

===== Tianlai teleconf (14 February 2014) summary =====

Attendance: R. Ansari, J.E. Campagne, Xuelei Chen, J.M. Martin, J. Peterson, P. Timbie, Le Zhang, Jiao Zhang,

This meeting web page and documents:

<https://indico.lal.in2p3.fr/conferenceDisplay.py?confId=2381>

(modification pw = tian21cmte)

A- NSF-MRI proposal (P. Timbie)

- NSF-MRI proposal submitted 3 weeks ago
- Peter acknowledges input and support from many people (X. Wang, J. Zhang, A. Stebbins, R. Ansari, X. Chen ...)
- very competitive - results in 6 months
- Provision for manpower (engineering and project management has been included and represent significant fraction of the project cost
- Contacts with the US project manager for Daya bay, staff of Univ. of Wisconsin - Native chinese speaker - has a very good knowledge of work in China and technical aspects
- if proposal approved, that would represent 30% of an FTE / year , during 3 years

B- Site (X. Chen)

- A new site is being considered, in Xinjiang, different Dashankou
- Would probably be the Tianlai site
- Discussions with the local government and site construction costing under way
- Site in Hongliuxia (44.15433N,91.797163E) , around 1500 m
- 1 day driving from Urumqi, rather good road conditions, a narrow river to cross
- Windy region : The antenna design and construction should be made taking into account effect of strong winds)
- RFI measurements show a clean site
(see slides for the location and RFI measurements)

C- Intensity Mapping / Tianlai workshop (J.M. Martin)

- Intensity Mapping open workshop, followed by Tianlai collaboration meeting
- Date : 3 rd June ... 5 th june, followed by a visit to Nançay June 6th (friday)
- Place : Observatoire de Paris, in Paris, salle de l'Atelier (40-50 pers) 3,6 June, Salle du Conseil (5 June)
- Support from CIAS ~ 1 k€ - coffee breaks, evening cocktail ...
- X. Chen informs about a potential problem from the chinese side, as the government has introduced strict control over international travels for government employees, including research staff. probably only 3 people from NAOC would be able to attend the meeting.
- 1.5 - 2 days for the Intensity mapping workshop (1 - 1.5 days collaboration workshop)
- We should decide on the workshop title :
" Paris 21 cm Intensity Mapping Workshop (IM21 - Paris 2014) "
to send the workshop announcement soon
- Form the program committee (J.M.Martin + A. Stebbins (US) + X. Chen (China) + ??? + R. Ansari)

D- Tianlai working groups (X. Chen)

- Instrument design and parameters should be decided and fixed soon, by April - and at the June workshop at the latest.
- Cylinders : symmetric and asymmetric design - Symmetric design is favored given the lower height of the structures
- Cylinders - Optical and mechanical design - According to the proposal, 3 cylinders 15 m x 40 m (15 m wide) should be built. Ue-Li is in favor of wider cylinders, given the limited cylinder length that could be instrumented - However, larger cylinder width might have also a negative impact on the (u,v) plane coverage around u~0 (along EW direction)
- J. Peterson: any of the three mechanical support configurations for feeds : cables, vertical support struts, double inclined support struts should work
- Question of the F/D ratio of the cylinders: lowering F/D (fast beam) simplifies mechanical construction (lower height for the feeds), but make it difficult to illuminate fully the reflector
- J.P recommends F/D ~ 0.4 (F ~ 6 m for D=15m) = was 0.25 for Pittsburgh CRT. 0.25 would make mechanical installation of feeds easier.