

Regulus

2021 October

Newsletter of The Royal Astronomical Society of Canada - Kingston Centre
Celebrating our 60th anniversary 1961-2021 kingston.rasc.ca



Randy Shivak

Admin · August 15 at 9:00 PM · 🌐

OUR SOLAR ACTIVITY PICTURE OF THE DAY for August 16, 2021 is this beautiful FDI (Full Disk Image) by Hank Bartlett. *Details: What a beautiful*

MEETINGS

RASC-KC Wednesday Weekly Social videoconference. 7pm Eastern all weeks except the 2nd Wednesday of the month. For members and their guests. Email list subscribers receive the link weekly 1 or 2 days beforehand. Next Social: Wed 2021 October 6th

RASC-KC Regular Monthly Meeting - Wednesday 2021 October 13th: a virtual Zoom meeting at 19:00 EDT with member presentations. Members will be emailed a zoom registration link, others may watch on our youtube channel.

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Congratulations to Hank Bartlett for his Solar Activity Picture of the Day for 2021 August 16th.

<https://www.facebook.com/groups/solaractivity/>



Fall'N'Stars (21st event!) returned after a one year hiatus due to COVID19. Our 2nd year at Johnsons RV Park, South Bay, PEC had a reasonable Friday night clear skies and a clouded out Saturday night sky. A joint Star Party organized by the RASC Belleville and Kingston Centres, Belleville had the lead this year. Kingston has the lead for 2022. If you would like to participate on the organizing committee, contact us at kingston@rasc.ca We will have a local centre lead who will likely be named the Event Chair, and will need assistance in a few areas. Nothing too onerous!



President's Tidbits for October 2021- Kim Hay



It seems that we seem to suffer days of cloud and rain after a brief clear spell. I certainly hope that is not the way of the month of October. It is such a great time to observe. No mosquitoes and longer hours to observe more objects.

Our Annual Meeting is coming up in November, and along with the President, Vice President and Treasurer positions coming up for Election, we need to fill our Secretary position, as Asser ElGindy, who did a fantastic job has moved and is getting married this month. We were also notified that our Librarian Francesco Ambrogi, who is fully into his research and must scale back his involvement. Francesco, brought to the Kingston Centre the online E-Library which is available to members. This means that this position is also open. Good Luck Francesco, we wish you well in all future endeavours and look forward to seeing you again soon.

This is a great opportunity for anyone who wishes to learn how the Executive and Centre functions work. Become part of the team to help the Centre's future. All these positions job descriptions are available on the kingston.rasc.ca website.

We will continue with our meetings on ZOOM, until notified by Queen's if we can go back, or the Executive can determine if we can meet in person, following all protocols safely in 2022, perhaps at a new location.

As the 60th anniversary of the RASC Kingston Centre winds down, I will be putting together the Recipe Book/list for members. If you were going to send us your favourite Astronomical Recipe and want to share, please send to me, at kingston@rasc.ca with Recipe in the Subject line, by October 25th. Our Executive is looking for your input on upcoming meeting topics for speakers, please drop us a note at kingston@rasc.ca

NOTICE: Annual General Meeting Wednesday 2021 November 10th, 7pm EST via Zoom videoconference

Register in advance for this meeting: (to be published in the October issue and emailed to each member). After registering, you will receive a confirmation email containing information about joining the meeting. Voting will be done within the zoom environment.

AGM AGENDA

1. Welcome. Notes on videoconferencing and voting procedures (rasc members only, show of hands in video or participation windows)
2. Approval of Agenda
3. Approval of 2020 AGM 20201111 minutes (later in this newsletter)
4. Approval of Secretary's Annual Report
5. Approval of Treasurer's Annual Report (including auditors report)
6. Centre Elections:
 - President
 - Vice-President

- Treasurer
- Secretary (one year term)
- 7. Election of Auditor
- 8. Questions regarding other published reports: President, Vice President, Librarian, Editor, NC Rep, Webmaster, Equipment Loan,
- 9. Adjourn with thanks

The Board structure consists of seven positions of two year terms. The terms are staggered with the President, Vice President and Treasurer's terms being up in odd numbered years and the Secretary, Librarian, Editor and National Council Rep being up in even numbered years. Source: RASC-KC Bylaws (2006). The Executive consists of the Board, and other appointed Officers.

DUTIES OF THE PRESIDENT:

- 8.9 Duties Of The President
- 8.9.1 The President shall
- 8.9.1.1 * preside at all meetings of the Centre and the Council as provided by Articles 10.4 and 7.2.4,
- 8.9.1.2 represent and speak for the Centre when appropriate,
- 8.9.1.3 preside at all meetings of the Executive Committee referred to in Article 9.7, and
- 8.9.1.4 have such other duties as may be prescribed by the Council.

8.9.2 The President is a member of all committees of

the Council, as prescribed in Article 9.3.

DUTIES OF THE VICE-PRESIDENT:

8.10 Duties Of The Vice-President

8.10.1 The Vice-President shall assist the President in the discharge of his or her duties, shall preside at meetings of the Council and of the Centre in the circumstances prescribed in Articles 7.2.4 and 10.4, and shall have such other duties as may be prescribed by the Council.

8.10.2 The Vice-President shall be a member of the Executive Committee as prescribed in **Article 9.7.**

DUTIES OF THE TREASURER:

8.12 Duties Of The Treasurer

8.12.1 The Treasurer shall

8.12.1.1 * prepare the annual financial statements of the Centre as specified by Article 11.2, present them to the Council for approval at a meeting prior to the next annual meeting of the Centre, and present the approved annual financial statements for adoption by the annual meeting of the Centre as prescribed in Article 10.1.3.3,
8.12.1.2 * submit the financial statements referred to in clause (a) to the Treasurer of the Society by January 15th in each membership year,

8.12.1.3 prepare and keep complete financial records of the business of the Centre, including books of receipts, disbursements, assets and liabilities,

8.12.1.4 receive and supervise the deposit of receipts,

8.12.1.5 supervise the disbursement of Centre funds,

8.12.1.6 supervise the safekeeping of the Centre's securities and other monetary assets,

8.12.1.7 in general conduct the financial business of the Centre in accordance with the direction of the Council, and

8.12.1.8 have such other duties as may be prescribed by the Council.

