MC group meeting - 29. April 08

- report from the MC school
- MC position
- next projects:
 - HEPMC
 - GENSER validation
 - PDF4MC
 - RIVET
 - QCDwiki
- AOB

MC position

- MC position is announced
- selection committee not defined: aim is to have representative from MCr joining.

DESY, Hamburg location, is seeking: A Scientist

The Analysis Centre of the Helmholtz Alliance "Physics at the Terascale" at DESY supports physicists at German universities and institutes working on analyses at ATLAS, CMS and ILC in areas like Monte Carlo generators, parton distribution functions and statistics tools. The Monte Carlo group is one of the major activities of the Analysis Centre and provides maintenance, support, validation and tuning of existing Monte Carlo event generators.

The position

- Active contribution to and shaping of the above topics
- Participation in new developments of general purpose Monte Carlo generators

Requirements

- Ph.D. in physics
- Experience in the simulation of higher order contributions and the development of parton showers in Monte Carlo event generators is welcome

The position will be for an initial duration of five years and can become permanent in case of positive evaluation. If the successful candidate already holds a permanent position it can be made permanent from the beginning.

For further information you may also contact Klaus Mönig (klaus.moenig@desy.de) and Hannes Jung (hannes.jung@desy.de).

Applications including a letter of application, CV, academic records as well as a list of publications and the names of three persons who can provide further information about the candidate should be addressed to:

Prof. Ian Brock (Scientific Manager of the Helmholtz Alliance) DESY, Notkestraße 85, D-22607 Hamburg (Ian.Brock@desy.de)

Salary and benefits are commensurate with those of public service organisations in Germany. DESY operates flexible work schemes. Handicapped persons will be given preference to other equally qualified applicants. DESY is an equal opportunity, affirmative action employer and encourages applications from women. There is an English-speaking Kindergarten on the DESY site.

Closing date for applications is 15 June 2008.

MC school

- more than 100 registered participants
- good response
- need to analyse the questionaire...

Monte Carlo School PHYSICS AT THE TERASCALE

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)

PHYSIC

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- Monte Carlo event generators CASCADE (H. Jung)
- HERWIG (S. Gieseke, P. Richardson)
- PYTHIA (T. Sjöstrand)
- SHERPA (F. Krauss)
 - Exercises (L. Sonnenschein et al.)

The school covers Monte Carlo techniques and applications in NLO calculations as well as full hadron level Monte Carlo event generators. Predictions coming from different generators will be compared in practical exercises and first steps for comparison with measurements will be shown in tutorials.

Registration deadline: 15.03.2008 Please register via the school webpage.

> Organising Committee: Hannes Jung, J. Katzy, A. Knutson, K. Kutak, Serguei Levonian http://www.terascale

H. Jung, DESY, 29-04-08

Get your 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



- Many thanks for coming
- Many thanks to all lecturers
 - →Leif Loennblad, Zakaria Merebashvili, Tornjorn Sjostrand, Stefan Gieseke, Steffen Schumann, Michael Dinsdale, Henrik Hoeth, Albert Knutsson, Krzysztof Kutak, Lars Sonnenschein
- Many thanks to MCnet for support
- Many thanks to all participants in the exercises

- Many thanks to all those who produced the plots for this morning session (and spend the whole night for this...)
- Many thanks to those who gave a presentation this morning (and spend the business dinner...)
- → Cano AY, Evelyn SCHMIDT, Sebastian ECKWEILER; Carsten HANDEL, Fred-Markus STOBER, Julia RUIZ, Deniz SUNAR, Ringo SCHMIDT, Dörthe LUDWIG, Michael BöHLER, Matthias MEYER, Christian SPECKNER, Peter STEINBACH, Kathrin LEONHARDT

- Many thanks to those doing all the work (in the background)
 - R. Eisberg, O. Knak for recording, video and sound
 - H. Lehmann and crew for PCs, PC cluster
 - S. Lehmann, U. Lindemann for WLAN
 - T. Tempel for school user accounts
 - B. Lewendel for PC cluster/NAF and all questions concerning computing during this school
 - Hostel: H. Hummerjohann and crew
 - B. Liebaug for poster
 - M. Mayer for poster, folder, fotos
- Many thanks to DESY and Alliance for support

- Many thanks to excursion guides:
 E. Wuensch, M. Vogt, Yves Kemp
- Many thanks to those helping preparing the exercises:
- A. Cholewa, W. Wuensch, N. Gogitidze, A. Fomenko, A. Borrisov
- Many thanks to my co-organisers:
 J. Katzy, A. Knutsson, K. Kutak, S. Levonian
- Many thanks to the "Lady of the Dices": Karen Troeger
- Many, many thanks to:
 Michaela Grimm, Alla Grobowsky, Sabine Platz

- HEPMC: problems during the MC school... can we solve them
 - check also the PYTHIA -CASCADE comparison
- GENSER for 64 bits
- further GENSER issues ?

• GENSER validation (proposal by M. Kirsanov)

Ordinary tests			
pythia8			
1. EP - conservation, multiplicities	M. Kirsanov		
2. Cross section of processes (use py	/thia6		
test4 as the list)	A. Polyarush		
3. Double interactions	M. Kirsanov		
1			

powheg

1. Basic tests to be defined

tauola

Test with Higgs production and decay to tau
 As 1, but with pythia8

herwig++

- 1. Improve test1: Z+jet instead of Z M. Kirsanov
- 2. Print final cross section from the user part
- 3. Run herwig++ through the ThePEG framework

M. Kirsanov?

- 4. Basic tests: EP conservation, multiplicities
- 5. Test with Higgs production and decay to tau (spin correlations as in tauola)
- 6. Radiative corrections (as in photos)?

H. Jung, DESY, 29-04-08

• GENSER validation (proposal by M. Kirsanov)

Ordinary tests

sherpa

1. Basic test with event analysis

photos

1. Test with pythia8

evtgenlhc

1. Test with photos

CASCADE ????

Rivet tests

• PDF4MC

- what needs to be done ?
 - 1st checks and tests until summer ?
- who can/wants to work on this (Federico von Samson-Himmelstjerna, ?)

RIVET

- what needs to be done ?
- who can/wants to work on this

- QCDwiki
 - idea of wikipedia for QCD including HERA results
 - get web-office experts involved (have now very good experience with IT support...)

• web based tools:

• twiki pages ?

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New User Email

AOB

next meeting: 8 May together with kickoff for stat. tools
 DESY internal Kick-off-Meeting for
 'Statistical tools' in the Analysis Centre
 Date: May 8th (thursday), 11:00-13:00 Venue: Sem. 2
 Tentative Agenda:

- Introduction (O. Behnke, C. Kleinwort, S. Schmitt) (10+5)
- Statistical tools for unfolding, fitting and other things (V. Blobel) (10+5)
- Available tools and software in HEP (NN) (10+5)
- Discussion on the role, targets and 'work mode' of the ST group (Convenors) (15)
- Planning, e.g. organisation of Alliance Statistical Tools
 - + Workshop @DESY 19.6.
 - + School @DESY 29.9.-2.10.

All interested people are welcome!