

Forbush Decrease Mechanism in a Magnetic Cloud

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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.

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