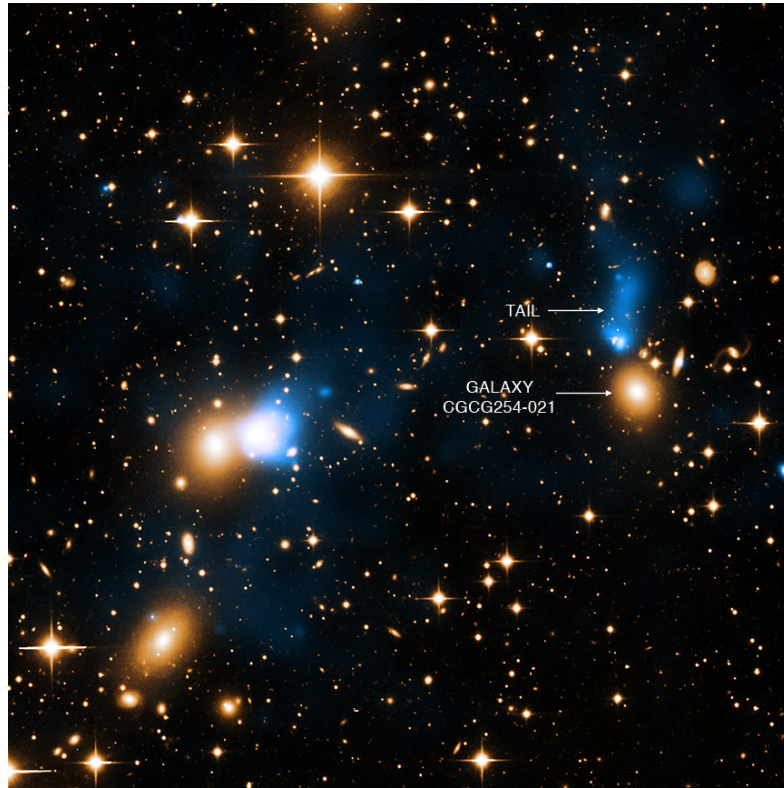




# Chandra Science Highlight

## A Long X-ray Tail in the Zwicky 8338 Galaxy Cluster



A composite X-ray (blue) and optical (yellow) image of the galaxy cluster reveals a long X-ray tail near the galaxy CGCG254-021. The center of the cluster, roughly a million light years to the left, is also seen as an extended source of X-ray emission. Most of the cluster is filled with 30-40 MK gas that does not appear in this image.

- ❑ The X-ray tail was likely produced by gas stripped from the galaxy CGCG254-021 as the galaxy moved through the hot intracluster gas.
- ❑ The temperature of the tail is 10 MK, and it has a length of at least 250,000 light years, making it one of the longest such tails ever observed.
- ❑ The tail illustrates how the intracluster gas can dramatically affect the evolution of galaxies in a cluster by stripping away the raw material for the formation of new stars.

**Reference:** Schellenberger, G. et al, 2015, A&A, 583, L2;  
arXiv:1510.03708

**Credit:** NASA/CXC/University of Bonn/G. Schellenberger et al;  
Optical: Isaac Newton Telescope

**Instrument:** ACIS

**Scale:**  
Image is 11 arcmin across  
(about 2.1 million light years)

**Distance Estimate:**  
680 million light years

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