

# Hernán Asorey

**Particle and Radiation Detection Laboratory**  
Comisión Nacional de Energía Atómica  
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## Personal Information

Born in Quilmes, Buenos Aires, Argentina, on February 05<sup>th</sup>, 1974 (41 years old)  
Argentinian, married, two daughters.

## Current Positions

Researcher at Laboratorio Detección de Partículas y Radiación (LabDPR), Gerencia Tecnología e Investigación en Altas Energías (Technology and Research in High Energy Physics Department), Centro Atómico Bariloche, Comisión Nacional de Energía Atómica (CNEA)

Associated Professor at Sede Andina, Universidad Nacional de Río Negro (UNRN)

## Education

- 2012 DOCTOR IN PHYSICS (PH.D.)  
*Institution:* Particles and Fields Group, Centro Atómico Bariloche - 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:* High Energy Physics. *Institution:* Particles and Fields Group, Instituto Balseiro, Centro Atómico Bariloche (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, Centro Atómico Bariloche (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 (2006-PRESENT)

See [www.auger.org](http://www.auger.org)

Task leader of the “Cosmo-Geophysics” task of the Pierre Auger Observatory

Data analysis of the Surface Detector

Extensive Atmospheric Shower Physics

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

LATIN AMERICAN GIANT OBSERVATORY (LAGO) (2007-PRESENT)

See [lagoproject.org](http://lagoproject.org)

Principal Investigator since 2013

Environmental and atmospheric variables analysis

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 Centro Atómico Bariloche. 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) (2010-2013)

See [www.cta-observatory.org](http://www.cta-observatory.org)

San Antonio de los Cobres site characterization

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 (2010-PRESENT)

See [www.andeslab.org](http://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 (2009-PRESENT)

See [www.ib.edu.ar](http://www.ib.edu.ar), [www.uis.edu.co](http://www.uis.edu.co), and [www.unrn.edu.ar](http://www.unrn.edu.ar)

Professor, Classical Mechanics (Graduate) and General Astronomy, School of Physics, UIS.

Professor, Introductory Physics course and Introductory Particle Physics course, UIS.

Design and lecture of the course “Astro-meteorology and Climate Change”, intended for High Schools teachers, UIS, March 2014.

Professor, Advanced Mathematical Methods for Physics course, UIS.

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

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

## Additional Information

Languages: Spanish (Native); English (B2); French (A1)

Computing skills: Linux and Windows operative system. Preferred editor: Vim.

Programming skills: C/C++, Perl, Python, HTML, PHP, SQL, and Bash.

Technical computing and data analysis software skills: root, gnuplot, spyder, Mathematica, AutoCAD design software.

## Human Resources Training

### COMPLETED

- 2015 Master in Physis thesis advisor of Mauricio Suárez Durán at the School of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia
- 2015 Physics thesis advisor of Alex Estupiñán at the School of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia, Qualification 5/5.
- 2014 System Engineering thesis advisor of Rafael Laverde at the School of System Engineering, Universidad Industrial de Santander, Bucaramanga, Colombia, Qualification 4.9/5.
- 2014 Physics thesis advisor of Lic. Jonathan David Bossio Solá, at the Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Buenos Aires (UBA), Qualification 10/10.

### UNDERWAY

- 2014 Master in Physis thesis advisor of Christian Sarmiento Cano at the School of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia.
- 2014 Master in Physis thesis advisor of Yunion Perez at the Physics Department, Universidad de los Andes, Mérida, Venezuela.
- 2014 Physics thesis advisor of Arturo Núñez at the Physics Department, Universidad de los Andes, Mérida, Venezuela.
- 2014 Physics thesis advisor of Rolando Calderón Ardila at the School of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia
- 2014 Physics thesis advisor of Sergio Pinilla at the School of Physics, Universidad Industrial de Santander, Bucaramanga, Colombia.

## Publication summary

60 peer review journal publications.

41 participations and presentations at Schools & Conferences.

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

See the complete list of publications, works and citations in some of the following services:

ORCID : [orcid.org/0000-0002-4559-8785](https://orcid.org/0000-0002-4559-8785)

Google Scholar : [scholar.google.com.co/citations?user=Vj7\\_fGsAAAAJ](https://scholar.google.com.co/citations?user=Vj7_fGsAAAAJ)

Scopus : [www.scopus.com/authid/detail.url?authorId=35276880300](https://www.scopus.com/authid/detail.url?authorId=35276880300)

Inspire-HEP : [inspirehep.net/author/profile/H.Asorey.1](https://inspirehep.net/author/profile/H.Asorey.1)

COLCIENCIAS : [190.216.132.131:8081/cvlac/visualizador/generarCurriculoCv.do?cod\\_rh=0000005467](https://190.216.132.131:8081/cvlac/visualizador/generarCurriculoCv.do?cod_rh=0000005467)

A handwritten signature in black ink, consisting of several overlapping loops and strokes, positioned above the printed name.

Hernán Asorey  
29th April 2015

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