ATLAS

10th May 2006

Minutes of the 22nd Resources Review Board Meeting
Held at CERN on 25th April 2006

Present:

Europe
O. Abdinov (Institute of Physics, Azerbaijan)
V. Vrba (Institute of Physics, Prague, Czech Republic)
J.D. Hansen (Niels Bohr Institute, Copenhagen, Denmark)
P. Rebourgeard (CEA-Saclay, Gif-sur-Yvette, France), J. Ernwein
F. Le Diberder (IN2P3, Paris, France), D. Fournier
J. Khubua (IHEPI, Tbilisi State University, Georgia)
J. Richter (BMBF, Bonn, Germany), K. Ehret (DESY, Hamburg), V. Guelzow, N. Wermes
S. Bethke (MPI Munich), H. Oberlack
E. Gazis (National Technical University, Greece)
E. Rabinovici (Racah Institute of Physics, Jerusalem, Israel), G. Mikenberg
U. Dosselli (INFN, Rome, Italy), F. Ferroni, L. Mandelli
F. Linde (NIKHEF, Amsterdam, Netherlands), A. van Rijn
B. Jacobsen (Norwegian Research Council, Oslo, Norway)
J. Królikowski (University of Warsaw, Warsaw, Poland), M. Turala
G. Barriera, (LIP, Portugal)
F-D. Buzatu (Nat. Inst. for Physics and Nuclear Eng., Bucuresti, Romania), L. Puscaragiu
Y. Kozlov (Russian Federal Agency of Science and Innovation), V. Savrin
A.N. Sisakyan (JINR, Dubna, Russia), A. Petrov (Permanent Mission of Russia, Geneva)
A. Sitarova (Ministry of Education of the Slovak Republic, Bratislava), D. Bruncko
M. Mikuz Josef Stefan Institute, Ljubljana, Slovenia)
D. Espriu (Min. of Education and Science, Spain), F. Barreiro (Universidad Autonoma de Madrid)
A.C. Lagerkvist (Swedish Research Council, Stockholm, Sweden)
A. Clark ("CHIPP" Geneva, Switzerland) A. Rubbia (ETHZ),
R. Wade (PPARC, United Kingdom), R. Jones, R. Nickerson

North America
I. Blain (NSERC, Ottawa, Canada), R. Orr, W. Davidson (Observer, NRC)
J. O'Fallon (DOE, Washington, USA), S. Gonzalez, T. Ferbel
M. Pripstein (NSF, Washington, USA), H. Gordon, P. Tuts

Asia
Y. Huang (Academy of Science of China), Y. Peng (MOST)
P. Ji (National Science Funding Agency of China), Y. Zhang
S. Iwami, H. Iwasaki (KEK, Tsukuba, Japan), T. Kawamoto (University of Tokyo)
S.C. Lee (ACSS, Tapei)

Australia
S. Tovey (Australian Research Council, Melbourne)

CERN
R. Aymar, J. Engelen (chairman), P. Geeraert, D. Jacobs, C. Jones (secretary), A.J. Naudi, E. Tsesmelis, J-J. Blaising, J. Salicio-Diaz

ATLAS
P. Fassnacht, F. Gianotti, P. Jenni, M. Nessi, M. Nordberg, C. Oram, S. Stapnes

22nd Meeting of the ATLAS Resources Review Board RRB, 25th April 2006

1. Introduction J. Engelen, Chief Scientific Officer

J. Engelen welcomed RRB delegates to this 22nd session of the ATLAS Resources Review Board.

2. Approval of the Minutes of the 21st Meeting (CERN-RRB-2005-066)

C. Jones noted two corrections to the minutes in the financial situation as reported by P. Geeraert. A corrected version had already been posted in the web. The minutes of the 21st meeting were approved with no further comments. J. Engelen thanked C. Jones for having taken these minutes. There were no matters arising.

