



Chandra Science Highlight

Chandra Sees Evidence for Possible Planet in Another Galaxy



Caption: Chandra detected the temporary dimming of X-rays from a system where a massive star is orbited by a neutron star or black hole (shown in the artist's illustration). This dimming may be caused by a planet passing in front of X-ray-emitting material around the neutron star or black hole. A composite image of M51 with X-rays from Chandra (purple and blue) and optical light from NASA's Hubble Space Telescope (red, green, and blue) contains a box that marks the location of the possible planet candidate.

<https://chandra.si.edu/photo/2021/m51/>

- Astronomers have announced evidence for a possible planet outside of the Milky Way galaxy. This exoplanet would be much farther away than any of the thousands of exoplanets that other scientists have found in our Galaxy.
- This planet candidate was identified with NASA's Chandra X-ray Observatory, which detected a temporary dimming in X-rays from a binary system.
- Researchers interpret this dimming as a planet passing in front of X-ray-emitting material around a neutron star or black hole orbiting a companion star.
- The team estimates that it will take about 70 years before another such event occurs, but the same technique is being used to search for other planet candidates.

Distance estimates: About 28 million light-years.

Credits: X-ray: NASA/CXC/SAO/R. DiStefano, et al.; Optical: NASA/ESA/STScI/Gendler; Illustration: NASA/CXC/M.Weiss.

Instrument: ACIS

Reference: Di Stefano, R., et al., 2021, *Nature Astronomy*; [preprint of accepted paper](#)

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