



Chandra X-Ray
Observatory Center

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Trumpler 14: A star cluster about 9,000 light years from Earth in the Constellation Carina.

Credit: NASA/CXC/PSU/L.Townsley et al.

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

Scale: Image is about 18 arcmin across the field of view.

Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory