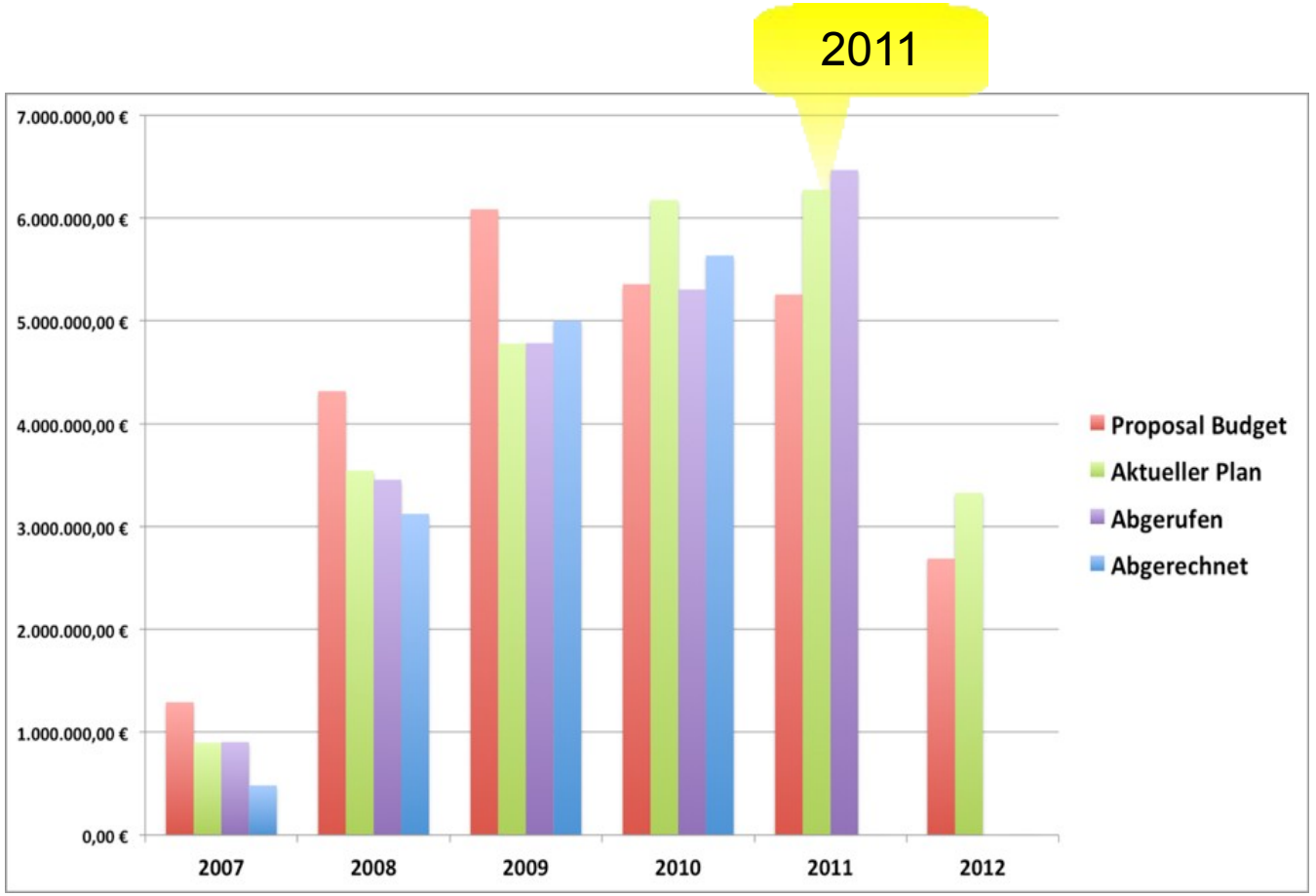
Status of the Alliance 2011

Ties Behnke, DESY

Report at the meeting of the international advisory board, Bonn, 9.12.2011

Status

Alliance in 2011 in full swing:



About 6 Mio in 2011

71 FTE financed

- 34.8 Analysis
- 5.5 accelerator
- 18.8 Detector
- 8.5 GRID
- 3.5 Backbone

(about 20 tenure track)

Big impact
in the German
HEP landscape

Status 2011

Young investigator group in Göttingen (Analysis) started (last major group of the Alliance to start)

Young investigator group in Accelerator reached completion (had started in 2010)

