



PhD POSITION IN ICECUBE AT ULB, BRUSSELS - BELGIUM

The Service de Physique des Particules Élémentaires of the Université Libre de Bruxelles - ULB invites applications for a PhD position within the IceCube collaboration.

The Service is part of the Inter-University Institute for High Energies **IIHE (ULB-VUB)**, which combines the experimental particle and astro-particle research groups from both Brussels universities, ULB and VUB, and presently numbers more than 80 physicists, engineers and support staff. It is involved in frontier research in large international collaborations as **CMS** (at the LHC) and **IceCube/ARA** (South Pole), and has **R&D activities** in detector development, data acquisition systems and electronics.

The IceCube detector, located at the Geographic South Pole, is the world's largest observatory searching for astrophysical neutrinos with energies ranging from a few GeV to PeV (<http://icecube.wisc.edu/>). IceCube has recently provided the first evidence of extra-terrestrial high-energy neutrinos. Following this success, several upgrades are foreseen that will expand the energy range to the lower and higher energies.

The astro-particle division within this service is focused on high-energy neutrino astrophysics and seeks a PhD student who will engage in **analysis of data from the IceCube detector** looking for signatures of high-energy neutrinos from astrophysical sources. The Brussels group is active in searches for point sources, identification of tau neutrino events in the detector, and development of new detector technologies for future, even larger-scale observatories.

Outstanding candidates will join the activities of the Brussels IceCube analyzing the data of the telescope as well as laboratory work for the commissioning of the future IceCube upgrades. The position does not impose teaching duties, but contributions to teaching are welcome. The salary is competitive and includes all social security benefits (information is available on request). Training is provided in an international context; the doctoral studies can also take place in a context of inter-university co-supervision, with a joint/double doctoral degree by ULB and the former home institute. The thesis may be written in either French or English.

The positions will remain open until suitable candidates are found. Interested candidates are encouraged to **apply before October 20th, 2014**, when a first application screening will take place. Applications should be sent by email (with subject "Icecube –PhD position") to **J. A. Aguilar** via the IIHE-ULB secretariat. They should include a detailed CV, including a scanned copy of the diploma, a letter of motivation and the names of 2-3 referees; the list of attended courses at Master level, corresponding marks and ranking among students of the same class should also be provided.

Contact : J. A. Aguilar - via the IIHE secretary : **Audrey.Terrier@ulb.ac.be**

Phone : +32-2-629.3202

IIHE web site : <http://w3.iihe.ac.be>