



**Chandra X-ray
Observatory Center**

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CID 1711 and CID 3083: Two pairs of galaxies in a large survey that covers a large patch -- two square degrees -- on the sky
(Credit: X-ray: NASA/CXC/IPMU/J.Silverman et al; Optical: NASA/STScI/Caltech/N.Scoville et al.)

Caption: Researchers have looked at thousands of galaxies in a large survey to test a prediction that close encounters between galaxies can trigger the rapid growth of supermassive black holes. They found that galaxies in early stages of an encounter were more likely to have actively growing black holes in their cores than isolated, or “lonelier” galaxies. The galaxies range in distances from about 3 billion to 8 billion light years from Earth, and two of the pairs are shown here in X-rays from Chandra (purple) and optical light from Hubble (gold). Chandra’s unique ability to pinpoint actively growing black holes through the X-rays they generate was critical in determining this result.

Scale: Images are 15 arcsec across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
