Join Science's Astrometrics for Two Comets and a Shower

October 18th through the 22nd!

October night skies have three amazing things to see and we invite you to join us in observing Two Comets and a Shower! Comet C/2025 R2 (SWAN), Comet C/2025 A6 (LEMMON) and the Orionids Meteor Shower will be streaking across the sky in the middle of October and you can see the comets with binoculars and the meteors with the naked eye. You can register for the event as an individual, chapter, or SRT by clicking here. Submit your photos of the night sky, observations, or artwork to sfsci-director@sfi.org and we will post them on social media and in the next issue of The Event Horizon. All participants will receive a certificate!

RESOURCES & EQUIPMENT

The Sky Live - https://theskylive.com/c2025a6-info

Visit https://www.timeanddate.com/ to find out when these objects will appear in the sky in your part of the world.

Apps such as Stellarium or SkyView to help you find the comets in the sky.

Binoculars

Cell phone/iPad

Optional - telescopes

HOW TO FIND THE COMETS

Using binoculars - prepare ahead of time - This is a great technique to find objects quickly using binoculars. Please practice this in the daylight until you feel comfortable. It will help you immensely when looking at stars.

- Go outside with your binoculars and find an object in the distance that is fixed, a street light, a far off stop sign…
- Fix your eyes on that object. Then, without moving your eyes, slowly pull the binoculars up to your eyes. The target object should be in your field of view in the binoculars.
- If it isn't, start over and try again – as many times as it takes until you get it.
- This technique is MUCH faster than randomly searching for something. Start with larger targets (street signs) then move on to smaller targets (birds or smaller) until you get good at it.

You will see there are lots of stars in your field of view when looking at the night sky. If you focus your eyes and concentrate on the one you want to look at, that is what will be in your binoculars!

To find the comets:

- Use your app and search for the comet by its name (example: C/2025 R2 (SWAN).
- Point your phone to the sky and follow the arrows on the app until you see it.
- Look for the brightest star near it on the app, notice what direction the comet is from your star and how far.
- Then, look for that bright star with the naked eye and use the binocular technique above to bring it into your field of view in the binocs.
- When you have found your star, slowly move the binoculars in the direction of where the comet should be until you see it.
- If you can't find it, start over and try again. When you do succeed, you will feel **really good!**

WHEN AND WHERE TO VIEW

Early Evening JUST After Sunset
Comet C/2025 R2 (SWAN) - southwest
Comet C/2025 A6 (LEMMON) – western horizon

Early Morning
Comet C/2025 A6 (LEMMON) – eastern horizon

All Night
Orionids Meteor Shower – Emits from the Orion nebula

Comet C/2025 R2 (SWAN) - SWAN is only observable in **early evenings — right after the sky has become dark**. Astronomers recommend finding dark skies about one hour after sunset with unobstructed views to the **southwest**. You'll likely need binoculars to get a good look, though it could get bright enough to be observed with the naked eye as it gets closer.

Comet C/2025 A6 (LEMMON) **–** Comet Lemmon is visible only to those of us in the Northern Hemisphere. It will be at its brightest the **early morning of the 21st** because that's when it will be closest to us, but it will **also be visible just after sunset**. Find a good observing site with no obstructions and look to the **western horizon** so you can observe and photograph this once-in-a-lifetime comet.

Orionid Meteor Shower - The Orionids are visible to skywatchers in both the Northern and Southern Hemispheres. Meteors **will appear to come from the area of the constellation Orion**, which rises in the east in the hours **after midnight** during October. Meteors will streak out from this area in all directions. The Orionid meteor shower will peak on the night of October 20 to 21. Astronomers expect an average of about 20 meteors per hour and good viewing conditions because it is a new moon at that time. The Orionids can produce bright, fast meteors that make for a spectacular show with the constellation Orion in the background.

FACTS

- Comets are made of ice, frozen gases and rock, and as they travel near stars such as the sun, heat causes them to release gas and dust which creates their signature tails.

- Comet C/2025 R2 (SWAN) will be closest to Earth on October 19 at a distance of approximately 24 million miles away. This is a once-in-a-lifetime comet.
- Comet C/2025 A6 (LEMMON) was spotted by the Mount Lemmon Observatory in Arizona as part of the Catalina Sky Survey, a NASA-funded project that scans the night sky for near-Earth objects such as asteroids that could pose a risk to Earth.
- Orionid meteors are known for their brightness and for their speed. These meteors travel at about 41 miles (66 kilometers) per second into Earth's atmosphere. Fast meteors can leave glowing "trains" which last for several seconds to minutes. Fast meteors can also sometimes become fireballs!