Contribution ID: 332 Type: Poster

Forbush Decrease Mechanism in a Magnetic Cloud

Monday, 22 October 2018 15:40 (150)

Using back tracing we research galactic cosmic ray propagation in a moving magnetic cloud having the shape of magnetic loop. It is obtained that the inductive electric field of an extended magnetic cloud decreases particle energy. Both energy losses and long particle trapping by a magnetic loop produce Forbush decrease. The calculation results of particle density and the components of uni- and bidirectional anisotropies are shown. The calculation results generally agree with measurements.

Primary author(s): Dr. PETUKHOV, Ivan (Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy of SB RAS); Dr. PETUKHOV, Stanislav (Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy of SB RAS); PETUKHOVA, Anastasia (Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy of SB RAS)

Presenter(s): PETUKHOVA, Anastasia (Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy of SB RAS)

Session Classification: Poster session and coffee-buffet

Track Classification: Particle physics: astroparticle physics