

A 'Rose' made of galaxies

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Credit: NASA, ESA, and the Hubble Heritage Team (STScI/AURA)

(PhysOrg.com) -- In celebration of the twenty-first anniversary of the Hubble Space Telescope's deployment in April 2011, astronomers at the Space Telescope Science Institute pointed Hubble's eye to an especially photogenic group of interacting galaxies called Arp 273.

The larger of the spiral galaxies, known as UGC 1810, has a disk that is

tidally distorted into a rose-like shape by the gravitational tidal pull of the [companion galaxy](#) below it, known as UGC 1813. A swath of blue jewels across the top is the combined light from clusters of intensely bright and hot young blue stars. These massive stars glow fiercely in ultraviolet light.

The smaller, nearly edge-on companion shows distinct signs of intense star formation at its nucleus, perhaps triggered by the encounter with the companion galaxy.

A series of uncommon spiral patterns in the large galaxy is a tell-tale sign of interaction. The large, outer arm appears partially as a ring, a feature seen when [interacting galaxies](#) actually pass through one another. This suggests that the smaller companion actually dived deep, but off-center, through UGC 1810. The inner set of [spiral arms](#) is highly warped out of the plane with one of the arms going behind the bulge and coming back out the other side. How these two spiral patterns connect is still not precisely known.

The interaction was imaged on Dec. 17, 2010, with Hubble's [Wide Field Camera 3](#) (WFC3).

This Hubble image is a composite of data taken with three separate filters on WFC3 that allow a broad range of wavelengths covering the ultraviolet, blue and red portions of the spectrum.

Provided by JPL/NASA

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