylight. This is the brightest star in Canis Major (Big Dog) constellation. The large and small dogs follow the hunter, Orion. Sirius is not far from Orion's belt. To see a star or planet during the day, it is helpful to try to focus on some very distant object, like the edge of a cloud or aircraft.

October 9 sees the Moon in the Pleiades in the evening sky. This open cluster is to the west of Orion and makes up the shoulder of Taurus, the Bull. The red star, Aldebaran, is the eye of the Bull. The peak for the S Taurid Meteor shower is Oct 10th in the pre-dawn hours. These come from Comet Encke and last for a couple of months. They can have some very bright fireballs.

The 12th has Jupiter just S of the Moon. Last Quarter is on the 13th. Zodiacal light may be visible in the morning for the next two weeks and on the 16th the Moon will occult Regulus (the bright star in Leo). On the 19th Venus will be N or the moon. First quarter moon on the 29th and Mercury will be as distant from the Sun as it gets.

Shakespeare referred to the Moon as 'inconstant' and, from Earth's point of view, it is. Although it is 'tidally locked' with Earth, how we actually see it changes throughout the year. The same face of the Moon is visible from Earth all the time, so the Moon's 'day' is as long as our 'month'(29.5 days). The first photograph of the far side of the Moon was taken by the Soviet Union's Luna 3 in 1959. The Moon is known for its Phases, meaning the shape of the reflected sunlight we see from Earth. Throughout this the Moon remains a solid sphere.

Let's start with New Moon. we can't see any of the lit parts from Earth. They are on the far side of the Moon. For an astronomer, it means sky will be dark all night long. A solar eclipse can only take place at New Moon.

What type of solar eclipse we see is dependent on how far or near the Moon is to Earth at New Moon. It varies a lot and the Moon changes how far South or North it can go.

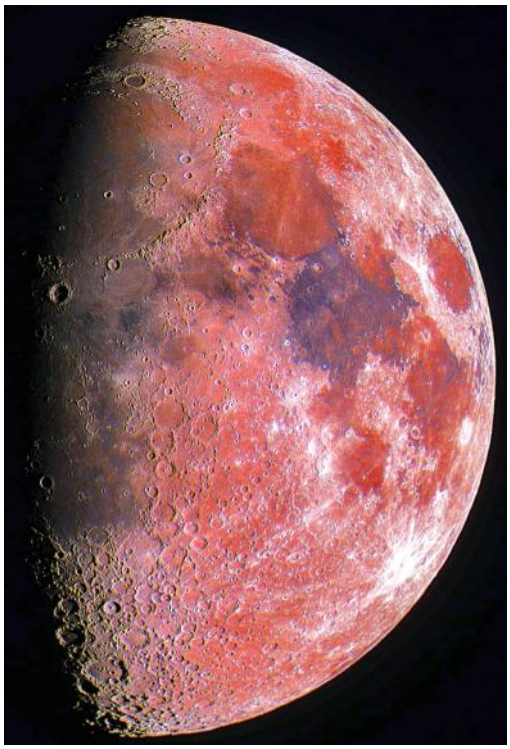
Conversely, the lunar eclipse can only take place at Full Moon. The light of the sun is covering the entire face of the Moon that faces us. This can outshine the stars. The Moon also rises in the East as the Sun sets in the West.

The other phases are called Crescent, Quarter and Gibbous. These can be 'waxing' or waning. If the Moon is lit on the right hand side, it is waxing, left side is waning. DOC can be a memory aid. The crescent is thin and curved - between New and Quarter. The Quarter is where it looks like half the Moon is lit. But you are only seeing half the Moon, so you are seeing a Quarter. Gibbous meant a swelling, like a pregnancy.

The inner planets (Mercury and Venus) show us Phases as well. You can see this change with binoculars. Venus appears brightest to us when it is in its Crescent Phase.

To observe lunar details, try to find the Terminator (the line between light and shadow). This will look three dimensional.

Clear Skies.



