

Regulus

RASC Kingston Centre

December 2019

End of Year, End of Decade

We are transitioning from the creation of the Centre newsletter Regulus, from Long Time Editor Walter MacDonald, to New Time Editor Graeme Hay.

Thanks to Walter MacDonald, who since 2008 has set the long duration record for Editorshipness.

In the interim, this is a fillintheblanks newsletter with some items of minutes of meetings to get into our Centres historical records, ie Regulus, The Newsletter of The Royal Astronomical Society of Canada - Kingston Centre.

So far in the vastness of Timey-Wimey Time and Space, Regulus has withstood the test of Timey Wimeyness and has been the best historical repository if information... especially not getting lost, crumpled, flooded, eaten by rabbits, mutilated or otherwise disappeared.

Minutes of The RASC-KC Special Meeting of Sunday 2019 September 8th

This was a special meeting with the RASC Belleville Centre featuring our Honorary President David Levy speaking on the event

of his autobiography "A Night watchman's Journey- The Road not Taken" publication. John and Peggy Hurley picked up David from the Kingston Train Station (from Montreal) and brought him to the speaking venue of Stirling Hall Theatre A at 64 Bader Lane on Queen's University Campus. David had previously spoken at the Montreal and Ottawa Centres in the preceding days.

The room was booked from 2:30 to 5:30pm with a planned start time of 3pm. Unbeknownst to us, the building is now normally locked on weekends, programmed in during the week, and would not unlock until 2:30pm. Call to campus security did not result in an earlier opening, so we waited outside for 40 minutes. The doors did finally open at 2:38 and we went in to set up.

We had purchased a box of 24 books from the RASC and had them on hand to sell to members at our cost of \$35. We had over 40 people in attendance, with the majority being RASC members. Advertising had gone out to all major newspapers and radio stations in Kingston along with notices to the Queens Astronomy and English departments.

Kevin Kell opened the meeting with introductions of those Kingston and Belleville Board member he saw in the audience. He also ran through some information items such as the dinner afterward where all in the audience were invited to attend, the next regular meetings of both centres and the existence of an

online video of the Clyde Tombaugh talk in Kingston on 1989 Oct 20 on our Youtube channel. Kevin then introduced Dave Cotterall, RASC Belleville president, to introduce the speaker David Levy. David then proceeded with his talk for the next hour and took questions at the end. Kevin presented David with a thank you letter and card.

Ten people purchased books and had David sign them. He also signed a few more copies for future sales.

We then headed over to the Queen's Inn on Brock Street, to the Sports Tap and Grill where 20 people attended. Service was quick and delicious. After dinner the meeting broke and John and Peggy took David back to the train station for an evening return to Montreal.

Thanks to all who assisted in setting this up and carrying out the Special Meeting.

Prepared by Kevin Kell, Secretary of the RASC Kingston Centre

Minutes of The RASC-KC Regular Meeting of Thursday 2019 September 12th

Pre-meeting - Dinner with 14 members and guests at the Sports Tap and Grill on Brock St from 5pm

The Regular Meeting was in Mac-Corry Hall Room D216 on Queen's University Campus in Kingston Ontario, which ran from 7-9:20pm.

26 people were in attendance including President Rick Wagner, Treasurer Susan Gagnon, Librarian Kim Hay and Secretary Kevin Kell.

Handouts available at the door were: a meeting agenda, 2019 AGM Agenda, 2018 AGM Draft Minutes, a one page Executive Summary, FallNStars 2019 Registration forms and directions to FNS.

Rick Wagner called the meeting to order at 19:00 EDT and welcomed everyone. He talked about getting involved with volunteering with the Centre. He then went into Upcoming Events for the next two months.

