

The 3rd International Symposium on Cosmic Rays and Astrophysics (ISCRA-2021)

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Type: **Overview**

Large scale modulation: view from the earth points

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The current knowledge and ideas, obtained from groundlevel observations and concerning the solar modulation of cosmic rays, are reviewed. The following topics are discussed:

observations of the cosmic ray modulation at the Earth and main characteristics of the accumulated experimental data; manifestations of the solar magnetic cycle in cosmic rays; the effect of hysteresis and its relation to size of the heliosphere; the rigidity spectrum of long-term cosmic ray variations and its comparison with direct measurements on spacecraft; calibration of ground-based monitoring data using direct measurements on spacecraft in comparable energy ranges; the place of ground level observations in current studies of cosmic ray modulation and their future prospects.

Particular consideration is given to the correlation of long-term cosmic ray variations with different solar-heliospheric parameters, and to empirical models of cosmic ray modulation.

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