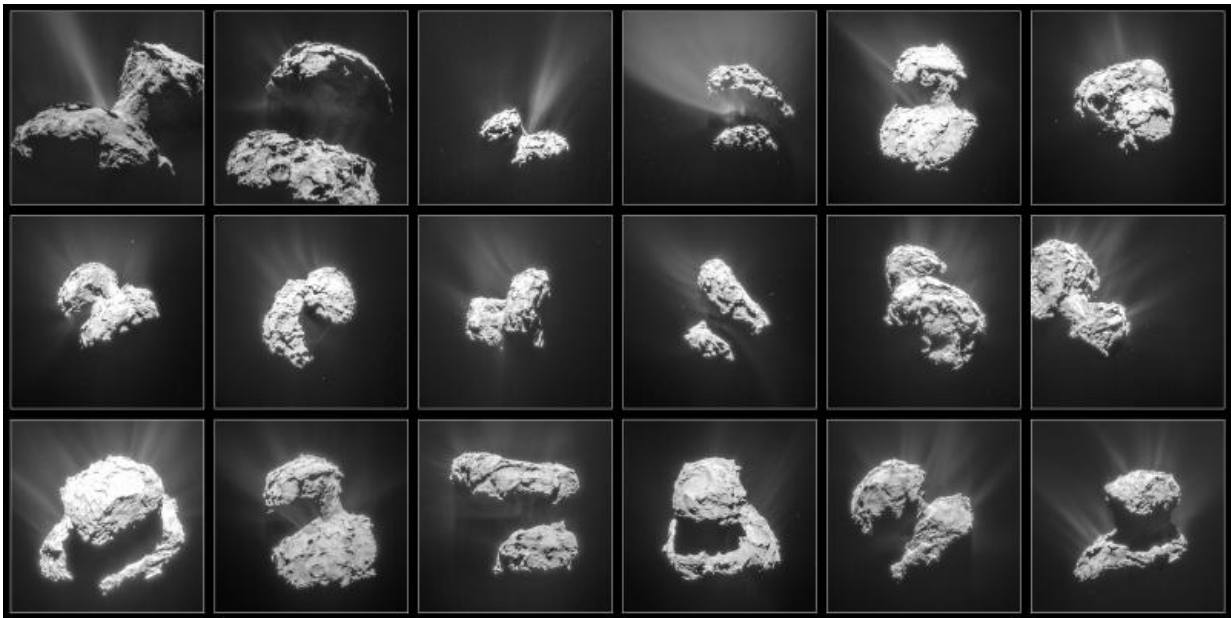


## Image: Comet activity 31 January – 25 March 2015

April 14 2015

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Credit: ESA/Rosetta/NAVCAM – CC BY-SA IGO 3.0

Four months from today, on 13 August, Comet 67P/Churyumov-Gerasimenko will reach perihelion – a moment that defines its closest point to the Sun along its orbit.

For 67P/Churyumov-Gerasimenko, this takes place at a distance of about 185 million km from the Sun, between the orbits of Earth and Mars.

Rosetta is along for the ride, and has been watching the [gradual evolution](#) of the comet since arriving in August 2014.

As the comet's surface layers are gently warmed, frozen ices sublime. The escaping gas carries streams of dust out into space, and together these slowly expand to create the comet's fuzzy atmosphere, or coma.

As the comet continues to move closer to the Sun, the warming continues and activity rises, and pressure from the solar wind causes some of the materials to stream out into long tails, one made of gas, the other of dust. The comet's coma will eventually span tens of thousands of kilometres, while the tails may extend hundreds of thousands of kilometres, and both will be visible through large telescopes on Earth.

But it is Rosetta's close study of the comet, from just a few tens of kilometres above its surface, which enables the source of the comet's activity to be studied in great detail, providing context to the more distant ground-based observations.

This spectacular montage of 18 images shows off the comet's activity from many different angles as seen between 31 January (top left) and 25 March (bottom right), when the spacecraft was at distances of about 30 to 100 km from the comet. At the same time, Comet 67P/Churyumov-Gerasimenko was at distances between 363 million and 300 million km from the Sun.

After perihelion, Rosetta will continue to follow the [comet](#), watching how the activity subsides as it moves away from the Sun and back to the outer Solar System again.

While the majority of the images in the montage have been released previously, the final frame is published for the first time in today's Cometwatch on the [Rosetta blog](#).

Provided by European Space Agency

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