Chandra Science Highlight

The Galaxy Cluster A2052

Chandra X-ray Observatory ACIS image

Distance Estimate: about 480 million light years (z=0.03549)
Scale: Image is 9.3 arcmin across (about 1.27 million light years)

X-ray data (blue) from NASA's Chandra X-ray Observatory shows 30 MK gas in A 2052 and optical data (gold) from the Very Large Telescope shows the galaxies.

- A huge spiral structure in the hot gas – spanning almost a million light years – is seen around the outside of the image, surrounding a giant elliptical galaxy at the center.
- This spiral was created by an off-center collision between a small cluster of galaxies and the main cluster.
- The collision caused the cluster gas to slosh back and forth about the center of gravity of the cluster, similar to water sloshing in a bathtub when a person gets in.
- The sloshing may play an important role in redistributing cool gas and heavy elements from the center of the cluster to the outer regions.

Credit: X-ray: NASA/CXC/BU/E.Blanton; Optical: ESOVLT

Reference: Blanton, E. et al. 2011, Astrophys. J. 737, 99

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