3. Status of the Experiment P. Jenni, Spokesperson

Paper CERN-RRB-2006-027 Presentation CERN-RRB-2006-056

3.1 Collaboration News and Management

P. Jenni announced that, at the last RRB in October 2005, they had announced Expressions of Interest to join the ATLAS Collaboration from six new groups. Since then the discussions and negotiations for the contributions of these groups had been constructive, and the admission procedures had been concluded. They were all approved unanimously by the Collaboration Board on 24th February 2006 as new members. This meant in particular that, in each case, necessary technical service tasks and, in most cases, hardware contributions had been identified, besides agreements concerning their involvement in the physics.

In Germany, and funded by the BMBF, the Institute of Nuclear and Particle Physics, Technical University Dresden and the Institute of Physics II, Justus-Liebig-University, Giessen would join the Collaboration.

From the U.S.A. and funded by the DOE, there would be two new groups namely the Physics Department, Oklahoma State University and the Physics Department and the Center for HEP, University of Oregon, Eugene.

There was a new Funding Agency from Argentina, the Agencia Nacional de Promocion Cientifica y Tecnologica (ANPCyT) supporting the ATLAS Collaboration, and who would join the ATLAS RRB. The groups concerned were the National University of La Plata and the University of Buenos Aires.

In all six cases P. Jenni indicated the contributions to ATLAS to be made by the groups concerned. The RRB was kindly requested to endorse the admission of these six new Institutions in the ATLAS Collaboration.

In addition, following detailed and fruitful discussions, the admission procedure had been initiated for four new groups from the following Institutions, who had submitted formal Expressions of Interest (EoI) letters to the CB of 24th February 2006:

- DESY (Hamburg and Zeuthen), Germany
- Humboldt University Berlin, Institute of Physics, Berlin, Germany
- New York University, Department of Physics, New York, U.S.A.
- SLAC, Stanford, U.S.A.

Several other contacts had not been encouraged at this stage to proceed to EoIs. Further discussions and negotiations were necessary in order to assess the mutual benefits in each case. No action was requested at this stage from the RRB concerning these EoIs and contacts.

As of April 2006, the ATLAS Collaboration stood at 158 institutions from 35 countries, amounting to 1650 scientific authors, of whom 1320 were holding a Ph.D or equivalent.

Since the last RRB, C. Oram from TRIUMF had taken over the Chairmanship of the Collaboration Board. Following the ATLAS rules, the out-going Collaboration Board Chair, S. Bethke, would act for one year as Deputy. P. Wells had become Project Leader for the SCT.

3.2 Construction Progress

P. Jenni provided a most detailed report of construction progress of the experiment (CERN-RRB-2006-027) as well as a clear presentation including the latest photographs (CERN-RRB-2006-056). This information is not further summarized in these minutes.

3.3 ATLAS SLHC R&D

P. Jenni noted that ATLAS had put in place a structure to steer its planning for future upgrades, in particular for R&D activities needed for possible luminosity upgrades of the LHC (SLHC). The main goals were:

- to develop a realistic and coherent upgrade plan addressing the physics potential,
- to retain detector experts in ATLAS with challenging developments besides detector commissioning and running
- cover less attractive (but essential) aspects right from the beginning

The organization has two major coordination bodies, an Upgrade Steering Group and a Project Office.

They had put in place a procedure for reviewing and approving the ATLAS SLHC R&D projects. First proposals had been submitted whilst others were in the pipe-line. There was good communication with the CMS upgrade studies in order to benefit from common approaches. Despite this activity looking at the future steps, P. Jenni emphasized, there was no ambiguity: the priority of ATLAS was to complete, commission and exploit the TDR detector.

3.4 Operation Model

The Collaboration had endorsed the broad guidelines for an “Operation Model” for the data-taking phase which was being implemented. He outlined the five activity areas and noted the important step of the explicitly combined “Trigger and Physics Weeks” driving this central activity of preparation of the data taking area.

