

Statistical analysis of Sunspot Area and their Heliospheric Effect for the Period 1986-2016

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Sunspot area varies over the Sun's disk and is to be heliospheric behavior during the descending phase of solar cycle 22 to 24. Galactic Cosmic rays encounter an outward-moving solar wind with cyclic magnetic-field fluctuation and turbulence. This causes convection and diffusion in the heliosphere. We have observed that the galactic cosmic rays recoveries are much faster than the solar parameter (sunspot area) with negative time lag during the descending phase of solar cycles 22 and 24. Statistical analysis of absolute asymmetry (A) of sunspot area is carried out for quasi-biennial (QBO) period is ~ 1.95 years with high amplitude during 2001. The significant Rieger-type periods (~ 124 to ~ 175 days) of the absolute asymmetry (A) of the sunspot area have been investigated using Morlet Wavelet Techniques (MWT) for combined solar cycles 22-24.

Keywords

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Collaboration

other Collaboration

Subcategory

Theoretical Methods

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