



Contribution ID: 139

Type: Oral presentation

SPONTANEOUS BREAKING OF SYMMETRY IN PROBLEM OF SPATIAL LOCALIZATION OF PARTICLE MOVING IN A SOLID

Tuesday, 27 September 2016 16:00 (15 minutes)

Early it was found the significant change in the size of the projectile's wave packet correlation length during the initial short time after penetration in the volume of a solid. Because the correlation length becomes much less compared to the initial size of the packet, suppose that after the penetration in the solid the projectile appears in one of spatially localized states with the central mean point found in one of large number of positions predicted by the initial packet width. Such a spatially localized state can produce the polarization well that can capture the projectile in the same quantum-mechanical coupling state. In the present work the possibility of corresponding polarization phenomena are estimated and problems connected to this phenomenon are discussed.

Summary

Localization phenomena in the problem of quantum particle interaction with disordered solid are considered.

Primary author: Dr FILIPPOV, Gennadiy (Cheboksary Polytechnic Institute)

Presenter: Dr FILIPPOV, Gennadiy (Cheboksary Polytechnic Institute)

Session Classification: S1.3: Channeling & Radiations in Crystals