

## Image: Stellar object IRAS 14568-6304 ejects gas across 180 light years

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ESA/Hubble & NASA Acknowledgements: R. Sahai (Jet Propulsion Credit: Laboratory), S. Meunier

This young star is breaking out. Like a hatchling pecking through its shell, this particular stellar newborn is forcing its way out into the surrounding Universe.

The golden veil of light cloaks a young stellar object known only as IRAS 14568-6304. It is ejecting gas at [supersonic speeds](#) and eventually will have cleared a hole in the cloud, allowing it to be easily visible to the

outside Universe.

Stars are born deep in [dense clouds](#) of dust and gas. This particular cloud is known as the Circinus molecular cloud complex. It is 2280 light-years away and stretches across 180 light-years of space. If our eyes could register the faint infrared glow of the gas in the cloud, it would stretch across our sky more than 70 times the size of the full Moon. It contains enough [gas](#) to make 250 000 stars like the Sun.

IRAS 14568-6304 was discovered with the Infrared Astronomical Satellite, launched in 1983 as a joint project of the US, the UK and the Netherlands to make the first all-sky infrared survey from space.

This particular image was taken by the NASA/ESA Hubble Space Telescope. It is a combination of just two wavelengths: optical light (blue) and infrared (golden orange). The dark swath running across the image is the Circinus molecular cloud, which is so dense that it obscures the stars beyond.

At longer infrared wavelengths, this darkness is filled with point-like stars, all deeply embedded and which will one day break out like IRAS 14568-6304 is doing.

Indeed, IRAS 14568-6304 is just one member of a nest of young stellar objects in this part of Circinus, each of which is producing jets. Put together, they make up one of the brightest, most massive and most energetic outflows that astronomers have yet observed. In years to come, they will be a beautiful, brightly visible star cloud.

Provided by European Space Agency

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