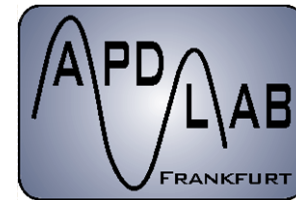


Presentation Talk

Jordi Albert

APD-Labor, IKF Frankfurt



EMC Meeting

GSI Darmstadt, 22-23 February 2010



Physics Studies

Faculty of Physics
at the University of València (Spain)
1996–2001

- Major fields of study:
 - Elementary Particles
 - Nuclear Theory
 - Experimental Techniques in Nuclear Physics
- Academic degree: *Licenciado en Física / Llicenciat en Física*

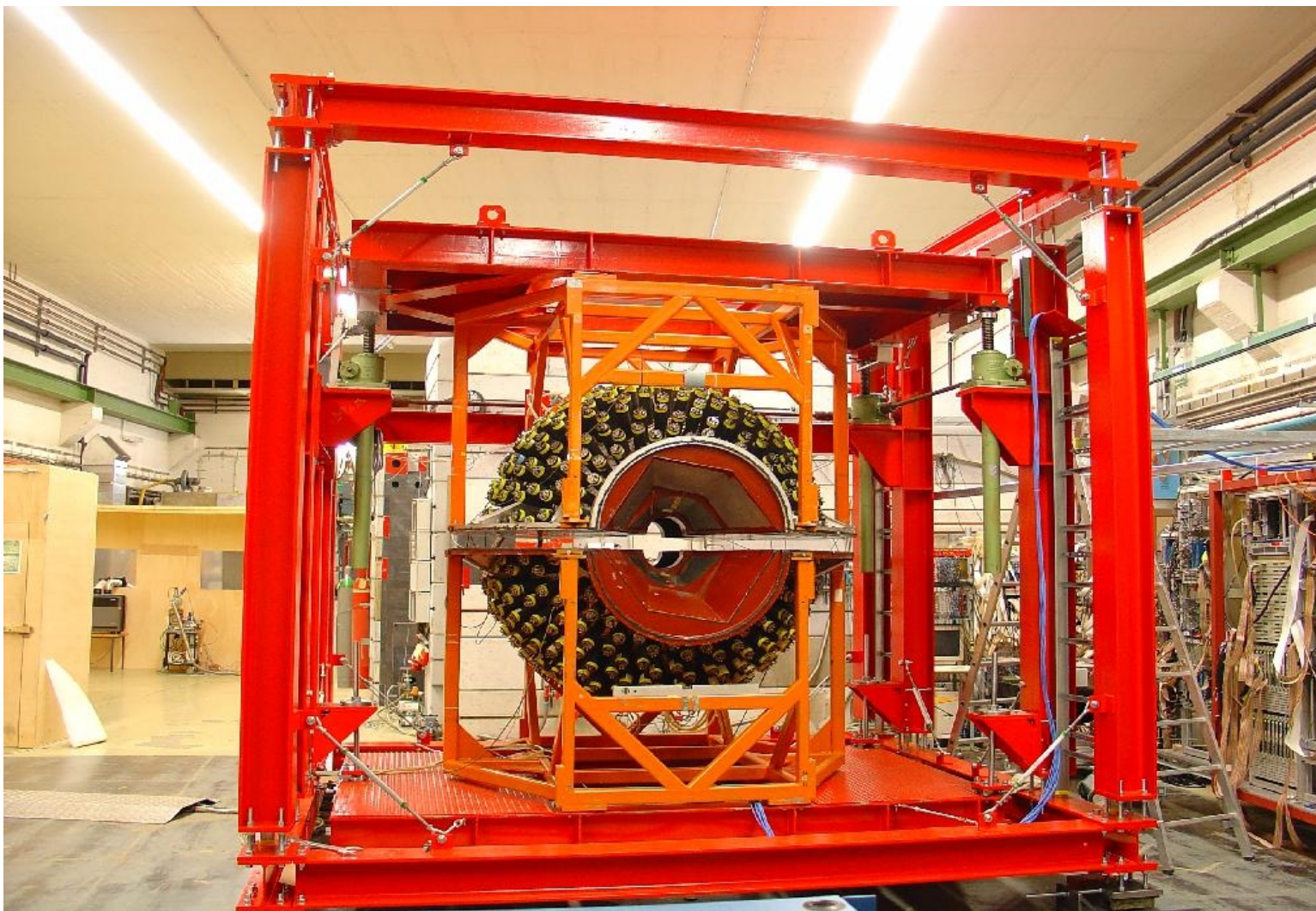


Diploma Thesis

Institute of Nuclear Physics
at the Johannes Gutenberg University of Mainz (Germany),
under the supervision of Prof. Dr. Reinhard Beck
2002–2003

