

Image: Saturn's great storm of 2011

December 5 2016



Credit: NASA/JPL-Caltech/Space Science Institute

These colourful swirls depict an unprecedented storm that played out in the northern hemisphere of the gas giant Saturn from December 2010 until June 2011.

The scene is shown in false colour and is created from 84 near-infrared images captured by the international Cassini spacecraft on 26 February 2011.

The image is processed such that blue colours indicate high, thin clouds, while yellow and white are relatively thick clouds also at [high altitudes](#). Red and brown depict clouds at low altitude that are unobscured by the [high clouds](#), and the deep blue is a thin haze with no clouds below. Green represents intermediate [clouds](#).

The bright 'head' of the storm is towards the left; much lightning activity was recorded here. The roiling [storm clouds](#) raged through the atmosphere in a westward direction, eventually wrapping themselves

around the entire planet.

At the tail-end (right) a vast swirling oval-shaped vortex is seen which is some 12 000 km wide, comparable to the diameter of Earth.

After many months, the head had caught up with the tail, and the storm began to subside.

Saturn's storms are quite different from Earth's, where stormy weather is rather frequent. On Saturn the atmosphere appears to be quite calm for 20–30 years at a time, and then erupts somewhat violently in months-long persistent storms like this one. Since it takes Saturn about 30 years to orbit the Sun, the repetitive nature of the giant storms may be linked, in part, to seasonal changes in the planet's atmosphere.

Provided by European Space Agency

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