

SYMMETRY FEATURES IN THE INTENSITY-TIME PROFILE OF FORBUSH DECREASES

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Abstract

Forbush decreases, magnetic clouds, transient effects, cosmic ray anisotropy, neutron monitors Recent research on Forbush decreases utilizing analysis techniques similar to those which were developed for the study of ground level enhancements has reconfirmed the potential of neutron monitors to provide information about complex transient structures in the near-Earth interplanetary medium. It was found e.g. that the temporal evolution of the cosmic ray anisotropy during the main phase of the 24 March 1991 Forbush decrease reflects the passage of a complex magnetic field structure within about 20 hours after the arrival of an interplanetary shock. We demonstrate that symmetry features in the intensity-time profiles of Forbush decreases as recorded by neutron monitors can yield additional information about such magnetic field structures and their effect on cosmic rays.