



Post-doctoral position: Data Acquisition and Analysis of a Digital Calorimeter for the ILC

The Laboratoire Leprince-Ringuet (LLR) at École polytechnique, is seeking a skilled post-doctoral research assistant to work on the readout and test beam analyses of a prototype of a digital hadronic calorimeter for the International Linear Collider (ILC); the Calice collaboration¹ aims at testing a new type of hadronic calorimetry where only a discrete information on the passing particles is recorded (encoded on 1 or 2 bits) in a highly granular calorimeter (1×1cm² cells), with the readout electronics fully embedded; a prototype stack (½ m³) is being developed to be tested in beam around the summer 2009.

The successful candidate is expected to contribute actively to the preparation of the acquisition system for the future test beam both on the hardware and the software, in collaboration with the laboratory engineers and to its integration with the new data acquisition framework. A strong participation on the preparation of the tools for the test beam data analysis itself and the comparison of the collected data with the Monte-Carlo is also awaited. A possible contribution is also possible on the integration of this type of calorimeter in one of detector of the ILC with the analysis of the performances on one of the “standard” physics channels (to be defined).

The profile of the perfect candidate is typically that of a physicist with Ph.D degree in particle physics having some background on calorimetry and instrumental data analysis, in detector readouts and low level data handling. A good knowledge of C and C++ and of the RooT analysis framework is preferable. Applicants should also be interested in training students and visiting researchers in the participating labs.

The work, which will be mainly performed at École polytechnique, at Palaiseau (30 km south of Paris) will imply regular contributions for tests and collaboration meetings abroad (typically CERN, DESY and FNAL).

The successful candidate will be employed by the CNRS partly on ANR (French Agence Nationale de la Recherche) funds for a period of 2 years, for a monthly net salary of ~2000 €. The position will opened at the beginning of April.

The interested candidates should send a scientific Curriculum Vitae, a letter of motivation and the names of two referees to

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¹ “CALorimeter for the LInear Collider Experiment”, <http://llr.in2p3.fr/activites/physique/flc/calice.html>