



**Chandra X-ray  
Observatory Center**

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**Perseus Cluster:** The central region of a galaxy cluster about 250 million light years from Earth.  
(Credit: NASA/CXC/GSFC/S.A.Walker, et al.)

**Caption:** The central region of a galaxy cluster about 250 million light years from Earth. Using NASA's Chandra X-ray Observatory, scientists have found a vast wave of hot gas in the Perseus galaxy cluster. Spanning some 200,000 light years, the wave is about twice the size of the Milky Way galaxy. Researchers think the wave formed billions of years ago after a small galaxy cluster grazed Perseus and caused its vast supply of gas to slosh around in an enormous volume of space. Researchers combined a total of 10.4 days of high-resolution Chandra data with 5.8 days of wide-field observations. This X-ray image of the hot gas in the Perseus galaxy cluster was made from those observations. Researchers then filtered the data in a way that brightened the contrast of edges in order to make subtle details more obvious.

**Scale:** Image is about 18.6 arcmin on a side

*Chandra X-ray Observatory ACIS Image*

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*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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