September 10, 2025 Meeting Minutes

Elena Zanetti

The meeting began at 7:20 pm.
Malcolm Park welcomed 21 Kingston Centre members and guests.

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.

Other than meeting nights, we host Wednesday night Zoom Socials, with an invitation posted to the Centre's email list. At our November AGM, we will be looking for a new treasurer. Please consider and if interested in this position, RASC National is holding a seminar later in September. Congratulations to Susan, our current treasurer, on being elected to the National Board.

This summer, we received an inquiry from the estate of Attilla Danko with an offer to donate his 25" Obsession Dobsonian for outreach use. We reached out to Joe Gilker and Tim Trentadue at the Lennox & Addington Dark Sky Viewing Area to see if they would be interested in hosting this onsite for their well-attended programs - 2024 had 7,000 people visit. An agreement was reached and our Centre will deploy the telescope to the L&A Deep Sky Viewing Area. If anything ever changes there and the program ends, we will take it back. In addition to the donation of the telescope, the estate has donated funding to the L&A DSVA for the construction of the storage shed and a trailer for ease of use. Next will be a storage shed design and build and getting it into their hands for hopeful use in spring 2026. Our Centre monthly newsletter, the Regulus, is available from our editor, Roger Hill, and more information about this donation is available here. Our monthly newsletter, Regulus, can be found on the RASC Kingston Centre website https://kingston.rasc.ca/

Laurie Graham has a contact with a possible 6" refractor telescope donation. Storage is an issue and Laurie will investigate further.

John Hurley, National Council Rep: National office is offering a Treasurer's training session, Stellarium Planetarium program, among others – check their website. New national president is Brendan Roy and Michael Watson now treasurer. Revenue generating ideas are welcome. RASC merchandise available on website.

Membership fees remain the same. No grace period offered for renewal. Jenna Hinds seeks ideas for General Assembly topics. National office looking for people with French skills to prepare material and offer the Green Laser Pointer course in French. National books will be audited twice a year. Membership numbers are down thus revenue down. Windsor Centre is celebrating their 80 th anniversary November 15 with guest speaker Dr. David Levy and all welcome.

Featured speaker: Rick Wagner presents Astronomical Photometry. Rick's main interest is in variable stars with the intent of collecting data on light intensity of pulsations. Photometry helps further the research on the galactic structure and the scale and evolution of the universe. Rick walked up through the history of photometry and his current methods on research and data collection.

Rick Wagner: What's Up in the Sky
Local Events
12 Sep – Burcin Mutlu-Pakdil (Dartmouth) Galaxies
13 Sep – Queen's Observatory Open House
18 Sep – Brooks Thomas (Lafayette) Cosmology
25 Sep – Drie Van de Putte Star Formation
9 Oct – Jason Young (SETI) Galaxies

Lennox and Addington Dark Sky Viewing Area
13 Sep – Triple Feature
20 Sep – Astrophotography
26 and 27 Sep – Laser Guided Tour
Sky Events – September
14 Sep – Last Quarter Moon
18 Sep – zodiacal light visible in the east in morning twilight for next 2 weeks
19 Sep – thin crescent Moon very near Venus and Regulus low in the east before sunrise
20 Sep – Titan's shadow transits Saturn's disk (00:41 to 04:00EDT)
21 Sep – Saturn at opposition
21 Sep – New Moon (15:54EDT)
22 Sep – Autumnal Equinox (14:19EDT)
23 Sep – Neptune at opposition
27 Sep – Double shadows on Jupiter (01:00EDT)
29 Sep – First Quarter Moon
Sky Events – Oct
04 Oct – Double shadow transit on Jupiter (03:00EDT)
06 Oct – Full Moon (23:48EDT)
T CrB
High in west after sunset and still faint
Major Planets
Mercury (mag -0.7) too close to Sun
Mars (mag 1.5) very low in W
Saturn (mag 0.6) & Neptune (mag 7.7)
Uranus (mag 5.7) rises mid evening
Jupiter (mag -2.1) high in SE in morning
Venus (mag -3.9) low in E during morning twilight
Small Bodies
02 Oct – 1 Ceres at opposition (mag 7.6)
04 Oct – Double shadow transit of Io and Europa on Jupiter (03:00EDT)
06 Oct – Shadow transit of Titan on Saturn (00:309 – 02:30EDT)
06 Oct – Full Moon (23:48EDT)

Member Presentations:
Bruce Murray shared an image of a two-panel mosaic of the Markarian's Chain using Stellarium to plan and 60 minute exposures for each panel using a 2600MC camera. M81, Lunar X and the Dark Shark Nebula were also shared.

