

May 7, 2006 LGS Facility IPT Meeting Minutes

A. Bouchez

Caltech: Bouchez, Cromer, Moore, Petrie, Pickles, Roberts, Shelton
Palomar: Henning, Kibblewhite, Sweet, Thicksten, Tripathi

1. Laser

Measured power of 1.06 μ m diodes: Set 1 gave 36, 34, 30 amp turn-ON time, with average 218W power @ 1KHz. Set 4 gave 32, 33, 28 amp turn-ON times with average 231W @ 1KHz. Very similar to delivery specs, indicating little degradation with time. Still need to measure 1.32 μ m diodes sometime to determine reference values.

Ed, Renu, and Chris think they've found polarization/power problem with 1.06 μ m laser. It appears to be a spurious mode between the HR and gain module (perhaps corner-cube-type reflection in the YAG rod). Solution will include improving alignment procedure and perhaps installing apertures. Got power up to 13W without the spurious mode yesterday.

Ed is working on a CfAO proposal / return estimate paper. Calculations indicate that we should be getting far higher return than we do, but calculations are consistent with literature. Should be getting V=8 stars with 1-2 W. Ed requesting funding from CfAO to optimize spectral content of the laser.

Renu and Ed expect to have time to change out the SFG LBO crystals if there are no surprises. Ed leaves on Thu. morning. Antonin to go up to Palomar on Wed. to meet with Ed & Renu.

2. Laser safety

John C. is looking into "radar-only" incident during last run. ASCAM display software slow-down during clouds should not be affecting aircraft detection.

Jeff suggested IR camera may be in wrong gain mode. Various strange behaviors observed during run: Unusable last night and insensitive the other nights. John and Antonin will decide what to do before Wed.

Bob will talk with Fred Battle in next few weeks to plan IR camera demo at TMO or Palomar.

3. LGS diagnostics

Anna presented enclosure drawings. Coude enclosure drawings are completed and in to the shop. Will be anodized black in time for the May run, and includes captive bolts instead of velcro. Prime focus enclosure has not yet been updated - may or may not be done for this run.

AB to connect V plate to Diagnostics PC this week while at Palomar.

Michael Martin, SURF student from Claremont College, will be at Palomar for first 2-3 days of the May run.

4. LLT

The ~5 arcmin. reboresighting of the LLT necessary during the last run was probably due to the change in tilt of secondary by Hal during setup on the first night. We still have not tested removing and reinstalling LLT with no optical changes.

5. Laser automations

Steve would like to test Linux temperature control this week, so would like Renu to use it instead of PC. However, Ed requested detailed instructions on starting and stopping this software.

Dan should be able to get to software consolidation on the "diagnostics PC" this week. We will retain the laptop through the next run however.

Meeting adjourned at 9:45.