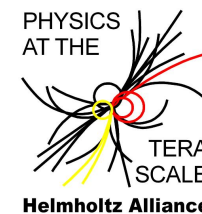


Welcome

Book project “Physics at the Terascale”

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Thomas Schörner-Sadenius

Hamburg, 15 September 2009



IDEA OF THE PROJECT

- > Give status of field on the advent of the LHC, including physics, technology and organisation / social / political / financial aspects.
- > Provide easy (but concise) reading for students (and more seniors) with many references.
- > Fill the obvious gap between normal university course books (Schmüser, Berger etc.), overview and review articles, and specialised articles.
- > Demonstrate the large spectrum covered by Alliance members.
- > Write the book I, as a student, always wanted to have but never found.
- > ... have fun ...



CHAPTERS AND NAMES 1

- > Foreword: Rolf Heuer and Joachim Mnich
- > Editorial: Ian Brock and Thomas Schörner-Sadenius
- > 1: Setting the scene: Ian Brock and Thomas Schörner-Sadenius
- > 2.1: Standard Model: Markus Diehl and Wolfgang Hollik
- > 2.2: MC generators + fixed-order calculations: Stefan Gieseke and Zoltan Nagy
- > 2.3: Electroweak and SM physics: Klaus Mönig and Georg Steinbrück
- > 2.4: (Hard) QCD: Sven-Olaf Moch and Klaus Rabbertz
- > 2.5: Higgs physics: Markus Schumacher and Michael Spira
- > 2.6: SUSY: Herbi Dreiner and Peter Wienemann
- > 2.7: Charming beauty: Gudrun Hiller, Ulrich Uwer and Wolfgang Walkowiak
- > 2.8: Top physics: Peter Uwer and Wolfgang Wagner
- > 2.9: BSM: Christophe Grojean, Thomas Hebbeker and Arnd Meyer
- > 2.10: Diffraction and low x: Joachim Bartels and Kerstin Borras



CHAPTERS AND NAMES 2

- > 3.1: Accelerators: Helmut Burkardt, Jean Delahaye, Günter Geschonke
- > 3.2: Detector concepts: Karsten Büsser and Wolfram Zeuner
- > 3.3: Tracking: Jörn Grosse-Knetter, Rainer Mankel, Christoph Rembser
- > 3.4: Calorimeters: Karl-Heinz Meier und Felix Sefkow
- > 3.5: Muon detectors: Kerstin Höpfner and Oliver Kortner
- > 3.6: Luminosity determination: Ian Brock and Hasko Stenzel
- > 3.7: Triggering and DAQ: Eckhard Elsen and Johannes Haller
- > 3.8: Computing etc.: Wolfgang Ehrenfeld and Thomas Kress
- > 4.1: Collaborations as social experiments: Michael Barnett
- > 4.2: Financing HEP: Klaus Ehret
- > 4.3: The role of the big labs: Albrecht Wagner
- > 4.4: PR: Barbara Warmbein and James Gillies



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INSTITUTES

Aachen	3
Berlin	1
Bonn	3
CERN	8
DESY	16
Dortmund	1
Freiburg	1
Glessen	1
Göttingen	1
Hamburg	3
Heidelberg	2
Karlsruhe	3
MPI	2
Siegen	1
Wuppertal	1
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OPEN QUESTIONS

- > QCD: parton shower? PDFs? Fragmentation? Minimum Bias? UE?
- > Tau physics?
- > ... just two examples!
- > Clearly many more – have to be solved in the course of the next few weeks



STATUS WITH EDITOR

- > Contract signed
- > Each author will sign his / her own agreement with Wiley (detailing free copies and Wiley discount)
- > Intended volume: about 350 pages
 - Taking all your requests into account, it could easily become more.
 - How to limit ourselves?
- > Deadline: February 2009 → our first draft this year!
 - Works only if we commit ourselves to this goal and
 - ... if you accept being bugged by Ian and myself ;-)
- > Editor will provide
 - Tex style files (for the time being, take Ian's framework)
 - Help with copyrights etc.
 - Ideas on citation, chapter naming conventions etc.
 - Ian's style guide (later)
- > ...



CONNECTIONS AND COLLABORATIONS (EXAMPLES)

- > SM (Diehl / Hollik) – Higgs (Spira / Schumacher) – SM/EW (Moenig / Steinbrueck)
- > SM (Diehl / Hollik) – QCD (Moch / Rabbertz)
- > SUSY (Dreiner / Wienemann) – SM (Diehl / Hollik)
- > Detector concepts (Buesser / Zeuner) – Calorimetry (Sefkow / NN) – Tracking (Grosse-Knetter / Mankel / Rembser) – Lumi (Brock / Stenzel) – Trigger (Elsen / Haller)
- > Computing (Ehrenfeld / Kress) – Trigger (Elsen / Haller)
- > Heavy flavours (Hiller / Uwer / Walkowiak) – Top (Uwer / Wagner)
- > SM (Diehl / Hollik) – MC etc. (Gieseke / Nagy)
- > ...
- > Mailing list: hgfa-book@desy.de - but maybe arrange for more “granular” contact lists?



STYLE GUIDE (IAN)

> In order

- to ensure a common language level and a common level of difficulty,
- In order to facilitate collaboration among ourselves and
- In order to have a consistent treatment of technical aspects,

Ian has prepared a style guide (→ discuss).



NEXT STEPS

- > All authors should agree to the schedule and mark the end of November in red in their calendars.
- > All author teams for each chapter should get in close contact with each other.
- > First step: Defining the structure and content of the respective chapter. Ian and Thomas very willing to discuss with you.
- > Second step: defining the interfaces to other chapters and discussing with the respective authors (who covers what?).
- > Third step: Who writes what until when? When writing, please have the style guidelines in mind.
- > Fourth step: Organising feedback.
- > Fifth, sixth ... step: iterating on the text.



SUGGESTION: RETREAT

- > One of our crowd (may I speak the name?) has suggested having a creative retreat of (interested) authors for about a week in November / December.
 - Clearly helps to keep the deadline ;-)
- > Suggestion: If sufficiently many interested, TSS could volunteer to try to find a place that is suitable:
 - Space
 - Internet connection
 - Sauna
 - Sea-side
 - ...
- > We don't have to decide today, but please let me know if you are potentially interested.

