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Numerical propagation of Cosmic Rays in the Galaxy

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Abstract content

We present a Monte-Carlo calculation of the propagation of cosmic ray protons in the Galaxy for energies above 1 PeV. We discuss the relative strengths of competing effects such as parallel/perpendicular diffusion and drifts in toy models of the Galaxy. We compare our estimates with the results of the MC calculation for the toy models and then we apply the MC calculation to a few realistic models of the Galactic magnetic field. We study the containment times for different models of the magnetic field in order to understand which one is able to reproduce the low energy data.

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. 2 (OG part 1), pages 195-198

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