

The fourth Data Release of the fourth Fermi LAT source catalog

Wednesday, 4 October 2023 15:45 (15 minutes)

The new data release four (DR4) of the Fourth catalog of gamma-ray sources of the Fermi Gamma-ray Space Telescope Large Area Telescope (4FGL), is based on gamma-ray photons detected with energy between 50 MeV and 1 TeV, and accumulated during the first 14 years of the Fermi all-sky survey. The analysis methods are inherited from the first 4FGL catalog (8-year list), with several new features introduced in DR3 and a few in this release. We present first insights, both about the characteristics of the entire source population, and the sources (about 500) that are new, with respect to the previous DR3 (12-year list).

About 40% of the new sources of DR4, are statistically associated with counterparts at other electromagnetic wavelengths (generally radio and/or X-ray sources), and are largely represented by blazars or candidate blazars. In this view, initial highlights on the companion catalog, the data release four of the Fourth LAT AGN Catalog (4LAC-DR4), are also briefly introduced.

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Session Classification: Probing the science of AGNs with multimessenger observations