

The heliospheric magnetic field and the modulation of the galactic cosmic rays

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The effects on the galactic cosmic ray modulation of the Parker field and the Fisk field for the model of the heliospheric magnetic field (HMF) are numerically investigated. The calculation of the propagation of the galactic cosmic ray is made by solving a coupled set of stochastic differential equations (SDE) which is equivalent to the so-called diffusion convection partial differential equation. The three-dimensional code based on the SDE method has been developed into the Fisk field. We present the details of the effects of the Fisk HMF on the solar modulation of the galactic cosmic rays.