

Minutes of the MICE Collaboration Board held on 2nd August 2004 in Osaka

Present

CB Chair – P. Dornan

Spokesman – A. Blondel

CERN – H. Haseroth

FNAL – A. Bross

Illinois Inst. Tech. – D. Kaplan, Y. Torun

Imperial College London – M. Ellis, K. Long

INFN Napoli – V. Palladino

KEK – K. Yoshimura

LBNL – D. Li

Northern Illinois – M.A. Cummings

Osaka – M. Yoshida

Oxford – J. Cobb

RAL – P. Drumm

Sheffield – C. Booth

UC Riverside – G. Hanson

1) Approval of Minutes of 31st March 2004

The minutes of the previous meeting were approved.

2) Spokesman's Remarks (Alain Blondel)

Collaboration financing had already been reported extensively in the plenary session. Alain pointed out the many in-kind contributions from all sites doing R&D. This included support from Fermilab for the work on the tracker; from the Muon Collaboration for the RF cavity, other RF equipment and absorber prototype and design; from Japan for tracker and absorber; from EU for PSI solenoid, RF equipment, PID detector etc; from UK for preparation of hall, beam-line, tracker etc. Many remarkable achievements had been made. Both the common tests at KEK and the 200 MHz cavity work at MTA were opportunities to involve both existing and new groups. He expressed a serious worry about funding for the spectrometer solenoid – an Italian responsibility – which is on the critical path. One possibility was the recognition of joint projects, financed by the collaboration as a whole. These are different from Maintenance & Operation funding, for consumables etc, which will also have to be addressed soon. Other solutions were invited.

Simulation & reconstruction effort is another concern. Particular areas are accelerator-specific aspects and particle identification detectors. This could be an opportunity for collaborators without money for hardware. Controls and monitoring coordinators are required. The former would have an overview of the controls for the running of the experiment, and Paul has potentially identified someone from RAL. The latter would oversee the book-keeping of all the parameters needed in the analysis of data, control of systematics etc. More work is also needed on studies of the optics. Ulysse Bravar had done very good work, following on from Bob Palmer, but may be leaving the collaboration soon and a volunteer would be welcomed to join the effort. An Italian group had studied the non-flip version of the experiment and was interested in returning to MICE to work on optics; an optics workshop is planned for early October in Frascati.

Various possible decisions had to be considered. Cryocoolers would allow significant savings (>£1M) but appear to preclude running with helium absorbers on a routine basis. A discussion in the full collaboration would be needed before any decision. For the tracker, it had been decided at RAL last year that the SciFi was the baseline; validation is in progress, with the single outstanding issue being the simulation of realistic RF background. This should be completed by the October meeting. For the RF design and costing, there is progress in studies of refurbishing both Los Alamos/Berkeley hardware and CERN equipment, but no firm proposal as yet.

3) Funding Status

Belgium (via A. Blondel): V. LeMaitre, the head of the Louvain group, had expressed a commitment to MICE. The funding request had been rejected, due to G. Gregoire's retirement. The group still intends to build the Cherenkov, however.

CERN (H. Haseroth) In-kind contribution, such as work on RF amplifiers, was all that could be expected.

France (via A. Blondel): Alain had spoken to J-M. Rey, who confirmed Saclay would not participate. Lyon has expressed an interest in joining.

Italy (V. Palladino): INFN was not very supportive. K. Peach had visited, and there were efforts to stimulate a bilateral agreement between UK & INFN. The response will depend on what people wish to do. (Vittorio explained that there had been 30 Italian signatures on the MICE proposal, but now there were no more than 10 involved. It was important to rebuild the collaboration in order to proceed. He proposed a progressive approach, with a Statement of Interest requiring less commitment, which he hoped more would sign, in September. This would be followed by an attempt to increase people's commitments, prior to a funding request. The involvement of accelerator physicists from Frascati was important. He hoped that at least one solenoid could be built, for 2006; commitments for ToF, calorimeter, TPG and DAQ were now less strong.)

Japan (K. Yoshimura): The committee had advised that current funding will stop after 2-3 years. Applications to two alternative sources had not been accepted. A small amount was available via KEK internal funds.

Switzerland (A. Blondel): No real change. A small amount of money (~CHF50K/year) plus some University funds, a student and post-doc were available. The request for CHF1.5M was not approved, but a "more reasonable request" could be made.

UK (K. Long): Ken reiterated that £12.5M was promised over 5 years. However, this must be unlocked by adequate funding from outside the UK.

