

Channeling 2018



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The Crystal Surface Optimal Geometry to Reflect of a Charged Particles Beam

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The aim of our investigations is to create the physical model for effective reflection of charged particle beam by the crystal surface to take into account relativistic effects. Particularly, calculation of the optimal structure and reflecting surface geometry, at which the reflection coefficient of incident beam will be maximum.

Summary

The crystals can be used to control charged particle beams, if this crystal created by special way. For example, one of the surface plane coincides with the crystallographic planes. At these conditions the particle beam can be captured into the channeling regime. Then deviation, reflection, collimation or focusing of beams is regulated by the dynamics of the beam passing at the planar channeling regime both at the sub-barrier regime and at the above-barrier. By these conditions one can effectively possible to control the beams by operation of reflection from the surface.

Primary author: Prof. DABAGOV, Sultan (LNF)

Co-authors: Prof. KOROTCHENKO, Konstantin (National Research Tomsk Polytechnic University); Mr EIKHORN, Yury (National Research Tomsk Polytechnic University)

Presenter: Mr EIKHORN, Yury (National Research Tomsk Polytechnic University)

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