Saturday September 14th: The KAON (Kingston Astronomy Outreach Network) Queen's University Ellis Hall Observatory Open House starting at 8:00 pm in Ellis Hall. This month's talk will be given by Guest Speaker: Prof. Ken Clark (Queen's) Title: Fishing for Neutrinos in the Pacific Ocean Location: Ellis Hall Auditorium
 10 Sep – Neptune at opposition
 13 Sep – nearly Full Moon rising at Sunset
 14 Sep – Full Moon
 23 Sep – Autumn Equinox 03:50EDT
 26&27 Sep – crescent Moon in zodiacal light in dawn sky
 27+ Sep – Uranus visible naked eye for next 2 weeks
 28 Sep – New Moon
 28 Sep – minor planet 21 Lutetia at opposition
 30 Sep – ideal Algol minimum
 5 Oct – Werner Lunar X visible ~2300EDT
 7-9 Oct – Draconid/Giacobinid meteor shower (Moon interferences)
 10 Oct - S Taurid meteor shower (Moon interferences)

Kim Hay (Chair, Fall'NStars 2019) spoke on FNS and the change of venue from Vandewater Conservation Area near Thomasburg to the Johnson RV Park southeast of Picton. The Conservation Area has instituted a new policy of locking the gates at the parking lot 24/7 now and parking fees.

We could not come up with a solution of allowing passage to attendees in any reasonable fashion.

Registration forms were available at the meeting and on the RASC Belleville website.

Kim then spoke in her role as RASCKC Librarian. She had brought a selection from the library, received a loaned out book and talked about the signout list.

We then moved into Observing Reports from Members and started with a remote report from Richard Schmude (Georgia) as sent to Rick. Susan Gagnon spoke on her move to motivate... more observing or her observatory would come down. So far it is working with a renewed interest in variable start observing.

Hank Bartlett show some images of recent solar minimum followed by successful attempts at imaging daytime stars. He now has imaged over 20 different stars in the daytime. Brian Hunter then showed images from his 2019 July 2nd solar eclipse trip to Chile and ensuing travelogue to Rapa Nui (aka Easter Island). Many question from the audience followed about the Moai, moreso than the eclipse! He closed with news that SpaceX will be launching 60 low earth orbit communication satellites for internet data on each rocket, with an anticipated 24 launches in 2020 alone. These satellites will be visible photographically and will affect anyone imaging wide angle astrophotography. The total in orbit will be approximately 12000 at an operational altitude above that of the ISS, about 500km. At least two other companies are planning similar satellite constellations.

We then took a 10 minute break and returned to more Observing Reports after the door prize draw. Thanks to Rick for donating the prize this month.

Leslie Roberts then showed many deep sky images, processed using registrar and images+.

Stephen Craig talked about and showed images from Starfest 2019, and his exceptional observing runs over the summer of deep sky objects. He uses the Mallincam Universe camera generally with 5 runs of 20

min exposures binned 2x2, using an onaxis guider.

Malcolm Park then treated us to some images from the remote observatory in Chile. Near San Pedro de Atacama, from his Iphone with enough dongles to trip over, connected to the room video projector. It was apparent that the room video projector, as realized in the past, is very poor at recreating astronomical images.

Rick Wagner then talked about the City of Kingston City Hall event that 8 members participated in and the resulting honorarium from the city. That happened on Friday evening 2019 July 12th. The Elbow Lake Queens University biological station event with 5 members had a small turnout of about

40 people amidst mostly cloudy skies on Friday evening 2019 August 8th.

The Next meeting is scheduled Thursday 2019 October 10th, 7pm, Location MacCorry Hall D216, Queen's University. Our guest speaker will be Mike as suggested and aided by Rose Marie Burke. Keep in touch with us by email, our website, facebook, and twitter (details at the top).

The meeting adjourned at 21:20

Prepared by Kevin Kell, Secretary of the RASC Kingston Centre

Minutes of The RASC-KC Regular Meeting of Thursday 2019 October 10th
Pre-meeting - Dinner with 17 members and guests at the Sports Tap and Grill on Brock St. The Regular Meeting was in Mac-Corry Hall Room D216 on Queen's University Campus in Kingston Ontario, and ran from 7-9:00pm. 33 people were in attendance including Rick Wagner President, Susan Gagnon Treasurer, Kim Hay Librarian and Kevin Kell Secretary.

