



CMS

3<sup>rd</sup> March 2009

## Minutes of the 27th LHC Resource Review Board Meeting (CERN, Geneva, 11<sup>th</sup> November 2008)

Present:

J. Lemonne (FWO, Belgium)  
J. Sacton (FNRS, Belgium)  
P. Ji (National Natural Science Foundation of China, China)  
Y. Zhang (National Natural Science Foundation of China, China)  
L. Zou (National Natural Science Foundation of China, China)  
D. Denegri (Repr. Ministry of Science and Technology, Zagreb, Croatia)  
D-O. Riska (Helsinki Institute of Physics, Finland)  
J. Tuominiemi (Helsinki Institute of Physics, Finland)  
E. Augé (CNRS/IN2P3, France)  
P. Chomaz (CEA Saclay, IRFU/DIR, France)  
Y. Sirois (LLR, Palaiseau, France)  
K. Ehret (DESY, Germany)  
M. Fleischer (DESY, Germany)  
T. Hebbeker (RWTH Aachen, Germany)  
E. Gazis (NTU-Athens, Greece)  
G. Vesztegombi (KFKI-RMKI, Hungary)  
T. Csörgő (MTA KFKI-RMKI, Hungary)  
P. Mukherjee (Department of Atomic Energy, India)  
A. Gurtu (Tata Inst of Fundamental Research, India)  
M. Diemoz (INFN, Italy)  
F. Ferroni (INFN, Italy)  
A. Bernotas (The Lithuanian Academy of Sciences, Lithuania)  
J. Królikowski (University of Warsaw, Poland)  
G. Barreira (LIP, Portugal)  
Y.I. Choi (Sungkyunkwan University, Republic of Korea)  
D.M. Lee (KICOS, Republic of Korea)  
A. Petrov (Russian Permanent Mission, Switzerland)  
V. Savrin (SINP MSU, Russia)  
T. Rodrigo (IFCA (CSIC-UC), Spain)  
Q. Ingram (PSI, Switzerland)  
T. Nakada (CHIPP EB member, Switzerland)  
G.W.S. Hou (National Taiwan University, Taiwan) - part time  
I. Turk Cakir (TAEA, Turkey)  
G. Hall (Imperial College London, United Kingdom)  
A. Boehnlein (DOE, United States of America)  
J. Butler (FNAL, United States of America)  
R. Cousins (UCLA, United States of America)  
S. Gonzalez (DOE, United States of America)  
D. Marlow (Princeton University, United States of America)  
M. Pripstein (National Science Foundation, United States of America)  
M. Procaro (DOE, United States of America)

G. Lafferty (University of Manchester, Scrutiny Group Chair)  
C. Diaconu (CNRS/IN2P3, Scrutiny Group)  
R. Heuer (DESY, Director-General Designate)  
S. Bertolucci (INFN, Research Director Designate)

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J. Engelen, E. Tsesmelis, D. Jacobs, R. McLaren, J-J. Blaising, J. Salicio-Diez, , T. Lagrange, E. Van Hove, F. Sonneman

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T. Virdee, A. Petrilli, G. Tonelli, A. Ball, T. Camporesi

Apologies

P. Schroth /Germany BMBF

U. Dosselli (INFN, Italy)

Y. Kozlov (Russian Federal Agency for Science and Innovation, Russia)

J. Fuster (University of Valencia CSIC, Spain)

C. Cavata (CEA, France)

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

### **1. Introduction** J. Engelen, Chief Scientific Officer

J. Engelen welcomed delegates to the 27<sup>th</sup> meeting of the RRB. He introduced T. Lagrange who replaced P. Geeraert as head of CERN's Finance department.

### **2. Approval of the minutes of the last meeting.** J. Engelen, Chief Scientific Officer CERN-RRB-2008-060 (report)

The minutes of the last RRB were approved without comment.

### **3. Status and financial plan of the experiment.** T. Virdee, Spokesperson CERN-RRB-2008-095 (report) CERN-RRB-2008-096 (presentation)

T. Virdee began by showing CMS on the cover of Newsweek, an indication of the media interest and international recognition of the success of the LHC Project. He went on to present collaboration news since the last RRB and changes in the Management.

T. Virdee then illustrated, with a series of photographs the progress of CMS which, after almost 20 years, had become a working experiment in September 2008.

He continued with a summary of commissioning of the Solenoid Magnet, progress on the ECAL ES and the results from Combined Computer Readiness Challenge.

T. Virdee moved on to commissioning prior to beam; he covered the Global cosmics runs and the commissioning of the Tracker, Pixels, ECAL and Muon DTs. He presented the first events of beam going through CMS and recalled the atmosphere in the control rooms.

He then listed the activities which would take place during the shutdown and the progress and plans in software, computing and preparation for physics.

T. Virdee said a few words on the LHC inauguration before concluding that:

The dedicated and strenuous efforts of many over the summer allowed a powerful CMS detector to be prepared for LHC startup.

After almost 20 years of design and construction CMS started taking data with LHC beams.

All indications are that sub-detectors, online, offline, computing and analysis systems are performing well.

CMS had become a running experiment!