The program of young investigator groups within the Alliance is now complete

- Theory in Berlin
- Monte Carlo in Karlsruhe
- Detector/ Analysis in Dresden
- Analysis in Wuppertal
- Accelerator in Hamburg
- Phenomenology in Göttingen

All groups are operating
Very visible, successful program
High impact in science

Scientific Activities

Strong focus on LHC exploitation and upgrade preparation

Actual analysis of LHC data is done within the collaborations

Alliance working groups complement and add to this by a more global view, generic, connecting experiment and theory

- Specific algorithms (m_tau, central jet veto, neutrino masses...)
- Pdf group
- Statistical tools
- Global analysis (global fits to the data, interpretation)
- Theoretical interpretation
- ...

Preparations for a Linear Collider:

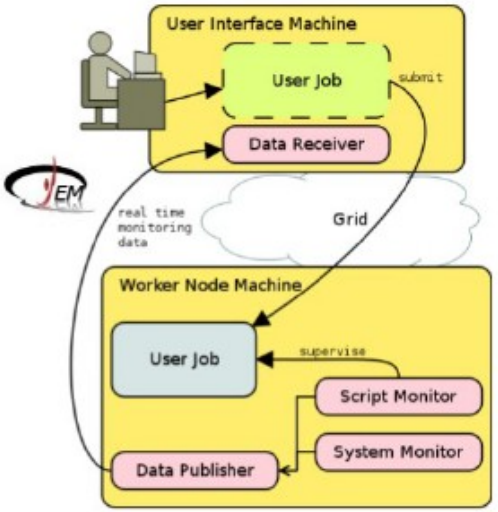
- Linear Collider forum: making the case for the LC in view of LHC data

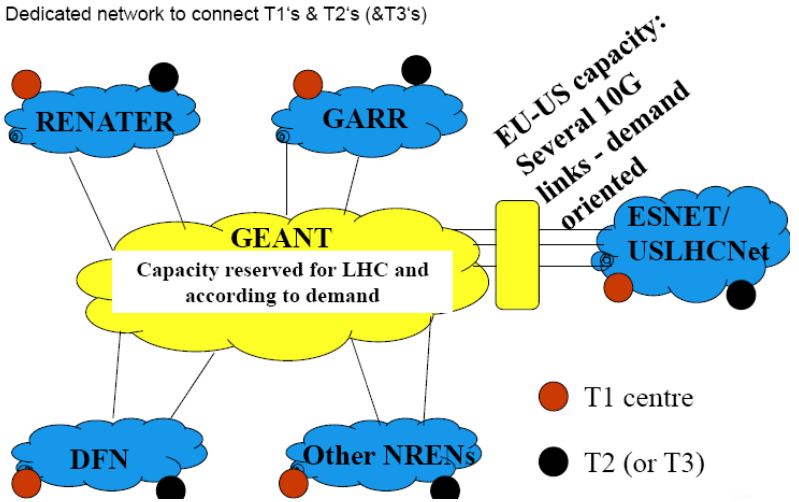
GRID Computing

Central supporting role for GRID computing in Germany

- Distributed Tier2 system in Germany
- Strong contribution to the development of the GRID system

Happy Faces Monitorir





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Scientific Activities

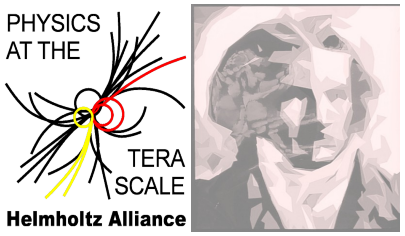
Detector development

- Distributed infrastructure installed and operational and used
- Common development projects across locations and experiments
  - 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)

Accelerator science

- Established strong links within the German community at the energy frontier
- Helped to strenghten research on novel acceleration systems in Germany

Education of young scientists is strong component in all programs



Education: schools

Centrally organised: Schools

Date	Title	Place	Participants	Comment
21-25 February	**Introduction to Terascale Physics**	**Hamburg**	**50**	
14-17 March	**MC School**	**Hamburg**	**35**	
15-17 March	4th Detector Workshop	Hamburg	82	(also a school part)
20-25 March	Computer Algebra and Particle Physics	Zeuthen	32	Partly funded by Alliance
4-8 April	**Statistics School**	**Mainz**	**50**	
10-13 May	**Geant4 Training event**	**Zeuthen**	**30**	
26-30 September	**Software Development**	**Dresden**	**25**	
4-7 October	**Data combination and limit setting**	**Hamburg**	**40**	
10-13 October	**LHC Precision Predictions for Pedestrians**	**Freiburg**	**40**	

