Minutes for AMiBA Telecon 20111201, UTC 2:00

Regular Meeting Time: UTC 2:00 Every Thursday
USA Toll-Free 888-204-5987 Taiwan Toll-Free 00801-10-4304
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- General issue:
  - CCC requires a UPS but it is inconvenient to use the control room's. Have some progress on setup.
- Operation on site:
  - Lab
    -
  - IF/LO & Rx status
    - Will replace Ant9 IF/LO to solve IF2 problem, waiting for Johnson's help. As for Ant11 the corr box needs to be lowered for exam.
    - Sent compressors back to the vendor.
    - Ant4 looks OK after replaced the power supply board. 9R may have a problem in the IF chain; 11L12L, 11L13L are flat, probably related to readouts.
  - Readout & Correlator
    - CCC's / partition is still full, but seems not to interfere the obs/ctrl software.
    - A script is needed to compare time diff between CCC, TCS and GPS.
  - Observations:
    - Add A611 to observe, as well as 3 hrs of Neptune (DEC -11, 3~4 Jy) to check the deformation model. A plan of 6 nights has been scheduled.
    - 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:
  - Radio & optical image comparison: use miriad to gaussian-fit the star center for cross-check.
  - Considering to reset the high-El part in the current IT (alternative is offset obs.). The trusted region is El<75 deg, and Locutus will look into the interp. algorithm for the side effects of resetting.
  - 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:
  - North & South targets shows the radio pointing error based on the optical-obtained deformation model is ~1' (max 1.5').
  - Strain-gauge data needs to be combined with pointing logs to see if there is difference between hexpol=0 and <5deg strategies.
  - The feasibility to use the laser-ranging technique? The technique can provide z-axis information.
  - Ask Vertex for codes to calculate the reacting force.
- Data Analysis & Science:
  - Kyle averaged all baselines of each mbtp and found some spikes even existed in June data (cal. by Saturn). These spikes are small and coherent across baselines.
  - Blank-sky data (~10% left after flagging) shows noise is well integrated down (RR).
  - Kyle reported small spikes in the cluster data calibrated by Jupiter, which is a possible origin to the spurious pointing error). These spikes persist after 4-σ filtering and pass KS tests. A statistics is needed, however, to identify and quantify them.
  - Proty's students will analyze A2390 and A383 to compare with Hiroaki's results.
  - DACOTA: requests for the preliminary 13-element images. Discussion about possible CO detecting using AMiBA W-band. We need some confidence before invest vast amount of obs. Time.
  - Need to check if the noise can be integrated down at the scale of all data.
  - Long baselines have higher fluxes. Related to non-flat vis in calibration? (not pure point source) Not critical so far until ultra-deep integration.
  - Ant9 RR is often flagged out. Some baselines' noise weights are poor and we need to exam on this. The current weighting scheme is pursuing high S/N so with loss of

efficiency.

Cluster (till 2011/11/29)	on-src time (min) in the past week	Total on-src time (min)	% of data analyzed
A1689		456	More than 80% data has been roughly looked by Kyle. Further detailed analysis tasks has not been distributed, of which the progress will be logged here.
MACS J2129.4		1326	
RXJ1347		393	
A2261		1344	
MS2137		2454	
RCS1447		975	
MACS J1931		1485	
A209		1485	
A2142		795	
A383	144	2577	
A2390	120	1638	
MACS J0329	192	822	
MACS J0429	252	774	
A611	351	606	

- Beyond 13 element:
  - Platform modification
  - Calibration system

Traveling Schedule to Hilo: (current)

- Johnson

Traveling Schedule to Hilo: (proposed)

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