

February 5, 2006 LGS Facility IPT Meeting Minutes

A. Bouchez 2/5/07

Caltech: Angione, Bouchez, Cromer, Guiwits, Moore, Roberts, Shelton
Palomar: Tripathi

1. Laser head upgrade

- Spent most of the time in the machine stop.
- Got 1.06 to 12.3 W at 400 Hz. When increase current (previously 125 A) to 110A.
- One of the 1.06 mirrors got bumped during alignment of 1.32.
- 1.32 laser: 8W at 110A, 350 Hz.
- Diode laser alignments completed, but not optimal.
- Coolant lines with new laser head design not optimal.

2. Status and plans for all subsystems

2.1. Laser

- Optimize both lasers, particularly 1.06.
- Equilibrate cavity lengths. Back fold mirrors have shifted.
 - Could use AOM performance as feedback.
- Protect water lines. Renu order right angle fittings today.
- Work with Chris this Thu, possibly more work next week.

Punch list

- Install new data logging card in servo control box. (CS - next week).
- Reduce frequency dither step size. (RT/CS - next week)
- Replace 1.32 um laser PZT etalon mount. Order replacement knob (CS).
- Adjust power display gain controls (RT/CS - next week).
- Write up etalon calibration results (RT)

2.2. BTO

Punch list

- Clean M3 (BTO Boresight mirror). (RT/RB)
- Clean all other optics. (AB)
- Replace M3 controller and install heating device. (JH)
- Restore BTO FSM resolution to original values (JH?)
- Fix M1 run-away when light is blocked (JA)
- Update operating manual (JA) AB to send john setup writeup.
- Recalibrate BTO motor positions (JA/AB, 2/22 - AB to check with Joe and Bob.)
- Improved BTO GUI... Handing off to Steve.
- Testing of solid-state disk. Disk works fine, AD driver needs work. Writing better driver for LGS computer will address this. (SG)

2.3. LGS Computer

Punch list

- Implement temp on/off control of individual channels (SG).
- Write up data paths and operating modes. (AB)
- Working on getting photodiode communications. Steve to send status on Fri.
- Photodiode FUI.
- Logging temps. and photodiode to AODR.
- Implement outer frequency servo loop.
- Do we need remote reboot capability? No.

If LGS computer is ready to go up to Palomar on 2/22, JA could install. Order shelving AB.

2.4. Laser diagnostics

Punch list (AM)

- Design Coude beam block & filter mechanisms
- Design 2" pulnix mirror translation mount.
- More work on labview display software.
- Install new filters (610/630 and 589 NB) on Coude bench.
- Coordinate Feb 22-24 testing period with Renu.

2.5. Safety systems

Punch list

- Modify Coude room door sign circuit to allow chillers to run on "green". (JH?)
- Implement fix for client DS9 crashes (JC).
- New goggles have arrived. Small ones don't fit. (RT).