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The Fermi-LAT Light Curve Repository

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We present the Fermi LAT light curve repository, consisting of a public library of light curves for variable Fermi LAT sources on a variety of time scales. Based on the successful Fermi All-sky Variability Analysis data portal, the Fermi LAT light curve repository aims to provide publication quality light curves on time scales of days, weeks, and months for over 1500 sources deemed variable in the 4FGL DR2 catalog. Unlike FAVA, which focuses on efficient flare detection through photometric analysis, the repository will consist of light curves generated through a full likelihood analysis of the source and surrounding region, providing calibrated flux and photon index measurements for each time bin. Hosted at NASA's HEASARC, the library will provide users with on demand access to this light curve data, replacing a task that is currently time consuming to perform with high cadence over long intervals using traditional LAT analysis tools. Such a system will serve as a resource to the multi-messenger community by helping scientists monitor interesting LAT sources and alerting them of γ-ray flares in near real time.

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