

**LHCb** 12 April 2010

### Minutes of the 23<sup>rd</sup> LHC Resource Review Board Meeting (CERN, Geneva, 14<sup>th</sup> October 2009)

#### Present:

- L. De Paula (Instituto de Fisica, UFRJ, Brazil)
- R.C. Shellard (CBPF, Brazil)
- Y. Gao (Institute of High Energy Physics, China)
- Y. Zhang (National Natural Science Foundation of China, China)
- E. Aslanides (CPPM, France)
- E. Auge (CNRS/IN2P3, France)
- K. Ehret (PT-DESY, Germany)
- M. Pantea (Federal Ministry of Education and Research, Germany)
- F. Ferroni (INFN, Italy)
- U. Marconi (INFN, Italy)
- A. Van Rijn (NIKHEF, Netherlands)
- J. Królikowski (Univ. of Warsaw and Ministry of Science and Higher Education, Poland)
- F. Buzatu (Institute of Atomic Physics, Romania)
- V. Savrin (Institute of Nuclear Physics, Moscow State University, Russia)
- A. Petrov (Federal Agency of Science and Innovations, Russia)
- L. Garrido Beltran (University of Barcelona, Spain)
- T. Nakada (CHIPP (Switzerland), Switzerland)
- G. Zinovjev (National Academy of Sciences, Ukraine)
- A. Medland (SFTC, United Kingdom)
- F. Muheim (University of Edinburg, United Kingdom)
- M. Pripstein (National Science Foundation, United States of America)

#### **CERN**

S. Bertolucci (Chairman), J. De Groot, T. Lagrange, S. Lettow, R. McLaren (Secretary), J. Salicio Diez, S. Schmeling, E. Tsesmelis, E. Van Hove

#### **LHCb**

A. Golutvin, M. Pepe Altarelli, C. D'Ambrosio, A. Schopper, U. Straumann, W. Witzeling

### **Scrutiny Group**

B. Loehr (Chairman)

#### **Apologies**

- U. Doselli (INFN, Italy)
- E. Tsesmelis

#### http://committees.web.cern.ch/Committees/WelcomeLHCRRB.html

- 1. Introduction. S. Bertolucci, Director of Research and Scientific Computing.
- S. Bertolucci welcomed delegates to the  $23^{\rm rd}$  meeting of the LHCB LHC Resource Review Board
- **2. Approval of the minutes of the last meeting.** S. Bertolucci, Director of Research and Scientific Computing.

The minutes of the last RRB CERN-RRB-2009-074 were approved without comment.

## **3. Status of the LHCb experiment.** A. Golutvin, spokesperson CERN-RRB-2009-114 (report)

A. Golutvin's presentation focussed on six main areas:

- Introduction
- Detector Subsystems
- Trigger/Online/ Computing
- Cost and funding issues
- Collaboration matters
- Physics goals in 2010

#### He summarised that:

- The installation of LHCb is fully completed, including M1 station
- All detector elements are commissioned and ready for data taking. Read out at 1Mhz has been successfully tested
- Full Experiment System Test (FEST), which is able to inject MC data to Event Filter Farm, is used for the HLT commissioning.
- Strategy for trigger and subsequent physics analysis of the 2009-2010 Run has been prepared.
- LHC is fully operational for the Physics Run in 2010

M. Pripstein asked for more information on the anti-aging strategy for the Outer Tracker. A. Golutvin replied that heating and flushing the chambers had improved the situation. Future measures could include training the chambers with high voltage. In the worst case, the modules would be replaced changing the composition of the glue which has been determined to be the cause of aging.

# 4. LHCC Deliberations (paper only). S. Bertolucci, Director of Research and Scientific Computing.

CERN-RRB-2009-116

S. Bertolucci stated that the presentation was in line with the LHCC report. The on-going work is reasonable. The LHCC considers that LHCb will be ready for beam this year.

- **5. Financial matters.** T. Lagrange, Head of CERN Finance and Procurement Department CERN-RRB-2009-095 (report)
- T. Lagrange presented the changes with respect to the above report.

Outstanding contributions for the Common fund are 17 kCHF from Romania and 13.7 kCHF from the Ukraine.

The M&O-A account had received a contribution of 29 kCHF from Ireland. The outstanding contributions for M&O-A stand at 279 kCHF from member states and 485 kCHF from non-member states. T. Lagrange reported that Poland would try and pay before the end of 2009.

*There were no questions arising from this presentation.* 

- **6. Construction Budgets.** C. D'Ambrosio, Resource Coordinator. CERN-RRB-2009-117 (report), CERN-RRB-2009-132 (report) CERN-RRB-2009-118 (slides)
- a. 2009 Construction Budgets

D'Ambrosio, reported that, as foreseen last year, spending from the Common Fund had been significant especially in DAQ and Infrastructure. He expected DAQ and Infrastructure to continue to use Common Fund in 2010.

As anticipated, the large amounts for Muon, OTR and Rich were mostly repayments of loans from Core funds. About 1 MCHF was still uncommitted at the end of August and no cash flow problems were anticipated.

Turning to Core, D'Ambrosio, stated most of the spending came to an end in 2006. The last delivery of HPDs for the RICHs was done in the first half of 2007. The Muon chamber production has also finished. Still using Core for purchasing for DAQ and data storage will continue throughout 2009 and 2010. However, no additional requests for funds will be presented to the RRB.

b. Category A M&O status for 2009

D'Ambrosio presented a table showing the amounts spent and budgeted for each item. He stated that, based on extrapolations of the spending profile, he expected that the budget forecast for 2009 to be correct for all the items apart from Online computing and Power estimate; a compensation for power is proposed for 2010. He continued with the proposed evolution of Category A M&O (without Velo and Power).

There were some changes from 2009 (in agreement with the Scrutiny Group):-

There was a proposal that the 2008 under spending, 106 kCHF, is kept as a buffer in M&O A. This is in agreement with CERN-RRB-2006-026.

150 kCHF had been allocated for Core Computing from 100 kCHF in 2009. The Core Computing Chapter had been set to zero until 2008. The expressed intention of the collaboration had been to try to find the missing manpower, 4 FTE by the last count,

on a voluntary basis inside the collaboration and not ask for Core Computing service tasks to be charged to Category A; this position had proven to be no longer tenable. The funds will be used to support people stationed at CERN.

The assumption is that the estimated cost for EVO is billed to the experiments; LHCb costs for 2010 will be  $\sim$ 40 kCHF. This sum is included in the Communications line of the budget request.

D'Ambrosio then showed the sharing of the M&O A by Funding Agency in 2010. He concluded with a breakdown of the M&O B for 2009, remarking that only small adjustments would be necessary for 2010.

c. M&O Scrutiny Group Report. B. Loehr, Scrutiny Group Chairman CERN-RRB-2009-078 (report)

Concerning the request to keep the under-spend for on-line hardware for coming years, the Scrutiny group agreed with this proposal on the condition that the funds should be kept in an account which can be scrutinised.

The budget request was approved.

- **7. Summary.** S. Bertolucci, Director of Research and Scientific Computing.
- S. Bertolucci summarised that LHCb is ready to take data and the finances are in order.