XXI Meeting of Physics 2021



Contribution ID : 107 Type : posters

OUTPUT FACTOR MEASUREMENTS FOR NON-SQUARE SMALL FIELDS USING DIFFERENT DEVICES AND METHODS

The aim of this work is to calculate the output factors for 48 small fields with rectangular shapes. This has been performed using different detectors, such as: Pinpoint 31016, Diode E 60012, Diode P 60008, Diode SRS 60018, Diamond 60019, and as a benchmark the EBT3 Dosimetric Films. We also considered the XVMC Montecarlo of the MONACO 5.11.03 planner as a reference for the simulation. All measurements has been done with an Elekta brand linear accelerator, Infinity model with Agility head, and 5mm multilayers with 6Mv photon energy. Two different equivalent-field size methods for calculating the output factor for rectangular shape are taking. One of this method is described by formula Seq=4A/P, where A is the area and P is the perimeter. The other one is defined as Seff= \sqrt{x} .y, where x and y are the sizes for the rectangular fields, Seff is the side characteristic of the equivalent square of the small field. For these two types of calculations we applied the Daisy Chaining method and the correction factor K given in Technical Reports Series 483.

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Session Classification: Posters

Track Classification: Medical Physics