

Aurora



RASC Windsor Centre's Monthly Newsletter January, 2026

Cosmos 2026: A Year of Discovery, Exploration, and Celestial Wonders

Sandy French

As we settle into 2026, astronomers and space enthusiasts around the world are gearing up for one of the most exciting years in recent cosmic history. From human voyages around the Moon to spectacular sky events visible from Earth, this year promises breakthroughs in both space exploration and astronomical observation.

Historic Space Missions on the Launch Pad

NASA's *Artemis II* mission is scheduled to launch in early 2026, sending four astronauts on a lunar flyby; the first crewed journey around the Moon in more than half a century. Canada will be represented by Colonel Jeremy Hansen of the Canadian Space Agency. This mission tests deep-space systems and paves the way for future lunar landings under the Artemis program.

Set to launch in August aboard a Rocket Lab Electron rocket, NASA's *Aspera* UV Space Telescope will map diffuse ultraviolet emission in and around nearby galaxies. This mission extends our understanding of the cosmic web and the hot gas that threads the universe.

China's ambitious *Chang'e 7* mission is targeted for late 2026 and will include an orbiter, lander, rover and mini-hopper. Its primary goal is to hunt for water ice in the Moon's permanently shadowed regions; a key resource for future exploration.

The European Space Agency's *Hera* Asteroid Reconnaissance spacecraft is set to arrive in November at the binary asteroid system Didymos/Dimorphos. This follows NASA's *DART* impact experiment and will deliver detailed data on asteroid composition and dynamics. This is very valuable for planetary defense research.

Scientific research aboard the ISS continues through July 2026 as *Expedition 74* conducts experiments

across biology, physics and materials science, contributing to humanity's knowledge of living and working in microgravity. *Expedition 75* will continue with some new crew members through to 2027.

Astronomy & Night Sky Highlights

The night sky will treat observers to a dramatic total lunar eclipse, where Earth's shadow will cast a reddish "Blood Moon" across the lunar surface. This March 3 event will be visible from much of North and Central America, East Asia and the Pacific region.

2026 features two solar eclipses. First, an annular eclipse on February 17, producing a "ring of fire" view over remote Antarctica. Next, a total solar eclipse on August 12, visible from Greenland, Iceland, and northern Spain, offers a few minutes of daytime darkness.

Planetary Wonders & Alignments

Jupiter reached opposition on January 10, becoming the brightest object in the night sky for the night. Late February features a remarkable planet parade with Mercury, Venus, Saturn, Jupiter, Uranus and Neptune visible in rough alignment; a treat for backyard astronomers.

Astronomical Collaboration & Conferences

2026 isn't just about observing the universe. It's about discussing groundbreaking discoveries.

The 247th American Astronomical Society (AAS) meeting, held in early January, showcased the latest science from space telescopes and upcoming missions like the *Nancy Grace Roman Space Telescope*, slated for a 2026 launch.

The International Astronomical Union (IAU) symposia is a global series of meetings throughout 2026 that will tackle topics from technosignatures to star and exoplanet evolution, bringing astronomers together across continents.

Looking Ahead

With missions launching, eclipses enthralling

skywatchers and scientists converging to share discoveries, 2026 is shaping up to be a landmark year in both astronomy and space exploration.

Whether you're watching the sky through a telescope, tracking spacecraft in orbit, or following scientific developments from the comfort of your screen, there's something cosmic to look forward to every month of the year! 🌙

Astronomy Obscura

Tara Carman-French

Thank you for taking the time to read the introductory article in this column that will include unusual and obscure factoids about astronomy, its appearance in and impact on pop culture, and other randomness that I hope you might find interesting and entertaining. ~ Tara

We will begin with a concert from Mars. Alex James and Dave Rowntree, the bass player and drummer from the UK band, Blur, have always been passionate about astronomy. In the 1990s, during some downtime from a US tour through Texas, they paid a visit to the space centre. This visit inspired them to call up their accountant and see if investing in a UK space program was a possibility. As it turned out, a program was already in the early stages of development. Additionally, they were soon to be working with the European Space Agency on what was called the Mars Express mission. The UK had designed a lander, named Beagle 2. After connecting with the planetary scientist Colin Pillinger, the Blur boys were beyond excited to get on board with the program.

