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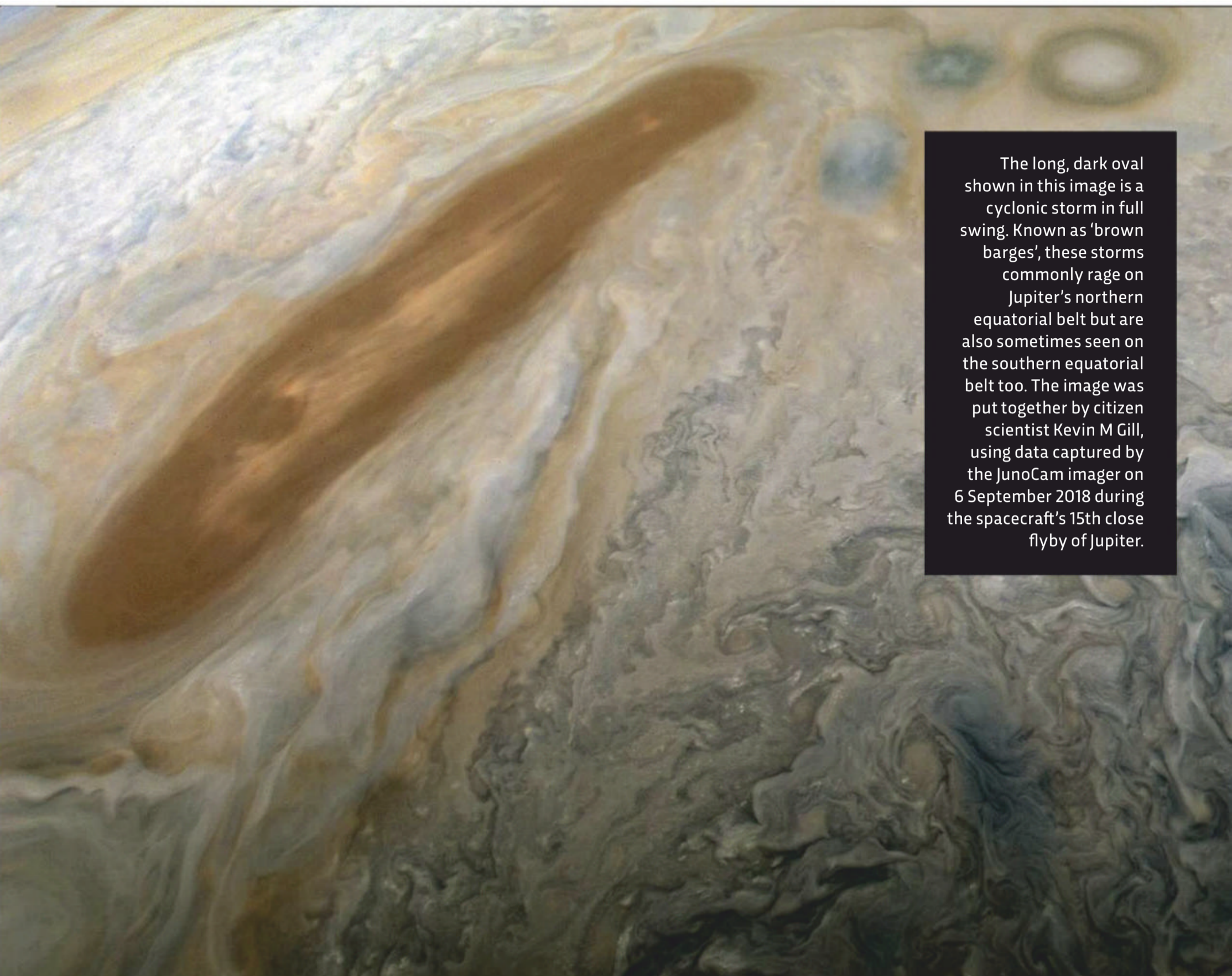
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The long, dark oval shown in this image is a cyclonic storm in full swing. Known as 'brown barges', these storms commonly rage on Jupiter's northern equatorial belt but are also sometimes seen on the southern equatorial belt too. The image was put together by citizen scientist Kevin M Gill, using data captured by the JunoCam imager on 6 September 2018 during the spacecraft's 15th close flyby of Jupiter.

