

# Celestial



# Observer

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*CCAS member Catherine Hyde took this photo of the Heart Nebula (IC 1805). Located 7,500 light years from Earth and visible in the Northwest sky this time of year, this nebula is located in the constellation Cassiopeia. This photo is a stack of 51 (15 minute) images taken over 4 nights. (102mm astrograph refractor and a Nikon D810A camera, on an Astro-Physics Mach1 mount)*

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## **Next Star Gazing: ONLINE!**

Friday, February 18<sup>th</sup> at 7pm PST

CCAS President Aurora Lipper, and astronomer Brian P. Cox will be taking you on a virtual tour of the Winter night sky, so you can stargaze right from home!

Connect here:

[CentralCoastAstronomy.org/stargaze](https://CentralCoastAstronomy.org/stargaze)

## **Look to the West for the Zodiacal Light!**

The last two weeks in February are the best time to view the Zodiacal Light - light reflected off of dust orbiting the Sun in the inner solar system.

Get more info here:

<https://earthsky.org/astronomy-essentials/everything-you-need-to-know-zodiacal-light-or-false-dawn/>

# Next Stargazing: ONLINE! Invite friends!!

Friday, February 18<sup>th</sup> at 7pm PST

On February 18<sup>th</sup>, CCAS President Aurora Lipper will join NASA Solar System Ambassador and CCAS member Brian P. Cox to take you on a tour of the night sky using live telescope views! (Live views are weather permitting) 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 a mission report on NASA's Double Asteroid Redirection Test (DART)!

