National Aeronautics and Space Administration

CHANDRA SCIENCE HIGHLIGHT: September 2026

NASA's Chandra Unveils Mysterious X-ray Objects

- Astronomers discovered a new class of objects in six galaxies using NASA's Chandra X-ray Observatory.
- They dubbed these "hypersoft X-ray sources" (HSS) because they give off very low-energy X-rays but are not seen in higher energy X-rays.
- Despite their stealth X-ray output, HSS may be emitting large amounts of ultraviolet radiation, revealing indirect information about a part of the spectrum that is difficult to explore.
- They lively involve accretion onto compact objects. The discovery may help scientists unravel mysteries around Type Ia supernovas and the interstellar medium.

Distance estimate: 21 million light-years from Earth
Credit:X-ray: NASA/CXC/Univ. of Alabama/M. Muhibullah et al.; Optical: NASA/ESA/STScI; Image Processing: NASA/CXC/SAO/N. Wolk
Instrument: ACIS
Reference: Muhibullah, M., Irwin, J.A., and Di Stefano, R., 2026, Nature Astronomy (available here)

More information: The detailed caption and other material are here: https://chandra.si.edu/photo/2026/m101/



The face-on spiral galaxy M101, also known as the Pinwheel, is one of six galaxies where a new type of object producing very soft X-rays was found. This new M101 composite image contains X-ray data from Chandra (purple) that have been combined with an optical image from the Hubble Space Telescope (red, green, and blue). The orange circles show the location of the seven newly-discovered objects in M101.