



Chandra Science Highlights

X-ray Montage of Galactic Center

This 400 by 900 light-year montage of several Chandra images of the central region of our Milky Way galaxy reveals hundreds of white dwarf stars, neutron stars, and black holes bathed in an incandescent fog of multimillion-degree gas. The supermassive black hole at the center of the Galaxy is located inside the bright white patch in the center of the image. The colors indicate X-ray energy bands: red (1-3 keV), green (3-5 keV), and blue (5-8 keV).

(Credit: NASA/U. Mass/D. Wang et al.)

Reference: Q.D. Wang et al. *Nature*, 415, 148, (2002)



Chandra X-ray Observatory ACIS image.

Scale: 2 x 0.8 degrees

- The Chandra spatial resolution allows a clean separation of the diffuse and point-like sources in the Galactic Center region.
- The Helium-like Iron K-alpha emission previously attributed to diffuse emission is found to be due to the discrete source population.
- Approximately 1000 point-like sources are detected, less than 20 of which are previously known objects; many could be luminous background active galaxies.
- The diffuse X-ray emission is associated with distinct interstellar structures observed at radio and mid-infrared wavelengths, suggesting a common origin in recent massive star formation