

# PRINCIPAL LHCC DELIBERATIONS

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22<sup>ND</sup> MEETING OF THE CMS RESOURCES REVIEW BOARD

24 APRIL 2006

EMMANUEL TSESMELIS  
SCIENTIFIC SECRETARY, LHCC

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**GENERAL**

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This document summarises the principal LHCC deliberations concerning CMS at the Committee's sessions in October and November 2005 and in February and March 2006.

The LHCC took note of the updated CMS Master Schedule 34.4 and the accompanying milestones. The overall schedule remains very tight and challenging as delays have reduced the contingency in the schedule. To consolidate the schedule, settle the crystal procurement issues, and implement the new Tracker integration plan, CMS will soon need the 4 MCHF requested from the Resource Review Board.

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**CONCERNS FROM THE PREVIOUS CMS RESOURCES REVIEW BOARD**

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<b>SUB-SYSTEM</b>	<b>CONCERN</b>	<b>STATUS</b>
Silicon Strip Tracker (SST)	The SST continues to be on the critical path for completion of CMS.	Excellent progress was reported on the SST but the overall schedule remains tight. Integration of the Tracker is well underway in the Tracker Integration Facility (TIF).
ECAL	Crystal production for the ECAL Barrel and ECAL End-cap is on the critical path.	Production of crystals has improved but still requires further progress to ensure the timely completion of the ECAL. The production of crystals continues to dominate the ECAL schedule, resulting in a very tight time-line for the installation of the detector in CMS.
Muon Spectrometer	The critical path goes through the cabling and commissioning on the surface of the chambers on the central barrel yoke wheel YB0.	All the necessary cables are being prepared and the manpower is being put in place for this operation, scheduled for after the Magnet Test and Cosmic Challenge.

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## DETECTOR SUB-SYSTEMS

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### MAGNET

The magnet is complete and has been cooled-down in preparation for the Magnet Test and Cosmic Challenge in mid-2006.

### TRACKER

Most problems identified at the recent dedicated review of the Tracker have been solved. The Tracker Integration Facility (TIF) is fully-operational and the cold room has been delivered. Integration of the Tracker in the TIF is well-underway and the electronics and data acquisition system are being exercised in the TIF.

### ELECTROMAGNETIC CALORIMETER (ECAL)

Most problems identified at the recent dedicated review of the ECAL have been solved. Production of crystals for the ECAL has increased slightly. Seven Supermodules have been integrated and the 18 Supermodules needed in the autumn 2006 for insertion into the first Hadron Calorimeter half barrel are expected to be complete by the summer 2006.

### HADRONIC CALORIMETER

Good progress was reported on the HCAL – Hadronic Barrel (HB), Hadronic End Cap (HE), and the Hadronic Forward (HF) with no major concerns having been identified.

### MUON SYSTEM

Most problems identified at the recent dedicated review of the Muon System have been solved. The new organization of the Muon System Project is functioning well and the installation of the Barrel Muon System is proceeding faster than planned. The critical path items include cabling of the detectors, integration of the Drift Tube (DT) and Resistive Plate Chambers (RPCs) and the detector installation.

### TRIGGER AND DATA ACQUISITION

Good progress was reported on the Trigger and Data Acquisition with no major concerns having been identified.

### COMPUTING AND PHYSICS STUDIES

Good progress was reported on the CPT Project, which encompasses Computing, Software and Physics Reconstruction and Selection.

Volume I of the Physics Technical Design Report has been submitted to the LHCC, while submission of Volume II is scheduled for May 2006 and Volume III for January 2007.

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## COMPUTING TECHNICAL DESIGN REPORT

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The LHCC recommended general approval of the CMS Technical Design Report on the Computing and the Research Board approved the Technical Design Report.