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Electron anisotropies in the inner heliosphere

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Abstract content

The COSPIN/KET experiment on board the Ulysses spacecraft has been observing the flux of 3-30 MeV and also higher energy electrons in the inner heliosphere (radial distances > 5.2 AU) since its launch in 1990. These observations have indicated the presence of low-energy electrons with a strong anisotropy off the equatorial plane as far as 2.2 AU from Jupiter. This was observed during Ulysses' first encounter with Jupiter in 1992 and again during its descent to low heliospheric latitudes in 2004 when the spacecraft approached Jupiter within 1 AU. A three-dimensional electron modulation model is used to study the modulation of the 10 MeV Jovian electron anisotropies in the inner heliosphere. The emphasis is placed on the role that polar perpendicular diffusion plays in establishing large electron anisotropy in the inner heliosphere.

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 429-432

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