The ATLAS Technical Paper and back-up papers

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❖ Content of the ATLAS technical paper

❖ Time schedule

❖ Status

❖ Status of backup publications

❖ Summary

ATLAS technical paper
(D. Froidevaux & M. Vincter coordinators)

● What it will contain:

➢ Description of as-installed detector (geometry, readout channels)

➢ Basic performance figures from measurements (lab and test-beam)

➢ Expected overall performance in ATLAS based on CSC results and analyses wherever possible

➢ Something substantial on Combined Test Beam results (in performance chapter)

➢ Briefly, ATLAS items to come (staged components, forward detectors)

➢ Snapshot of ATLAS status before submission (install.&commiss.)

● What it will not contain:

➢ Description of construction process (refer to back-up documents)

➢ Description of integration and installation process (hopefully there will be a back-up document by TC for integration and installation)

➢ Detailed results from standalone test-beam (published elsewhere)

➢ Software and computing

➢ Complete list of parameters will be put in the ATLAS Parameters Book

This paper is a bird's eye view introduction to the detailed back-up papers
➔ together with the back-up papers it should replace the obsolete TDRs

Time schedule for ATLAS detector paper
(D. Froidevaux dixit)

- ❖ target for space budget: 150 pages (30 for Muon system)

- ❖ first version to go to whole ATLAS community:
  → july, 9th (Glasgow workshop)
- ❖ waiting for comments from ATLAS community:
  → mid august 2007
- ❖ reviewers from the PubCom and personally nominated editors from ATLAS to incorporate comments into the next draft:
  → end of august (only 2 weeks? realistic?)
- ❖ work on final draft by authors and editors:
  → mid october

- ❖ Backup papers: work with authors to produce drafts by june/july
- ❖ publish backup papers together with ATLAS det. paper by mid-october

Status of ATLAS detector paper

❖ All subdetector sections have presented 2nd draft, to be found under:
   https://twiki.cern.ch/twiki/bin/view/Atlas/AtlasTechnicalPaper

❖ Latest version of Muon part under:
   /afs/cern.ch/user/r/richterr/public/Muon_text/Muon_text.pdf
   ➢ Draft read by Manuella Vincter (Physicist from Carlton Univ.) for understandability, repetions, typos etc.
   ➢ Need comments from muon subdetector experts to check for correct presentation,
      missing things, up-to-date numbers
   ➢ Problem to find high-quality figures (eps)

● Discussion in weekly editorial meetings (D. F.):
   ➢ detailed comments to subdetector sections
   ➢ level of details and homogeneuous style (part. problem in ID)
   ➢ distribution text / pictures; quality of pictures (tendency to replace good drawings by photos…)

Status of Muon backup papers

❖ Several people took responsibility for Muon subdetector sections

❖ Progress at different levels

  ➢ expect to get readable drafts by mid july (semi-complete text & figures)
    → Needs priority/effort from editors and contributors

  ➢ advice: start with detailed breakdown of content (example: RPCs)

❖ The ATLAS technical paper will not be very useful w/o qualified back-up papers

  ➢ because the TDRs are obsolete (1997/98)

  ➢ no other up-to-date descriptions for most subsystems

❖ We have to describe and document our own system. Need system documentation for the years to come and for new people to join.

❖ If we don't do it in 2007, we will not do it in 2008, when the experiment is starting (we didn't do it in 2003…)

Backup papers for the Muons

Titles and corresponding editors:

❖ MDT mechanics (H. Kroha, MPI)

❖ MDT electronics (G. Brandenburg, Harvard & J. Chapman, Michigan)

❖ MDT integration barrel and EC (J. Dubbert, MPI, S. Zimmermann, Freiburg & J. Bensinger, Brandeis)

❖ Alignment (C. Guyot, SACLAY)

May be integrated in one pub

❖ RPC mechanics and FE elx (P. Giusti, Bologna)

❖ TGC mechanics and FE elx (NN)

❖ CSC (V. Polychronakos, BNL)

→ The "Trigger part" of the trigger chambers will be treated in the TDAQ part. Backup papers on
RPC-trigger: S. Veneziano
TGC-trigger: L. Levinson & O. Sasaki)

Summary

❖ ambitious time schedule for ATLAS detector paper

❖ needs high quality backup papers

  ➢ need up-to-date references for ATLAS publications in the future

  ➢ need understandable, up-to-date documentation for new people

❖ need drafts of backup papers by july

❖ → please be nice to the back-up paper editors

  ➢ send your contributions

  ➢ answer to e-mails

  ➢ provide up-to-date figures

  ➢ provide recent performance numbers etc.