

Spooky nebulae treats for Halloween

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The Ghost of Cassiopeia is an emission nebula located 600 light years away in the constellation of Cassiopeia

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Halloween is upon us, and the sky contains several spooky nebulae very appropriate for this time of the year.

The Ghost of Cassiopeia is an emission nebula located 600 light years away in the constellation of Cassiopeia. This constellation is named after a vain queen in Greek mythology, and forms an easily recognizable “W” shape in the night sky during fall and winter. The central point of the W is marked by the massive blue star named Gamma Cassiopeia which we can see on the top of the image. Gamma Cassiopeia is a blue-white giant star that is surrounded by a gaseous disc and lies four light years away from the nebula. This star is 19 times more massive and 65,000 times brighter than our Sun, and rotates at the incredible speed of 994,000 mph.

The red seen in the image is the effect of the star’s ultraviolet radiation on the hydrogen molecules of the nebula, and the faint bluish areas are the results of light reflecting on the nebula’s dust and oxygen molecules. The nebula is being dispersed into the interstellar medium by the effects of Gamma Cassiopeia’s radiation. The region at the top of the image and to the left of Gamma Cassiopeia is called IC 59. This area contains more dust and oxygen molecules than IC 63, producing the blue glow.

In Greek mythology, Cassiopeia was the queen of Aethiopia and the wife of King Cepheus. She was very beautiful and vain. She claimed that she and her daughter, Andromeda, were more beautiful than the sea Nymphs. That angered Poseidon, god of the sea, who sent the sea monster Cetus to attack Aethiopia. Cepheus and Cassiopeia were told by the oracle of Ammon that in order to appease Poseidon, they had to sacrifice their daughter Andromeda. So they

chained her to the sea cliff as a sacrifice to Cetus. However, the hero Perseus defeated Cetus and married Andromeda. Poseidon, still upset that Cassiopeia had not been punished, tied her to a chair in the heavens to revolve upside down half of the time.



The best time to see Cassiopeia constellation is late in the fall, when it stands high in the northwestern sky. As it rotates, east to west, the “W” turns upside down.

Happy Halloween!

– Dr. Carlos Rotellar is a Bowling Green nephrologist who has had an interest in astrophotography and has been taking images of the universe from his driveway for several years. Website: Skyastrophotos.com.