

**LHCb**10th May 2007

Minutes of the 18th Resources Review Board Meeting

Held at CERN on 25th April 2007

Present:*Europe*

F. Le Diberder (IN2P3, Paris, France), E. Aslanides
K. Ehret (BMBF, Bonn, Germany), H. Bojahr
F. Ferroni (INFN, Rome, Italy), P. Campana
A. van Rijn (NIKHEF, Amsterdam, Netherlands)
J. Królikowski (University of Warsaw, Warsaw, Poland), G. Polok
F-D. Buzatu (National Institute for Physics, Bucharest, Romania), L. Puscaragiu (Romanian Mission)
V. Savrin (Ministry of Science and Technology, Moscow, Russia)
L. Garrido (University of Barcelona, Spain)
A. Rubbia (CHIPP, Switzerland), A. Bay (EPFL, Switzerland)
J. Seed (STFC, Swindon, United Kingdom), V. Gibson

Asia

Y. Zhang (National Funding Agency of China)

CERN

J.J. Blaising (chairman), C. Jones (secretary), S. Lettow, P. Geeraert, D. Jacobs, E. Tsismelis, J. Salicio Diez, S. Schmeling, E. Van Hove, F. Sonneman, M. Pepe-Alterelli

LHCb

R. Forty, T. Nakada, A. Smith, W. Witzeling, O. Ullaland

G. Lafferty (Chairman of the M&O Scrutiny Group)

18th Meeting of the LHCb Resources Review Board RRB, 25th April 2007**1. Introduction****J-J. Blaising, PH Department Leader**

The acting Chairman J-J. Blaising welcomed the delegates in the name of J. Engelen, who had an appointment elsewhere. He welcomed G. Lafferty as the new Chairman of the Scrutiny Group.

2. Approval of the Minutes of the 17th Meeting (CERN-RRB-2006-128)

The minutes of the 17th meeting were **approved** without comment. J-J. Blaising Engelen thanked C. Jones for having taken these minutes. There were no matters arising.

3. Status of the Experiment**T. Nakada, Spokesperson**

Paper CERN-RRB-2007-043

Presentation CERN-RRB-2007-044

T. Nakada presented a status report on the LHCb experiment. He divided his talk into three parts namely: construction and installation, costs and funding, and conclusions.

3.1 Construction Status

T. Nakada presented the LHCb construction status in detail and this information can be found both in his paper and his presentation referenced above. This information is not summarized further in these minutes with the exception of the major points in the conclusions below.

In response to a question from J-J. Blaising about the LCG, T. Nakada confirmed that LHCb was also having problems with access to data in CASTOR (CERN Advanced STORage manager).

3.2 Cost and Funding

T. Nakada highlighted the changes since the previous RRB in October 2006. They had received new contributions from Spain (20 kCHF) and the UK (400 kCHF) which corresponded to the requests made for CPU's in 2006. France had now agreed to provide an addition contribution of 300 kCHF. Brazil had agreed to make a first contribution of 55 kCHF. The US-NSF had agreed to provide 30 kCHF but the main request to NSF for 450 kCHF in 2007-2009 had not been approved. In summary, the current missing funding was 497 kCHF, and this was to be compared with missing funds of 1302 kCHF at the October 2006 RRB.

T. Nakada summarized on slide 26, by Funding Agency, the MoU signed contribution, the extra contributions for the detector and the extra contributions for CPU's. Of the total 3.42 MCHF needed for CPUs, they were missing 497 kCHF. This was not an immediate problem and there were possible further contribution from Brazil and others still being discussed.

There was an additional cost on the horizon which was the replacement of the beryllium beam pipe section. This cost was expected to be substantial, namely in the order of some millions of Swiss francs. This would be needed only in a few years time, but the production time could be long.

A commitment was required soon for the VELO replacement RF boxes. The cost was not expected to be high, but expert manpower and R&D might be needed.

3.3 Summary

T. Nakada summarized as follows:

1) Installation of the spectrometer was nearing completion, and commissioning had started for many sub-detectors. Computing and physics preparation for data was ongoing.

2) The schedule was still tight, in particular, for the production of IT, RICH-1 mechanics integration, and the Muon system installation.

