LABORATOIRE DE L'ACCÉLÉRATEUR LINÉAIRE

Mémoire d'habilitation à diriger des recherches soutenu par :

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(Depacc)

« Interactions between Lasers and Electrons »

Lasers can interact electrons with electrons in several ways. With a \ang{90} crossing angle the laser can be used as an unbreakable wire that will generate Compton scattering and allow the measurement of electron beams that are only a few micrometers wide. Compton scattering is also used when the beams collide head on to generate intense X-rays or γ-rays as was done in the MightyLaser experiment. Building a dedicated accelerator for this purpose will make a compact X-ray source, as in the ThomX project. Finally if the photons are co-propagating with the electrons in a plasma they create a wakefield that will accelerate the electrons with very high gradients, creating the need for new diagnostic.

vendredi 30 mars 2018 à 14h00

Auditorium Pierre Lehmann - Bât. 200, Orsay

cnrs

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