June 4, 2007 LGS Facilty IPT Meeting Minutes

A. Bouchez

Caltech: Angione, Bouchez, Cromer, Guiwits, Petrie, Roberts
Palomar: Henning, Sweet, Thicksten.

1. Laser safety

- How safe is the stimulus laser? We determined ~9 mo ago that setting power supply to 3.5V assured that laser was below 5mW.
- Walk-through of dome to discuss laser safety issues is planned for this Thursday, for future changes to SOP.
- We will postpone daytime BTO tests until after safety system procedures resolution.
- Bob distributed Coude entry incident report to Caltech safety office and filed at Palomar.
- Moon in ASCAM kept us from observing several targets. In some cases, bad column caused problems. 3 targets impacted. Could widen the mask? This would reduce sensitivity of ASCAM. JC to look into software solution.

Action items (pending and new):

- AB to verify that FAA and Space Command don't require a manual log.
- AB to make a form for Jennifer to use.
- John C. will make changes to SOP. Should include BTO procedures. JA has most recent version, will update & send out.
- JC: SOP should include procedures for all activities in Coude lab when laser is on. Label goggle shelves or goggles.
- Bob will talk with Fred Battle in next few weeks to plan IR camera demo at TMO or Palomar. Tentatively set up for end of this month.

2. BTO and LLT

BTO problems experienced on final night of May observing run:

Occasionally BTO does not lock up on first try. Reset alarm and try again worked each time. BTO averages Qcell values over low speed rate (0.1s), including shutter closed time. Low-speed motors don't move, and Q3 interlock shutters beam. Made mod to look only at instantaneous data rather than average. Not yet tested.

On last night of run, BTO locked on several targets with no trouble. Then BTO lock on target at 63.3deg failed, both with 589nm and stimulus. 60deg worked. 61.5 worked. Set to 63.2deg counts went to zero. Several targets later, same problem occurred in far south (0 dec). Saw glint off cable wrap near top of trolley and on boresight mirror enclosure. Final target at -7 dec, did acquire with stimulus (after realignment).

LLT performance during LGS run:

- Boresighting was extremely repeatable. LGS came in within 5" of HOWFS field stop on first night.
- Used Pulnix to successfully optimize image quality of LLT (from ~3.2" to ~2.5" FWHM).
- Took video data with Pulmix. MT analyzed data and will send out results (unofficial word is that the tip/tilt seen was consistent with the seeing)
- Aligned finder scope, but this may be irrelevant since we later collimated the LLT and did not repeat the finder scope alignment.

Action items:

- AB and JA will go up to Palomar sometime later in June to test BTO.
- SG and JA will write up a backup operating mode and spares plan for BTO and LGS computers.
- AB still waiting on shop for the new LLT primary cover.

3. Laser automations

- Ask Renu whether we can get rid of laptop.
- Laser power display was successful. May be non-linear, but we will simply plan on recalibrating when laser power changes substantially.
- Logging of laser power & temps not successful. Steve working on it this week, does not need laser on.
- Steve wrote up instructions on LGS computer operation. Steve to post on TWiki.

4. Laser diagnostics

SK working on cable changes to improve setup efficiency.

- What is the status of the Coude enclosure?
- Anna to replace velcro with captive screws and have enclosures painted.

5. Further notes on science run

While observing and emission nebula, dithers with LOWFS failed. 5" dithers failed, 2" manual dithers worked ok. May need to change procedure and implement open-loop dithers. Jenny will bring this up in this week's software meeting.

Ed planning to come up to Palomar on June 12, for ~10 days.

Meeting adjourned at 9:50am.