

**LHC EXPERIMENT-ACCELERATOR DATA EXCHANGE WORKING GROUP
(LEADE)**

Minutes of the 17th Meeting held on May 17, 2004

Present: A. Ball, S. Baron, P. Baudrenghien, M. Clayton, N. Ellis, D. Evans,
P. Farthouat, P. Grafström, Ch. Ilgner, R. Jacobsson, R. Jones,
D. Macina, K. Potter, W. Salter, A. Smith, W. Smith, J. Troska,
E. Tsesmelis

1. MATTERS ARISING

Approval of the Minutes

The minutes of the 16th LEADE meeting were approved without modification.

Optical Splitter for TTC Distribution (J. Troska)

Jan Troska presented the concept for the optical splitter for the CMS single-mode TTC distribution system, which is essentially an optical distribution tree. Most design features of the 19'' rack mount units have been recently fixed. Due to their size, they can house optical equipment of any type. The device will either have a 6U or 9U front panel. An order for 4 modules has been placed, delivery expected by beginning June 2004. The only drawback is that the module will prevent the cooling-air flow inside the rack (perforated top/bottom plates under test).

Action: Jan Troska will give a more detailed status report at a future meeting of LEADE.

2. ORGANISATION OF TTC COORDINATION (S. BARON, E. TSESMELIS)

Emmanuel Tsesmelis gave a report summarising recent discussions on the coordination of the overall TTC system. It was reiterated that Sophie Baron will act as the TTC coordinator and will provide an interface between the experiments and accelerator.

A number of issues which need immediate action were brought to the attention of the working group:

- Clarification of the situation (availability/support) on the TTC transmitter crates for the Prévessin Control Room (PCR).
- For the TTCmi modules in the experimental areas, no schematic drawings are available.
- The type of cable from the PCR (single or double mode fibre) needs to be specified (also for the TTCrx).

- BOBR: Distribute technical documents to the experiments, including a list of signals/information sent. In addition, Rhodri Jones will make some (very global) information available.
- TTCex (also under experiments' responsibility): What is the clock frequency? Compatibility with QPLL?

Action: Sophie Baron will give a progress report at a future meeting of LEADE providing an update to the above outstanding issues.

3. REPORT FROM THE LHC DATA INTERCHANGE WORKING GROUP (W. SALTER)

Wayne Salter gave a brief report from the LHC Data Interchange Working Group, addressing the current status of DIP integration. DIP is a simple and robust publish/subscribe system, supporting an on-change data exchange. Its data format includes a time-stamp and a quality flag. Two products – DIM and SonicMQ – were selected for evaluation and due to its lower cost and simpler maintenance philosophy, the former system was selected. The question of whether it would be possible to store and retrieve data published by the LHC domain via the DIP was raised. The experiments expressed a preference for a central repository of all LHC data and for an interface to gain access to this archived data. The issue of a central repository will be discussed again at the next LEADE meeting.

Action: Decision on central repository for LHC data (representatives of the experiments; Wayne Salter)

4. LUMINOSITY MEASUREMENT & MONITORING AT POINT 1 (P. GRAFSTRÖM)

ATLAS proposes to complement their main detector with ultra-small-angle detectors based on Roman Pot inserts in the beam pipe, equipped with position sensitive detectors and located at 240 m on either side of the main ATLAS detector. The detectors will measure elastically scattered protons in the theoretically well-calculable Coulomb scattering regime for the primary purpose of the absolute determination of the LHC luminosity at the ATLAS interaction point. In addition, ATLAS proposes a luminosity monitor based on cylindrical Cerenkov counters placed around the beam pipe close to the ATLAS interaction point. The proposed detector, called LUCID (LUMinosity measurement using a Cerenkov Integrating Detector), will monitor the number of inelastic pp interactions in each bunch crossing by counting the average number of particles detected per bunch crossing.

Ch. Ilgner

Provisional Dates for 2004 meetings:

14 June
19 July
6 September
18 October
13 December