

## Minutes for AMiBA Engineering Telecom 20070503, UTC 2:00

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Regular Meeting Time: UTC 1:00 Every Thursday

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- Mount operation:
  - ACU timeout: solved by changing ports on switch2. Is it our network problem?
  - General:
    - Michael will visit Hilo the Jun/3 to Jun/8.
    - Kyle will put together a troubleshooting guide.
  - Problem lists :Vertex issue (PK summary)
    - (1) ACU response delay: can cause a 'stop' or non-smooth scan -> likely to be a Vertex problem, but we need to be sure about our network
    - (2) lost program track commands in ACU stack: will loose on-source flag, stop
    - (3) invalid backward transformation, kinematics error - can cause a 'stop'
    - (4) problems with az=0 crossing in dec scan - likely related to (1) and (2)
    - (5) recent pointing: some sequences of preset, startrack seem to fail if a pol drive is required. Not yet clear.
  - Problem lists: Our side (PK summary)
    - - correlate 1st OT -2nd OT data, especially polarization pointing: I am working on that
    - - improvements on control software: change in polarization pointing to save time, more
    - - 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 vacuum valve (Pfeiffer) was broken. Johnson will contact vendor for repair and investigate whether we should use a different one.
    - ASC compressor has different color code for electrical power. It was connected wrong and caused receiver to warm up. Fixed.
    - CH will send a report on the work of corr box temp controller.
    - Ant6 DRO cable was broken. Fixed after meeting.
  - IF power:
    - Jupiter fringe first taken after RR input power was raised from -12dBm to -8dBm. SN ratio will be analyzed.
  - DC offset:
    - DK suggests to swap Rx and phsw to correlator in order to see if DC offset is related to receivers. (planned)
  - Observations:
    - Radio alignment data taken after Ant1 was shimmed. Ant6 was unavailable due to LO cable problem. New data will be taken after fix.
    - Previous A2142 SZ map was affected by mis-connected IF cables. Estimated 15% of useful baselines were affected. Protty will generate a new corrected map. Clean map will be studied later.
  - RPFITS
    - New rpfits and new mbtp was tested at the same time, but new mbtp still has some problem. Next time we will take rpfits data and compare it to ascii data using old mbtp (not at the same time).
    - Protty forwarded Michael's new package of rpfits routines. It will be studied.
    - Discussing about whether we should assign one person from our team to take care of rpfits issues.
- General site issue:
  - Pablo will generate a shelter/site operation procedure document.
  - Shelter control (joystick) was ordered but not here yet. (not urgent)
  - Expect the emergency generator to arrive the end of May.
- 13 element:
  - Pacing items:
    - Mixers
    - New IF/LO

- Rx
  - Ming-Tang will contact Tod about the shipping schedule of LNA (was supposed to be in Hilo already)
  - Rx8 and Rx9 will be ready by end of May.
  - Short of Subharmonic mixers. We will get quotation from ITRI after some modification of the drawings. Expect 2-3 months.
  - Expecting 10+ LNA in a few weeks. They should come with room temperature data.
- IF/LO
  - IF parts are ok.
  - Expect to get miniature IF/LO at end of June. It will be tested in lab for about 1 month.
  - Dashun found a way to simplify the bracket design. It can be finished in this week.
  - DRO is ready. SW is working on thermal control.
- Electronic box
  - Joshua finished a new electronic box with new backboard. It will be used in the lab for new Rx testing.
- Compressor and He line
  - Compressor order is pending onsite testing result. (Pablo?)
  - CH ordered a pair of hard He line. Soft He line has shorter lead time and can be ordered later.
- RO and correlator
  - New RO PCB will come back in one month.
  - Mark is making new XY and TP modules. Derek has all the XY Marki correlator. These will be stored in Hilo for assembly.
- 3<sup>rd</sup> section
  - Order to Wisewave has been placed. Johnson is sending all materials to them.
- Correlator housing
  - Ted reported an estimated schedule of 5 months.
- 1.2m dish
  - Contract with Cotech was signed. First two dishes will deliver in two months. The rest will be delivered at 4 dishes every two months.
  - Should we measure beam pattern in Taipei? Stability of the setup is a concern. Paul Shaw suggested to explore possibility with CSIST facility. Near field test is also an option but still need a lot of work.

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Traveling Schedule to Hilo:

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