National Aeronautics and Space Administration

AG Carinae

AG Carinae, one of the brightest stars in our galaxy, is surrounded by a shell of gas and dust about five light-years wide. The star is a luminous blue variable, a rare type of massive star that burns extremely bright and dies young as a result. Though the star is a few million years old, it cast off its outer layers creating the colorful ring only 10,000 years ago. Such outbursts are typical of luminous blue variables, which are unstable and expel their matter to stabilize themselves when in danger of exploding as a supernova.

This alluring star is more than 70 times more massive than our Sun and burns 1 million times brighter. It produces stellar winds traveling at speeds up to 670,000 miles per hour that push slower moving gas far from the star in a “snowplow” effect, clearing a distinctive gap around the star. AG Carinae is 20,000 light-years from Earth. Hubble took this image in visible and ultraviolet light.

Hubble Space Telescope – Wide Field Camera 3
NASA, ESA, and STScI