

## **Fermi-LAT results on the intensity and origin of the diffuse extragalactic gamma-ray background**

The data collected by the Fermi Large Area Telescope (LAT) for more than four years enable a huge step forward in measuring and understanding the origins of the extragalactic diffuse gamma-ray background (EGB). The EGB originates from the superposition of different populations of unresolved sources with possible contributions from genuinely diffuse and exotic processes. In most parts of the sky it is sub-dominant to the Galactic diffuse emission, which represents a foreground to be subtracted to properly measure the EGB intensity. Due to the long exposure, improved event selection, and better understanding of the Galactic diffuse foregrounds and particle backgrounds, we can now extend the measurement of the spectrum of the EGB to the energy range from below 200 MeV to hundreds GeV. Furthermore, population studies based on resolved LAT sources allow to constrain the contribution of individual classes of unresolved sources to the EGB. In this talk we will present an updated measurement of the EGB spectrum and we will discuss the contribution of known classes of sources, focusing particularly on the origin of the EGB above 10 GeV.

**Presenter:** AJELLO, Marco