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A Survey of Interplanetary Coronal Mass Ejections During 1996 – 2007

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Abstract content

Interplanetary coronal mass ejections, the interplanetary counterparts of coronal mass ejections at the Sun, are the major drivers of interplanetary shocks in the heliosphere, and are associated with modulations of the galactic cosmic ray intensity, both short term (Forbush decreases caused by the passage of the shock, post-shock sheath, and ICME) and possibly with longer term modulation. Using several in-situ signatures of ICMEs, including plasma temperature, and composition, magnetic fields, and cosmic ray modulations, made by near-Earth spacecraft, we have compiled a "comprehensive" list of ICMEs passing the Earth since 1996, encompassing solar cycle 23. We summarize the properties of these ICMEs, such as their occurrence rate, speeds, association with solar energetic particle events, shocks and cosmic ray decreases.

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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 319-322

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