



**Chandra X-ray  
Observatory Center**

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**Abell 2142:** A galaxy cluster about 1.2 billion light years from Earth.  
(Credit: X-ray: NASA/CXC/Univ. of Geneva, D. Eckert. Optical: SDSS provided by CDS through Aladin.)

**Caption:** Astronomers have used Chandra data to capture a dramatic image of an enormous tail of hot gas. This tail stretches for more than a million light years behind a group of galaxies that is falling into the depths of an even-larger cluster of galaxies. The left panel shows a wide-field view of the entire system while the right is a close-up view of the infalling galaxy group. In this composite, Chandra data (purple) have been combined with optical data (red, green, and blue). Discoveries like this help astronomers learn about the environment and conditions under which the Universe's biggest structures evolve.

**Scale:** The image is about 33.5 arcmin across (about 11,550,000 light years); Inset: about 5.8 arcmin across (about 2,000,000 light years).

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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