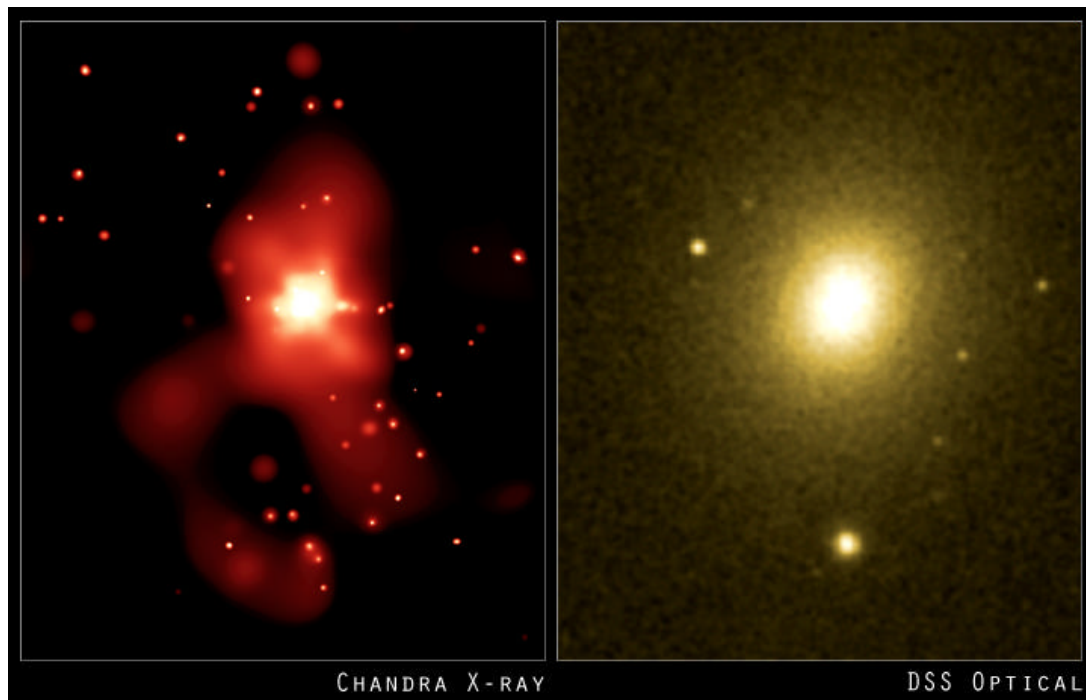




Chandra Science Highlight

NGC 4261: An Elliptical Galaxy about 100 million light years from Earth



Chandra X-ray Observatory ACIS image.

Chandra's image reveals dozens of black holes and neutron stars strung out across tens of thousands of light years like beads on a necklace. This spectacular structure, which is not apparent from the optical image of the galaxy, is thought to have been caused by a collision between galaxies a few billion years ago.

*Credit: Image: NASA/CXC/A. Zezas et al;
Optical: Pal.Obs. DSS)*

Reference: A. Zezas, et al. 2003 *Astrophysical Journal Letters* (in press 2004) also astro-ph/0310567

- Found 40 discrete, or point-like sources within the ellipse that defines the optical galaxy.
- The luminosities of these sources ranged from 2.5×10^{38} erg/s to 4.4×10^{39} erg/s, suggesting X-ray emission from accreting black holes and neutron stars.
- The spatial distribution of the discrete sources shows a distinct asymmetric pattern, consistent with long streamers of gas created in the collision between two galaxies. This image illustrates how X-ray observations may be the best way to identify the ancient remains of mergers between galaxies.