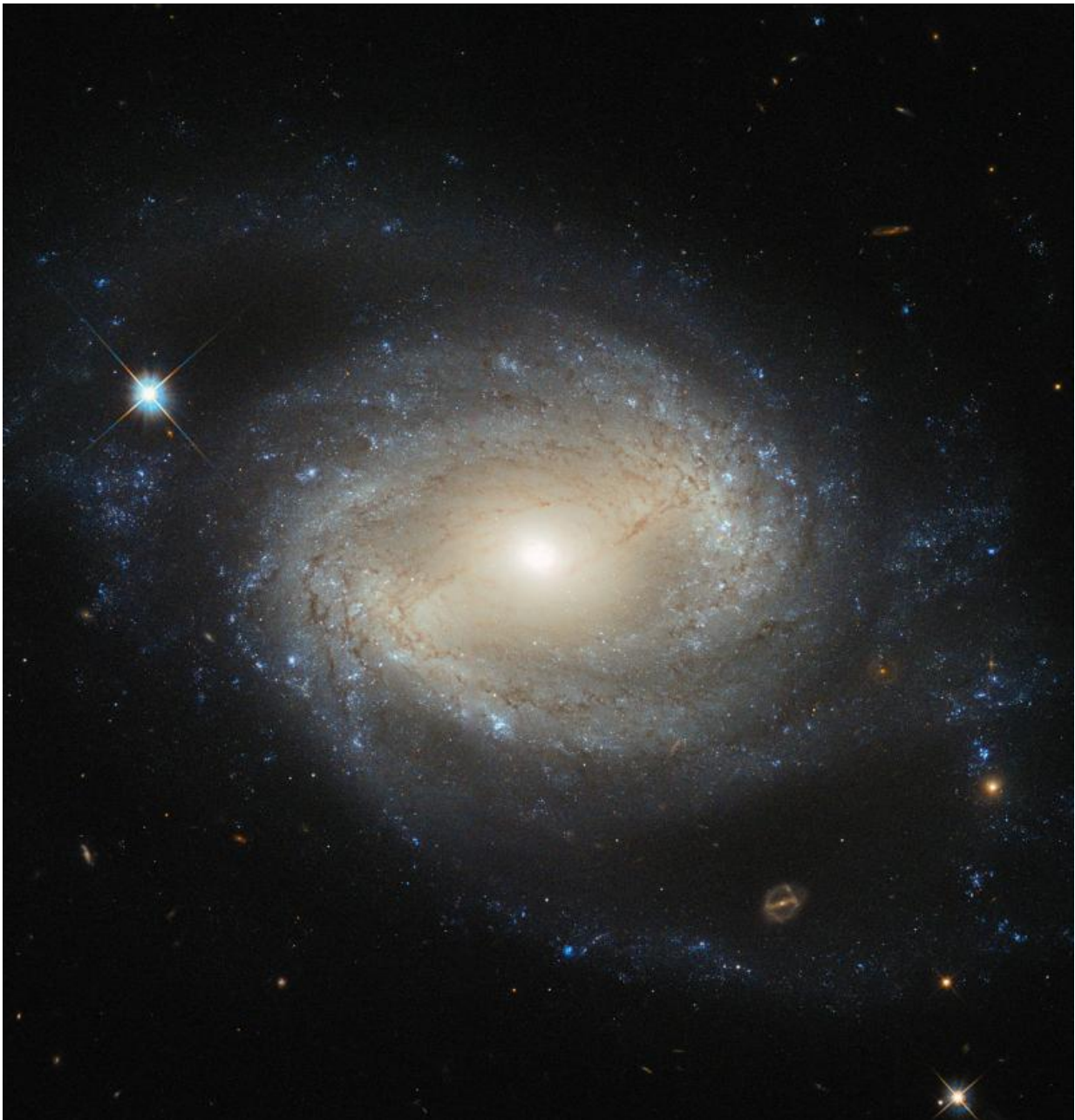


Image: Hubble sees elegant spiral hiding a hungry monster

October 19 2015



Credit: ESA/Hubble & NASA

NGC 4639 is a beautiful example of a type of galaxy known as a barred spiral. It lies over 70 million light-years away in the constellation of Virgo and is one of about 1,500 galaxies that make up the Virgo Cluster.

In this image, taken by the NASA/ESA Hubble Space Telescope, one can clearly see the bar running through the bright, round core of the galaxy. Bars are found in around two-thirds of spiral galaxies, and are thought to be a natural phase in their evolution.

The galaxy's spiral arms are sprinkled with bright regions of active star formation. Each of these tiny jewels is actually several hundred light-years across and contains hundreds or thousands of newly formed stars. But NGC 4639 also conceals a dark secret in its core—a [massive black hole](#) that is consuming the surrounding gas.

This is known as an [active galactic nucleus](#) (AGN), and is revealed by characteristic features in the spectrum of light from the galaxy and by X-rays produced close to the black hole as the hot gas plunges towards it.

Most galaxies are thought to contain a black hole at the center. NGC 4639 is in fact a very weak example of an AGN, demonstrating that AGNs exist over a large range of activity, from galaxies like NGC 4639 to distant quasars, where the [parent galaxy](#) is almost completely dominated by the emissions from the AGN.

Provided by NASA

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