Minutes for AMiBA Telecon 20070920, 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

- Mount operation:
  - General:
    - Still no news from Vertex about the skypol-lock solution. Patrick has sent the reminder.
    - We will ask Vertex to modify the TCP parameter in ACU regarding the latency issue.
    - Jack encoder cables are still on the surface. Will try to route thru conduits next week.
  - Problem lists :Vertex issue (PK summary)
    - (1) ACU latency problem seems to be resolved. Guillaume is trying to simulate and reproduce the delay using ACU simulator in Taipei.
    - (2) Sky-pol lock problem was identified and Stephan will send the corresponding modification in another week
  - Problem lists: Our side (PK summary)
    - improvements on control software: change in polarization pointing to save time
    - user-friendly input for tracking with defined hexpol Not very pressing items, but we need to keep working on it.
- Testing on site:
  - Rx status
    - Ant2 and Ant6 warm up due to the He compressor incident reported last week. We are using new compressor (Austin) to cool down now. It has been fine for two days. Since the new compressor seemed unable to maintain stable temperature for four coldheads at the same time before, we will keep and eye on the them.
    - TCS power supply failed and has been replaced. Pablo found the ethernet socket for the "vertex network" on TCS is loose and easily detached from the card. It has been soldered back on-site. Could this be the cause of many network problems?
    - RR box "hair" problem?
  - Broken 2nd mirror of Ant2:
    - With the damaged mirror, we will lose efficiency and increase noise and also change the beam pattern. However, for on-axis observation, the problem is not very obvious.
  - IF power:
    - Derek and Peter replaced the IF/LO module for Ant4.
    - 1L AM-ing shows changing amplitude. However, the AM-ing can be minimized by tuning the LO power. The issue seems ok for now.
    - 2R abnormal pattern in the correlator outputs is still unresolved. Hilo team will try to investigate each section separately.
    - 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:
    - Derek and Peter tuned all the LO power for minimal AM-ing effect in IF during day time and closed shelter. Kyle will check the status of DC offset during the night of Hilo time.
  - Pointing:
    - Pointing taken simultaneously by both OTs is proposed.
    - Combined result of two OT's shows there is 0.3' to 0.5' discrepancy, probably due to local effect. Polarization pointing: being worked on.
  - Observations:
    - Next team to go to Hilo is Keiichi and Sandor (in late-Sep).
    - 1L- and 2R-related baselines show abnormal pattern. Being investigated.
  - RPFITS
    - Remaining: ACU-TCS delay prevents smooth operation of correlator thru a_boss.
- General site issue:
  -
- 13 element:
  - Rx
    - Prof. Chu's lab will give us three bonded mixer this week. If the test result is

good, we can proceed with the rest.

- IF/LO
  - Single stage tests will be carried out on the new IF/LO assembly soon.
  - Current IF/LO will be assigned to Ant #8, #9.
  - SW has order two sets of the current IF/LO module. Longest lead time for components is 3 months.
- RO and correlator
  - CT has finished testing the RO board in Taipei. We may still need another revision after the testing in Hilo. This part has roughly two months delay.
  - We will find machineshop to manufacture the correlator frame using drawings from ARL. It should be done in two months.
  - Peter is making progress on the 1st and 2nd section assembling.
- 3rd section
  - 3rd section packaging is finished and being sent back to us.
- 1.2m dish
  - Cotech has finished the 3rd and 4th dish, both within the weith limit. Ted is going to inspect them this afternoon. The new dishes will stay in the plant till we finish the testing of the first two dishes and ship them out.
  - The overall result for the far-field measurement looks good. For details, we still need one to two weeks for analysis.
  - The near-field setup in EE dept requires better stability. We will try to connect the dish holder and the test equipment together.
  - Far field measurement was completed with two patterns in different resolution. Preliminary analysis of low resolution one shows main lobe to 1st side lobe peak difference ≃17 dB < 60cm's ≃ 20dB, but no obvious ground-pickup or severe symmetry distortion, nor projection of arms for secondary. FWHP ≃ 11 arcmin.
  - Cross-talk measurement is planed, waiting for one more dish and modification of the source/emitter.
- Platform modification
  - Philippe has come up with a new design and Ted is going to help verify it. Cosmology team should make a decision whether 1.2m separation is necessary given that we will have 1.4m separation.
  - Offline discussions to provide a stronger case for a new platform.
  - 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
  - No update

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, kylin@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, y.jhwang@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, sky.jade1@gmail.com, sandor@asiaa.sinica.edu.tw, wyhwang@phys.ntu.edu.tw, sllin@asiaa.sinica.edu.tw
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