September 12, 2006 Palomar LGS IPT Meeting Notes

A. Bouchez, 9/12/06

Caltech: Bouchez, Cromer, Dekany, Guiwitz, Moore, Petrie, Roberts, Shelton, Troy, Velur
Palomar: Henning, Thicksten.

1. Announcements

- Celebration tonight at Lucky Baldwin's, starting at 5:30pm.
- Palomar science meeting is this Thursday, in the Arms lecture hall: Chris, Mitch, and Antonin will present NGS and LGS status.
- Unofficial news: JPL has fully funded Palomar AO in FY07.

2. Review of September LGS run

- LGS spot size very good, but inconsistent with seeing. On first night, laser spot on primary was somewhat triangular, but about as small as we've seen. Size on primary increased from night to night, and became more elongated.
- Laser was stable on final night. Wavelength tuning still not well understood. Need better feedback & understanding of etalon angle tuning.
- During tuning of 1.06 laser, spot size appeared to vary (minimum not at peak power).
- Return per watt appeared to increase on last night, need to confirm. Proper alignment (for which there was not time) could increase this substantially.
- BTO operated without 660nm laser on last two nights. Need to decide on operating procedure for.
- LOWFS data still being analyzed. Acquisition procedure needs to be rethought, perhaps need new acquisitions camera filtering or optics.
- Laser was sent into new stops several times during run. Need to check for damage.
- LLT boresighting needs to be looked at (verify how far off boresight we can operate). Flexure is probably OK.
- ASCAM live last two nights. IRCAM jumpered after false positives (crash)

3. Priorities for remainder of 06B

- AO optomechanics
  - Understanding LOWFS performance, correcting if needed.
  - LOWFS and acquisition camera Raleigh filtering.
  - MGSU removal: RD will contact Ellerbroek
  - LOWFS focus control.
  - Chopper removal or improvements.
  - Laser stimulus.
- AO Software
  - LGS user interface
  - database-IDL interface
  - BTO data in database
  - BTO software improvements (CVS, cleanup, AO operator interface)
- Laser diagnostics & automation
  - Diagnostics benches for PF & Coude
  - LGS computer development.
- Laser - will discuss in telecon at 1pm today.
- Safety systems
  - IRCAM software.
  - FAA approval.

4. Laser diagnostics benches

AM presented requirements for Coude diagnostics. Much discussion about photodiode operation, Na cell, and relation to 660nm stimulus beam. Decided that it would be advantageous to have Na cell on laser bench - will dicuss this with Ed.

Meeting adjourned at 10:15am.