# Strange discovery: The famous star that has been observed a lot so far turns out to be a pair of twins

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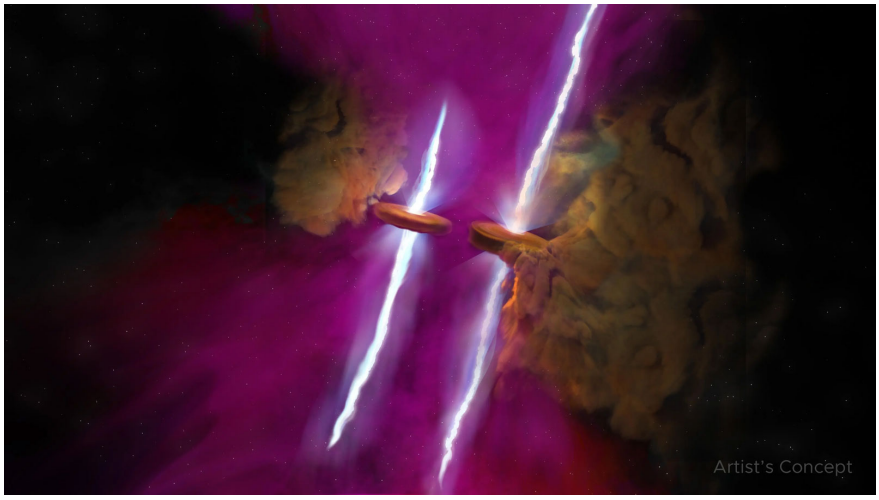
There are a number of regions and objects in outer space that are favorite targets for observations of astronomers - usually because they are nearby (and therefore easier to observe), and because they are good examples of an object such as a stellar nursery or black hole.

But sometimes, even famous objects that have been observed and studied for a long time also contain many surprises. Recently, observations from the world's most modern James Webb Space Telescope showed that a star called WL 20S, in the frequently observed WL20 region, turned out to be not a single star. , which are actually twin stars.

The WL20 star system has been known and studied by astronomers for a long time. But what's striking is that one of the stars in the system appears to be much younger than the rest. Through the combined use of James Webb's MIRI and ALMA systems, scientists unexpectedly discovered that these are in fact twin stars right next to each other. Each of these stars is surrounded by a disk of material, and each disk emits rays parallel to each other.




Specifically, the observations were made using Webb's MIRI system and a cluster of ground-based telescopes called ALMA (Atacama Large Millimeter/submillimeter Array). In it, James Webb is responsible for observing the jets of matter escaping from the star, while ALMA targets the disks of matter around them.

Previously, if scientists had not seen that these were two stars, the resulting observations might have looked like a single disk with a gap in the middle. However, the new data on the two stars are clearly at a critical point in their lives, when the energy for their formation is gradually running out.

The disks of material around each star have the potential to form planets, while the jet consists of streams of charged particles ejected from each star's poles. Since the rays are visible at the infrared wavelengths at which Webb operates, and the dishes are visible at ALMA's radio wavelengths, it took two instruments working together to make this discovery.