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Bremsstrahlung Kernel of Beta-Particles

Chul-Young Yi[1] Kook Jin Chun[1], Suck-Ho Hah[1], and Hyun-Moon Kim[1]

[1] Ionizing Radiation Group, Korea Research Institute of Standards and Science, P.O. Box 102, Yuseong, Daejeon 305-600, Korea

cyyi@kriss.re.kr

Energy distribution of the external bremsstrahlung emitted by the beta-particles slowing down in the selected media was calculated using PENELOPE - a code system for Monte Carlo simulation of electron and photon transport. During the calculation, it was assumed that the beta particles generated at the center of the spherical homogeneous media were slowing down with losing energy. The bremsstrahlung from the beta particles were recorded on the surface of the sphere. The effect of the electron impact ionization on the energy distribution of bremsstrahlung was investigated and the details of the calculation involved were described.

Keywords : Beta-particle, Bremsstrahlung, Monte Carlo Calculation