



Contribution ID: 13

Type: **not specified**

electronCT Simulations with Allpix Squared

Thursday 23 May 2024 16:55 (25 minutes)

electronCT is a rising project aimed at investigating the exploitation of multiple coulomb scattering of electrons in matter for tomographic imaging. One potential use case lies in the context of radiation therapy with electrons of energies in the range of 100 to 250 MeV. In this environment, the electronCT technique could be used to image the tumour with high precision just before the treatment using the same accelerator.

Having the proof of principle of this new imaging technique already established at beam tests at the ARES accelerator at DESY, Hamburg, it is vital to understand how the quality of imaging changes due to environmental factors. These factors include changes of beam parameters and the impact of the detector design and technology on the image quality. This task requires realistic and well controllable simulations of the beam setup. In this contribution, we present how Allpix Squared is used for these simulations and present preliminary results obtained from these simulation studies.

Will the talk be given in person or remotely?

Remotely

Author: Mr DE SILVA, Malinda (Deutsches Elektronen-Synchrotron (DE))

Presenter: Mr DE SILVA, Malinda (Deutsches Elektronen-Synchrotron (DE))

Session Classification: Applications and studies

Track Classification: Applications & Studies