Regulus

Newsletter of the RASC Kingston Centre

Vol. 52 No. 3 March, 2025

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Centre Events this month:

March 12: Regular Monthly Meeting—Zoom only
March 13: Astrophotography Zoom session
March 13/14: Lunar Eclipse Social Zoom meeting
March 19: Weekly Social, Online.
March 26thWeekly Social, Online.
March 29: Dawn partial solar eclipse
March 30: Deadline for Submissions to Regulus
April 2nd:Weekly Social, Online.

President's Report

Malcolm Park

Greetings from the RASC Kingston!

The Kingston Centre Seestar S50 is now in the equipment loan program!

Our first user is Rick Wagner.

Rick is looking forward to testing the scope for use in photometry. We look forward to a report on this sometime in the future!

On Sunday, March the 2nd, I was thinking about taking some pre-dawn nightscape images. The sky was forecast to be crystal clear, but cold. I set my alarm, and hoped for clear skies. Looking to the east, I saw some familiar stars in the morning March sky, and as I looked up, there was Cygnus. I realized that I could see the Summer Triangle.

The problem was, outside it was not summer! With the wind chill it felt like -30c out there. I did NOT venture out to take any photos.

But I have been busy with my widefield Constellation image capture project. So far I have captured 22 of the Northern Constellations, and most recently I have added Bootes, Coma Berenices, and Ursa Major. (see next page)

The Astrophotography 101 sessions continue.

Most recently we had a session on the 13th of February focused on the running of sequences, and what goes into the planning of an imaging session.

Coming up via Zoom on March 13th, our next session will focus on the processing of the data we have captured. We will:

- Make master calibration frames.
- Calibrate our lights and stack them.
- Get into some post-processing techniques using Pixinsight.

Depending on how much material is left uncovered, we may need to split this into two sessions. We will see how it goes.

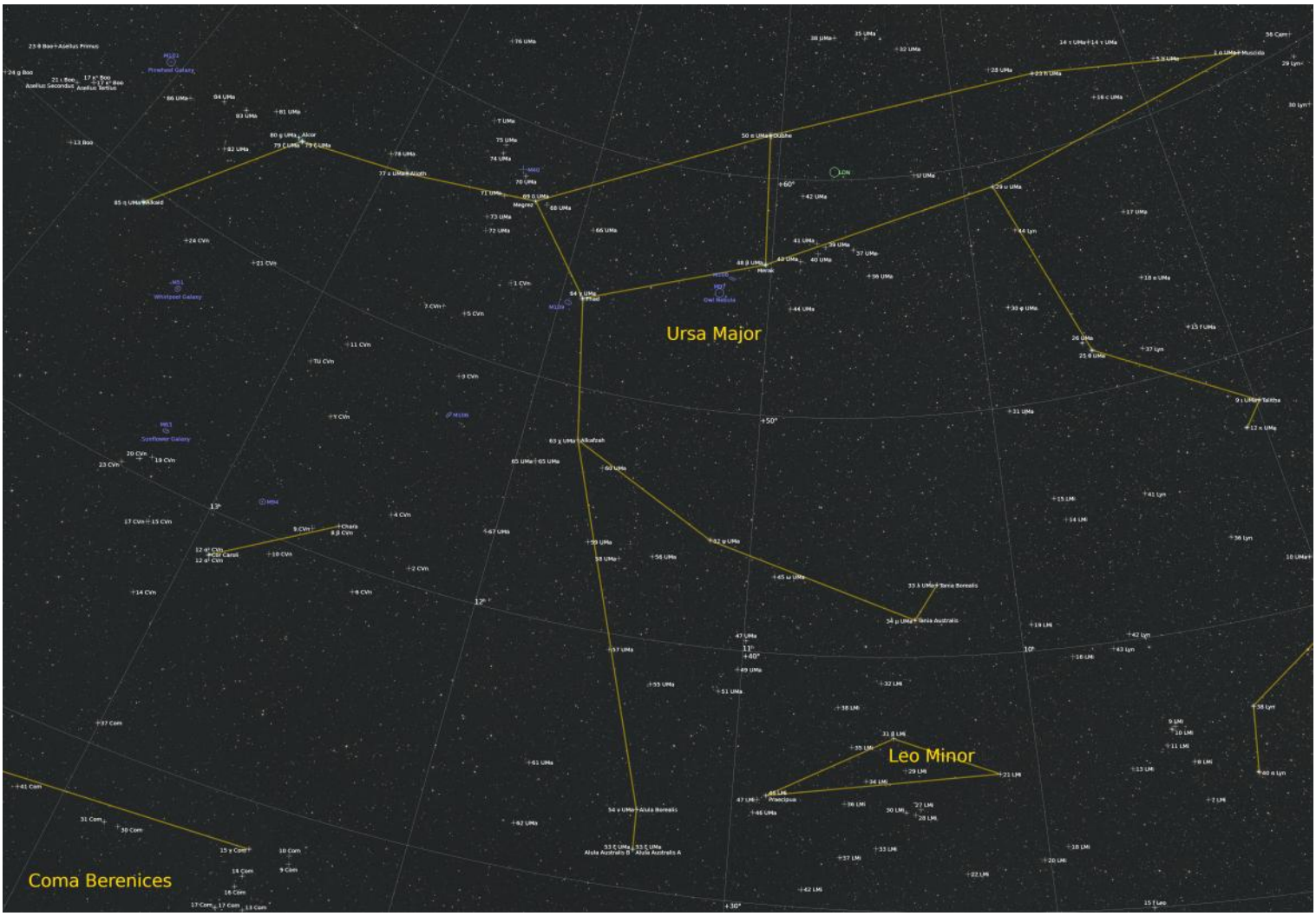
The March 12th meeting will be a zoom meeting. We did state previously that February was our last zoom meeting. But due to issues at Queen's, our first in person meeting has been moved to April.

