



Little Door to the Fifteenth of December

The Coldest Stellar Object (Yet)

The coldest celestial object, as of now (December 15, 2025), is the **Boomerang Nebula** that was discovered by the Hubble Telescope. This nebula is about 5,000 light years away from Earth in the direction of the Southern constellation Centaurus. **And here comes the insane part:** measurements have shown that the temperature of this nebula is just one degree Kelvin above absolute zero (nearly -460 F° or -273.15 C°)!



Absolute zero is a theoretical temperature limit: if reached, it couldn't get lower than that.

The nebula derived its name from its symmetric structure as seen from telescopes stationed on the ground. But Hubble can resolve patterns and ripples in the nebula very close to the central star that can't be observed by ground-based telescopes (which is pretty amazing!). But there's one more thing before this little door concludes: through an ejection process known as a bipolar outflow, the central star of the Boomerang Nebula lost nearly 1.5 times the mass of our Sun over the last 1,500 years (-> NASA: <https://science.nasa.gov/mis-sions/hubble/boomerang-nebula/>).