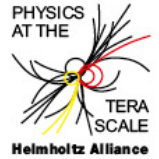


Monte Carlo School

March 14-18, 2011
DESY, Hamburg

Helmholtz Alliance

PHYSICS AT THE TERASCALE



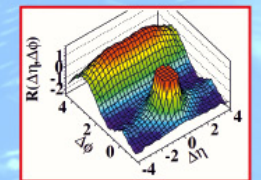
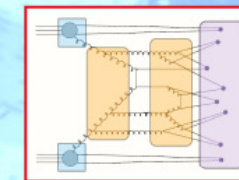
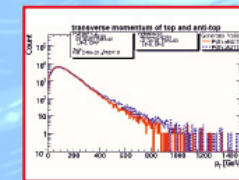
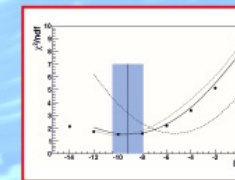
Deutsches Elektronen-Synchrotron DESY +++ Karlsruher Institut für Technologie - Großforschungsbereich +++ Max-Planck-Institut für Physik +++ Rheinisch-Westfälische Technische Hochschule Aachen
+++ Humboldt-Universität zu Berlin +++ Rheinische Friedrich-Wilhelms-Universität Bonn +++ Technische Universität 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 +++

Monte Carlo School 2011

14 - 17 March 2011
DESY, Hamburg

The 2011 Monte Carlo School aims mainly at Ph.D. students and young postdocs wishing to learn about the basics of Monte Carlo generators. It focuses on the topic of QCD. Lectures and tutorials will be given on the following subjects:

- Basics of QCD at the LHC
- Parton showers - why, what, how?
- Monte Carlo methods and Monte Carlo generators
- Hadronisation
- Jet Physics
- The underlying event
- Physics at the LHC



Registration deadline: 1 February 2011. The school fee is 40 Euros. Please register via the school webpage:

<http://www.terascale.de/mc2011>

Welcome

- This is the third “MC School” in DESY
 - in this year we have 49 participants
 - in this year we focus on “Standard MC”, “Jet physics” and “Underlying Event”
- 3.5 days lectures, tutorials and discussion
- Thursday afternoon and Friday morning there are ATLAS and CMS specific tutorials for ATLAS and CMS students respectively.

Timetable

	Monday 14 March 2011		Tuesday 15 March 2011		Wednesday 16 March 2011		Thursday 17 March 2011		Friday 18 March 2011	
AM	12:30	Registration - Seminar room 2	09:00	Introduction to Monte Carlo methods and Monte Carlo generators - Frank Krauss (IPPP Durham) (Seminar Room 2)	09:00	Jet Physics: Basics of jets and jet algorithms - Matteo Cacciari (LPTHE Paris) (Seminar Room 2)	09:00	Jet Physics: Tutorial (with coffee break)(Flash Hall)	09:00	ATLAS MC Tutorial- Wolfgang Ehrenfeld (DESY) (until 12:20)
			10:00	--- Coffee break ---	09:45	Jet Physics: More fun with jets, physics with jets, and jetography - Matteo Cacciari (LPTHE Paris) (Seminar Room 2)	12:30	--- Lunch ---	09:00	Herwig++ Exercise - Jan Kotanski (Hamburg University/DESY)
			10:30	Hadronisation, MC frameworks and assorted issues - Frank Krauss (IPPP Durham) (Seminar Room 2)	10:30	--- Coffee break ---			10:00	--- Coffee ---
			11:30	The HepMC Analysis Tool - Sebastian Johnert (DESY) (Seminar Room 2)	11:00	The underlying event: Modelling in theory - Stefan Gieseke (KIT) (Seminar Room 2)			10:20	Simple Event Analysis - Wolfgang Ehrenfeld (DESY)
			12:30	--- Lunch ---	11:45	The underlying event: Basics and introduction - Stefan Gieseke (KIT) (Seminar Room 2)			11:20	Event Analysis with HepMCAnalysisTool - Sebastian Johnert (DESY)
					12:30	--- Lunch ---			09:00	CMS MC Tutorial (until 12:10)
PM	14:00	Welcome - Thomas Schoerner-Sadenius (DESY) (Seminar Room 2)	14:00	MC generators: Tutorial (with coffee break) - Simon Platzer (DESY) Stefan Gieseke (KIT) Frank Siegert (Freiburg) Stefan Prestel (Lund) (Flash Hall)	14:00	The underlying event: Recent results and MC tunings - Albert Knutsson (DESY) (Seminar Room 2)	14:00	Evaluation and feedback discussion and good bye(Seminar Room 2)		
	14:15	Physics at the LHC: Basics - Christian Sander (University of Hamburg) (Seminar Room 2) Slides 			14:45	The underlying event: Tutorial (with coffee break)(Flash Hall)	15:00	ATLAS MC Tutorial- Wolfgang Ehrenfeld (DESY) (until 18:30) ()		
	15:00	Parton Showers: Basics - what, how and why - Frank Krauss (IPPP Durham) (Seminar Room 2)			19:15	--- Dinner ---	15:00	NAF Introduction - Wolfgang Ehrenfeld (DESY)		
	15:45	--- Coffee break ---					15:15	NAF exercise - Wolfgang Ehrenfeld (DESY)		
	16:15	Physics at the LHC: Measurements - Christian Sander (University of Hamburg) (Seminar Room 2)					15:45	Event Generation in ATLAS - Liza Mijovic (DESY)		
	17:00	Parton Shower: Implementations and Caveats - Frank Krauss (IPPP Durham) (Seminar Room 2)					16:15	--- Coffee ---		
	17:45	Laptop preparations for tutorials					16:30	Pythia6 Exercise - Liza Mijovic (DESY)		
							17:30	Exercise with Sherpa - Frank Siegert (Freiburg)		
							18:00	CMS MC Tutorial (until 18:00)		

