

Introduction to the Terascale

Welcome, some caveats, some information

Helmholtz Alliance
PHYSICS AT THE TERASCALE
Helmholtz Alliance

**Introductory School
"Terascale Physics"**

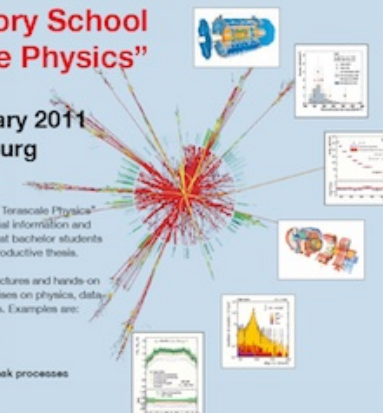
**21-25 February 2011
DESY, Hamburg**

The "Introductory School on Terascale Physics" aims at providing the essential information and techniques on the subject that bachelor students may find very helpful for a productive thesis.

The programme consists of lectures and hands-on tutorials and computer exercises on physics, data analysis and technical issues. Examples are:

- Physics at the Terascale
- ROOT
- Standard Model electroweak processes at LHC
- QCD at LHC
- Monte Carlo techniques and programmes
- Top physics and searches
- Statistics

Admission to the school will be through a selection by the organisers. Please send an email to ans@desy.de, mentioning the name and institute of your supervisor, together with your experience in high-energy physics (if any). The deadline for registration is 10 January 2011. The school fee will be 50 Euros. Support for travel and accommodation can be granted on request. For more details see www.terascale.de/intro2011



Thomas Schörner-Sadenius
DESY-FH



DESY, 21 February 2011

WELCOME ...

- > ... to the second (!) “Introductory” school.
 - Last year’s school attracted 45 participants, this year about the same number – so last year not all was bad!
 - Of course we have changed, adapted, improved. But we also repeat a large fraction of last year’s programme.
- > ... to five days of lectures, tutorials, and discussions.
- > ... to DESY – the national HEP laboratory.
 - DESY has to change and is changing – exciting times!
 - Please participate in Wednesday’s guided tour – there is a lot to see!
- > Caveat:
 - It is extremely challenging to find a level of difficulty and complexity that suits most of you. We hope we manage, but please let us know if things are far too easy or too difficult.
 - Please ask questions immediately!



ORGANISATIONAL ISSUES

> Tutorials:

- Will be made using the VM image prepared by Simon. Time for technical preparation tonight after the last lecture. Please let us know if you have no laptop → use DESY desktop machines!
- We invite you to work in pairs – therefore lack of laptop anyhow no problem!

> Wireless network and tabletop connections!

> Hotel B&B – bills:

- All hotel room bills should go to DESY directly. If you should happen to get a bill from the B&B hotel give it to us.

> Social events:

- Workshop dinner on Wednesday in the canteen appendix, and guided tour of DESY on Wednesday at 13:00 starting in this seminar room.

> Requests from the organisers

- No laptop work etc. during lectures
- Questions immediately – and feedback is very welcome (questionnaires on Friday)



STUDENT PRESENTATIONS

- > Each tutorial shall be especially observed, documented and reported on (in the Friday morning session) by a team of ~three students.
 - Several benefits: these persons will pay special attention, repetition of material for all colleagues, improving your presentation and documentation skills, etc.
 - We ask for volunteers, otherwise we will volunteer teams.
 - You can use any technology you like that you find installed somewhere: Linux, Windows, Apple, ... Tex, Powerpoint, Keynote, ... hand-written slides ...
 - Idea: Summarise task, results, main messages for colleagues.
 - You can also bring in your feedback here if you want to!



