

Thesis Topic Proposal

Institute of Physics, Czech Academy of Sciences

ELI Beamlines laser centre

Degree Level: Bachelor, Master

Starting date: Upon an agreement

Benchmark of different Monte Carlo codes

Topic Characteristics/Abstract:

ELI Beamlines hosts several sources of ionizing radiation, each with specific characteristics. The effects of the radiation can be estimated by means of Monte Carlo simulations, therefore these represent a very powerful tools, which, while being well established in other fields of physics, are new to laser science. Several Monte Carlo transport codes are available, like Fluka, Geant4, or PhITs. Comparisons of the results from different codes can highlight difference between them and so indicate their capabilities and their limitation, especially if compared with experimental data.

Scope:

Comparing results from different Monte Carlo codes.

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Application:

Send your application including your CV/Resume and motivation letter describing why are you interested in this particular topic to Ms. Andrea Füst via andrea.furst@eli-beams.eu