8.12.2 The Treasurer shall be a member of the Executive Committee as prescribed in Article 9.7.

DUTIES OF THE SECRETARY:

8.11 Duties Of The Secretary

8.11.1 The Secretary shall

8.11.1.1 * submit for adoption at the annual meeting of the Centre a report on the number of members in each class of membership at the end of the previous membership year,

8.11.1.2 * submit to the Secretary of the Society by January 15th in each membership year the report referred to in clause (a), a list of the current officers, National Council Representatives, and Centre Council members of the Centre,

with addresses for the officers and National Council Representatives, and a brief report on the activities and meetings of the Centre during the past calendar year,

8.11.1.3 conduct the correspondence of the Centre and report thereon to Council,

8.11.1.4 have custody of the seal and the current minutes and documents of the Centre,

8.11.1.5 discharge the duty prescribed in Article 10.1.2,

8.11.1.6 be responsible for the preparation and submission of accurate minutes of all meetings of the Council,

8.11.1.7 send to all members of the Council the minutes of all Council meetings referred to in clause 8.11.1.6, and

8.11.1.8 have such other duties as may be prescribed by the Council.

8.11.2 The Secretary shall be a member of the Executive Committee as prescribed in Article 9.7.

- Take minutes of Regular Monthly Meetings and send to the Editor for inclusion in the newsletter.

- Take minutes at Executive Board Meetings (minimum of three executive meetings a year)

- Send out "Thank You" letters to guest speakers

Duties Of The Librarian

8.15.1 The Librarian shall

8.15.1.1 have custody of and be responsible for the safekeeping of the books, publications, films and photographs, astronomical instruments, archives and other library materials of the Centre,

8.15.1.2 operate the Centre's library, including the acquisition of new books and other library materials, the lending of library materials, the maintenance of a current catalogue of all library materials,

and the exchange with other organizations of library materials, and

8.15.1.3 have such other duties as may be prescribed by the Council.

DUTIES OF THE AUDITOR

11.1.1 At every annual meeting the Centre shall elect an auditor to hold office until the end of the next annual meeting. The auditor shall conduct an audit of the Centre's financial records and shall express an opinion on the annual financial statements to the members of the Centre. The auditor shall not be a member of the Council.



MINUTES

2020 Annual General Meeting of The RASC - Kingston Centre

Virtually via zoom videoconference, based out of corporate address above.

Thursday 2020 November 11th 7pm Eastern Time

1. Welcome

President Kim Hay welcomed everyone to the meeting. Housekeeping tips by Kevin Kell on the Zoom technology. Please bear with us for any technical or procedural difficulties. Please stay muted unless the Chair asks for input, discussion, etc. For voting, the Chair will call the vote. To facilitate voting this I have renamed your name virtual presence with a prefix of "OK"-name. Those not on the 2020Nov01 membership list I have put an "X". Raise your physical hand on the video display.

2. Presentation and approval of Agenda by Kim Hay as presented . **Carried. Motion AGM2020-01**

3. Presentation and approval of 2019 AGM minutes by Kevin Kell -Copies of the 2019 Draft AGM minutes had been published in the August 2020 issue of Regulus. Moved to accept by Secretary Kevin Kell. The Secretary went on describing the wrong report, namely the annual secretary report, for a minute or two before being corrected. . The draft AGM minutes were then correctly presented and discussed **Carried. Motion AGM2020-02.**

4. Annual Reports:

4a Secretary Kevin Kell moved to accept the Secretarys Annual Report 2020. Questions and answers followed. Bruce asked about the noninclusion of events in 2020 that were cancelled. Kevin answered that he only included items and events that we did in fact carry out. **Carried. Motion AGM2020-03**

4b Treasurer Susan Gagnon presented the Financials and read her report. Profit Loss Statement: Total annual (Oct 01

- Sept 30) Income was \$3,636, Total Expense \$1,667, Net Profit: \$1,968 Balance Sheet Total Assets: \$32,876. Membership =65. Signing authority remains two out of three with the Treasurer being one. Bookkeeping remains on a simple spreadsheet showing a general journal and account/line item tabs. Donations continue to outpace membership fee income. GIC Interest will be hitting record lows. A question about Directors Insurance was explained as liability insurance for directors and officers of the Centre. What is the special projects fund? It was used for startup funding for the Lottery we had two years back.. a special project.

The Auditors report as presented as well (Steve Craig) which indicated all was good. Moved by Susan Gagnon that the Financials and Auditors report be accepted as presented. **Carried. Motion AGM2020-04**

4c Librarian Kim Hay noted a report had been created and sent out..

6. Centre Elections: (nominees must be a member in good standing, be at least 18 years old, be mentally competent and cannot be bankrupt). Some questions and answers about duties were asked and answered.

Secretary - Asser Elgindy
 Librarian - Francesco Ambrogi
 Editor- no nominees or volunteers
 NC Representative- John Hurley
 Secretary, Librarian and National Council Rep were volunteers with no election needed.

The remaining Board consists of: President Kim Hay, Vice President Laurie Graham, Treasurer Susan Gagnon. The Board will ask for volunteers or nominees going forward and make appointments as needed.

7. Appointment of Auditor - Stephen Craig volunteered. Susan Gagnon moved to appoint him. **Carried Motion AGM2020-05**

8. Other business
 Webmaster Walter MacDonald- no report
 Equipment Coordinator Kevin Kell- no report
 President Kim Hay read out a short report on the social and outreach activities of the year.

9. A request from the Secretary Kevin Kell to ensure that there was a motion and vote to accept the annual secretaries report as it may have been unclear earlier in the meeting.

Moved by Kevin Kell to accept the Secretaries Annual Report. **Carried. Motion AGM2020-06**

9. Adjourn with thanks Motion to Adjourn by Kim Hay. **Carried at 21:40 EST Motion AGM2020-07**

Kevin Kell, Secretary The RASC Kingston Centre

Revision 20201113-0800



Meteorite Hunting Kit- Kevin Kell

Based on the advice from our September guest Speaker Murray Paulson, the following is a list of equipment that you should have with you

when you go meteorite hunting:

- * A GPS to record the location of each find
- * Plastic ziplock bags to put the meteorites in and protect them from moisture
- * a sharpie pen to mark the bag/meteorite with an identifier matched with the find locations
- * gloves for handling the meteorites and if you use a metal detector
- * a shovel to dig a few inches down
- * a walking stick with rare earth magnet on the end.. for testing rocks on the ground (most meteorites have enough iron in them to be picked up by the magnet)
- * metal detector (if you are into spending \$600-1200.. stay well away from anything under that price (pretty much the same advice for telescopes!)

