



**Chandra X-ray
Observatory Center**

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

Six Galaxy Clusters: Six galaxy clusters that are part of a study of 72 colliding clusters
(Credit: X-ray: NASA/CXC/Ecole Polytechnique Federale de Lausanne, Switzerland/D. Harvey &
NASA/CXC/Durham Univ/R. Massey; Optical & Lensing Map: NASA, ESA, D. Harvey (Ecole
Polytechnique Federale de Lausanne, Switzerland) and R. Massey (Durham University, UK))

Caption: These galaxy clusters are part of a large study using Chandra and Hubble that sets new limits on how dark matter – the mysterious substance that makes up most of the matter in the Universe – interacts with itself. The hot gas that envelopes the clusters glows brightly in X-rays detected by Chandra (pink). When combined with Hubble's visible light data, astronomers can map where the stars and hot gas are after the collision, as well as the inferred distribution of dark matter (blue) through the effect of gravitational lensing.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory
