



*Photo taken 50 Miles north of Seneca, OR. We supposedly had 100 seconds of totality but it seemed to me like it was over in 20 seconds. ~Dave Bowlus*

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**Next Meeting:** Check our website for details on the next guest speaker and free public astronomy talk! Our meetings are fun and have something for everyone, including time for shares and questions.

**Next Star Gazing:** Saturday, Oct. 14<sup>th</sup> (weather-permitting!) at sunset at the Santa Margarita KOA. Set up early to get a good spot with our astronomers!

# Next Star Gazing

**Oct. 14<sup>th</sup> at sunset at the Santa Margarita KOA**

Our Sky Star Parties occur once a month, and are free and open to the public, and also weather-permitting. If you'd like to join us, park at the bottom of the hill and walk up to the telescopes just before sunset. If you're got a large, bulky telescope, please arrive *before* sunset to set up.



*Image above:* On Sept. 15th, folks got to hear a lecture on Saturn, and then get to see it! After Nasa Planetary Geologist “Indiana Janie” Radebaugh spoke on the Cassini Mission at Cal Poly’s Spanos Theatre Dave Majors set up his 12” Dobsonian along with scopes from the Cal Poly Astronomical Society. About 50 people or so looked through our scopes!

# Member's Outreach!

## CCAS & Cal Poly's WOW Week

On Sep 17 Cal Poly held their annual Showcase event to finish off WOW week. Ron Setina and Dave Majors helped the Cal Poly Astronomy Club with their booth with our Solar Scopes. Since their scopes were looking at the Sun, Dave powered his with solar panels. Here are some images from that event:



## Member's Work

### Dave Majors spent a week at a dark sky site.

The Trifid Nebula (M20, NGC 6514) is an H II region located in Sagittarius, and its name means 'divided into three lobes'. It is approximately 5000 ly away from Earth. Its apparent magnitude is 6.3.



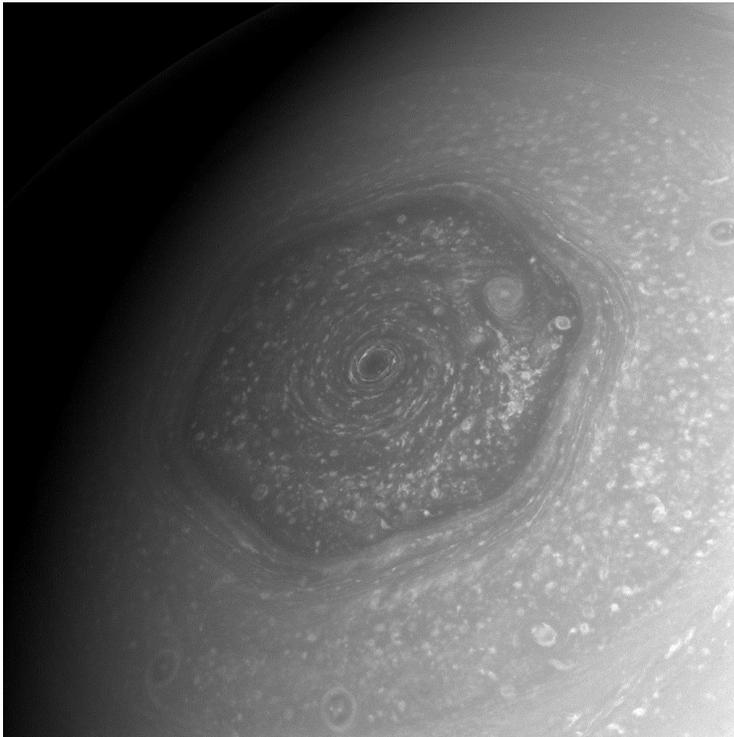
The object is an unusual combination of an open cluster of stars; an emission nebula (the lower, red portion), a reflection nebula (the upper, blue portion) and a dark nebula (the apparent 'gaps' within the emission nebula that cause the trifurcated appearance; these are also designated Barnard 85). In January 2005, NASA's Spitzer Space Telescope discovered 30 embryonic stars and 120 newborn stars not seen in visible light images. *Image credit: Dave Majors, CCAS Member, Text: Wikipedia.*

# NASA Article

## Cassini Says Goodbye by Teagan Wall, *NASA Space Place*

On September 15th, the Cassini spacecraft will have its final mission. It will dive into the planet Saturn, gathering information and sending it back to Earth for as long as possible. As it dives, it will burn up in the atmosphere, much like a meteor. Cassini's original mission was supposed to last four years, but it has now been orbiting Saturn for more than 13 years!

The spacecraft has seen and discovered so many things in that time. In 2010, Cassini saw a massive storm in Saturn's northern hemisphere. During this storm, scientists learned that Saturn's atmosphere has water vapor, which rose to the surface. Cassini also looked at the giant storm at Saturn's north pole. This storm is shaped like a hexagon. NASA used pictures and other data from Cassini to learn how the storm got its six-sided shape.



