ATLAS 21st February 2011

Minutes of the 30th LHC Resource Review Board Meeting (CERN, Geneva, 20 April 2010)

Present:

G. Taylor (University of Melbourne, Australia)
O. Abdinov (Institute of Physics, Azerbaijan)
I. Koultchitski (IP National Academy of Sciences of Belarus, Belarus)
F. Lu (National Natural Science Foundation of China, China)
V. Vrba (Institute of Physics, Czech Republic)
J. D. Hansen (Niels Bohr Institute, Denmark)
E. Auge (CNRS/IN2P3, France)
D. Fournier (LAL, Orsay, France)
D. Muller (DESY, Germany)
S. Kern (BMBF, Germany)
V. Polychronakos (replacing E. Gazis, National Technical University of Athens, Greece)
L. Rossi (Genoa, Italy)
T. Kondo (KEK, Japan)
H. Kamiyama (Permanent Mission of Japan, Japan)
M. Turala (Institute of Nuclear Physics PAN, Poland)
Y. Kozlov (Federal Agency of Science and Innovations, Russia)
A. Sissakian (JINR, Russia)
D. Bruncko (IEP SAS, Slovakia)
T. Ekelöf (Uppsala University, Sweden)
A. Clark (DPNC, Switzerland)
T. Nakada (CHIPP representative, Switzerland)

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

ATLAS
F. Gianotti, A. Lankford, M. Nessi, M. Nordberg, D. Charlton

EVO
R. McPherson (University of Victoria, Canada)
P. Chomaz (CEA/DSM/IRFU/DIR, France)
S. Bethke (Max PLanck Institute for Physics, Germany)
K. Ehret (PT-DESY, Germany)
H. Mahlke (DESY, Germany))
P. Mättig (Uni Wuppertal, Germany)
U. Dosselli (INFN, Italy)
F. Ferroni (INFN, Italy)
B. Jacobsen (The Research Council of Norway, Norway)
M. Mikuz (University of Ljubljana, Slovenia)
J. Fuster (IFIC, Spain)
A. Medland (STFC, United Kingdom)
D. Tovey (ATLAS UK National Contact, United Kingdom)
H. Gordon (Brookhaven National Laboratory, United States Of America)
M. Tuts (Columbia University, United States Of America)

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 ATLAS 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-2010-002 were approved without comment.

3. Detector consolidation and upgrade. M. Nessi, Technical Coordinator.
Slides of this presentation are on the RRB Agenda page

M. Nessi began with a summary of the major events since the last RRB. He gave an overview of the operation resources and task sharing and went into details of the shutdown activities. He gave the status of the sub-detectors and magnets, highlighted the major concerns and presented the strategy for the medium and long term including the IBL.

There were no questions arising from this presentation.

4. Status of the experiment. F. Gianotti, Spokesperson.
CERN-RRB-2010-008 (report). Slides of this presentation are on the RRB Agenda page.

F. Gianotti's presentation focussed on three main areas:

- Collaboration and Management matters
- First results from 900 GeV and 7 TeV collision data (in particular: first observation of W -> ev, μν candidates at LHC)
- Physics prospects for 2010-2011 (a few examples …)

She concluded that:

- ATLAS has successfully collected first LHC pp data at √s = 900 GeV and √s =7 TeV. We are grateful to the LHC team for the excellent performance of the machine !
- The whole experiment has worked efficiently and fast, from data taking at the pit, to data processing and transfer worldwide, to fast delivery of results. We are making efforts (as we gain experience) to reduce the number of shifts and CERN-based tasks.
- The first data demonstrate that the performance of the detector and software tools (simulation, reconstruction, understanding of material, control of instrumental effects, …) is better than expected at this (initial) stage of the experiment, in a (soft) energy regime ATLAS was not optimized for.
- Years of test beam activities, increasingly realistic simulations, and commissioning with cosmics were fundamental to achieve these nice results so quickly.
- A first physics paper has been published, many more physics results are expected soon. This is only the beginning of an exciting physics phase, but already a major achievement of the worldwide ATLAS Collaboration.