It was suggested that they approach the rest of the band to persuade them to write a call sign for Beagle 2. Should the lander make it to Mars and all systems were working, the very first thing it would do was beam this signal, and Blur's song, back to Earth.

They were going to play the first gig on Mars!

Unsurprisingly, it was a simple sell to the rest of the band.

On June 2, 2003, Beagle 2 launched into space. Six months later, it approached Mars. It was December when Beagle 2 was launched off the main spacecraft.

Christmas Day was the magic day. The earliest possible day that Beagle 2 would be able to send a message home.

Three days later and still silence. No magic. No Martian concert. Beagle 2 was lost.

Flash forward to 2015. NASA was performing a high-resolution photographic catalogue of the entire surface of Mars and they found Beagle 2. It had landed safely on the surface, but the solar panels were not properly deployed, so it had no power and no signal to send.

Beagle 2's mission manager, Mark Sims, has been quoted as saying that Blur's melody was likely played on Mars, even if no human ears heard it.

Our musical connection to space is strong and ongoing. From the golden records onboard Voyager through the first music ever successfully broadcast from Mars to Earth, will.i.am's single "Reach for the Stars", to the Curiosity rover using its soil analysis system to send to us a buzzy version of "Happy Birthday To You", we continue to connect the planets and celestial bodies with music.

If you are curious about the Blur Martian submission, check out Beagle 2 on Spotify. Alex and Dave created another ode to their astronomy passion with "Far Out", another great harmony to vibe to while observing. Clear skies! 🌙

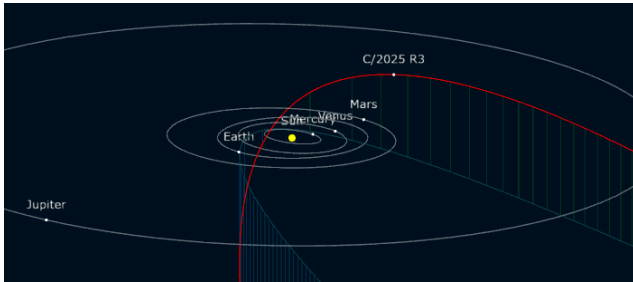


Potentially “Great” Comet News for the New Year!

Steve Pellarin, President
RASC Windsor Centre

We are less than three weeks into the year and yet we already have a pair of newly discovered comets that may challenge to become the "Great Comet" of 2026. Both of these potentially “naked eye” comets will reach their closest point to us less than four months from now!

Scientists discovered the first of the incoming comets, [C/2025 R3 \(PanSTARRS\)](#), on September 8, 2025, in images captured by the Pan-STARRS telescope, in Hawaii. It is currently around 348 million kilometers from Earth (around halfway between the orbits of Mars and Jupiter).



C/2025 R3 is a long-period comet, meaning it likely takes more than 1,000 years to orbit our home star, and probably originates from the Oort cloud — a giant reservoir of comets and other icy objects near the edge of the solar system. Astronomers are still narrowing down the comet's exact orbit, so they do not yet know the precise amount of time the comet takes to circle our Sun. However, similar trajectories of comets indicate that the period is at least several 10s of thousands of years. Another interesting note is that the comet's orbit is close to a perfect parabola — this leads some scientists to think that this may be its first visit to the inner solar system.

C/2025 R3 is currently speeding toward the sun and will reach perihelion (its closest point to the Sun) on April 20th. It will come within 76.3 million km of the sun, which is between the orbits of Mercury and Venus. Just one week later, on April 27, the comet will make its closest approach to Earth, coming within 44 million miles (70.8 million km) of our planet.

Astronomers don't yet know exactly how brightly the comet will shine during its solar flyby. Among other

factors, a comet's brightness depends on how it reacts to increased solar radiation: when a comet gets closer to the sun, it soaks up more sunlight, causing it to release trapped ice and gases, which reflect sunlight toward Earth. But it is too early to predict exactly how this will affect C/2025 R3. Based on current orbital data and best guesses on some of its as yet unknown properties, there are researchers predicting it will reach an apparent magnitude of 2.5, meaning it would be clearly visible to the naked eye.

