

COSMIC RAY ANISOTROPY DURING THE FORBUSH EFFECTS AS A POSSIBLE INDICATOR OF THE SOLAR SOURCE LOCATION

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Cosmic ray anisotropy, deduced by worldwide neutron monitor measurements by the Global Survey Method (GSM) has shown possible indications of the solar source of Forbush decreases, specifically, for 800 identified with solar sources Forbush decrease events during the last 55 years. These events were divided on five groups by heliolongitude of associated X-ray flares and behavior of the cosmic ray vector anisotropy have been studied within each of separated group. The examples of typical behavior of CR anisotropy are presented for each group. For example, sources of 161 Forbush decreases have a far western origin. By a statistical filtering it was shown that only a dozen events, of this category, indicated large magnitude ($>6\%$) and enhanced diurnal cosmic ray anisotropy ($>5\%$). The resulted calculations on cosmic ray anisotropy and density gradient are also discussed. A possible association of the behavior of the diurnal cosmic ray anisotropy component to the solar source location is being proposed.