



**Chandra X-ray  
Observatory Center**

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**M101:** A face-on spiral galaxy about 22 million light years from Earth.  
(Credit: X-ray: NASA/CXC/JHU/K.Kuntz et al.; Optical: NASA/ESA/STScI/JHU/K. Kuntz et al; IR: NASA/JPL-Caltech/STScI/K. Gordon)

**Caption:** This image of M101 is a composite of data from NASA's Chandra X-ray Observatory, Spitzer Space Telescope, and Hubble Space Telescope. Sources of X-rays detected by Chandra (colored blue) include million-degree gas, the debris from exploded stars, and material zooming around black holes and neutron stars. Spitzer's view in infrared light (red) highlights the heat emitted by dust lanes in the galaxy where stars can form. Finally, most of the visible light data from Hubble (yellow) come from stars that trace the same spiral structure as the dust lanes.

**Scale:** Image is 18 arcmin across.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*