The best chance to see C/2025 R3 will likely be just before perihelion, around April 17, when a new moon will darken the night sky, making it easier to spot objects on the cusp of naked-eye visibility. But by its closest approach to Earth, the comet may become obscured by the sun, making it harder to spot. During its perihelion and flyby of Earth, C/2025 R3 will be visible in the constellation Pisces, just beneath the Great Square of Pegasus, meaning it will be visible in the eastern sky just before sunrise. Viewers in the Southern Hemisphere may also get a good look at the comet in early May in the evening sky.

A second potentially more spectacular comet has also recently been discovered. Earlier this month, observers with the MAP Observation Program reported the discovery of a faint new comet, provisionally designated 6AC4721, detected from Chile's Atacama Desert. At discovery, the comet was near magnitude 17–18 and more than 2 AU from the Sun, making it accessible only to large professional instruments. Its motion, however, quickly indicated a highly unusual orbit and prompted rapid follow-up observations.

Orbital solutions soon confirmed that 6AC4721 is a **Kreutz-group sungrazing comet**, part of the well-known family of long-period comets that pass extremely close to the Sun at perihelion. Its orbit is nearly parabolic, with an eccentricity just under 1 and an inclination of roughly 145°, placing it on a steep, retrograde trajectory. The comet's orbital period is estimated to be on the order of several centuries.



Comet Ikeya-Seki. Photo by James W. Young (TMO/JPL/NASA)

What sets this Kreutz-family comet apart is how early it was detected. Most sungrazers of this group are discovered only days or weeks before perihelion, often in SOHO solar imagery, but 6AC4721 was identified months in advance. This indicates two things – one, that the comet may be a larger fragment than most known members of the Kreutz family (example: comet Ikeya-Seki, Great March Comet 1843, etc.) and two, this one provides a rare opportunity to track changes in its activity and apparent magnitude as solar heating increases – allowing scientists to better understand the composition and structure of this class of comets. Current predictions place perihelion in early April 2026, with the comet passing extremely close to the solar photosphere. This comet discovery is so new that specific details of where and when to view it have not yet been released.

As with all sungrazers, the comet's fate remains uncertain. Many such objects disintegrate near perihelion, while a small number survive long enough to become very bright, sometimes reaching naked-eye or even daylight visibility. If 6AC4721 remains intact, its apparent magnitude could increase rapidly in the weeks before perihelion, though brightness forecasts at these distances remain highly speculative.

For now, Comet 6AC4721 is a compelling target for continued monitoring and orbital refinement. Whether it fades quietly or develops into a notable sungrazer, its early discovery is already providing valuable insight into the behavior and evolution of this extreme class of comets. 🌙