USA (D. Kaplan): \$24M over 5 years had been requested from NSF and DoE. The proposal was still formally listed as "under consideration", but informally the news was not good. Apparently the proposal had reviewed well, but NSF had not received its expected budget, and did not have funds available for MICE. DoE funds could only continue at the present level. There was a possibility of applying to the NSF Major Instrument fund, and also of appealing a negative decision on MICE.

4) Technical Coordinator's Report (Paul Drumm)

Cryocoolers were reviewed, and appeared suitable for cooling the magnets. For the absorbers, R&D was required (possibly coupled with that on hydrides). A potential drawback was that they were not appropriate for a Neutrino Factory. Use for liquid helium is more difficult; development will be required.

Paul pointed out that several different simulations of the beam-line exist, and it was not clear if there was a uniform model, with consistent definitions of "good muons" etc. The ISIS shutdown has changed, allowing us a bit more time to prepare for installation.

Cost estimates of the capital requirement were presented of £9.6M for stages I to V and £11M for I to VI; these figures are without contingency or an allowance for inflation. A delay in funding will mean that a delay in the implementation of MICE is inevitable. For work to proceed on the beam-line, a partnership is needed, in order to release promised funds. The WBS will need to be reviewed before Gateway2. Similarly, there must be a complete revision of the Technical Reference Document for

the October meeting, with GW2 in mind. Collaboration Projects (as introduced by Alain) were discussed. Prior to funding, we must consider a redistribution of responsibilities, as the funding situation develops. Major items may need a special proposal, depending on size. Common or Operating Funds will be required, to cover operating costs at RAL (small items, RAL resources such as electricity, protons(!), riggers, etc.). A full list should be drawn up by the next collaboration meeting.

5) MICE Project Management Report & Stakeholders' Plan (Ken Long)

Ken reminded us of the stages in the UK Gateway process. We had passed GW1 "on amber" and were recommended to prepare for a combined GW2 & 3 review ("procurement strategy" and "investment decision"). Part of this preparation required MoUs with the various "stakeholders" – including the various funding agencies and the host laboratory. Within PPARC, we should seek Science Committee endorsement in September, followed by Council approval in October. Formal documentation required included a revised WBS. It was hoped to initiate the GW2/3 review in December 2004. (This is likely to be a "rolling review" until other funding is committed, rather than a one-off approval process.)

6) Collaboration Meeting at RAL 27-29th October (Ken Long)

The main lecture theatre at RAL had been booked from Wednesday to Friday; two conference rooms were also available from the Tuesday onwards. Accommodation will be provided at Coseners House, plus local hotels if necessary, with buses laid on between Coseners and RAL. The collaboration dinner will be held on the Thursday evening, in a local restaurant. Professors Halliday, Peach, Taylor, Wade and Wood have been invited to the MICE dinner (and have the date in their diaries); Peach and Taylor have agreed to come to part of the MICE Collaboration Board meeting, which will immediately precede the dinner.

7) Collaboration Meetings in 2005 (Vittorio Palladino)

The following suggestions were made:

- a meeting late February in the US, possibly at Berkeley;
- 18th-20th June, directly before NuFact05, on Capri;
- around October at RAL.

8) Video Conference Dates (Yagmur Torun)

A list of dates had been circulated by e-mail. After discussion, a few dates were removed as too close to other meetings. Yagmur agreed to publicise the revised list. The issue of timing was revisited. After a lengthy discussion, when no time that was convenient for all could be found, it was agreed to leave the time unchanged until the RAL meeting, for a decision then.

9) Membership of Collaboration Board (Peter Dornan)

The Spokesperson, Deputy Spokesperson and Technical Coordinator are ex officio members of the board. All voting institutes (i.e. those with more than one member) have a representative on the board. It was proposed that there also be technical members, representing particular hardware projects. After some discussion as to whether this would make the board rather unwieldy, this suggestion was referred back to the Executive Board. The Chair already has the right to invite anyone he/she wishes, and it was generally considered that this was satisfactory. As defined in the constitution, only institute representatives would have the right to vote.

10) Election of Collaboration Board Chair (Peter Dornan)

Two nominees, D. Kaplan and K. Long, had agreed to stand, and an election was held. Dan Kaplan was duly elected. Peter was thanked for his work as the interim Chair.

11) AOB

H. Haseroth proposed looking to other sources for funding. The International Science and Technology Committee (ISTC), which provides funding for ex-USSR states to develop peaceful applications of technology, was one possibility. There were also various philanthropic organisations which might provide support. Helmut agreed to look into starting the process, though someone else would have to follow this up. D. Kaplan agreed to write a draft document that could be used in such appeals.

CNB 8th September 2004