Handouts available at the door were: a meeting agenda, 2019 AGM Agenda, 2018

AGM Draft Minutes, a one page Executive Summary.

Rick Wagner called the meeting to order at 19:00 EDT and welcomed everyone. He talked about the upcoming Annual General Meeting and Elections and noted which positions were up:

President, Vice President, Treasurer, NCRRep, and the Editor who is looking to step down.

He listed upcoming events in the area including many seminars and presentations by Queen's University and the McDonald Institute.

Saturday October 12th- KAON Ellis Hall Observatory Open House 7:30pm
Wednesday October 23rd – Astronomy on Tap

He then went into a list of astronomical events for the next month or two including more Algol variable star minimums' meteor showers and more.

13 Oct – Full Moon
21-22 Oct – Orionids max – best @ midnight
22 Oct – Algol minimum 2300EDT
26 Oct – 9 Metis in opposition
27 Oct – very old Moon in dawn sky
28 Oct – very young Moon in evening sky
28 Oct – Uranus in opposition
29 Oct – thin crescent Moon above Venus
2-3 Nov – return to Standard Time
11 Nov – Mercury Transit!!!!
12 Nov – Full Moon
12 Nov – Algol at minimum after midnight
12 Nov – 4 Vesta at opposition
12 Nov – N Taurid meteors peak

Rick introduced our guest speaker, Mike Adler from Jackson Hole Wyoming. Michael Adler is a highly skilled astrophotographer from Wyoming who does a lot of public speaking and displays his pictures in many

venues around Wyoming. He's going to talk to us about the Juno mission to Jupiter, including many of the spectacular images: Jupiter Re-Discovered This talk will highlight recent discoveries about the largest planet in the Solar system, Jupiter. The Juno spacecraft has been in a polar orbit around Jupiter since July 2016 and has made some amazing pictures of Jupiter including the first ever of the polar regions but has also provide a totally new perspective on Jupiter using its 8 scientific instruments. In addition to the images, highlights of the results will be reviewed including the first measurements of Jupiter interior structure below the upper clouds, measurements of the magnetosphere and the gravitational field and an analysis of lightning on the planet. Mike also showed images of his observatory (Spectacular!) and the work that he is doing in wideband and narrowband imaging of nebula. After answering a lot of questions, Mike was presented with an RASC-KC coaster set and a small honorarium.

The 10 minute Break was followed by the door prize draws. – we had three door prizes this evening.. thanks to all who contributed!
Members purchased pre-ordered rasc 2020 calendars for \$20. Some were still remaining from members who were not at the meeting.

Rick then reviewed the details of the upcoming Transit of Mercury across the Sun
• Mercury Transits occur in May or November. The last four transits occurred on November 15, 1999; May 7, 2003; November 8, 2006; and May 9, 2016.

The next will occur on November 11, 2019, and then on November 13, 2032. A typical transit lasts several hours.
Start 12:35 UTC
Mid 15:20 UTC
End 18:04 UTC

Total transit time = 18:04-12:35 = 5 hours 29 minutes.

Daylight Saving Time switches on Sunday 2019 November 03!

We are 5 hours behind UTC so for us the transit starts at 07:35 EST and ends at 13:03 EST.

