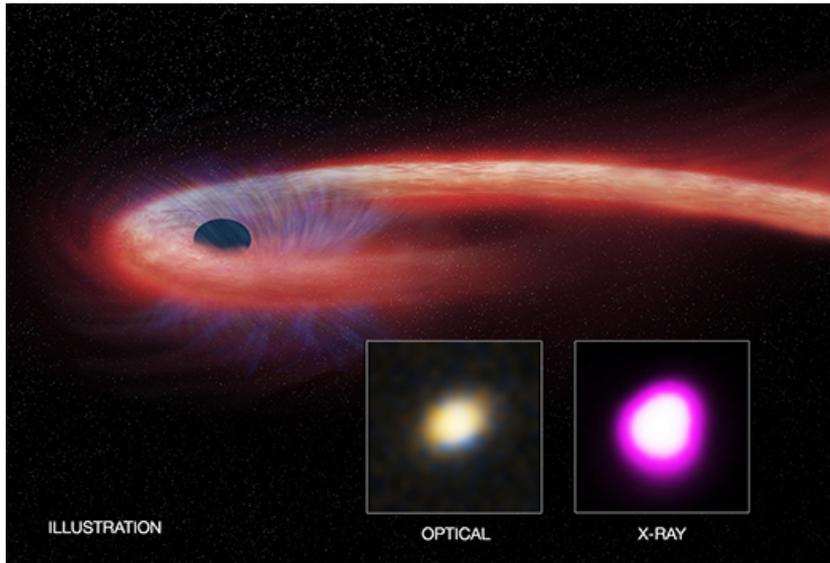




Chandra Science Highlight

A Likely Decade Long Black Hole Tidal Disruption Event



- An X-ray source was detected serendipitously in observations by Chandra and XMM-Newton of a foreground galaxy group from 2005 to 2011.
- In 2005, the source flared up by a factor of 100 over a period of a few months and has decayed by only a factor ~ 2 over the next decade.
- An observation with Chandra in 2015 provided a well constrained X-ray position coincident with the center of a dwarf galaxy.
- The proposed explanation for this event is the tidal disruption of a star by a supermassive black hole in the center of the dwarf galaxy. If so, the decade-long flare has persisted much longer than the typical duration of ~ 1 year tidal disruption events.

Scale: Inset images are 11 arcsec across (about 92,000 light years)
Distance: About 1.8 billion light years

Credit: X-ray: NASA/CXC/UNH/D.Lin et al, Optical: CFHT,
Illustration: NASA/CXC/M.Weiss
Instrument: ACIS
Reference: Lin, D. et al, 2017, Nature Astronomy (accepted);
arXiv:1702.00792

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