Caltech Optical Observatories
Palomar Adaptive Optics

June 20, 2006 Palomar LGS IPT Meeting Minutes

http://www.oir.caltech.edu/twiki_oir/bin/view.cgi/Palomar/PalmLGS/Ipt
A. Bouchez, 6/20/06

Caltech: Bouchez, Cromer, Moore, Shelton, Troy, Velur
Palomar: Doyle, Henning.
Chicago: Kibblewhite

1. Announcements

- Congratulations on a very successful June engineering run!

Figure 1: *Left:* Photo by Scott Kardel of laser projecting off zenith on June 14.
Right: 10s PHARO K band images of first light star (V=10.0), taken June 13.

- We decided to postpone a press release until after the July run (at the earliest).
- Anna going to Palomar tomorrow for SWIFT interface work. Will need AO on spit, with optics up.
- Next meeting will be 9-10am, *Wednesday* 5 July.

2. New technical issues to address

- AO acquisition camera sensitivity: Video noise is possibly caused by ground difference between camera and AO. Could add an amplifier to video signal, or could convert to fiber optics for path to data room.
- We need a more convenient method of aligning red and yellow lasers in the Coude lab.
- Raleigh scatter in the LOWFS: Need Na rejection filter, probably thin to minimize focus shift. Implement for September run.
- Aircraft avoidance camera software: IRCAM monitor would not connect to video framegrabber. Neither display process could connect to the TCP ports on remote computers (possibly a network/configuration problem).
- Dial gauges perhaps needed on 1.06 laser. Depends on final etalon control strategy.
- Stability of 1.06 laser a real problem. Replacing gain module is a high priority.
- AO video doesn't come up correctly after reboot. Need to investigate.
- HOWFS background sometimes came out bad. Need to investigate.
- Ability to adjust dichroic in x-y needs to be improved. Strategy depends on future of MGSU.

3. AO Tasks before July run

- Installation and testing of HOWFS chopper. Will try to have it running on external controls only for July run (JR).
- Complete changes to real-time code for denominator-free centroiding (TT).
- LOWFP problems. 2 possible solutions to be evaluated (TT).
- Install 18" LLT mirror (HP/AB).
- Aircraft avoidance camera software fixes (JC).

- Paint Coude block inner surface black (Palomar).
- Design and installation of optics in Coude to assist laser coalignment (CS).
- Fix Acquisition camera video noise problem (CS).
- User interface IDL software improvements (AB/MT).

4. Laser tasks before July run

Ed does not think he can build a new gain module in time for the July run. He and Viswa will therefore focus on the following priorities:

1. Agree implement new etalon control. A multitude of options were discussed. We will choose a strategy in a telecon at 3pm PDT 6/21/06 (tomorrow).
2. Improved diagnostics.
3. Build new 1.06 μm gain module
4. Prepare downstairs lab for testing new gain modules.

meeting adjourned at 10:05am.