Minutes for AMiBA Telecon 20120426, UTC 2:00

Regular Meeting Time: UTC 2:00 Every Thursday
USA Toll-Free 888-204-5987 Taiwan Toll-Free 00801-10-4304
Access code: 2151097 Host password: 6697

- General issue:
  - Shelter opens at 4pm, needs 1.5 hrs to stabilize the temperature (on platform). Will compare with the temperature inside the corr. boxes.
- Operation on site:
  - Lab
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  - IF/LO & Rx status
    - Replacing cold heads for Ant2, 8, 13. Ant8 has retching noise after decontamination. Ant13 warmed up every 2 weeks and its cold head is due for replacement.
    - Ant10 was cooled on Mon and is working now.
    - Surge protection for compressors? 10-50 min temporally off still keeps cold. UPS is expensive. Safety concerns for remote control?
    - Ant9 IF2 debug: spectrum analyzer shows weaker signal than IF1. LNA might be broken (will test by grxmon on/off). Mixer?
  - Readout & Correlator
    - New PROM chips are installed in LL & RR DAQ boxes. All baselines are affected. Noise spectra show 75% baselines are flat, while some have DC fluctuations, jumps (unlikely related to PROMs, not seen in Jan. Data). Noted spikes in 3R time-domain ⇒ T.O. data shows changing amplitude of spikes. [Hiroaki]
    - 11L12L, 11L13L are flat, probably related to readouts. The corr box needs to be lowered for exam.
    - A script is needed to compare time diff between CCC, TCS and GPS.
  - Observations:
    - One team switches to day crew for cold head replacement for two weeks.
    - Finished the weak source 1607+268; add MACS J1931.
    - High-El IT has a pointing error down to 0.39' (4 DECs tested) so the high-El is open from now on.
    - A1689? using spare time for high S/N for shape, long baselines issues etc.
    - Repeating Jupiter radio-alignment measurements is on hold until all Rx are back online.
    - The current IT has not included the systematic misalignment to the East and the absolute pointing error.
- Dish , Mount, Pointing:
  - Schedule changing the lubricant oil of the gear boxes for jacks in July.
  - radio pointing: the increasing-with-hexpol error pattern should be real. (now IT corrections for all hexpols are the same.) The IT corrections follow the r-pointing error trends, but with a different amplitude making the r-pointing rms increase.
  - “stretch” the hexapod before obs might help on pointing deviation near the zenith.
  - Vertex todo: to install another logger to record HPC log file on next site trip.
- Platform, Deformation:
  - Strain-gauge data needs to be combined with pointing logs to see if there is difference between hexpol=0 and <5deg strategies.
  - Ask Vertex for codes to calculate the reacting force.
- Data Analysis & Science:
  - Absolute flux calibration using weak sources: only a few existed in current catalogs.
  - J1115 flux 24±3 mJy; hasn't obtained reliable images for A1995 [Hiroaki].
  - Study of CMB temperature scaling with z using multi-freq. data of 2 clusters [Ven].
  - J0717 [Kyle]: the 2nd half of data is not consistent with the 1st half; flux and peak location changes but not in the case of its r-companion. [Hiroaki] reports 45±5 mJy (all data) with noise higher than expected and changing with time.
  - Discussion on extended sources for verification of cluster sub-structure. Pairs? Virgo?
  - Multi-freq. science: how to collaborate with other projects? May summarize multi-freq. in the ref. column of AMiBA target web. Catalogs release? [Ven].
  - [Proty] A2142, A383, A2390 appear to have substructure. But they were observed in the same time period. ⇒ to compare A383 with Bolocam image.
  - Cluster stacked profile constructed by a simple model (phase center is picked

manually) shows long baselines are systematically deviated from the model.
    - Compare results w/ and w/o deformation corrections. It seems these corrections could correlate noise/signal, especially more apparent in low S/N targets.
    - Smearing seen in long integration of cluster (ex. A383, A2390). Deformation? Noise? Pointing (of El)? Longer-integrated radio sources didn't show this issue.
    - Ant9 RR is often flagged out. Some baselines' noise weights are poor and we need to exam on this.

Cluster (till 2012/04/30)	on-src time (min) in the past week	Total on-src time (min)	
A1689		456	Hiroaki's analyzed visibilities see http://amibawiki.asiaa.sinica.edu.tw/index.php/Calibrated_Visibility Proty's team finished the analysis of these clusters with deformation corrections.
MACS J2129.4		1326	
RXJ1347		393	
A2261		1344	
MS2137		2454	
RCS1447		975	
MACS J1931		1485	
A209		1485	
A2142		795	
A383		3294	
A2390		1695	
MACS J0329		2280	Hiroaki
MACS J0429		2556	Hiroaki
A611		4470	Hiroaki, Proty's (Tai-an)
MACS J1115	324	4131	Hiroaki
A1995	270	2574	
MACS J0717		1446	Hiroaki
A2163	120	606	
MACS J0744	252	1020	
MACS J1931	120	180	

- Beyond 13 element:
    - Platform modification
    - Calibration system

Traveling Schedule to Hilo: (current)

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Traveling Schedule to Hilo: (proposed)

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