

## Minutes for AMiBA Engineering Telecom 20070517, UTC 2:00

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Regular Meeting Time: UTC 1:00 Every Thursday

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- Mount operation:
  - Vertex (Klaus) request more tcpdump data to troubleshoot the problems. We are to either run tcpdump on TCS and monitor only traffic with ACU or run tcpdump with an extra hub which usually leads to ACU-HPC stop. MT will contact Klaus to arrange a telecon.
  - HPC touch screen needs recalibration. PK has got the instruction.
  - ACU blue screen may be related to faulty flash card. PK proposes to buy a new one and copy the program to try.
  - General:
    - Michael will visit Hilo the Jun/3 to Jun/8. A list of tasks:
      - Rpfits to ascii.
      - Skypol lock problem in a\_boss but not in test\_va.
      - Tracking with constant Hexpol.
      - Sun avoidance?
    - 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
    - Cold heads of Ant2 and Ant6 were replaced without opening vacuum chamber. 4 rx are being cooled and the rest 3 rx will be cooled by tomorrow night.
  - IF power:
    - Jupiter fringe first taken after RR input power was raised from -12dBm to -8dBm. SN ratio will be analyzed.
  - DC offset:
    - Rx5 and Rx6 IF/phsw were swapped but the result is confusing. Derek calls meeting tomorrow to discuss further tests.
  - Observations:
    - Radio alignment data is confusing and the validity of data is questioned. Will take new data to verify.
    - Previous A2142 SZ map was affected by mis-connected IF cables. Estimated 15% of useful baselines were affected. Proty will generate a new corrected map. Clean map will be studied later.
  - RPFITS
    - CT took rpfits and mbtp log files at the time using new tkds and tkcor from Taipei. There seems to be no more glitches than the old software. We will use a\_boss to take more data.
    - Proty forwarded Michael's new package of rpfits routines. It will be studied.
- General site issue:
  - Site electrical work is done. Will move transformer out of control container tomorrow.
  - 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 are shipped with half-full electronic box. The correlator-side is not completed yet.
    - Got a quote on mixer block from ITRI. First two units are expected to arrive at end of June.
    - Johnson found a local vendor of vacuum valve. Concerns are whether it has good warrant because it is not a standard off-the-shelf product.
  - IF/LO
    - Manpower in Prof. Chu's lab is an issue. A review on the mini-IF/LO will be held in July to decide whether we should go ahead or not. In either case, two units should be done at end of Sep. Rx8 and Rx9 will use old design.
    - 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
    - Linearity of the new v2f component is very good. Most part will be ready by end of year.
    - 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
    - Now still waiting for actuators.
  - 1.2m dish
    - Cotech changed dimension of the hexagonal supporting plate at bottom of primary. Philippe will analyze to see if it has any impact. Schedule is unchanged.
    - First two dishes will deliver in early July. The rest will be delivered at 4 dishes every two months.
    - Need some clever idea to reinforce the platform once 1.2m dishes are installed. (related to platform deformation)
    - Total weight of 1.2m 13-element is about 4.5tons. It is 800kg over the spec of hexapod but still within safety margin.
    - Beam pattern:
      - Eugene will get in contact with CSIST for their capability and interest in near field measurement.
      - MT is contacting Prof. Chu's lab for near field tests.
      - The original far field measurement is still being considered.
  - Calibration system
    - Pierre has generated a schedule.

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Traveling Schedule to Hilo:

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