SPACE SCOOP
NACHRICHTEN AUS DEM WELTALL

Solving the Mystery of Massive Star Birth
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Like people, stars are born, they grow old and they die. Small and medium-sized stars, we know, are born in enormous clouds of cold gas and cosmic dust known as nebulae.

Occasionally, something will disturb the gas in these clouds. For example, the pull of a passing star's gravity or the violent explosion of a nearby dying star. The movement can trigger the collapse of the cloud, which begins to shrink under the pull of its own gravity.

As the cloud gets smaller, it gets clumpy. The clumps may eventually become so compact that they begin to heat up, growing hotter and hotter, until eventually they begin "burning" at their core. When the temperature at the core reaches a scorching 10 million degrees, the clump officially becomes a new star.

We know this is how small and medium-sized stars form, but what about the most massive stars? Scientists from Japan have been trying to find out.

With the help of some of the World's most powerful telescopes, these scientists were able to peer into a large gas cloud in our galaxy that we knew contains lots of massive stars. And, lo-and-behold, they spotted something interesting — a giant, baby star with a dusty disc around it's middle. A little like the icy rings surrounding Saturn.

When small and medium-sized stars are born any leftover gas forms a disc like this around the newborn star. It's actually from this disc of gas and dust that planets form. So, the dusty disc spotted by Japanese scientists suggests that the formation of massive stars is actually very similar to the way that smaller stars, like the Sun, are born.

COOL FACT!

Compared to the Earth, the Sun is gigantic. It would take no less than 109 Earths to stretch across the diameter of the Sun. But the Sun is just an average-sized star. The largest known star is called VY Canis Majoris, and if it replaced the Sun at the centre of our Solar System, all planets up to Saturn would be inside it!