Metal detector sample models:

- Radio Shack - Bad
- Fisher Gold OK
- Garret Gold better
- Garret 2500 best



The RASC-KC Meteorite Collection- Kevin Kell

A reminder that the RASC-KC has a meteorite collection that can be signed out and used for Public Outreach, or even for your own education. It is currently stored indoors at the home of the Equipment Coordinator and consists of:

- Meteorite #1: NWA 869 (North West Africa 869)
- Meteorite #2: Gibeon, Namibia, Iron Meteorite
- Meteorite #3 NWA998 Northwest Africa 998 Martian Meteorite
- Meteorite #4 Campo Del Cielo, Chaco Argentina
- Meteorite #5 Whitecourt Alberta
- Meteorite #6 Sikhote-Alin, Russia



"Either there's a spider on the lens, or we need to call somebody."

Skyward for October 2021 by David H. Levy



Fond memories of Carolyn Shoemaker

One clear evening during the summer of 2019, I was using Pegasus, one of my childhood friend Carl's telescopes, at our annual Adirondack Astronomy Retreat. When my

cellphone began to ring, I picked it up with some surprise. At the other end of the line was Carolyn Shoemaker. I was thrilled to hear from her, as it had been some time since our last contact. Carolyn was doing well, except for a mild loss of hearing. She had called to say that since her daughter and son-in-law had moved to New Mexico, she would be living at the Peaks, a comfortable assisted living facility in Flagstaff. My colleague Brent Archinal gave me her cell phone number. I was able to speak with her again a few months later. I wanted to find a way to increase the frequency of our conversations. "You speak with your brother Richard every Monday," Wendee commented, and suggested, "Why not call Carolyn every Monday as well?"

For the next 18 months that's what I did. Carolyn would pick up the phone and announce, "It is David. It must be Monday!" Wendee would often join the discussion as well. But when I called on Monday, August 9, no one answered. After repeated tries, her daughter Linda called to say that Carolyn had had a minor fall and was in the hospital. On Thursday evening, August 12, she went into respiratory arrest. Carolyn died the next morning at 10:40 A.M. Arizona time.

With her husband Gene and the five-year comet and asteroid program we shared, Carolyn was responsible for a very rich period in my life. In fact, virtually every article one reads about the Shoemakers will agree that the discovery and impacts of Comet Shoemaker-Levy 9 were the most significant part of our professional lives. Carolyn began her observing project a few years after her husband Gene was disqualified as a potential astronaut because of Addison's disease. He decided to go at the problem of impacts, not from studying craters as he walked about on the Moon, but from the opposite direction of the comets and asteroids that collide with the Moon, and with the Earth. Carolyn quickly learned to become proficient at using the stereomicroscope. She would place two films into the microscope; they were identical except that the second plate would be about 45 minutes later than the first. The films were almost always identical, except that when an asteroid was moving slowly, it would appear to float above the starry background. Carolyn discovered 377 asteroids this way, each one

charted until its orbit round the Sun could be determined accurately. When one included the asteroids for which orbits have not yet been determined, that number rose significantly, according to Carolyn, to about 800.



In 1983 Carolyn discovered the first of her 32 comets. When their colleague Henry Holt joined the following year, the number of new comets rose rapidly. It was only a year or two after that when she surpassed the number of comets another famous astronomer, Caroline Herschel, discovered, and *Sky & Telescope* published a news note about "Carolyn passing Caroline." I joined the team in 1989. In a sense, passing Herschel's record might have been Carolyn's golden moment, but it wasn't. That came later on a cloudy and dull day on March 25, 1993. Two nights earlier I had taken two exposures that she was scanning. Suddenly looking up, she announced "I don't know what I have, but it looks like a squashed comet." That was the discovery moment of Comet Shoemaker-Levy 9. Sixteen months later, when the 21 pieces of this fragmented collided with Jupiter, we got to meet President Clinton and chat amiably with Vice President Gore and share the world's excitement over the first collision of a comet and a planet ever witnessed by humans. It was a satisfying peak to all our careers.

After Gene died in a car accident in Australia, Carolyn continued observing with Wendee and me for several years. One evening she confided that sometimes she wished she had died with Gene. But she did not and the world was able to enjoy her company for more than 24 more years. The weekly telephone calls began much later. I shall miss the deep friendship I enjoyed with Carolyn Shoemaker, the woman whose energy, intelligence, and terrific sense of humor brightened our lives and made the night sky a happier place.

Laser Pointer use in Astronomy today-Kevin Kell

Based on the laser pointer user certification course a number of us took at Fall'N'Stars, some updated information:

1) **We CANNOT use any laser pointer (green, blue, whatever frequency or wavelength) within 10km of a certified airport OR within Montreal, Toronto or Vancouver. This INCLUDES Queen's Observatory Observing Deck as it is within 10km of both Norman Rogers Airport AND the Helicopter Landing Pad at Kingston General Hospital.**

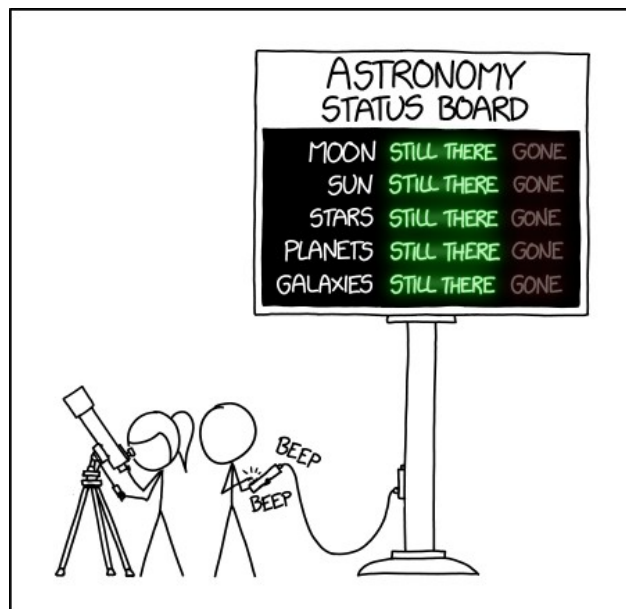
2. We CANNOT Carry one of these laser pointers anywhere in Canada UNLESS you have been trained and carry the certification card **AND** your RASC membership card (get this online rasc.ca website)

3. We CAN hold an outreach event outside of these 10km exclusion zones and use laser pointers ****IF**** we apply for a permit through RASC well In advance and received a copy of the insurance for the event, a RASC membership card, a Laser certification card AND a same qualification 2nd person Spotter whose job is to watch for any aircraft in view and notify laser users to STOP!

