Chandra Science Highlight

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

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


- Found 40 discrete, or point-like sources within the ellipse that defines the optical galaxy.
- The luminosities of these sources ranged from $2.5 \times 10^{38}$ erg/s to $4.4 \times 10^{39}$ 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.

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