MATTER AND TECHNOLOGIES

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Characterization and optimization of laser-generated THz beam for THz based streaking

At the Ferninfrarot Linac- Und Test-Experiment (FLUTE) at the Karlsruhe Institute of Technology (KIT) a new and compact method for longitudinal diagnostics of ultrashort electron bunches is being developed. For this technique, which is based on THz streaking, strong electromagnetic pulses with frequencies around 240 GHz are required. Therefore, a setup for laser-generated THz radiation using tilted-pulse-front pumping in lithium niobate was designed, delivering up to 1 µJ of THz pulse energy with a conversion efficiency of 0.03 %.

In this contribution we study the optimization of the THz beam transport and environment.

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Speed Talks

Normal

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