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Monte Carlo Calculation of the Photon Energy Spectrum from the Co-60 Irradiator

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The photon energy spectra from the Co-60 irradiator (AECL Eldorado 8 radiotherapy unit) installed at KRISS (Korea Research Institute of Standards and Science) were calculated as a function of field size using PENELOPE - a code system for Monte Carlo simulation of electron and photon transport (Salvat et al., OECD/NEA databank, 2003). During the calculation, the Co-60 source capsule, housing and collimator were modeled realistically. The scattered photon contribution and the effect of electron contamination were evaluated. The accuracy of the present calculation was also discussed.

Keywords : Monte Carlo Simulation, Co-60, Energy Spectrum