- Working group:
A2 International Collaboration – Experiments with Real Photons at MAMI
- Research facility:
MAMI (Mainzer Mikrotron), Mainz
- Topic:
Test measurements for the commissioning of the Crystal Ball Detector,
a large-acceptance photon spectrometer.
- Tasks:
 - Test of two prototypes for the vertex detector: A straw-tube chamber and a multiwire proportional chamber.
 - Investigation of a possible neutron background in the experimental hall due to the remodelling of the electron beam dump.
 - Measurement tasks for running experiments at MAMI.



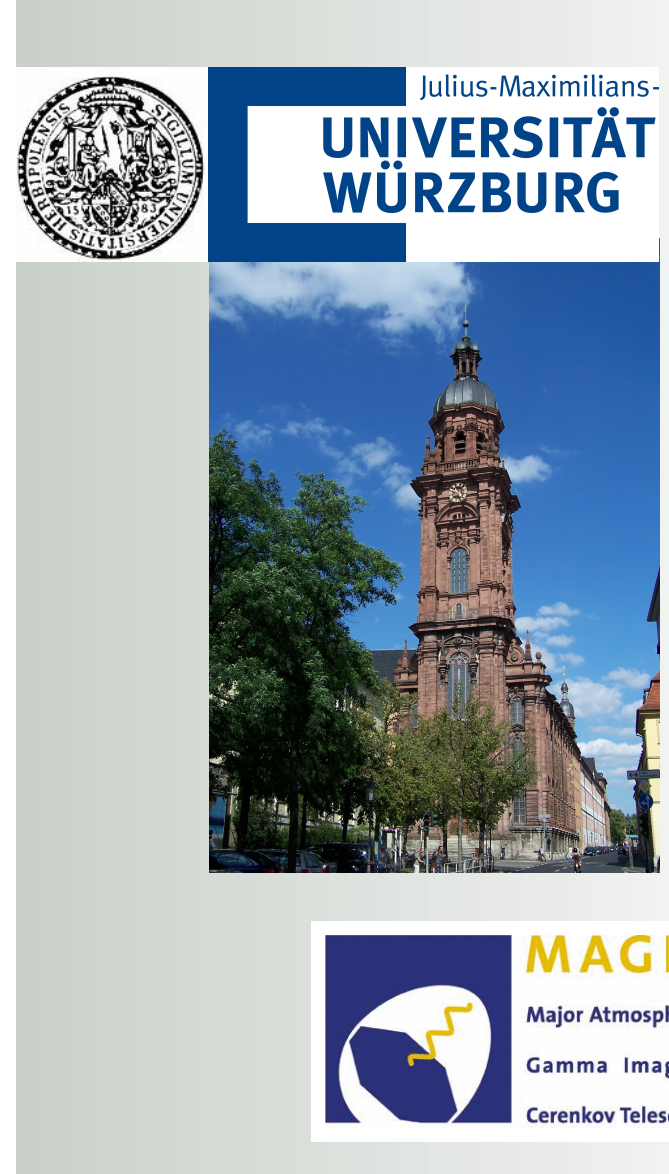


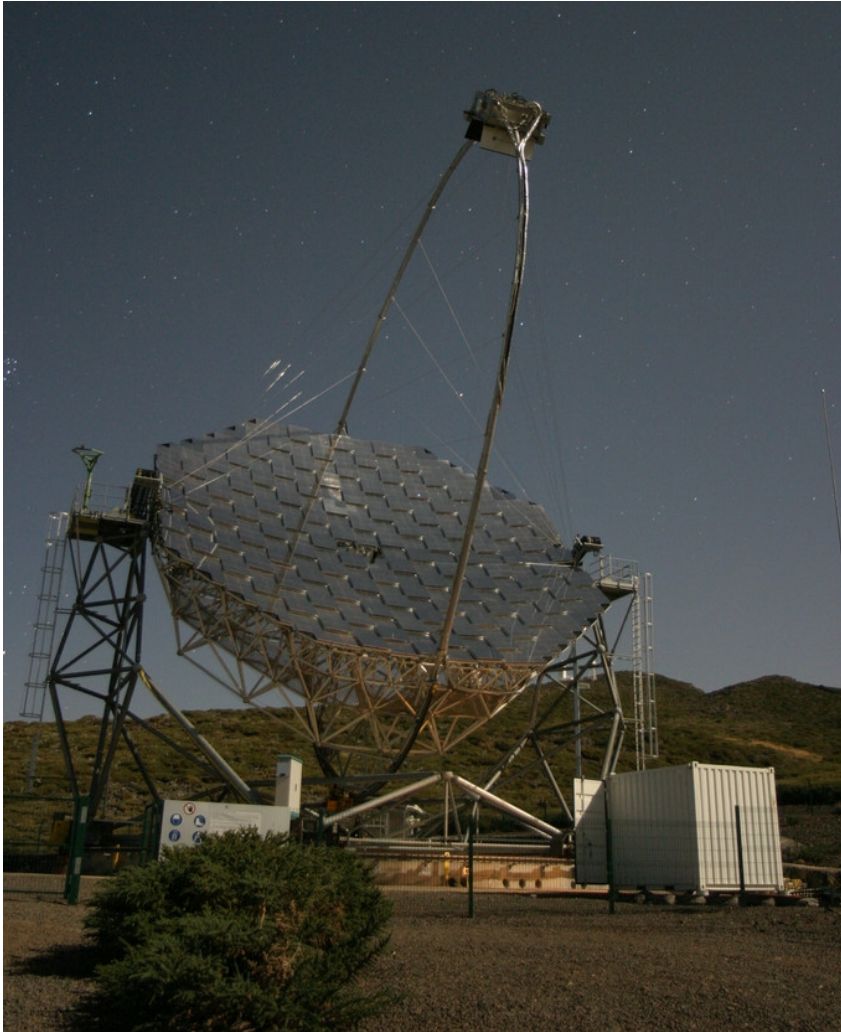
Crystal Ball in its frame at MAMI, October 2003

PhD Studies in Very High Energy (VHE) Gamma-Ray Astrophysics

Institute of Theoretical Physics and Astrophysics
at the Julius-Maximilians University of Würzburg (Germany),