Check here for the map of airfields
<https://tc.canada.ca/en/aviation/aviation-security/use-hand-held-lasers-legally-safely/where-hand-held-lasers-over-1-milliwatt-are-prohibited>
or google "transport canada laser map"

RASC-KC members completing the certified training on 2021Sept11: John Hurley, Doug Angle, Susan Gagnon, Rick Wagner, Kim Hay, Kevin Kell.

Congrats! You are now certified to operate a laser pointer or be a Spotter under the terms and conditions of Transport Canada Interim Order, apply for event insurance coverage/ permit from the RASC National Office, notify the RASC Kingston Centre board at least 8 hours in advance of the event, and afterward, report on the event, with date, time, location, number of people attending to the RASC Kingston Board (kingston@rasc.ca).



Some notes from the email chat list:

Cathy Hall stumbled onto the following:
<https://spacemath.gsfc.nasa.gov>
New NASA pdf book 2020 - A Guide to Smartphone Astrophotography:
<https://spacemath.gsfc.nasa.gov/SMBooks/AstroPhotographyV1.pdf>
And 2019 - A Guide to Smartphone Sensors:
<https://spacemath.gsfc.nasa.gov/Sensor/SensorsBook.pdf>

Rick Wagner – Fall'N'Stars 2021- What a great time. It was so nice to see everybody in person for a change and get to talk and observe together. The skies were great, so dark and (mostly) clear Friday night, less horizon light domes compared to here at home. Oh, and much better horizons than here (below 70 degrees if you can imagine that much sky!) I'm glad to see that our decision to leave last night was vindicated by the showers last night. But I would much rather have had another evening and morning of camaraderie.

AAVSO (aavso.org) free October How-to Hour and webinars:
Saturday Oct 9th, at 18:00 UT
Dr. Emily Levesque "Betelgeuse Is Pretty Cool: Cosmic Questions for our Naked-Eye Neighbor" and Dariusz Kubicki "International Observation Campaign of Eclipse of EE Cephei in 2020"

Saturday the 23rd, at 18:00 UT Dr. Nancy Morrison "How To Write an Astronomical Research Paper" and Dr. Mario Motta "'Dark and Quiet Skies,' a UN effort at light pollution control and more"

In the October Sky- Rick Wagner

* soon available as a shared google calendar!!

01 Oct – minor planet (40) Harmonia at opposition (mag 9.4)

01 – 15 Oct – look for the zodiacal light in the eastern sky during morning twilight. If you're under very dark and transparent skies at midnight you can try to see the even fainter gegenschein – the backscatter of sunlight from dust particles in the plane of the solar system. It will appear as an extremely faint glow about 10° across centred in the middle of the southern arm of Pisces.

05 Oct – Algol will be at minimum brightness for about 2 hours centred shortly after 2200EDT

06 Oct – New Moon 0705EDT

07 Oct – minor planet (762) Pulchova #1 occults (passes in front of) an 11.8mag star (TYC 1922-00066) at 0357EDT. The combined magnitude will drop by 2 magnitudes for up to 7.2 seconds.

08 Oct – Mars in conjunction with the Sun, a new apparition begins.

09 Oct – Venus 3° south of the Moon

10 Oct – minor planet (365) Corduba occults a 12.5mag star (UCAC4 393-087275) at about 2055EDT. The combined magnitude will drop by about 2.5 magnitudes for up to 4.4 seconds.

13 Oct – First Quarter Moon

– Saturn 4° north of the Moon

16 Oct – bright white Venus very reddish Antares in the evening southeast sky.

20 Oct – Full Moon 1056EDT

21 Oct – Orionid meteor shower peak this morning; the just-past-full Moon will interfere with visibility of the fainter meteors.

– Uranus 1.3° north of the Moon.

25 Oct – Mercury at greatest elongation west 18°, visible low in the east shortly before sunrise – this is Mercury's best morning apparition of the year.

25 Oct – Algol will be at minimum brightness for about 2 hours centered shortly before midnight

28 Oct – Last Quarter Moon

29 Oct – Venus at its greatest elongation east 47°; although this is a relatively 'poor' showing, Venus is so bright and so far from the Sun that it is never-the-less spectacular.

Membership Renewals, Calling all Members!

In years past when a renewal was due there would be a series of 3 notices sent to the member by National Office. The 3rd notice would actually arrive a month after fees were due. For the time being this practice has gone by the wayside, most likely temporarily. Also for the last year there has been a policy to keep all pre-pandemic members on the membership roll in case circumstances had created financial hardship.

At this point your executive would like all members to check the status of their membership and renew if possible/indicated. To check, log into the National site and click on 'Renew Membership'.

On this page, under 'Useful Links' select 'My Account' to see when you last paid. If you wish to renew now, click the header tab 'Member Area' to return to the Useful Links list and hit 'Renew' and fill out your order with any extras and of course add yourself to the Kingston Chat list if you have never tried it out!

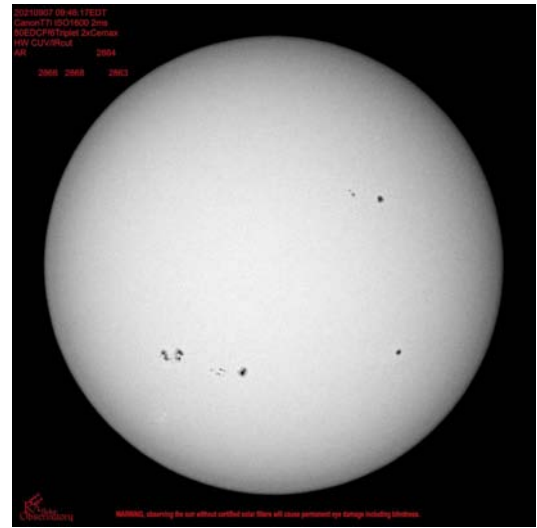
Susan Gagnon, Treasurer RASC-KC

RASC-KC Solar Cycle 25

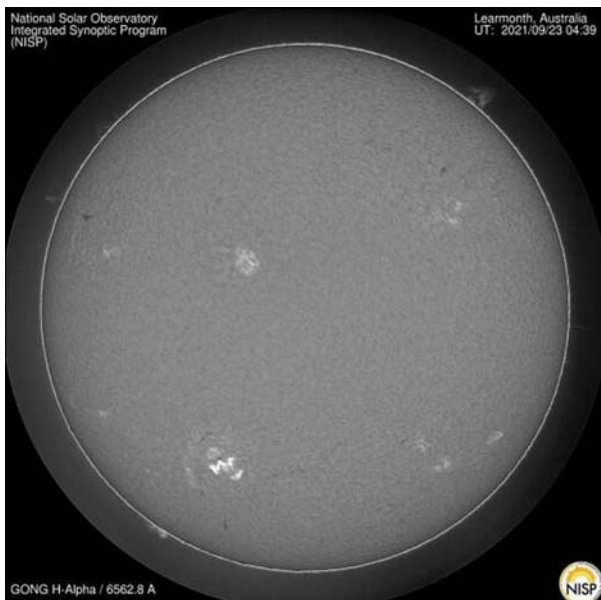
Monthly Review

A review of solar activity and images during the past month
by RASC-KC solar observers.

