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Diurnal variations of Cosmic Ray Intensities: Solar Modulation

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Abstract Solar modulation refers to the influence the Sun exerts upon the intensity of galactic cosmic rays - there is found an inverse relationship between solar activity and cosmic ray intensity. Cosmic ray flux modulation closely mirrors the solar activity implying cosmic rays to be a mediator to speak of the solar variability. Latitudinal, altitudinal and barometric differences are also some times reasons of cosmic ray intensity variation. In this paper the solar modulation, thereby causing cosmic ray variability, is discussed, in terms of cosmic ray intensities (1982-2006) observed by five neutron monitors with different latitudes, as function of sunspot solar parameter.