

Welcome to the Monte Carlo School



Welcome to DESY and
Hamburg

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Welcome to the Monte Carlo School



Monte Carlo School

PHYSICS AT THE TERA SCALE

Strategic Helmholtz Alliance

**21-24 April 2008,
DESY Hamburg**

Topics:

- Monte Carlo techniques and physics (L. Lönnblad)
- NLO Calculations (NN)
- NLO and parton showers (M. Dinsdale)
- Monte Carlo event generators
 - CASCADE (H. Jung)
 - HERWIG (S. Gieseke, P. Richardson)
 - PYTHIA (T. Sjöstrand)
 - SHERPA (F. Krauss)
- Exercises (L. Sonnenschein et al.)

PHYSICS AT THE TERA SCALE
Helmholtz Alliance

Deutsches Elektronen-Synchrotron DESY +++ Forschungszentrum Karlsruhe GmbH +++ Max-Planck-Institut für Physik München +++ Helmholtz-Zentrum für Technische Wissenschaften Aachen
+++ Humboldt-Universität Berlin +++ Rheinische Friedrich-Wilhelms-Universität Bonn +++ Universität Dortmund +++ Technische Universität Dresden +++ Albert-Ludwigs-Universität
Freiburg +++ Justus-Liebig-Universität Gießen +++ Georg-August-Universität Göttingen +++ Universität Hamburg +++ Universität Heidelberg +++ Universität Karlsruhe +++ Johannes
Kepler Universität Mainz +++ Ludwig-Maximilians-Universität München +++ Universität Potsdam +++ Universität Regensburg +++ Julius-Maximilians-Universität Würzburg +++ Bergische
Universität Wuppertal +++

Schedule

Monday 21 April 2008

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14:00	Monte Carlo techniques and physics I (1h00')	Leif Loennblad
15:00	break	
15:30	NLO Calculations (1h00')	Zakaria Merebashvili
16:30	Monte Carlo techniques and physics II (1h00')	Leif Loennblad
18:30	Welcome Reception	

Tuesday 22 April 2008

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09:00	Monte Carlo techniques and physics III (1h00')	Leif Loennblad
10:00	break	
10:30	CASCADE (30')	Hannes Jung
11:00	PYTHIA (30')	Torbjoern Sjostrand
11:30	HERWIG (30')	Stefan Gieseke
12:00	SHERPA (30')	Steffen Schumann
12:30	lunch	

14:00->18:00 **Exercises**

- transparencies will be made available on the web page

Schedule

Wednesday 23 April 2008

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09:00 MC and parton showers (45')	Michael Dinsdale
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09:45 Minimum bias/underlying event physics with PYTHIA (45')	Torbjoern Sjostrand
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10:30	break
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11:00 Spin Correlations with HERWIG (45')	Stefan Gieseke
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11:45 Multijet matching (45')	Steffen Schumann
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12:30	lunch
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14:00->18:00 **Exercises**

19:00	Buisness dinner
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Thursday 24 April 2008

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09:00 Parameter fitting and PDF4MC (1h00')	Henrik Hoeth, Albert Knutsson, Krzysztof Kutak
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10:00	break
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10:30 Presentation of comparison of MC generators (1h30')	all
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12:00	end of school
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- transparencies will be made available on the web page

Video recording and EVO

- The lectures will be video recorded

Diese Veranstaltung wird in Bild
und Ton

aufgenommen, gespeichert und
veröffentlicht

This performance will be
audio-visually

recorded, stored and published

- Lectures will be made available in mp4 format after the school

- Lectures are also accessible form outside via EVO:

Title:	Monte Carlo Group
Description:	Monte Carlo Group
Community:	Terascale
Password:	tsmcg



Computing infos

- special WLAN:
 - select SSID: MC-School
 - no encryption
- all registered participants will have a school user account:
please sign the paper with your user-id and passwd, and return it to
the registration desk
- logon to Monte Carlo school cluster:
 - either via logon panel of desktop
 - or via ssh
ssh -X schoolXX@bastion.desy.de
ssh -X schoolXX@mcschool.desy.de
- Please look in your registration folder for further infos

Exercises

- **Goals**
 - learn how a Monte Carlo event generator works
 - learn, how to use it, in a standalone mode
 - learn how to obtain information from the Monte Carlo event generator
 - understand the physics of the individual Monte Carlo generators
- **using HepMC event record:**
 - event record common for all MC generators
 - easy to change from one to another generator
- **Thursday morning:**
 - 2-4 persons per generator should present (ca 20 min) the results and achievements of the exercises including critics and suggestions ...

Exercises on Tuesday and Wednesday

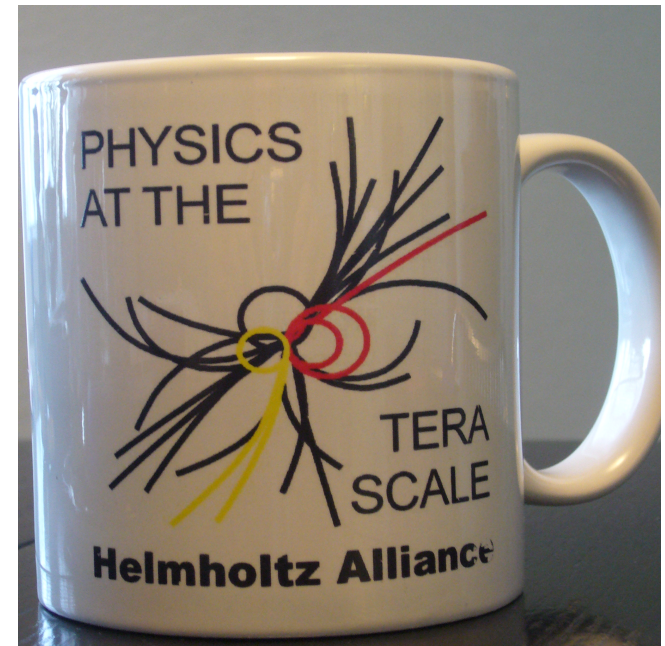
- 4 sessions in parallel, one for each generator
 - please sign in the list at the registration desk for the first day
 - try to keep sessions equally occupied
 - since analysis on HepMC event record, it is easy to investigate another generator...
- Room assignments:
 - 2 seminar rooms with Desktops (15 each), Sem 1 and Sem 5
 - 2 seminar rooms only with laptop access, Sem 4a and Sem 4b
 - each generator will have a session in a room with Desktop and without.
 - check room assignments on the doors and on the schedule

Social events

- **Monday evening:**
Welcome reception 18:30 in canteen extension
- **Wednesday evening:**
Business dinner, 19:00 in canteen extension
.... possibilities to finalise YOUR exercise presentation for Thursday ...

Monte Carlo school toys ...

- The necessary tool for a true Monte Carlo event generator:
Dices with LHC processes are available at the registration desk: 2 Euro
- For your Coffee/Tea breaks:
cups with Terascale Logo are available at the registration desk: 5 Euro



Visit to Accelerator and NAF

- Thursday afternoon
 - visit to HERA tunnel and accelerator control rooms
 - visit to computing center and NAF

Please sign in the lists at the registration desk

Thank you for coming

- Thank you all for coming
- Thanks to all the lecturers
- Thanks to the MCnet ...



- Thanks to all the local staff here at DESY, helping, preparing and organising in the background

Have fun in Monte Carlo



- it's a hard life ..
- getting true random numbers
- Puhhh... Going out every night ...



Have fun and ...

enjoy the
Monte Carlo school

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