SPACE

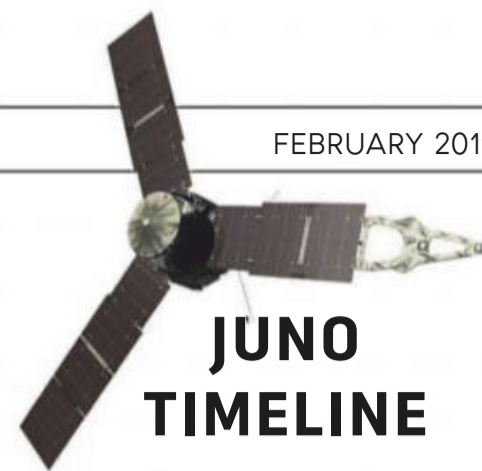
NASA'S JUNO PROBE HITS THE HALFWAY MARK

Since its launch more than seven years ago, NASA's Juno space probe has completed 16 close flybys of Jupiter. Throughout its journey, the probe's JunoCam has delivered some of the most spectacular images of the giant planet ever, detailing the swirls of its atmosphere in unprecedented detail.

"While originally envisioned solely as an outreach instrument to help tell the Juno story, JunoCam has become much more than that," said

Dr Candice Hansen, Juno co-investigator at the Planetary Science Institute in Tucson, Arizona. "Our timelapse sequences of images over the poles allow us to study the dynamics of Jupiter's unique circumpolar cyclones and to image high-altitude hazes. We are also using JunoCam to study the structure of the Great Red Spot and its interaction with its surroundings."

As the mission is now at its halfway point, we've selected some of its most breathtaking shots.



JUNO TIMELINE

9 JUNE 2005

Juno is selected as the second mission to be funded under NASA's New Frontiers project, following the New Horizons mission. NASA had previously rejected two other proposed missions, INSIDE Jupiter and the Europa Orbiter.

5 AUGUST 2011

Juno launches from Cape Canaveral, on board an Atlas V rocket. The probe carries nine scientific instruments, including the JunoCam camera, and tools for studying the planet's composition, gravity, magnetic field and polar magnetosphere.

OCTOBER 2013

Juno carries out a flyby of Earth. This enables scientists to test out its instruments, and takes advantage of Earth's gravity to slingshot the craft towards Jupiter. Such a manoeuvre in spaceflight is known as a 'gravity assist'.

5 JULY 2016

Juno goes into orbit around Jupiter. Its orbit is elliptical: at perijove – the closest point in its orbit to Jupiter itself – it comes within some 4,200km of the planet; at apojoive – the furthest point – it is some 8.1 million kilometres away. Each orbit takes 53 days.

27 AUGUST 2016

Juno reaches perijove for the first time. JunoCam sends back its first grainy images of the planet's north and south poles, while the Jovian Infrared Auroral Mapper provides an infrared image of Jupiter's southern aurora.

11 JULY 2017

Juno flies over Jupiter's Great Red Spot. As a result, scientists learn that the storm extends deeper into the atmosphere than was previously thought – it's now believed to be 50-100 times deeper than the oceans here on Earth.

21 DECEMBER 2018

Juno carries out its 16th pass of Jupiter, making the halfway point in the craft's fact-finding mission. It has now provided low-resolution images of the planet's entire surface; the second half of the mission will double the resolution of these images.

30 JULY 2021

The date when Juno will be deliberately deorbited into the Jovian atmosphere, where it will burn up. The descent will be carefully controlled, to avoid surrounding Jupiter with a ring of space junk.



This stunning image of Jupiter's tumultuous cloudscape was pieced together by citizen scientists Gerald Eichstädt and Seán Doran using data from the spacecraft's JunoCam imager taken on 29 October 2018. It has been colour enhanced to show the complex patterns formed as the storms rage in the planet's atmosphere.



This timelapse image was taken over 40 minutes on 1 April 2018 as the spacecraft performed its 12th close flyby of Jupiter. It shows a southern tropical disturbance stealing threads of orange haze from Jupiter's iconic Great Red Spot. It was created by citizen scientists Gerald Eichstädt and Seán Doran using data from the spacecraft's JunoCam imager.