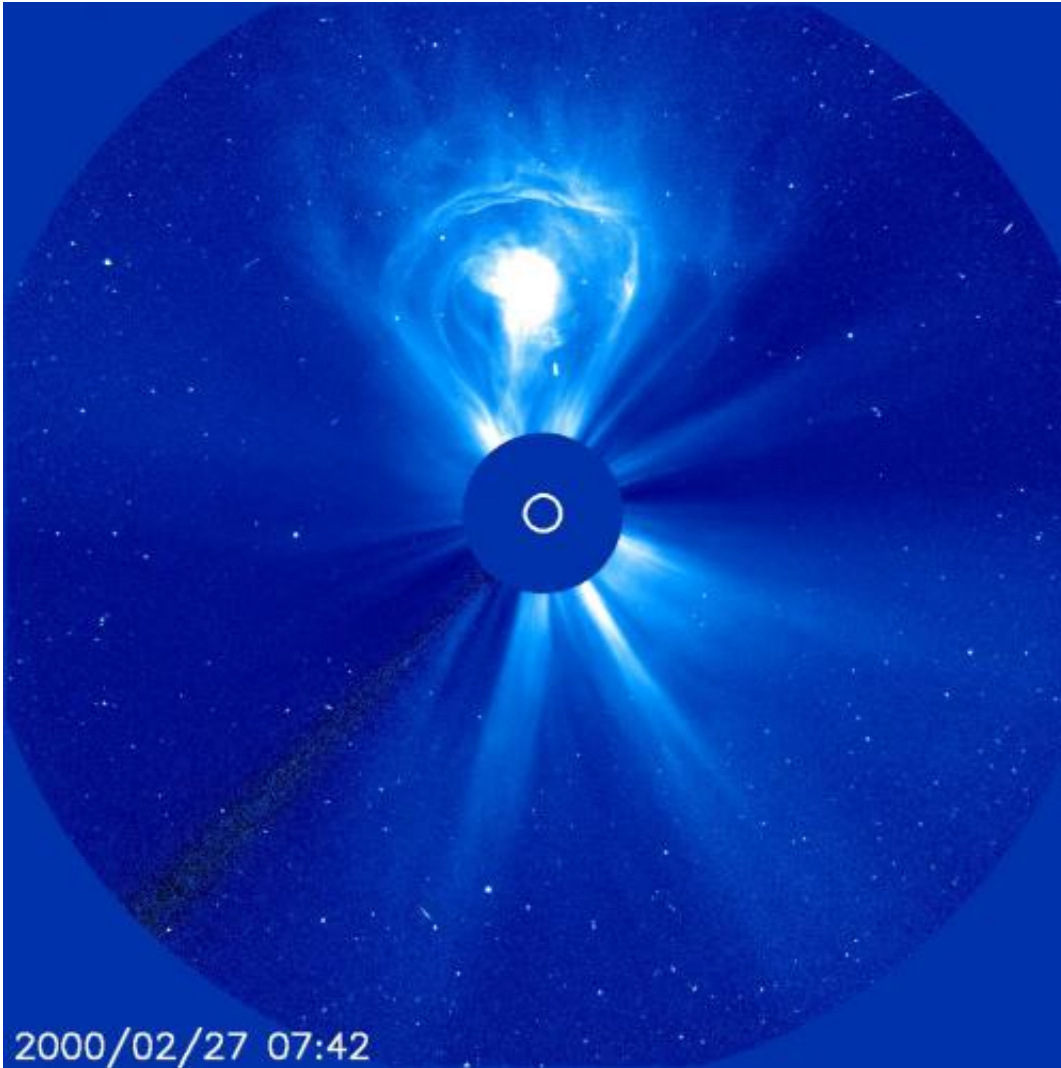


The Sun has a great idea

July 24 2012



The image was taken with SOHO's LASCO 3 instrument (Large Angle and Spectrometric Coronagraph) on 27 February 2000. The shaded disc at the centre of the image is a mask in the LASCO instrument that blots out direct sunlight to allow study of the faint details in the Sun's corona. The white circle added within the disc shows the size and position of the visible Sun. SOHO is an international collaboration between ESA and NASA. It was launched in 1995 and orbits

around the Sun in step with Earth, 1.5 million km away at the L1 point. Here, the combined gravity of Earth and Sun keep SOHO in an orbit locked to the Earth-Sun line, allowing SOHO to enjoy an uninterrupted view of our daylight star.

Credits: SOHO/LASCO (ESA & NASA)

(Phys.org) -- A light bulb-shaped eruption leaps from the Sun and blasts into space in this archival image from the ESA/NASA Solar and Heliospheric Observatory, SOHO.

SOHO captured the scene on 27 February 2000, watching as a large filament rose from the Sun's broiling atmosphere and evolved into the coronal mass ejection loop seen here.

A coronal mass ejection – or CME – is a huge cloud of magnetised [plasma](#) ejected from the Sun's atmosphere – the corona – and launched into interplanetary space. They comprise millions of tonnes of gas and race away from the Sun at hundreds of kilometres per second.

If a powerful CME is aimed in Earth's direction then the resulting geomagnetic storm may trigger regional power outages and communications blackouts.

But CMEs also have an appealing side: interactions with Earth's magnetic field ignite auroras over the northern or southern poles, producing spectacular natural light displays that dance across the night sky in shades of red and green.

This particular CME shows three distinctive features as it leaps from the [Sun](#). A bright loop of plasma leads the way with a dark, low-density cavity behind it. The [light bulb](#) 'filament' – a bright orb of solar plasma – follows behind and dominates the centre of feature.

Provided by European Space Agency

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