Muon TDR Contents

Outline:

1. Introduction (~2 p.)
   - Physics requirements and background conditions
   - Evolution since the TP
2. Detector Specifications (~5 p.)
   - Muon System Overview
   - Detector Technologies
     - Rate Capability, Time resolution, Cross-talk, Aging Properties
   - FE-chip requirements
3. Physics Performance (~8 p.)
   - Performance of the L0 muon trigger
   - Reconstruction of muonic final states
     - $B_d \rightarrow J/\psi K_{s,}$; $B_s \rightarrow \mu\mu$
4. Prototype Results (~15 p.)
   - Beam test results of MWPCs
   - Beam test results of RPCs
   - Test of FE-chip candidates

Muon TDR Contents

Outline (ctd.) :

5. Technical Design (~25 p.)
   - MWPC Detector
     - Chamber design and construction
   - RPC Detector
     - Chamber design and assembling
   - Support Structures and Installation
   - Readout Electronics
     - FE-board
     - "channel reduction"
     - ODE-board, Synchronization
   - Power and Control Systems
     - Gas and HV-System
     - Monitoring and Controls
   - Safety aspects
6. Project Organization (~4 p.)
   - Schedule and Milestones
   - Distribution of responsibilities
   - Cost

Muon TDR Preparation

Editorial Panel:

An editorial Panel should be formed, charged with steering the preparation of the Muon TDR

Muon TDR schedule:

• Outline of TDR Contents	December 2000
• List of Support Documents and Authors	Mid January 2001
• Draft of support documents	Begin of March 2001
• Draft of TDR distributed to muon group	Begin of April 2001
• Technical Board meeting to discuss draft	Mid April 2001
• Final Draft: Release to LHCb	End of April 2001
• Technical Board meeting to discuss final draft	LHCb week 7-11 May 2001
• Submission to LHCC	End of May 2001
• Presentation to LHCC	4 July 2001

Muon TDR Support Notes

Outline:

1. Introduction
   - Overview — Note 2000-089
   - Background conditions — Notes 1998-059, 1999-036, 2000-11, + note to be prep.
   - Technology Proposals — Notes 1999-049, 2000-53, + TGC and MWPC Prop. t.b.
   - Optimization Note — Note 2000-016
2. Detector Specifications
   - MWPC simulation notes — Notes 2000-060, -061
   - RPC simulation notes — Notes 2000-111, -2000-112
   - FE-chip requirements — Notes 2000-060, + ?
3. Physics Performance
   - L0 muon trigger — Notes 2000-16, 2000-101, +notes with new soft. results
   - B_d -> J/ψ K_s, — Yellow report -> update (Paul)
   - B_s -> $\mu\mu$ and MuID — -> Erica/Rio (2-3 Notes)
4. Prototype Results
   - MWPC Notes — Notes 2000-003,-102, M2R2-Note, M5R2-Note ?
   - RPC Notes — Notes 1999-049, 2000-053
   - FE-chip tests — Note 2000-062 (ASDQ++), CMS-note, Carioca Note, + ?

Muon TDR Support Notes

5. Technical Design

- MWPC Detector Design	Notes 2000-060,-061
	Cempir Note -> Potenza
	Honeycomb Note -> CERN, Potenza
	Construction Notes (various groups)
- RPC Detector	LHCb 2000-112
	-> Rome II, Firenze
- Support Structures and Installation	-> CERN, LNF
- Readout Electronics	Note 2000-017
- FE-chip and board	Note 2000-093, CARIOCA Note, OR-note
- ODE-board, Synchronization	-> Cagliari, LNF
- Power and Control Systems	Gas System Note -> Rolf
	ECS Note -> Valerio
- Safety aspects	Safety Document

6. Project Organization "Muon MoU"