



CMS

29th June 2010

**Minutes of the 30th LHC Resource Review Board Meeting
(CERN, Geneva, 19th April 2010)**

Present:

C. -E. Wulz (Institute of High Energy Physics, Austria)
D. Denegri (Repr. Ministry of Science and Technology, Croatia)
J. Tuominiemi (Helsinki Institute of Physics, HIP, Finland)
E. Augé (CNRS/IN2P3, France)
Y. Sirois (LLR Ecole Polytechnique, France)
S. Kern (BMBF, Germany)
D. Muller ((replacing K. Ehret) BMBF, Germany)
G. Vesztegombi (KFKI, Hungary)
D. Higgie (Mission to the U.N., New Zealand)
R. Little (Mission to the U.N., New Zealand)
M. Turala ((replacing J. Królikowski), Poland)
I. Golutvin (JINR, Russia)
V. Karjavin (JINR, Russia)
V. Petrov (Mission, (replacing Y. Kozlov) Federal Agency of Science and Innovations, Russia)
N. Russakovich (JINR, Russia)
Q. Ingram (PSI, Switzerland)
T. Nakada (CHIPP, Switzerland)
R. Cousins (UCLA/replacing J. Butler, US-DoE)
I. Fisk (FNAL), US-DoE)

CMS

A. Ball, A. Charkiewicz, A. De Roeck, J. Incandela, G. Tonelli.

CERN

S. Bertolucci, P. Bloch, J. De Groot, R. Heuer, T. Lagrange, S. Lettow, R. McLaren, J. Salicio Diez, S. Schmelting, E. Tsesmelis, E. Van Hove.
D. Espriu (Computing Resources Scrutiny Group)
B. Loehr (Scrutiny Group Chair)

EVO

J. Lemonne (FWO, Belgium)
J. Sacton (FNRS, Belgium)
D.-O. Riska (Helsinki Institute of Physics, HIP, Finland)
P. Chomaz (CEA/DSM/IRFU/DIR, France)
P. Schleper (Hamburg University, Germany)
F. Ferroni (Università Sapienza e INFN Roma, Italy)
M. Diemoz (INFN-Roma, Italy)
U. Dosselli (INFN, Italy)
L. Silvestris (INFN-Bari), Italy)
J. Królikowski (Institut of Experimental Physics, Poland)
T. Rodrigo (Universidad de Cantabria, Spain)
G. Hall (Imperial College London, United Kingdom)
J. Butler (FNAL, US-DoE)

Documents can be found in the RRB indico pages; accessible via the LHC-RRB home page <http://committees.web.cern.ch/committees/all/welcomeLHCRRB.html>

1. Introduction S. Bertolucci, Director of Research and Scientific Computing.

S. Bertolucci welcomed delegates to the 30th meeting of the RRB. Many delegates were unable to attend in person due to the eruption of the Eyjafjallajökull volcano in Iceland.

2. Approval of the minutes of the last meeting. S. Bertolucci, Director of Research and Scientific Computing.

CERN-RRB-2010-005 (report)

The minutes of the last RRB were approved without comment.

3. Status of the experiment, including Financial Plan. G. Tonelli, Spokesperson

CERN-RRB-2010-026 (report) CERN-RRB-2010-027(presentation)

G. Tonelli presented the results of the first physics at CMS. He showed the results of the very first run, the pilot run and the distribution to Tier 1 and 2. He gave a summary of results which showed excellent correlation with the simulation, followed by details of the first paper “Transverse momentum and pseudorapidity distributions of charged hadrons at $\sqrt{s} = 900$ and 2360GeV ”; stating that many other papers were in preparation.

He then gave details of the work during the 2009-2010 winter shutdown and the start-up of operations; everything had been ready for 7 TeV operation since February. G. Tonelli recalled the careful preparation for the run and then recalled the atmosphere in the control room after the first collisions. This was complemented by unprecedented interest from the media.

