

WEYMOUTH ASTRONOMY

Sky Watcher

Volume 16, Issue 9
11 February 2022

Trips / Events

Ideas for trips and events
always welcome!

events@weymouthastronomy.co.uk

Society Meetings

16 Feb—CADAS *Life in the Universe – are the Aliens out there?* James Fradgley

1 Mar—WAS *The Far Side of the Moon*
Dr Julian Onions

16 Mar—CADAS *On Board the ISS* Jo Richardson

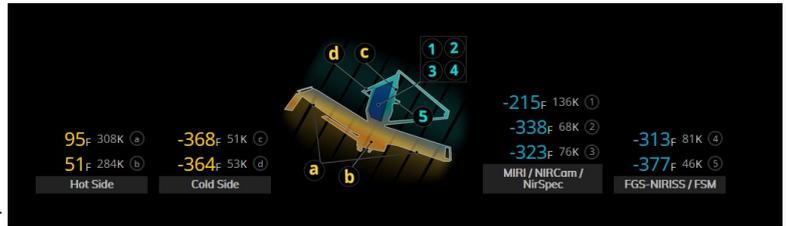


Latest News:

Where is WEBB?

Nominal Event Time:
Launch + 30 days

Status: [Webb is in L2 Orbit and Cooling](#)



NASA has an excellent timeline site to monitor the deployment progress and distance en route to the final Lagrange 2 orbital location.

<https://www.jwst.nasa.gov/content/webbLaunch/whereIsWebb.html>

Keep an eye out for the upcoming phases in the preparations for first light! Until next month...Clear Skies! ~SLKarl



Days: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Early Deployment

Sunshield

Secondary Mirror

Primary Mirror

Mirror Segments



L2

Shutdown, Instruments On, Mirror Alignment



5 Apr—WAS *Astronomy Answers a 19th Century Conjecture* Alan Jefferis

Lots more to come in the new year. Stay



Hang out with the Gemini Twins

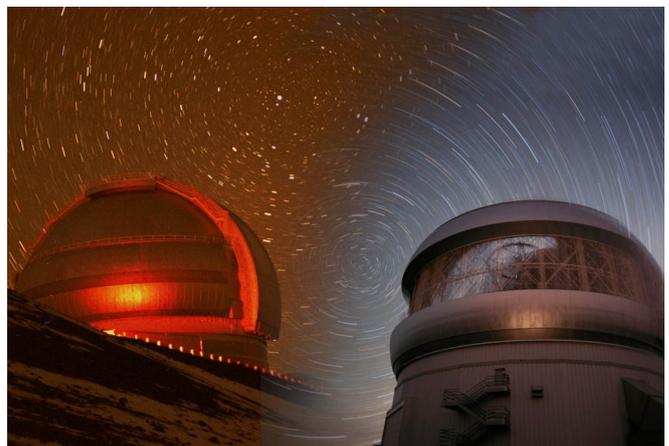
by David Prosper

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"



Above: Montage of Gemini North, located on Mauna Kea in Hawaii, and Gemini South, located on Cerro Pachón in Chile. These "twin" telescopes work together as the Gemini Observatory to observe the entire sky.

WAC Upcoming Events:

4th Mar	Robin Catchpole - 32 Years of the Hubble Telescope and what next? (Face to face and Zoom)
8th Apr	Mary McIntyre - Reflection, Refraction & Excitation: The Hunt For Atmospheric Optics. (Face to face and Zoom)
13 May	AGM - James Fradgley (Face to face and Zoom)

Orion the Hunter (more!)

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).



