

DISTRIBUTION OF SOLAR ENERGETIC PARTICLE EVENTS OVER AN 11-YEAR SOLAR CYCLE

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Solar energetic particle (SEP) events are powerful signatures of solar activity. In general, the rate of SEP events changes in phase with the 11-year solar cycle, as it is seen, for instance, in the sunspot number. However, it is known that the rate of major SEP events suffers a reduction around solar activity maximum (Gnevyshev Gap). Other depressions in the SEP event rate also occur in the course of a solar activity cycle. A suggestion was put forward that these depressions are a consequence of the superposition of 11-year and quasibiennial oscillations of solar activity. In this paper it is shown that this hypothesis may be valid for the relatively small and moderate SEP events but not for the most powerful ones, the ground level enhancements (GLEs).