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## electronCT Simulations with Allpix Squared

Thursday 8 May 2025 11:45 (25 minutes)

electronCT explores the use of multiple Coulomb scattering of electrons in matter for tomographic imaging, particularly in the context of radiation therapy with electron beams in the 100-250 MeV energy range. This technique has the potential to provide high-precision imaging of tumors immediately before treatment, utilizing the same accelerator as the therapy itself. The proof of concept for electronCT has been investigated at the ARES accelerator at DESY and the MAMI accelerator in Mainz.

Accurate beam simulations play a crucial role in refining image reconstruction techniques and estimating key parameters such as the absorbed dose in patients. In this contribution, we present how Allpix Squared is employed for these simulations. We will also compare the different approaches used by different simulation tools that contributes to the ongoing development of electronCT technology.

## Will the talk be given in person or remotely?

In person

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