January 16, 2006 LGS Facilty IPT Meeting Notes

A. Bouchez 1/16/07

Caltech: Angione, Bouchez, Cromer, Roberts, Shelton
Palomar: Henning, Thicksten, Tripathi
Chicago: Kibblewhite

1. Laser

Ed coming arriving at Palomar on Thursday. Before arrival, the following needs to be done:

- Remove dusty old insulation.
- Second laser nearly built.

AB to verify monastery bookings.

Renu has received quotes for anti-grey tracking KTP ($250), and LIO3 at 1.06 ($359) and 1.32 ($359-471). According to Ed, current KTP is supposedly anti-grey tracking, but evidence appears to contradict this. Ed recommends trying LIO3 at both wavelengths. Renu will purchase two LIO3 crystals.

Renu will be working on etalon characterization this week.

2. Laser automation

Some issues with current LGS computer requirements came up during discussions of laser automation last week.

- Where does digitization of photodiode signals occur? Current servo control box digitizes signals already. This reduces noise which would be incurred by extending analogue lines off of the laser bench.
- Should we rebuild servo control hardware? No reason to do this at this point.

In terms of tasks for LGS computer, using the digitized signals requires writing a driver to communicate with AD brick over USB. If driver proves to be a problem, we could consider changing logging card to different model. Chris will forward IOTech board info to John and Steve, so they can evaluate level of difficulty of writing a USB driver. Note that this does not eliminate the need for an ADC in the LGS computer, which will be required to read the amplified photodiodes on the laser diagnostics benches.

LGS computer priorities:

1. USB interface to servo control box (laser bench photodiodes).
2. AcroMag ADC driver (diagnostics bench photodiodes).
3. Logging of the above to AO database.

3. BTO computer

We requested that Palomar staff (J. Henning) add a heater or thermal blanket to the BTO M3 Newport motor controller at the end of the telescope engineering run (sometime around Feb. 12). Could be run on the same network power supply as the motor controller, insuring that it is turned off during all observing but LGS-AO. J. Henning agreed to investigate a thermostatic heater and present options in a few weeks.

4. Safety systems

John C. would like to get remove clients working again, in part to provide this functionality for Mauna Kea. AB objected, since we don't appear to need it at Palomar. Will discuss at a further date.

Caltech Optical Observatories
Palomar Adaptive Optics

Coude room warning light status still an issue. We would like to change circuits such that chillers do no affect light status. John H. will look into this.

Renu will order new laser goggles - 2 pair.

Adjourned at 9:34am.