[IM20] Cosmic Ray Scattering In the Turbulent Magnetic Field

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As an important example of the dynamics of cosmic ray in electromagnetic fields, we consider the motion of charged particles in static turbulent magnetic fields. The ensemble of the test particles diffuses in magnetic field and we analyze the transport of particles parallel or perpendicular to the mean magnetic field. The analyses utilize the numerical simulation that integrates the trajectories of an ensemble of test particle from which we obtain diffusion coefficients based on the particle motions.