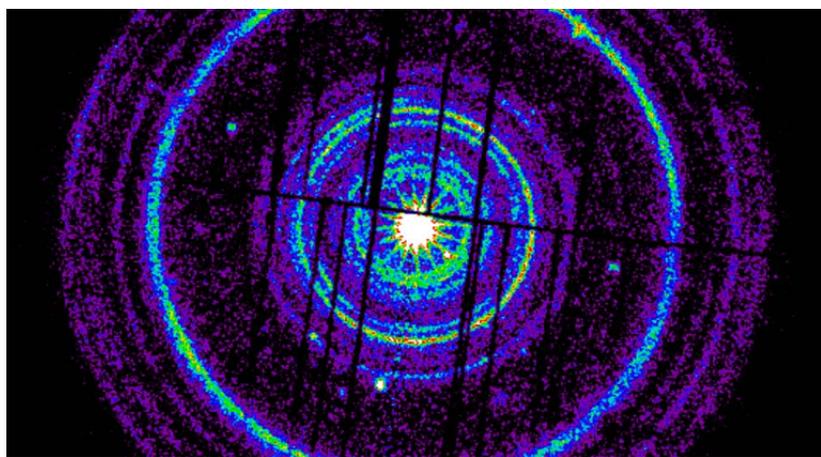


# Press Release 2021

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## THE BRIGHTEST GAMMA RAY BURST OF ALL TIMES



Several space telescopes orbiting Earth and probes operating in different areas of the Solar System revealed a strong pulse of very high-energy radiation, followed by a prolonged emission across the electromagnetic spectrum, 9 October 2022. The source was a gamma ray burst (GRB), one of the most powerful bursts in the universe, so exceptional that it immediately earned the nickname "BOAT" from the English "Brightest Of All Time."

Currently called GRB 221009A, the flash was first revealed by NASA's Fermi Gamma-Ray Space Telescope, which has a key contribution from Italy through the Italian Space Agency (ASI), the National Institute of Astrophysics (INAF) and the National Institute of Nuclear Physics (INFN), while the first to make the announcement was the Neil Gehrels Swift Observatory satellite, also from NASA, which also has a strong Italian participation through ASI and INAF. It was initially thought that its source might be in our galaxy, the Milky Way, but further data collected by Swift and Fermi and the European Space Agency's (ESA) INTEGRAL satellite indicated a much more distant origin. Thanks to observations made a few hours later with the X-Shooter instrument on ESO's Very Large Telescope in Chile, the source of the GRB could finally be identified: a galaxy about 2 billion light-years from us. These observations will be crucial to understanding the colossal explosions from which gamma-ray bursts originate.