Start time is 7pm, zoom link will be sent out on Wednesday the 5th of March.

Our guest speaker will be Dave Chapman, of the RASC Halifax Centre.
His presentation is called "Celestial Birds". He says It's about the constellations that are birds and what to look for in them. He focuses on the RASC Observing programs and gets into a bit of global cultural astronomy as well.

President's Report

Malcolm Park



Thank You Donors!

The Kingston Centre would like to extend its thanks to those who generously donate to the Centre. Their support goes a long way in helping us in our mission to enhance the understanding of, and inspire curiosity about, the Universe, through public outreach, education, and support for astronomical research.

Because of people like these, we are able to make a difference, and bring positive change to our organization. Their kindness and commitment to the Kingston Centre has a lasting impact, and we are incredibly grateful for their contributions.

Thank you again for your generosity.

Sandy MacHattie
Susan Gagnon
Andrew Godefroy
Brian Hunter
Bruce Elliott
Cathy Hall
Elena Zanetti
Heidi Linley
James McAlpine
John and Peggy Hurley
John Rossiter
Kevin Kell
Kim Hay
Laurie Graham
Rick Wagner
Sarah Sadavoy
Bruce Murray

The Editor's Keyboard

Roger Hill

I do like eclipses. Lunar, solar, partial, total, annular, transits and occultations, it doesn't matter. I think it's the motion that fascinates me.

My fascination with astronomy started at a fairly young age (along with dinosaurs!), it really got going when a teacher said that anyone who finished their work early, could read from one of the books at the back of the room. The one that I read was by Percival Lowell.

I was entranced, like so many before me, with visions of a dying civilization building giant canals to bring water from the polar caps to the parched cities in the more temperate areas towards the Martian equator. It is safe to say that while I had an interest in astronomy, it was Lowell who ignited it into a passion.

When I finally got a chance to travel to Arizona, I had to travel to Flagstaff and visit Lowell Observatory. I had not realized that Lowell's mausoleum is there, too, so I stood in front of it and silently thanked the man who had deeply influenced me.

I got my first telescope when I was 10. My Dad took me into a book shop in Liverpool, and bought me two books. When we got home, there was a telescope there. A 4-inch f/8 Newtonian reflector with three home-made eyepieces.

One of the two books had a diagram in the back which showed the maximum amount of Sun that would be covered by the Moon for all solar eclipses in the UK until the end of the 20th Century. There was one there for May 20th, 1966. My teacher, a Scottish man who sounded like the fellow from Pink Floyds The Wall (You, Laddie...stand still laddie...How can you have any pudding if you don't eat your meat?) actually let me have the morning off to view the partial eclipse.

There was one in that book that caught my eye, though. August 1999 would see a total solar eclipse in the UK. Emigrating to Canada, though, allowed me to see the partial eclipse of March 7, 1970 from my front yard in Burlington. A friend from my high school science class and I recorded the temperature drop, and used a hand-held light meter to track the changing brightness. It was part of the same Saros sequence as the 2024 April 8th event.

My first total eclipse was in the Gaspe Peninsula in July, 1972, and I was then completely hooked on eclipses, having already seen a total lunar eclipse in 1968.

Total eclipses followed in 1979, 1991, 2017 and the latest one last year. I also saw the annular eclipse that came through Ontario on May 10th, 1994.

I have seen many partial solar eclipses, along with partial and total lunar eclipses, so this month could be a good one.

