

## Minutes for AMiBA Engineering Telecom 20070524, UTC 2:00

---

Regular Meeting Time: UTC 1:00 Every Thursday

USA Dial-in = 1-877-505-6247; passcode 8339148 #; mod\_code 2917771 #

Outside USA Dial-in = 1 630 693 3224

---

- Mount operation:
  - Telecon with Vertex. On-source flag disappearance accounts for ~90% of the problems. Vertex request tcpdump monitoring TCS-ACU comm (with switch 2). Vertex will add software filter to remove obvious glitches from encoder and also update ACU software so the encoder information can be read from analogue output. Suggests we swap the encoder cable to find the cause.
  - Touch screen panel can be calibrated with external keyboard or a laptop and windows task manager.
  - 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
    - Ant2 and Ant6 LO modules were swapped and now are back to normal.
  - 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:
    - Protty will answer some questions regarding the results of radio alignment offline.
    - CT has written a script to synchronize atdc to GPS on CCC reboot.
  - 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.
    - Protty forwarded Michael's new package of rpfits routines. It will be studied.
- General site issue:
  - Transformer has been moved outside of control container, and a cooling fan is rigged to the window to reduce day-time temperature in the container.
  - Installing generator at the end of May. It would not interrupt operation.
  - Pablo will generate a shelter/site operation procedure document.
  - Shelter control (joystick) was ordered but not here yet. (not urgent)
- 13 element:
  - Pacing items:

- Mixers
- New IF/LO
- Rx
  - Still no news about the LNA.
  - Rx8 and Rx9 are on the way to Hilo and should arrive this week.
  - Mixer block design is revised and will incur ~1 month delay.
  - Johnson found a local vendor of vacuum valve.
- IF/LO
  - Johnson will ask quote and order two sets of current IF/LO and also ask about quotation for 8 modules in case mini-IF/LO will not be used.
  - A decision should be made in the review of mini-IF/LO development in mid-July.
  - 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
  - The new RO board is being tested. Next iteration layout is scheduled to be sent out by end of May and it would take two weeks to have the new board.
  - 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
  - The actuators should have arrived. Ted will check the status.
- 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.

---

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](mailto:kylin@asiaa.sinica.edu.tw), [ctli@asiaa.sinica.edu.tw](mailto:ctli@asiaa.sinica.edu.tw), [dkubo@sma.hawaii.edu](mailto:dkubo@sma.hawaii.edu),  
[homin@asiaa.sinica.edu.tw](mailto:homin@asiaa.sinica.edu.tw), [cchan@asiaa.sinica.edu.tw](mailto:cchan@asiaa.sinica.edu.tw), [shchang@asiaa.sinica.edu.tw](mailto:shchang@asiaa.sinica.edu.tw),  
[pmkoch@asiaa.sinica.edu.tw](mailto:pmkoch@asiaa.sinica.edu.tw), [pierre@asiaa.sinica.edu.tw](mailto:pierre@asiaa.sinica.edu.tw), [yduang@asiaa.sinica.edu.tw](mailto:yduang@asiaa.sinica.edu.tw),  
[chiuehth@phys.ntu.edu.tw](mailto:chiuehth@phys.ntu.edu.tw), [kyl@asiaa.sinica.edu.tw](mailto:kyl@asiaa.sinica.edu.tw), [nishioka@asiaa.sinica.edu.tw](mailto:nishioka@asiaa.sinica.edu.tw),  
[jhpw@phys.ntu.edu.tw](mailto:jhpw@phys.ntu.edu.tw), [keiichi@asiaa.sinica.edu.tw](mailto:keiichi@asiaa.sinica.edu.tw), [r91222042@ntu.edu.tw](mailto:r91222042@ntu.edu.tw), [mkesteve@atnf.csiro.au](mailto:mkesteve@atnf.csiro.au),  
[raffin@asiaa.sinica.edu.tw](mailto:raffin@asiaa.sinica.edu.tw), [hueiwang@ew.ee.ntu.edu.tw](mailto:hueiwang@ew.ee.ntu.edu.tw), [pshaw@asiaa.sinica.edu.tw](mailto:pshaw@asiaa.sinica.edu.tw),  
[yjhwang@asiaa.sinica.edu.tw](mailto:yjhwang@asiaa.sinica.edu.tw), [f87026@ew.ee.ntu.edu.tw](mailto:f87026@ew.ee.ntu.edu.tw), [ho@cfa.harvard.edu](mailto:ho@cfa.harvard.edu), [jbp@cmu.edu](mailto:jbp@cmu.edu),  
[swchang@asiaa.sinica.edu.tw](mailto:swchang@asiaa.sinica.edu.tw), [thc@ew.ee.ntu.edu.tw](mailto:thc@ew.ee.ntu.edu.tw), [chchang@asiaa.sinica.edu.tw](mailto:chchang@asiaa.sinica.edu.tw),  
[ken@asiaa.sinica.edu.tw](mailto:ken@asiaa.sinica.edu.tw), [fabi@asiaa.sinica.edu.tw](mailto:fabi@asiaa.sinica.edu.tw), [poshiro@asiaa.sinica.edu.tw](mailto:poshiro@asiaa.sinica.edu.tw),

[jlim@asiaa.sinica.edu.tw](mailto:jlim@asiaa.sinica.edu.tw), [wwilson@atnf.CSIRO.AU](mailto:wwilson@atnf.CSIRO.AU), [pablo@asiaa.sinica.edu.tw](mailto:pablo@asiaa.sinica.edu.tw)  
Please contact MTC for managing this mailing list