



X-RAY & INFRARED

BLACK HOLE ILLUSTRATION



**Chandra X-ray  
Observatory Center**

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**COSMOS Legacy Survey:** Two separate surveys of "intermediate-mass black holes" that stretch from the nearby Universe to 10.9 billion light years away.  
(Credit: X-ray: NASA/CXC/ICE/M.Mezcua et al.; Infrared: NASA/JPL-Caltech; Illustration: NASA/CXC /A.Hobart)

**Caption:** This image shows data from a massive observing campaign that includes Chandra and has provided strong evidence for the existence of intermediate-mass black holes (IMBHs). Combined with a separate study also using Chandra data, these results may allow astronomers to better understand how the very largest black holes in the early Universe formed. Data from the COSMOS-Legacy Survey used in one of the studies are shown here with an artist's illustration of a growing black hole in the inset.

**Scale:** The image is about 1.5 degrees on a side.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*