



**Chandra X-ray  
Observatory Center**

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

**Space-time Foam:** Extremely tiny bubbles and irregularities in space-time predicted by certain theories.  
(Credit: NASA/CXC/FIT/E.Perlman et al, Illustration: NASA/CXC/M.Weiss)

**Caption:** Observations of distant quasars in X-rays from Chandra (top six images) and gamma-ray telescopes are helping scientists test the nature of space-time at extremely small scales. This artist's illustration (bottom) depicts how the foamy structure of space-time may appear, showing tiny bubbles quadrillions of times smaller than the nucleus of an atom that are constantly fluctuating and last for only infinitesimal fractions of a second.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*