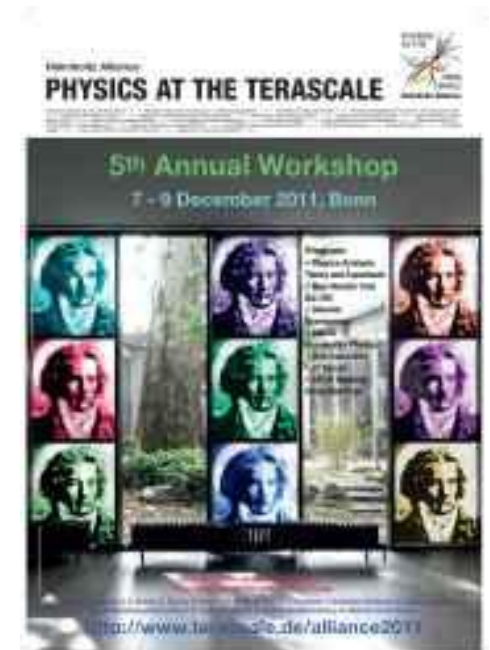
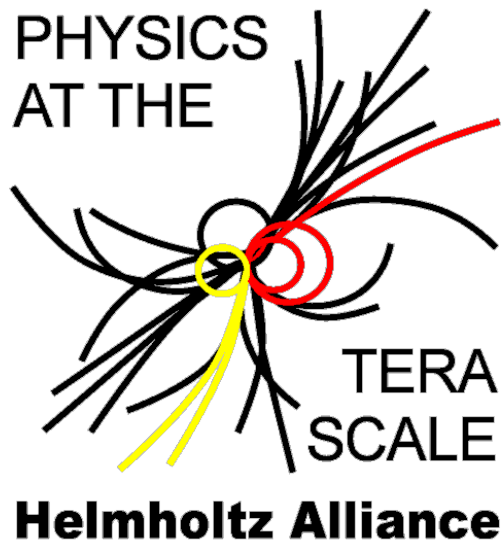


Alliance „Physics at the Terascale“ Status and Outlook

Christian Zeitnitz



The Alliance: Some Facts

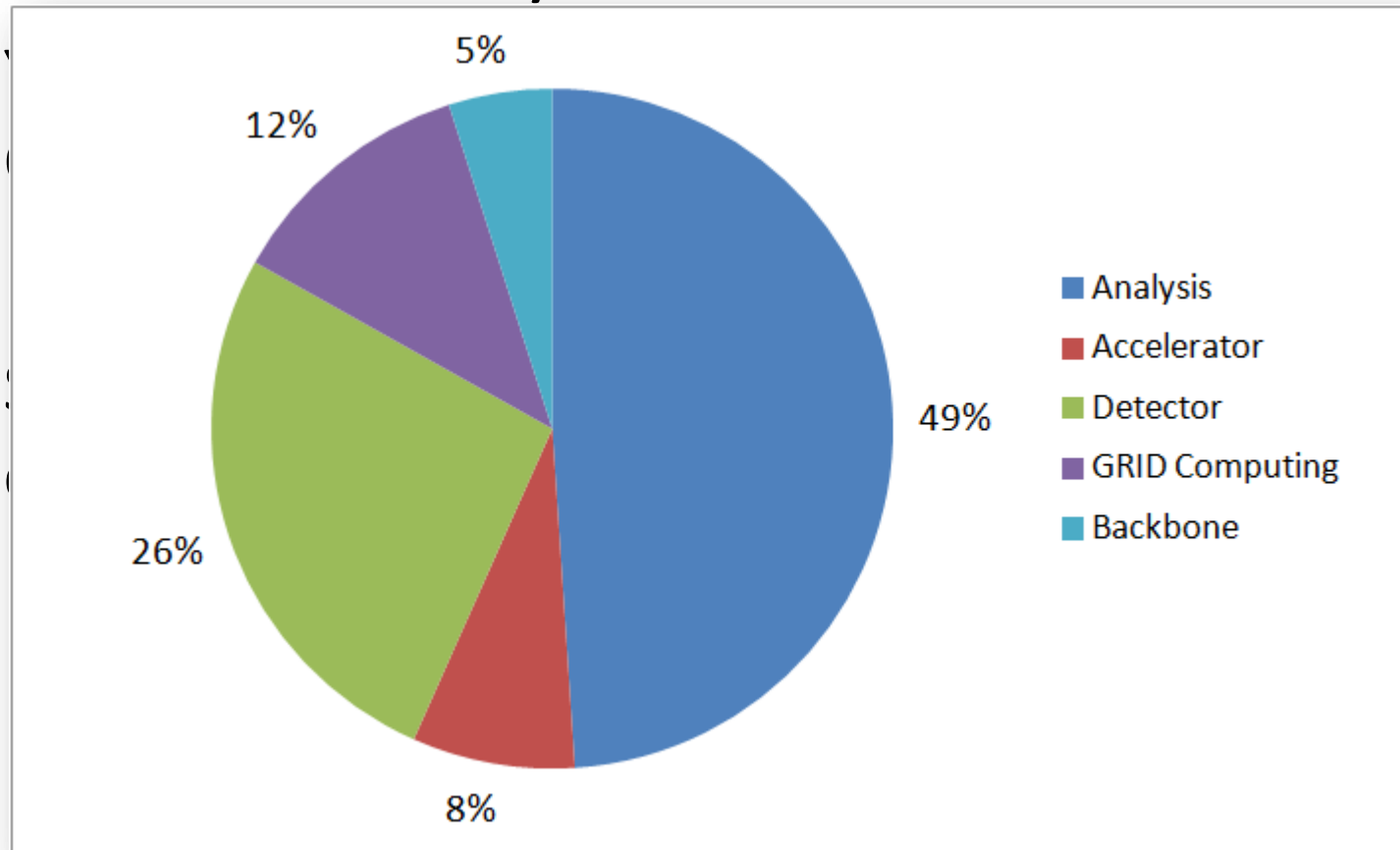
- First Alliance financed by the Helmholtz Association
- DESY, KIT, 18 Universities and MPI Munich
- Research areas
 - Accelerator, Analysis incl. the Analysis Center, Detector and GRID Computing
- Backbone
 - Schools and Workshops
 - Dual Career program
 - Outreach
 - Guest support
 - and more
- Started in July 2007
- Budget: 73M€ from all partner institutions
 - 25M€ for 5 years from Helmholtz Association
- 2011 approx. 6M€ from Helmholtz

