



 Chandra X-Ray
Observatory Center

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Jupiter: The fifth planet away from the Sun, it is the largest planet in our solar system.

Credit: NASA/CXC/SWRI/G.R.Gladstone et al.

Chandra's image of Jupiter provided some major surprises to scientists who study X-rays emanating from the planet. During the 10-hour observation which allowed Jupiter to complete an entire rotation, an X-ray hot spot that pulsated every 45 minutes was discovered near the north magnetic pole. Earlier theories held that X-rays were produced when particles flowing from Jupiter's moon Io became trapped in Jupiter's magnetic field. Now it appears that the particles must come from a much more distant source, such as the Sun, to explain the observed hot spot and pulsations.

Scale: Image is 1.5 arcmin on a side.

Chandra X-ray Observatory HRC Image