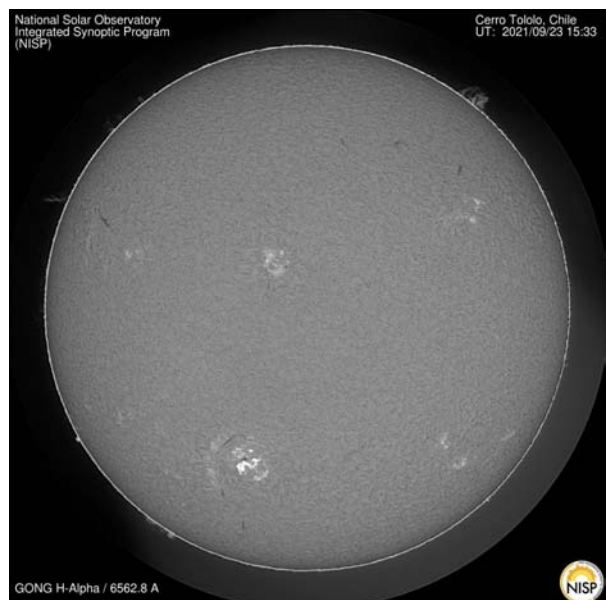
The first two weeks of September saw a very nice start with regard to sun spot regions especially across its southern hemisphere. Although much smaller these spots have been reminiscent of the Oct 2003 sun spot groups of cycle 23 (see image comparison). Unlike 2003 these active regions were low energy and did not spawn any decent solar flares and today (Sept 15) with the impending exit of AR2866 the X-ray baseline is about to drop below the dreaded 10^{-7} level. Boring days may be ahead as there is no sign of new spots arriving



On day 16 we sadly and spotlessly dropped past the 10^{-7} mark in X-ray. Of course if one images in h-alpha this is not such a buzz kill as the beat goes on. Just 3 days later AR12871 rotated over the SE limb with another region in the NE still forming above it, this is the start of something good. 2871 continued to build and on Sept 23 it had 2 almost identical M flare eruptions as shown below by GONG-H-alpha. CLOUDY! I missed both of these, insert sad face here.

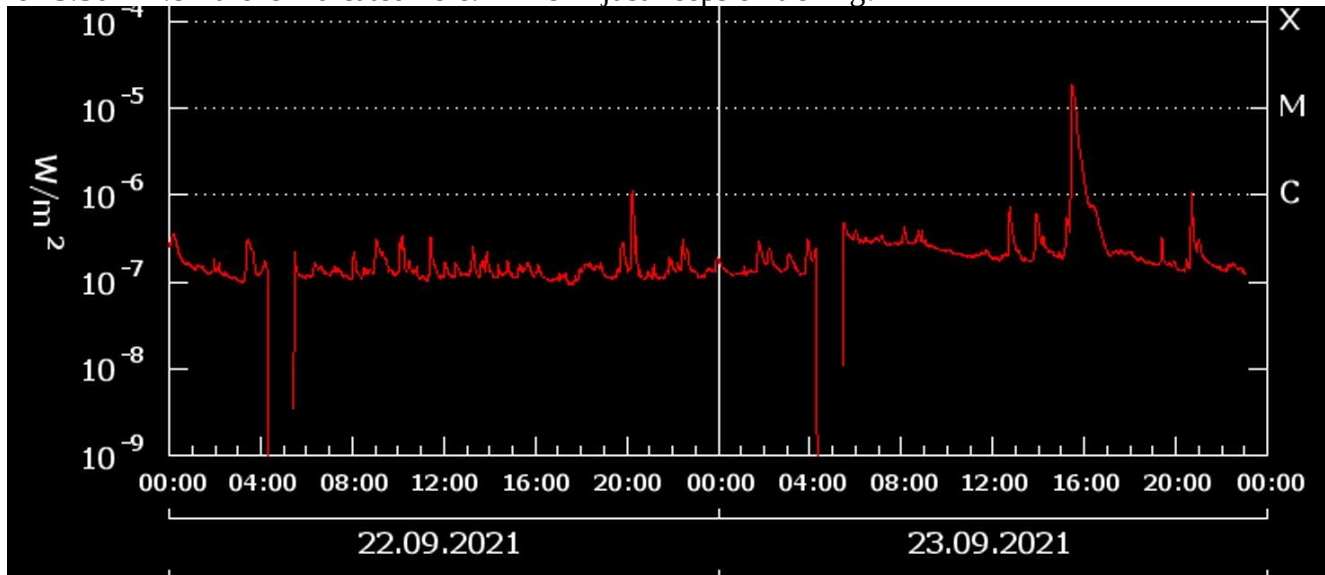


The



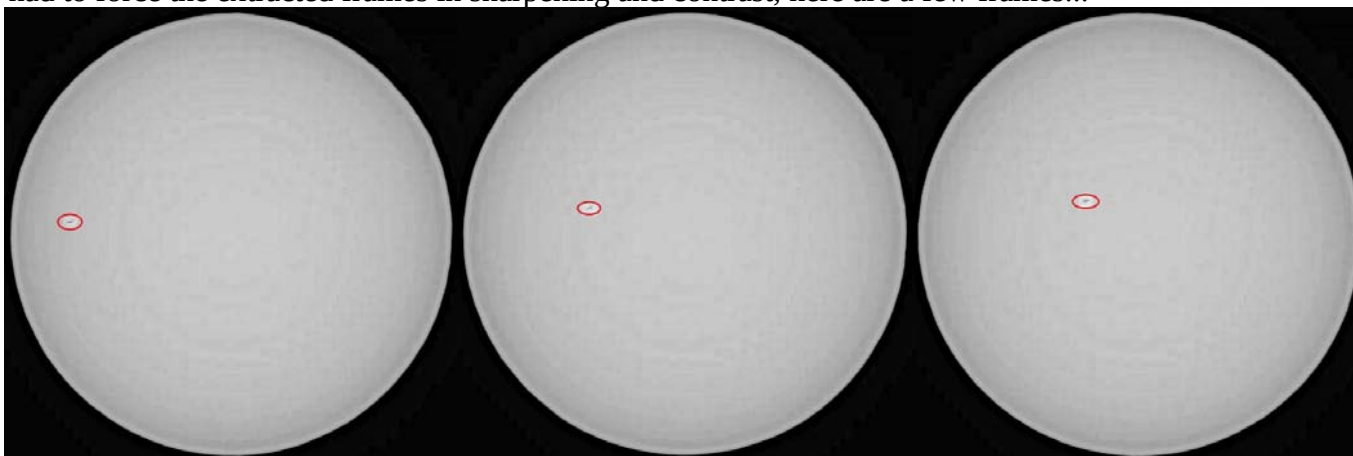
04:40UT flare was during the SDO drop-off black out and was not caught on the x-ray graph below but


