Abstract Submitted
for the PSF09 Meeting of
The American Physical Society

Energetics of Non-thermal Accelerated Electrons and Thermal Plasma during Solar Flares CHRISTOPHER MOORE, University of Iowa, BRIAN DENNIS, NASA Goddard Space Flight Center, UNIVERSITY OF IOWA/NASA GODDARD SPACE FLIGHT CENTER COLLABORATION[1] — Since the beginning of its operation on February 12, 2002, the Reuven Ramaty High Energy Solar Spectroscopic Imager (RHESSI) has observed numerous solar flares. RHESSI measures the solar flux from 3 keV (soft X-rays) to 17 MeV (gamma rays) with 1 keV spectral resolution. Assuming a thick-target flare model, energy estimations of the non-thermal accelerated electrons and the plasma at the thermal peak can be obtained through spectral and image analysis. This model is composed of an exponential with an average temperature for the thermal component and a single delta power law for the non-thermal component. Energy estimations have been carried out for over 30 flares from solar cycle 24.

[1]Summer Internship

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Date submitted: 19 Oct 2009 Electronic form version 1.4