

Detected the largest cosmic explosion in history, creating a light source 2 trillion times that of the Sun

The explosion may have originated from the rare event where a giant gas cloud was swallowed up by a supermassive black hole.

International scientists have just recorded an unprecedented cosmic explosion, such that the emitted light overwhelmed a supernova event (the explosion that occurs when a massive star is nearing the end of its life). also take place over a much longer period of time (a few years versus a few months).

According to the initial assessment of astronomical researchers, the explosion may have originated from a rare event when a giant gas cloud was swallowed by a supermassive black hole, creating a light source twice as strong. trillion times the Sun and 10 times more than any known supernova.

Called AT2021lwx, the explosion is thought to have taken place at a location about 8 billion light-years from Earth, and has lasted for more than three years so far. Dr Wiseman, an astronomer at the University of Southampton, who was part of the research team said: "This fireball (blast) is 100 times the size of the solar system and 2 trillion times brighter than the Sun. Over three years, the energy released in the explosion is estimated to be 100 times more than the energy produced by the Sun over a billion-year lifetime."



AT2021lwx was discovered by accident when a search algorithm by scientists at the University of Southampton accidentally flagged it while searching for a type of supernova. Typically, most supernovas and tidal disruption

events last only a few months before disappearing. For a bright outburst over two years, that was an anomaly, and scientists were quick to spot it.

In fact, the explosion was first detected in 2020 by an observatory located in California, through a sudden increase in the brightness of the night sky. This could signal the discovery of a supernova or the movement of asteroids and comets at a close distance.

After a series of additional observations, the team came to the conclusion that this was an extremely rare, historic find. The cause of the explosion is still unclear, but astronomers think it is most likely the result of a giant cloud of hydrogen gas thousands of times larger than our sun being crushed by a supermassive black hole. heavy to swallow. This gas cloud initially orbited the black hole safely but, for some reason, veered off course and was sucked in.

To understand more about the explosion, the researchers plan to observe it at different wavelengths such as X-rays. There will be a lot more valuable astronomical knowledge to be discovered behind this event.

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