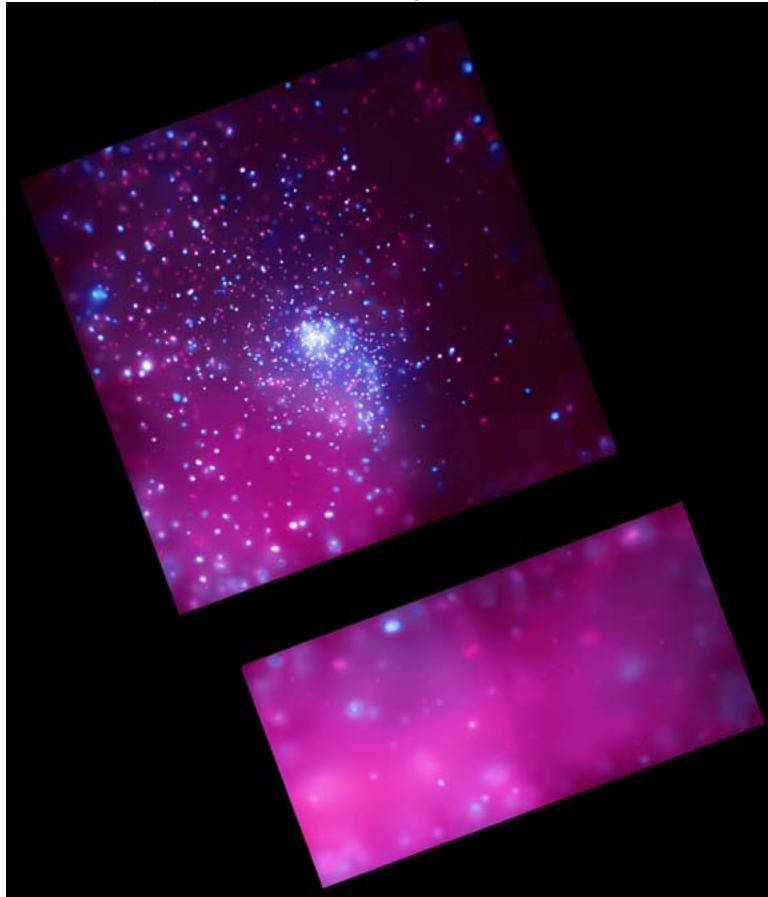




Chandra Science Highlight

Trumpler 14: A Star Cluster about 9,000 light years from Earth in the Constellation Carina

Chandra X-ray Observatory ACIS image.



Scale: The image is about 18 arc minutes across, corresponding to about 50 light years

Chandra's image of Trumpler 14 shows about 1,600 stars and a diffuse glow from hot, X-ray producing gas. The gap between the upper and lower portions of the image is an instrumental artifact.

- The cluster has an unusually high concentration of massive, luminous, young (~1 million years old) stars. X-rays can be produced by shock waves in unstable winds flowing away from massive young stars.
- The diffuse X-ray glow is likely due to the combined action of many such winds on a scale of several light years.
- The bright, diffuse glow in the lower part of the image is from a gas cloud that has been enriched with oxygen and other heavy elements, probably by a supernova that exploded thousands of years ago.

(Credit: NASA/CX/PSU/L. Townsley et al.)

Reference: L. Townsley, et al. Astro-ph/0506418

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