Mark Kaye shared images of Titan's and Rhea's shadows taken 2 weeks apart.

Malcolm shared a video of the night sky from Chile.

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 meeting at Queen's Room 226 on October 8. Malcolm thanked all for attending and the meeting ended at 8:49 pm.
Elena Zanetti, Secretary.

Zoom Social Recap

September 24, 2025

After a recent Zoom Social meeting, Zoom's AI sent out a recap of the discussion generated by Zoom's AI Companion feature Key points from the meeting are transcribed. This was accidentally turned on during the Zoom Social event of September 24, 2025.

Some people found it somewhat disturbing, while others thought it an excellent reminder of what was talked about. One person suggested that it was good enough for Regulus, and so to help generate some conversation, I've included it here in Regulus. Since we are no longer mailing out Regulus, we're no longer bound by a page limit, and while I've been trying to keep to a limit of no more than 12 pages (not always 100 adhered to), adding content of this type is no longer a concern.

So, since Regulus is not merely a newsletter, but also an official record of what is going on in the Centre, will this content be a draw for people who are members of the Centre, but not interested in some of the more social aspects? Will it deter some people from contributing at Social Zoom calls since it may be transcribed and a record kept?

I don't have answers to these questions, so I present the recap here, which may either be the first time we've done this, or it may also be the last time. Bear in mind, though, that this was accidentally turned on, so some discussion from the early parts of the event have not been transcribed.

Quick recap

The meeting began with Leslie presenting celestial images and discussing various astronomical objects, including binocular asterisms and globular clusters, while also translating a Latin phrase. The group then shared and discussed various astronomical images and observations, including photos of the Aurora Borealis and Titan's shadow transit, along with experiences observing the night sky and encounters with wildlife. The conversation ended with discussions about upcoming meetings, notifications for transient phenomena, and technical equipment considerations, including the creation of a WhatsApp group for event notifications.

Astronomical Images and Observations

The group discussed various astronomical images and observations. Richard presented images of the Seestar 50 and September 4th transit of Titan's shadow, noting challenges with sharpening and color correction. Malcolm shared a photo of the Aurora Borealis from his favorite viewing spot, highlighting unusual green blobs appearing above the red aurora. RoseMarie and Bruce also shared their observations of the aurora, with RoseMarie specifically noting the rare occurrence of green aurora appearing above the red.

Wildlife Encounters and Safety Concerns

RoseMarie shared her experience of observing the night sky from her property, discussing the visibility of stars, auroras, and a light dome over Kingston. She also described her encounters with beavers and bears, expressing caution due to the aggressive behavior of beavers and the increasing presence of bears. Malcolm, Bruce, and others contributed to the discussion, sharing their own experiences with wildlife and discussing the dangers posed by beavers and muskrats. Les mentioned a Wikipedia entry on beaver-related deaths, and the group exchanged anecdotes about encounters with wildlife.

Transient Phenomena and Observing Tips

The group discussed upcoming meetings and notifications for transient phenomena. Mark shared photos of the night sky from northern locations. Les and Roger talked about an adapter for powering a DSLR camera with an on-step device. The group agreed to add Bruce and Les to a WhatsApp group for notifications about transient events. They also discussed the challenges of predicting and observing auroras.

