

CERN-RRB-2007-079  
8 OCTOBER 2007

# PRINCIPAL LHCC DELIBERATIONS

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25<sup>TH</sup> MEETING OF THE ATLAS RESOURCES REVIEW BOARD

22 OCTOBER 2007

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SCIENTIFIC SECRETARY, LHCC

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**GENERAL**

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This document summarises the principal LHCC deliberations concerning ATLAS at the Committee's sessions in May, July and September 2007.

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

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<b>SUB-SYSTEM</b>	<b>CONCERN</b>	<b>STATUS</b>
Semiconductor Tracker (SCT) and Pixel Detector	Failure of evaporative cooling heaters.	Much progress has been reported on understanding the failures of the heaters of the evaporative cooling system of the Semiconductor Tracker (SCT) and Pixel Detector and a reasonable plan is being implemented to address the problem.
Forward Muon Spectrometer	Tight installation schedule.	All Big Wheels of the Muon System have been installed and work on the Small Wheels and on the Muon End Wall Monitored Drift Tube (MDT) stations is proceeding well.
Power Supplies	Late delivery of the low voltage and high voltage power supplies.	Retro-fitting of the LAr low voltage power supplies is advancing well and the repair of the Tile Calorimeter electronics drawers is on-going in order to cure the observed instabilities.  The delivery of the CAEN high voltage power supplies for the Muon System remains critical as their availability for the full commissioning of the detector remains tight.

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## EXPERIMENT SUB-SYSTEMS

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### MAGNETS

Both End-Cap Toroid magnets, ECT-A and ECT-C, have been lowered successfully into the ATLAS cavern and the cool-down of both is scheduled to start in November 2007. A full test of the ATLAS toroid magnet system, barrel and end-cap, has been pushed back to March 2008 in order to gain additional flexibility for work on the Inner Detector (ID) and calorimeters.

### INNER DETECTOR

Installation of the Pixel Detector, together with the central experimental beam pipe, and the barrel and end-cap Semiconductor Tracker (SCT) is complete.

Much progress has been reported on understanding the failures of the heaters of the evaporative cooling system of the Semiconductor Tracker (SCT) and Pixel Detector and a reasonable plan is being implemented to address the problem. The Inner Detector (ID) installation plan has been re-organised in order to minimize the impact on the overall ATLAS schedule. The LHCC will continue monitoring progress in its future sessions.

### CALORIMETERS

Commissioning of the ATLAS calorimeters is making good progress. Retro-fitting of the LAr low voltage power supplies is advancing well and the repair of the Tile Calorimeter electronics drawers is on-going in order to cure the observed instabilities.

### MUON SYSTEM

All Big Wheels of the Muon System have been installed and work on the Small Wheels and on the Muon End Wall Monitored Drift Tube (MDT) stations is proceeding well. The delivery of the CAEN high voltage power supplies remains critical as their availability for the full commissioning of the detector remains tight.

### TRIGGER AND DAQ

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

### COMPUTING

Preparations for the ATLAS Full Dress Rehearsal (FDR) are well underway. The FDR will make use of the overall ATLAS chain from the DAQ to the data analysis using large sets of simulated data.

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## GLOBAL COMMISSIONING

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The LHCC considers that the objectives of the ATLAS experiment commissioning are well-defined and are proceeding on schedule. The overall commissioning plan consists of the integration of sub-detectors and central systems as they become available, followed by the testing of various operational

modes. Cosmic-ray runs are scheduled allowing for detector studies with particles and the transfer of data to the Tier-0 computing centre.

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**ZERO DEGREE CALORIMETER LETTER OF INTENT**

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The LHCC took note of the ATLAS Zero Degree Calorimeter (ZDC) Letter of Intent.