The Alliance: 2011

- 71 FTE financed by the Alliance
 - YIGs, Fellows, Staff, PhD students, Outreach, Dual Career ...
- Ca. 1,7M€ invest and backbone money
 - School and Workshop support, travel money, Tier-2 centers, Detector and GRIDprojects
 - Backbone 283k€
 - Detector ca. 400k€
 - Grid ca. 1M€

The Alliance: 2011

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Some Activities 2011

- More than 20 Schools/Workshops with Alliance involvement
 - More than 1000 participants
 - Financial support has been granted for a lot of Workshops by the Project Boards or the Analysis Center
- First Workshops for 2012 have been scheduled



Scientific Activities

- Analysis Project

- New Young Investigator Group (Steffen Schumann) started in Göttingen
- Analysis – Working Groups
 - Mtautau working group
 - Central Jet Veto working group
 - Neutrino Masses and Lepton Flavour Violation at the LHC
 - PDF group
 - MC group
 - BSM Parameter Fitting group
 - Statistics Tools group
 - Linear Collider-Forum

Check the Alliance Web Page for details and contacts!

Scientific Activities (2)

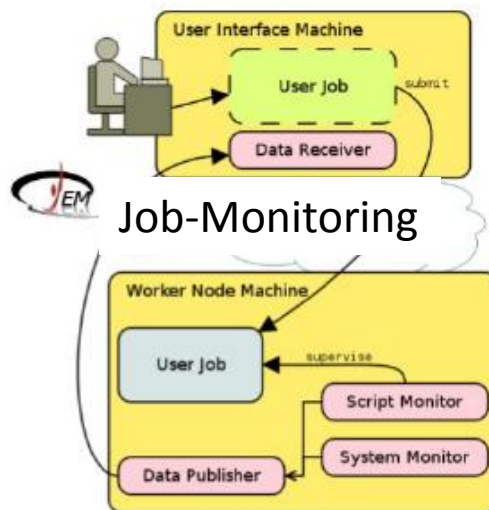
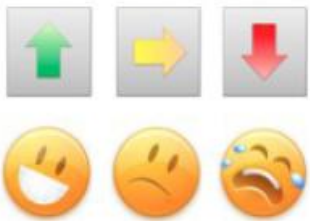
- Accelerator
 - Development for ILC
 - Gradient of 35MV/m have been reached
 - Contributions from DESY, HH, W
 - Plasma Wake-Field Acceleration has been established in Hamburg
 - Young Investigator Group in HH
 - Involved in multiple projects at DESY and EU program
 - Collaboration with MPI and CERN
 - Education
 - Lecture at GÖ in 2011
 - Next Accelerator School in 2012

