



Cosmic ray diurnal anisotropy during extreme events of the period 2001-2014

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The diurnal variation of cosmic ray intensity, based on the records of two neutron monitor stations at Athens (Greece) and Oulu (Finland) for the time period 2001 to 2014, is studied. This period covers the maximum, the descending phase and the minimum of the solar cycles 23/24 and the ascending phase of the solar cycle 24. These two stations differ in their geographic latitude and magnetic threshold rigidity. The amplitude and phase of the diurnal anisotropy vectors have been calculated on annual and monthly basis. From our analysis it is resulted that there is a different behaviour in the characteristics of the diurnal anisotropy during extreme events of cosmic ray activity, such as ground level enhancements, Forbush decreases and magnetospheric events due to strong solar phenomena. These results may be useful to the Space Weather forecasting and especially to Biomagnetic studies.