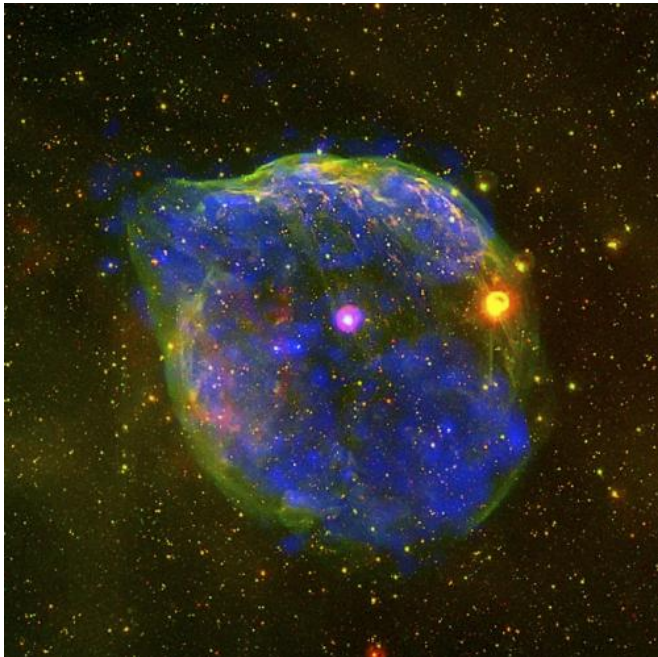


Fire burn and cauldron bubble in Canis

Major

30 October 2012



A giant bubble blown by the massive Wolf-Rayet star HD 50896, the pink star in the centre of the image. Credit: ESA

The cosmic cauldron has brewed up a Halloween trick in the form of a ghostly face that glows in X-rays, as seen by ESA's XMM-Newton space telescope. The eerie entity is a bubble bursting with the fiery stellar wind of a 'live fast, die young' star.

The bubble lies 5000 light-years from Earth in the constellation of Canis Major, the 'greater dog', and can be imagined to take on a dog- or wolf-like face.

It spans nearly 60 light-years across and was blown by the powerful [stellar wind](#) of the Wolf-Rayet star HD 50896 – the pink star near the centre of the image that makes up one of the object's piercing eyes.

Wolf-Rayet bubbles are the result of a hot, massive star – typically greater than 35 the mass of our Sun – expelling material through a strong stellar wind. This star's howling wind is a million-degree plasma potion that emits X-rays, represented in blue in this image.

Where this fierce wind ploughs into surrounding material it is lit up in red tones as seen in the 'cheek' of the face.

The green halo is a result of a shock wave racing out from the star and colliding with the layers of stellar material already ejected into space.

A 'blow-out' of X-ray emission at the top left gives the wolf an ear, and a denser region to the bottom right can be likened to a snout.

The witching hour will soon come for this bubble and its star. The bubble will burst and disperse into the surrounding environment, while the star will end its life in a dramatic [supernova explosion](#).

More information: Toala, J. et al. X-Ray Emission from the Wolf-Rayet Bubble S 308. *Astrophysical Journal* 755, 77 (2012)

Provided by European Space Agency

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