

BIGGEST EXPLOSION SEEN IN UNIVERSE CAME FROM BLACK HOLE

Relevant for: Geography | Topic: The Earth and the Solar System

An image of the extremely powerful eruption that occurred in the Ophiuchus galaxy cluster, which is located about 390 million light-years from Earth. Galaxy clusters are the largest structures in the Universe held together by gravity, containing thousands of individual galaxies, dark matter, and hot gas. | Photo Credit: [International Centre For Radio Astronomy Research/Nasa/PA](#)

Astronomers have discovered the biggest explosion seen in the universe, originating from a super-massive black hole.

Scientists reported on Thursday that the blast came from a black hole in a cluster of galaxies 390 million light-years away.

The explosion was so large it carved out a crater in the hot gas that could hold 15 Milky Ways, said lead author Simona Giacintucci of the Naval Research Laboratory in Washington.

It's five times bigger than the previous record-holder.

Astronomers used NASA's Chandra X-Ray Observatory to make the discovery, along with a European space observatory and ground telescopes. They believe the explosion came from the heart of the Ophiuchus cluster of thousands of galaxies — a large galaxy at the center contains a colossal black hole.

Black holes don't just draw matter in. They also blast out jets of material and energy.

The first hint of this giant explosion actually came in 2016. Chandra images of the Ophiuchus galaxy cluster revealed an unusual curved edge, but scientists ruled out an eruption given the amount of energy that would have been needed to carve out such a large cavity in the gas.

The two space observatories, along with radio data from telescopes in Australia and India, confirmed that the curvature was, indeed, part of a cavity.

"The radio data fit inside the X-rays like a hand in a glove," co-author Maxim Markevitch of NASA's Goddard Space Flight Center in Maryland, said in a statement. "This is the clincher that tells us an eruption of unprecedented size occurred here."

The blast is believed to be over by now. There are no signs of jets currently shooting from the black hole.

More observations are needed in other wavelengths to better understand what occurred, according to the team.

The [findings](#) appeared in the *Astrophysical Journal*.

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The WHO had to come up the name in line with the 2015 guidelines between the global agency, the World Organisation for Animal Health and the Food and Agriculture Organization.

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