- Looking further ahead: activities to consolidate and upgrade the detector continue with vigor, in order to mitigate ageing, cope with increasing luminosity, enhance the performance -> maximize the physics potential throughout ATLAS lifetime
- Finally, on behalf of the ATLAS Collaboration, F. Gianotti thanked very warmly the Funding Agencies for their huge contributions to the experiment, and their continuous support, during almost 20 years."

The written report outlines plans for extensions and consolidation which would take place during the 2012 shutdown; T. Medland asked when the comprehensive plans would be presented. M. Nessi replied that the M&O A 2009 plan contained part of the information and a detailed finance plan with priorities was under discussion. He indicated that these plans would be presented in the October RRB.

5. LHCC Deliberations (paper only). E. Tsesmelis, LHCC Scientific Secretary.
CERN-RRB-2010-016

E. Tsesmelis reported that the LHCC considers that ATLAS has made excellent progress in all aspects of the experiment and the Committee congratulates the ATLAS Collaboration on its achievements.

6. Financial matters. T. Lagrange, Head of CERN Finance and Procurement Department
CERN-RRB-2010-017 (report), CERN-RRB-2010-056 (slides)

T. Lagrange presented the changes with respect to the report on the 28th February. Concerning contributions for Common Fund, Construction Completion and Commissioning & Integration; there were cash contributions of 1.8 MCHF. There was now 3.4 M CHF outstanding.

Cash contributions for the M&O A, received after 1st March 2009 totalled 4 MCHF. Outstanding contributions from the Member States are 1.55 MCHF and 6.19 MCHF for non-member states. Earlier in the day, Poland had paid its contribution to the M&O A for 2009.

7. Full Design Luminosity Detector (2009, 2011). M. Nordberg, Resources Coordinator.
CERN-RRB-2010-012 (report). Slides of this presentation are on the RRB Agenda page.

M. Nordberg gave the 2010 status of the TDAQ, the Insertable b-layer (IBL) and the Forward luminosity detectors. He also presented the TDAQ budget update of 1.7MCHF.

8. M&O Budgets (2009, 2011). M. Nordberg, Resources Coordinator.
CERN-RRB-2010-014 (report)

Referring to 2009 M&O A, M. Nordberg highlighted the cost drivers that resulted in total payments of 14.4 MCHF. M&O B final payments totalled 6.24 MCHF. He then presented the preliminary estimates for 2011: 19.97 MCHF for M&O A and 4.81 for M&O B and illustrated the cost evolution from 2002–2014. M. Nordberg then concluded with the status of outstanding M&O A and B contributions.

The RRB subsequently:
- Approved 2009 FDL (TDAQ, Table 1)
- Took note of the 2010 FDL Status

- Approved M&O 2009 Payments
- Took note of M&O 2011 Budget Proposal

K. Ehret referred to previous discussions concerning the sharing of costs in areas of core computing, databases and collaborative tools. The previous minutes recorded a plan to draft a report to define the border between CERN responsibilities and those funded by the collaborations. However, the report could not be drafted until several factors, including the run schedule, the future of European projects and the results of the evaluation of collaborative tools were known. S. Bertolucci agreed that a report was important and he recommended that the LHCC together with the Scrutiny Group and the experiments look at this issue in more detail with the aim of producing a draft report a month or two before the October RRB. S. Bertolucci also confirmed that the minutes of the ATLAS RRB would be available on a similar timescale.

E. Auge asked if there was a known relationship between the online computing requirements and the luminosity, is there a need to increase online computing when there is low luminosity? F. Gianotti replied that the present computing power met the needs; this would be re-evaluated when the luminosity increased. The evolution of the M&O A budget shown earlier would be reconsidered on the basis of experience in 2010.

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

S. Bertolucci summarised that ATLAS is progressing well and is preparing for a sustained run. Longer terms plans and shutdown synchronisation will be agreed with the accelerator sector. By October a lot of experience will have been gained and this will facilitate fruitful discussion and effective decisions.