

Hubble captures majestic barred spiral galaxy NGC 6956

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Credit: NASA, ESA, and D. Jones (University of California – Santa Cruz);
Processing: Gladys Kober (NASA/Catholic University of America)

Against an inky black backdrop, the blue swirls of spiral galaxy NGC 6956 stand out radiantly. NGC 6956 is a barred spiral galaxy, a common type of spiral galaxy with a bar-shaped structure of stars in its center. This galaxy exists 214 million light-years away in the constellation Delphinus.

Scientists used NASA's Hubble Space Telescope to image NGC 6956 to study its Cepheid [variable stars](#), which are stars that brighten and dim at regular periods. Since the period of Cepheid variable stars is a function of their brightness, scientists can measure how bright these stars appear from Earth and compare it to their actual brightness to calculate their distance. As a result, these stars are extremely useful in determining the distance of cosmic objects, which is one of the hardest pieces of information to measure for extragalactic objects.

This galaxy also contains a Type Ia supernova, which is the explosion of a white dwarf star that was gradually accreting matter from a [companion star](#). Like Cepheid variable stars, the brightness of these types of supernovae and how fast they dim over time enables scientists to calculate their distance. Scientists can use the measurements gleaned from Cepheid variable stars and Type Ia supernovae to refine our understanding of the rate of expansion of the universe, also known as the Hubble Constant.

Provided by NASA's Goddard Space Flight Center

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