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Radiation by High Energy Electrons in Ultra Thin Crystal

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An effect analogous to TSF-effect is possible at passing of particles through thin crystals. In this case, nevertheless, not the Bremstrahlung should be suppressed, but the coherent ultrarelativistic electrons radiation. In the last years a possibility is opened to research experimentally this effect, which is connected with the development of the technology of producing ultra thin crystals (with the thickness of the order of 100 nm), which may be used for this aim. In the present work quantitative calculations of this effect are presented, which allows to define the conditions of its experimental observation.

Primary author: Prof. SHUL'GA, Nikolai (Akhiezer Institute for Theoretical Physics of NSC KIPT)

Presenter: Prof. SHUL'GA, Nikolai (Akhiezer Institute for Theoretical Physics of NSC KIPT)

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