With the total lunar eclipse on March 14, I'm hoping that I can produce a movie of the event, as I have done before. In the past, I have tried tracking the moon, but the mount I was using either didn't have a Lunar rate, or (more likely), my polar alignment was off and the moon drifted.

This time, I'm thinking of trying to track the anti-solar point, which should be the centre of the Earth's shadow. With a 300mm lens I think I can get the entire shadow in, and so it will show the moon passing through the shadow, rather than the shadow passing over a stationary moon. This means that I'll have to set the tracking to Solar rate, rather than sidereal or lunar.

I'm going to have to change the exposure over time, though, which will make it really tricky to do. I can't rely on the camera to determine the correct exposure, because at the start it will be a very bright blob well off to one side; in the middle it will be a fairly dim, reddish, orb near the middle and then back to a bright blob on the other side. I don't know if I can tell the camera to use the correct exposure so that nothing is over-exposed.

In fact, one movie that I made in 2000-and-something was featured in a background shot of the TV show Rookie Blue. My brother used to live with one of the people who worked on the show, and the director wanted a realistic movie to show on a TV screen in the background of a hospital waiting room. Wendy asked me if I had anything, and so I sent it along to her, and it was used in the show! The only issue was that it had to be unaccredited, which was a shame, but Wendy is good people, and I was always happy to help her out. In return, my family got a chance to see a show being shot in a warehouse in Mississauga. Way cool!

So we also have a partial eclipse to enjoy this month, too. I'm not sure if I want to travel out to the Tadoussac area in Quebec where the eclipse will be 86% obscured. Seaway Observatory in my backyard will see 29% and Kingston 19%.

I'll travel a bit for clear skies, but not the several hours like last year.

Then again, I've said that before. We'll see!

Clear skies to you!

Roger Hill

If we begin this month by trying to find the best line Shakespeare ever wrote, that may not an easy task, or it could be quite easy. I could open my Shakespeare and pretty much point at random to almost any line in the canon. But today I do have something specific in mind. It is a simple prose passage from Hamlet, and it could be one of the finest passages he ever committed to paper:

I will tell you why; so shall my anticipation prevent your discovery, and your secrecy to the King and Queen molt no feather. I have of late, but wherefore I know not, lost all my mirth, forgone all custom of exercises, and, indeed, it goes so heavily with my disposition that this goodly frame, the Earth, seems to me a sterile promontory; this most excellent canopy, the air, look you, this brave o'erhanging firmament, this majestical roof, fretted with golden fire—why, it appeareth nothing to me but a foul and pestilent congregation of vapors. What a piece of work is a man, how noble in reason, how infinite in faculties, in form and moving how express and admirable; in action how like an angel, in apprehension how like a god: the beauty of the world, the paragon of animals—and yet, to me, what is this quintessence of dust?
-Hamlet.2.2.292-306.

The magic of this passage begins with the "goodly frame". Hamlet is speaking of the planet on which he lives as almost a consecrated thing. It is surrounded by a most excellent and protective canopy, the air; without it we would never be here or could have evolved here as a species. But the lines reach their zenith with the "brave o'erhanging firmament a reference to the night sky in a way virtually none of us could even imagine. It gets better: "this majestical roof, fretted with golden fire." I can think of no more appropriate way to characterize the night sky. Shakespeare is ready to call the magnificence of the night sky, on any night, a holy thing and experience. I have heard the night sky described in many ways during my lifetime, but never so exquisitely.

Many readers of this column take advantage the night sky as a target of their cameras; I am one of those who does not. I am primarily a visual observer, and from night to night, season past season, and year after year, I am still spellbound by the simple joy of the night sky. It is not that I have never photographed. I used to be quite the celestial shutterbug. And between 1989 and 1996 I took literally thousands of pictures of the sky, mostly using the 18-inch Schmidt camera at Palomar Mountain Observatory. Just two of those images, recorded on March 23, 1993, began an adventure with a comet that eventually collided with Jupiter. Perhaps that was enough. In a sense, it is time for me to give my camera a rest, open my eyes, ands simply enjoy the night sky's golden fire.

All pictures on this page supplied by David Levy

The Sky This Month

Rick Wagner

Any night of the week can offer up a broad range of viewing wonders. RASC KC Past President Rick Wagner keeps an eye on the sky for us each month, sharing some of the best viewing opportunities as well as timings to catch your favourite night sky target at its best.

