

Dosimetry of Tungsten Eye Shields for electron therapy.

It is customary to use eye shields for electron treatments of facial lesions to spare ocular structures. We present our work in the evaluation of two sets of porcelain-clad eye shields, a small and a medium size. Dosimetry variations between identical shields are presented as well as the dependence of dosimetric parameters on the size of the shield. Measurements are acquired using a small, 4x4 cone, for treatment of unilateral lesions, and larger cones for treatment of more involved fields. In the latter case the dependence of the shield inter-spacing on dosimetric profiles is evaluated. Ion chamber dosimetry and film dosimetry are used to deduce the dose at various depths in a phantom corresponding to depths of ocular structures as a percentage of the prescription dose. Film dosimetry also yields radiation dose profiles at these depths which determine “effective width coverage” of the shields. Our data are taken with 6MeV and 9 MeV electron beams which are the modalities of choice for treatment of superficial skin lesions.