

Channeling 2018



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Charge Radiation in the Presence of Conical and Prismatic Dielectric Objects: Far-Field Area

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We analyze radiation of charges moving in presence of some dielectric targets. The first of them is a cone with vacuum channel where the charge moves. The second is a prism (the charge moves along one of its borders). We use the “aperture method” developed in our previous works. Here the main attention is given to the far-field area. Analytical and numerical results are shown and main physical effects are described (in particular, the phenomenon of “Cherenkov spotlight” for the cone target). Prospects of use of aperture technique for other objects are discussed as well.

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