

## MICE Executive Board meeting

22<sup>th</sup> February 2015; 14:30 GMT

**Present:** S. Boyd, A. Blondel, M. Bonesini, A. Bross, J. Cobb, D. Kaplan, K. Long, V. Palladino, M. Palmer, D. Rajaram, R. Preece, P. Soler  
**Apologies:** Z. Bowden, Y. Kuno, C. Rogers, R. Tsenov

### Notes

#### 1. Minutes and actions: All Notes accepted.

- **KL/ZB:** Join forces to work with HR on visitor agreement.  
**Done!** Now need to push through the implementation of the MICE use of the ISIS User System (**Action: KL**).
- **KL:** Progress review of collaboration charter.  
**Ongoing.** Status reported to CB. ABl proposed that he invite J. Dainton straight away to the next CB (23Jun15) (**Action: ABl**).
- **ABl:** Post shift and publication policies as CB documents.  
**Almost done.** Posted on CB WWW page; need to give “CB document” numbers and post as CB documents. KL will complete the action.
- **DK:** Test the water with Ljubljana contacts.  
**Done.** Contact made. Action changed to follow-up.
- **KL:** Draft an email to go out to CB over ABl and KL signatures asking the the shift personnel be entered into CHEESE.  
**Done.**
- **KL:** Contact C. Booth to enquire about status of MICE collaboration-list refresh and ask that it be completed for CM41.  
**Ongoing.** Agree to post what CB has obtained and post on WWW. Then circulate a request to the CB to ask for further updates.
- **KL** In collaboration with C. Booth make author list available by 02Feb15 for use in the NSF proposal.  
**Done.** We agreed to use the author list of the most recent publication as the reference. This is already available via our WWW site.
- **KL:** In parallel to above, produce author list in format required for “MICE style” paper format.  
**Done.**
- **KL, CR:** Review and release for comment long-list of MICE publications.  
**Ongoing.** CR has made a first draft. KL/CR have not yet had time to iterate to complete the list and circulate for comment.
- **KL:** Refresh contact with YK re Japanese contributions to the physics of Step IV.  
**Stands.**
- **PS:** Investigate whether the H2020 RISE programme can be used to provide travel support for Serbian participation in MICE.  
**Done.** Discussed at CM41:  
**RISE** is a programme that enables exchanges. One of the rules is that a non-EU third country is required. It has been established that this Can not be Serbia. Could try to include US and/or China.  
**COSTS** requires only 5 “COST” countries: UK, CH, I, Bul, Serbia (and Netherlands) all eligible.

COST awards only able to pay networking cost (i.e. travel to meetings). Maximum of 130kEuro per year. The bid is “simple”. There is a rolling call: the next deadline is March, then October. Two actions: seek to prepare a bid for March deadline (**MB, PS**); contact NIKHEF to see if they would be interested in participating (**KL**).

## 2. Issues arising from CM41: All

- *Shift allocation/operations strategy:*

Long discussion of implications of shift sign up. Presently the shift load was felt to be large. It was not clear how the shift allocation would be discharged alongside the other necessary activities during running, including expert cover and analysis shifts.

A number of ways to develop the operational activity were proposed including: migration to 1-person shifts; increasing the shifter pool; revising the present shift rules to allow greater flexibility in taking up “personal” shifts; possible weighting algorithms to give more weight to (e.g.) night shifts; the inclusion of planned maintenance/access days.

It was *agreed* that KL would develop a more concrete plan in the following steps:

- (a) Revise present run plan;
- (b) Scrutinise present shifter list;
- (c) Seek to complete shifter list;
- (d) Devise plan for operations taking into account comments made.

The outcomes of this work will be documented and circulated. The run plan will be posted as a MICE Note. The work must complete sufficiently in advance of the next round of reviews to allow collaboration to comment. Seek to collaboration at the March VC.

We discussed the need to increase the rate at which we record good muons through a combination of increased particle production at the target (liaison with ISIS; issue activation of ISIS); possible modification of trigger to include ToF2; speed up of tracker r/o through readout in “discriminator mode”.

The idea of a review, internal to MICE, of the quality of data taking at an appropriate date was accepted.

- *New MICE institutions:*

The EB welcomed the CB decision to accept the requests of Belgrade, IHEP and Sichuan to join the collaboration. ABl pointed out that the new institutions must sign the collaboration’s MOU. As CB chair he will write to the representatives of the new institutes to welcome them and to ask them to sign the MOU.

- *Optics of the MICE Muon Beam:*

The large excursions (in particular in the vertical plan at Q8) pointed out by J. Pasternak was noted. Other analysis of the performance of the MMB had also been presented at CM41 (D. Nugent, R. Bayes) and it was not clear to what extent the results were consistent. It was agreed that JPa should coordinate a study to resolve the issues raised. JPa needs to call on support to address this issue since the problems of integration of the cooling channel were becoming pressing (**Action: KL**).

- *Electrical ground:*

Clear that the grounding issue was critical to the success of the experiment and was being given appropriate priority by the project team. The plan presented by S. Griffiths was discussed briefly. It was accepted that, while it might be desirable, it was not feasible due to financial, schedule and personnel constraints, to install a second transformer to provide a “clean” supply. Griffiths’s plan was accepted as a pragmatic approach. Contractor effort would be brought in to implement the solution when the design was complete. Additional support from (e.g. FNAL) would be welcome.

