

# Welcome –

– to the **SUSY/BSM Parameter Fitting Workshop**  
(The Analysis Centre and its activities in  
statistics)

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SUSY/BSM Parameter Fitting Workshop  
DESY, 26 July 2010

# REMINDER: ANALYSIS CENTRE

## MISSION OF THE ANALYSIS CENTRE

The mission of the Analysis Centre is to enhance the physics potential of the German LHC / ILC community by providing analysis infrastructure and by supporting analysis-related issues of general relevance.

- > **Education and training** (schools, workshops, documentation, ...).
- > **Basic research, tools development** and user support in central fields.
  - Software, algorithms, methods, papers, talks, ...
- > LHC / ILC **analysis support** (to be developed).
- > **Networking**.
- > Fields of general relevance → three **dedicated working groups**:
  - **Monte Carlo** generators (MC),
  - **Parton Distribution Functions** (PDFs), and
  - **Statistics Tools**.
  - Needed by everybody at LHC, building on large HERA/DESY expertise, experiment independent!



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- > Fields of general relevance → ~~three~~ **four** **dedicated working groups**:
  - Monte Carlo generators (MC),
  - Parton Distribution Functions (PDFs), and
  - Statistics Tools.
  - **SUSY/BSM parameter fit working group**



# EDUCATION AND TRAINING: 2010

- Education and training events intended for 2010:

Name	Date, place
Statistics 2010	DESY, March
Introduction to Terascale	DESY, March
CTEQ-MCNet School*	June, Black Forrest
LHC Physics Workshop	DESY, September
Advanced Statistics	Göttingen, October
Standard Candles 2010	Zeuthen, November
OO Design course	Dresden, September

- Plus numerous workshops (and external events): Unfolding workshop, MPI+UE workshop, SUSY parameter fitting, Geant4 workshop (2\*), Würzburg GrK, single top and fourth-generation quarks workshop etc.

# EDUCATION AND TRAINING: 2011

> Education and training events intended for 2011:

Name	Date / Place
Statistics 2011	DESY, March
Introduction to Terascale 2011	DESY, February
MC 2010	DESY, March
LPPP 2011	DESY, February
PDF 2011	DESY, October (?)
Advanced Statistics 2011	Karlsruhe (?)
LHC Physics Workshop 2011	DESY, September (?)
Geant4 2010	DESY, May
Workshops, short-term ideas	

# ANALYSIS CENTRE GROUPS

- > MC Group:  **$\text{Data} = \text{PDF} \times (\text{hard part} \times \text{shower} + \text{MPI/UE} \times \text{shower}) \times \text{hadronisation}$** 
  - A. Knutsson, Z. Nagy
  - Theory projects (and workshops on them) and tuning / service activities. Examples: Parton shower developments, NLO calculations, tuning (PROFFIT, CMS, ATLAS), GENSER, uPDFs, kt framework ...
- > PDF:
  - J. Blümlein, A. Glazov, S. Moch
  - Two PDF projects: HERA PDF, and ABKM.
- > SUSY/BSM parameter fitting:
  - P. Wienemann et al.
  - 75% of worldwide expertise in D (FITTINO, MasterCode, SFITTER, GFITTER, ...)
- > Statistics:
  - O. Behnke, **G. Flucke**, C. Kleinwort, K. Kröninger
  - Projects see next slide.

# STATISTICS TOOLS GROUP

- > Organisation of schools (typically two per year, one basic, one more advanced)
- > Support and help for statistics-related questions
- > Numerous projects being worked on: Millepede, LVMINI and APLCON (porting of Blobel-tools to C++ / ROOT), unfolding framework, ...
- > Via fellows / students contributions to TMVA, ROOSTATS, ...
- > Possibilities for collaboration between statistics tools group and SUSY/BSM parameter fitting group?
  - Have to bring people into contact – let's see after the holiday period.

# THIS AND THAT

## > Studentship programme:

- 2 students in first round, second round just out
- Contribute to significant projects (“get a foot in the door”)

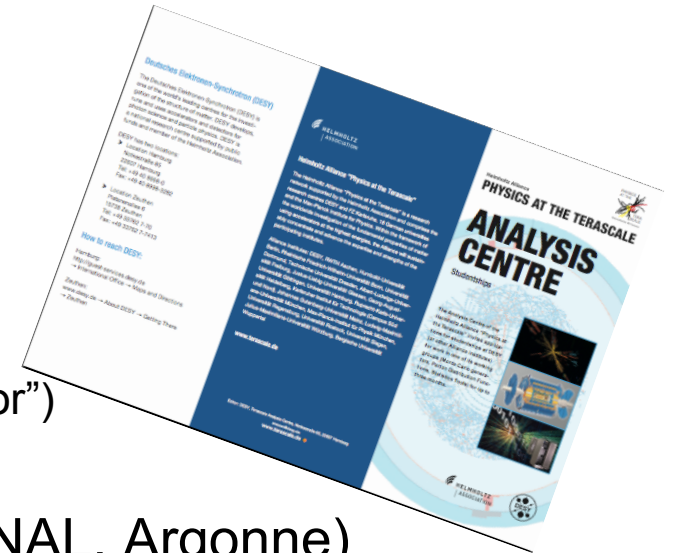
## > Contact to other “Analysis Centres” (CERN, FNAL, Argonne)

- Invited to contribute to FNAL/CTEQ workshop on SM physics (11/2010)

## > Analysis Working Groups (e.g. mtautau etc.)

## > Further activities and plans:

- Analysis Centre seminar, Theorist of the Week, visitors, ...





# WELCOME TO THE WORKSHOP

- > Locations: SR 4a (Monday), SR 1 (Tuesday), SR 4a (Wednesday)
- > In SR 4a: EVO – there should be a new EVO meeting (in the Terascale community): SUSY/BSM parameter fitting (without protection).
  - If not yet installed, please use the “Analysis Centre Seminar” meeting in the same community.
- > Coffee and tea will be served in the mornings and afternoons.
  - In case of all organisational questions please contact M. Grimm (phone 3100, room 1b345)
- > Monday night: Dinner at “Champus” restaurant
  - See next slide for directions.
- > Now, I wish you a successful and agreeable meeting and constructive further collaboration.

# RESTAURANT “CHAMPUS”

➤ Monday 19:30, Beseler Str. 35

