



**Chandra X-ray
Observatory Center**

Harvard-Smithsonian Center for Astrophysics
60 Garden St. Cambridge, MA 02138 USA
<http://chandra.harvard.edu>

SDSS J1030+0542: A galaxy located about 9.9 billion light years from Earth
(Credit: NASA/CXC/INAF/R. Gilli et al.; Radio NRAO/VLA; Optical: NASA/STScI)

Caption: This image contains a black hole that is triggering star formation across the longest distance ever seen. As hot gas swirls around the black hole, it emits large amounts of X-rays that Chandra detects (red). The black hole is also the source of radio-wave emission from a jet of high-energy particles – previously detected by scientists with the VLA (blue) – that stretches about a million light years. Astronomers found that this black hole and jet are responsible for increasing the rates of star formation in newly-discovered nearby galaxies.

Scale: Image is 2 arcmin (about 3.4 million light years) across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
