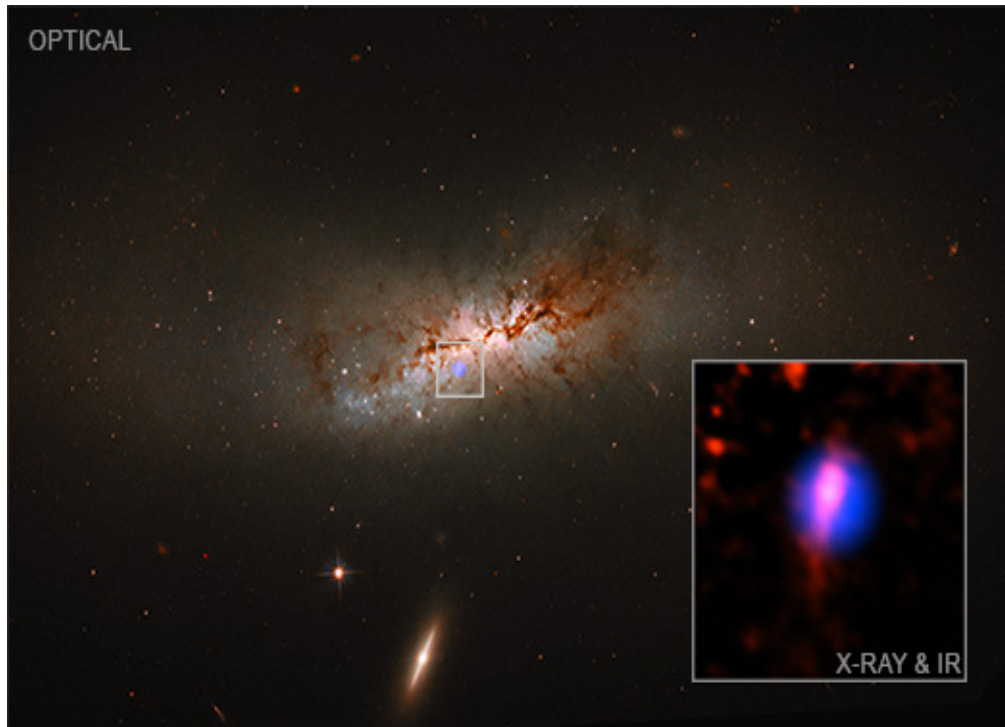




Chandra Science Highlight

NASA Telescopes Capture Stellar Delivery Service for Black Hole



Caption: Astronomers may have witnessed a smaller galaxy containing a supermassive black hole colliding with a larger spiral galaxy. The main panel shows a wide-field view of the larger galaxy, called NGC 4424, in optical light from Hubble. The inset features a close-up view of a star cluster, nicknamed Nikhuli, thought to remain behind after the small galaxy has had most of its stars stripped away. Optical data (red) that has been specially processed to highlight faint features shows Nikhuli, and Chandra X-ray data (blue) gives the location of its supermassive black hole.

- NGC 4424 is a spiral galaxy in the Virgo galaxy cluster that is absorbing the collision of a smaller galaxy.
- Data from NASA's Chandra X-ray Observatory provides evidence for a supermassive black hole in the smaller galaxy.
- The smaller galaxy has therefore likely acted as a massive black hole "delivery service" for NGC 4424.
- This supermassive black hole and one expected to be found in the center of NGC 4424 are likely to eventually collide and merge with each other.

Distance estimate: Main image is 45,100 light-years across. Inset image is about 1,160 light-years across.

Credits: X-ray: NASA/CXC/Swinburne Univ. of Technology/A. Graham et al.; Optical: NASA/ESA/STScI

Instrument: ACIS

Reference: Graham, A. et al., 2021, ApJ, 923, 146;
[arXiv:2112.05318](https://arxiv.org/abs/2112.05318)

(The photo album is at:
<https://chandra.si.edu/photo/2022/ngc4424/>)

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Astrophysical Observatory



August 2022