HUMBOLDT-UNIVERSITÄT ZU BERLIN

Three PhD Positions in VHE Gamma-Ray Astronomy at Humboldt University Berlin for H.E.S.S. or CTA (DR/025/11)

The (Astro-)Particle Physics Group at the Physics Department of Humboldt University Berlin (see http://www-eep.physik.hu-berlin.de/HESS) invites applications for three PhD positions in very high-energy gamma-ray astronomy.

Two positions are devoted to H.E.S.S. (see http://www.mpi-hd.mpg.de/hfm/HESS), an array of currently four 12m-diameter imaging atmospheric Cherenkov telescopes. The H.E.S.S. array is located in Namibia and explores the non-thermal Universe at photon energies > 100 GeV. Candidates are expected to contribute to the transition to H.E.S.S. II (the commissioning of a 28m-diameter telescope in 2012) and the analysis of H.E.S.S. data. The technical activities will focus on three topics: (i) the data acquisition system, (ii) the online analysis of H.E.S.S. data, and (iii) the development of trigger and reconstruction techniques that allow more sensitive Dark Matter searches with the large H.E.S.S II telescope.

Another position is available to work on CTA (Cherenkov Telescope Array, see http://www.cta-observatory.org), a future ground-based gamma-ray observatory which should consist of two large telescope arrays in the northern and southern hemisphere. The group at Humboldt University is involved with the design of the hardware and software systems that are needed to control, read out and monitor the CTA arrays. Candidates should join the effort to develop the data acquisition and control system for a 12m CTA prototype telescope which is erected close to the Physics Department of Humboldt University in 2011.

The analysis activities for all three positions will use H.E.S.S. data to address the physics of Galactic gamma-ray sources (in particular supernovae as possible sources of cosmic rays, variable galactic sources, search for pulsed emission from pulsars, studies of pulsar wind nebulae) and the search for Dark Matter.

Applicants should hold a qualifying degree in physics and have a specialization in elementary particle physics and/or astrophysics. Software skills (C++, analysis software, Linux) and experiences with Monte Carlo simulations and data acquisition systems would be assets. The three positions are limited to three years. Salary (E13 TV-L HU, part time 50%) and benefits are commensurate with public service organizations. The positions will be available from July 2011, but an earlier or later starting date can be negotiated.

Please contact Ullrich Schwanke for further inquiries and send applications (CV, research interests, names of references) in PDF format to schwanke@physik.hu-berlin.de. Please quote DR/025/11 with your application.
Applications in paper format should be sent to:

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