



**Chandra X-ray  
Observatory Center**

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

**Arp 147:** A galaxy about 430 million light years from Earth.  
(Credit: X-ray: NASA/CXC/MIT/S.Rappaport et al, Optical: NASA/STScI)

**Caption:** This composite image of Arp 147 shows the pair of interacting galaxies in X-ray light from Chandra (pink) and optical data from Hubble (red, green, blue). Arp 147 contains the remnant of a spiral galaxy (right) that collided with the elliptical galaxy on the left that triggered an expanding wave of star formation. Young massive stars race through their evolution in a few million years or less and explode as supernovas, leaving behind neutron stars and black holes. Some of these black holes are seen as X-ray sources around the ring of the spiral.

**Scale:** Image is 54 arcsec across.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*