Image: Hubble's close-up of spiral's disk, bulge

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Credit: ESA/Hubble & NASA, P. Erwin et al.

This image from the NASA/ESA Hubble Space Telescope shows IC 2051, a galaxy in the southern constellation of Mensa (the Table Mountain) lying about 85 million light-years away. It is a spiral galaxy, as evidenced by its characteristic whirling, pinwheeling arms, and it has a bar of stars slicing through its center.

This galaxy was observed for a Hubble study on galactic bulges, the bright round central regions of spiral galaxies. Spiral galaxies like IC 2051 are shaped a bit like flying saucers when seen from the side; they comprise a thin, flat disk, with a bulky bulge of stars in the center that extends above and below the disk. These bulges are thought to play a key role in how galaxies evolve, and to influence the growth of the supermassive black holes lurking at the centers of most spirals. While more observations are needed in this area, studies suggest that some, or even most, galactic bulges may be complex composite structures rather than simple ones, with a mix of spherical, disk-like, or boxy components, potentially leading to a wide array of bulge morphologies in the universe.

This image comprises data from Hubble's Wide Field Camera 3 at visible and infrared wavelengths.

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