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Education: workshops

Date	Title	Place	Comment
24 January	Network requirements for LHC data analysis	Goettingen	
14-15 February	Readout link topical workshop	Wuppertal	
28 February	Computing for HEP data analysis	Goettingen	
15-17 March	Detector Workshop	Hamburg	
16-17 March	dCache workshop	Goettingen	
8-15 April	VISPA Workshop	Aachen	HGF Support
7-8 April	Top Quark Workshop	Wuppertal	
4-6 May	Neutrino Masses and LFV @ LHC	Hamburg	
4-6 May	SUSY / BSM working group	Hamburg	
9-10 June	Central Jet Veto working group	Goettingen	
15-17 June	Rare b decays and low recoil WS	Hamburg	
15-17 June	SM Benchmarks at the LHC	Zeuthen	
14-15 July	2nd LC Forum	Munich	
5-6 September	Single-top / 4th Generation WS	Hamburg	
21-23 November	Whizard Workshop	Hamburg	

Continuation after 2012

Official end of the Alliance: 31.12.2012

Broad agreement by all partners:

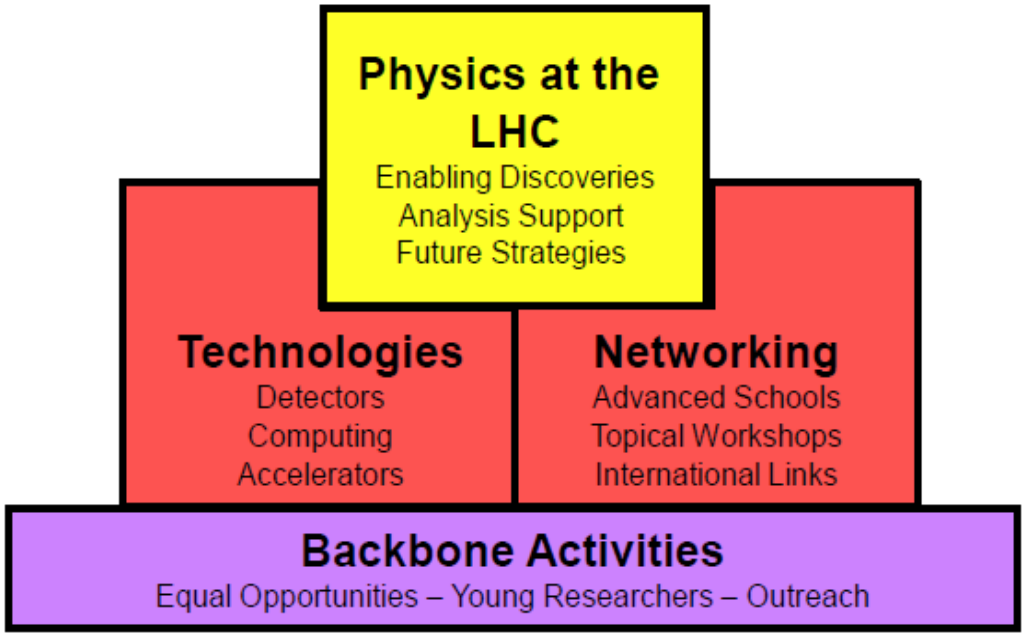
Want to continue and evolve the Alliance structures beyond 2012

Started in 2010 process to ensure continuation after 2012:

- Series of meetings of all group leaders to discuss the “new Alliance”
- Series of workshops by the project boards to define the program > 2012
- Proposal written summer 2011 to lay down our ideas
- Discussion with Helmholtz throughout the process to find a feasible way

After 2012

Develop the focus: Physics at the LHC



Boundary conditions:

- LHC is running

- New initiatives within the Helmholtz association on accelerators and detectors and computing

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The Future Program

Project boards have developed clear outlook on a future program

- Central topics have been defined
- A concept for a funding after 2012 has been developed
- A strong support by the partners is visible

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Helmholtz Alliance

The Outlook

… is not clear

The current situation:

- first attempt to ensure funding after 2012 through special Helmholtz funds (portfolio process) failed

- Offer from Helmholtz to bridge the years 2013 and 2014 with 500kEUR/ year

- perspective after 2014 unclear (inclusion in funding of the Helmholtz centers?)

