



**Chandra X-ray  
Observatory Center**

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**MACSJ0717.5+3745:** One of the most complex galaxy clusters known, located about 5.4 billion light years from Earth.

(Credit: X-ray (NASA/CXC/IfA/C. Ma et al.); Optical (NASA/STScI/IfA/C. Ma et al.))

**Caption:** This composite image shows the massive galaxy cluster MACSJ0717.5+3745 (MACSJ0717, for short) where four separate galaxy clusters have been involved in a collision -- the first time such a phenomenon has been documented. In this composite image, data from NASA's Chandra X-ray Observatory reveal the cluster's hot gas, while an optical image from the Hubble Space Telescope shows the individual galaxies in the system. The hot gas in this image is color-coded to show temperature, where the coolest gas is reddish purple, the hottest gas is blue, and the temperatures in between are purple.

**Scale:** Image is 4.5 arcmin across.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*