Both the cosmic ray running, which was gradually starting at Point 1, and the forthcoming “Calibration Data Challenge” simulations were seen as important shake-down actions for the OM implementation. The Collaboration had also initiated a major effort to define the fair sharing of all operation tasks. This would include a definition of obligations for new Institutions joining ATLAS in this new phase.

3.5 Cost to Completion, and initial staged detector configuration

P. Jenni reminded the RRB that the Cost to Completion (CtC) was defined as the sum of Commissioning and Integration (C&I) pre-operation costs plus the Construction Completion (CC) cost in addition to the deliverables.

He noted that ATLAS was proceeding within the framework agreed at the October 2002 RRB, namely:

The following framework was accepted at the October 2002 RRB
(ATLAS Completion Plan, CERN-RRB-2002-114rev.):

CtC 68.2 MCHF (sum of CC = 47.3 MCHF and C&I = 20.9 MCHF)

Commitments from Funding Agencies for fresh resources (category 1)	46.5 MCHF
Further prospects, but without commitments at this stage (category 2)	13.6 MCHF

The missing resources, 21.7 MCHF, have to be covered by redirecting resources from staging and deferrals.

The Funding situation will be reviewed regularly at each RRB, and is expected to evolve as soon as further resources commitments will become available.

He noted that the physics impact of the staging and deferrals was discussed in detail with the LHCC previously. It has to be clearly understood that the full potential of the ATLAS detector would need to be restored for the high luminosity running, which was expected to start only very few years after turn-on of the LHC, and to last for at least a decade.

Many constructive interactions continued to take place with Funding Agencies, and the national communities continued actions to secure the funding required to complete the detector. Step by step the overall funding situation was slowly improving, even though ATLAS was still short of resources to meet its initial detector requirements, and therefore would be forced to start up with a significantly staged initial configuration.

Since the previous RRB report (CERN-RRB-2005-088), France IN2P3, INFN Italy, Poland, Russia and Switzerland had made highly appreciated commitments to secure further CtC resources. The present status of the Completion Funding planning was given in the updated table (CERN-RRB-2006-027.)

The Collaboration was very grateful to all the Funding Agencies that had already agreed to the category 1 Completion Funding and found new resources, and it hoped very much that the others would be able to support the ATLAS cost to completion as well in the future.

P. Jenni announced that, with the construction now approaching completion, and with extended experience now at hand for the installation and commissioning efforts needed to meet the schedule, the ATLAS management has started to re-assess the resources needed to have the initial detector ready for turn-on in summer 2007. Some corrections to the initial CtC estimates might be required in the areas of the magnet system, the LAr cryogenics, and the infrastructure and installation activities (additional manpower to meet the schedule). At this stage it was premature to state any figure, and to conclude whether these additional costs could be managed within the full 2002 CtC envelope or not. The plan was to make a statement, covering the possible consequences, at the October RRB.

There remained also a serious issue of cash flow, mainly due to late contributions to the baseline MoU Common Fund Construction Funding, which would be addressed in the budget discussion by Markus Nordberg later in the meeting.

For the successful implementation of the Completion Plan it is also very important that the funds for deferred items would be made available early on, and documented to the RRB based on ATLAS agreements specifying in a transparent way the corresponding accounting.

3.6 Conclusion

P. Jenni concluded by noting that:

- The ATLAS project was proceeding within the framework of the accepted Completion Plan
- Component construction was (nearly) complete for the sub-systems, and emphasis had shifted further to pre-assembly, integration, installation and commissioning
- The remaining technical concerns were regularly reported to, and reviewed with, the LHCC referees
- M. Nessi would report on the evident progress for the large Common Project systems, and on the general installation status and activities in the cavern
- Very major software and computing activities proceeded according to plans
- The detector commissioning had started, and the global planning for the early physics exploitation was well underway with the implementation of an Operation Model

As final remarks he emphasised that ATLAS was on track for LHC physics in 2007, and that to really make a success a great effort was still required from all partners in terms of resources to complete the project.

Discussion

J. Engelen thanked P. Jenni for his very clear presentation. He asked for any questions on the technical part of this ATLAS status report, including any comments on the paper presented by E. Tsesmelis entitled LHCC Deliberations (CERN-RRB-2006-045).

M. Pripstein asked which of the list of top items to be watched gave most concern. P. Jenni replied that there were several items of concern, for example the tight schedule to recover from the Pixel problems, the preparation of the big wheel sectors for the endcap muon system, as was the schedule of the endcap toroid which had slipped a little. Looking ahead the installation of services would be a big issue.

R. Wade noted that as regards the CtC the UK was holding a single block of contingency for all of the LHC experiments. The first call on that contingency was any increased costs in the UK deliverables, and they wished to hold as much of the contingency in reserve for as long as possible, in order to be sure that they met their obligations. On the positive side he hoped that they would be able to meet the requirements of all 4 detectors, but on the negative side they would not be able to give an answer in the short term and it was possible that they would have to wait a year or so.

R. Wade noted that he did not understand how one could have approved the CtC plan in 2002, since the gap was surely clear at that time. P. Jenni commented that the word in the minutes was “accepted” rather than approved. It had been accepted that ATLAS would work within the framework of the above completion plan. The variable was the amount of staging that had to be introduced in order to defer resources from the baseline into paying the initial detector. R. Wade noted that the RRB had been effectively walking into a problem with its eyes open. In the case of ATLAS, the gap was by now a small problem. He noted that CERN had been the biggest contributor to closing that gap. He did not understand where CERN was able to help and where not. P. Jenni replied that, in October 2002, when both large experiments came with their completion plans, CERN had made the same contribution to both. His understanding today was that, if all partners would pay their share to the CtC, plus this larger contribution from CERN, then they would be able to put together the detector they needed for the initial phase. A. Naudi noted that at the time of the review, in October 2002, these contributions and their rationale were presented to SPC, Finance Committee and Council, and approved.

There being no further question, J. Englen asked the RRB to endorse formally the admission of the new institutes into the ATLAS Collaboration. This was unanimously **approved**.

4. In-kind Contributions and Common Projects - M. Nessi, Technical Coordinator

Paper CERN-RRB-2006-028 Presentation CERN-RRB-2006-057

4.1 Status of the Common Projects and the Installation

M. Nessi presented an update on the common projects and the installation. See his paper and clear presentation for the details, (which are not re-summarized in these minutes), and for many interesting and spectacular recent photographs of the installation in the cavern.

4.2 Overall Schedule

M. Nessi showed the new ATLAS Overall Schedule (7.11) which had been presented to the Collaboration in April 2006. The main changes and constraints were to:

- take into account 5 weeks delay in BT assembly
- new ready-for-installation dates for the inner detectors
- pixel installation in March 2007
- enough time for beam pipe closing (scheduled as of today for end of June 2007)
- experience in ID services and muon barrel installation
- new readiness dates for endcap toroids
- best guess of today's knowledge of the forward muon system installation work

Note: The detailed new Overall Schedule is shown in slide 34 of his presentation.

4.3 Summary

In summary the ATLAS installation was proceeding well and on schedule (master schedule 7.11), targeting August 2007 for readiness and the end of June 2007 for the beam pipe closing. The major technical problems of the last 6-8 months had been solved, and they were now working in parallel on many fronts, in fact many more that they had expected few years ago.

The result was a requirement for more resources for extra shift work. They had difficulties to find more qualified manpower and a larger cohabitation of different activities. Today's critical path, (mostly time), was the installation of all inner detector services and the forward muon big wheels.

In the next months they were facing some very critical milestones, such as the cooling of the barrel toroid, the installation of the services necessary for the installation of the Inner Detector, the start of the installation of the big wheels, the 80°K test of the first end cap toroid. In parallel to the installation work for detectors and services, the commissioning of the various components was proceeding well. He emphasized that the next 12 months would be very intense!

Discussion

J. Engelen thanked M. Nessi for his presentation, showing both the very impressive progress and also the complexity of the operation. He invited questions from the RRB.

M. Pripstein noted that this was truly a complex operation and one could but be amazed and impressed by what they were trying to do. He wondered whether they could afford so much effort, or was it in practice the limit on the availability of qualified people that kept things in budget. M. Nessi replied that they had made an appeal to the Collaboration for manpower, and in terms of expertise, they had a very good response. As P. Jenni had noted, this cost extra money. They needed to assess this and come back at the next RRB. For the moment they were doing this within the project money. J Engelen added that the assumption was that the institute manpower was paid by the institutes. M. Nessi noted that this was largely true, but there were common activities where they used common money in order to help the institutes to bring manpower to CERN.

There being no comments M. Nessi asked the RRB to take note of the accompanying document CERN-RRB-2006-028 which contained more information on the status of the in-kind contributions and common projects and which was for information only.

5. LHCC Deliberations (paper only) — E. Tsesmelis, LHCC Scientific Secretary

CERN-RRB-2006-045

J. Engelen noted that the RRB should take into consideration the paper on the LHCC Deliberations provided by the scientific secretary of the LHCC, E. Tsesmelis. The contents were consistent with the previous presentations and confirmed that the LHCC was in agreement with the reports. Delegates had no further comments to make and the RRB **took note** of the report of E. Tsesmelis

6. Financial Matters — P. Geeraert, Head, Finance Department

Paper CERN-RRB-2006-024 Presentation CERN-RRB-2006-049

P. Geeraert presented a financial update on the situation reported in his paper referenced above and correct to the 28th February 2006. For the Common Fund they had received new contributions of 240 kCHF and made new payments of 1.96 MCHF leading to a positive balance of 7.44 MCHF but with outstanding commitments of 14.28 MCHF. Thus there was an approaching cash flow problem, and this gap needed to be funded quite soon. He showed that outstanding cash contributions at this point amounted to nearly 14 MCHF.

Following the receipt of money from Greece, there were long outstanding membership fees for the Common Fund from Belarus, Brazil, Morocco and Russia. This amounted to a total of 183 kCHF from non-Member States. For the CC-A there were still outstanding membership fees up to 2005 amounting to 297 kCHF.

For the M&O A they had received new contributions of 1.2 MCHF and made new payments of 159 kCHF, resulting in a balance of 2.37 MCHF with outstanding commitments of 80 kCHF.

The outstanding contributions to M&O A up to the end of 2005 showed missing contributions from Poland, Armenia, Azerbaijan, Belarus, Brazil, Morocco, Russia (Protvino). The total missing money including 2006 now amounted to 5.99 MCHF.

Discussion

J. Engelen thanked P. Geeraert for this presentation of the financial facts. He commented that it was not surprising that there were as yet large outstanding payments for 2006, but, in view of the cash flow situation, he invited Funding Agencies to pay as soon as possible. As far as outstanding contributions of an earlier date were concerned, both in the area of detector construction and in the area of M&O, there was a need to converge to a solution. Book closing for detector construction was not too far away and they could not postpone these issues too far into the future. These issues would be raised again in the next presentation.

A. Naudi noted just how impressive the presentations of P. Jenni and M. Nessi had been in showing the progress of the experiment. Much less impressive, in his view, were the financial tables presented. Within just over a year they ought to complete construction of this enormous enterprise ATLAS. The work to complete the construction needed manpower and resources for which it was necessary to pay. He felt strongly that the members of the RRB should impress upon their authorities to make the payments that had been requested of them and to which they had committed.

J. Engelen supported this view and noted that there would be an opportunity to return in detail to these issues after Presentations by the ATLAS Resources Coordinator.

7. Construction Budgets — M. Nordberg, Resources Co-ordinator

Paper CERN-RRB-2006-018 Presentation CERN-RRB-2006-058

M. Nordberg noted that the full tables and detailed explanations were to be found in the paper, whilst the presentation would contain only summaries. His first slide re-stated a number of definitions that he used in the documents.

7.1 Closing Report for 2005

M. Nordberg presented the Closing Report for 2005 ATLAS Baseline and Cost to Completion Budgets. In October 2004 the RRB approved the year 2005 baseline budget for construction activities, amounting to 30.6 MCHF in commitments and 54.4 MCHF in payments (CERN-RRB-2004-122). Final baseline and CC-A budget figures in 2005 amounted to 29.4 MCHF for commitments and 43.0 MCHF for payments, the latter being some 20% below the approved budget. The main reasons for this decrease were explained in detail in the document, but were essentially that the production of electronics and installation work had been slower than foreseen.

The graphs of Baseline Commitments Evolution 5 showed that at the end of 2005 essentially 95% of the baseline (475 MCHF) had been committed, consistent with earlier remarks in this meeting that the end game was in sight. This did not include the cost to completion.

Tables 7 and 9 showed the 2005 CC and C&I Payments. C&I payments revealed a negative balance of 4 MCHF and CC-B a negative balance of 3 MCHF. He would return to the overall cash flow situation later in the presentation.

On behalf of the ATLAS management he kindly invited the RRB to approve the final baseline and cost to completion payments for 2005. J. Engelen proposed that the RRB listen to the complete picture before making this approval.

7.2 Current Status for 2006

M. Nordberg presented the 2006 budget for information only. At present they expected payments amounting to 44.5 MCHF and contributions totalling 37 MCHF, leaving a gap of -7.5 MCHF. This was mostly linked to power supplies and installation in the cavern. The 2006 C&I Income and Payments tables showed that contributions and payments were balanced. 2006 CC-B Income and Payments showed contributions of 1.75 MCHF and payments of 4.6 MCHF leaving a balance of minus 2.8 MCHF. He emphasized again that this was for information only at this stage. Table 17 gave the overall picture.

7.3 Preliminary Estimates for 2007

The Preliminary Budget Estimate for 2007 showed that the only active system was the trigger DAQ. The budget presented assumed all due contributions from 2006 would be paid. In reality, a funding gap of up to 10 MCHF was projected at this point in time.

M. Nordberg presented his view of the global cash-flow situation as summarized in Table 17. He referred to the line marked Deferrals totalling -11 MCHF. Deferrals were essentially the money liberated by staging the detector. However, today the pledges were such that they only needed 5 MCHF to finish the detector, instead of 11 MCHF. He had nonetheless put 11 MCHF in this budget line because there were due contributions still in the baseline from several countries, and he did not expect these contributions to arrive in full by the end of 2007. In terms of cash flow, they were using this deferral money to finish the initial detector. Unless they received these delayed contributions, amounting to roughly 10 MCHF in the baseline, they would not be able to put back the staged items, over and above the initial detector. He assumed that these 10 MCHF would arrive eventually, but not by the end of 2007. The result was that in terms of cash flow things were alright but it did not mean that they had the detector that they wanted. They were working very hard on this situation.

M. Nordberg showed the requested baseline contributions which did not come in 2005:

- Russia+JINR 5 MCHF
- Greece 1.5 MCHF (in process of being paid)
- Canada 1.5 MCHF
- US 1.0 MCHF (in process of being paid)
- China 0.3 MCHF
- Due MS fees 0.2 MCHF

He summarized his remarks on the Construction Budgets as follows:

- ATLAS payments were lower in 2005 than planned by 20% (shift to 2006)…
- … but some 10 MCHF of baseline (CF) contributions were also late
- … and the deferral contributions were also coming in slowly
- Therefore, a potential cash-flow problem remained in 2006
- They had to rely on deferral income for the time being
- The proposed way to solve/minimize the cash-flow problem was:
  - Pleading with FAs to make their (deferral) contributions available now
  - And asking FAs to make their full (calculated) part of CtC funding available as soon as possible
  - Delaying payments (CERN technical services)
- ATLAS would return to the matter in October.

