

## Cherenkov radiation from relativistic heavy ions with taking into account stopping in radiator

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In Ref. [1] the authors predicted the diffraction-like effects in angular distribution of Cherenkov radiation from relativistic heavy ions in thin radiators arising due to stopping of ions in a radiator. The key factor which determines the characteristic angular width of Cherenkov radiation, together with finite size of radiator, is the energy loss. The authors of Ref. [1] have used an approximate method of taking into account the energy loss ( $dE/dx$ ). In order to avoid any approximations during calculations of angular distribution of Cherenkov radiation, we are developing new approach with use of computer simulation by SRIM'06 [2]. We compare our results with those of Ref. [1] and discuss new peculiarities of angular distribution in vicinity of Cherenkov cone, such as dependences on the ion charge, initial energy of the ion beam, wavelength of radiation and type of radiator.

[1] E.D. Donets, D.E. Donets, V.V. Salnikov, V.B. Shutov, S.V. Gudkov, et al., *Rev. Sci. Instr.*, 71, 679 (2002).

[2] J.F. Ziegler, The Stopping of Energetic Light Ions in Elemental Matter, *J. Appl. Phys. / Rev. Appl. Phys.*, 85, 1249-1272 (1999)