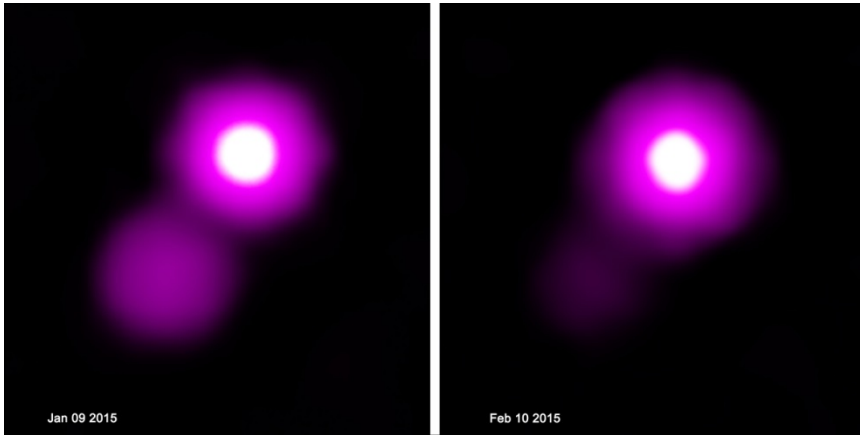




Chandra Science Highlight

GRB150101B: A kilonova and off-axis jet from a compact star merger



Chandra images of the gamma-ray burst source GRB 150101B (lower left) illustrate the offset of GRB 150101B from the center of its host galaxy (upper right), and the fading of the GRB with time.

Distance estimate: 1.7 billion light years (redshift $z = 0.1341$)

Scale: Images are 12 arcsec (90,000 light years) across.

- GRB 150101B was a faint short duration gamma-ray burst (GRB) characterized by a bright optical counterpart and a long-lived X-ray afterglow.
- These properties, unusual for a typical short GRB, are similar to the gravitational wave source GRB170817A produced by the merger of two neutron stars.
- The observations of GRB 150101B are consistent with an explosion viewed off-axis, with the observed X-rays tracing the GRB afterglow from a jet with an opening angle of 3-5 degrees viewed at an angle of ~ 13 degrees.

Credits: X-ray: NASA/CXC/GSFC/UMC/E. Troja et al.;
Optical and infrared: NASA/STScI

Instrument: ACIS

Reference: Troja, E. et al [2018arXiv180610624T](https://arxiv.org/abs/2018arXiv180610624T)

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