

The Many Sizes of Stars

Some stars have less mass than the Sun, some have more.

Red dwarf star



The Sun



Blue dwarf star



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R136a1—one of the most massive known stars

Stars come in different sizes and different masses. A star's size is how big it is from one side to the other. A star's mass is the amount of matter it contains. There are stars smaller than the Sun with less mass, and there are stars that are larger with more mass. Our Sun is an average low-mass star. Cooler red dwarf stars, like the one on the left in this image, usually have about 1/10th the mass of the Sun, while much hotter blue stars, like the two on the right, can have 10 to 100 times the mass of the Sun. But stars can also change size as they age. While the blue supergiant R136a1 has more mass than almost any other star scientists have discovered, it is still smaller in size than very old and bloated red supergiants.