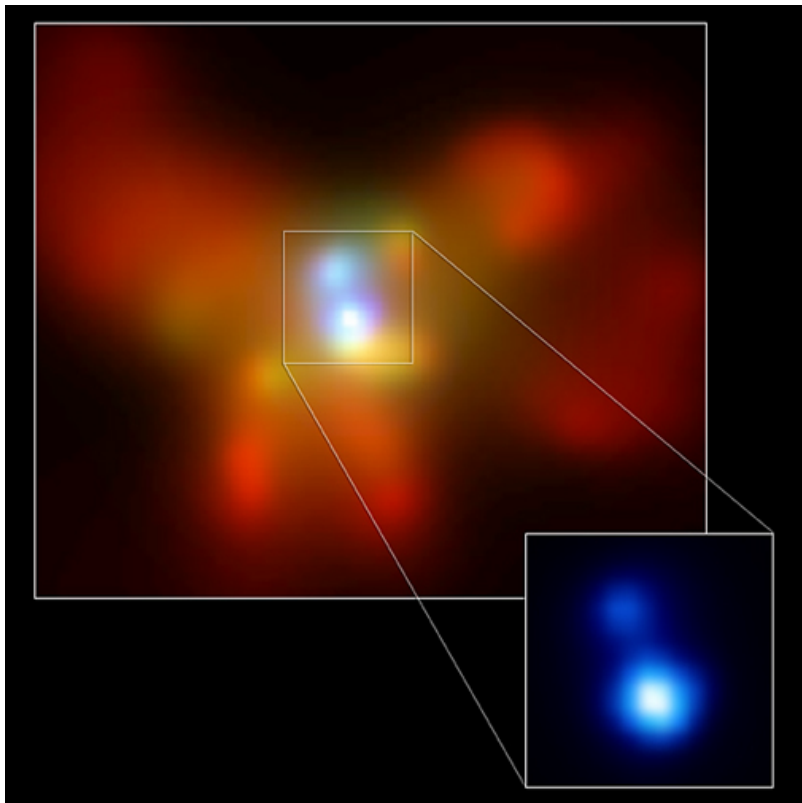




Chandra Science Highlight

NGC 6240: First Positive ID of Two Active Supermassive Black Holes in Same Galaxy

Chandra ACIS Image.



- Chandra discovered two bright point sources of X-ray emission in the center of the ultraluminous galaxy NGC 6240.
- The active black hole nature of both sources was revealed by the detection of a hard X-ray spectrum showing absorption by dust and gas in the galaxy at lower energies, and X-rays from fluorescing iron atoms in gas near the black holes.
- This is the first positive evidence of supermassive black holes in the nucleus of a galaxy.
- This detection of a binary black hole supports the idea that black holes grow to enormous masses in the centers of galaxies by merging with other black holes.

Reference: S. Komossa et al. *Astro-ph/0212099*

Credit: NASA/CXC/MPE/S. Komossa et al.

The Chandra image of NGC 6240, a butterfly-shaped galaxy that is the product of the collision of two smaller galaxies, revealed that the central region of the galaxy (inset) contains not one, but two active supermassive black holes.