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Dark Matter Searches with Gamma Rays and Cosmic Rays

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The existence of dark matter - the dominant, non-baryonic, neutral and cold matter component of our Universe - is inferred from its gravitational effects at galactic and cosmological scales, as well as from the power spectrum of the temperature anisotropies of the cosmic microwave background. Several theoretically plausible dark matter candidates, such as WIMPs, axions or primordial black holes, would produce distinct spectral and/or morphological signatures in the measured fluxes of different cosmic ray species. Thus, identification of such signatures (a procedure known as "indirect" dark matter detection) could help pinpoint the nature of dark matter. In this talk, I will review several of the existing experimental methods aimed at indirect detection of dark matter signatures, as well as the latest results in the field.

Primary author: RICO, Javier (IFAE-BIST)

Presenter: RICO, Javier (IFAE-BIST)

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