

## **LGS FY07 Remaining work**

A. Bouchez and J. Roberts, v2.0 (6/25/07)

### **Management**

1. Set up mtg. with Dan McKenna & others mid-July to confirm FY08 operations staffing.
2. Budgets.
  - 2.1. AB to discuss COO budget overrun with Rich.
  - 2.2. AB to confirm that NGS visitor instruments not being charged to LGS project.
3. ~~Shelton no longer available for LGS project.~~
  - 3.1. AB to discuss implications for Palomar staffing with Andrew
4. Change LGS meeting format to reduce unnecessary participation.

### **Systems engineering**

1. JR to document LOWFS performance.
2. ~~AB to write tool to monitor performance on science nights.~~
3. ~~Catch up on engineering run experiment analysis!~~

### **LGS performance**

1. Laser goals for FY:  $> 8.0$  W,  $< \lambda/2$  wavefront error, stable to 10% over night.
2. documented laser optical design (RT)
3. documented laser alignment procedure (RT)
4. AB to prepare schedule for June-July work with Renu.
5. Schedule experiment with AOA WFS during 2 wks before next run: July 9-21. JR available.
6. Renu's responsibility to include polar axis alignment for next run.
7. BTO
  - 7.1. AB and JA to recalibrate (early July?).
8. LLT
  - 8.1. JR to check collimation sensitivity in Zemax.
9. LOWFS (JR):
  - 9.1. Implement lower framerates (30 Hz, maybe lower?)
  - 9.2. ~~Investigate lower binning readout mode.~~
  - 9.3. Improve cooling performance (-25C max) (AB).
  - 9.4. ~~Look into replacing camera head.~~
  - 9.5. Remove metal vignetting LOWFS patrol range.

### **Software**

1. Continuing LOWFS bug fixes:
  - 1.1. pixel ordering (TuT)
  - 1.2. background averaging (ThT)
  - 1.3. mode changes (ThT)
2. Complete LGS automation software (SG)
3. CVS BTO and laser automation software (JA/SG)
4. Complete all requested TAO changes (ThT)
5. Implement control of chopper from AOCP (JA)
6. Clean up Aerotech motion control code (JA)
7. Document flat map algorithm and procedures (JR)
8. ~~Complete LGS acquisition sequencing software (AB)~~

### **Facility / Laser safety**

1. Implement changes agreed to in 7/21 safety mtg (AB/JC/Pal)
2. ~~Bring SOP up to date (JC).~~
3. ~~Negotiate for 30deg. elevation limit with FAA (AB).~~