Scientific Activities (3)

- GRID Computing Project

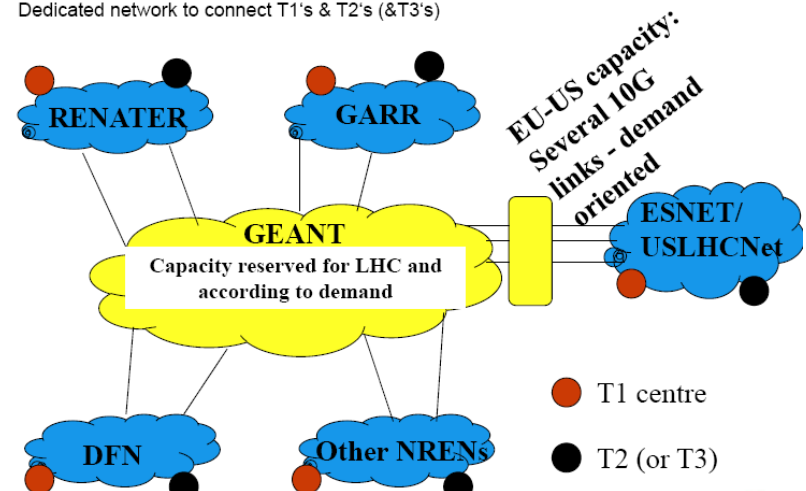
- Alliance (co-)financed Tier-2 centers and the NAF are the backbone for the analysis activities in Germany
- Alliance supported GRID-Projects (mass storage, monitoring, virtualisation ...) are in production at the LHC experiments
- Support for LHCOne – a dedicated network for LHC

Happy Faces Monitoring



LHCOne Network

Dedicated network to connect T1's & T2's (&T3's)



/orkshop 09.12.2011

Scientific Activities (4)

- **Detector Project**
 - Very successful workshop in March
 - Special „SiPM“ and „radiation hard electronic“ school and hands-on lab course
 - Focussed on: silicon detector, gas-detectors and spin-offs
 - Next workshop in March 2012
 - Hands-on: FPGA Programming
 - Topics: new technologies, calorimetry and low mass design
 - SiPM Virtual Institute has been extended by Aachen
 - Member institutes: AC, DESY, HD, M, W
 - Current projects
 - Irradiation and characterisation (KA)
 - „A Test Bench for Fast Data Transmission Line“ (DESY, HD, W)
 - Novel Powering Concepts for Tracking Detectors (AC)
 - Ageing and background sensitivity of particle detectors (M)
 - Virtual SiPM Laboratory (AC, DESY, HD, MPI, W)
 - Bump Bonding (HD)

Analysis Centre Issues

<http://www.terascale.de/anacentre>

- Analysis Centre studentships still available:
Funding for projects of up to three months away from the home institute
- “Theorist of the Week” program: Suggest your candidate – let the Analysis Centre organize. Next: John Collins – 21-25 May 2012, Hamburg
- Schools and Workshops (see next slide for 2012 draft overview)
 - 2012 editions of “Introduction to Terascale Physics”, MC and Statistics Schools
 - Again Advanced Statistics School, this time combined with BSM Physics topic
 - Computing events: Complementary programs at GridKa school and Dresden School
 - Contact the Analysis Centre for (financial, organizational, ...) support for organizing your workshop

Analysis Centre and other Events 2012

http://www.terascale.de/schools_and_workshops/

Title	Date	Place	Organiser	Comment
Introduction to the Terascale	5-9 March	Hamburg	Schörner-Sadenius	Mainly for Bachelor (Master) students
MC School	12-16 March	Hamburg	Plätzer / Reuter	BSM Physics
Top Workshop	22/23 March	Berlin	P. Uwer	
Single-top / SM4 WS	26-28 March	Pfalz (?)	Nierste / Hirschbühl	
Statistics School	2-5 April	Hamburg	Flucke	Fitting, MVA etc.
Mtautau Workshop	2-3 April		Kobel	Freiburg
J. Collins TOW	21-25 May	Hamburg	Schörner-Sadenius	
Event Generation and Resummation	4-8 June	Hamburg	Nagy	
Statistics + BSM Physics	17-21 September	Bonn	Bechtle	Advanced statistics
Advanced Computing	24-28 September	Dresden	Mader, Steinbach	Building on GridKa school material
MC Generators Workshop	~24-28 Sept.	Hamburg	Schörner-Sadenius, Plätzer	Around DESY Theory Workshop