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

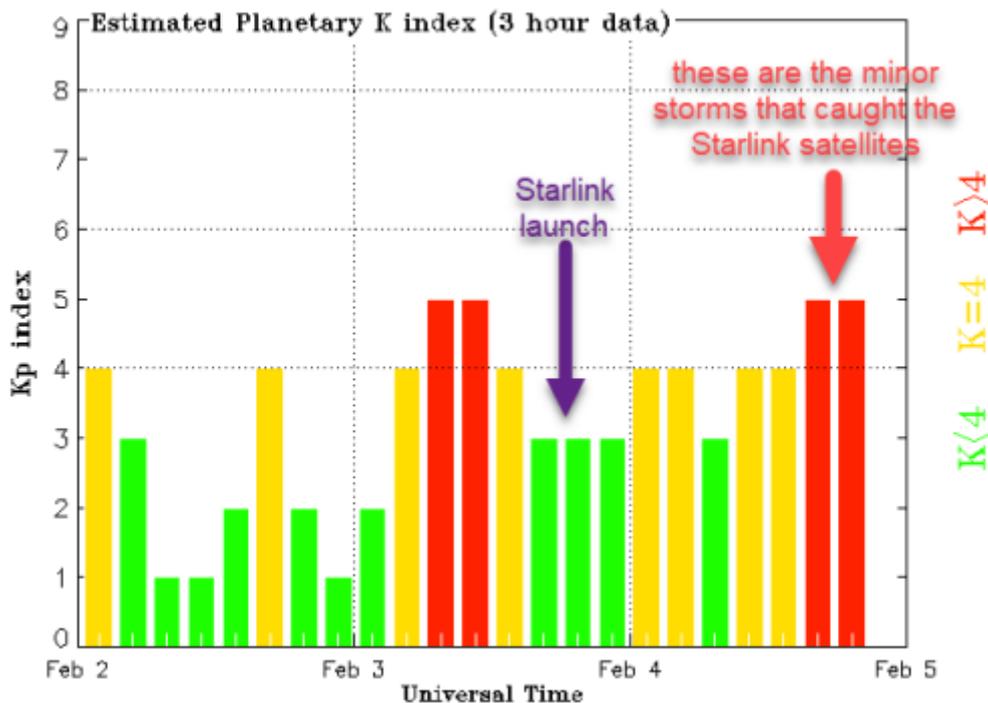
Image created with assistance from Stellarium.



Spaceweather.com [10 Feb 2022]

GEOMAGNETIC STORM BRINGS DOWN STARLINK SATELLITES: As many as 40 Starlink satellites are currently falling out of the sky--the surprising result of a minor geomagnetic storm. SpaceX made the announcement yesterday:

"On Thursday, Feb. 3rd at 1:13 p.m. EST, Falcon 9 launched 49 Starlink satellites to low Earth orbit from Launch Complex 39A (LC-39A) at Kennedy Space Center in Florida. ... Unfortunately, the satellites deployed on Thursday were significantly impacted by a geomagnetic storm on Friday, [Feb. 4th]."



Two days before launch a CME hit Earth's magnetic field. It was not a major space weather event. In fact, the weak impact did not at first spark any remarkable geomagnetic activity. However, as Earth passed through the CME's wake, some sputtering G1-class geomagnetic storms developed. It was one of these minor storms that caught the Starlink satellites on Feb. 4th.

Geomagnetic storms heat Earth's upper atmosphere. Diaphanous tendrils of warming air literally reached up and grabbed the Starlink satellites. According to SpaceX, onboard GPS devices detected atmospheric drag increasing "up to 50 percent higher than during previous launches."

"The Starlink team commanded the satellites into a safe-mode where they would fly edge-on (like a sheet of paper) to minimize drag," says SpaceX. "Preliminary analysis show the increased drag at the low altitudes prevented the satellites from leaving safe-mode to begin orbit raising maneuvers, and up to 40 of the satellites will re-enter or already have re-entered the Earth's atmosphere."

The Sociedad de Astronomia del Caribe apparently caught one of the re-entries over Puerto Rico on Feb. 7th:
<https://youtu.be/a7KUSN89-A0>

SpaceX says that the deorbiting satellites "pose zero collision risk with other satellites and by design demise upon atmospheric re-entry—meaning no orbital debris is created and no satellite parts hit the ground."

Keep an eye on the night sky this week. You might catch a Starlink satellite burning up overhead.

A sharable permalink to this story is available here: [The Starlink Incident.](https://spaceweatherarchive.com/2022/02/09/the-starlink-incident/)
<https://spaceweatherarchive.com/2022/02/09/the-starlink-incident/>

