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Helmholtz – CSC – Fellowships 2010

Helmholtz Centre: Forschungszentrum Karlsruhe = KIT – Campus North
Research Field: Structure of Matter
Research Project: Astroparticle Physics
Position: PhD Student oder Sandwich PhD Student Postdoc
Department/Supervising scientist: KIT Campus North - Institut für Kernphysik - A. Haungs

Research Area:

Anisotropy studies of high-energy cosmic rays

The KASCADE experiment (<http://www-ik.fzk.de/KASCADE-Grande.html/>) explores cosmic rays in the energy range of 100 TeV to 100 PeV, i.e. in the region of the so called “knee” of the cosmic ray spectrum. With the multi-detector set-up installed in Karlsruhe detailed investigations of the arrival directions of the cosmic particles are possible, where results would give valuable information on the origin, acceleration and propagation of cosmic rays. Different methods are available to estimate large scale anisotropy, but all of them require large data statistics to provide. A comparable experimental device to KASCADE exists in China with the Tibet air shower array. The candidate is supposed to work on a combined analysis of the data from both sites to enhance the sensitivity of the measurements.

Specific Requirements:

Candidates should hold a qualifying degree in physics and have a specialization in particle astrophysics and/or elementary particle physics. Software skills (C++, analysis software, Linux) would be assets. A basic command of English should be available.

Work Place: KIT Campus North, Karlsruhe, Germany

Earliest Start (between September 2010 and February 2011): **September 2010**

Language Course: offered by KIT

Further Information: <http://www.fzk.de/ik>

Address for application: Dr. Andreas Haungs, Karlsruhe Institute of Technology
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