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Coronal mass ejections and associated radio bursts in relation to impulsive solar energetic particle events.

Abstract content

Solar energetic particle events are classified into two classes impulsive and gradual on the basis of their abundance, duration and associated soft X-ray flares. The gradual SEPs are more intense and longer in duration events and associated with fast coronal mass ejections .The impulsive SEPs known as 3He rich (Z rich) events are typically short lived and small compared to the large gradual SEPs. In the present paper we have investigated impulsive SEP events using WIND/EPACT data and their association has been investigated using white-light data obtained from SOHO/LASCO. It is found that about $\approx 20\text{-}40\%$ of impulsive SEP events are associated with CMEs. Only 5-15% events are associated with metric type II radio burst .The statistical properties of associated CMEs compared with those of general CMEs indicate that these CMEs are significantly slower (median speed of 613km/s) and narrower but faster than the general CMEs(400km/s).

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

Summary

Reference

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Primary author(s): Dr. MISHRA, A.P (A.P.S.University,Rewa(M.P.)INDIA)
Co-author(s): Ms. TRIPATHI, Roopali (A.P.S.University,Rewa(M.P.)INDIA)
Presenter(s): Dr. MISHRA, A.P (A.P.S.University,Rewa(M.P.)INDIA)
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