He asked RRB to endorse the 2005 construction budget and to take note of the 2006 budgets and the preliminary budgets for 2007. In response to J. Engelen he confirmed that the context was that the overall picture had not changed appreciably as compared to the last meeting.

Discussion

J. O'Fallon commented on the baseline common fund where the USA was seen to be arrears by 1 MCHF. Indeed progress was being made in paying this, and he wished to point out that they had actually already paid 5 MCHF into this budget.

I. Blain noted that Canada would continue to make a best effort towards finding the 1.5 MCHF missing and there would be a meeting the following week with NRC President and with TRIUMF. Since a large sum had recently been given for the Tier 1 centre, it was a matter of trying to tap all of the possible sources this was not easy. J. Engelen thanked her for this positive comment.

The RRB endorsed the 2005 construction budget.

8. M&O Budgets — M. Nordberg, Resources Co-ordinator

Papers CERN-RRB-2006-029 Presentation CERN-RRB-2006-058

8.1 Closing Report for 2005

M. Nordberg then moved to document CERN-RRB-2006-029. The 2005 summary showed a balance of -1.7 MCHF, following the payment of a number of outstanding and delayed invoices. Some changes with respect to the foreseen budget had been discussed and agreed with the Scrutiny Group. As a consequence the cumulative balance for each funding agency was now zero for those who had paid, and of course still negative for those who had not paid.

8.2 In-kind Contributions towards Core Computing, Infrastructure and Services

As agreed at the October 2005 RRB, M. Nordberg presented an update on the core computing (infrastructure & services) contributions in Category-A. This amounted to 862 kCHF (785 kCHF in October 2005). This had been taken into consideration whilst sending the cash part of the M&O-A 2006 invoice.

8.3 Preliminary Estimates for 2007

M. Nordberg showed the Preliminary 2007 M&O-A estimated budget, which amounted to 11.6 MCHF, and its main cost drivers: technical services, magnet operation, core computing, energy and on-line computing. There was a possible additional cost of around 1 MCHF related to the helium transfer line installation of the cryogenics plant which might need to be repaired. Similarly, the refrigerator might need some additional cooling power. He also presented the estimated for M&O-B. This was for information only at this stage.

8.4 Status of ATLAS M&O MoU Signatures

M. Nordberg showed the table of current signatures of the M&O MoU. Russia signed in March 2006. Overall 36 out of the 38 Funding Agencies had signed. They were waiting for Brazil and Switzerland. Although these had not signed as yet, these did make contributions so this was a technicality.

Discussion

J. Engelen asked the RRB to endorse the 2005 budget and this was given unanimously.

E. Gazis asked whether this increase of the M&O budget was based on the new members joining ATLAS or was the collaboration going to increase the membership fee? M. Nordberg replied that the M&O-A was based on the number of authors so a new member would get their share based on the cost per author. Concerning new countries, they were in the process of discussing a policy as to which areas they should contribute in and how much. U. Dosselli and P. Jenni noted that, with new members, the sharing changed but this was not the reason for the increase of the budget.

9. Summary, Future Activities & A. O. B. J. Engelen

J. Engelen concluded ATLAS had demonstrated progress on the technical and installation side that was very impressive. The financial side was not without worries, notably outstanding payments that needed to be resolved in a concrete manner given the book closing for construction approaching. They had been warned of a possible technical problem that was currently being investigated.

Under AOB, A. Petrov wished to inform the distinguished delegates of the Resource Board that JINR, together with CERN, under the assistance of the Russian Mission here in Geneva, had organised an exhibition, “Science bringing together Nations”, in the Palais des Nations, the UN main building in Geneva. He kindly invited all the members of the RRB to the opening ceremony at 15:00 on the following day. J. Engelen added that the opening would be by the Director General of the UN here in Geneva.

J. Engelen reminded members that there would now be a tour of ATLAS and this would be followed by a reception in the lobby of building 40.

The next RRB meetings in 2006 will take place at CERN on
Monday 23rd, Tuesday 24th and Wednesday 25th October 2006

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

C. Jones
June 2006