

July 25, 2006 Palomar LGS IPT Meeting Minutes

Caltech: Cameron, Cromer, Petrie, Pickles, Shelton, Troy, Velur
Palomar: Bouchez, Henning, Moore
Chicago: Kibblewhite

1. Announcements

- Still no word on the success of the PALM-3000 MRI proposal.
- Ben Oppenheimer is in Pasadena, available for discussions about P1640.

2. LGS magnitude analysis

Discussed results of analysis of LGS magnitude presented in [link]. Overview of results is as follows:

1. The observed LGS magnitude is consistent with only 25% BTO transmission (or alternately with very poor)
2. 50-65% of the returned flux is lost due to the large spot and small (~2.5") field stop.
3. Another 50-70% of the light is lost between the sodium dichroic and the HOWFS detector.

Several ways to improve this analysis were proposed, including:

- Using the measured spot profile rather than a Gaussian approximation.
- Including the star's spectral energy distribution in the analysis.

Other tasks which this analysis suggests will be useful are:

- Measuring the actual BTO transmission (AM and AB doing this today)
- Measuring the actual HOWFS bandpass.
- Measuring the dichroic spot's reflectivity at 589nm.
- Verifying HOWFS alignment and transmission at 90 km conjugate
- Design and implementation of an LGS stimulus.

3. Laser upgrade schedule

A schedule of laser upgrade work leading up to the September LGS engineering run is presented in Figure 1. Ed will be arriving at Palomar on 8/11, and leaving on 8/18. The laser will have to be moved to the downstairs lab before his arrival, and be returned to the Coude lab several days before the September run. MT suggested that a review of progress be held before moving the laser.

4. LGS email aliases and archive

We will set up an email alias for the LGS group (including Caltech, JPL, Palomar, and U. Chicago personnel). This alias will also be connected to an email archive, allowing access to all previous documents. MT and AB will compare systems available at JPL and on campus.

Meeting adjourned at 10:00am.

Caltech Optical Observatories
Palomar Adaptive Optics



Figure 1: Laser work scheduled for 7/24/06 - 7/9/06.