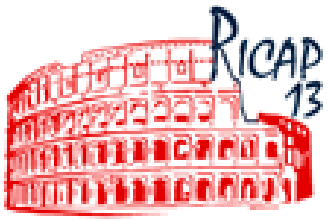

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Dark Matter implications of Fermi-LAT measurement of anisotropies in the diffuse gamma-ray background

Wednesday, 22 May 2013 15:20 (20 minutes)

The detailed origin of the diffuse gamma-ray background is still unknown. However, the contribution of unresolved sources is expected to induce small-scale anisotropies in this emission, which may provide a way to identify and constrain the properties of its contributors. Recent studies have predicted the contributions to the angular power spectrum (APS) from extragalactic and galactic dark matter (DM) annihilation or decay. The Fermi-LAT collaboration reported detection of angular power with a significance larger than 3σ in the energy range from 1 GeV to 10 GeV on 22 months of data [Ackermann et al. 2012]. In this talk I will present preliminary results using the already published Fermi-LAT APS measurements [Ackermann et al. 2012] compared to the accurate predictions for DM anisotropies from state-of-the-art cosmological simulations as presented in [Fornasa et al. 2013] to derive constraints on different DM candidates.

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