

UCL - Universite Catholique de Louvain
Center for Particle Physics and Phenomenology - CP3
22/11/2006

The Department of Physics at the Universite catholique de Louvain (UCL, Belgium) invites applications for a faculty position in experimental particle physics at the level of Assistant Professor (Charge de cours) starting in September 2007.

Currently, the High Energy Physics group is mainly involved in the CMS and ZEUS experiments as well as in a number of Research and Development (R&D) programs: RD39, RD50 and FP420. The group is also finalizing analyses of data from the ALEPH experiment. In the future, the group main activities will focus on CMS and on R&D programs for the future experiments to be installed at the Super-LHC and/or the ILC.

The Louvain HEP group has contributed to the construction of the forward silicon tracker detector of CMS. Integration and testing of about 40 large tracker sectors (petals) was performed at UCL. The group installed and ran the CERN Petal Integration Centre where more than 50 petals were built and tested and about 150 petals (half of the full production) were commissioned. The group has responsibilities in the data handling, calibration, monitoring and commissioning software for the CMS Tracker. Important contributions were given to past Tracker beam tests and to the recent Magnet Test and Cosmic Challenge at CERN.

The R&D projects focus on RD50 and FP420. The main objective of RD50 is the development of radiation hard semiconductor devices for high luminosity colliders. The R&D programs FP420 and RD39 concern the development of ultra fast pico-second Cerenkov detectors and edgeless silicon detectors, to be used to measure forward protons at the LHC. The group is responsible for the design of the precision positioning mechanical system, where all forward detectors will be located. The R&D activities benefit from the local cyclotrons facilities, including an intense neutron beam line, the mechanical and electronic workshops, and the close collaborations with the engineering faculty.

In addition, the group is involved in the development of the CMS high level reconstruction software and in the LHC phenomenology studies. This activity includes the following main fields of research: development of high level triggers, development of energy flow algorithms, top physics, feasibility studies on searches for exotic Higgs boson representations (not exclusively within SUSY) and the detection of high-energy photon interactions at the LHC, including the associated phenomenology. These studies are pursued in close collaboration with theoreticians within the Center for Particle Physics and Phenomenology recently created at the UCL (<http://cp3.phys.ucl.ac.be/>). UCL also hosts one of the two sites of the Belgian Tier-2 centre that is part of the CMS LHC Computing Grid.

Applicants should have a Ph.D. in physics and an outstanding record of research accomplishments. The successful candidate is expected to establish and lead a strong

research program in the CMS experiment, the R&D programs or start new experimental activities. The appointee is also expected to teach effectively at both the undergraduate and graduate levels and to participate in the educational programs and other activities of the Department.

Interested candidates should apply according to the procedure indicated at <http://www.rhum.ucl.ac.be/emploi/> (or <http://www.uclouvain.be/38442.html>)
More information can be obtained directly from

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