March Skies

01 Mar – Low in the west after sunset thin crescent Moon 7º lower left of Venus (mag -4.8), Mercury (mag -1.0) 10º below Moon; Saturn (mag 1.1) 7.5º below Mercury is probably impossible
04 Mar – Double moon shadows on Jupiter (18:40EST)
06 Mar – First Quarter Moon
08 Mar – Mercury GEE (18º) low in the west after sunset
09 Mar – Daylight saving time begins at 02:00EST
10 Mar – minor planet 11861 Teruhime (mag 16.7) occults UCAC4 441-058053 (mag 11.2, variable)
11 Mar – Double moon shadows on Jupiter (22:40EDT)
11&12 Mar – Mercury (mag 0.6) passes 5½º left of Venus (mag -4.4) very low in the west shortly after sunset – binoculars will help pull Mercury out of the twilight
12 Mar - minor planet 8 Flora (mag 9.5) at opposition
14 Mar – TOTAL LUNAR ECLIPSE! (partial umbral from 01:15 to 04:45EDT, total from 02:30 to 03:30EDT))
14 Mar – Full Moon (02:55EDT)
16 Mar – zodiacal light for the next two weeks – a broad triangular patch of light extending up and left from the western horizon after sunset
20 Mar – Spring Equinox – Sun is over the equator, day and night are equal (05:01EDT)
22 Mar – Last Quarter Moon – sitting on the spout of the Sagittarius teapot
23 Mar – Venus at inferior conjunction 9.5º above Sun! Dangerous observation but great chance to see the extremely thin 'silver eyelash' during daylight
29 Mar – New Moon (06:58EDT)
29 Mar – Sun rises partially eclipsed – eclipse ends ~15min after sunrise

Target for Tonight: Gemini

Susan Gagnon

Note: whenever tracking down a nebula of any sort a nebula filter can be helpful although not always required.

Bright stars of note in Gemini are Castor and Pollux. In March 2025, these two make an attractive grouping with Mars, which remains in Gemini for the whole of the month.

Mekbuda aka Zeta/43 Geminorum, also a bright star, is a classical Cepheid variable. The ETU documentation provides some comparison stars in the non-compulsory variable section. It is a pulsating giant occupying the instability strip of the H-R diagram. Variability is less than a full magnitude with a period of just over 10 days. An 8th magnitude companion makes it a visual or optical pair, meaning they are not physically associated.

Another double is HD51502 (HIP 33529); it is a much tighter pair than Mekbuda and fainter.

M35, open cluster well suited to small scopes and binoculars and has a diameter of 1/2 degree, similar to that of the Moon.

NGC 2158, an open cluster, lies close to M35 in the sky but is 3 times as distant and appears much more compact and very small. Larger scope may be required.

NGC 2371/2372 is a planetary nebula requiring a scope of 6 inches or more. Once thought to be 2 objects now suspected as two lobes of the same nebula.

NGC 2392, the Eskimo Nebula is a planetary nebula with a bright central area with a fainter halo.

IC443 is a supernova remnant with a moderately strong radio source. A scope of 250 to 300mm is recommended as well as a nebula filter.

NGC 2420 is an open cluster suitable for binoculars or small scope.

IC2194/6/7 are 3 small galaxies which are members of a galaxy group also containing 2199 and 2193. (2197 may be 2193?!)The magnitudes of this group range from 13.8 to 15, faint indeed.

J 900 or Jonckheere 900 (PK194+2.1) is a compact planetary nebula with a faint central star. Thought to be harder to identify than to see, it can be confused as part of a double star system at mag 12.4.

PK205+14.2 is a planetary nebula, ~mag 13. (The open cluster NGC 2395 is nearby.)

Tips for Zoom

1. Update your zoom client to the latest client version https://www.zoom.us/download .
2. Reboot your computer 30 minutes beforehand (PC, mac, handheld).
3. Ensure your portable device is fully charged.
4. Only start the minimal amount of programs you will need before the zoom session.
5. If you have a choice of wifi vs. wired network, always use wired network.
6. Once connected test and adjust your audio and video settings
   Use headsets or earbuds for best quality audio (the noise cancelling in the zoom software causes its own audio artifacts when using computer built-in mic and speakers).

If you are presenting:

1. If you have low bandwidth, turn off your camera video during the presentation (this gives more bandwidth to your audio and screen share)
2. If you have low CPU oomph, turn off camera background images or videos. use blur to hide the background at the lowest CPU cost. or turn off your camera video altogether.
3. If your presentation (PowerPoint, keynote, etc) has video, be sure to click the "video" box between the first and second share button clicks. The same for audio.
4. If you have multiple displays, test in advance and learn of all of the various settings to show the audience view to the audience and any notes on your local screen.

There are settings in zoom to pick and choose which window or desktop to share, and settings in PowerPoint and keynote to swap audience vs. presenter screens.