Celestial Events ~ Jan-Feb, 2026

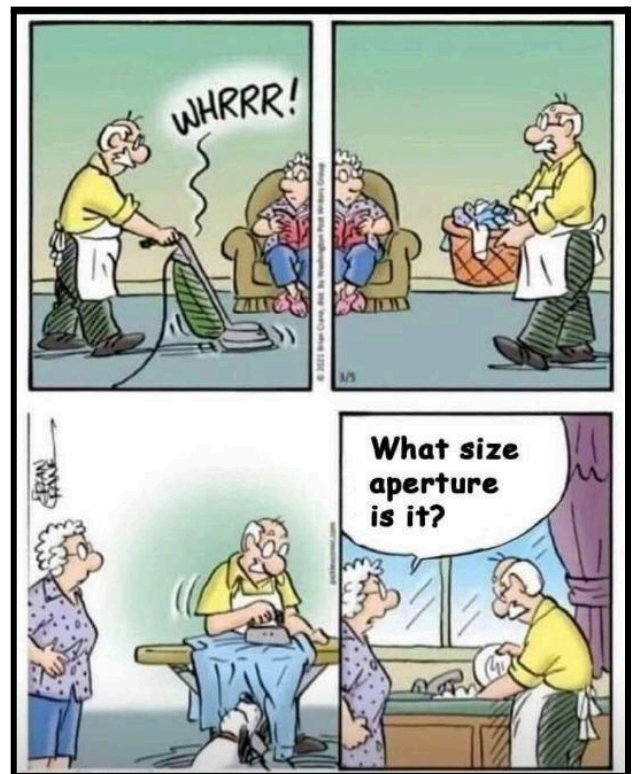
From www.SeaSky.org

February 1 - Full Moon. The Moon will be located on the opposite side of the Earth as the Sun and its face will be fully illuminated. This phase occurs at 15:11 EST. This full moon was known by early Aboriginal tribes as the Snow Moon because the heaviest snows usually fell during this time of the year. This moon has also been known by some as the Hunger Moon, since the harsh weather made hunting difficult.

February 17 - New Moon. The Moon will be located on the same side of the Earth as the Sun and will not

be visible in the night sky. This phase occurs at 07:05 EST. This is the best time of the month to observe faint objects such as galaxies and star clusters because there is no moonlight to interfere.

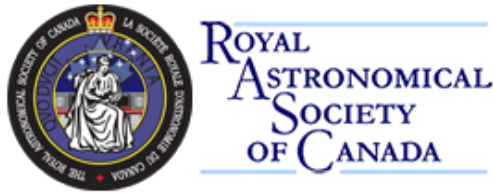
February 17 - Annular Solar Eclipse. An annular solar eclipse occurs when the Moon is too far away from the Earth to completely cover the Sun. This results in a ring of light around the darkened Moon. The Sun's corona is not visible during an annular eclipse. This eclipse will only be visible in Antarctica and the southern Indian Ocean. 🌙



RASC Windsor on CBC Radio One

Our centre's media chair, Tom Sobocan was recently interviewed on CBC Radio. Under the headline "A lunar mission and another total solar eclipse. These are some of the highlights we can expect in the sky in 2026. Local astronomy buff Tom Sobocan told us what he's most excited about." The in-studio interview ran about 10 minutes on the morning of January 12, 2026. It's available to listen online at:

<https://www.cbc.ca/listen/live-radio/1-106-windsor-morning/clip/16191455-a-lunar-mission-another-total-solar-eclipse-expect> 🌙



Windsor Centre

Minutes of the General Meeting

Tuesday, November 18, 2025

Ojibway Nature Centre, Windsor Ontario

General Meeting ~ Call to Order and Announcements

This meeting was called to order by President Steve Pellarin at 19:33. The Chair asked all attending to sign the registration book and noted that the 50/50 draw will take place after the break. The Chair then proceeded to introduce the Agenda for the meeting which will include Executive and Council elections, discussion on the recent 80th Anniversary Celebration and National Council information. Feature presentations from Mike Mastronardi and Juliana Grigorescu will round out the evening.

Thirty-seven members attended the meeting, plus a visiting family (Sarah and Avery) who are interested in the stars.

Minutes of the Previous Meeting

October 21, 2025. General Meeting Minutes were circulated by email, and printed in the Aurora. Nancy Ng noted a minor change in the description for her presentation.

- **Motion to accept the Minutes as amended.**
Moved by Michael Tiefenbach, Seconded by Nancy Ng. Carried.

Election of Centre Executives and Council Members

Mike Mastronardi presented the official list of candidates for executive positions and council membership, and the criteria for holding an elected position. The candidate must have been a RASC member for at least one year and must be in good standing with the national society.

- President: **Steve Pellarin**
- 1st Vice-President: **Mike Mastronardi**
- 2nd Vice-President: (Vacant)
- Treasurer: **Grant Maguire**
- Secretary: **Sandy French**
- Council Members: **Cliff Campeau, Michel Collins, Mahayarrahh-Starr Livingstone, Donna Ronconi, Brian Simpson, Tom Sobocan, Sandy van Gaalen, Joady Ulrich.**

A call for nominations was made to the membership. **Tara Carman-French** volunteered for a council membership position. A second and third call was made and nominations closed. With no further nominations from the floor, and with no position requiring a separate vote, a motion was made to accept the nominees and elect them to their positions for the 2025-2026 term of office.

- **Motion to accept the nominees and elect them to their positions for the 2025-2026 term of office.**
Moved by Susan Sawyer-Beaulieu, Seconded by Chitra Rangan. Carried.