Organizational Issues

➤ Tutorials

- Will be made using the VM image prepared by Simon. Time for technical preparation tonight after the last lecture *in the Flash Hall*. 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!

➤ Social Event

- School dinner on Wednesday at 19:30 in the canteen appendix.

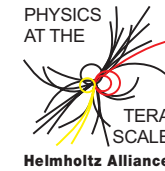
➤ Request from the organizers

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

Future Workshop

Helmholtz Alliance

PHYSICS AT THE TERASCALE



Deutsches 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 +++

Analysis Centre Schools and Workshops 2011

Introductory School to the Terascale
21-25 February 2011
DESY, Hamburg
terascale.de/intro2011

Monte Carlo School 2011
14-17 March 2011
DESY, Hamburg
terascale.de/mc2011

Computer Algebra & Particle Physics 2011
20-25 March 2011
DESY, Zeuthen
terascale.de/capp2011

School on Statistics 2011
4-7 April 2011
Johannes Gutenberg-Universität, Mainz
terascale.de/statistics2011

Geant4 Training
10-13 May 2011
DESY, Zeuthen
terascale.de/geant2011

Standard Model Benchmark Processes at the LHC
15-17 June 2011, DESY, Zeuthen
terascale.de/smcandles2011

Single-Top Workshop
5-6 September 2011
DESY, Hamburg
terascale.de/singletop2011

http://www.terascale.de/schools_and_workshops

Future Workshop

Standard Model Benchmarks at High Energy Hadron Colliders

**15 - 17 June 2011
DESY, Zeuthen**

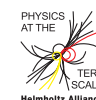
This is the second workshop in a series jointly organised by the LHC centres at Argonne, CERN, DESY and Fermilab. The workshop will allow for intense discussions between experimentalists and theorists on Standard candle processes, precision predictions and their comparison with and influence on the proton parton distribution functions.

Topics:

- W/Z boson production, Drell-Yan processes
- Parton distribution functions
- Jets, photons and quarkonia
- Top physics
- Higgs physics

Hosted by the LHC Physics Centres at Argonne, CERN, DESY and FNAL
Advisory Committee:
Johannes Blümlein (DESY), Richard Cavanaugh (Chicago), Sasha Glazov (DESY), Joey Huston (Michigan State), Michelangelo Mangano (CERN), Sven-Olaf Moch (DESY), James Proudfoot (Argonne), Thomas Schörner-Sadenius (DESY), Ian Shipsey (Purdue), Rik Yoshida (Argonne)

Registration deadline is 15 May 2011.
In case of questions please contact the Analysis Centre at DESY:
anacen@desy.de
For more information and in order to register please go to the workshop home page:
<http://indico.desy.de/conferenceDisplay.py?confid=3577>





MPI@LHC 2011

3rd International Workshop on Multiple Partonic Interactions at the LHC

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

Topics:

- Phenomenology of MPI processes and multiparton distributions
- Theoretical considerations for the description of MPI
- Measuring multiple partonic interactions
- Experimental results on inelastic hadronic collisions: underlying event, minimum bias, forward energy flow
- Monte Carlo development and tuning
- Connections with diffraction, heavy-ion physics and cosmic rays

International Advisory Committee:
P. Bartalini (National Taiwan University), C. Buttar (University of Glasgow), J. Butterworth (University College London), L. Fano (INFN / Perugia), R. Field (University of Florida), I. Hinchliffe (LBNL), H. Jung (DESY), F. Krauss (University of Durham), S. Lami (INFN / Pisa), M. Mangano (CERN), A. Moraes (University of Glasgow), A. Morsch (CERN), G. Panzeri (INFN / Rome), M. Schmelling (MPI Heidelberg), T. Sjöstrand (Lund University), J. Stirling (University of Cambridge), Y. Srivastava (INFN / Perugia), M. Strikman (Pennsylvania State University), D. Treleani (INFN / Trieste)

Organising and Programme Committee:
K. Borras, M. Diehl, H. Jung, J. Katzy, M. Medinnis, K. Mönig, Z. Nagy, S. Plätzer, T. Schörner-Sadenius, G. Steinbrück, K. Stemmler, G. Weiglein

<http://mpi11.desy.de>

