

Spécialité de Master « Optique, Matière, Plasmas »

Stage de recherche (4 mois minimum, à partir de début mars 2011)

Proposition de stage pour l'année 2010-2011 (**ne pas dépasser 1 page**)

Date de la proposition :

Responsable du stage / internship supervisor: Julien Fuchs			
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Nom du Laboratoire / laboratory name: Laboratoire pour l'Utilisation des Lasers Intenses			
Code d'identification :	UMR 7605	Organisme :	CNRS/Ecole Polytechnique
Site Internet / web site:	http://www.luli.polytechnique.fr		
Adresse / address:	Ecole Polytechnique, 91128 Palaiseau		
Lieu du stage / internship place:	Ecole Polytechnique, 91128 Palaiseau		

Titre du stage / internship title: Experiments on ion energy loss in high-energy density matter
Résumé / summary
<p>Energy loss in matter due to charged particles is a fascinating field of research that has been studied for nearly a century. Most experiments in this area have been methodically carried out with accelerators and have provided numerous and trustable data for cold solid matter on a large projectile energy range (1 keV/u → 100 MeV/u) on many materials. However, far less is known about stopping in warm or hot dense matter (WDM). This is quite understandable considering the experimental complexity of containing heated matter long enough to make the measurement before thermal expansion takes place and properly characterizing the studied medium.</p> <p>The understanding of ion stopping power is nonetheless of tremendous importance in ion-driven or inertial confinement fusion as well as for the exploration of High-Energy Density matter.</p> <p>The candidate will participate in a series of experiments performed at LULI exploring this thematic by performing measurements of the ion source and of its properties after interacting with WDM.</p>
<p style="text-align: center;">Toutes les rubriques ci-dessous doivent obligatoirement être remplies</p>

Ce stage pourra-t-il se prolonger en thèse ? Possibility of a PhD ? : Oui			
Si oui, financement de thèse envisagé/ financial support for the PhD: Ecole Polytechnique			
Lasers et matière	x	Lumière, Matière : Mesures Extrêmes	x
Optique de la science à la technologie		Physique des plasmas	x

Fiche à transmettre (fichier pdf **obligatoirement**) sur le site <http://stages.master-omp.fr>