



**Chandra X-ray  
Observatory Center**

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

---

**Data Sonification:** A New Cosmic Triad of Sound  
Credit: NASA/CXC/SAO/K.Arcand, SYSTEM Sounds (M. Russo, A. Santaguida)

**Caption:** Data sonification translates information collected by various NASA missions — including Chandra, Hubble, and Spitzer — into sounds. These new "sonified" images are the Bullet Cluster (where two galaxy clusters are colliding), the Crab Nebula (a spinning neutron star and nebula) and Supernova 1987A (one of the youngest known exploded stars). In each case, the astronomical data have been assigned to different frequencies of sound or various families of instruments.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

---