under the supervision of Prof. Dr. Karl Mannheim
2004–2008

- Working group:
MAGIC International Collaboration – Observation of VHE (GeV–TeV)
Cosmic Gamma-Rays with an Imaging Atmospheric Cherenkov Telescope
- Research facility:
MAGIC Telescope, La Palma (Canary Islands)
- Tasks:
 - Planning of observational campaigns and writing of proposals.
 - Measurement tasks at the telescope.
 - Software development for the data analysis (based on ROOT).
 - Analysis of observational data and physical interpretation within the framework of theoretical models for relativistic particle acceleration and VHE emission mechanisms in active galactic nuclei.



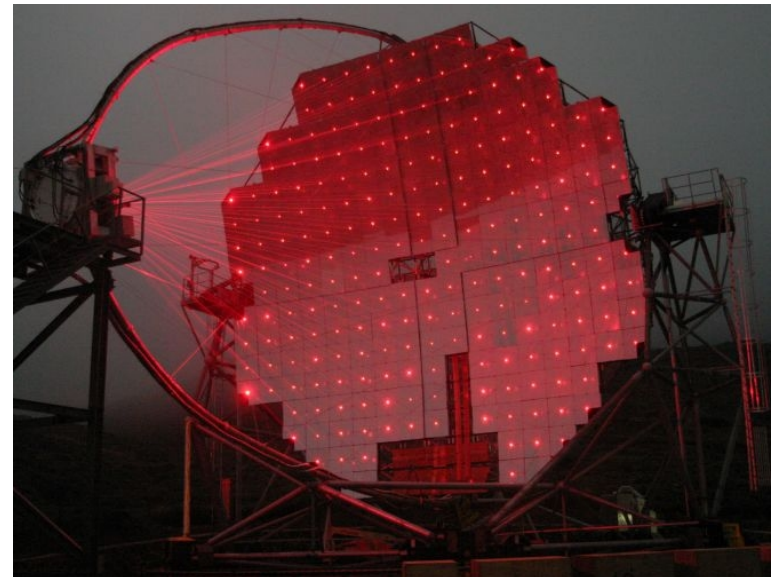


MAGIC Telescope, at the astronomical observatory El Roque de los Muchachos, La Palma (Canary Islands), 2200 m above sea level



