



1ST ESTRO PHYSICS WORKSHOP

*Science in
development*

17-18 November 2017
Glasgow, UK

Micro- and nanodosimetry for radiotherapy

Chairs: B. Reniers, H. Palmans

Short description of the workshop:

Increased use of light-ion beam therapy, brachytherapy using low-energy emitters and radionuclide therapy have renewed and increased interest in micro- and nanodosimetry applied to RT. Long term experience in radioprotection, space and environment exists resulting in vast experience with detectors and modelling. Aim of this workshop is to bring these communities in better contact, to get the detector community interested in RT applications and to raise awareness within the RT community of the potential impact. Some initiatives have already moved in that direction (e.g. BioQuART, mediNET, etc.) The workshop aims to address this topic in a broad sense covering all applications in radiotherapy.

Preliminary program - list of topics to be covered:

Topics would be organized per application area:

- Brachytherapy, low-energy x-rays, small-animal irradiators
- Radionuclide therapy
- Proton therapy, incl. a debate or panel discussion topic on the need for LET, microdosimetric, nanodosimetric or RBE painting
- Ion ($A > 1$) beam therapy
- Link of micro- and nanodosimetric quantities with radiobiology.

Expected outcome:

- Stimulate collaboration between radiotherapy and micro/nanodosimetry research communities
- Stimulate initiatives and participation in consortia seeking international research funding
- Defining more focused areas for future workshops.

Target group:

Medical physicists interested in micro/nanodosimetry applications, detector developers, code developers and users.