

# PAON news

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The 4 5m-dishes are now operational (currently 18/12/14 DAQ on CygA transit)



2 ortho-polar per dish, 36 visibilities done offline for the moment after FFT done online (1250-1500 MHz, 4096 bins) at 1kHz trigger. Soon server machines will compute the visibilities online.

Raw visibility data  
[  $V_{ij}(\nu)$  ]



Cleaned / compressed  
visibility data [  $V_{ij}(\nu)$  ]

*(A) RFI cleaning, time dependent  
gain/noise monitoring ...*

Cleaned / compressed  
visibility data [  $V_{ij}(\nu)$  ]



Calibration data (gain, phase)  
Beam,  $T_{sys}$   
Cleaned / calibrated [  $V_{ij}(\nu)$  ]

*(B) Calibration on point  
sources*

Calibration data (gain, phase)  
Beam,  $T_{sys}$   
Cleaned / calibrated [  $V_{ij}(\nu)$  ]  
Array configuration



3D sky maps  $I(\alpha, \delta, \nu)$   
Synthesized beams  
noise maps ...

*(C) Map making*

*(D) Component separation  
Foreground/signal maps  
and power spectrum ...*

- ❖ (A) : Cleaning raw visibility data (RFI removal, time dependent gain /  $T_{\text{sys}}$  monitoring, data compression (rebinning in time))
- ❖ (B) : Relative gain/phase calibration using single bright point sources - should be then extended to the use of multiple point sources. Will also provide single dish+feed beam response and  $T_{\text{sys}}$
- ❖ (C) : Map making - 3D intensity map reconstruction
- ❖ The software modules being developed could be applied also to Tianlai data

Qizhi Huang will contribute  
to (A), (B)  
Currently he is playing with  
PAON2 data

Jiao Zhang have been  
working on C