National Metrology Institute

Webinar on small field dosimetry for MRgRT

MRgRT-DOS project

Aim: To enable traceable measurement of absorbed dose-to-water in small x-ray and proton beams (field size < 3 cm) in the presence of strong magnetic fields in support of future standards for small field dosimetry in MRgRT.

Partners:

- Four metrology institutes
- Three academic hospitals
- One university

Stakeholder committee:

- Standards developing organisations
  - IAEA chief stakeholder
- Manufacturers
- Hospitals

Project details:

- Run time May 2020 – April 2023
- Project website:http://mrgrtmetrology.com/
- Coordinator: Jacco de Pooter (jdpooter@vsl.nl)

Program

1. Introduction – Jacco de Pooter (VSL)
2. Overview of MRI linac technology: - Sonja Surla (DKFZ)
3. Detector characteristics - 1: effective point of measurement - Hui Khee Looe (Uni. of Oldenburg)
4. Detector characteristics - 2: fluence perturbation effects and volume averaging - Yunuen Cervantes (Université Laval)
5. Extending TRS-483 to small fields in MRgRT – Ralf-Peter Kapsch (PTB)
6. Monte Carlo simulations of detector type specific output correction factors in the presence of magnetic field in experimental facilities using EGSnrc – Ilias Billas (NPL)
7. Monte Carlo simulations of detector type specific output correction factors in the presence of magnetic field in MRI linacs using Penelope – Jacco de Pooter (VSL)
8. Possibilities and limitations of experimental facilities – Stephan Frick (PTB)
9. Performance of scintillators in presence of magnetic fields – Claus Andersen (DTU)