Post-doctoral position in plasma physics

**Development, Optimization, Test and Calibration of PETAL+ Charged Particle diagnostics**

**Advertiser:** Center Lasers Intenses et Applications, University Bordeaux 1, CNRS, CEA

**Application:** Deadline November 20\(^{th}\), 2013

**Duration:** 1\(^{st}\) January 2014 to 30\(^{th}\) June 2015 (18 months)

**Salary:** approximately 32000 € gross yearly salary, according to the university regulations

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**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+ charged particle diagnostics. These include electron spectrometers, an ion/proton spectrometer and a proton radiography module. Also the post doc fellow will be in charge of the preparation of the first physics experiments to be performed on LMJ/PETAL using such diagnostics tools.

The selected candidate will collaborate will the research teams of CELIA, CEA/CESTA, ILP (Institut Lasers et Plasmas) in the deployment of the charged particle 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 first physics experiments.

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 all countries. After the first period, it may be prolonged.