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The effect of a modified Parker field on the modulation of the galactic cosmic rays

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Abstract content

The effects on the galactic cosmic ray modulation of a Parker field modified by a latitudinal-dependent solar wind speed are numerically investigated. The calculation of the propagation of the galactic cosmic ray is made by solving a coupled set of the stochastic differential equations which is equivalent to the so-called diffusion convection partial differential equation. The stochastic numerical code adapted for the wavy heliospheric current sheet in a Parker field has been developed by Miyake and Yanagita [1]. The 3D code has developed into a Parker field modified by a latitudinal-dependent solar wind speed. The differences between the effect of a standard Parker field and a modified Parker field on the solar modulation of the galactic cosmic ray will be presented.

[1] Miyake, S. and Yanagita, S., Proc. 29th ICRC, 2, 203-206, 2005.

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 445-448

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