But: we know what we have and need:

1.0 Mio in tenured positions at DESY
1.2 Mio in tenured positions at Universities

Need 3 Mio/ year
to keep the current
level of activities

The Bridge Concept

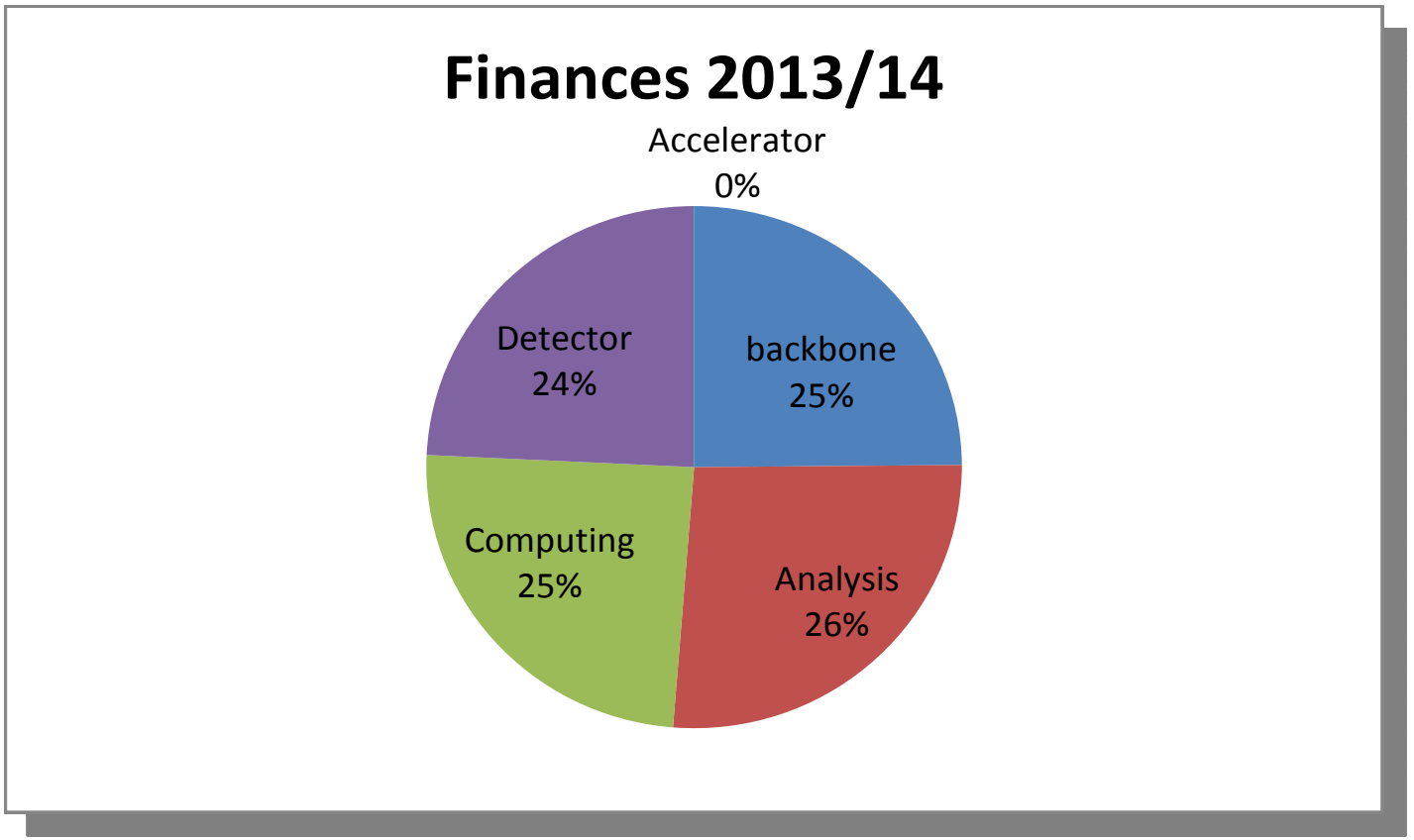
Try to define a minimum program

- Keep the structures alive
- Ensure that the partners remain motivated to keep the pledged resources in the Alliance

Requested bridging budget: 1.06 Mio EUR / year for 2013 / 2014

hoping that we find a way after 2014 to include more money for the Alliance in the Helmholtz planning

