

Evaluation of radiation levels within ELI Beamlines

Bachelor or Master Thesis, Monte Carlo Simulation and/or Experiment

Abstract:

ELI Beamlines will host several sources of ionizing radiation, each with specific characteristics. The radiation fields generated by these sources need to be characterized by means of Monte Carlo simulations and measured by appropriate detectors. This means the preparation of ambient dose equivalent rate maps and the study of the activation of various devices present. According to the results, it would then be necessary to find solutions for the shielding and for the management of activated waste. It could also be possible to study the response of radiation detectors to the generated radiation.

Thesis may focus on Monte Carlo simulations, experimental measurements or a comparison of the two.

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