Quick recap
The meeting began with technical difficulties and discussions about Star Trek series before transitioning into a review of astronomical images captured with the Seestar camera, including various celestial objects and technical challenges. The group then discussed upcoming astronomical events, including comet observations and Jupiter's double shadow, while sharing personal experiences with Halley's Comet and recent telescope observations. The conversation ended with updates about upcoming meetings, health-related matters, and a discussion about a recent memorial event for a deceased colleague.

Seestar Camera Image Capture Review
Brian presented images taken with the Seestar camera, including the Eagle Nebula and the Whirlpool Galaxy. He discussed technical details and challenges encountered during capture, such as frame drops and light pollution filtering. The group provided suggestions for improving image quality, including refocusing after changing objects, turning on the dew heater, and experimenting with the light pollution filter. Kevin shared an all-sky image capturing a meteor, highlighting the capabilities of the Seestar camera.

All-Sky Camera Calibration Challenges
Kevin discussed the challenges of calibrating and configuring an all-sky camera, including issues with exposure gaps and a persistent purple background. He shared footage of recent aurora sightings and a fireball report, noting that an older video camera captured better results than the newer all-sky camera. Kevin also mentioned plans to rebuild and relocate the camera's post for better stability. The group briefly discussed light pollution affecting aurora visibility and Kevin's progress on rebuilding a telescope, which has slowed due to an obsession over minor details.

Telescope Heater Power Discussion
The group discussed using a heater for a telescope to prevent dew formation, with Kevin suggesting it should be left on by default. Les inquired about the power consumption of the heater, estimating it to be around 10-15 watts, while Richard and others guessed it was likely 2-3 watts. Mike mentioned using a 3D-printed dew shield, but found it easier to just use the heater. The conversation concluded with Kevin reminding everyone about the Dwarf Planet No. 1 series at Opposition the following day.

Astronomical Events and Comet Observations
The group discussed upcoming astronomical events, including a double shadow on Jupiter visible Saturday morning at 3:00 AM Eastern Daylight Time, and the last Titan shadow transit of Saturn on Monday, October 6th at 3:31 AM Eastern Daylight. Kim reported observing Comet Lemmon, noting its tail was visible in the Seestar but not in telescopes or binoculars, measuring approximately 15 degrees. The group also discussed the comet's location, which Kim clarified was not in the Big Dipper's handle but rather off its back legs near Gemini.

Colleague's Memorial and Astronomy Discussion
The group discussed a recent memorial event for a deceased colleague, noting it was well-attended and highlighted his career achievements in astronomy and electronics, as well as his passion for cycling. John mentioned he was still recovering from an illness, which others noted was likely a common cold, and Peggy shared that she and Rick had set up a telescope in their backyard for observation. Richard and Mark discussed the comet's location and shared a screenshot, while Kim expressed concern about dismantling the telescope setup.

Comet Observation and AGM Planning
The group discussed observing a comet, with Kim noting its movement and magnitude, while Richard shared images of the sun taken with a solar filter. Les showed an old black and white photo of Comet West from 1975, taken on an Olympus Pen F camera. Susan mentioned she would be preparing financial records for the upcoming AGM with Bruce Murray. The conversation ended with Susan mentioning she had not yet checked the website for this month's speaker.

Comet Observations and Personal Journeys
The group discussed their experiences with Halley's Comet, with several members sharing their earliest images from the 1980s and 1990s. Doveed recounted his career-defining moment when he decided to become a comet hunter after a French teacher's skeptical comment. The conversation then shifted to recent telescope observations of the moon and its craters, with Peggy and others discussing the challenges of capturing images through thin atmospheric conditions. The conversation ended with updates about upcoming meetings and health-related matters, including John's recovery

Next steps
- Brian to try imaging with the Seestar again with different light pollution filter settings and report back on the results.
- Brian to refocus the Seestar every time he changes objects to avoid focus issues.
- Susan to check if she captured audio from last month's meeting recording.
- Susan and Bruce Murray to prepare the financial books for the AGM.
- Members to look through their archives to find their earliest astronomical images to share at a future meeting.

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

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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

Image of the Aurora from September 30, 2025 by Malcolm Park, using a Nikon DSLR. It is part of a time lapse sequence.