

TITLE: The HEROES Balloon-borne Hard X-ray Telescope
PRESENTATION TYPE: Research Contributed

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ABSTRACT BODY:

Abstract (2,250 Maximum Characters): The High Energy Replicated Optics to Explore the Sun (HEROES) payload flew on a balloon from Ft. Sumner, NM, September 21-22, 2013. HEROES is sensitive from about 20-75 keV and comprises 8 optics modules (HPD~33" as flown), each consisting of 13-14 nickel replicated optics shells and 8 matching Xenon-filled position-sensitive proportional counter detectors ($dE/E=0.05$ @ 60 keV). Our targets included the Sun, the Crab Nebula and pulsar and the black hole binary GRS 1915+105. HEROES was pointed using a day/night star camera system for astrophysical observations and a newly developed Solar Aspect System for solar observations (with a shutter protecting the star camera.) We have successfully detected the Crab Nebula. Analyses for GRS 1915+105 and the Sun are ongoing. In this presentation, I will describe the HEROES mission, the data analysis pipeline and calibrations, preliminary results, and plans for follow-on missions.

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