

Celestial



Observer

Volume 42 Issue 4

April 2022



CCAS member Peter Bresler took this photo of the Horsehead Nebula (Barnard 33) and Flame Nebula (NGC 2024). Located just to the South of Alnitak, the Easternmost star in Orion's Belt, these nebulae are a part of a large active star forming region (IC 434) within the even larger Orion Molecular Cloud Complex, located approximately 1,500 light-years from Earth.

Next Star Gazing: ONLINE!

Saturday, April 23rd at 7pm PDT

Join for a live virtual tour of the night sky, plus an update on the James Webb Space Telescope! Get your free SkyChart and more info on our website.

Connect here:

CentralCoastAstronomy.org/stargaze

Do Galaxies Breathe, Too?

Wednesday, April 20th at 1pm PDT

Join for an online presentation by Dr. Xinnan Du, Outreach and Engagement Manager at the Kavli Institute for Particle Astrophysics and Cosmology at Stanford University!

Find out more here:

CentralCoastAstronomy.org/april202022

Next Stargazing: ONLINE! Invite friends!!

Saturday, April 23rd at 7pm PDT

On April 23rd, CCAS President Aurora Lipper will join amateur astronomer and CCAS officer Kent Wallace, with NASA Solar System Ambassador and CCAS Officer Brian P. Cox to take you on a virtual tour of the night sky. You'll learn about objects visible naked-eye, through binoculars, and through a telescope. Then, using the tools you learn during the presentation, you'll be able to stargaze from the comfort of your own home. Brian will also share an update on the James Webb Space Telescope!



Invite all your friends! Anyone with the link can view our free online stargazing session. All that's needed is an internet connection. Join the stream using any tablet, personal computer, or YouTube enabled TV. After the presentation, the video will be available on demand on our YouTube channel. Check our website for all the details and to download your free SkyChart to follow along:

CentralCoastAstronomy.org/stargaze

Do Galaxies Breathe, Too?:

Presented by Dr. Xinnan Du

Wednesday, April 20th at 1pm PDT

Join us online for a special presentation! Galaxies are more than just hundreds of billions of stars; the gas that fills the space between the stars in fact plays a crucial role in determining the fate of a galaxy. Join this presentation to learn more about the interplay between gas and stars, as well as galaxy “breathing” in a similar way to human respiration!



Dr. Xinnan Du is the Outreach and Engagement Manager at the Kavli Institute for Particle Astrophysics and Cosmology (KIPAC) at Stanford University. Inspired by one of Stephen Hawking's books, A Brief History of Time, in high school, Xinnan pursued astronomy in undergraduate and graduate studies. Xinnan is passionate about sharing exciting discoveries of the Universe with students and the general public, inspiring and engaging everyone in learning astronomy through various educational programs. Follow the link below to join us!

CentralCoastAstronomy.org/april202022

Springtime Catspotting: Lynx and Leo Minor

by David Prosper for NASA Night Sky Network



This image is a map of the sky around Lynx and Leo Minor. Notice the prevalence of animal-themed constellations in this area, making it a sort of celestial menagerie. If you are having difficulty locating the fainter stars of Leo Minor and Lynx, don't fret; they are indeed a challenge. Hevelius even named the constellation as reference to the quality of eyesight one needs in order to discern these faint stars, since supposedly one would need eyes as sharp as a Lynx to see it! Darker skies will indeed make your search easier; light pollution, even a relatively bright Moon, will overwhelm the faint stars for both of these celestial wildcats. While you will be able to see NGC 2419 with a backyard telescope, Hanny's Voorwerp is far too faint, but its location is still marked. A few fainter constellation labels and diagrams in this region have been omitted for clarity.

Image created with assistance from [Stellarium](https://www.stellarium.org/).

Many constellations are bright, big, and fairly easy to spot. Others can be surprisingly small and faint, but with practice even these challenging star patterns become easier to discern. A couple of fun fainter constellations can be found in between the brighter stars of Ursa Major, Leo, and Gemini: Lynx and Leo Minor, two wild cats hunting among the menagerie of animal-themed northern star patterns!

Lynx, named for the species of wild cat, is seen as a faint zigzag pattern found between Ursa Major, Gemini, and Auriga. Grab a telescope and try to spot the remote starry orb of globular cluster NGC 2419. As it is so distant compared to other globular clusters - 300,000 light years from both our solar system and the center of the Milky Way - it was thought that this cluster may be the remnants of a dwarf galaxy consumed by our own. Additional studies have muddled the waters concerning its possible origins, revealing two distinct populations of stars residing in NGC 2419, which is unusual for normally-homogenous globular clusters and marks it as a fascinating object for further research.

Leo Minor is a faint and diminutive set of stars. Its “triangle” is most noticeable, tucked in between Leo and Ursa Major. Leo Minor is the cub of Leo the Lion, similar to Ursa Minor being the cub to the Great Bear of Ursa Major. While home to some interesting galaxies that can be observed from large amateur scopes under dark skies, perhaps the most intriguing object found within Leo Minor’s borders is Hanny’s Voorwerp.

This unusual deep-space object is thought to be a possible “light echo” of a quasar in neighboring galaxy IC 2497 that has recently “switched off.” It was found by Hanny van Arkel, a Dutch schoolteacher, via her participation in the Galaxy Zoo citizen science project. Since then a few more intriguing objects similar to Hanny’s discovery have been found, called “Voorwerpjes.”

Lynx and Leo Minor are relatively “new” constellations, as they were both created by the legendarily sharp-eyed European astronomer Johannes Hevelius in the late 1600s. A few other constellations originated by Hevelius are still in official use: Canes Venatici, Lacerta, Scutum, Sextans, and Vulpecula. What if your eyes aren’t quite as sharp as Johannes Hevelius – or if your weather and light pollution make searching for fainter stars more difficult than enjoyable? See if you can spot the next Voorwerp by participating in one of the many citizen science programs offered by NASA at science.nasa.gov/citizenscience! And of course, you can find the latest updates and observations of even more dim and distant objects at nasa.gov.



**This article is distributed by
NASA Night Sky Network**

The Night Sky Network program supports astronomy clubs across the USA dedicated to astronomy outreach. Visit nightsky.jpl.nasa.gov to find local clubs, events, and more!

CCAS Contacts

President	Aurora Lipper
Vice President	Tom Frey
Treasurer	Lee Coombs
Secretary	Linnea Fritch
Outreach	Scott McMillian
Communication	Brian P. Cox

CCAS Information

Founded in 1979, the Central Coast Astronomical Society (CCAS) is an association of people who share a common interest in astronomy and related sciences.

Central Coast Astronomical Society
PO Box 1415
San Luis Obispo, CA 93406

Website: CentralCoastAstronomy.org

Facebook: facebook.com/CentralCoastAstronomicalSociety



CCAS member Frank Widmann took this photo of M78 (also known as NGC 2068). Easily found in small telescopes, this reflection nebula which is part of the Orion Molecular Cloud Complex.



CCAS officer Lee Coombs took this photo of the Leo Triplet, which includes spiral galaxies NGC 3628 (top), M65 (lower right), and M66 (lower left). Located approximately 35 million light-years from Earth, this group is located in the constellation Leo and is easily viewed even in small telescopes.