Observing reports from members:

- Stephen Craig showed images from FallNStars, a panorama generated using microsoft's Image Composite Editor (ICE) <https://www.microsoft.com/en-us/research/product/computational-photographyapplications/image-composite-editor/> along with clusters imaged recently with the moon in the sky and nebula from when the moon is not.
- Bob showed his homemade newtonian telescope on an equatorial mount with 30kg of homemade counterweights, along with some nebula
- Bruce Elliott showed some recent outreach images along with some southern summer constellations.
- Malcolm Park showed two images of his recent work imaging M31 – Andromeda. Not a completed work, he will return when he is happier with the processing.
- Brian Hunter expanded on our discussions about SpaceX Starlink satellite constellation, with some existing videography and how bad it may get. See a sample video shortly after the 1st starlink launch and deployment here: <https://vimeo.com/338361997>
- Kevin Kell showed some images from FallNStars <https://starlightcascade.ca/fns2019> which included images from Stephen Crain, Hank Bartlett, Kim Hay and himself, and also talked about the tree planting for past president Ruth Hicks at the Lemoine Point Conservation (just past the nursery) area on Saturday 2019 October 5th. RASC-KC joined with Kingston Horticultural Society to sponsor 4 trees: oak, Spruce, sugar maple, tamarac grouped together nearer the road.

Rick closed the meeting with some announcements:

- Annual General Meeting: Thursday November 14th, 2019 7pm, MacCorry D216 Queen's University followed by guest speaker Patrice Scattolin (Montreal) on the Winter Star Party
- December no regular meeting, holiday dinner Thursday December 12th at the Mandarin restaurant in the Frontenac Mall on Bath Road, 5:00pm

Keep in touch with us by email, our website, facebook, and twitter (details at the top).

Email: kingston@rasc.ca

Website: kingston.rasc.ca

Email list:

lists.rasc.ca/mailman/listinfo/kingstonrasc

Facebook:

www.facebook.com/rasckingston/

Twitter: [@astrokingston](https://twitter.com/astrokingston)

The meeting adjourned at 20:00

Prepared by Kevin Kell, Secretary of the RASC Kingston Centre

Minutes of The RASC-KC Regular Meeting of Thursday 2019 November 14th

Pre-meeting - Dinner with 13 members and guests at the Sports Tap and Grill on Brock St. The Regular Meeting was in Mac-Corry Hall Room D216 on Queen's University Campus in Kingston Ontario, and ran from 7-9:30pm and included the Annual General Meeting. 19 people were in attendance including Rick Wagner President, Susan Gagnon Treasurer, Kim Hay Librarian and Kevin Kell Secretary.

Handouts available in the room were: 2019 AGM Agenda, 2018 AGM Draft Minutes, a one page Executive Position Summary, 5 page Annual Secretary Report, The Treasurer Annual Report and Financial Reports.

Rick Wagner called the meeting to order at 19:05 EST and welcomed everyone. He

talked about the upcoming Annual General Meeting and Elections and noted which positions were up:

President, Vice President, Treasurer, NCRRep, and the Editor who is looking to step down.

He listed upcoming events in the area including many seminars and presentations by Queen's University and the McDonald Institute.

Rick introduced our guest speaker, Patrice Scattolin from Montreal. Patrice presented an hour long travelogue on the Florida Winter Star Party, held in the Florida Keys in February of each year. It was a great presentation, causing many members inquiring about how to register for the event. He covered travel to the US, cost, what to expect when onsite, and more.

After answering a lot of questions, Patrice was presented with an RASC-KC coaster set and a small honorarium.

The 10 minute Break was followed by the Annual General Meeting (minutes separate).

After the AGM concluded at 21:22, we quickly ran through the door prize draws. – we had ten door prizes this evening.. thanks to all who contributed! Observing reports from members were cancelled due to the meeting running well overtime.

December - no regular meeting - holiday dinner Thursday December 12th at the Mandarin restaurant in the Frontenac Mall on Bath Road, 5:00pm. Please RSVP to Kim Hay via email at

kingston (at) rasc (dot) ca

Keep in touch with us by email, our website, facebook, and twitter (details at the top).

Email: kingston@rasc.ca

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Facebook:

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Twitter: [@astrokingston](https://twitter.com/astrokingston)

The meeting adjourned at 21:30

Kevin Kell, Secretary of The RASC Kingston Centre