The Chair offered congratulations to the newly elected executives and council members. Appointed positions will be filled by the new council in early 2026.

Presentation ~ Mike Mastronardi ~ The Observer's Handbook

The Observer's Handbook remains a critical, detailed resource for amateur astronomers, recognized worldwide for its depth and annual updates. Mike Mastronardi provided a guided overview covering 25 key sections, focusing on how to navigate the handbook's dense technical data without getting overwhelmed.

The book includes monthly sky event calendars, celestial maps and detailed charts for planets, moons, clusters and galaxies, supporting both beginner and advanced observers. Key features highlighted include the use of icons for quick navigation, sky measurement techniques with hand spans and time zone explanations crucial for interpreting universal time in astronomy. The handbook's sections on night vision, binoculars, and weather resources offer practical tips to improve observing sessions and planning.

This presentation aimed to increase member confidence in using the handbook as a long-term reference, improving observing skills and engagement with astronomy activities.

Presentation ~ Steve Pellarin ~ 80th Anniversary Summary

The 80th Anniversary Banquet held recently was a major success, attracting 85 attendees and celebrating the Club's rich history dating back to its charter in December, 1944.

The event featured historical displays including the original Patterson telescope, Sandy van Gaalen's memorabilia from past decades, and a slideshow of club milestones, fostering member pride and connection. Special acknowledgements included donations by members and souvenir wooden coasters engraved by Jeremy Hansen for all attendees, adding value and memorable takeaways. The banquet also honored longtime member Steve Mastellotto with the rare *Windsor Centre Service Award* for extraordinary service, reinforcing the value of sustained member contributions. Presence of past presidents and guests from neighbouring astronomy societies underscored the club's strong regional ties and reputation.

The banquet's storytelling reinforced the club's founding narrative involving key figures like Cyril Hallam and Dan Bawtenheimer, and origins tied to local schools and wartime conditions. This historic context helps members appreciate the club's legacy and motivated ongoing participation by connecting present activities with a proud past.

The account of David Levy's solar observation at Detroit Metro Airport, despite logistical challenges, illustrated the passion and dedication of prominent members, inspiring attendees. Publicizing such stories supports cultural continuity and encourages member involvement beyond routine meetings, enhancing community bonds. The Club's collaborations with other Centres and recognition from the Sarnia Centre further strengthened its network and visibility in the Canadian amateur astronomy community.

Break

The chair called a coffee break following the presentations at 21:00. The meeting resumed at 21:20.

Presentation ~ Juliana Grigorescu ~ Director of Observing

Juliana's *Director of Observing Report* was very detailed and covered information and images of November's night sky, Bernard's Star (Time lapsed from 2010-2025) and the Milky Way Galaxy with a SAR (Stable Auroral Red) arc.

Astrophotography submissions included:

- Jupiter ~ Steve Mastellotto
- Comet Lemmon ~ Nancy Ng, Steve Mastellotto, Jeff Peacock, Mahayarrahh-Starr Livingstone
- Shoemaker-Levy 9 (July 1994)
- Saturn ~ Steve Mastellotto
- The Sun (Spectroheliograph) ~ Steve Mastellotto
- Aurora ~ Art Rae, Steve Mastellotto, Mike Dufour.
- Conjunctions of Mars and Saturn

Aurora

Juliana reviewed upcoming meteor showers, with the main November Leonids on the 17th and 18th and the December Geminids, urging members to observe from dark locations.

Presentation ~ RASC National Meeting

Tom Sobocan, National Council Rep, shared that the Observer's Handbook is complimentary for RASC members and available for purchase on the website (www.rasc.ca), promoting resource accessibility.

Closing Comments

President Steve Pellarin announced the postponement of the December Christmas Social, moving the event to Friday, January 9th. The next General meeting is scheduled for Tuesday, January 20, 2026.

