

Minutes for AMiBA Engineering Telecom 20060608

Meeting Time: UTC 1:00, 20060608, (Taipei 9:00am, 20060608) (HST: 3:00pm, 20060607)

Regular Meeting Time: UTC 1:00 Every Thursday

Participants:

Australia:

Hilo:

MLO:

Taiwan:

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- **Upcoming Milestone**
 - **June 2, 2006: Sun imaging from AMiBA, without dishes, at least 5 receivers.**
 - **July 31 (+- 3 days): AMiBA-7 Dedication.**
- AMiBA current status:
 - Mark Birkinshaw and Katy Lancaster visited. Preliminary comments of the first sight:
 - Receiver mounting. Visually OK. Concerned when larger dishes were mounted in the near future.
 - Vacuum window mounting may need improvement to prevent standing wave between window and feed horn.
 - Might consider active support for receiver in the near future. Experts in optical observatories might provide feasible ideas.
 - More to come at the end of the week.
 - Patrick:
 - Performed testes on ground pick up without and with dishes.
 - Intermittent disconnection on correlator pc; in every couple of hours or so. Fixed after gotten CT's help over phone. Problem seemed gone now.
 - TP and correlated signal could not be monitored simultaneously. CT: This feature was coming soon.
 - 1.2 M dish fabrication:
 - (0607) Ong sent in his measured data on new mold, and asked for analysis from Patrick. New dish was under fabrication, should be finished in a week.
 - No comment from Ong on the new mold. Patrick (presumably) would generate the data when he got time for it. May need some one's help.
 - MTC asked Ong for an updated schedule. Waiting for Ong's report.
 - (0607) Philippe: 1.2 m prototype weighted more than 35 kg, 10 kg in dish and 25 kg in baffle. Could use thinner baffle and reduce weight by 10 kg. Needed to check pointing in this case, (concern with the secondary). Reminded people that the baffle was needed for secondary support.
 - Long term noise data (3 days)
 - (0607) Data generated by Nishioka
 - The 2nd platform survey
 - (0607) Ideas were convergent. Kyle kept on discussing a execution plan.
 - (0511) Kyle proposed another run of photogrammetry.
- Major Issues:
 - (20060607) Dish baffle: ground pickup? Reflective or not?
 - (20060517) Large temperature variation in correlator. Major problem. Resolution to be investigated.
 - (20060507) DRO & receiver overnight stability. Got measurement. DRO over night seemed OK in both phase and amplitude. MT urged everyone to look into what were the realistic numbers we were after. Would come back to this issue again.
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- Intermittent Issues:

- (20060517) Too much activity and work load in correlator computer? Resolved with extra computer in the cone area? Monitoring computer under the hexapod, permanent or not?
- (20060504) ACU occasional crashes. Cause unknown. Reboot the machine would resolve the situation.
- System Testing:
 - (0525) C.T.: the last interface board (data read out) would corrupt correlation or total power data. Correlator could only take data from 6 rx's. Need some time for debugging in Taipei.
 - (0525) Kyle: Swap the tp detector didn't help. The problem might come from the IF amplifier? Took it down to Hilo, haven't got a chance to debug it yet. IF power from Rx5 IF2 is about 20 dB lower. The problem might be from the LNA. Need update
 - Path length alignment.
 - (0531) Kyle: still missed self-correlated data for three receivers. Patrick and Co. were helping in getting the data on site. MTC urged Kyle to have the order ready for compensated cable lengths in the coming week.
 - (0504) Testing Schedule (Kyle)
 - Install compensation cable and measure Ant7 delay with translation stage. (Johnson?) – *Late May or early June, one week. On going.....*
 - After compensation, measure fringe of each baseline as reference. (Johnson, Patrick, Hiroaki) – *June, two weeks. Need cables*
 - IF, LO monitoring. And phsw power difference, DC offset, noise property investigation. (CT) – *May, three weeks? Update?*
 - 2nd OT installation and verification. (Patrick, Ken) – *On going*
 - Remove 1st OT and install 60cm dishes. Dish/Rx alignment with TP from sun. (??) – *Late June or early July? Two weeks.*
 - Planets! (??) – *July.*
- Hexapod testing:
 - (0607) No update from Vertex on the backward transformation failure.
 - (0607) OT bracket had arrived at Hilo. Second OT would be mounted after the present pointing run finished (interpolation table test)
 - (0531) Patrick: the interpolation table worked to improve the overall hexapod pointing somehow. However, the result was not conclusive. More testing was underway in the next few days.
 - (0531) Hexapod Backward Transformation Failure. (0531) Patrick: did tests suggested by Vertex. Tested results sent back to Vertex for resolution
- Site & Hilo Lab:
 - (Log0607) Homin: resistance measurement on platform.
 - electrical power panels(Panel thereafter) to earth spot near control container(spot thereafter): 0.27 ohm
 - Earth spot to cone: 1.5 ohm
 - Earth of power outlet on cone to the cone. The power of those outlet come from the panel, take long way routing thru the shelter, up to the cone: 6 ohm
 - Chassis of ant1 to cone: 68 ohm
 - Chassis of ant4 to cone: 39.4 ohm
 - Employ the Fluke 85 III multimeter with a wire of 0.4 ohms.
 - (Log0530) container door damaged. Please kept door closed before fixed.
 - (0607) Compressor fan needed repaired:
 - (0526) Vendor was working on an enclosure. Need a schedule.
 - (0504) emergency power generator (Pierre)
 - (0504) Firewall (John & Homin), struggling
 - Few more tasks or issues need to be discussed or taken care of:
 - SHELTER NEMA 4 ENCLOSURE. Mostly done. Waiting for the flood light bulbs.
 - CHANGE 50 A CIRCUIT BREAKERS FOR THE COMPRESSORS.
 - GROUNDING: Next time.
 - New ethernet switch installed. Next time.
 - Tiltmeter installed. Next time.
 - Transformer to be moved out of control room
 - Automate the weather station

- A Site PA system (Over internet?)
- Lighting protection. Enlist professional help.
- A shelter operation procedure. Need fee back from members
- Fabric replacement (Long term, but important.)
- Ground shield, feasibility study, may contract to Bill and ARL
- Supporting cone insulation?
- Platform covers for drop-thru holes (CFRP, strong structure)?
- A stair way up to the platform – might have to order an off-the-shelf model and modify it?
- Crane?
- Calibration:
- RX/IF/LO:
 - (Log0607) 60 Hz ground loop appeared in IF/LO output?
 - (0531) Johnson: Rx-7 on platform and tested.
- Correlator:
- Software update:
- Dish:
- Some lingering ideas (Need further sharpened...)
 - (0511) Proty addressed data storage on site.
- Upcoming events:
 - AMiBA-13 Technical Review: June 28 - 30, 2006, ASIAA (Taipei)

Traveling Schedule to Hilo

Chia-Hao Chang	May 2 - June 16 (Hilo)
Ted Huang	May 11 - June 12 (June 13 – 24 to NRAO VLA)
Johnson Han	May 11 - June 13
Ken Chen	May 16 -
Patrick Koch	May 17 - June 12 (June 13 – 24 to NRAO VLA)
Hiroaki Nishioka	May 17 - June 12
Locutus Huang	June 6 – July 5
Mark Birkinshaw:	June 5 -11
Katy Lancaster:	June 6 -11
Keiichi Umetsu	June 9 – July 3

ASIAA Hawaii: <http://pmo.asiaa.sinica.edu.tw/Hilo%20office/>
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Please contact MTC for managing this mailing list