Minutes for AMiBA Telecon 20071122, UTC 2:00

Regular Meeting Time: UTC 2:00 Every Thursday
USA Dial-in = 1-877-505-6247; passcode 8339148 #; mod_code 2917771 #
Outside USA Dial-in = 1 630 693 3224

- Platform crack:
  - Cotech had a proposal for repair and we raised a few concerns. They will address these concerns in the revised proposal. CMA has not replied with a repair plan yet.
  - Both Cotech and CMA agreed that platform crack can be fixed without removing the platform from the mount. We should get reply or quotations from them within 1 or 2 weeks.
  - Pointing and deformation may change if there exist cracks. Need to check obs. data.
  - For safety reason, all mount operation is suspended till further notice.
- Mount operation:
  - General:
    - Guillaume is working on the 'simhexapod' and will show new video displaying more info.
    - Vertex has just sent us a new version software which should solve the skypol-lock issue. Testing of the software is suspended.
  - Problem lists :Vertex issue
    - MT will discuss with Vertex about the incident – how did it happen? How to prevent it from happening again? Unfortunately there is no log about this event.
    - ACU latency problem seems to be resolved. Guillaume found one TCP parameter should be modified.
  - Problem lists: Our side
    - Michael has changed the polarization sequencing in CCD code. Also removed temporary code in a_boss related to skypol/hexpol issue assuming Stephan's new code works.
    - user-friendly input for tracking with defined hexpol. Not very pressing items.
- Testing on site:
  - Lab
    - Johnson will swap the OMT to see if the noise spikes seen with Rx8 can be removed next time he goes to Hilo.
    - Rx8 noise temp shows two spikes near 6GHz and 13GHz. Investigation continues.
  - Rx status
    - IF/LO on Ant2 was brought down to be swapped with #8. Temp control sensor need to be removed and reinstalled.
    - S/N increased from VGA 5V to 3V (adam) but didn't from 7V to 5V.
    - CH will compare IF power variation with and without temperature control
  - Correlator
    - 2R7R shows constant high counts, probably due to its RO IC since the demodulation doesn't work. Check later.
  - Broken 2nd mirror of Ant2
  - IF power:
    - LL baselines show IF noise dominate. RR baselines show IF noise is only marginally stronger than the backend noise (dcamp and RO). Suggest to increase RR IF power.
    - Investigation of dc-offset and 2R abnormal pattern continues.
    - Ant3IF2 TP shows zero counts and is not changing with input power under etd 2.
    - Jupiter fringe first taken after RR input power was raised from -12dBm to -8dBm. SN ratio will be analyzed.
  - DC offset:
    - After tuning the LO power during day time, only a few baselines show increased offset toward the end of night as expected. LO for two LO need fine-tuning later.
  - Pointing:
    - Two OT's are ready for pointing.
  - Observations:
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- General site issue:
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- 13 element:
  - Review schedule next week. Are there intermediate steps between 7x0.6m array and 13x1.2m array?
  - Rx
    - First three mixer module test results seems good. Proceed with the rest packaging.
    - We have got three bonded mixers and they look good. Eugene will measure the performance.
  - IF/LO
    - Single stage testing finished. LO contains 21GHz leakage at -23dBc. The leakage is well below

cutoff freq of waveguide (26.4GHz for WR-22).
        - SW has order two sets of the current IF/LO module. Longest lead time for components is 3 months.
    - RO and correlator
        - CT/Mark is will make housing for RO boards for better handling on site.
        - Shen-Hsin is working on revising the correlator board.
        - Next will work on the correlator electric box. Estimated time to finish in two months.
        - We will find a machine shop to manufacture the correlator frame using drawings from ARL. It should be done in two months.
    - 3rd section
        - 3rd section packaging is finished and being sent back to us.
    - 1.2m dish
        - Cotech has got 10 dishes finished. #1 and #2 sent back for re-coating. #9 and #10 in Taipei for beam pattern tests. The rest are in Cotech warehouse.
        - MT suggests shipping two dishes to Hilo for cross-talk measurement.
        - Dashun and Eugene are working on the near field measurement and may have result in this week.
        - Cross-talk between two dishes with baffles is expected to be -110dB (-80dB without baffle). We need higher gain in the measurement system to measure it.
    - Platform modification
        - MT will ask Philippe to start from the most conservative design of new platform. 13 elements, close-packed, 1.4m spacing, only one configuration. We consider other configurations later.
        - Science team's consensus is to keep 1.4m baselines. It has lower sensitivity for CMB observation but can be solved by longer integration. For 1.2m baselines on SZ observation, CMB primary contamination is too severe to be accepted.
        - Total weight of 1.2m 13-element is about 4.5tons. It is 800kg over the spec of hexapod but still within safety margin.
    - Calibration system
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Traveling Schedule to Hilo:

ASIAA Hawaii: http://pmo.asiaa.sinica.edu.tw/Hilo%20office/
AMiBA Website: http://amiba.asiaa.sinica.edu.tw/
Distribution List:
kylin@asiaa.sinica.edu.tw, ctli@asiaa.sinica.edu.tw, dkubo@sma.hawaii.edu, homin@asiaa.sinica.edu.tw, cchan@asiaa.sinica.edu.tw, shchang@asiaa.sinica.edu.tw, pmkoch@asiaa.sinica.edu.tw, pierre@asiaa.sinica.edu.tw, ydhuang@asiaa.sinica.edu.tw, chiuehth@phys.ntu.edu.tw, hyhuang@asiaa.sinica.edu.tw, nishioka@asiaa.sinica.edu.tw, jhpw@phys.ntu.edu.tw, keiichi@asiaa.sinica.edu.tw, blog.locutus@gmail.com, mkesteve@atnf.csiro.au, raffin@asiaa.sinica.edu.tw, hueiwang@ew.ee.ntu.edu.tw, pshaw@asiaa.sinica.edu.tw, yjhwang@asiaa.sinica.edu.tw, f87026@ew.ee.ntu.edu.tw, ho@cfa.harvard.edu, jbp@cmu.edu, swchang@asiaa.sinica.edu.tw, thc@ew.ee.ntu.edu.tw, chchang@asiaa.sinica.edu.tw, ken@asiaa.sinica.edu.tw, fabi@asiaa.sinica.edu.tw, poshiro@asiaa.sinica.edu.tw, jlim@asiaa.sinica.edu.tw, wwilson@atnf.CSIRO.AU, pablo@asiaa.sinica.edu.tw, r91222045@ntu.edu.tw, skyjadel@gmail.com, sandor@asiaa.sinica.edu.tw, wyhwang@phys.ntu.edu.tw
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