CID-42: A source in the Cosmic Evolution Survey field thought to be at a distance of almost 4 billion light years.

(Credit: NASA/CXC/SAO/F.Civano et al.)

**Caption:** Evidence for a recoiling black hole has been found using data from Chandra (colored blue in this composite image), Hubble (gold), XMM-Newton, and several ground-based telescopes. This black hole kickback was caused either by a slingshot effect produced in a triple black hole system, or from the effects of gravitational waves produced after two supermassive black holes merged a few million years earlier. Of the 2,600 X-ray sources found in this survey, only CID-42 coincides with two very close, compact optical sources. In this image, the two sources are seen in the HST data, but they are too close for Chandra to resolve separately.

**Scale:** Image is 0.5 arcmin across (about 570,000 light years).

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