AGENDA

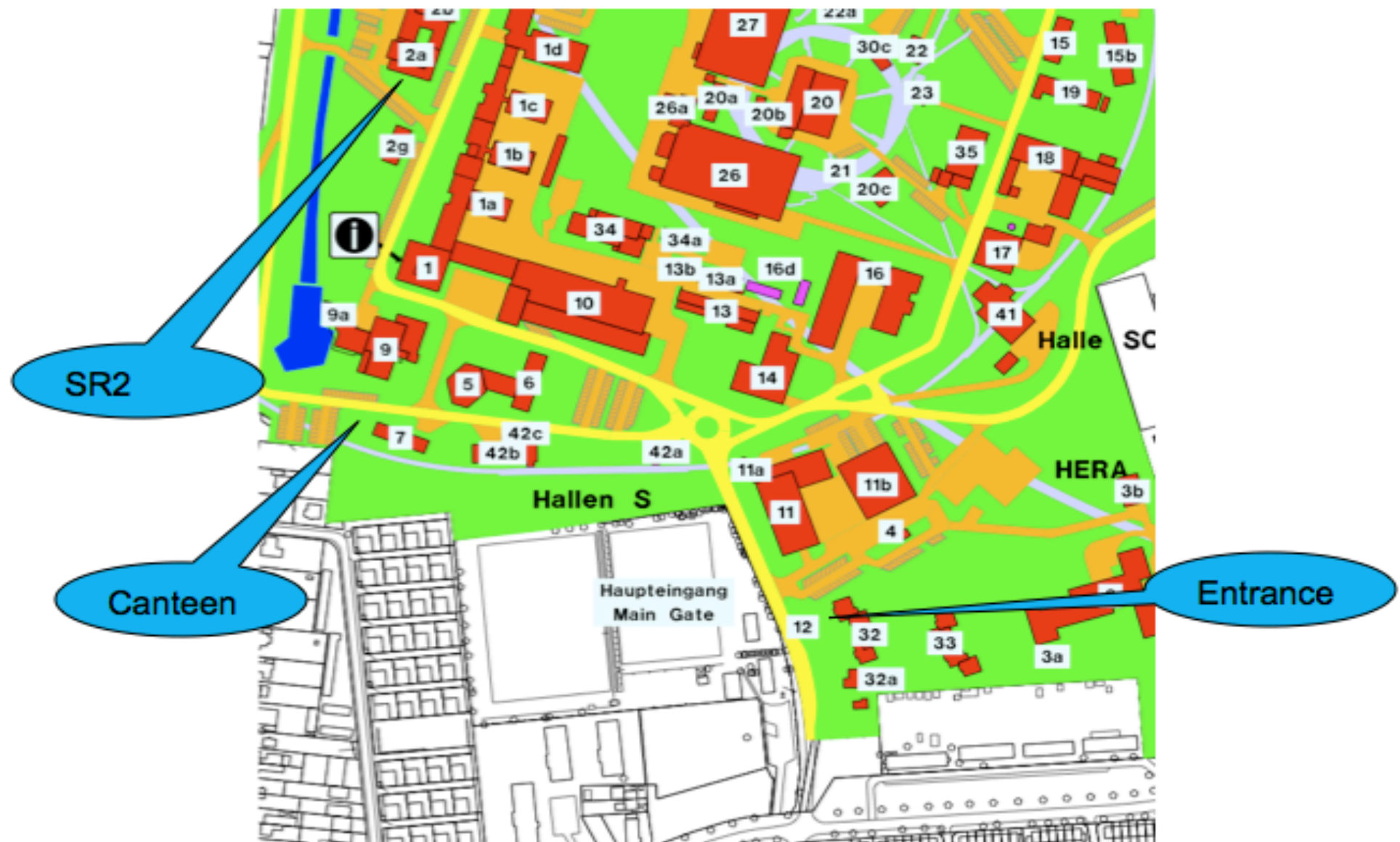
Monday	Tuesday	Wednesday	Thursday	Friday
	Electroweak physics (lecture and tutorial)	QCD at the LHC (lecture) The parton shower (lecture)	Top physics (lecture and tutorial)	Student presentations Feedback session
Registration and lunch	Lunch	Lunch and guided tour	Lunch	Lunch
Physics at the LHC (lecture) Detectors for the LHC (lecture)	Electroweak physics continued Making measurements at the LHC	QCD and Monte Carlo generators (lecture and tutorial)	Higgs, searches and statistics (lecture and tutorial)	

Computer setup!

Dinner!



DESY – OVERVIEW



THANKS TO ...

- > ... to your home institutes (more than 10!)
 - ... for contributing to the budget and sending you here!
- > ... to DESY
 - ... for hosting us!
- > ... to the Helmholtz Alliance
 - ... for the money and the framework!
- > ... to all lecturers and tutors
 - ... for their immense work!
- > ... and finally to all people behind the scenery which are necessary to put things in place:
 - Secretaries (especially Katja Stemmler), technicians, DESY IT, Simon Plätzer for the VM setup, ...



“SCHLEICHWERBUNG”

- > “Physics at the Terascale”
(Wiley-VCH)

