## Minutes for AMiBA Engineering Telecom 20070215, UTC 1:00

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

- Happy New Year.
- Here is a list of topic that I circulate two weeks ago. Let's review this list again, and where we are.
- System-wide, IF level adjustment to increase system efficiency.
  - IF level adjustment. Derek, and Peter have been working on this topic. Preliminary on ant-7, continue toward ant-1.
  - A follow-up topic: Need remote adjusting capability on IF.
  - Further hardware issues:
    - Characterize DC offset, system stability & reliability.
    - Antenna-stiffness verification.
    - Tidy up network issue in control room.
    - Clean up supporting cone area.
    - De-commissioning the prototype.
  - Need more technical manpower to pair with observers.
  - Bottom line: We need a critical number of personnel on site to keep the instrument in its top shape. Please schedule your trip after the Chinese New year.
- Hexapod operation issues:
  - Meeting with Vertex on 2/25/07.
  - Patrick and Ken continue testing the telescope on those issues reported by Proty.
    - Scanning instability has been resolved. It turns out to be an interpolation issue related to program track position.
    - Instability in Jack-3 has be reduced to negligible level, although cause is still unknown.
      Vertex hints that it may be an read-out issue on the jack encorder. Working with Vertex to solve this one.
    - Hexapod "stop" unintentionally. This issue is more serious for it affect our observation stability and quality. We are exploring many fronts on this issue.
      - Vertex is looking into communication interruption between ACU and HPC.
      - Homin suggests to check internet connection cable.
    - More exotically, some unintentionally interference between correlator and hexapod. Need further test to confirm this one.
- Antenna co-alignment:
  - Proty's alignment methodology seems to work to some degree, but not clear how far the method carries us. In particular, need further communication with Proty to clarify few more points. Mainly, need a clear demonstration on the independence between the relative antenna alignments and the relative path difference.-- Another serious implication from Proty's analysis is the co-movement of all the receiver, or the antenna, on the platform, likely due to gravity, or some other causes. This seems to be in conflict with Ted's photogrammetry result, which shows no co-movement due to gravity. Further analysis, and experiment are needed. Important topic!
  - Further off-line discussion among various people: Proty, Ted, and others.
- Calibration:
  - For the upcoming observation, we need a list of AMiBA calibration sources, which we do not have. Should set as the top priority to obtain this list. Should start observation runs on the potential calibration targets.Do we need a calibration system? How many 3-mm targets out there?-- CT mentions that we need a tunable CW source for pass-band calibration. The scale for such system should be smaller than an overall cal system that we are planning on. Need further discussion.
  - Need help from Proty, Keiichi, Kyle, and many others.

Traveling Schedule to Hilo:

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

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

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