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The Diffusion Tensor of Energetic Particles in Different HMF Configurations

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Abstract content

The propagation of energetic particles in the heliosphere is described by the Parker transport equation. It includes the physical processes of diffusion, drift, convection and adiabatic energy changes. For the modulation of the particle's energy spectra the geometry of the heliospheric magnetic field is important, but it is still an unsolved problem.

In this contribution we present model calculations of the particle mean-free-path in two different field configurations: the standard Parker geometry and a Fisk-Parker hybrid field. Results for both magnetic field models are shown comparatively and the implications on the particle transport are discussed.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 1 (SH), pages 451-454

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