

===== CRT/Tianlai/BAORadio teleconf (13 December 2012) summary

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Attendance: J.Peterson (in NAOC) , P.Timbie, Le Zhang, X. Chen, Yichao, R. Ansari, A.S Torrento, C. Magneville

A- NSF-MRI proposal (P. Timbie)

2 pre proposal for NSF-MRI (~ 1 M\$) will be submitted to UW and CMU.
prep-proposal should be selected by a university before being submitted to NSF.
Plan to build a correlator using CASPER hardware (GPU-based , 256-400 channels)
30% matching funds from international partners (France, China)

B- Report on Intensity mapping workshop in Oxford (X. Chen)

Workshop program and slides can be found here :
<http://www.jb.man.ac.uk/~rbattye/intensity.html>
• BINGO : ~ 100 k\$ from Saudi Arabia, and some Brazilian participation
• CHIME has been approved, ~ 10 M\$ (equipment fund)

C- Presentation on software (R. Ansari)

o Presentation by R. Ansari on software development for 21cm (acquisition, data processing, software/GPU correlator) - see slides
o Action: Compare packet structure (BRPaquet) and correlator software with CASPER

D- Tests in China (X. Chen)

o J. Peterson is in China (till 22nd December) to participate in Tianlai tests
o 2 x D=5m dishes have been (1000 \$ each)
o Tests will be performed at Xinglong observatory (2.5 hours from NAOC), LAMOST site
o Some delay with respect to the original plan (departure was on 12 december)
 some problems with the digitizer/correlator board
o Plan to test the Institute 54 analog receiver (without analog optical transmission)
 0.4 - 0.5 dB noise figure, large gain in the first stage (might need some filtering to avoid oscillations) - Mixer ?
o Dishes : aluminum struts (similar to HamDesign ?) and steel back support
o Feed from institute 54 : 4 triangles in a coffee can (@ 700 MHz)
o Jeff's sleeved dipole feeds with cone ground plane (700-1400 MHz)
o Digitizer / correlator board : 2 Vertex 6 + FMC connectors + daughter boards
 6 channel digitizers + 10 Gbits ethernet . F (time FFT) & X (multiply) on the Virtex 6 chip

AOB

o Shared LaTeX site : check site fee
o The mailing list bao21cm@fnal.gov should be updated.