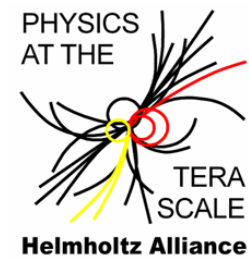


# Welcome !

## 2nd MC-PAD Network Training Event

Detector simulation using Geant4 and data analysis with ROOT

Hamburg, 28-30 January 2010



# DESY and University of Hamburg



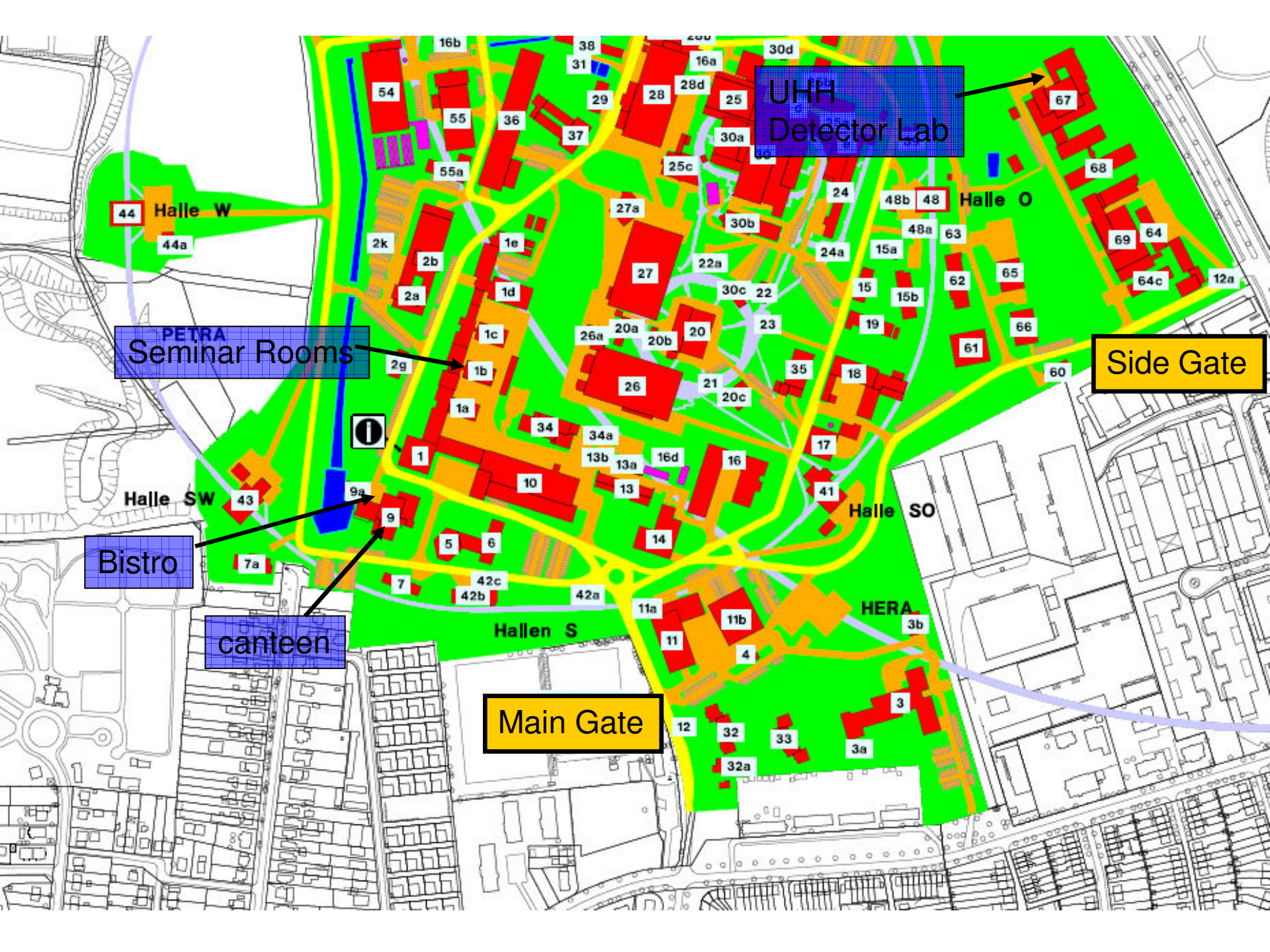
- Largest German Lab for Particle Physics and Synchrotron Radiation
- Until 2007 main emphasis was on HERA experiments
- Now strong contributions to LHC and ILC
- DESY is a key lab in the Helmholtz-Alliance ( a consortium of the German Particle Physics Labs, aiming at strong contributions to LHC)



