

# On the solar poloidal magnetic field as one of the main factors for maximum GCR intensity for the last five sunspot minima

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The conditions in the heliosphere are considered during the minimum phase of the sunspot cycle when the intensity of galactic cosmic rays (GCRs) attains its maximum at the Earth. These times of maximum GCR intensity are determined for the last five sunspot minima, including the present one. From the quantitative correlation between the heliospheric factors important to the modulation of GCRs in the heliosphere and the index of high-latitude photospheric magnetic field (all determined during times of GCR intensity maxima) the conclusion is made that the poloidal magnetic field of the Sun is one of the main governing factors for these heliospheric characteristics.

Following this up, the dependence of GCR proton spectra on the index as mentioned above for the last five sunspot minima 21/22 - 24/25 is calculated and discussed with special attention paid to the comparison of spectra for the current and previous sunspot minima and to the energy at which spectral cross-overs occur when the polarity of the heliospheric magnetic field is changed.

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## Collaboration

## other Collaboration

## Subcategory

Theoretical Methods

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