Adjournment

A motion to adjourn the meeting was called at 22:02. Carried. *Clear Skies!* 🌙

Light Pollution Abatement Report ~ January 14, 2026

Mahayarrahh-Starr Livingstone

Light Pollution Abatement Chair

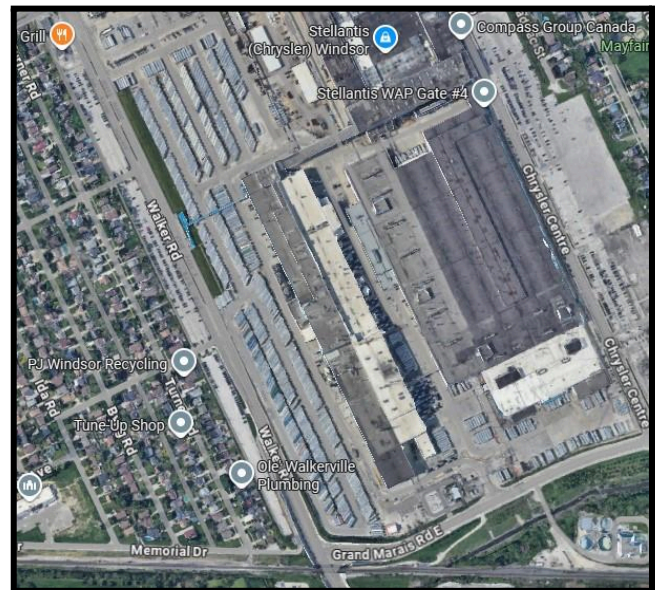
In December, I reported on a lighting situation along Walker Road in Windsor. The City of Windsor has recently passed an outdoor lighting bylaw. The lighting that the Stellantis (Chrysler) plant had installed in their parking lots along Walker Road are clearly not compliant with the new bylaw. They are full cutoff LED fixtures installed at a 45 degree angle, which creates glare for motorists on Walker Road, as well as casting light into the night sky.

I submitted a complaint to Bylaw Enforcement. Today, a Building Inspector informed me that the light fixtures are being adjusted to face downward so that light will be cast on the parking lots only. There are probably about 100 fixtures that are being adjusted.

This is a big win for light pollution abatement in Windsor and it is great to see that there was enforcement and bylaw compliance!

If you have issues with a neighbour or a business that has excessive lighting, contact me (226-246-3908) or call the Bylaw Department and file a complaint. We don't have to be subject to poor lighting. 🌙

Image by Google Maps.



The Telescope

Author Unknown

I steady myself
On the eyepiece.
Take a deep breath.
And, with my eyestaring down the
illuminated crosshairs,

I step off the boat
That is my planet,
And swim into the
Infinite
Starry home.

RASC National Update

Tom Sobocan, National Council Rep

The new Education and Public Outreach (EPO) Chair, Karim Jaffer shared this exciting information at the RASC National Council meeting of December 7, 2025:

- The **NOVA** (New Observers to Visual Astronomy) program will be in full swing in the new year. There are two sets of six freestanding modules, NOVA I & NOVA II, which can be taught in any order. RASC Centres will need a presenter. The suggested fee structure is 80% to the RASC local Centre & 20% to RASC National.
- The **Artemis II** launch window is February 5 to the end of April. The mission will orbit the Moon with Canadian astronaut Jeremy Hansen on board. There is a lot of outreach material available.
- [NASA Artemis II | Send Your Name to Space](#). This interesting program will give you a digital boarding pass which will go on a USB stick aboard the Artemis II mission. You need to put in your first and last name, as well as choose a numerical PIN code. I have done so, along with 1.7 million other people and counting. It only takes a few seconds of your time and no other personal information is requested. More importantly, this site is a launch pad for information on the four astronauts chosen for the mission.
 - REID WISEMAN, Commander
 - VICTOR GLOVER, Pilot
 - CHRISTINA KOCH, Mission Specialist
 - JEREMY HANSEN, Mission Specialist 🌙

RASC Windsor Centre's Winter Social ~ January 9, 2026

Photos by Tom Sobocan



Top Left: Grant McGuire, Colleen Melody Campsall & Michael Dufour. Top Centre: Susan Sawyer-Beaulieu & Steve Pellarin. Top Right: Mike Tiefenbach. Bottom Left: Mike Mastronardi & Gérard Ronconi. Bottom Right: Sandy French & Colleen Melody Campsall.