

Bridging the Gap - The first sensitive 20-200 MeV catalog

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The under-explored MeV band has an extremely rich scientific potential. Awaiting an all-sky MeV mission, it is now the prime time to take full advantage of the capabilities of the Fermi Large Area Telescope to explore this regime. With more than 12 years of the best available dataset (Pass8), we have developed an all-sky analysis to build a sensitive catalog of sources from 20 to 200 MeV. This work will allow us to cover the SED peak of many gamma-ray sources, fundamental to understanding their nature, and possibly discover a whole new population of MeV ones. Importantly, this program will start bridging the gap between the MeV and GeV energy bands, strongly supporting the scientific case for future all-sky MeV missions and enhancing the legacy of the Fermi mission. In this talk I will present the preliminary results of this analysis, highlighting the scientific potential of this project. I will also discuss the difference with respect to the first catalog of low-energy sources (1FLE, Principe et al. 2018).

Track

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