



**Chandra X-ray
Observatory Center**

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

Comet C/1999 S4 (LINEAR): A comet discovered in September 1999 by the Lincoln Near Earth Asteroid Research (LINEAR) project. (Credit: NASA/SAO/CXC/STScI/Lisse et al.)

Caption: On July 14, 2000 Chandra observed the comet LINEAR for a total of 2½ hours. The X-ray emission proved to be due to collisions of electrically neutral elements in the atmosphere of the comet with nitrogen and oxygen ions in the solar wind. Observed variations in the amount of X-rays produced by the comet were probably due to an increase in the intensity of the solar wind from recent solar flares. The colors represent the intensity of the X-rays with white being the most intense, then yellow, orange, and red.

Scale: Image is 10 x 10 arcminutes

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory