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Forbush decreases in relation to CME related shocks and solar wind disturbances.

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Abstract content

Forbush decreases in relation to CME related shocks and solar wind disturbances.

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ABSTRACT

Coronal mass ejections (CMEs) are the most energetic events in the heliosphere and are widely recognized as being responsible for production of large disturbances in solar wind, transient interplanetary shocks and Forbush decreases in cosmic ray intensity. I studied Forbush decreases, recorded with ground based monitor at Oul for the period 1997-2006 with variation in solar wind plasma velocity, proton density, temperature and different types of interplanetary shocks related to ejecta and magnetic clouds which are interplanetary manifestations of coronal mass ejections. I found a weak positive co-relation between magnitude of jump in solar wind velocity, proton density, temperature and magnitude of Forbush decreases. Further I have concluded that the forward shocks which are related to ejecta, magnetic clouds or ejecta and magnetic clouds both are very much effective in producing Forbush decreases of higher magnitudes in cosmic ray intensity. The results obtained in this study gives very important informations about the events which are mainly responsible for Forbush decreases.

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

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Summary

Reference

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