

The magnetic fields swirling within the Whirlpool galaxy

January 19 2021, by Andy Tomaswick



Credit: NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA)

Messier objects are some of the most imaged objects in the universe. In part that's because many of them are so visibly appealing. A good example of that is the Whirlpool galaxy, M51, which recently received an even more dramatic visual representation with a new photo released by NASA. In it, the magnetic fields that are holding the galaxy together and tearing it apart at the same time are clearly visible. And it is even more stunning to look at.

The photos were a composite from NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) mission, and were presented to the American Astronomical Society at its [237th meeting](#) last week. Astronomers have long known about the magnetic fields in some parts of the galaxy, but SOFIA's High-Resolution Airborne Wideband Camera (HAWC+) filled in the chaotic scene around the galaxy's outer reaches.

Part of that chaos is likely induced by another galaxy, NGC 5195, which is starting to interact with the Whirlpool galaxy, and is visible in the upper part of the image. It is likely strengthening the magnetic fields in the space between the two galaxies. The effects of those fields will eventually be felt throughout the entire galaxy, but it will take millions of years for that to happen. In the meantime we can appreciate another bit of astronomical wizardry and watch the chaos evolve from afar.



Magnetic fields are not the only stunning way to observe the Whirlpool Galaxy – here it is captured in X-Ray. Credit: Chandra Observatory

Provided by Universe Today

Citation: The magnetic fields swirling within the Whirlpool galaxy (2021, January 19) retrieved 26 April 2024 from

<https://phys.org/news/2021-01-magnetic-fields-swirling-whirlpool-galaxy.html>

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