



# Chandra Science Highlight

## M86: A Giant Elliptical Galaxy in the Virgo Galaxy Cluster



This composite X-ray (blue)/optical (orange) image of M86 shows gas being swept out of the galaxy into a long tail more than two hundred

thousand light years in length.

- The supersonic motion of M86 through diffuse 2 MK gas that pervades the Virgo cluster produces a “ram pressure” that is stripping gas from M86 and forming the spectacular tail.
- Eventually, most of the gas will be swept out of the galaxy, leaving an essentially gas-free galaxy orbiting the center of the cluster along with hundreds of other galaxies.
- M86 has been pulled into the Virgo galaxy cluster and accelerated to a high speed by the combined gravity of dark matter, hot gas, and hundreds of galaxies that comprise the cluster.
- The infall of the galaxy into the cluster is an example of the process by which galaxy groups and galaxy clusters form over the course of billions of years.

*Credit: X-ray: NASA/CXC/C. Jones, W. Forman & S. Murray  
Optical: Palomar Obs. DSS*

*Chandra X-ray Observatory ACIS image.*