A statistical study on RHESSI Flares

Y. Su, W. Q. Gan and Y. P. Li

Purple Mountain Observatory, Chinese Academy of Sciences, China (say82@163.com)

A statistical analysis of RHESSI X-ray flares in 12-25 keV during the period from February 2002 to June 2005 is presented. We found that a power-law with an index of -1.83±0.03 can well fit the frequency distribution of the peak count rates. This power-law does not change with time. However, the frequency distribution of the flare durations can not be fitted well by a single power-law. A weak correlation is found between the peak count rates and the characteristic times like rise times, decay times, or durations. In particular, we found a strong correlation between the averaged total counts in the rise phase and those in the decay phase. We discussed the results obtained and compared them with previous works.