



**Chandra X-ray
Observatory Center**

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3C186: A galaxy cluster with a central quasar located about 8 billion light years away.
(Credit: X-ray: NASA/CXC/SAO/A.Siemiginowska et al, Optical: AURA/Gemini Obs.)

Caption: This composite image contains a new, deep image from Chandra (blue) showing emission from gas surrounding the point-like quasar near the center of the galaxy cluster known as 3C 186. Optical data from the Gemini telescope (yellow) show the stars and galaxies in the field of view. Chandra X-ray spectra reveal that the temperature of the gas drops from 80 million degrees on the outskirts of the cluster down to 30 million in the core. This drop in temperature occurs because intense X-ray emission from the gas cools it. 3C 186 is the most distant such object observed, and could provide insight into the triggering of quasars and the growth of galaxy clusters.

Scale: Image is 4.6 by 3.4 arcmin (10.7 by 7.9 million light years).

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
