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CMS

10th March 2010

Minutes of the 29th LHC Resource Review Board Meeting (CERN, Geneva, 13th October 2009)

Present:

J. Lemonne (FWO, Belgium) J. Sacton (FNRS, Belgium) R.C. Shellard (CBPF, Brazil) S. Novaes (Universidade Estadual Paulista, UNESP, Brazil) A. Santoro (UERJ, Brazil) Y. Zhang (NSFC, China) Z. Wang (IHEP, CAS, China) D. Denegri (Repr. Ministry of Science and Technology, Zagreb, Croatia) M. Raidal (NICPB, Estonia) D-O. Riska (Helsinki Institute of Physics, Finland) J. Tuominiemi (Helsinki Institute of Physics, Finland) E. Augé (CNRS/IN2P3, France) U. Bassler (CEA, France) P. Rebourgeard (DSM, IRFU-DIR, France) Y. Sirois (LLR, Palaiseau, France) K. Borras (DESY, Germany) M. Pantea (Federal Ministry of Education and Research, Germany) K. Ehret (DESY, Germany) V. Guelzow (DESY, Germany) P. Schleper (Hamburg University, Institute for Experimental Physics, Germany) E. Gazis (NTU-Athens, Greece) T. Csőrgő (MTA KFKI-RMKI, Hungary) G. Vesztergombi (KFKI-RMKI, Hungary) P. Mukherjee (Department of Atomic Energy, India) A. Gurtu (Tata Inst of Fundamental Research, India) F. Ferroni (INFN, Italy) F. Ferrini (Permanent Mission, Italy) J. Krolikowski (University of Warsaw, Poland) G. Barreira (LIP, Portugal) J.E. Ha (Ministry of Education, Science and Technology, Republic of Korea) I.I. Lee (Ministry of Education, Science and Technology, Republic of Korea) H. Kim (National Research Foundation of Korea, Republic of Korea) I.H. Kim (National Research Foundation of Korea, Republic of Korea) Y.I. Choi (Sungkyunkwan University, Republic of Korea) Y.F. Kozlov (Federal Agency of Science and Innovations, Russia) V. Savrin (SINP MSU, Russia) A. Petrov (Russian Permanent Mission, Switzerland) A. Sissakian (JINR, Russia) I. Golutvin (JINR, Russia) T. Rodrigo (ICFA, CSIC-UC, Spain) O. Ingram (PSI, Switzerland) T. Nakada (CHIPP EB member, Switzerland) G.W.S. Hou (NTU, Taipei) A. Medland (STFC, United Kingdom) G. Hall (Imperial College London, United Kingdom) A. Boehnlein (DOE, United States of America)

S. Gonzalez (DOE, United States of America)

M. Pripstein (National Science Foundation, United States of America)

M. Procario (DOE, United States of America)

J. Butler (FNAL, United States of America)

I. Fisk (FNAL, United States of America)

D. Marlow (Princeton University, United States of America)

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

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T. Virdee, A. Ball, A. Charkiewicz, R. Cousins, D. Green, A. Petrilli, G. Tonelli

Scrutiny Group

B. Loehr (Chairman)

Apologies

U. Dosselli (INFN, Italy) E. Tsesmelis

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

1. Introduction. S. Bertolucci, Director of Research and Scientific Computing. S. Bertolucci welcomed delegates to the 29th meeting of the RRB.

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

CERN-RRB-2009-073 (report) The minutes of the last RRB were approved without comments.

3. Status of the experiment, including Financial Plan. T. Virdee, Spokesperson CERN-RRB-2009-108 (report) CERN-RRB-2009-109 (presentation)

T. Virdee's presentation focussed on four main areas:

- Progress since the last RRB
- Preparations for LHC Startup
- Upscopes and Upgrades
- Financial Information

On the first two areas, he concluded that:

- The CMS detector was closed in mid-July.
- CRAFT09 was successfully run in August. First results indicate a performance equal to, or better than, that in CRAFT08. Some improvements in data-taking efficiency need to be made.

- Much was learnt from CRAFT08. Over 20 papers will be sent for publication at the beginning of November.
- The software and computing systems have been exercised by generating and distributing MC samples (500 M Fullsim evts) to update 10 TeV "physics analyses" and soon 7 TeV "physics analyses" AND to get familiar with the latest version of CMS software (CMSSW_3).
- The "October" exercise is ongoing to test/reaffirm the analysis readiness.
- CMS is ready for beam now expected in mid-November 2009.

T. Virdee concluded the first part of his presentation by quoting the conclusions of the LHCC "The LHCC considers that CMS has made excellent progress in all aspects of the experiment and is ready for the start of the LHC".

