

DYNAMIC CHAOS  
IN THE MOTION AND SCATTERING  
OF FAST CHARGED PARTICLES IN CRYSTALS

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S u m m a r y

We consider a number of effects related to the dynamic chaos that appears in the motion of fast charged particles which move in the periodic field of an atomic string within a crystal. A possibility for particles to move either regularly or chaotically in such a field is demonstrated. Some consequences of such a dynamics for the processes of dechanneling and scattering of relativistic particles and radiation emission by them in the crystal have been discussed. A possibility of anomalous diffusion, when particles channel in the crystal, has been demonstrated.