



Contribution ID: 146

Type: Oral presentation

Diffraction transition radiation of a beam of relativistic electrons in a thin single-crystal plate

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

In the present work, diffracted transition radiation (DTR) of the beam of relativistic electron crossing a thin single-crystal plate. The expression for the DTR angular density has been derived for the case when the path of the electrons in the target considerably less than extinction length. For the first time the kinematic character of DTR of the beam of ultra-relativistic electrons crossing a thin single-crystal plate has been proved. The numerical calculation carried out shown a considerable influence of divergence of the beam on the angular density of DTR for high and super high energies of the electrons.

The investigation has been carried out at the expense of grant of Russian Science Foundation (project №15-12-10019)

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