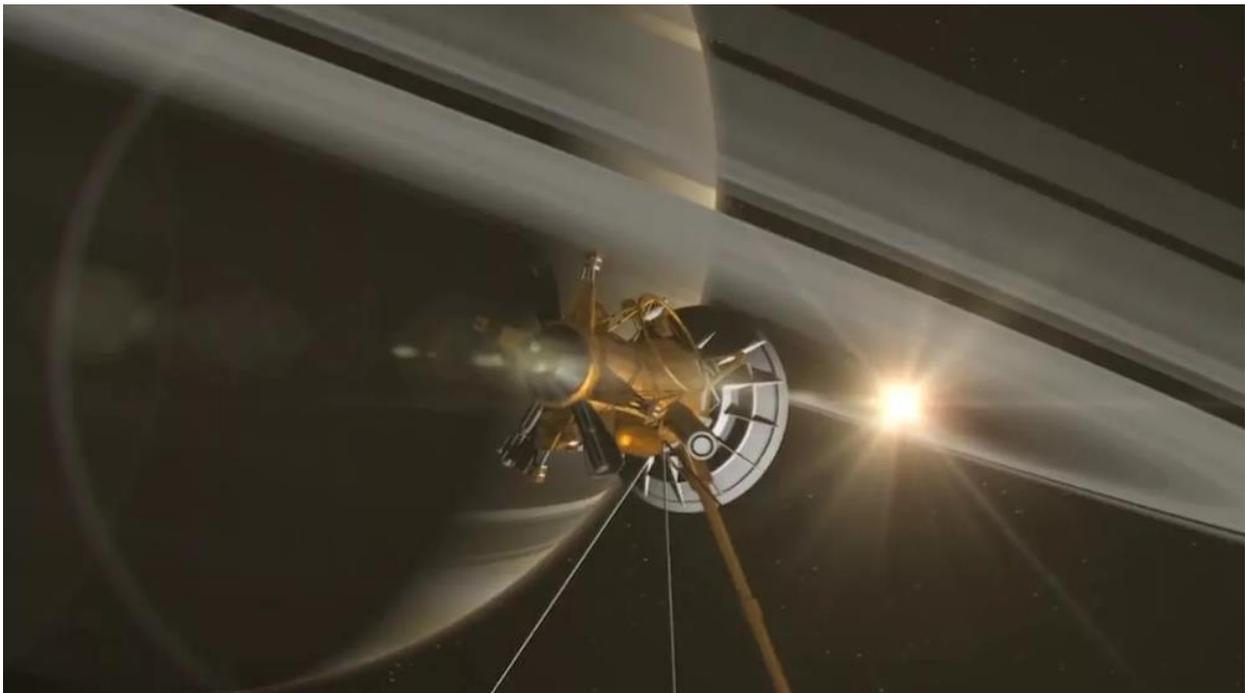
*Caption: Image left is of the hexagonal storm on Saturn's north pole was taken by Cassini in 2013. Credit: NASA/JPL-Caltech/Space Science Institute*

Cassini also looked at some of Saturn's moons, such as Titan and Enceladus. Titan is Saturn's largest moon. Cassini carried a lander to Titan. The lander, called Huygens, parachuted from Cassini down to the surface of the moon. It turns out, Titan is quite an exciting place! It has seas, rivers, lakes and rain. This means that in

some ways, Titan's landscape looks a bit like Earth. However, its seas and rivers aren't made of water—they're made of a chemical called methane.

Cassini also helped us learn that Saturn's moon Enceladus is covered in ice. Underneath the ice is a giant liquid ocean that covers the whole moon. Tall geysers from this ocean spray out of cracks in the ice and into space, like a giant sneeze. Cassini flew through one of these geysers. We learned that the ocean is made of very salty water, along with some of the chemicals that living things need.

If there is life on Enceladus, NASA scientists don't want life from Earth getting mixed in. Tiny living things may have hitched a ride on Cassini when it left Earth. If these germs are still alive, and they land on Enceladus, they could grow and spread. We want to protect Enceladus, so that if we find life, we can be sure it didn't come from Earth. This idea is called planetary protection.



Scientists worry that when Cassini runs out of fuel, it could crash into Titan or Enceladus. So years ago, they came up with a plan to prevent that from happening. Cassini will complete its exploration by diving into Saturn—on purpose. The spacecraft will burn up and become part of the planet it explored. During its final plunge, Cassini will tell us more about Saturn's atmosphere, and protect the moons at the same time. What an exciting way to say goodbye!

# CCAS Officers

Feel free to connect with us!



President: Joseph Carro

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Outreach Coordinator: Dave Majors

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## CCAS Contact 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.*

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