- Large University:
- About 40 000 Students
- About 1000 in the Physics Department
- 4 main focuses:
  - Nanostructures
  - Astrophysics
  - Physics with Photons
  - Particle Physics (Theory and Experiment)

# Organizational Matters

1. Reception desk: will be open during coffee breaks
2. Coffee breaks: in the area outside the seminar rooms
3. Trainees: everyone will get an account  
please take the seats in the front rows  
two persons share one computer
4. MC-PAD Researcher: need this room for discussion/election during next break  
seminar room 3 booked for this evening
5. Wireless Connection: everyone gets a flyer with the information at Registration  
*Name: Geant2010*  
*WPA/WPA2-PSK: uluz7nea6*



UHH  
Detector Lab

44 Halle W  
44a  
PETRA  
Seminar Rooms

Side Gate

Bistro

canteen

Main Gate

Halle SW

Hallen S

Halle SO






Halle O

HERA

# Agenda

Thursday 28 January 2010

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09:00	Welcome and organizational issues (15')	Christian Joram (CERN) , Doris Eckstein (University of Hamburg, Institut für Experimentalphysik)
09:15	Lecture and tutorial: Basic fitting (1) (1h00') (  Slides  )	Gero Flucke (DESY (Hamburg)) , Olaf Behnke (DESY)
10:15	Coffee break (30')	
10:45	Lecture and tutorial: Basic fitting (2) (1h15')	Gero Flucke (DESY (Hamburg)) , Olaf Behnke (DESY)
12:00	Lecture: Physics of the beam telescope (1h00')	Tilman Rohe (PSI)
13:00	Lunch break (1h00') (Kantine, Geb. 9 )	
14:00	Lecture: Monte Carlo method (1h00')	Thomas Schoerner-Sadenius (DESY)
15:00	Lecture and tutorial: Introduction to and first experience with Geant 4 (1h10')	John Apostolakis (CERN)
	• L: Introduction to Geant4 (20')	John Apostolakis (CERN)
	• Task 1.0: Geant4 Basics (15')	Vladimir Ivantchenko (CERN, ESA)
	• Task 1.0: Visualization (20')	Andrea Dotti (CERN)
	• Task 1.0: Documentation (15')	Gunter Folger (CERN)
16:10	Coffee break (15')	
16:25	Lecture and tutorial: Geometry, Materials, and Particle Source (1h35')	Andreas Schaelicke (DESY Zeuthen)
18:00	MC-PAD Supervisory Board Meeting (2h00') (  DRAFT AGENDA   ) (Seminar Room 5 )	
	Representatives of MC-PAD network participants	
18:00	MC-PAD Researchers Session (2h00') (DESY Hamburg ( SemRm 3 ))	
	Discussion and exchange session, for MC-PAD Researchers only.	

# Agenda

## Friday 29 January 2010

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09:00	Lecture and Tutorial: User actions and Analysis (1h45')	Andrea Dotti (CERN) , Gunter Folger (CERN)
10:45	Coffee break (15')	
11:00	Lecture and Tutorial: Particles and physics processes (1h45') (  Slides  )	Vladimir Ivantchenko (CERN, ESA) , Gunter Folger (CERN)
12:45	Tutorial: Generation of the test data with Geant4 (15')	Andrea Dotti (CERN)
13:00	Lunch break (1h00') (Kantine, Geb. 9 )	
14:00	Tutorial on ROOT Analysis of Test Beam Data: Pedestal and Noise Determination, Cluster Finding and Position Reconstruction (2h30')	Gero Flucke (DESY (Hamburg)) , Olaf Behnke (DESY)
16:30	Coffee break (15')	
16:45	Tutorial on ROOT Analysis of Test Beam Data: Cluster Charge Distributions (1h30')	Olaf Behnke (DESY) , Gero Flucke (DESY)
19:00	Workshop Dinner (3h00') (Restaurant Champus, Beselerstraße 35, 22607 Hamburg )	

## Saturday 30 January 2010

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09:00	Tutorial on ROOT Analysis of Test Beam Data: Momentum Dependence of Position Resolution, Multiple Scattering Effects (1h45')	Olaf Behnke (DESY) , Gero Flucke (DESY)
10:45	Coffee break (15')	
11:00	Tutorial on ROOT Analysis of Test Beam Data: Angular Dependence of Cluster Charge and Position Resolution (1h00')	Olaf Behnke (DESY) , Gero Flucke (DESY)
12:00	Summary of Workshop (30')	Robert Klanner (Institut fuer Experimentalphysik)
12:30	Lunch break (1h30')	
14:00	Beautiful Hamburg! (4h00') (... )	