



Chandra X-ray
Observatory Center

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M82: A galaxy 12 million light years from Earth that is undergoing a burst of star formation.

(Credit: X-ray: NASA/CXC/JHU/D.Strickland; Optical: NASA/ESA/STScI/AURA/The Hubble Heritage Team; IR: NASA/JPL-Caltech/Univ. of AZ/C. Engelbracht)

Caption: Images from three of NASA's Great Observatories were combined to create this spectacular, multiwavelength view of the starburst galaxy M82. Optical light from stars (yellow-green/Hubble Space Telescope) shows the disk of a modest-sized, apparently normal galaxy. Another Hubble observation designed to image 10,000 degree Celsius hydrogen gas (orange) reveals a startlingly different picture of matter blasting out of the galaxy. The Spitzer Space Telescope infrared image (red) shows that cool gas and dust are also being ejected. Chandra's X-ray image (blue) reveals gas heated to millions of degrees by the violent outflow, which can be traced back to vigorous star formation in the central regions of the galaxy. The burst of star formation is thought to have been initiated by a close encounter with a large nearby galaxy, M81, about 100 million years ago.

Scale: Image is 7.9 arcmin across.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory