



## **Minutes of the 22<sup>nd</sup> Resources Review Board Meeting** **Held at CERN on 25<sup>th</sup> April 2007**

### **Present:**

#### *Europe*

M. Sumbera (Academy of Sciences, Prague, Czech Republic)  
J.D. Hansen (Niels Bohr Institute, Denmark)  
D-O. Riska (University of Helsinki, Helsinki, Finland), J. Rak  
J. Zinn-Justin (CEA-Saclay, France), F. Staley  
B. Erasmus (IN2P3, Paris, France)  
I. Reinhard (GSI, Darmstadt, Germany), P. Braun-Munzinger  
R. Santo (BMBF, Germany)  
E. Gazis (National Technical University, Greece)  
G. Vesztegombi (KFKI-RMKI, Budapest, Hungary)  
A. Bracco (INFN, Italy), G. Fortuna, P. Guibellino, E. Nappi  
A. van Rijn (NIKHEF, Amsterdam, Netherlands)  
B. Jacobsen (Research Council of Norway)  
J. Królikowski (Ministry of Science and Higher Education, Poland), J. Bartke, T. Siemiarcuk  
F-D. Buzatu (National Institute for Physics, Bucharest, Romania), L. Puscaragiu  
Y. Koslov (Ministry of Education and Science, Moscow, Russia), V. Savrin  
R. Lednicky (JINR, Dubna, Russia), A.S. Vodopianov  
A. Sitarova (Ministry of Education of the Slovak Republic, Bratislava)  
P. Karlsson (Swedish Research Council, Stockholm, Sweden), H-A. Gustafsson  
G. Zinovjev (Bogolyubov Inst. for Theoretical Physics, Kiev, Ukraine)  
J. Seed (STFC, Swindon, United Kingdom)

#### *Asia*

C.V. Ananda Bose (DAE, Mumbai, India)  
N-J. Cho (Ministry of Science and Technology, Republic of Korea), D-W. Kim, S. Kim

#### *CERN*

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

#### *ALICE*

J. Schukraft, Y. Schutz, J. de Groot, F. Antinori, C. Decosse

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

**22<sup>nd</sup> Meeting of the ALICE Resources Review Board RRB, 25<sup>th</sup> 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 a long-standing appointment elsewhere and who sent his apologies. He welcomed G. Lafferty as the new Chairman of the Scrutiny Group.

**2. Approval of the Minutes of the 21<sup>st</sup> Meeting (CERN-RRB-2006-127)**

The minutes of the 21<sup>st</sup> meeting were **approved** without comment. J-J. Blaising thanked C. Jones for having taken these minutes.

**3. Status of the Experiment****J. Schukraft, Spokesperson**

Paper CERN-RRB-2007-032

Presentation CERN-RRB-2007-033

J. Schukraft welcomed the members to the 22<sup>nd</sup> in the series of ALICE RRBs. He presented the status report of the ALICE experiment.

**3.1 Collaboration News**

J. Schukraft reported first on the composition of the Collaboration. In Mexico the 'Universidad Autónoma de Sinaloa' had replaced the 'Universidad Michoacana de San Nicolás de Hidalgo' with the agreement of the Funding Agency. The M&O MoU for Mexico was ready for signature.

There were several new applications to join, including six US Universities whose applications were under review by DoE. There were also long standing applications from PUCP (Peru) and from Yonsei (Korea). These were working with the Funding Agencies to see whether they could proceed.

In terms of funding, the EMCAL project was approved in France by CNRS in March (ca 1 M Euro). In Italy, INFN would discuss their EMCAL funding in September. Also in September, the next two steps of the US approval process (CD2/3) should take place. In response to J-J. Blaising, J. Schukraft confirmed that the CORE cost of the EMCAL was of the order of 10 MCHF from America, plus the Italian and French contributions of about 1 M Euros each. They had received a small increase from Finland in the CORE contributions to the V0 trigger counter in order to allow some increased functionality.

ALICE awarded two more ALICE Industrial Awards (March 2007): one to Fibernet Ltd, Yokneam, Israel who had made the very fine cables for the Silicon Strip Detector, and one to ADIC/Quantum Corp, Munich, Germany (San Jose, CA, USA) for software in the StorNextCluster File System software for DAQ.

J. Schukraft noted that the 7<sup>th</sup> LHCC Comprehensive Review (CR7: 19/20 March) had concluded that there were no major concerns.

**3.2 ALICE Detector**

J. Schukraft outlined the latest status of ALICE planning (slide 4) and of the installation milestones. He reported on an incident with the Pixel Detector (slide 6) that had damaged 6 half-staves (~7,5% of acceptance). It had been attributed to a problem with the power supply, but the exact reason was not fully understood and remained under investigation. ALICE had decided to chose the option of SPD repair and had rearranged the installation/commissioning to recover time elsewhere.

J. Schukraft then reported in detail on the status of the installation of the ALICE detector, including a number of the latest photographs. This interesting and important information can be found in both the paper and the presentation referenced above and is not further summarized in these minutes. He made some ALICE specific remarks concerning computing resources and the usability of installed or pledged resources in 2006 – see slide 36.

### 3.3 Summary

J. Schukraft summarized his talk in two points. As major milestones achieved:

- TPC installed in its final location,
- SSD/SDD end of production, integrated & installed (no longer on critical path),
- Beampipe and trigger detectors installed,
- good progress in services & cabling.

The remaining Biggest Concerns were:

- SPD repair, although this was going well. Delay of installation sequence, the installation of ITS/TPC was very delicate and complex,
- Computing resources: still some way to go,
- LV power supply delivery schedule (until April 2008).

### Discussion

J-J. Blaising thanked the spokesperson for this excellent overview of the progress that had been made. He invited comments both in this presentation and on points raised in the paper on LHCC Deliberations from E. Tsemelis below.

E. Gazis asked for an estimate of the cost to repair the pixel detector. J. Schukraft replied that there was no direct hardware cost since they had sufficient spares, but the unforeseen manpower involved was significant. This mainly concerned the Italian and CERN colleagues. For the Italian colleagues this implied additional travel to CERN.

J. Seed asked whether they had any feeling for the risk of this incident reoccurring. J. Schukraft replied that one reason behind the decision to take the detectors out had been the ability to look at them in a post mortem analysis. It was important that this did not happen again. J. Seed asked if there were not a general problem with the power supplies, not just in obtaining them, but also in technical problems of those delivered. She suggested a review across the experiment of the lessons learned in these contracts, not in a critical way of pointing fingers, but to look at how to take this forward and avoid such problems in the future. J. Schukraft agreed this was a good idea and they would look at this.

#### 4. LHCC Deliberations (paper only)

Paper CERN-RRB-2007-039

#### LHCC Scientific Secretary, E. Tsemelis

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

#### 5. Financial matters

Paper CERN-RRB-2007-007

#### Head, CERN Finance Dept., P. Geeraert

Presentation CERN-RRB-2007-012

P. Geeraert presented a financial update on the situation as reported in his paper referenced above and covering the period from the end of February 2007.

##### 5.1 Status of Common Fund and C&I accounts

In the Common Fund and C&I, ALICE had received additional income of 56 kCHF from China, Greece and Romania and made new payments of 573 kCHF, which left a balance for the Common Fund account of 731 kCHF with 1.55 MCHF of outstanding commitments.

There were outstanding Common Fund membership fees totaling 50 kCHF, of which 3 kCHF was attributable to Poland. The non-Member States Armenia, Croatia, Mexico, South Africa and Ukraine together owed 47 kCHF.

Slide 5 showed the money due, according to the MoUs, in membership fees and cash contributions. The outstanding amounts until the end of completion of the project amounted to 3 kCHF for the Member States and to 943 kCHF for the non Member States.

## 5.2 Status of M&O accounts

Recent income for M&O-A from France IN2P3, India, Germany GSI, Netherlands, Czech republic, UK, Finland, Sweden and Romania amounted to 1.05 MCHF, whilst additional expenditure of 162 kCHF left a positive balance of 1.69 MCHF with outstanding commitments of 207 kCHF.

Total outstanding contributions to M&O-A up to the end of 2006 amounted to 610 kCHF. In this, contributions were owed by non-Member States China, JINR Dubna, Mexico and Russia. All Member States had paid up to the end of 2006. The total still outstanding for 2007 was 2.32 MCHF.

## Discussion

J-J. Blaising thanked P. Geeraert for this presentation of the financial facts and asked whether he considered these outstanding contributions to be significant. P. Geeraert replied that the construction period was coming to an end and this money should be paid up soon, since it was becoming very hard for CERN to borrow and advance the money to the experiment. For the M&O-A the situation was not too bad, but the non-member states should make an effort in view of the cash flow problem.

There were no further comments and the RRB **took note** of the Financial Update.

## 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-2007-034

## Resources Co-ordinator, J. De Groot

Presentation CERN-RRB-2007-035

### 7.1 ALICE CORE Construction Budgets

J. De Groot reported the 2006 budget by system and Funding Agency. Although the budget was foreseen at 14.9 MCHF the expenditure had amounted to 27.0 MCHF. There were two main reasons for this. Firstly there was a general effect from a number of bills that became due in 2006 that had been engaged in the year before, and secondly, as in the case of the TRD, there was significant extra funding that had become available from the German Funding Agency. As an

example of the first case the Italian colleagues had expenditure significantly greater than foreseen due to bills for the TOF detector that had been engaged the year before.

Looking at the total situation over the ten years 1997 until 2006, the total payment by the Funding Agencies amounted to 118.1 MCHF. Knowing that, by the end of the next year, for most of the detectors, essentially all of the money should have been spent, one could make some reality checks. This had allowed some anomalies to be detected. The cumulative expenditure contained some back reporting of things that had not been reported correctly in the past. In general, expenditure was under rather than over reported. One small correction, with respect to the document that had been circulated, concerned the Slovak republic where there was a small correction for 2005. J. De Groot showed a graph (slide 7) of the yearly expenditures and the cumulative total which would approach 135 MCHF by the end of 2008.

J. De Groot presented an update, for information, of the status of the 2007 budget, by system and by Funding Agency (slide 9), which amounted to around 10.4 MCHF.

The Common Fund status (slides 11 and 12) showed the income into the Common Fund and C&I between 1997 and the end of 2006. There was around 1.2 MCHF still outstanding. This figure updated to April 2007 was closer to 1.1 MCHF. He reviewed the contributions outstanding from the individual Funding Agencies and gave his understanding of the status in each case.

J. De Groot presented the Common Fund expenditure 1997-2006, with the greatest expenditure in 2006. The graph of the Common Fund Balance extrapolated up to 2009 revealed negative balances of 600 kCHF in 2007, 265 kCHF in 2008 and 140 kCHF in 2009.

The Preliminary 2008 CORE Construction Budget estimates added up to around 8.0 MCHF.

## **7.2 MoU Addenda**

J. De Groot showed that an MoU Addendum were in preparation covering the contributions of Brazil. MoU Addenda had been signed with Japan, Korea and Spain/Cuba.

## **Discussion**

J-J. Blaising thanked J. De Groot for his clear presentation and asked the RRB is there were any questions.

E, Gazis enquired how the 2006 expenditure was charged to the individual Funding Agencies. J. De Groot replied that the expenditures in the individual Funding Agencies were reported to him by his correspondents. He relied upon their information.

## **8. M&O Budgets**

Paper CERN-RRB-2007-036

## **J. De Groot**

Presentation CERN-RRB-2007-037

### **8.1 Report on 2006 M&O, income and expenditure**

J. De Groot presented the final 2006 income and expenses. He showed the amounts invoiced and received since 2002. A number of Funding Agencies still had unpaid M&O bills. He acknowledged the effort by the Polish Funding Agency to clear all of their unpaid M&O invoices. The total outstanding M&O-A amounted to 397 kCHF at the date of the meeting. The expenditure in 2006 reached 91% of the budget. A summary of income and expenditure for the period 2002 - 2006 shows a cash balance of 459 kCHF, in agreement with was reported earlier by P. Geeraert.

### **8.2 Status of the 2007 Budget**

J. De Groot showed the current status of the 2007 invoices and contributions. The money received so far accounted for 44.2 % of that invoiced.

### 8.3 Preliminary Draft Budget for 2008

The evolution of the M&O-A 2007 to 2010 was shown in graphical form, with power operations and consumables taking roughly equal shares and a total reaching 8.3 MCHF per year in 2010 and 2011. J. De Groot presented the 2008 Preliminary Draft Budget by Funding Agency which totalled 5.1 MCHF. Clearly this would evolve before the October RRB.

The preliminary M&O-B estimates were also shown with a total of 1.0 MCHF.

### 8.4 M&O MoU signatures

Finally J. de Groot showed the list of signatures on the MoU for M&O. Signatures were outstanding from Greece, China and Mexico. It was probable that Mexico would sign on the occasion of a formal visit in one month's time.

### Discussion

J-J. Blaising thanked J. De Groot for his clear presentation and asked the RRB if there were any questions. D-O. Riska had asked previously for more transparency of the M&O-B numbers, especially in this transition from construction to operation. He would appreciate more information. J. De Groot agreed that the collaboration should try to make a greater effort in this direction and agreed to see what could be done.

E. Gazis noted, as a general comment not specific to ALICE, that the breakdown of the budget should have a certain consistency of algorithm for a number of costs, for example communications. G. Lafferty replied that this was the job of the Scrutiny Group to look at such things and to seek justification for deviations from any communality across the four experiments. They would report on this at the October RRB. E. Gazis requested a meeting with J. De Groot in order to discuss the M&O MoU signature and this was agreed.

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

J-J. Blaising concluded that there had been significant progress in the ALICE project since previous RRB. There had been an incident with the silicon pixel detector, but ALICE still had a plan which would allow them to close the detector at any time this would be requested by the LHC machine.

<p>The next RRB meetings in 2007 will take place at CERN on <b>Monday 22<sup>nd</sup>, Tuesday 23<sup>rd</sup> and Wednesday 24<sup>th</sup> October 2007</b></p>
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There being no questions and no further business, the Chairman thanked the participants and closed the meeting.

C. Jones  
May 2007