

===== Tianlai teleconf (25 September 2013) summary =====

Attendance: R. Ansari, J.E. Campagne, X. Chen & colleagues, J.M. Martin, M. Moniez,
C. Magneville, A. Stebbins, Jiao Zhang, Le Zhang

This meeting web page and documents:

<https://indico.lal.in2p3.fr/conferenceDisplay.py?confId=2250>

A- Report on Tianlai activities in NAOC (X. Chen)

- Site preparation and construction work: little progress since the beginning of summer.
still hope to start construction work in spring/summer 2014
- Some testing / observations carried in the observatory in inner Mongolia. The work, mostly on electronics (receiver, mixer) is led by Feng Quan, and was slowed by the bad weather. Results are encouraging, pointing toward a noise figure of 60 K for the LNA. This value needs to be confirmed.
- The digital sub-system and the acquisition software need more work, in order to identify the origin of lost packets - currently through the USB slow readout. Institute of automation has been asked to develop a more powerful system capable of performing automatic data processing and acquisition for long duration (few hours to few days) observations.
- Ue - Li is visiting NAOC : discussion about array configuration and observation strategies.
- Meeting with an optical module manufacturer (analog signal transmission): this company can build high quality analog optical transceivers, although at a higher cost than the one claimed by CHIME/Toronto.
- On-going work on the theory, simulation and data analysis: Yidong Xu working on bi-spectrum and non gaussianity, Jaswant on GBT data analysis, Liu Tao on feed simulations. evaluation of per baseline delay technique for signal-foreground separation.
- Xuelei was present at the SKA Oxford meeting (sep. 2013): Tianlai & CHIME can be considered complementary to SKA precursors. A large SKA meeting will be organized in January.

B- PAON status report (J.E. Campagne)

- Manufacturing by external companies finished in spring and all parts were delivered to GEPI (Obs. de Paris). A lot of progress during summer thanks to F. Rigaud's team at GEPI, in charge of dish design and building.
- First dish has been successfully mounted in GEPI/Obs. de Paris at Meudon. Deployment of the four dishes (PAON-4) at Nançay is planned before the end of the year.

- See the slides here:

<http://indico.lal.in2p3.fr/getFile.py/access?contribId=1&resId=0&materialId=slides&confId=2250>

C- Discussion on possible funding sources in the US (and Europe)

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- See few slides prepared by P. Timbie here:

<http://indico.lal.in2p3.fr/getFile.py/access?contribId=2&resId=0&materialId=slides&confId=2250>

- A. Stebbins: on the Fermilab side, it might be a better option to continue keep low profile. Discussion with Craig Hogan, director of Center for Particle Astrophysics at Fermilab (CPA-F). Computing resources are available at Fermilab, including a tape robot, but it would be difficult to get a computer professional to help organize the project software side

D- Work on array configuration (A. Stebbins)

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- Brian Nord (CPA-F) is working on all sky HI simulation, using Alphasurvey - Discussion with Xin Wang to investigate the "purification" method and compare with other signal-foreground separation.
- Presentation of possible Tianlai-16-dish configuration, optimized for observation toward the NCP (North Celestial Pole) - Concentrate the observation time over a limited area of the sky. However, not much extragalactic optical data seems available toward the NCP. See the slides here:

<http://indico.lal.in2p3.fr/getFile.py/access?contribId=4&resId=0&materialId=slides&confId=2250>

E- AOB

- We site (documents) for the next Tianlai teleconfs:

<https://indico.lal.in2p3.fr/categoryDisplay.py?categId=175>

password for uploading documents: tian21cmtc

- We have to reactivate the working groups, specially the simulation/array configuration WG (A. Stebbins) - and complete the short TDR
- Next Tianlai meetings - THURSDAYS : 17 october 2013, 14 November 2013, 12 December 2013