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Skin Dosimetry in MRI-guided Radiotherapy (MRIGRT)

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Geant4 has been used to simulate in high-resolution (10 micron thick voxels) the skin doses below 0.5 mm depth occurring in MRIGRT (6 MV photon beam, Varian 2100C). On the entry side lepton contamination removal has been studied to show potential skin dose reductions (at low magnetic field strengths). At high magnetic fields (>2 T) skin dose increases (up to 30% of d_{max}). In the exit region the Electron Return Effect (ERE) gives rise to massive skin dose increases ($>100\%$). The use of exit bolus is investigated for reducing these increases.

Are you a Member of the Geant4 Collaboration (yes/no)

no

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