

The moment two galaxies collide in a super rare image taken by the Gemini North telescope

It's hard to imagine, but out in the deep space of the other universe, there are countless galaxies that coexist and interact with each other.

In this most 'violent' type of interaction, two or more galaxies can collide directly with each other, leading to a terrifying but equally majestic and creative destruction. When galaxies 'rub' and merge, they can co-create regions of star formation with extreme intensity. In addition, the gravitational interactions between galaxies and the friction between the gas and dust also have a great influence on the galaxies involved.

Galactic mergers can happen over millions of years, meaning astronomers have the perfect opportunity to observe and study the phenomenon while it's happening.

Such a moment was captured by NOIRLab's Gemini North telescope in Hawaii, providing a beautiful and precious image. The image shows two galaxies NGC 4568 and NGC 4567 in a dramatic process of collision and merger. The two are now just 20,000 light-years apart, and they're poised to enter a destructive yet captivating phase of fusion.



The two galaxies are located about 60 million light-years away towards the constellation Virgo, and both are spiral galaxies similar to our own Milky Way. However, as they get closer together, the massive gravitational flows involved in the merger will begin to distort the two, triggering bursts of star formation in certain regions. .

'When NGC 4568 and NGC 4567 merge, their gravity will begin to 'duel' and trigger powerful star-forming explosions, violently distorting the massive structure of both. For millions of years, the galaxies will continuously cycle through each other in an increasingly tight direction, creating long bands of stars and gas until their individual structures are completely mixed to the point of becoming into a single, essentially spherical galaxy. By that time, most of the gas and dust (the fuel for star formation) in this system has either been used up or blown away'.

The same scenario will happen with our Milky Way when it collides with neighboring galaxy Andromeda over a period of about 4 billion years.

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