the 15:30 M2.8 flare is indicated here. AR2871 just keeps on ticking!



To recap the September the sun produced “0”_X class flares, “2” M class flares and “32” C class flares, these were mostly produced by the 23 sunspot active regions numbered AR12859 – 12881. AR2871 was responsible 13 of the total 33 flares. During the month the x-ray output reached a maximum level above 10⁻⁵ and is currently running a baseline just below the 10⁻⁶ range. As another month of cycle 25 closes I have had 22 observing/imaging sessions over 30 days, sadly many of these were through mixed cloud.

On the 18th and as an extra to solar imaging I was fortunate to capture a solar transit by the Chinese Tiangong space station. This being my first attempt I was over exposed in the video and therefore had to force the extracted frames in sharpening and contrast, here are a few frames...





Sat 2021-09-18, 12:35:17.20 • Sun transit

CSS angular size: 7.16"; distance: 519.55 km

Angular separation: 1.2'; azimuth: 170.4°; altitude: 46.8°

Center line distance: 0.21 km; visibility path width: 6.63 km

Transit duration: 0.66 s; transit chord length: 31.8'

SHOW ON MAP
MORE INFORMATION

Pass details : <https://transit-finder.com/> ...

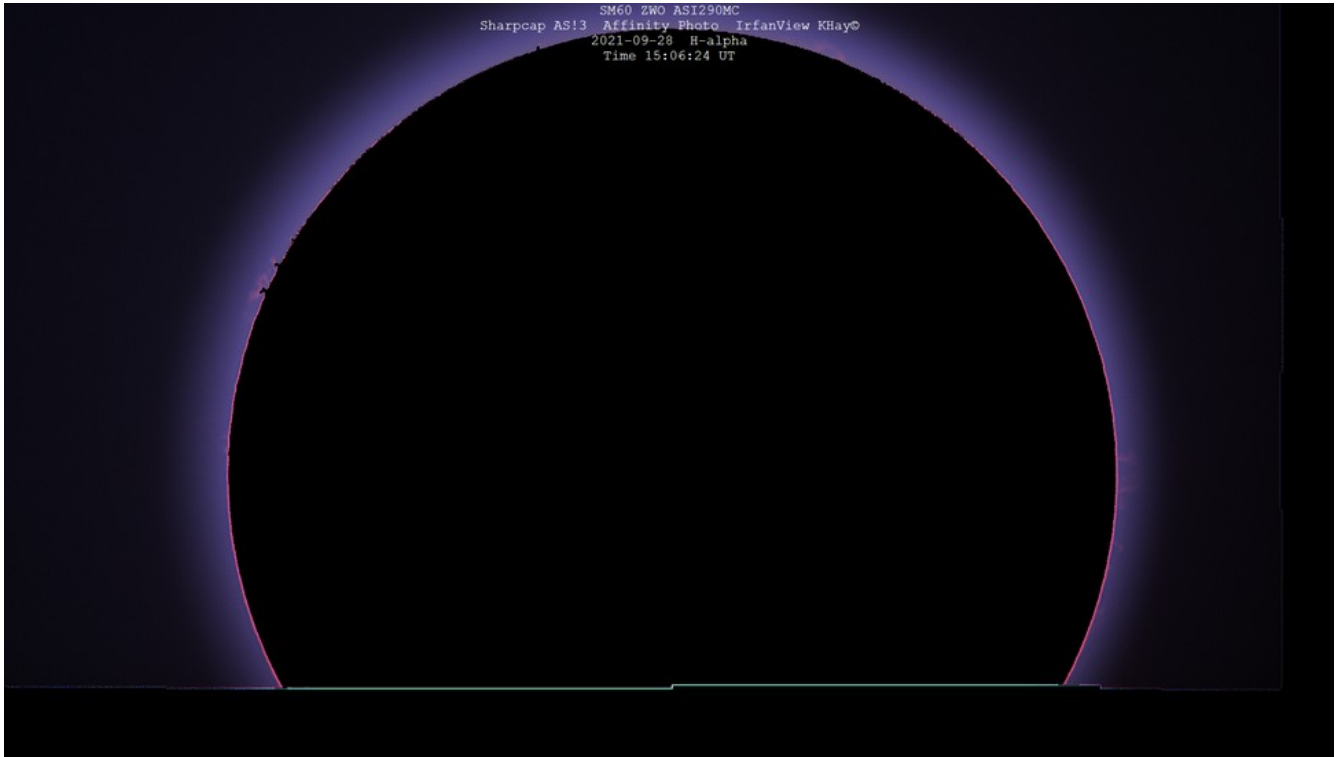
Member images...

I was out trying Kevin's Colour camera, as there maybe something not right with it, so testing. He will be testing the ASI120MM tonight, if clear on planetary, though mono and a smaller chip. The attached image is White Light taken with the ASI290MC. Ignore the dust motes, we know about those.