- *Magnetic alignment:*  
Analysis to determine the magnetic axis is going in the right direction. Time to close the analysis is short. The plan at present is to make a first alignment of the SSs and the FC to the best estimate of the magnetic axis asap (likely March). Once the south yoke is in place (and before the north yoke is fitted) it will be possible to adjust the alignment (May). Once the installation of the PRY starts it is likely that the alignment will be fixed for Step IV.
- *Computing speed:*  
Two, separate issues: reconstruction and MC. MC splits to in that the G4BeamLine simulation of target to D2 is time consuming. MAUS(MC) and MAUS(data) are also too slow. The MAUS(s/w) group is aware of the issues and will take appropriate action.  
Issues relating to the data-taking rate were also discussed. There are two aspects again; making a better good muon selection by using TOF2 in the trigger (in “OR” with down-scaled TOF1 trigger, perhaps) and using discriminator-mode readout on the tracker. The physics group is looking at the former while the tracker group is developing a plan to roll out the latter.
- *Secondary LiH absorbers:*  
Secondary absorbers were discussed. Procurement of discs was not considered an issue. However, the integration engineering issues need to be addressed.
- *Preparation for the April RLSR/MPB reviews:*  
Contact from DOE and S. Peggs to MP had already been made. KL intention to contact S. Peggs in March should therefore be brought forward. Issues that need to be addressed in the run-up to the next reviews include:
  - Step IV operational and run plans;
  - Path forward on engineering items such as secondary absorbers;
  - Vacuum system;
  - Integration of channel (envelopes, interfaces etc.);
  - Options analysis (what if we use the summer ISIS User Run, ends mid to late July?);

### 3. Paper status: CR

- Step I paper completion status;  
**Pion contamination:** Seek to finalise analysis, Note and draft paper in the next few weeks. Agreed on value of having paper in circulation (for us and the reviewers) by April 2015;  
**EMR:** No-one directly involved present (ABI had left); status felt to be good. Push to close this (UK) FY.
- Cooling demo definition paper status Again, progress felt to be good; push to close this FY.

### 4. Refreshing sleeping collaborators: KL

KL summarised the efforts being made to rekindle the interest of CERN and NIKHEF in MICE and muon accelerators. KL’s intention is to try and rekindle other sleeping groups.

### 5. Progress in filling empty positions in O&A organisation: KL

Agreed need to address single point failure issues in “Overall DAQ” and Tracker s/w.

### 6. Common Fund:

- Status report: PS  
Noted that 2014/15 census is final. Collection of levy is in hand.
- Proposal for “overseas visitor support”: KL/RP  
Agreed that non-UK CF can pay travel claim from Serbian colleagues.  
Agreed that KL will re-initiate search for commuter accommodation and that P. Hanlet will be asked to help.

7. **Speakers Bureau: VP**

Agreed not to send an abstract on behalf of MICE to detector conference in PISA.

Two abstracts accepted at IPAC. Lobbying for one to be come a talk. The following was agreed:

- **DR, VP:** Collaborate on replacement speaker for DR at CHEP;
- **KL, ABI, VP:** Seek input to speaker prioritisation from CB and task leaders.

8. **Next Collaboration meetings:**

- CM42 22nd to 24th June 2015;  
Shift training 15th and 26th.
- CM43 et seq: KL
  - 2015:
    - \* CM43 28th to 31st October 2015: FNAL/IIT
  - 2016:
    - \* CM44 15th to 19th February 2016
    - \* CM45 20th to 24th June 2016
    - \* CM46 03rd to 07th October 2016

**KL:** Propose dates for 2017 at next EB;

**KL:** Arrange for next CM meeting to be posted as a proto WWW page asap.

9. **DONM:**

6<sup>th</sup> March 2015.

10. **AoB**

None.

## Summary of actions

- **KL:** Push through the implementation of the MICE visitor-registration system as part of the ISIS User System.
- **KL:** Progress review of collaboration charter.
- **ABI:** Invite J. Dainton to the next CB (23Jun15).
- **KL:** Post shift and publication policies as CB documents.
- **DK:** Follow-up with Ljubljana contacts.
- **KL:** Ensure that C. Booth posts present status of collaboration list on the MICE WWW site. Circulate note to CB requesting further updates.
- **KL, CR:** Review and release for comment long-list of MICE publications.
- **KL:** Refresh contact with YK re Japanese contributions to the physics of Step IV.
- **MB, PS:** Seek to prepare COSTS bid in time for submission in March 2015.
- **KL:** Contact NIKHEF to ask that they consider involvement in COSTS bid to try and raise resource for potential more active participation in MICE.
- **KL:** Discuss with JPa of programme necessary to resolve the optical issues raised regarding the MMB and the integration of the cooling demonstration configuration.
- **KL:** Re-initiate search for commuter housing and ask P. Hanlet to help in specification and search.
- **DR, VP:** Collaborate on replacement speaker for DR at CHEP;
- **KL, ABI, VP:** Seek input to speaker prioritisation from CB and task leaders.
- **KL:** Propose dates for 2017 at next EB;
- **KL:** Arrange for next CM meeting to be posted as a proto WWW page asap.