G. Tonelli reported that the first two weeks of 7 TeV operations had proceeded smoothly. He then outlined the Physics Prospects for the 2010-2011 Run and the Short/mid term milestones taking into account the upgrade and planning of LHC shutdowns. He concluded that:

- After the winter shutdown and the first round of collisions CMS was in an excellent state.
- The preliminary detector performance obtained so far were very promising.
- The next challenge will be to operate the detector with high (>90%) data taking efficiency and be ready to present new physics results at the next summer conferences (ICHEP).
- There are no major concerns for the long period of running.
- Upgrade plans are being reviewed after Chamonix. A new plan is in preparation for June 2010.

E. Augé understood that the plan was for a two-phase upgrade: 2015 and longer term. He enquired as to whether the engineering work had started or was there still time for R&D? G. Tonelli replied that for the Muon upgrade, RPC and CSC, engineering studies were very mature and the focus was on procurement, production and installation. R&D was required for the new photo-detectors for Hadronic Calorimetry- SiPM- allowing finer segmentation of read-out in depth.

T. Nakada remarked that the SiPM was in two steps: the outer part and then all HPD. G. Tonelli concurred; for the HO the current SiPM were adequate and installation would continue using existing components. For the HB the plan was to spend one or two years, working with industry, to produce a new product.

T. Nakada asked if neutron background was an issue. G. Tonelli replied that this was not a major issue but was being taken into consideration.

E. Augé asked for confirmation of the timescales for the upgrade; would there be plans in the summer with discussions in fall 2010 on participation by Funding Agencies? G. Tonelli replied that this was the intention.

G. Tonelli then turned to the details of the Financial Plan and outlined the Maintenance and Operation (M&O-A) estimated needs for 2011. He promised the final numbers for the October RRB. He also commented on M&O B. His concluding comments were:

- Many thanks to the CERN Management and Technical Departments, particularly to Steve Myers and the whole LHC team for the excellent start-up of the LHC operations.
- Many thanks to the Funding Agencies for their continuous support to CMS.
- CMS is ready for important measurements and, if nature is kind to us, new discoveries.
- Stay tuned: the years 2010-2011 could be very interesting for our field.

4. LHCC deliberations (paper only). E. Tsesmelis, LHCC Scientific Secretary
CERN-RRB-2010-028 (report)

The LHCC considers that CMS has made excellent progress in all aspects of the experiment and the Committee congratulates the CMS Collaboration on its achievements.

5. Financial matters. T. Lagrange, Head of CERN Finance and Procurement Department
CERN-RRB-2010-029 (report) CERN-RRB-2010-057 (presentation)

Status of Common Fund accounts

T. Lagrange presented the changes with respect to the report on the 28th February. He reported that Taipei and Austria had since paid a total of 273 kCHF.

Looking at the contributions received from Member States for 2007-2010, Step 1 had received a total of 9.3 MCHF, Step 2 had received a total of 5.1 MCHF, Step 3 had received a total of 2.2 MCHF.

Contributions received from non-Member States for 2007-2010, Step 1 had received a total of 5.5 MCHF, Step 2 had received a total of 1.1 MCHF, Step 3 had received a total of 586 kCHF.

Status of M&O-A accounts

Since the 1st of March 2.2 MCHF had been received. The outstanding contributions for member states from 2002-2009 is 162 kCHF and for 2010 was 2.7 MCHF. For the non-Member States, the outstanding contributions from 2009 were 123 kCHF and 5.2 MCHF for 2010.

M. Turala, replacing J. Królikowski, announced that the Deputy Minister of Science and Higher Education, J. Szwed, had agreed to grant all four experiments the funds required to pay both outstanding and future contributions.

6. M&O Budgets. A. Charkiewicz, Resources Manager
CERN-RRB-2010-030, CERN-RRB-2010-031, CERN-RRB-2010-053 (presentation)

A. Charkiewicz reported on the M&O-A 2002-2009 Contributions, noting that the budget years up to 2007 are now fully paid and budget years 2008-2009 are expected to be fully paid before the October 2010 RRB. CMS thanks all Funding Agencies for their timely payments to the 2009 M&O-A.