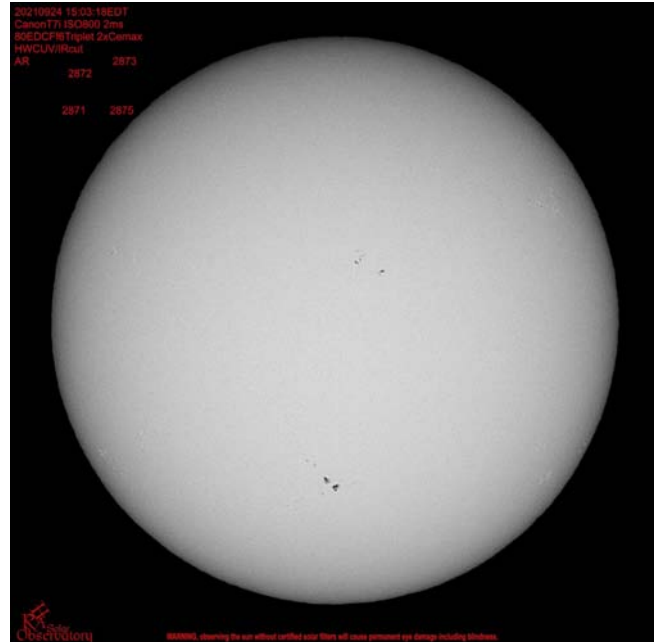
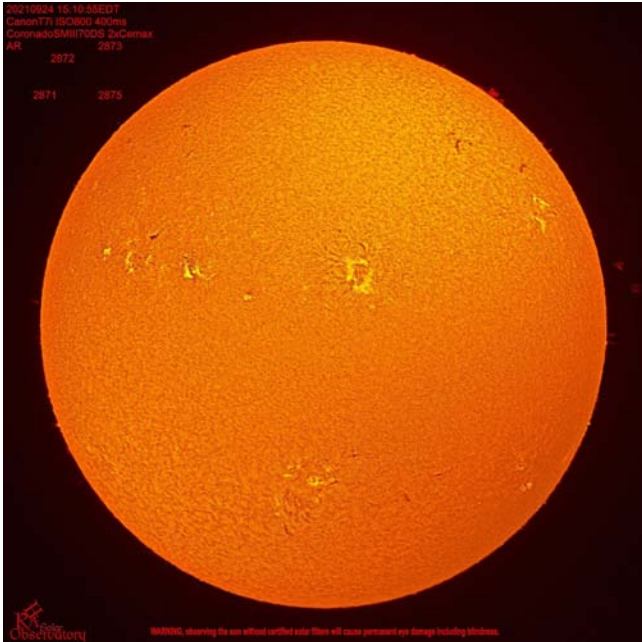


So far the processing has not messed anything up, except around the edges. Now something that was strange in H-alpha I could see the grid lines of the chip on the image under VLC and black and white. Brought it into AS!3 and it was coloured, though strange pinks and purples but no grid lines. Processed some and there were weird edging effects. The colour camera does not show the contrast detail of plage and filaments very well.

I have also attached an image with prominences taken with the same camera. Again the grid and black and white in VLC and colour in AS!3 which was really funky, but took it into Affinity photo and darkened the centre to see the edges.



Now, I think I need two cameras, the Mono and the Colour which has some possibilities.
 Kim H.



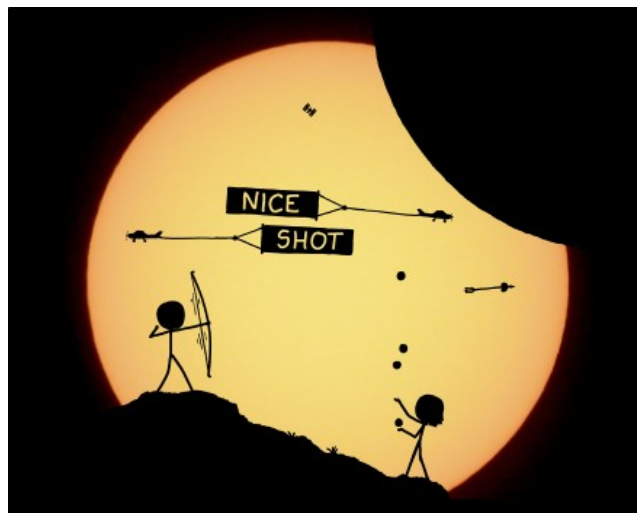
Last image of the month...



Hank B.

If you have any solar images during the month to contribute to RASC-KC Solar Cycle 25 Monthly Review forward it to rhaobs (at) gmail (dot) com along with exif and any other documentation about your observing session. Note that images may be cropped to specific content or for spacing.

Hank Bartlett



OUR ASTROPHOTOGRAPHY COMMUNITY'S
ONE-UPSMANSHIP IS GETTING OUT OF HAND.

The Serenity II mini-observatory at SCGO Part 2 - Kevin Kell

We left off with the Pier being poured and the deck being constructed atop double stacked deckblocks. The intent was to reuse the 4x4x4' structure but change it from an roof opening to a rolloff building.

So we started with the 5/4"x6"x10' decking, using pressure treated boards 10' long. But first we laid down some insect screening so that we could leave gaps between the decking to assist in airflow and cooling.

So then we moved onto the rails. We had two 6' angle rails from some unknown source (Norm Welbanks?) and needed more to match. The closest I found was at home depot.. for about \$40 for each 6' section. OMG! It would have been best to find two 10' section as that would save money, and save the hassle for trying to align the interface of the two 6' exactly.

One set was laid down, the building put on its back and the inverted wheels mounted on a 2'x4' added to the bottom of the building (to help stabilize it... it now has only 3 supported walls).

The building was flipped upright with one set of wheels on the rails. The 2nd set of rails was then aligned to match the wheels. It was rolled from end to end many times and all of the rails were screwed down (drilling holes and screwing to the deck joists).

To keep it from rolling off the back end, a wooden stop block was added. As well at the front so it would not run into the pier. To keep it from moving when closed, we added two hooks near the front door to lock it down just before closing the doors. To keep it from moving when open another bolt lock was added inside.

Operationally.. it works! The building is **very** easy to move with just the slightest bump when traversing from one 6' rail section to the next.

The last big hurdle is cable management (power, network, usb) as they are moving with the building on the deck and get stepped on quite a lot.



Notes from the Last National Council Meeting 2021 Sept 26th – John Hurley

New Office space is being arraigned at 203-489 College Street, near Bathurst St and near the Kensington Market, near U of T (Dunlop). We will be 700 meters from the old Office that RASC had 50 years ago. We take possession on Dec 01, 2021 with an opening date of Jan 01, 2022 is the plan. We have a 10 year agreement for this space at below market value. National has also hired two new staff for Memberships and between them they will be covering everyday of the week (all seven days) Some members of Council think that National should have moved out of Toronto but none of the staff wants to move. The Staff do not have to be in Toronto we have had some staff working from BC and now some from Quebec.

There is to be a Town Hall about the RASC Insurance coverage in the near future, date to be worked out.

Issues with the new membership database are getting better. Any issues let them know.