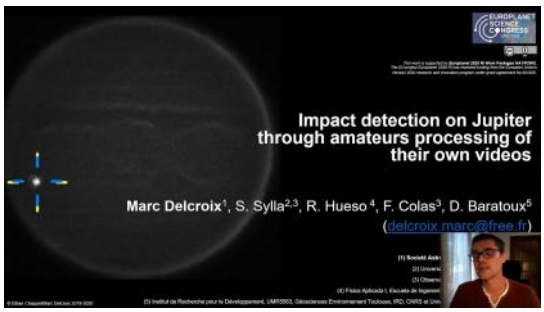
some references
https://www.zdnet.com/education/professional-development/zoom-presenting-like-a-pro/
https://www.teleprompter.com/blog/zoom-presentation-tips-for-all

Jupiter Impact Detection

Besides imaging Jupiter for the outofthisworldlisness of Jupiter, its moons and their shadows transitting the surface, the Great Red Spot, bands and belts, and many other spots, amateurs can also watch for impacts on Jupiter itself. Anyone remember Comet Shoemaker Levy 9 in 1994?

I have been aware of this concept, and even used the DeTect software package from time to time, but never in a consistent manner.

During a Citizen Science Education and Public Outreach Webinar on Feb. 23rd, I learned something tremendous. Installing DeTect on the same system as Autostakkert and (wait for it) Autostakkert will automatically invoke DeTect and have it search for Jupiter Impacts *whilst* at the same time doing its normal stacking process!



As seen in this image there is a tiny icon that looks like Jupiter (highlighted) and the check box is now checked after install of DeTect on the system.

I am looking forward to have this additional value added science tool for use in the future. In the meantime you can also run it on the raw saved .SER files from the past. For those RASC-KC members that ask “why do you save your raw data?” This is another great reason!

So I fired up DeTect and aimed it at my online archive of 2025 Jupiter .SER raw video files. Processing those 87 files of approx 528GB will probably take a few hours. Especially since I just saw that there were also some Mars files in there... I wonder what it will do with them? After that I will starting running through 2024, month by month, probably in overnight runs.

This is the realtime display of the software at work.

There is another big impact imaging project aimed at detecting lunar impacts, but I haven't tried that out yet :)

https://www.nasa.gov/meteoroid-environment-office/lunar-impact-monitoring/

Links:
DeTect https://github.com/DeTeCt-PSWS/DeTeCt-MFC/releases/tag/v3.9.0
Autostakkert https://www.autostakkert.com/
Impact imaging: https://www.nasa.gov/meteoroid-environment-office/lunar-impact-monitoring/

This has been the site of many BBC Sky At Night episodes, has a long history (see below) of Astronomy, Public Outreach and Education, and one of our own has taught onsite and operated telescopes.

Some background history:

Herstmonceux Castle is a brick-built castle, dating from the 15th century, near Herstmonceux, East Sussex, England. It is one of the oldest significant brick buildings still standing in England.[1]

From: https://en.wikipedia.org/wiki/Herstmonceux_Castle

The Royal Observatory was founded by King Charles II at Greenwich in 1675. Observing conditions at Greenwich deteriorated following the urban growth of London, and plans were made in the early 20th century to relocate the observatory to a rural location with clearer, darker skies. Herstmonceux Castle and estate were put up for sale by their private owners and were sold in 1946 to the Admiralty, which then operated the Royal Observatory on behalf of the British government. The relocation of the observatory took place over a decade, and was complete by 1957. A number of new buildings were erected in the castle grounds. The institution at Herstmonceux Castle was known as the Royal Greenwich Observatory, where it remained until 1988, when the observatory relocated to Cambridge.

In 1992 Alfred Bader, an alumnus of Queen's University at Kingston, learned of the castle's vacancy and offered to purchase the castle for his wife; she declined, joking that there would be "too many rooms to clean". But in 1994, after intensive renovations, the Queen's International Study Centre was opened.

On 13 November 2023, in response to engineering investigations, the university suspended operations at Bader College and future admissions to Bader College programs until structural remediation activities can be completed.

In 2024 August, it was announced that the future of the Observatory Science Centre on Herstmonceux Castle Estate remains unknown after Queen's forced the scientific organization to leave their longtime home.

This past month, the Board of Trustees of Bader College decided not to renew a lease with The Observatory Science Centre. The Centre, situated on the Herstmonceux Castle Estate where Bader College is also located, needs to vacate the property when its lease ends in 2026.

Rumbold (CEO of the Observatory Science Centre) learned the University was terminating their lease before the public announcement. The University didn't explain why they were terminating their lease, nor did they explain what purpose the building would serve in the future. While she's open to discussing the termination with the University, she has not received any communication from them since the decision was made.

