X-ray Emission Line Measurements of SNR 1E0102.2-7219

A.C. Fredericks, K.A. Flanagan, D.S. Davis, C.R. Canizares, D. Dewey, J.C. Houck, M.L. Schattenburg (*MIT Center for Space Research*)

Abstract

The young oxygen-rich supernova remnant 1E0102.2-7219 is the brightest SNR in the Small Magellanic Cloud and the second brightest X-ray source in the SMC. This SNR has been observed with the High Energy Transmission Grating Spectrometer (HETGS) of the Chandra X-ray Observatory. The high resolution X-ray spectrum reveals individual emission lines of oxygen, neon, magnesium, and silicon, with little Fe. We present a systematic analysis of flux measurements for the prominent lines and the plasma diagnostics obtained from ratios of these line fluxes.

CATEGORY: SUPERNOVAE, SUPERNOVA REMNANTS AND ISOLATED NEUTRON STARS