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M101: a Hubble Mosaic

By Robert Naeye



The galaxy M101 is a "grand design" spiral (meaning it's dominated by prominent, well-organized arms) of type Sc. Of its estimated trillion stars, many thousands of its brightest supergiants are resolved by Hubble. Click for larger view; see text for link to the full-resolution image. *NASA and ESA.*

February 27, 2006 | Today NASA and the European Space Agency released what they claim is "the largest and most detailed photo of a spiral galaxy beyond the Milky Way." The image shows the glorious face-on spiral M101, located 25 million light-years from Earth in Ursa Major off the handle of the Big Dipper. The image is a mosaic of 51 Hubble Space Telescope frames and several ground-based shots. The Hubble images used to make this 16,000-by-12,000-pixel composite were assembled from archival data, which were taken for a variety of research projects dating from 1994 to 2003. The galaxy itself is roughly twice the size of our Milky Way and contains about 1 trillion stars.

The views above and below are cropped and relatively low-resolution. To view better versions of the whole image, visit the [press release Web site](#).

Impressive as this picture is, it is not the largest of a galaxy ever taken. Connecticut-based amateur astronomer Robert Gendler has made a 90-hour CCD mosaic of the Andromeda Galaxy (M31) that is 40,000 by 25,000 pixels. Gendler used a much smaller aperture beneath Earth's atmosphere, but M31 is ten times closer than M101.



A detail of the M101 image, including another, much more distant grand design spiral galaxy in the far background (at lower left edge). Click for larger view, and see text for link to full-resolution view. *NASA and ESA.*