Contribution ID: **166** Type: **Poster**

Pilot testing of the new IAEA/AAPM Small Field Code of Practice

The IAEA is about to publish an IAEA/AAPM protocol for the dosimetry of small photon beams. The present paper inserts into an ongoing IAEA coordinated research project to test the applicability of the new code of practice.
Relative output factors were measured in water (SSD=90cm @10cm depth) for ten field sizes ranging from 0.49 to 11.3 cm of equivalent square. The collimation is made with the tertiary Elekta APEX mMLC attached to an Elekta Precise with flattering filter (WFF) linac of 6 MV beam. Each of the 10 field sizes was measured with the following detectors: Pinpoint 3D (PTW-31016), Non-shielded Diode (PTW-60017) and Microdiamond (PTW-60019).
In order to report the final output factor, measured reading ratios were adjusted with the correction factors from Table 26 of the new protocol. The field sizes were defined using the FWHM in both axes. An excellent agreement is shown for the 3 detectors. The values of the two solid state detectors (60017 and 60019) are very consistent in the whole range of field sizes. For the smallest field measured (0.5 cm) the output factor determined with the pinpoint chamber deviates by 9% respect to the others 2 solid state detectors, this may be explained because the correction factor for the pinpoint for this size was extrapolated from Table 26.
Thus, the applicability of the correction factors suggested in the protocol for these three detectors was demonstrated even for field sizes down to 0.5 cm square size.

Authors: Mr ARGOTA PÉREZ, Raúl (INOR, Cuba.); Mr GARCÍA YIP, Fernando (INOR, Cuba.); Mr ALFONSO LAGUARDIA, Rodolfo (InSTEC, Cuba.); Mr DIAZ MORENO, Rogelio (INOR, Cuba.)

Presenter: Mr ARGOTA PÉREZ, Raúl (INOR, Cuba.)

Session Classification: Poster Session - MP

Track Classification: Medical Physics