



**Chandra X-ray
Observatory Center**

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SpARCS104922.6+564032.5: A galaxy cluster located 9.9 billion light years away from Earth.
(Credit: X-ray: NASA/CXO/Univ. of Montreal/J. Hlavacek-Larrondo et al; Optical: NASA/STScI)

Caption: This composite image of X-rays from Chandra (light blue) and optical data from Hubble (blue, green, red) shows a galaxy cluster with a black hole that has stopped being active. The consequences of this dormant black hole is that star formation has been allowed to run rampant — at a rate some 300 times that seen in the Milky Way galaxy. The Chandra data reveal that without a central supermassive black hole in the largest galaxy in the cluster, huge amounts of gas are able to cool enough to trigger a torrent of stellar birth.

Scale: Image is about 50 arcsec (1.4 million light years) across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
