

EBL review and latest results

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Abstract content

The light emitted by all galaxies across the history of the Universe is encoded in the intensity of the extragalactic background light (EBL), the diffuse cosmic radiation field at ultraviolet, optical, and infrared wavelengths. The EBL is a source of opacity for high-energy γ rays via the photon-photon interaction ($\gamma\gamma \rightarrow e+e^-$), leaving a characteristic attenuation imprint in the spectra of distant γ -ray sources. In this talk, I will report on an unprecedented measurement of the EBL using data from the Large Area Telescope on board the Fermi Gamma-ray Space Telescope, which has allowed us to measure the star-formation history and the number density of faint galaxies during the re-ionization epoch.

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