

Heliospheric modulation of CRs

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HelMod is 2D Monte Carlo propagation model of galactic cosmic rays through the Heliosphere. The model includes the effects due to the variation of solar activity during the propagation of cosmic rays from the boundary of the heliopause down to Earth's position. The simulated spectra were found in agreement with those obtained with experimental observations carried out by BESS, AMS and PAMELA collaborations. Diffusion tensor in the frame of the magnetic field turbulence varies with time using a diffusion parameter obtained by Neutron Monitors. The parameters of the Model were tuned using data during the solar Cycle 23 and Ulysses latitudinal Fast Scan in 1995.

The actual parametrization is able to well reproduce the observed latitudinal gradient of protons and the southward shift of the minimum of latitudinal intensity. The description of the model is also available online at website www.helmod.org.

In helmod.org the end user can easily access a web interface to results catalog of the HelMod Monte Carlo Code. Catalog contain modulated proton flux data for a period (monthly average) between January 1990 and december 2007.

Actually tested and tuned web version of HelMod code will be presented. Web version of code will allow user to run simulation directly for selected set of parameters and by user choosen or imported shape of the local interstellar spectra.

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