## Minutes for AMiBA Engineering Telecom 20070719, UTC 2:00

Regular Meeting Time: UTC 2:00 Every Thursday USA Dia1-in = 1-877-505-6247; passcode 8339148 #; mod\_code 2917771 # Outside USA Dia1-in = 1 630 693 3224

- Mount operation:
  - General:
    - Pablo installed new interface card last week and the mount can be operated again. Observation will start on Monday. Initial tests show much less frequent backward transformation error. Jack 3 still jumps and the spikes count is still similar to before the interface card problem. (couple thousands per night)
    - \* Homin found only a few jumps in log file. Patrick explains spikes were counted at a much higher sampling rate (5ms compared to ~700ms). So log file may miss out many jumps (spikes).
    - \* Hiroaki tested the analogue output of ACU and it works. Next we can try to log the analogue output to see if we can determine the origin of spikes.
    - \* MT we keep observing and make the new cable at the same time but delay installation till there is no doubt or till Stephan arrives to supervise (Ju1/31).
    - \* Patrick was asked to brief Stephan about all the problem he will be facing and should fix before his departure.
  - 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)
      - $\ast$   $\,$  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:

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• Rx status

## \* RR box "hair" problem?

- 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 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:
- \* No update.
- Observations:
  - \* No observation till jack 3 problem resolved.
- RPFITS
  - 4R6R data glitches in 7rr11 config now fixed. Tuning VGA under 7rr11 config is also done.
  - \* Remaining: ACU-TCS delay prevents smooth operation of correlator thru a\_boss.
- General site issue:

## • 13 element:

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- Pacing items:
  - \* Mixers
  - \* New IF/LO
- Rx
  - \* We now have 6(?) pieces of mixer blocks.
  - \* Rx8 and Rx9 in Hilo have LNA now and miss one IF/LO module.
- IF/LO
  - \* Mini-IF/LO review shows the project is still moving forward and promising. 1<sup>st</sup> prototype will be delivered in September.
  - \* SW has order two sets of the current IF/LO module. Longest lead time for components is 3 months.

- \* DRO is ready. SW is working on thermal control.
- Electronic box
- Compressor and He line
- R0 and correlator
  - \* The test of actuator in ARL went well.
  - \* Had a meeting with contractor of RO board. Progressing well.
  - \* Peter is making progress on the l<sup>st</sup> and 2<sup>nd</sup> section assembling.
- 3<sup>rd</sup> section
  - \*  $3^{rd}$  section packaging is finished and being sent back to us.
- 1.2m dish
  - First two dishes will be delivered to Taipei tomorrow. They come with detachable baffle (shield) and weigh 27kg and 28kg respectively. Our spec was 25kg. MT inclines to accept them but at a discounted price and demand spec should be strictly followed in future dishes (without detachable baffle).
  - \* 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.

• Platform modification

- <sup>\*</sup> 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.
- Calibration system
  - \* No update

Traveling Schedule to Hilo:

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

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

Distribution List:

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