# **ICFA Neutrino Panel meeting #18**

Timed for Asia: 15Feb16; 06:00 GMT

Present: TK, MS, KL

**Americas:** 16Feb16; 18:30 GMT

Present: SG, RG, AdeG, KL, GZ

Europe: 19Feb16; 12:00 GMT

Present: DD, JC, MM, KL

#### Goals:

1. Review and gather comments on draft roadmap document;

- 2. Discuss and agree next steps to complete roadmap document;
- 3. Discuss and develop Third Large Neutrino Infrastructures meeting;
- 4. Discuss presentation KL must make to ICFA on 24Feb16.

### Agenda

# 1. Introduction and adoption of agenda

• Principal goals outlined above. Agreed to review draft roadmap-discussion document page by page.

# 2. Notes on recent meetings and actions arising:

- No outstanding actions are noted.
- No corrections to notes noted.

### 3. Review of draft roadmap discussion document

### Points noted:

- TK:
  - On T2K section noted that that T2K now seeks to propose "T2K II"; extension of T2K to allow data taking during time that HK is being prepared. Requires modification to text at lines 236 et seq and an update to figure 3.
  - Also note that in January 2016, an EOI to the above effect was submitted to the J-PARC PAC. This will be published on the arXiv. Reference can be made to this document.
- MS:

- HK have updated design and specification for Hyper-K. Will therefore need to update text and figure in HK section of chapter 2. MS will update the text/figure via the svn.
- We discussed H. Tanaka's comment regarding study of second oscillation maximum at DUNE and Hyper-K in regard to interim conclusion 2.3; recommendation 2.3. MS felt that there would be too few events at Hyper-K to make it likely for the collaboration to be able to make a study. Agreed to discuss with DUNE members in the other Panel calls this week.
- Noted that WAGASCI is in construction and therefore should be moved after ND280 in neutrino-scattering section.
- MS:
  - Noted that figure 14 and text will need to be updated to account for the recent changes in specification etc. of Hyper-K.
- Noted that mention of NEMO3/SuperNEMO was missing from section 7. Will be plugged by A.deGouvea.
- RG: LARIAT should be added in the detector section (or at least mentioned somewhere.
- From the discussion with the Panel members from the Americas:
  - The "must" formulation in the recommendations was largely replaced with "should"; we have no means of insisting things are done.
  - Various re-phrasings of the recommendations etc. were noted. Most were to be taken care of by KL. However the following specific actions were agreed:
    - Split recommendation 2.4 into one for experiment one for theory, vis:
      - SG: Draft recommendation to encapsulate need for a "process" to establish the capabilities to go beyond those of the next generation; and.
      - AdeG: Draft a recommendation for how development of (investment in) theory is critical to programme beyond next generation.
    - Conclusion 4.3 needs to emphasise that improvement in theory is needed in the scattering area. Need therefore a recommendation to encapsulate need for theoretical work.
      - AdeG: Agreed to draft a recommendation regarding the need for theory developments for neutrino interactions.

#### 4. Discussion of next steps

Agree to complete document following the Panel meetings this week. Need then to consult experiments and community at large. This can start as soon as the draft has been presented to ICFA. We noted that the Large Infrastructure Meeting being organised by TK and MS will be a good venue to engage with Funding Agencies and

Lab Directors. Then, need to present as draft around Neutrino 2016. Given the cycle of ICFA meetings, likely to take another year to complete our tasks.

# 5. Third meeting on Large Neutrino Infrastructures: TK, MS

Organisation now moving to invitation of VIPs and speakers. All Panel members should try and come to this important meeting.

### 6. Presentation to ICFA: KL/All

KL has 10 minutes to present our work. Plan is to focus on the roadmap, and particularly, the conclusions. Will also point out the desirability of a census and ask how to work with ICFA members and others to make this work. Will also outline that to close our work properly will take another year given that consultation to solicit feedback on roadmap discussion document has not yet started.

#### 7. DONMs

To be defined; but, in person meetings at the Large Infrastructures meeting and/or Neutrino 2016 will be valuable.

#### 8. AoB

None.

### Reminder of our goals for our second year:

- 1. Engage with establishment: FA reps and Directors;
- 2. Develop road-map for InuP;
- 3. Develop proposal for RD programme:
- 4. Explore opportunities for international collaboration necessary to realise NF
- 5. Establish clear set of goals for the precision with which \nu\_\mu and \nu\_e cross section measurements must be made;
- 6. Initiative to promote best practice in s/w & codes;