



**Chandra X-ray
Observatory Center**

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Mrk 462: A dwarf galaxy located about 110 million light years from Earth.
(Credit: X-ray: NASA/CXC/Dartmouth Coll./J. Parker & R. Hickox; Optical/IR: PanSTARRS)

Caption: Chandra has detected X-rays from the dwarf galaxy Mrk 462 (inset), which reveals the presence of a growing supermassive black hole. This black hole contains about 200,000 times the mass of the Sun and provides information to astronomers about how some of the earliest black holes in the Universe may have formed and grown billions of years ago. The background panel is an optical image from the Pan-STARRS telescope in Hawaii, with several galaxies from the HCG068 galaxy group on the left-hand side and the much smaller Mrk 462 to the lower right. Astronomers will continue to try to determine the percentage of dwarf galaxies that have supermassive black holes.

Scale: X-ray image (inset) is about 15 arcsec (7,900 light years) across. Optical image is about 32 arcmin (1 million light years) across.

Chandra X-ray Observatory ACIS /HRC Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