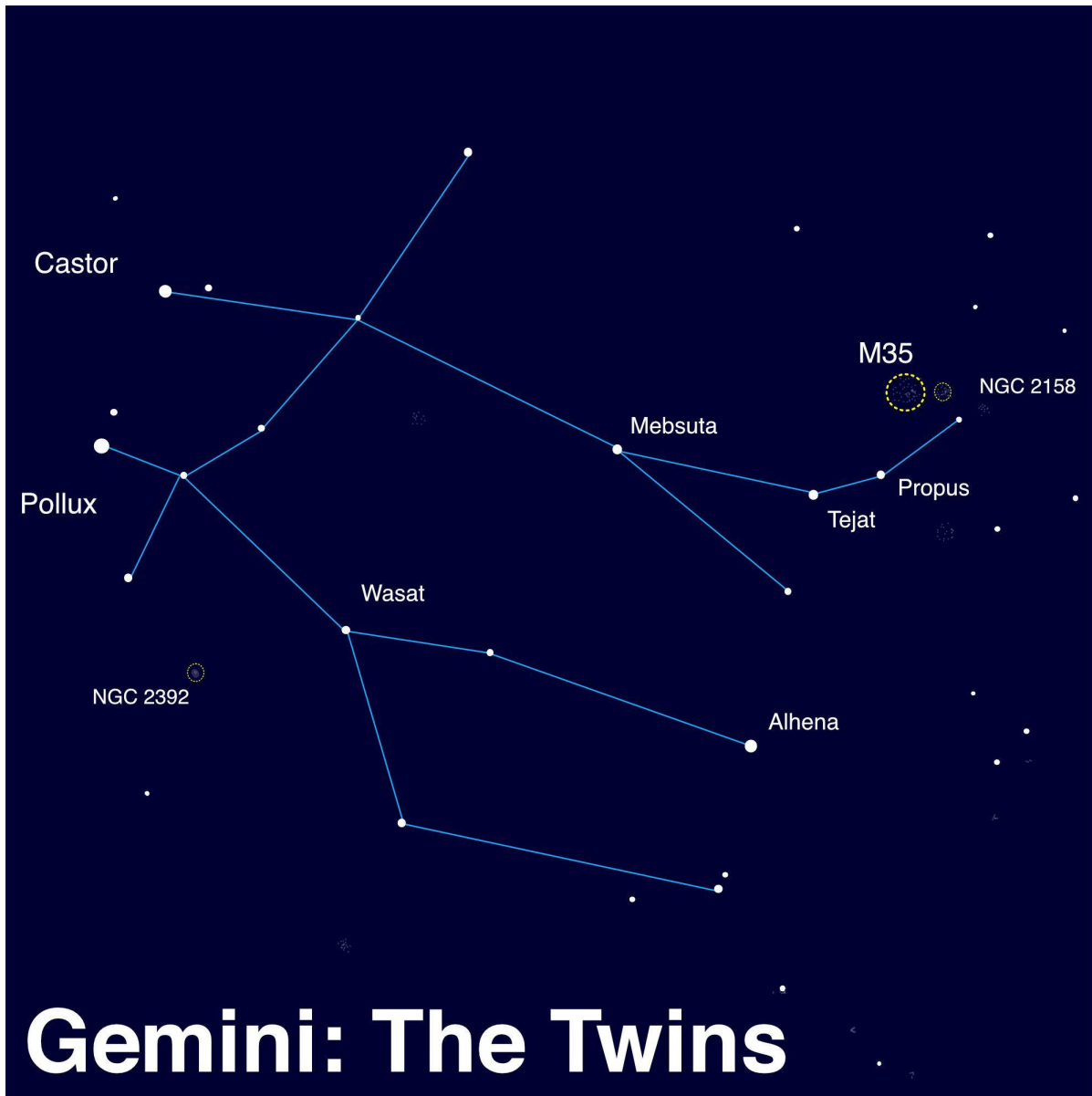


Invite all your friends! Anyone with the link can view our free online stargazing session. All that's needed is an internet connection. Join the stream using any tablet, personal computer, or YouTube enabled TV. After the presentation, the video will be available on demand on our YouTube channel. Check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

[CentralCoastAstronomy.org/stargaze](https://CentralCoastAstronomy.org/stargaze)

# Hang Out with the Twins of Gemini

by David Prosper



*Castor and Pollux are Gemini's most prominent stars, and often referred to as the "heads" of the eponymous twins from Greek myth. In Chinese astronomy, these stars make up two separate patterns: the Vermillion Bird of the South and the White Tiger of the North. What do you see? The Night Sky Network's "Legends in the Sky" activity includes downloadable "Create Your Own Constellation" handouts so you can draw your own star stories: [bit.ly/legendsinthesky](https://bit.ly/legendsinthesky) Image created with assistance from Stellarium.*

The night skies of February are filled with beautiful star patterns, and so this month we take a closer look at another famous constellation, now rising high in the east after sunset: Gemini, the Twins!

If you're observing Orion, as discussed in last month's article, then Gemini is easy to find: just look above Orion's "head" to find Gemini's "feet." Or, make a line from brilliant blue-white Rigel in the foot of Orion, through its distinct "Belt," and then on through orange Betelgeuse. Keep going and you will end up in between the bright stars Castor and Pollux, the "heads" of the Gemini Twins. While not actually related – these stars aren't bound to each other, and are almost a magnitude apart in brightness – they do pair up nicely when compared to their surrounding stars. Take note: more than one stargazer has confused Gemini with its next-door neighbor constellation, Auriga. The stars of Auriga rise before Gemini's, and its brightest star, Capella, doesn't pair up as strikingly with its second most brilliant star as Castor and Pollux do. Star-hop to Gemini from Orion using the trick above if you aren't sure which constellation you're looking at.

Pollux is the brighter of Gemini's two "head" stars - imagine it has the head of the "left twin" - and located about 34 light-years away from our Solar System. Pollux even possesses a planet, Pollux b, over twice the mass of Jupiter. Castor - the head of the "right twin" - by contrast, lies about 51 light-years distant and is slightly

dimmer. While no planets have been detected, there is still plenty of company as Castor is actually a six-star system! There are several great deep-sky objects to observe as well. You may be able to spot one with your unaided eyes, if you have dark skies and sharp eyes: M35, a large open cluster near the "right foot" of Gemini, about 3,870 light-years away. It's almost the size of a full Moon in our skies! Optical aid like binoculars or a telescope reveals the cluster's brilliant member stars. Once you spot M35, look around to see if you can spot another open cluster, NGC 2158, much smaller and more distant than M35 at 9,000 light-years away. Another notable object is NGC 2392, a planetary nebula created from the remains of a dying star, located about 6,500 light-years distant. You'll want to use a telescope to find this intriguing faint fuzzy, located near the "left hip" star Wasat.

Gemini's stars are referenced quite often in cultures around the world, and even in the history of space exploration. NASA's famed Gemini program took its name from these stars, as do the appropriately named twin Gemini North and South Observatories in Hawaii and Chile. You can discover more about Gemini's namesakes along with the latest observations of its stars and related celestial objects at [nasa.gov](https://www.nasa.gov).



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

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## **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

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*CCAS member Frank Widmann took this photo of the Leo Triplet. Located 35 million light years from Earth, the group of spiral galaxies consists of M65, M66 and NGC 3628 located in the constellation Leo.*