



**Chandra X-ray  
Observatory Center**

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**NGC 6338:** Two colliding groups of galaxies located about 380 million light years from Earth.  
(Credit: X-ray: Chandra: NASA/CXC/SAO/E. O'Sullivan; XMM: ESA/XMM/E. O'Sullivan; Optical: SDSS)

**Caption:** Using Chandra, XMM-Newton, the Giant Metrewave Radio Telescope, and the Apache Point Observatory, a team of astronomers has studied two galaxy groups that are smashing into each other at a remarkable speed of about 4 million miles per hour. This system, known as NGC 6338, could represent the most violent collision yet seen between two galaxy groups. This composite image contains X-ray data from Chandra (red) that shows hot gas with temperatures upward of about 20 million degrees Celsius, as well as cooler gas detected with Chandra and XMM-Newton (blue) that also emits X-rays. The X-ray data have been combined with optical data from the Sloan Digital Sky Survey in this image.

**Scale:** Image is about 12 arcmin (1.3 million light years) across.

*Chandra X-ray Observatory ACIS Image*

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*CXC operated for NASA by the Smithsonian Astrophysical Observatory*

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