*J. Engelen congratulated CMS on an impressive "final sprint" to complete the installation and the smooth transition to operation of the detector.*

Turning to financial matters, T. Virdee reminded delegates of the situation presented to the April RRB and gave a statement of accounts, looking in detail at the Three Steps.

T. Virdee concluded the presentation of the Financial Plan by stating that:

CMS was very grateful to all the Funding Agencies, including CERN, for the support provided over the long construction period.

Special thanks went to the outgoing CERN Management for their constant support and CERN for help in providing cash-flow.

CMS had reviewed the costs of the startup detector and has made a provisional estimation of the accounts. The deficit is somewhat larger than previously anticipated but can be accommodated within the costs of the low luminosity detector with the crucial assumption that all agencies pledge Step 1 and 2 funds requested in October 2006

CMS is not requesting any additional funds with respect to the original request of October 2006.

*F. Ferroni was delighted to see significant progress, however he reported that INFN could for the moment pledge only 1 MCHF instead of the 2.5 MCHF said previously.*

*J. Engelen asked if there were any issues concerning Step 1 and 2 that CMS wished to raise at the RRB. T. Virdee replied that in addition to the missing INFN contribution, there was Russia and Greece. These issues need to be addressed.*

*D-O. Riska suggested that Finland could make advance payment on their 2010, 2011 contributions; a running table, showing credit and debit, would help illustrate the gap. J. Engelen replied that this suggestion will be followed up.*

#### **4. LHCC deliberations (paper only).** E. Tsesmelis, LHCC Scientific Secretary CERN-RRB-2008-090 (report)

*Delegates had no comments and the RRB took note of the LHCC report.*

#### **5. Financial matters,** T. Lagrange, Head, CERN Finance Dept. CERN-RRB-2008-070 (paper)

T. Lagrange presented the changes with respect to the Financial Report of 31 August 2008.

On the Common Fund, Step 1, 2 and 3 contributions of 1.3 MCHF had been received from the USA and Belgium; the total amount received for the three steps was 9.2 MCHF.

For M & O A. 1.1 MCHF had been received bringing the total outstanding to 1.3 MCHF.

*F. Ferroni reported that INFN had paid 95 KCHF.*

**6. Budgets.** A. Petrilli, Resource Coordinator  
CERN-RRB-2008-098, CERN-RRB-2008-099 (reports), CERN-RRB-2008-100 (presentation)

**a. 2009 Construction Budget**

A. Petrilli introduced the draft budget for construction 2009 and made comments concerning the payments. He then gave an overview of the budget for each subsystem. This was detailed in Annex 10 of his report. He then invited the RRB to approve the budget.

*The budget was approved by the delegates.*

**b. 2009 M&O budgets**

A. Petrilli listed the Status of M&O MoU Signatures and presented the draft budget for Category A; this included a breakdown of the costs as reported in Annex A.1. He continued with a similar analysis for the Category B Budget as shown in Annex B.1.

A. Petrilli listed the contributions from the funding agencies and noted that whilst the total currently outstanding amount for 2002-2007 is 243 kCHF, agreements have been reached to cover some 221 kCHF of the above amount in the near future. He also presented graphs of the evolution of M&O for 2003 until 2012.

He concluded by inviting the RRB to approve the draft budget for M&O A for the year 2009 and take note of the draft budget for M&O B for the year 2009 and its sharing amongst the CMS Funding Agencies. He noted that the M&O B draft budget will not be invoiced but that those funds should be made available to the CMS collaborating Institutes.

**c. M&O Scrutiny Group report, G. Lafferty**  
CERN-RRB-2008-087 (report)

G. Lafferty reported that the SG had checked that the amounts in each of the categories matched the sum requested and was in line with previous experience. He warned that cooling and gas costs are rising. Computer spending is increasing in line with the plan for procurement. A request for an extra half FTE had been approved to support technical coordination.

Some more technical work is needed to properly estimate the cost, to M&O, of the revision of tracker cooling system. A new request for up to 200 kCHF for beam pipe spares was sanctioned by the SG.

To conclude G. Lafferty reported that M&O had been scrutinized and recommended the figures for approval by the RRB.

*J. Engelen thanked the Scrutiny Group for their comprehensive report and, there being no comments from the delegates, stated that the M&O budget for 2009 was approved.*

#### **7. M&O Scrutiny Group in 2009.** J. Engelen, Chief Scientific Officer

As announced in the plenary session, there will be changes to the Scrutiny Group. G. Lafferty, J. Mnich and J. Kirkby will be leaving the group, requiring new delegates from the UK, Germany and CERN, and a new Chairperson will be appointed. M. Turala will join the Scrutiny Group and J. Engelen proposed B. Loehr as a candidate. The RRB delegates will receive further information.

#### **8. Summary** J. Engelen, Chief Scientific Officer

J. Engelen summarized progress as significant and positive. Step 1 is almost financed, but needs to be completed. An account of the budget dynamics, as requested by D-O. Riska, will be prepared. Detailed discussions on step 2 and 3 will take place in 2009.

T. Virdee thanked J. Engelen and the CERN management for helping the CMS experiment and for the advice which helped make the detector a success. In addition T. Virdee expressed, on behalf of CMS, his gratitude to G. Lafferty and the Scrutiny Group.

There being no further business, the chairman thanked the participants and closed the meeting.