

## Image: The Argo's hidden cargo

July 20 2015

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Credit: JAXA

The constellation of the great ship Argo Navis used to bob along the watery southern horizon of the Mediterranean during times of antiquity.

Said to represent the ship used by Jason and the Argonauts in the quest for the Golden Fleece, it was included by Greek astronomer Ptolemy in his 2nd century AD list of the constellations.

French star-mapper Nicolas Louis de Lacaille split the giant [constellation](#) into three pieces in 1752 and this image shows Carina, the keel of the ship. Taken by Japan's Akari space observatory, it shows a hidden cargo: star-forming dust.

This dust is part of the interstellar medium, which also contains gas. The bright knots reveal dense cores, just a few tenths of a light-year across. These dusty cocoons are where gravity is incubating new stars. They are invisible at [optical wavelengths](#) because the dust blocks the light from escaping.

However, the dust's low temperature means it gives off far-infrared radiation, making it visible to the special detectors on Akari.

This false-colour image, spanning  $20 \times 15^\circ$ , is constructed from three far-infrared bands: blue represents 65 micrometres, green shows 90 micrometres and red codes the 140 micrometre wavelength. The image is part of Akari's recently released all-sky survey.

This is the first far-infrared all-sky survey since the Infrared Astronomical Satellite (IRAS) was launched by the US, the UK and the Netherlands in 1983. IRAS's final release of image data was made in 1993 and astronomers have been using it ever since.

Akari's all-sky survey is both higher resolution and contains longer wavelengths than the IRAS survey.

Akari observed more than 99% of the sky over a period of 16 months. The all-sky images have a resolution of 1–1.5 arcminutes

(0.017–0.025 $\mu$ m), in four wavelengths: 65, 90, 140 and 160 micrometres.

Akari was the second space mission for infrared astronomy from the Institute of Space and Astronautical Science of the JAXA Japan Aerospace Exploration Agency, this time with ESA's participation.

Provided by European Space Agency

Citation: Image: The Argo's hidden cargo (2015, July 20) retrieved 27 April 2024 from <https://phys.org/news/2015-07-image-argo-hidden-cargo.html>

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