3) Further additional contributions had been approved for the CPU farm: 55 kCHF (Brazil), 300 kCHF (France), 20 kCHF (Spain), 400 kCHF (UK) and 30 kCHF (US-NSF). This left 497 kCHF still missing for the CPU farm. Vacuum pipe replacement would require additional money. They continued to seek extra funding. There was a pending request to Italy and further requests to Brazil, US-NSF and others.

Discussion

J-J. Blaising thanked T. Nakada for his clear and comprehensive presentation of the experiment and the finances. He asked if there were any questions on this presentation or on the related paper, from the LHCC secretary E. Tsesmelis, giving the LHCC deliberations.

F. Ferroni congratulated the experiment which he felt was making impressive progress. There was a pending request for funding to Italy. He referred to previous RRB minutes in which Italy had twice emphasized the point that they considered that the new group from Syracuse should only join the collaboration provided it came together with appropriate resources. There was once again no representative of the relevant Funding Agency, namely NSF, at the RRB. Italy considered that a component as important as the US should be able to help this experiment to be a success. They awaited the October RRB to see how this situation would evolve before giving the position of Italy with respect to the funding request. J-J. Blaising agreed that this should be noted in the minutes and that he would convey this position to J. Engelen. S. Lettow fully understood this intervention and thought it was high time that appropriate measures were taken. J-J. Blaising strongly regretted the absence of an NSF representative at the RRB to explain their position.

4. LHCC Deliberations (paper only)

E. Tsesmelis, LHCC Scientific Secretary

Paper CERN-RRB-2007-041

Delegates had no further comments to make and the RRB **took note** of the report of E. Tsemelis.

5. Financial matters

P. Geeraert, Head, CERN Finance Dept.

Paper CERN-RRB-2007-010

Presentation CERN-RRB-2007-015

5.1 Status of Common Fund accounts

P. Geeraert presented an update to his financial report giving transactions as from the end of February 2007. In the Common Fund the current balance was 2.85 MCHF with outstanding commitments of 0.60 MCHF.

In terms of Common Fund contributions received and outstanding, Membership Fees and cash payments, amongst the Member States Italy owed 559 kCHF, Poland owed 1.5 kCHF, Spain owed 151 kCHF and Switzerland owed 221 kCHF for a total of 933 kCHF. In the non-Member States there were outstanding contributions from Romania for 17 kCHF and from Ukraine for 14 kCHF making a grand total of 964 kCHF outstanding.

5.2 Status of M&O accounts

For the M&O-A the current balance stood at 676 kCHF, with open commitments of 12 kCHF. There were outstanding contributions for the years 2002-2006 to the M&O-A from Spain (56 kCHF), Russia (222 kCHF) and Ukraine (56 kCHF) amounting to 335 kCHF. The total outstanding money, including 2007, was 1.5 MCHF.

Discussion

J-J. Blaising thanked P. Geeraert for his presentation. He asked what fraction of the contributions to the Common fund was outstanding. P. Geeraert replied that essentially 1 MCHF was missing from a total of 6 MCHF. F. Ferroni explained that the Italian contribution, which was essentially 60% of this sum, would be paid probably next year.

There being no further comments on these numbers, the RRB **took note** of this financial report.

6. Extension of the MoU for Construction J-J. Blaising

J-J. Blaising noted that the delegations should all have received an email from the CSO suggesting that they should agree to the extension of the period of the existing construction MoU which would otherwise expire at the end of 2007. It was clear that the construction of the detector would now take a little longer than this and it was necessary to keep the framework in place until the completion of the design luminosity detectors at the end of 2010. It was not the case that this implicitly implied new money as he had been asked by one delegation. He suggested that, in the absence of any comments at this meeting, that they could agree at this point to the extension in this meeting and record that in the minutes.

The opinions of the Funding Agencies around the table were requested. There were no further comments and this extension was **agreed** by all Funding Agencies at this stage.

7. Construction Budgets

Paper CERN-RRB-2007-028

A. Smith, Resources Coordinator

Presentation CERN-RRB-2007-029

7.1 Construction Budgets for 2006 and 2007

A. Smith reported that most of the Common Fund spending still went on infrastructure. By the end of 2007, essentially all the remaining funds would have been spent on finishing the sub-detectors and infrastructure. Only the small amount still to be spent on the on-line Farm should remain.

He reported the Common Fund spending in 2006 amounting to 5.28 MCHF, and that foreseen for 2007 which totalled 2.14 MCHF.

He summarized the status of contributions to the CF and the main changes since the previous RRB. Poland had paid all but 1 kCHF of its foreseen contributions. The outstanding contributions from Netherlands and Russia had been recognised as in-kind contributions. The remaining outstanding contributions were as follows. Italy had paid 300 kCHF early this year, and was likely to contribute the rest later this year and in 2008. Spain had promised to pay their outstanding amount at the last RRB and had now the money released. Switzerland would make a decision in the middle of this year. Romania expected to pay in two batches of 17 kCHF. They had no news on the 14 kCHF due from Ukraine

It was expected that CORE spending would be finished by the end of this year though there could still be some funds to be spent if the M1 Muon station was not completed this year

Discussion was postponed until after the M&O presentation.

8. M&O Budget

Paper CERN-RRB-2007-030

A. Smith, Resources Manager

Presentation CERN-RRB-2007-031

8.1 Cat. A M&O 2006 and 2007

A. Smith pointed out that the Category A M&O spending in 2006 was very close to the budgeted amount. The main item on which the estimate was exceeded was General Services, where transport costs were higher than expected, and some cooling and ventilation charges for 2005 were paid in 2006 along with the 2006 charges.

The current status of the 2007 budget was as follows. Poland had paid its outstanding contributions last December. The remaining outstanding contributions were from Spain, who had asked for the invoice for 2006 but the funds had not yet arrived, Russia, whose funds should arrive this year and next, and Romania, which had still not contributed for 2006. There was no news from the Ukraine. Only about 250 kCHF had been spent so far this year, as was normal, with most invoices expected later in the year.

8.2 Preliminary Draft M&O Budget 2008 and beyond

A. Smith showed the preliminary draft M&O-A budget for 2008, broken down by category and Funding Agency, with a grand total of 2.33 MCHF plus power at 0.97 MCHF.

He pointed out that it was currently believed that the M&O-A budget had essentially reached a plateau and its total should not change much before 2011. The estimates given in his next slide reflected this situation. However, the Collaboration Board had still to agree on a policy for the replacement of the FARM CPUs and this could increase the total from 2011 onwards. He showed the estimated M&O-A costs for 2009-2011.

8.3 M&O Category B

Only the MUON and RICH had provided data for Cat B for 2008. As a result, the table presented could only be taken as indicative for those detectors that had not yet provided data and which were shown in *Italic font*. About half the sub-detectors had still to provide their agreed sharing method.

Finally A. Smith noted that the CORE Software manpower needs had been estimated for 2008. It was hoped that, as usual, the required support would be found on a voluntary basis without having to involve Cat A M&O funds. The estimate remained the same as for the current year at 36.9 FTEs but the figure would be revised before the autumn RRB. At present there were still 4.15 FTE missing to complete the requirements of the current year.

Discussion

J-J. Blaising thanked him for this report and asked for any questions.

F. Ferroni had a question which he also directed at the Chairman of the Scrutiny Group. It was surprising that the M&O-A stayed constant at the level of 1 per mil across the transition from construction to operation. Was it not that they were simply used to get this level of money? A. Smith replied rather that the M&O had been progressively rising and had now reached a plateau. G. Lafferty agreed that the Scrutiny Group would indeed look at this.

G. Lafferty asked about the last slide where LHCb intended to revise their estimates. When would this change be known to the Scrutiny Group? A. Smith agreed that this information would be provided in time.

9. Summary, Future Activities & A. O. B. J-J. Blaising

J-J. Blaising concluded that LHCb had made significant progress since the previous RRB and there was no short term technical problem. Their main issue which had to be addressed between the two RRBs concerned the US-NSF contribution.

The next RRB meetings in 2007 will take place at CERN on
Monday 22nd, Tuesday 23rd and Wednesday 24th October 2007

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

C. Jones
May 2007