

## ACCELERATION OF ATOMS DURING PHASE TRANSITIONS ON CRYSTAL SURFACES

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### S u m m a r y

The paper explores a possibility of the coherent energy transfer from many adatoms initially in metastable states to a single accelerated adatom during a phase transition at the crystal surface. The acceleration occurs as a long chain of subsequent collisions with a single particle gaining momentum harvesting the energy of the transition of its predecessor in the row from the metastable to the stable state. The paper presents the analysis of the stability of the suggested system, simulation of the dynamics of accelerations, and the analysis of the limits imposed on the process by the defocusing effect.