ICRC 2025 - The Astroparticle Physics Conference



Contribution ID: 1182 Type: Talk

Direct measurement of cosmic neon, magnesium, and silicon fluxes with DAMPE

Tuesday 15 July 2025 16:20 (15 minutes)

The Dark Matter Particle Explorer (DAMPE) is a satellite-based detector optimized for precise Galactic cosmic ray studies up to hundreds of TeV. Since its launch on December 17th, 2015, DAMPE has been continuously collecting data on high-energy cosmic particles with excellent statistics and particle identification capabilities, thanks to a large geometric factor and a very good energy resolution. In this contribution, the latest advancements concerning the direct measurement of the energy spectra of cosmic-ray neon, magnesium, and silicon nuclei obtained by DAMPE will be presented. Precise knowledge of these spectral measurements could provide valuable insights into the origin, acceleration, and propagation processes of cosmic rays in the Galaxy.

Collaboration(s)

DAMPE Collaboration

Author: CASILLI, Elisabetta (University of Salento and INFN Lecce)

Co-authors: ALEMANNO, Francesca (University of Salento and INFN-Lecce); BERNARDINI, Paolo (INFN Lecce e Universita del Salento (IT)); DE PALMA, Francesco (INFN Lecce e Universita del Salento (IT)); GHOSE, Essna (INFN Lecce e Universita del Salento (IT)); SURDO, Antonio (INFN); YUE, Chuan

Presenter: CASILLI, Elisabetta (University of Salento and INFN Lecce)

Session Classification: CRD

Track Classification: Cosmic-Ray Direct & Acceleration