



**Chandra X-Ray
Observatory Center**

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

XTE J1118+480: A black hole orbited by a companion star about 5000 light years from Earth.
Credit: NASA/CfA/J.McClintock et al.

This Chandra X-ray Observatory image is a spectrum of a black hole, which is similar to the colorful spectrum of sunlight produced by a prism. These data reveal that a flaring black hole source has an accretion disk that stops much farther out than some theories predict. Scientists theorize that the accretion disk is truncated there as the material erupts into a hot bubble of gas before taking its final plunge into the black hole. This provides a better understanding of how energy is released when matter spirals into a black hole.

Chandra X-ray Observatory LETG/ACIS image