In the finest tradition of George Orwell, whilst kicking out/ closing down a gem of scientific education and public outreach, Queen's says:

"In response to recent concerns regarding the future of the Herstmonceux Science Centre site, Queen's University and Bader College would like to reassure the community of their shared commitment to upholding the site's legacy as a hub for scientific literacy, education, and public outreach"

What can you do?

The Observatory Science Centre is an educational charity which has called the Grade II listed, former home of the Royal Greenwich Observatory at Herstmonceux, East Sussex, home for the last 30 years. Please sign the petition: https://www.change.org/p/save-the-observatory-science-centre-herstmonceux

References:

https://www.bbc.com/news/articles/cyvpym84ygvo

https://www.queensjournal.ca/queens-terminates-lease-with-the-observatory-science-centre-on-herstmonceux-castle-estate/

https://herstmonceux-castle.com/bader-college-queens-university-committed-to-upholding-observatory-sites-legacy/

https://www.facebook.com/share/g/jCAgkswb4GL3xsw1/?mibextid=K35XfP

Can you stand this story???

Sunday, April 14, 2002

Okay - we've heard it all, right?

Got a call late last night from a guy driving in from Oklahoma City next week....needs some help with his NEW 8" LX200 GPS.

Just got it in and decided that the optics were NOT clean enough, being new and all. He was crying into the phone....voice trembling....the guy needed help. Clearly.

He followed my instruction on the 'net completely. First you blow off all the particles of debris (he admitted there WERE NOT any, but did this anyway...) from the corrector plate prior to cleaning. He mixed up the proper solution of isopropyl alcohol 1/4 to 3/4 distilled water and added a small amount of Ivory liquid to the solution in the proper amount. All is good and the sun is shining bright!

Even went to the store make SURE he had distilled way and ONLY Ivory liquid as prescribed by Doc Clay...Smart man, really smart man. (but remember, this is in Oklahoma!) But, he does not find "compressed air in a can." Nor does the gentleman pursue the fine arts so an artist's paint brush is not a common item around the house.

So....he remembers that he has this nice rubber ear syringe in the bathroom...never used on nary an ear in the house! One good shove on that rascal and it will blow the crap all the way to Arkansas! Little did he know! So off comes the dust cap, exposing the virgin glass to the elements of Oklahoma for the first time....lights from the hanging bulbs (poetic license here....) reflect near perfect images unimpaired by the elements of mankind upon this pristine surface...and he proceeds to BLOW!

Out comes the viscous glob of spewing yellow liquid....in its purest form, the saving grace of mankind's winter months, the chemical we know and love as ETHYLENE GLYCOL, our automobile knows as "anti freeze." Little droplets like a sneeze from Tuberculosis Tommy, spread in a pattern across the coated corrector plate that only God could know and love.

And then he "remembered." No, this had NOT been used on anyone's ears...ever. It had, however, been used several times last year when he overfilled his car's radiator getting it winterized for the season.

Oh my God! What should he do?? Well, Hell! Wipe the damned stuff OFF....of COURSE! So he runs out to his shop to get - what else, when you get anti-freeze all over something - SHOP RAGS! Of COURSE! So he rubs it down really hard to get all the gooey yellow stuff off—except that which has already seeped down inside the corrector retaining ring.

His story continued, his sobs getting deeper although over the phone I could tell this was an Okie with pride, his best attempts made to cover his sobs...Oh NO....he knew that wasn't the thing to do...there were huge gaps starting to show up in the UHTC coatings that he had just paid $300 for! So he quickly rushed back to the shop for just what YOU and I would get at this point!

ALLEN WRENCHES!!

Drop and roll, baby!

He quickly disconnected the OTA from the fork arms and jerked the scope tube assembly off and rushed it to the bathroom where the tub had been started, hot water rapidly filling the Baptism cavity at that point.

And down it went....once, twice, many times thereafter, the healing hot waters scalding and penetrating, permeating the work of art that had just been shipped out of the manufacturer...the first to go was the Inspection Sticker, floating away in the tub as if to surrender early in this fight.

But THEN, he did the right thing! He rinsed with distilled water, just as Doc Clay prescribes! Got to do that final rinse!! A careful one hour session with the hair dryer finished off the story...and the telescope.

"It all seems to be okay, but I just know it's not perfect anymore," he cried, periodically removing the mouthpiece of the phone away so that ears could not detect his weaker side.

In front of him, he admitted, was only a part of a telescope...the coatings were there in some places, gone in others...the finder was full of water, dripping out the eyepiece end. Droplets still oozed from the small seal behind the focus knob..."I just can't bring myself to using this - you know, NEW and all, - until I bring it by for you to look at and tell me it's O.K.!" he begged.

OKAY??!!? What? First you squirt anti-freeze on the poor devil, then rub it down real good with a shop towel, then dunk it in a tub of boiling water and try to kill it off with a blow dryer??

And YOU want ME to fix it??

And the moral of the story....it's on its way to Doc Clay Monday.

[true story!]
Clay

Dr. P. Clay Sherrod—Arkansas Sky Observatory

From MAPUG—Meade Advanced Products Users Group

Equipment Loan — Kevin Kell

The RASC-KC has an equipment loan program that does not get a lot of use.. so I will be highlighting some of the items each month in Regulus as well as in the email distribution list Kingston-astronomy-chat in attempt to improve utilization.

Members must be in good standing, and

- Are responsible for the equipment signed out
- The Equipment Loan period is nominally one month but may be extended.

You can access the master list by using our kingston.rasc.ca website login (if you don't have an account, please request one via email kingston@rasc.ca): https://kingston.rasc.ca/system/files/LoanProgram.pdf

Most of the loan equipment is in an outdoor storage shed that is not very accessible in the winter months. We store many items however indoors and those more easily accessed items will be highlighted here:

Item #15 Televue 19mm panoptic eyepiece 1.25" (2000)
Item #25 Eyepiece Nagler Type 5- 31mm 2" (2005)
Item #32 Sky Quality Meter (2006)
Item #52 Telescope 15cm (6") Bushnell Voyager "Gibbs" Dobsonian (2019)
Item #55 Laser collimator for Newtonian telescopes (2023)

Please contact me directly at kevin@starlightcascade.ca if you are interested in borrowing these items. Pickup can be made at our home by appointment outside of Yarker, or we can arrange a mutually convenient alternative.

For current status, see this page (logged in members only):

https://kingston.rasc.ca/equipment

SN2014J — Stuart Atkinson

For almost half a century, every time
I read the word "Supernova" I imagined
Standing outside, on a cold, clear night,
Seeing a hole punched in the sky;
The hide of heaven punctured, allowing the light
Of a more brilliant, more beautiful universe to come surging through,
A Niagara Falls of photons
Brighter than any Full Moon.
After all, those woodcuts, engravings and paintings on cave walls
All showed a spectacular sight:
Something beyond bright, a cosmic Maglite shining
Right in Earth's eye,
And as the years passed I grew impatient to see
Something like that above me,
A freshly-lit cosmic beacon burning above my town,
Above my hills and trees…
In my mind's eye I always saw my
First supernova shining amongst the stars of winter.
High, somewhere above Orion,
Its icy rays slicing through the Pleiades, putting nearby
Rigel and Sirius to shame; I pictured
A celestial welding flame so insanely bright
It would cast swaying shadows behind me as I stood there
Staring, staring…
…but instead what I saw was a barely there
Pinprick peeking through a puff of smoke,
A mere silvery mote – even when magnified a dozen times –
Off to one side in a telescope's eyepiece on a night
Of scudding clouds and mist-dimmed stars,
As I stood in the mud, in a car park.
Tempting… so, so human… to groan "Oh, is that it?"
But grossly unfair. Remember, I scolded myself, there, so hard to see
Through the fur on the Great Bear's shoulder,
A star has blown itself apart..!
Not today, but, as the poster says,
A long time ago in a galaxy far, far away.
So far away the light entering our eyes tonight
Set off when Mankind still swung from trees
And the delight of walking upright was just a dream,
Ten million years from waking…
So don't dismiss that distant fleck of light too soon.
That's the Universe bursting a balloon
Behind our backs, laughing as we run, stumbling
To our telescopes, desperate to know more,
Desperate to drink in its beauty while trying hard
Not to think of the fate of its family of worlds,
Or wonder if that star had been a civilization's Sun
Before it turned itself inside out,
Its neutrino-drenched death met with the terrified shouts
And screams of billions of beings as the ground
Beneath their feet blistered then shattered,
Their planets' dusty remains scattered like crushed dry leaves…

February 2025 Meeting Minutes

Elena Zanetti

Wednesday, February 12, 2025
Minutes of the RASC-KC Regular Monthly Meeting
Live streamed on Zoom only

At 19:05 EST, **President Malcolm Park** welcomed Kingston Centre members and guests with 43 Zoom screens in attendance and 58 preregistered.

David Levy: David read from his own biography, 'Clyde Tombaugh: Discoverer of Planet Pluto' as David was preparing for a trip to Lowell Observatory to celebrate Pluto Planet Day.

Malcolm Park shared an image of the Veil Nebula, a four-panel mosaic taken in Chile with a Rokinon 135, demonstrating the ease of imaging with the simplest equipment.

Our Centre is now in possession of the ZWO Seestar S50 smart scope (50mm aperture, 250mm focal length, f/5) for the purpose of outreach, the equipment loan program, Science Rendezvous, Queen's University Open House, and soon available to members to borrow.

