

MAXI GSC monitoring of the Crab nebula and pulsar during the GeV gamma-ray flare in September 2010

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We report on the MAXI GSC X-ray monitoring of the Crab nebula and pulsar during the GeV gamma-ray flare for the period of 2010 September 18-24 (MJD 55457-55463) detected by AGILE and Fermi-LAT. There were no significant variations on the pulse phase averaged and pulsed fluxes during the gamma-ray flare on time scales from 0.5 to 5 days. The pulse profile also showed no significant change during this period. The upper limits on the variations of the pulse phase averaged and pulsed fluxes for the period MJD 55457.5-55462.5 in the 4-10 keV band are derived to be 1 and 19%, respectively, at the 90% confidence limit of the statistical uncertainty. The lack of variations in the pulsed component over the multi-wavelength range (radio, X-ray, hard X-ray, and gamma-ray) supports not the pulsar but the nebular origin for the gamma-ray flare.

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