

## Minutes for AMiBA Engineering Telecom 20070712, UTC 2:00

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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

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- Mount operation:
  - General:
    - \* Waiting for encoder interface card to arrive (shipped). Pierre cautioned before testing the new interface card with old cables, check for any short circuit in the cables.
    - \* Homin suggested to test double-shielded cable on surface without going thru conduits.
    - \* Vertex has agreed to send someone to Hilo after the interface card and cables are installed. (end of July?)
  - 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) invalid backward transformation, kinematics error - can cause a 'stop'
  - 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
    - \* - 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
    - \* Continue with RR box 1<sup>st</sup> row troubleshoot. Card #3 and #4 in the data box were swapped. If the "hair" comes from the card, it should appear now in 3<sup>rd</sup> row. Need data to check this.
    - \* Johnson plans to replace one of the IF/LO bracket next week to check if it does improve accessibility.
  - Broken 2<sup>nd</sup> 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 found Ant3IF2 shows zero counts and is not changing with input power.
    - \* Jupiter fringe first taken after RR input power was raised from -12dBm to -8dBm. SN ratio will be analyzed.
  - DC offset:
    - \* No update.
  - Observations:
    - \* No observation till jack 3 problem resolved.
  - RPFITS
    - \* 4R6R data glitches in 7rr11 config now fixed. We can do a few more tests and start to store data in rpfits.
    - \* Remaining issue:
      - ACU-TCS delay prevents smooth operation of correlator thru a\_boss.
- General site issue:
  - Johnson has received the long He lines. He will need Kevin's help to deploy them in the Hilo lab.
  - New compressor shows higher temperature when driving 4 cold heads at the same time but is fine with 3.
  - Shelter control (joystick) was ordered but not here yet. (not urgent)
- 13 element:
  - Pacing items:
    - \* Mixers
    - \* New IF/LO
  - Rx
    - \* Haven't got LNA samples yet. MT will keep track on this item.
    - \* Rx8 and Rx9 are in Hilo
    - \* Ted has asked ITRI to speed up on the mixer block.
  - IF/LO
    - \* IF/LO new brackets have been tested and works. We can access cold head without

- having to move the receiver.
  - \* SW has order two sets of the current IF/LO module. Longest lead time for components is 3 months.
  - \* Miniature IF/LO review will be held next Wednesday(?)
  - \* DRO is ready. SW is working on thermal control.
- o Electronic box
  - \*
- o 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.
- o RO and correlator
  - \* The test of actuator in ARL went well.
  - \* Pierre is working on the schematics of the final 3<sup>rd</sup> version RO board. CT quoted the lead time of new FPGA is four weeks.
  - \* Peter will start integrate DC amp and corr module from mid June.
- o 3<sup>rd</sup> section
  - \* All components for the 3<sup>rd</sup> section have been sent to Wisewave last week.
- o 1.2m dish
  - \* First two dishes will deliver in early July. The rest will be delivered at 4 dishes every two months.
  - \* Philippe reported an idea of new carbon fiber interface ring. Its main advantage is light-weight and possibility to change design to better support outer rim of platform. We should consider what rx position will never be used.
  - \* 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.
- o Calibration system
  - \* No update

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Traveling Schedule to Hilo:

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ASIAA Hawaii: <http://pmo.asiaa.sinica.edu.tw/Hilo%20office/>

AMiBA Website: <http://amiba.asiaa.sinica.edu.tw/>

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