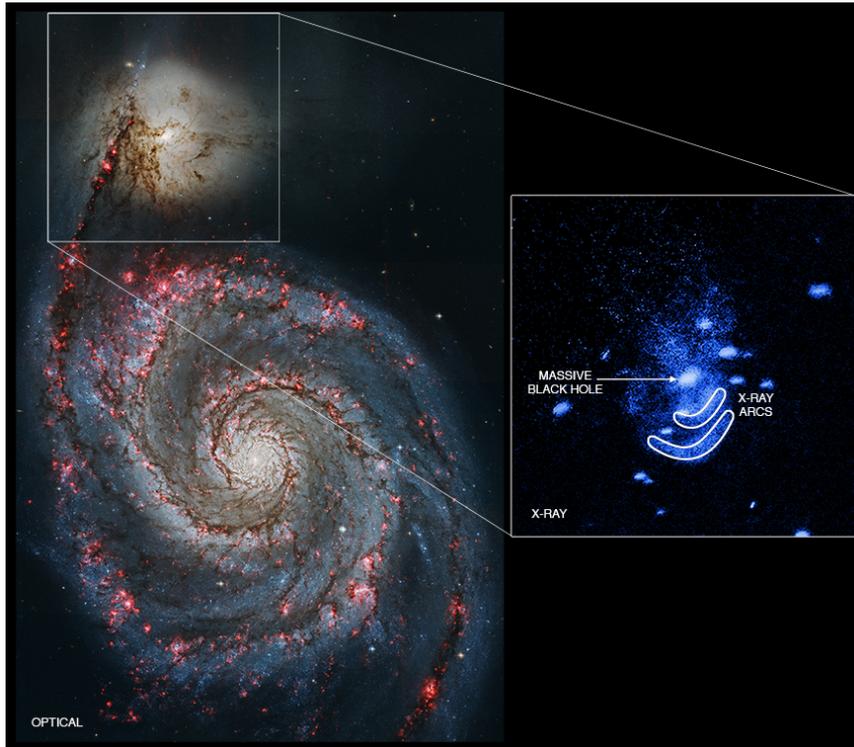




# Chandra Science Highlight

## NGC 5195: NASA's Chandra Finds Supermassive Black Hole Burping Nearby



This main panel of this graphic shows the M51 system in visible light data from the Hubble Space Telescope (red, green, and blue). The system contains a large spiral galaxy NGC 5194 interacting with a smaller companion galaxy, NGC 5195. The box at the top of the image outlines the field of view by Chandra of NGC 5195. The inset to the right shows the details of the Chandra data (blue) of this region.

- Chandra found evidence for eruptions connected to a supermassive black hole in NGC 5195.
- Two arcs in the X-ray data suggest separate eruptions from the black hole occurred about 3 to 6 million years ago.
- Such outbursts are part of the "feedback" process that is important to the evolution of the black hole and its host galaxy.

**Reference:** Schlegel, E. et al, AAS 227, 5-8 Jan 2016

**Credit:** X-ray: NASA/CXC/Univ of Texas/E.Schlegel et al;  
Optical: NASA/STScI

**Instrument:** ACIS

**Scale:**  
Pullout image is 3 arcmin across  
(about 23,000 light years)

**Distance Estimate:**  
26 million light years

**CXC Operated for NASA by the  
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