

Abstract Submitted  
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**The Third Fermi-LAT Catalog of High-Energy Gamma-ray Sources** TOBY BURNETT, University of Washington, FERMI-LAT COLLABORATION — The Fermi Gamma-ray Space Telescope Large Area Telescope (LAT) has been gathering science data since August 2008, surveying the full sky every three hours. The second source catalog (2FGL, Nolan et al 2012, ApJS 199, 31) was based on 2 years of data. We are preparing a third source catalog (3FGL) based on 4 years of reprocessed data. The reprocessing introduced a more accurate description of the instrument, which resulted in a narrower point spread function. Both the localization and the detection threshold for hard-spectrum sources have been improved. The new catalog also relies on a refined model of Galactic diffuse emission, particularly important for low-latitude soft-spectrum sources. The process for associating LAT sources with those at other wavelengths has also improved, thanks to dedicated multiwavelength follow-up, new surveys and better ways to extract sources likely to be gamma-ray counterparts. We describe the construction of this new catalog, its characteristics, and its remaining limitations.

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