

January 9, 2006 LGS Facility IPT Meeting Notes

A. Bouchez 1/9/07

Caltech: Angione, Bouchez, Guiwits, Petrie, Pickles, Roberts
Palomar: Henning, Thicksten, Tripathi

1. Laser

Laser performance unstable during the past run. Laser would start out at 5.5W, drift down to 4.5 W over 10s of minutes. The problem seemed to be in the LiIO3 in 1.32 laser. Unsure what was changing in crystal, but corrected by shifting beam on crystal.

Carrier frequency of AOM drivers had been switched to 0. AOMs were not modulating phase of lasers.

- Need to order crystals first thing. Need Ed's input. AB will call Ed today. Could try anti-grey-tracking KTP.
- Ed coming out to replace gain modules. Postponed trip to have time to finish 2nd module.
- Temp. control.
 - Need to purchase cleaner insulation.
 - IR-blocking plexiglass will cost \$400/sq. foot! RT to look into cheaper options.
- Cleanroom enclosure quote for HEPA filter on top, aluminum doors, walls ... 16-20k\$. AB to determine budget constraints.
- Modify door sign interlock circuitry to allow water to run without red warning. Need Ed's approval.
- Renu would like ladders changed. Will hold off until decision is made on cleanroom enclosure.
- We need to order new goggles. Quote sent to JC. Will order ASAP.
- Water leaks on bench need to be fixed. Work schedule this work on the 19th, with Steve Einer.
- Chris working on electronics this week? JR will ask what's up.

2. BTO

BTO worked well during run, with exception of M3 problems most likely due to temperature of motor controller on the top ring.

- Will leave BTO computer on telescope for the moment, until solid-state disk is tested at JPL. Will swap in solid state disk after February run.
- Newport reports that environmental range is 0-40C. SG will check whether an extended temp version is available.
- Send ESP300 controller to JPL when it's removed from the top ring. Will replace with spare for next run.
- Still have problems with M1 running away when beam is blocked. Will require disabling servo loop during a slew. Set=15"/s. Slew=1deg/s. JA.
- Need non-Mac GUI. JA.
- Need documentation on startup/operations/shutdown. JA.

3. LGS computer

Everything worked during run which we tried. Did not try setting temperature (does work on test sensor). Demonstrated a FUI (Fake GUI) to display temperatures.

For next run, will try to have 6 temp display, ability to set set and request temps. Will also record temperatures to AODR.

To do:

- Develop ADC and DAC drivers compatible with Red Hat 4. SG.
- Test parallel port driver at JPL (will need to be re-tested at Palomar prior to run). SG/JA.
- Set up temperature recording to AODR. SG/TT.
- Develop display of photodiode output. SG.

AB to check whether PC is available at Caltech.

4. LLT

LLT appeared to work well during the run. Boresighting was off by 3 arcmin. Congrats to Anna and Greg for a vast improvement in the cabling.

- Need to tether tools to LLT with lanyards. HP/RPT.
- A few changes are required to handling cart. HP.
- Combine flexure test data. AB & HP.

5. Safety systems.

Dome rotation triggers in ASCAM appear to have been successfully fixed. We did have several spurious triggers by the ASCAM, apparently of cosmic rays in the exclusion zone. No action items.

Meeting adjourned at 9:55.