General Information

- Want to participate in a project, organize a workshop or need information?
 - Check Alliance Web-Page: www.terascale.de
 - Contacts
 - Christian Zeitnitz – Scientific Manager
 - Katja Stemmler – Alliance Secretary
 - Project Board Chairs
 - Analysis: U. Uwer, H. Dreiner
 - Accelerator: E. Elsen
 - Detector: L. Feld
 - GRID-Computing: M. Kasemann
 - Analysis Center – Thomas Schörner-Sadenius
 - Check the „Who is Who“ on the Website

General Information

Who's Who in the Helmholtz Alliance (2011)

Management

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Workshop

– Check the „Who's Who“ on the website

General Information

Who's Who in the Helmholtz Alliance (2011)

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Stefan Gieseke
(YIGs + Fellows)
Michael Kobel

Joachim Mnich

Klaus Mönig

Markus Schumacher

Thomas Schörner
(Analysis Centre)
Peter Uwer

Dieter Zeppenfeld

International Advisory

Neil Geddes

Jim Brau

Peter Jenni

Dieter Schlatter

Bernhard Spaan

James Stirling

Tejinder Virdee

Sakue Yamada

Ulrich Uwer
(Experiment Chair)
Georg Weiglein

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Workshop

Check

Outlook

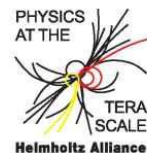
- Current funding of the Alliance will end Dec. 2012
- Continuation of the Alliance activities
 - Partner institutes have promised tenure positions
 - Approx. 17 at Universities and 8 at DESY
 - Some additional money will be available 2013/14 from the Helmholtz Association
 - Alliance will continue with small budget in 2013/14
- Beyond 2014
 - Discussions ongoing , but not clear yet

Summary

- Alliance is very active in all project areas
- High visibility of scientific activities
 - Please remember to acknowledge the Alliance in papers
 - Put the Alliance Logo on your talks
- Very good participation in schools and workshops
- Will continue beyond 2012, BUT not clear yet at what level
- Annual Workshop 2012 at DESY

Helmholtz Alliance

PHYSICS AT THE TERASCALE



Deutscher Elektronen-Synchrotron DESY +++ Karlsruher Institut für Technologie - Großforschungsbereich +++ Max-Planck-Institut für Physik +++ Rheinisch-Westfälische Technische Hochschule Aachen
+++ Humboldt-Universität zu Berlin +++ Rheinische Friedrich-Wilhelms-Universität Bonn +++ Technische Universität Dortmund +++ Technische Universität Dresden +++ Albert-Ludwigs-Universität Freiburg
+++ Justus-Liebig-Universität Gießen +++ Georg-August-Universität Göttingen +++ Universität Hamburg +++ Ruprecht-Karls-Universität Heidelberg +++ Karlsruher Institut für Technologie - Universitätsbereich +++ Johannes Gutenberg-Universität Mainz +++ Ludwig-Maximilians-Universität München +++ Universität Regensburg +++ Universität Rostock +++ Universität Siegen
+++ Julius-Maximilians-Universität Würzburg +++ Bergische Universität Wuppertal +++

5th Annual Workshop

Special thanks to

Andrea Fürstenberg
Valja Gebhardt
Katja Stemmler
Helmut Kortmann
Peter Wienemann
Udo Idschok

Program:

• Physics Analysis:
Theory and Experiment

• Detector

Accelerator Physics

• Grid computing

• Data Mining

Group Meetings

Photo: Berlin-Brandenburgische Akademie der Wissenschaften

Registration deadline: 15.11.2011
Please register via the workshop webpage.

Scientific Programme: I. C. Brock, K. Desch, H. Dreiner, E. Elsen, L. Feld, M. Kasemann, T. Schörner-Sadenius, U. Uwer, C. Zornitz
Local Organising Committee: I. C. Brock, K. Desch, H. Dreiner, A. Fürstenberg, U. Idschok, H. Kortmann

<http://www.terascale.de/alliance2011>