Speaker: Alan Dyer, 'Cosmic Connections: How the Moon and Stars Made Earth and Life Possible'. Alan discusses how various cosmic events, the moon and stars, including the aurorae, shape our lives down here. Alan also shared his own inspiring images of the aurora. On our RASC Kingston YouTube channel, @rasckingston9756, Alan's talk begins at the 10-minute mark.

Rick Wagner: What's Up in the Sky
Local Events
27 Feb – Astronomy on Tap
07 Mar – Seminar Renee Hlozek on Cosmology, PhysicsDept.
08 Mar – Queen's Observatory Open House
BAA Events
22 Feb – ARPS Exoplanet Division Webinar (05:30)
AAVSO Webinars
01 Mar – Deciphering Eclipsing Binary Systems
Sky Events – February
12 Feb – Full Moon (08:53EST)
14 Feb – Venus at greatest illuminated extent (Venus is getting closer and larger but its crescent is thinning)
15 Feb – watch for zodiacal light in western sky after evening twilight for the next 10 days
20 Feb – Last Quarter Moon
21 Feb – Moon occults tau Scorpii minutes before sunrise – use a telescope to pull the star out of the bright twilight
24 & 25 Feb – Saturn (mag 1.1) 2 degrees left of Mercury (mag -1.2) very low in western sky shortly after sunset
27 Feb – New Moon (19:45EST)
28 Feb - !!extremely young crescent Moon (<23 hours after new) 3.6 degrees below Mercury (mag -1.0) very low in western sky just after sunset. Saturn (mag 1.1) is 2.2 degrees below the Moon. Venus (mag -4.8), 16 degrees straight above the group will prove a valuable guidepost
Sky Events – March
01 Mar – thin crescent Moon 7 degrees lower left of Venus (mag -4,8), Mercury (mag -1) 10 degrees below Moon, Saturn (mag 1.1) 7.5 degrees below Mercury
04 Mar – double moon shadows on Jupiter (18:40EST)
06 Mar – First Quarter Moon
08 Mar – Mercury GEE (18 degrees)
09 Mar – Daylight Saving time begins
11 Mar – Double moon shadows on Jupiter (22:40EDT)
14 Mar – TOTAL LUNAR ECLIPSE! (01:00EDT)
T CrB
Transits before morning twilight by month's end - Still faint
Major Planets
Mercury (mag -1.3) setting in bright evening twilight
Saturn (mag 1.1) getting lower in west after sunset, setting early evening
Neptune (mag 7.9) sets mid-evening
Venus (mag -4.9) well up in SW after sunset
Uranus (mag 5.8) high in south after sunset, sets after midnight
Jupiter (mag -2.4) transits in evening twilight, sets after midnight
Mars (mag -0.5) transits mid evening, sets before morning twilight
Small Bodies
12 Feb – 29 Amphitrite (mag 9.0) at opposition
12 mar – 8 Flora (mag 9.5) at opposition
Occultations
21 Feb – 01:00UT (7607) BillMerline 17.9 occults TYC 1350 -00047-1 8.5 for a 8.8 drop for 2.5s
23 Feb – 02:30UT (1590) Tsiolkoyskava 16.4 occults TYC 1302-00069-1 8.4 for a 7.1 drop for 2.5s
26 Feb – 02:30UT (1662) Hoffmann 15.8 occults UCAC4 527 -049620 9.1 for a 6.5 drop for 1.1s
10 Mar – 05:00UT (11860) Teruhime 16.7 occults UCAC4 441-058053 11.2 for a 5.5 drop for 1.8s

John Hurley - National Council Report: 14,000 loss projected for the year in the Operating budget. (or 1.3% of total revenue) and the Society is hoping to again work on promotional and educational materials. GA will be April 26-27, an online event. Changes to their webpage coming with possibly short disruptions, updates will be available on their Bulletin.

Bruce Elliott: FLA Science Fair on March 20th and Science Rendezvous is May 10th. Please contact Bruce to volunteer for either event.

Next meeting will be on March 12 at 7 pm, Zoom only.

Malcolm Park thanked all for attending and the meeting ended at 8:38 p.m.

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.

JOIN US!

https://kingston.rasc.ca/join

Front cover image by Shelley Jackson, who finally had a clear night in Athens (near Brockville). This was three hours of exposures, and, no doubt, many more hours of processing.

Thanks:
The editor would like to thank all the members who submitted material for Regulus:
Susan Gagnon, Kevin Kell, David Levy, Malcolm Park, Rick Wagner, and Elena Zanetti.

Board of Directors & Officers for 2024-2025

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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.

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