

# Postdoctoral Research Position in LLR, Ecole Polytechnique

Characterization of a TPC as a high-resolution gamma telescope and polarimeter, and first measurement of the polarization asymmetry of low energy gamma conversion to  $e^+e^-$  pairs.

A 2 year post-doctoral position is open starting in September 2013, with the HARPO group[1] of the gamma astronomy department at LLR[2], on a P2IO[3] funding. LLR is a HEP and gamma astronomy laboratory on the Ecole Polytechnique Campus.

We are developing a high resolution, high sensitivity gamma-ray telescope and polarimeter in the [MeV - GeV] energy range, based on a TPC. We have built and tested a demonstrator with which we are preparing data taking at a polarized gamma-ray beam facility [4].

We are seeking a Ph.D. physicist to take part in the data taking and join our efforts in data analysis, and in particular in the simulation of the experiment. The selected candidate will take important responsibilities including software development coordination.

Previous experience in data analysis and/or simulation with the current tools used in HEP (C++, ROOT) is required, and experience with GEANT4 will be appreciated.

Questions and/or applications (including a motivation letter and Curriculum Vitae) should be sent to D. Bernard [5]. Applicants should separately arrange to have up to three letters of reference sent by their author by email.

The dead line for application is April 05 2013.

- [1] HARPO, the Hermetic ARgon POLarimeter, <http://llr.in2p3.fr/spip.php?rubrique89>
- [2] LLR, Laboratoire Leprince-Ringuet, Ecole Polytechnique, 91128 Palaiseau, France. <http://llr.in2p3.fr/>
- [3] Labex P2IO, Physique des 2 Infinis et des Origines, <http://www.labex-p2io.fr>
- [4] NewSUBARU, LASTI, U. of Hyôgo, and SPring8, Hyôgo prefecture, Japan.
- [5] Denis Bernard, LLR, tel (33) 1 6933 5534, [denis.bernard \(at\) in2p3.fr](mailto:denis.bernard@in2p3.fr)