Post-doctoral position in plasma physics

Development, Optimization, Test and Calibration of PETAL+ X-ray diagnostics

Advertiser: Center Lasers Intenses et Applications, University Bordeaux 1, CNRS, CEA
Application: Deadline November 20th, 2013
Duration: 1st January 2014 to 30th June 2015 (18 months)
Salary: approximately 32000 € gross yearly salary, according to the university regulations
Contact: Pr. D. Batani email: batani@celia.u-bordeaux1.fr tel. +33 (0)540003753

Project description.

The high power laser system PETAL is funded by the Regional Council of Aquitaine, the French ministry of Research and the European Union, and constructed by CEA/CESTA http://petal.aquitaine.fr/. PETAL will be dedicated to civilian academic studies on high energy density states of matter and inertial confinement fusion. It will be commissioned in 2015 and will be operated together with the Laser MegaJoule (LMJ).

The development of diagnostics for the PETAL laser system is funded by the French ANR within the Equipex project PETAL+ aiming at realizing X-ray diagnostics, charged particle diagnostics and the diagnostics insertion systems (SID).

The present post doc position is dedicated to the deployment, calibration and testing of the PETAL+ X-ray diagnostics, as well as to the preparation of the first physics experiments to be performed on LMJ/PETAL using such diagnostics tools.

The selected candidate will collaborate with the research teams of CELIA, CEA/CESTA, ILP (Institut Lasers et Plasmas) in the deployment of the X-ray diagnostics tools, to their calibration, to the preliminary testing using high energy laser facilities in France and elsewhere, to their final installation on the LMJ/PETAL interaction chamber. In particular, he/she will be involved in the phase of calibration, and will be in charge of the testing phase and of the preparation of the first physics experiments.

The X-ray diagnostics will include X-ray spectrometry as well X-ray radiography.

The position is open for 18 months. The postdoctoral fellow will be based in CELIA and will participate in the theoretical, numerical and experimental work.

Requirements: PhD degree in experimental plasma physics; knowledge of the basic physics of laser plasma interaction, motivation and autonomy; specific numerical or experimental skills in high energy density physics are welcome.

Candidates are required to send their complete CV and a motivation letter by email before the deadline. They will be notified about the outcome of their application by end November. Possibly an interview can be requested (this may also take place by using Skype, video conference tools, etc.)

The position is open to candidates from countries within the European Union. After the first period, it may be prolonged.