Hernán Asorey

Particle and Radiation Detection Lab
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Personal Information

Born in Quilmes, Buenos Aires, Argentina, on February 05th, 1974 (38 years old)
Argentinian, married, two daughters.

Current Positions

Permanent Position at Gerencia de Tecnología e Investigación en Altas Energías (Technology and Research in High Energy Physics Department), Bariloche Atomic Centre, National Commission of Atomic Energy (CNEA)

Senior Teaching Assistant (Jefe de Trabajos Prácticos) at Physics Department of Rio Negro National University (UNRN)

Teaching Assistant at Physics Department of Instituto Balseiro, Cuyo National University (UNC)

Education

2012 Doctor in Physics (Ph.D.)
Institution: Bariloche Atomic Centre - Instituto Balseiro, CNEA-UNC
Thesis: The Water Cherenkov Detectors of the Pierre Auger Observatory and their Application to the Study of Background Radiation
Advisor: Dr. Ingomar Allekotte

2005 Master in Science, Physics
Orientation: Fields and particle physics
Institution: Instituto Balseiro, Bariloche Atomic Centre (CNEA-UNC)
Thesis: Event Reconstruction with the Surface Detectors of the Pierre Auger Observatory
Advisor: Dr. Ingomar Allekotte

2004 "Licenciado" in Physics
Institution: Instituto Balseiro, Bariloche Atomic Centre (CNEA-UNC)

Research & Teaching Activities

Since I have earned my master degree in December 2005, I have been involved in the following projects:

Pierre Auger Observatory

See www.auger.org

Member of the Pierre Auger Collaboration since 2006

Ultra High-Energy Cosmic Rays Physics

Data analysis of the Surface Detector

Development of the reconstruction event chain of the Surface Detector

Development and applications of the low energy modes (scaler and histogram modes) of the surface detectors of the Pierre Auger Observatory, for the study of transient events (Gamma Ray Bursts and Forbush events), and short and long term modulation of the galactic cosmic rays flux due to solar activity

CORSIKA and detector simulations, oriented to determine the water-Cherenkov response working in the low energy modes

Data analysis of the weather monitoring system of the Pierre Auger Observatory

Large Aperture Grb Observatory (LAGO)

Declared of Scientific, Academic and Social interest by the Honourable House of Representatives of the Rio Negro Province, Dec. 42/2010.
See http://fisica.cab.cnea.gov.ar/particulas/laboratorio/lago

Country Representative - Argentina - since 2012

Member of the LAGO International Collaboration since 2006

Simulations and data analysis for the detection of transient events (GRB and Forbush events), background radiation and atmospheric physics.

Research, development and building of three water-Cherenkov detector prototypes for the LAGO project at Bariloche Atomic Centre. One of them will be installed at the Antarctic Peninsula.

Design and coordination of the experiment "Measurement of Muon Lifetime in Water", done by undergraduate students at Instituto Balseiro.

Cherenkov Telescope Array (CTA)

See www.cta-observatory.org

Member of the CTA consortium since 2010

Research and development of the autonomous station for control and data acquisition of the weather station and sky quality meter installed in San Antonio de los Cobres, Argentina, one of the site candidates for the CTA observatory.

ANDES Underground Laboratory

See www.andeslab.org

Estimation and measurements of the expected backgrounds at the ANDES underground lab due to natural radioactivity and high energy atmospheric muons

Teaching

See www.ib.edu.ar and www.unrn.edu.ar

Teaching assistant, Experimental Physics III and Introduction to nuclear and particle physics courses, Instituto Balseiro (UNC)

Senior teaching assistant, Physics I (introductory physics) course, UNRN.

Summary

42 peer review journal publications.

22 participations and presentations at Schools & Conferences.

13 technical notes (GAP Notes) of the Pierre Auger Observatory.

Hernán Asorey
5th December 2012