T. Virdee continued his presentation focussing on Upscopes and Upgrades, looking ahead at phase 1, phase 2 and towards the SLHC.

Turning to the Financial Plan, T. Virdee reminded the RRB of the three steps defined in the October 2006 RRB.

T. Virdee then presented the infrastructure which was necessary for long and sustained periods of running and for upgrades.

He concluded by thanking the Funding Agencies that have already made commitments to the various steps and reminded the delegates that to cover the deficits mentioned in the Tables 2 and 3 requires ALL of the Funding Agencies to fulfil their obligations.

Finally, looking back 15 years, he recalled the first RRB and the creation of the Memorandum of Understanding. He thanked everyone who had worked on CMS and stated that CMS had come a long way BUT the most exciting part of the journey is still to come!

S. Bertolucci asked the delegates to join him in expressing their appreciation for *T*. Virdee's long and skilful leadership of the collaboration.

E. Gazis, on behalf of the Greek funding agencies, presented his warmest congratulations to the CMS management and collaboration for producing a detector which was now 100% ready to take data. He also confirmed that 221 kCHF had been paid by Greece for Step 1 and that discussions were in progress for Steps 2 and 3.

4. LHCC deliberations (paper only). S. Bertolucci, Director of Research and Scientific Computing. CERN-RRB-2009--110 (report)

S. Bertolucci, on behalf of the LHCC chairman, confirmed the deliberations of the LHCC and emphasised the future need for a support infrastructure.

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

5. Financial matters. T. Lagrange, Head of CERN Finance and Procurement Department CERN-RRB-2009-093 (paper)

T. Lagrange presented the changes in the status of Common Fund accounts with respect to the above report. He reported that the U.S.A., Russia, Korea and Finland had contributed a total of 952 kCHF to the Three Steps. From CERN, there is 400 kCHF in the pipeline and 719 kCHF to be added to Step 3 in 2010. He then presented, by Funding Agency, the planned contributions for the Three Steps.

Turning to the status of M&O Cat. A accounts, since the 1st of September 263 kCHF had been received for Cat. A. The total of contributions received during 2009 was 10.5 MCHF. The outstanding contributions for member-states for 2008 is 66 kCHF and for 2009 is 859 kCHF. For the non-member states, the outstanding contributions from 2002-2008 is 66 kCHF and for 2009 is 1.2 MCHF. Poland has confirmed that they will pay their remaining contribution by the end of 2009.

There were no questions arising from this presentation.

6. M&O Budgets. A. Petrilli, Resources Manager CERN-RRB-2009-111, CERN-RRB-2009-112 (presentation)

a. Draft Budget for M&O 2010

A. Petrilli began with an update on the Step funding showing the invoiced but not received amounts.

He presented an overview of M&O Cat. A showing a grand total (including power) of 13.7 MCHF.

M&O Cat. B grand total was 6 MCHF. The technical manpower at CERN will be reviewed and moved to the Memoranda of Agreement service work whenever appropriate.

The total currently outstanding amount for 2002-2008 is 66 kCHF, 0.19% of the total invoiced contributions; as reported by T. Lagrange, this should be paid by the end of 2009.

A. Petrilli concluded by showing graphs of the evolution of the M&O budgets and invited the RRB to

- approve the Draft Budget for M&O Category A for the year 2010,
- take note of the Draft Budget for M&O Category B for the year 2010 and its sharing amongst the CMS Funding Agencies.

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

The SG report was presented at the Plenary and B. Loehr had no further comments to make.

E. Augé observed that, in the coming years, there was no significant increase in costs. A. Petrilli replied there was a small rise due the replacement of online computers.

E. Augé asked how upgrades for the detectors would be handled. T. Virdee replied that the procedure would be similar to the construction of the original detector; new projects would have to be discussed and approved by the RRB.

F. Ferroni referred to slide 10 which shows Cat. A and Cat. B by Funding Agency. He observed that the A/B ratio for Italy is close to 1; higher than other countries. A. Petrilli replied that a CMS Task Force had been set up to address this issue.

B. Loehr made the remark that some budget items had not been scrutinised, the SG is expecting a directive from the RRB on how to proceed with infrastructure items, SX5 and 904. The SG believes these items to be essential to CMS but asks for advice on the right procedure to be followed. S. Bertolucci concurs with the SG in considering essential these items of infrastructure. Continuing he stated that it is important to approve the first part of the plan which needs investments in 2010. T. Virdee suggested that CMS work with the SG to further clarify the detailed plan before approving the investments foreseen in 2011 and 2012 and report back at the RRB in April 2010. The proposal was approved by the RRB.

There being no other remarks, the budget was agreed by the RRB.

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

S. Bertolucci summarised that CMS was technically and financially in very good shape and ready for beam.