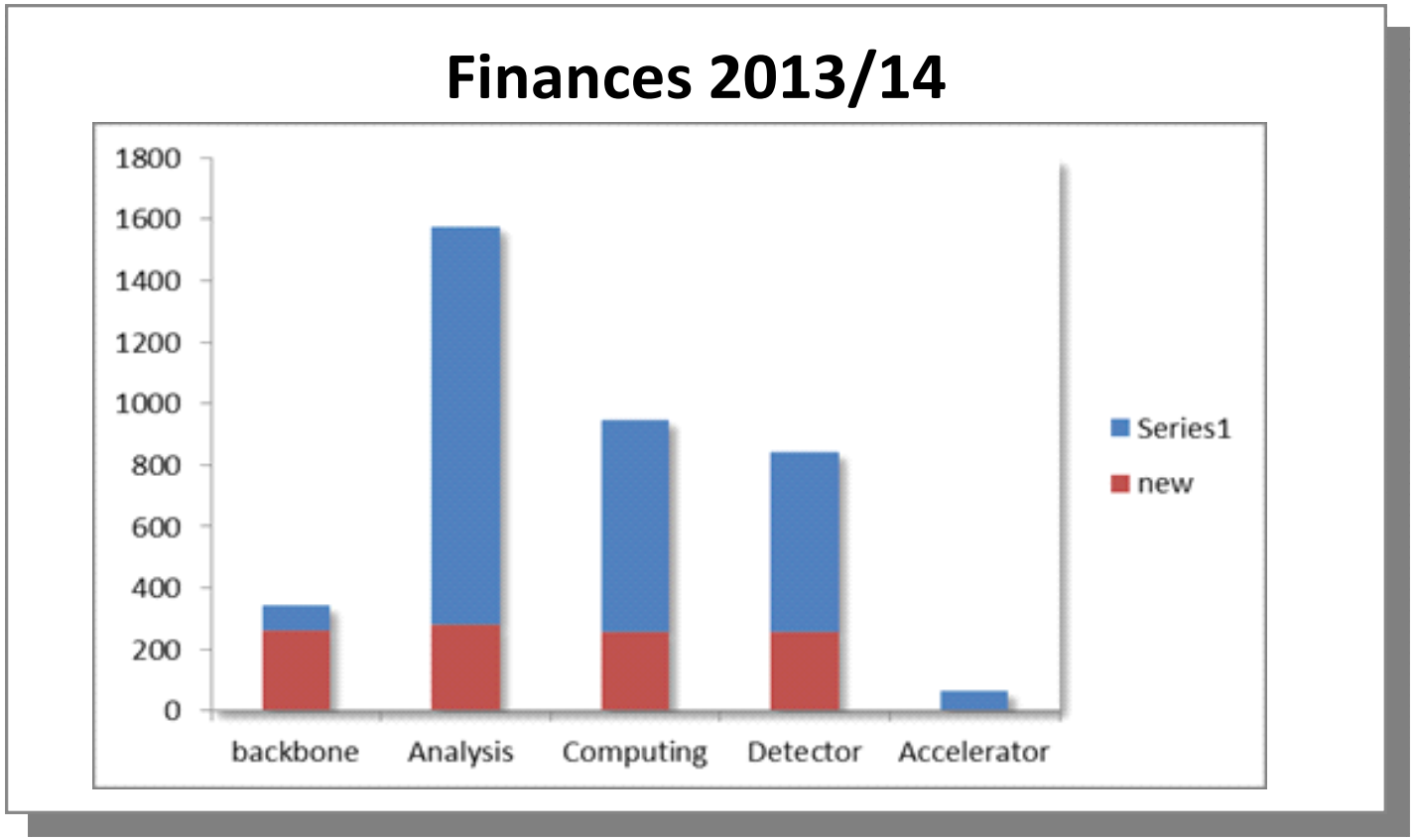
The Bridge Budget



Total requested budget:

1.06 Mio / year

Budget



Total requested budget:

1.06 Mio / year

New funds are leveraged by a factor of 2.5

The next Steps

Financial concept for bridge will be submitted to Helmholtz

(via DESY directorate) next week

Intense discussions with Helmholtz on long scale financing are needed

Planned: Discussions with other Alliances on moving together on this problem

PHYSICS AT THE TERA SCALE
Helmholtz Alliance

Summary

Alliance “Physics at the Terascale” is in full swing

The structures are in place and working

We feel the impact of the Alliance in many ways

Discussion on long term future of Alliance is still open

no solid financial basis has been established

Concrete plans by the Alliance have been developed, but financing is uncertain.