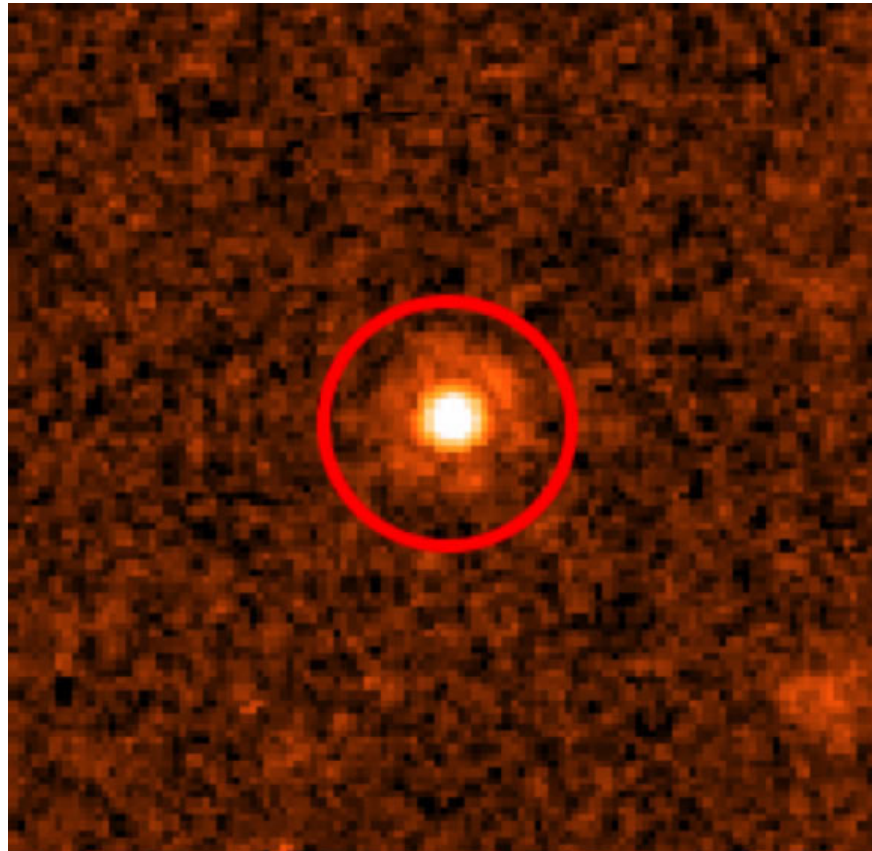


James Webb captured the most difficult to find object in the universe, 2,000 light years away

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The James Webb super telescope has captured GLASS-JWST-BD1 - a brown dwarf, a type of half-planet, half-star that is difficult to explain and the most difficult to find in the universe. This star appears in the Abell 2744 supercluster (Pandora Cluster) image series captured by the super telescope's Near Infrared Camera (NIRCam).

GLASS-JWST-BD1 is an extremely cold, faint brown dwarf with an estimated distance of about 2,000 light-years.



GLASS-JWST-BD1 has a mass of 0.03 times the mass of the Sun and is 5 billion years old. This star has a temperature of about 327 degrees Celsius, which is hot in the planetary world but is super cold compared to stars.

James Webb's capture of GLASS-JWST-BD1 at a distance of 2,000 light-years demonstrates the power of this super telescope in finding worlds far from Earth, even if they are very small and very dim.

The James Webb executive team from NASA, ESA (European Space Agency) and CSA (Canadian Space Agency) said that James Webb represents a major step forward in the detection of distant and cold brown dwarfs. The images and spectra extend to 5 micrometers.

A brown dwarf or "fail star", "superplanet" is a semi-planetary, half-stellar object about halfway between a gas giant and a star. This object is thought to have emerged "out of nowhere", formed from gas and dust in a star-like molecular cloud rather than from a specific protoplanetary disk. However, due to its small size, the object cannot sustain hydrogen fusion at its core and cannot be considered a star.

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