

# Minutes of the MICE Collaboration Board held on 24<sup>th</sup> February 2007 at CERN

## Present

**CB Chair** – D. Kaplan

**Spokesman** – A. Blondel

**Deputy** – M. Zisman

Brunel – J. Nebrensky

CERN – M. Vretenar

DPNC, Geneva – J-S. Graulich

FNAL – A. Bross

Illinois Inst. Tech. – T. Hart

Imperial College London – K. Long

INFN Milano – M. Bonesini

INFN Napoli – V. Palladino

ICST Harbin – L. Jia

Glasgow – K. Walaron

LBNL – D. Li

Liverpool – R. Gamet

Mississippi – L. Cremaldi

Osaka – Y. Kuno

Oxford – J. Cobb

RAL – C. Nelson

Sheffield – C. Booth

Sofia – R. Tsenov

## 1) Approval of Minutes of 11<sup>th</sup> October 2006

The minutes of the previous meeting were approved.

## 2) Spokesman's Remarks (Alain Blondel)

Minor changes to the schedule were announced, with beam-line commissioning for Step I starting 15<sup>th</sup> August, Step II in December and Step III March '08.

The funding situation was outlined. For the **UK**, in addition to the £9.7M already approved, a bid for Phase II is under review. (Peer review had recommended 90% funding but no decision has been made.) For the **USA**, approved funds included money via the NFMCC (DoE baseline of \$4.125M), NSF grant to IIT (\$300K), MRI grant for tracker and tracker solenoid (\$750K), DoE supplement for MUCOOL coupling coils (\$300K) and support via Fermilab (\$800K). Further requests had been submitted to the NSF MRI for MUCOOL coupling coils (resubmitted after refusal in 2006), NSF tracker proposal by G Hanson (*approved subsequent to the meeting*) and PIRE proposal by L Cremaldi (not selected in 2006, to be resubmitted). In **Japan**, an application for €1M for the MICE subprogram had been submitted in November 2006, with result expected this summer. The US-Japan request was not approved. For **Switzerland**, support includes the PSI solenoid, funding through the University of Geneva and S.Fr. 74K for collaboration with Bulgaria on PID electronics. CERN has agreed to supply one 4 MW RF station. The **Netherlands** will supply magnetic field probes. **Italy** has provided €500K for the ToF and calorimeter, but €200K more is needed for completion. €195K will be transferred from RAL funds to INFN, which has just agreed to pass this on to the labs for MICE detector work. MICE will also be considered within the "New Technique of Acceleration" programme, which may lead to improved stability in the future. **China** has submitted a bid from ICST to HIT to partially fund the coupling coil project.

The common fund is due to start on 1<sup>st</sup> October. C Booth had asked institutes to indicate the number of PhD (or equivalent) members of MICE (see below). To date, the half that have responded amount to 42 subscribers. At £3K per member, this amounts to £126K – with other institutes included, probably £175K±£25K can be expected. This is much less than the estimated requirement of £420K (including 200 days beam-line running). It has been suggested that RAL management bear the power costs – there has not yet been a response.

Alain informed us that he had agreed to stand in the election for the international co-spokesperson of T2K. If he had been elected, he would not have sought re-election

as MICE spokesperson, though Geneva's commitment to MICE would have remained the same. In fact, he was not elected to the T2K post and so confirmed his availability to continue as MICE spokesperson. He had also discharged himself from most of his teaching and other responsibilities to allow him to spend a considerable amount of his time at RAL.

Finally, training requirements were discussed. Each group should be prepared to formulate a safety plan, identify those competent to operate equipment and define training needs. The Executive Board will propose an operating plan, including chain of command and individual responsibilities, within the week.

### 3) Technical Coordinator's Report (Alan Bross, for Paul Drumm)

A number of critical issues were identified. For the **target**, concerns were expressed over the cooling and the reliability of the control at high acceleration. A more powerful microprocessor control system had been proposed, but there were serious concerns this could not be developed in time for installation. A review of the control system would be held at Daresbury on 9<sup>th</sup> March with the target team, DL engineers and outside experts, and documents were in preparation. It was proposed that the target be tested for 3 months at low current (April-June) and 3 months at full current (July-September).

The **Hydrogen system** specifications are nearing completion. Final drawings are needed for tender, and the TB review will be conducted by e-mail and phone. For the **Absorber Focus Coil module**, a number of interface issues had been resolved during this meeting. There were still issues with cryo-coolers and power supplies. The overall **beam-line installation** schedule is extremely tight. Work will have to be done in parallel, though there may be manpower issues. The ToF and Cherenkov schedules need updating, and issues remain for the ToF. There is about a month's delay for the spectrometer coil compared with the original baseline, but it is hoped some of this time can be made up.

A working group needs to be set up to define operational procedures, access control etc. (see previous talk).

### 4) Future Collaboration Meetings (Ken Long)

The next meeting at RAL will be held on 13<sup>th</sup> to 16<sup>th</sup> June, rather than 10<sup>th</sup> to 13<sup>th</sup> as previously announced. The following meeting will be from 7<sup>th</sup> to 10<sup>th</sup> October.

### 5) Commissioning Plans (Ken Long)

MICE participants will need to register to work at RAL. Aspects such as visas, work permits and insurance (the responsibility of the employing institute) will have to be considered. Susan Ketels can give assistance in these matters, and can help organise accommodation. Invoices for the Common Fund will be sent out in August.

Ken reminded us of the goals of Phase I – to characterise the MICE beam in terms of particle content, momentum range and emittance range. This implies commissioning the upstream beam-line, PSI solenoid, downstream beam-line, beam-line diagnostics, ToF, Cherenkov and upstream spectrometer (solenoid and upstream tracker). A list of milestones was presented, driven by the ISIS schedule. The synchrotron closes on 8<sup>th</sup> August, with ISIS commissioning during August and September. The ISIS running cycle starts on 2<sup>nd</sup> October. An installation and commissioning team will be required with representatives from the key subsystems, including DAQ, Tracker, PID, diagnostics etc. (The end of run party is scheduled for 21<sup>st</sup> December!)

#### **6) Report on Common Fund Collaborator Tally (Chris Booth)**

The last Collaboration Board had approved the principle of a MICE Common Fund, and all groups were asked to provide lists of members “of PhD status” to define group contributions. Despite several reminders, only 15 of the 33 institutes had replied. Those not responding included all the Italian and Japanese groups, ICST Harbin, Cockcroft, Daresbury, ANL, BNL, Fairfield, Fermilab, Northern Illinois, Riverside and UCLA. The total number of members from the institutes which did respond was 42.

All the institutes which had not yet replied were urged to do so as soon as possible, in order to allow planning for the Common Fund.

#### **7) Report on Spokesperson Election (Dan Kaplan)**

Alain’s term of office was from 1<sup>st</sup> May 2004 to 30<sup>th</sup> April 2007, and selection of the next spokesperson should have started about 9 months before the end of that term. This deadline was missed, but consultation started in December, and it had been agreed that Dan’s mandate as CB chair would be extended until the spokesperson election was completed. A search committee consisting of Dan, Ray Gamet, Ghislain Gregoire and Yoshi Kuno had been set up, and after consultation with the collaboration two nominations had been obtained, for Alain Blondel and Ken Long. Further possible nominations will be solicited within the next week, and then a secret ballot held via the web. According to the constitution, single-member institutes are only entitled to half a vote. There are 8 such institutes, and it was agreed that these should agree in pairs in order to cast one vote together.

CNB 16<sup>th</sup> May 2007