

PARTICLE TRAPPING
AND NON-RESONANT INTERACTION
IN A PROBLEM OF STOCHASTIC ACCELERATION

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Evolution of the velocity dispersion of particles undergoing the action of an external field of random waves is considered. For moderate Kubo numbers, the particle trapping effect is not negligible, so a discrepancy between the quasilinear diffusion and the results of simulations becomes evident. It is shown that the Fokker–Planck equation with the time dependent diffusion coefficient describes the particle trapping to some extent. Apart of this, such an equation accounts for the non-resonant wave-particle interaction.