Double-Doctoral Degree in Astrophysics

Instituto de Tecnologías en Detección y Astropartículas CNEA · CONICET · UNSAM

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Ministerio de Energía y Minería

CONICET

Ministerio de Ciencia, Tecnología e Innovación Productiva

UNSAM

Ministerio de Educación

PhD fellowships in Astroparticle Physics
UNSAM and Karlsruhe Institute of Technology (KIT)

www.iteda.cnea.gov.ar
www.ikp.kit.edu

Search: We are looking for outstanding students to do their PhD in High-energy Astroparticle Physics.

Additional information: Two fellowships are available within the Double-Doctoral Degree program in Astroparticle Physics (DDAp) that is conducted by Universidad Nacional de San Martín (UNSAM) and the Karlsruhe Institute of Technology (KIT). Selected candidates will both become members of the graduate schools of UNSAM (www.unsam.edu.ar/english) and KSETA (www.kseta.kit.edu) within the center KCETA (www.kceta.kit.edu/english). Courses will be conducted in English. Evaluation of applicants will start on Nov 1st 2017 and continue until the two positions are filled.

The successful candidates will be working on topics related to the data obtained at the Pierre Auger Observatory (www.auger.org.ar), the world largest cosmic-ray facility. The activity is part of the DDAp between UNSAM and KIT and the successful candidates must be willing to spend time at both institutions. The DDAp is partially financed by the Centro Universitario Argentino-Alemán (CUAA/DAHZ, http://www.cuaa-dahz.org/nosotros.html).

Research topics are:

1. Determining the lateral distribution of different air shower components in the energy range above 10^{17}eV.
2. Estimating the muon production longitudinal profiles using timing information of AMIGA counters in the energy range $\geq 10^{17}$ eV.
3. Application to astrophysical and geophysical phenomena of the low energy modes of the Observatory.

The main focus of the research is the analysis of the muonic component of the showers as detected by the multi-detector system of the Pierre Auger Observatory.

Requirements: Candidates must have a degree in physics at the time of taking the fellowship.

Selection process: all applications will be reviewed by a panel of experts. Following this round, a shortlist of candidates will be interviewed and the best candidates will be offered the opportunity to join the PhD program.

Application: Please send in a resume, relevant information and the e-mail addresses of two references all in a single PDF file, preferably before Dec. 15th, 2017.

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