Paul Sadler (Ottawa Center) is going to write up a Best Practice letter about Volunteer Screening

Once again the National Council ran out of time to go through the GA feedback process that Phil Groff suggested (two meetings now) and we are going to try and do that in the next few weeks as a special meeting. Randy Attwood suggested that we form a working group to hash out things about the GA and this group should go forward after the GA feedback is in. So far Randy Attwood, Chris Gainor, Robyn Foret, Peter Hagar and myself (John Hurley) are suggested for the Working Group, others can submit their suggestions when this process gets to that point.

There are three new Asteroids names with RASC connections:

Minor Planet Nason, recognizes Curt Nason.
Nominated by RASC New Brunswick ;

Minor Planet Noeldetilly, recognizes Roland Noel de Tilly. Nominated by Centre Francophone de la Société Royale d'Astronomie du Canada;

Minor Planet Ikwiliamson recognizes Isabel K. Williamson. Nominated by RASC Montreal Centre

The next National Council Meeting is Dec. 05, 2021 at 1400 ET



Steve Craig's Galaxy of the Day for September

Day 160 NGC3729 is another peculiar galaxy about 53 million light years away in Ursa Major. It is interacting with yesterday's galaxy, NGC3718, just out of the field of view. It was discovered on March 12, 1789 by William Herschel.

Day 161 NGC3726 is a barred spiral galaxy about 45 million light years away in Ursa Major. It is about 85 thousand light years in diameter. NGC3726 was discovered on February 5, 1788 by William Herschel.

Day 162 NGC3735 is an edge on spiral galaxy about 123 million light years away in Draco. It was discovered on December 7, 1801 by William Herschel.

Day 163 NGC3755 is a spiral galaxy about 75 million light years away in Ursa Major. It was discovered on March 11, 1831 by John Herschel.

Day 164 NGC3756 is a nice spiral galaxy about 60 million light years away in Ursa Major. It was discovered on April 14, 1789 by William Herschel.

Day 165 NGC3769 is an interacting spiral galaxy about 52 million light years away in Ursa Major. It is catalogued as #280 in the Arp Atlas of Peculiar Galaxies, noted as an interacting double galaxy. NGC3769 was discovered on February 5, 1788 by William Herschel.

Day 166 NGC3780 is a spiral galaxy about 109 million light years away in Ursa Major. It was discovered on April 14, 1789 by William Herschel.

Day 167 NGC3786 (left) and NGC3788 (right) are a pair of interacting spiral galaxies about 122 million light years away in Ursa Major. They are catalogued as #294 in the Arp Atlas of Peculiar Galaxies, noted as a pair of galaxies with filaments. They were discovered on April 10, 1831 by John Herschel.

Day 168 NGC3801 (top left) is part of an interesting group of galaxies. It is 151 million light years away in Leo. Along with NGC3801 is NGC3802 (top centre), NGC3803 (top right) and NGC3790 (bottom). They were discovered on April 11, 1784 by William Herschel.

Day 169 NGC3808 is a pair of interacting galaxies about 330 million light years away in Leo. They are catalogued as #87 in the Arp Atlas of peculiar galaxies. A stream of gas can be seen flowing from 3808A on the left to 3808B on the right. They were discovered on April 10, 1785 by William Herschel.

Day 170 NGC3810 is a superb spiral galaxy about 50 million light years away in Leo. It was discovered on

March 15, 1784 by William Herschel.

Day 171 NGC3877 is a fine almost edge on spiral galaxy about 50 million light years away in Ursa Major. It was discovered on February 5, 1788 by William Herschel.

Day 172 NGC3893 is a disturbed spiral galaxy about 50 million light years away in Ursa Major. It is interacting with NGC3896 (lower right). It was discovered on February 9, 1788 by William Herschel.

Day 173 NGC3898 is a spiral galaxy about 63 million light years away in Ursa Major. It has very tightly wound spiral arms. It was discovered on April 14, 1789 by William Herschel.

Day 174 NGC3900 is a lenticular galaxy about 82 million light years away in Leo. It was discovered on April 6, 1785 by William Herschel.

Day 175 NGC3930 is a barred spiral galaxy about 42 million light years away in Ursa Major. It was discovered on March 17, 1787 by William Herschel.

Day 176 NGC3938 is a spiral galaxy about 43 million light years away in Ursa Major. It was discovered on February 6, 1788 by William Herschel.

Day 177 NGC3945 is a barred lenticular galaxy about 63 million light years away in Ursa Major. It has a complex structure, with two concentric bars and a pseudobulge. It was discovered on March 19, 1780 by William Herschel.

Day 178 NGC3953 is a barred spiral galaxy about 56 million light years away in Ursa Major. It has a circular ring around it's central bar. It was discovered on March 11, 1787 by William Herschel.

Day 179 NGC3972 is a spiral galaxy about 65 million light years away in Ursa Major. It's companion, NGC3977 is just below and to the left in this image. They were discovered on April 14, 1789 by William Herschel.

Day 180 NGC3991 (upper), NGC3994 (middle) and NGC3995 (lower) are a group of interacting galaxies about 145 million light years away in Ursa Major. They are catalogued as #313 in the Arp Atlas of Peculiar Galaxies. They were discovered on February 5, 1864 by Heinrich d'Arrest.

Day 181 NGC4010 is an edge on spiral galaxy about 41 million light years away in Ursa Major. It was discovered on April 26, 1830 by John Herschel.

Day 182 NGC4013 is an edge on spiral galaxy about 55

million light years away in Ursa Major. It was discovered on February 6, 1788 by William Herschel.

Day 183 NGC4026 is an edge on lenticular galaxy about 50 million light years away in Ursa Major. It was discovered on April 12, 1789 by William Herschel.

Day 184 NGC4041 is a spiral galaxy about 70 million light years away in Ursa Major. It has a very bright core and faint moderately wound spiral arms. It was discovered on March 19, 1790 by William Herschel.

Day 185 NGC4051 is an interesting spiral galaxy about 54 million light years away in Ursa Major. It was discovered on February 6, 1788 by William Herschel.

Day 186 NGC4062 is a spiral galaxy about 35 million light years away in Ursa Major. It was discovered on March 20, 1787 by William Herschel.

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NGC3726



NGC3729



NGC3735



NGC3755



NGC3756



NGC3769



NGC3780



NGC3786



NGC3801



NGC3808



NGC3810



NGC3877



NGC3893



NGC3898



NGC3900



NGC3930



NGC3938



NGC3945



NGC3953



NGC3972



NGC3994



NGC4010



NGC4013



NGC4026



NGC4041



NGC4051



NGC4062