He gave an overview of expenditures of M&O-A 2009 including a breakdown by subsystem. He explained the reasons for the overspending of 2.4 MCHF and the measures that were being taken to deal with this issue.

Turning to the overview of expenditures of M&O-B, the Resources Manager reported on the creation of a Task Force to ensure that M&O-B cost sharing is carried out in as fair and equitable way as possible. The Task Force had made specific recommendations to the Finance Board to further formalize the M&O-B budgetary process with a view to ensuring transparency and coherence between the different CMS Sub-systems.

He summarized by inviting the RRB to take note of the present expenditure report and asking the Funding Agencies to ensure that payments, especially outstanding contributions, are made as early as possible.

A. Charkiewicz then presented the Status of M&O MoU Signatures.

He then moved on to present, for information only, the Preliminary Draft Budget for M&O 2011. The cost sharing presented in document CERN-RRB-2010-031 was preliminary (based on the latest PhDs list available in October 2009) and would change for the October 2010 RRB. The M&O-A costs would be reviewed by the CMS Finance Board and further input from the Scrutiny Group will be taken into account in the October M&O Draft Budget.

He then commented that the M&O-A cost estimates have changed with respect to the October 2009 RRB meeting. Some of these changes have already been signaled at the October 2009 RRB (On-line DBA, indexation of manpower). Others result from unexpected emergency leak repairs, manpower needs in the area of computing and the cost of video-conference software.

A. Charkiewicz presented a breakdown, by subsystem, of the M&O-A Preliminary Draft Budget for 2011 which has a grand total, including power, of 17.1 MCHF.

Turning to the 2011 M&O-B Preliminary Draft Budget, he commented that M&O-B costs had been partially reviewed by the CMS Collaboration. This is subject to an in-depth analysis by

a Task Force created by the Finance Board in June 2009. This budget request will be further updated before being presented to the Scrutiny Group and to the October 2010 RRB. The M&O-B cost sharing is as presented in October 2009. Further modifications may result from adjustments in Sub-systems.

He then presented a breakdown, by subsystem, of the M&O-B Preliminary Draft Budget for 2011 and summarized that:

- The M&O-A Preliminary Draft Budget 2011 amounts to 17.1 MCHF. CMS intends to reduce this amount in the Draft Budget proposal to the October 2010 RRB.
- This would bring the 2011 M&O-A budget request closer to the amount of 15.2 MCHF already presented in the October 2009 RRB.
- The M&O-B Preliminary Draft Budget 2011 amounts to some 5.7 MCHF and some 115 FTEs of collaborating Institutes manpower.

A. Charkiewicz concluded by inviting the RRB to take note of the present, unscrutinised, cost estimates for M&O-A and M&O-B.

U. Dosselli announced that INFN was very pleased with the performance of both the LHC and the CMS experiment. Despite the difficult financial situation, he was pleased to report that INFN would pay 1.25 MCHF to cover their share of Steps 1 and 2. S. Bertolucci and G. Tonelli, on behalf of the CMS collaboration, expressed their gratitude.

B. Loehr introduced CERN-RRB-2010-054 which is a report from the LHC M&O Scrutiny Group following a meeting with CMS to discuss the M&O-A requests for the Operational Centre, the Engineering Integration Centre, and the Electronics Integration Centre. The conclusion of the report is that the Scrutiny Group endorses its recommendation for the approval of the CMS budget request for 2010 including the new projects under items 6.01 and 7.11.

8. Summary. S. Bertolucci, Director of Research and Scientific Computing.

S. Bertolucci summarised that CMS was in full swing and proceeding very well. The model for operation and expenditure would have to be refined with experience. New scenarios will be defined with guidance of the scrutiny groups and with a firmer plan of the CERN management.

He also announced, at the start of the meeting, that the EGI.eu has been founded; this will guarantee the long-term availability of a generic e-infrastructure for European research communities and their international collaborators.