Physics Colloquium Mainz

January 16, 2024 at 16 c.t.

Lecture room KPH,
Johann-Joachim-Becher-Weg 45, JGU

Particle therapy is a rapidly growing and potentially the most effective and precise radiotherapy technique. However, only a tiny minority of patients receive protons or heavy ions rather than X-rays these days. Physics research is needed to address a few problems that hamper its wider diffusion. The efforts are toward making particle therapy cheaper, faster, and more conformal.

In this lecture we will give some examples of applications of nuclear physics to particle therapy. In particular for reducing range uncertainty, we will discuss the use of radioactive ion beams (RIBs) for simultaneous treatment and online range verification using positron emission tomography (PET) within the ERC AdG BARB (Biomedical Applications of Radioactive ion Beams) project at GSI/FAIR. We will also report on recent experiments in collaboration with Helmholtz Institute Mainz.

Nuclear Physics for Next-Generation Cancer Therapy

Dr. Marco Durante

GSI Helmholtzzentrum für Schwerionenforschung, Biophysics Department, and TU Darmstadt, Institute for Condensed Matter Physics, Darmstadt

Eine Veranstaltung von
Institut für Physik | Institut für Kernphysik
Institut für Physik der Atmosphäre
Helmholtz-Institut Mainz