



Interacting Galaxy Arp 143

Galaxies in a Twisted Tango

More than half of all galaxies in the universe are flattened, pinwheel-shaped spirals. However, in the interacting galaxy pair Arp 143, one galaxy has a curious triangular shape. This triangular galaxy (right), called NGC 2445, is rich in gas that fuels star formation, revealed by the galaxy's abundance of young, blue stars and pinkish star-cocooning nebulae.

Its companion galaxy (left), NGC 2444, no longer has fuel to feed new generations of stars. It only has an aging population of yellowish-white stars, like our sun, and oddball-shaped spiral arms that look like they were twisted.

Hubble's snapshot makes it pretty clear that this galactic odd couple is engaged in a gravitational tug-of-war. NGC 2444 yanks taffy-like strands of gas from its triangular-shaped companion, and streamers of young, blue stars form a bridge stretching part way between the two galaxies.

This Hubble image presents an intriguing example of a galaxy that's experienced two encounters in succession – one that created a ring of star formation and another that distorted the ring into a triangle. NGC 2445 was once a ring-shaped galaxy, formed when a smaller galaxy makes a fleeting bull's-eye passage through the center of a larger galaxy. The space between stars in a galaxy is so vast that when galaxies collide, the stars don't actually crash into each other.

The smaller galaxy's plunging passage created a ripple of dense gas that ignited a firestorm of star birth around the targeted galaxy. This could have happened about 100 million years ago, and the interloper is long gone and out of sight in this photo. NGC 2444 came along much later and pulled the blue star ring into its triangular shape.

Image Credits: NASA, ESA, STScI, Julianne Dalcanton (Center for Computational Astrophysics, Flatiron Inst./UWashington)

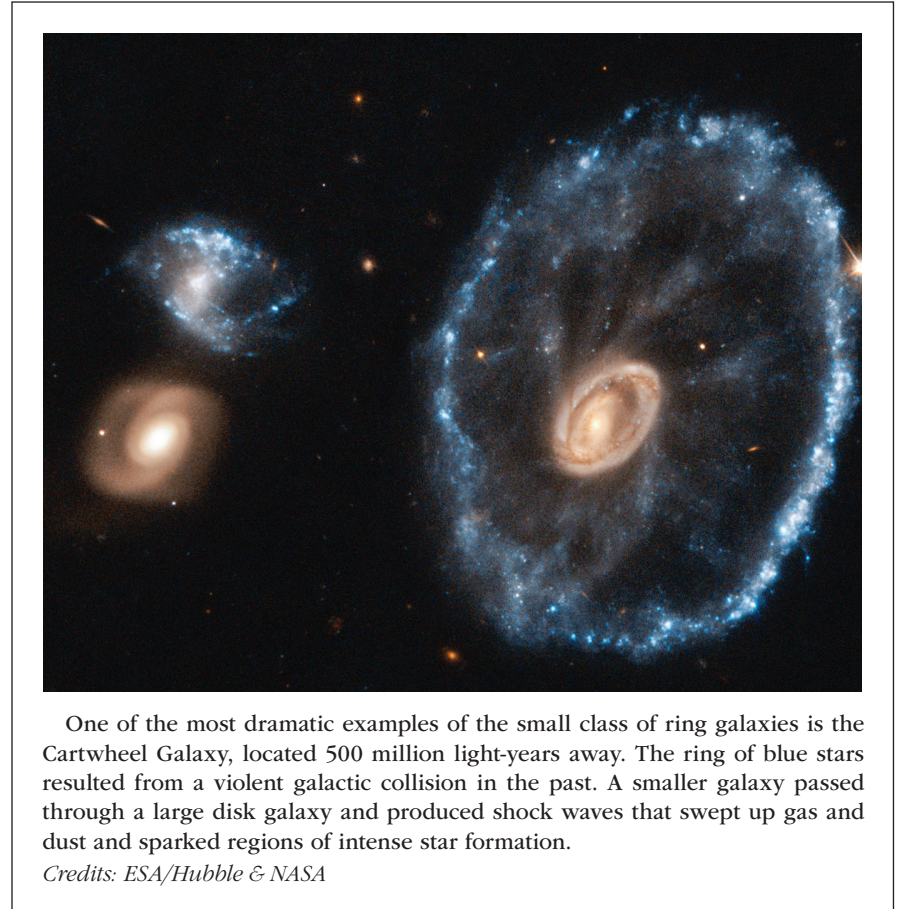
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One of the most dramatic examples of the small class of ring galaxies is the Cartwheel Galaxy, located 500 million light-years away. The ring of blue stars resulted from a violent galactic collision in the past. A smaller galaxy passed through a large disk galaxy and produced shock waves that swept up gas and dust and sparked regions of intense star formation.

Credits: ESA/Hubble & NASA

VOCABULARY

Galaxy: A collection of millions to billions of stars, gas, dust, and dark matter held together by their mutual gravity.

Galaxy Interaction: Galaxy interactions occur when gravity causes nearby galaxies to pull on each other, distorting their shapes.

For images and information on the Hubble mission, go to www.nasa.gov/hubble and hubblesite.org. Follow the Hubble mission on social media: @NASAHubble.



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