

Hubble captures a suspected galaxy encounter

February 1 2024, by Claire Andreoli



This new NASA Hubble Space Telescope image is of the spiral galaxy UGC 3912. Credit: NASA, ESA, and C. Kilpatrick (Northwestern University); Processing: Gladys Kober (NASA/Catholic University of America)

UGC 3912 is classified as a spiral galaxy, but you wouldn't know it from this detailed NASA Hubble Space Telescope image. UGC 3912's

distorted shape is typically indicative of a gravitational encounter with another galaxy. When galaxies interact—either brush up against each other's gravitational fields or even collide—their stars, dust, and gas can be pulled into new paths. UGC 3912 might have once been an organized-looking spiral, but it looks like it's been smudged out of shape by a giant thumb.

Fortunately, when galaxies interact, the individual stars and objects that orbit them remain whole even though their orbits can change so dramatically that the entire galaxy's shape is altered. That's because the distances between stars in galaxies are so vast that they don't crash into one another, just continue serenely along their new orbits.

Astronomers are studying UGC 3912 as part of an investigation into supernovae activity—when stars at least eight times larger than our sun explode at the end of their lives. Hubble is examining one of the several types of supernovae, a hydrogen-rich phenomenon known as Type II. Though ample Type II [supernovae](#) have been observed, they exhibit enormous diversity in their brightness and spectroscopy and are not well understood.

Provided by NASA

Citation: Hubble captures a suspected galaxy encounter (2024, February 1) retrieved 29 April 2024 from <https://phys.org/news/2024-02-hubble-captures-galaxy-encounter.html>

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