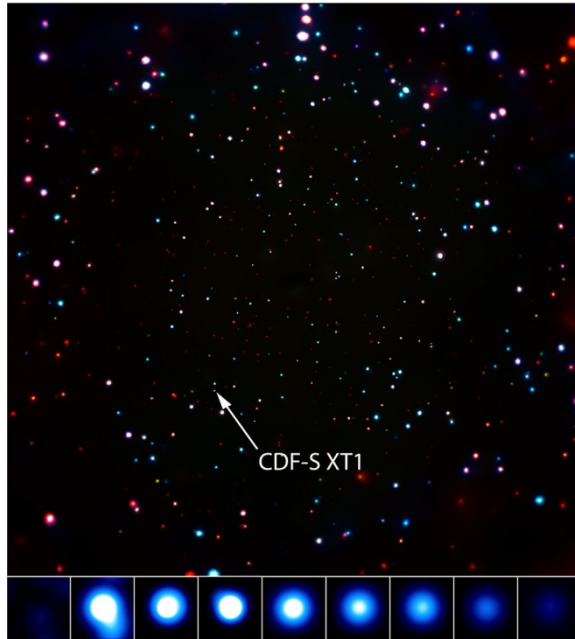




Chandra Science Highlight

CDF-S XT1: A New Fast High-Energy Transient Source Found in Chandra Deep Field South



A flash of X-rays has been detected from a galaxy in the Chandra Deep Field South. The larger image shows the position of the source, CDF-S XT1. In this image, red, green, and blue refer to low (0.5-2 keV), medium (2-4 keV) and high-energy (4-7 keV) X-rays. The boxes at the bottom of the image show the variability of the source.

- The source, which was not detected previously, erupted in October 2014 and flared up by a factor of 1,000 in a few hours, during which time its power equaled that of 10 trillion Suns.
- After about a day the source faded to an undetectable level.
- Data from the Hubble Space Telescope and the Spitzer Space telescope indicate that the source is likely associated with a distant dwarf galaxy.
- The properties of the source are unlike any known gamma-ray burst, X-ray burst, or tidal disruption event.
- A search of the Chandra source catalog found no sources similar to CDF-S XT1.

Scale: Main image is 16 arcmin across; Inset images are 3.7 arcsec across.

Distance: About 10.7 billion light years (redshift $z = 2.23$)

Credit: X-ray: NASA/CXC/Universidad Católica de Chile/F.Bauer et al.

Instrument: ACIS

Reference: F. Bauer et al, 2017, Mon. Not. Roy. Astr. Soc. (in press) arXiv:170104422

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