

SOLAR CR KINETICS IN THE RADIAL REGULAR IMF

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Theory of cosmic ray propagation in the radial regular magnetic field with superimposed magnetic irregularities is advanced. Starting from Boltzmann kinetic equation the analytical expression for CR distribution function is obtained in two cases of the impulse particle injection and the continual particle emission source. The particles can be divided into two parts which describe the non-scattered and scattered populations. In result, the non-scattered particles appear as a strongly anisotropic beam with a small angular width due to the magnetic focusing of charged particles in radial regular magnetic field. Evolution of the angular distribution of both populations and the temporal profiles of CR intensity are analyzed. The obtained results can be used for description of energetic particle streams in the turbulent interplanetary magnetic field.