PMT camera

Laser adjustment of mirror panels

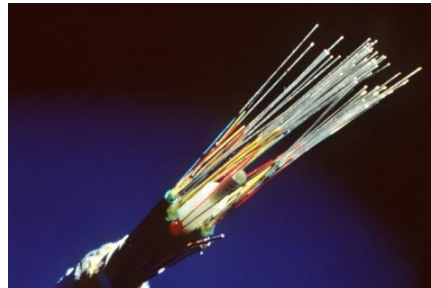
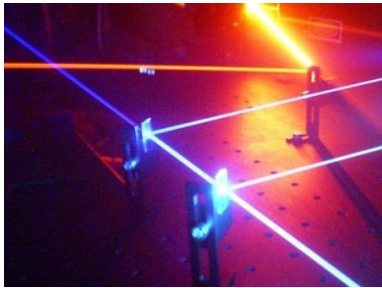


Advanced Studies on Technology Development

Rhine University of Applied Sciences, Köln (Germany)
2009

Major fields of study:

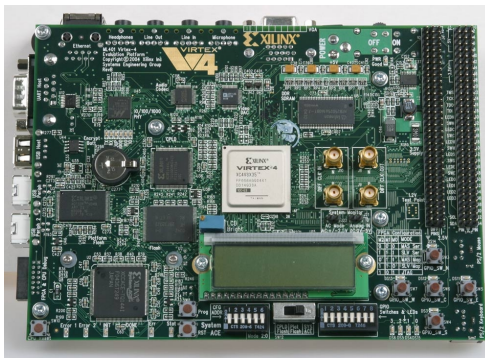
- Laser Technology
 - Material processing in the industry (cutting, drilling, welding, marking and material stripping)
 - Medical therapy (laser treatment of human tissue)
- Optical Data Communication
- Hardware Design with FPGA



Professional Training

Central Institute of Electronics
at the Research Centre Jülich (Germany),
under the supervision of Dr. Heinz Rongen
2009

- Working area:
Hardware Design with FPGA for Digital Signal Processing
- Tasks:
 - Implementation of FIR filters on FPGA by using VHDL
 - Design of floating-point algorithms based on a Xilinx IP-core
 - Test and validation of implemented filters



Xilinx Virtex-4 ML402
Evaluation Platform



And now...

PhD Studies in Experimental Hadron Physics

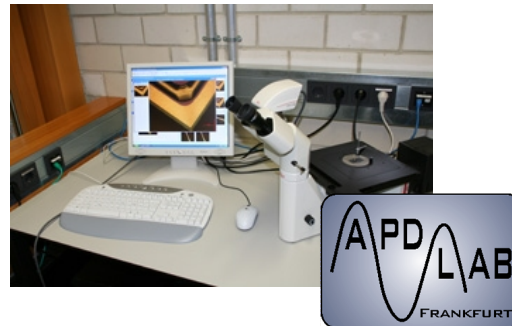
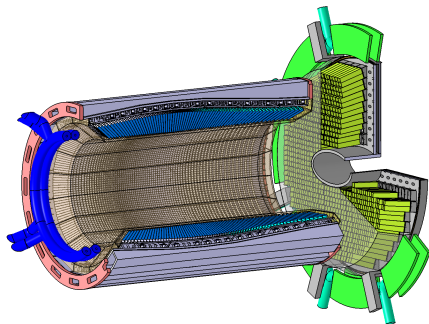
Institute of Nuclear Physics

at the Goethe University of Frankfurt (Germany),

under the supervision of Prof. Dr. Klaus Peters

Tasks:

- Research and development of large-area avalanche photodiodes for the electromagnetic calorimeter of PANDA, at the APD-Labor in Frankfurt, in collaboration with Dr. Andrea Wilms.
- Analysis and interpretation of data from a running experiment (to be determined).





*Looking forward
to a fruitful cooperation*

Jordi Albert
APD-Labor, IKF Frankfurt



EMC Meeting
GSI Darmstadt, 22-23 February 2010

