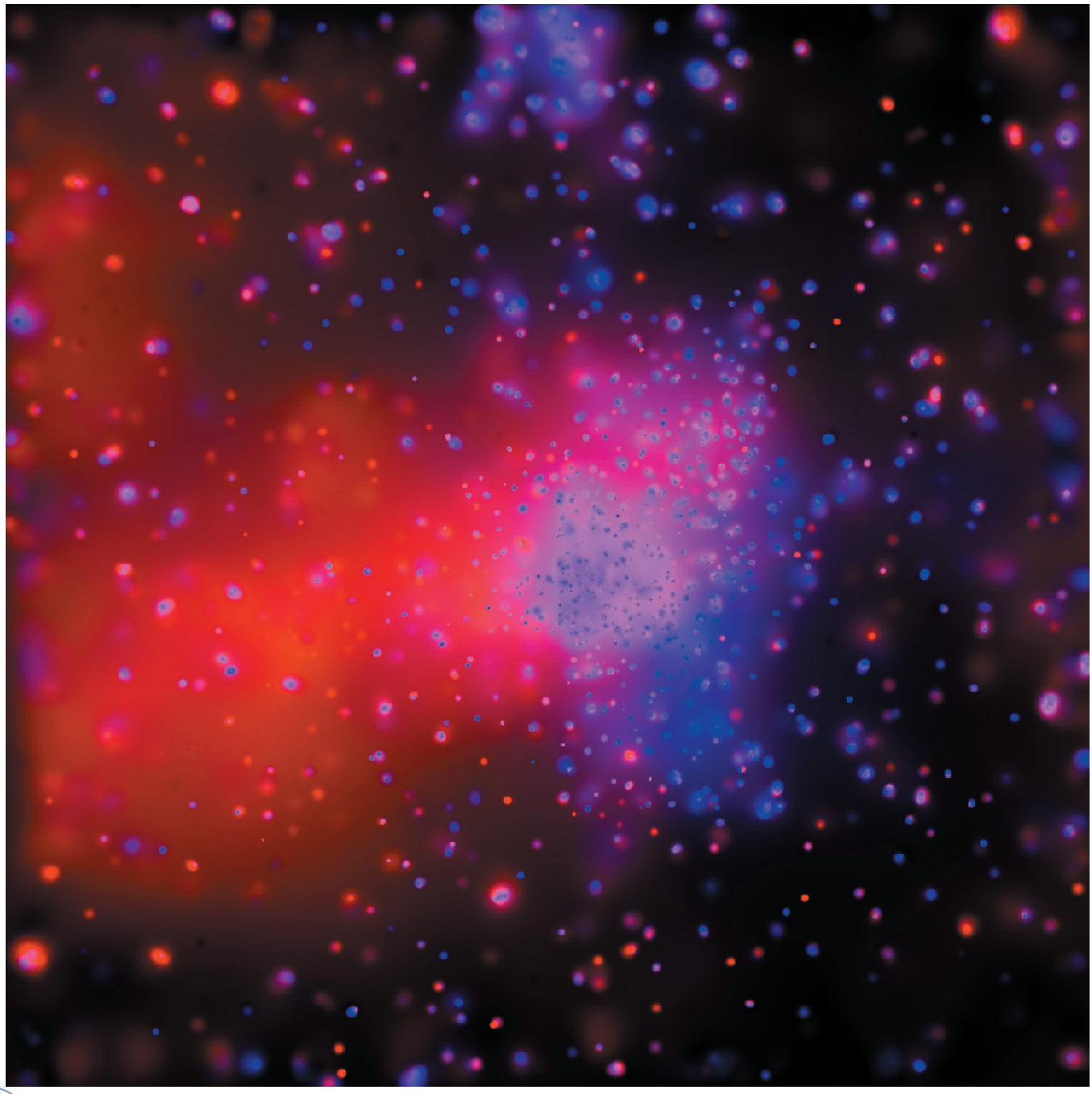

Chandra X-Ray Observatory Center

Harvard-Smithsonian Center for Astrophysics
60 Garden Street, Cambridge, MA 01238 USA
http://chandra.harvard.edu

M17, a. k. a. the Horseshoe Nebula, a.k.a. the Omega Nebula: A young star cluster 5,000 light years from Earth in the constellation Sagittarius.
Credit: NASA/CXC/PSU/L.Townsley et al.

Chandra's image shows hot gas flowing away from massive stars clustered in the center of the Horseshoe Nebula (pink) that are only about a million years old. This gas shows up as the red regions, which have temperatures ranging from about 1.5 million degrees Celsius (2.7 million degrees Fahrenheit) to about 7 million degrees Celsius (13 million degrees F). Collisions between high-speed winds of particles flowing away from the massive stars could heat the gas, or the hot gas could be produced as these winds collide with cool clouds to form bubbles of hot gas. This hot gas appears to be flowing out of the Horseshoe like champagne flows out of a bottle when the cork is removed, so it has been termed an "X-ray champagne flow."

Scale: Image is approx. 17 arcmin on a side.
Chandra X-ray Observatory ACIS Image

CXC operated for NASA by the Smithsonian Astrophysical Observatory