

Constellation Project

Cassiopeia

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History

The constellation Cassiopeia is named after a queen in Greek Mythology. Cassiopeia, wife of King Cepheus of Ethiopia, once boasted that she was more beautiful than the Nereids, 50 sea nymphs. Enraged, the nymphs pleaded with the sea god, Poseidon, to punish the queen for her comments. Poseidon decided to send the sea monster Cetus to ravage the coastline of King Cepheus' lands. After consulting an oracle, it was discovered that the only way to appease Poseidon was to sacrifice the princess Andromeda to the sea monster. Cepheus and Cassiopeia chained their daughter to a rock by the sea; but, before she could be eaten, the hero Perseus rescued her. At their wedding, an altercation occurred and Perseus took out the head of medusa which turned everyone to stone. The king and queen didn't look away in time and were killed. Poseidon placed them in the sky but Cassiopeia was condemned to circle the celestial pole forever, and spends half the year upside down in the sky as punishment for her vanity.

The constellation was first catalogued by the Greek astronomer Ptolemy. It is located in the northern sky and is recognizable due to its W shape, which is made up of the five brightest stars in the constellation. Cassiopeia contains several deep sky objects. The open star clusters are Messier 52, Messier 103 and The White Rose Cluster. Cassiopeia A is a supernova remnant. It is also the brightest astronomical radio source in the sky. It was discovered in 1947 and one of the first radio sources to be discovered but the light from this supernova is believed to have reached Earth almost 300 years ago. The Pacman Nebula is 9,500 lightyears away and was discovered by American astronomer E.E. Barnard in 1883.

Motion of the Constellation

Cassiopeia is an easy constellation to spot even on nights with poor visibility. It is bright enough to be seen from most suburban areas and can be found by looking due north. In my observations I included other constellations I knew by heart and could locate in the sky. As a circumpolar star, it circles the celestial north pole and never sets. When I first began observing it, it seemed almost directly to the right (east) of Polaris. As time continued, it began to slowly rise up in the sky and move slightly to the left. Ultimately in my final observations, it appears to be almost above Polaris. Comparing the first and final position, they create about a 60 degree angle

using Polaris as a vertex. Along with Polaris as a reference I also used the building and tree. Cassiopeia began in the upper right corner of the tree and just above the building. Over the observation period it arced over the tree to the left and ended up almost directly above it.

APOD

NGC 7789: Caroline's Rose

2013 October 26

Image Credit & Copyright: [Albert Barr](#)

Explanation: Found among the rich starfields of the Milky Way toward the constellation Cassiopeia, [star cluster NGC 7789](#) lies about 8,000 light-years away. A late 18th century [deep sky discovery](#) of astronomer [Caroline Lucretia Herschel](#), the cluster is also known as Caroline's Rose. Its suggestive appearance is created by the cluster's nestled complex of stars and voids. Now estimated to be 1.6 billion years young, the galactic or open cluster of stars also shows its age. All the stars in the cluster were likely born at the same time, but the brighter and more massive ones have more rapidly exhausted the hydrogen fuel in their cores. These have evolved from [main sequence](#) stars like the Sun into the many red giant stars shown with a yellowish cast in this lovely color composite. Using measured [color and brightness, astronomers](#) can model the mass and hence the age of the cluster stars just starting to "turn off" the main sequence and become [red giants](#). Over 50 light-years across, [Caroline's Rose](#) spans about half a degree (the angular size of the moon) near the center of the wide-field telescopic image.

