

Caltech Optical Observatories / NASA Jet Propulsion Laboratory
Palomar Adaptive Optics

Palomar LGSAO Engineering Summary 07/28/07 UT

Afternoon:

- Laser 7.0W, stable.
- BTO tested in 10 min.
- Measured PHARO wavefront vs. sky position.
- Calibrating LOWFS patrol motion.
- Sky partly cloudy.

Night log:

1950 Opening dome for twilight flats.
2020 Moving to SAO 64745 for NGS checkout.
FWHM=0.32" in K, closed-loop Strehl ~65%.
2035 Ready to project at zenith.
2055 Projecting at zenith.
1185595030.fits, 5048.fits. FWHM=14x12 pix.
Background: 5090.fits, 5102.fits.
2100 Moving to bright star for LGS checkout.
2125 ASCAM software problems. Many ASCAM shutters. Trouble finding LGS due to clouds?
2150 Finally locked on V=11 star. Frames 53-62, 5s in Ks. 63-72.
2155 Ready for science.
2157 Moving to target 1.
2207 Telemetry crash. While taking HOWFS background in LGS mode.
2216 Acquisition complete.
Difficulty identifying field. Finally established that large proper motion was reason. Reacquired but clouds coming in.
2245 Shuttering laser due to clouds.
0030 Resuming laser operations. Sending spotters out and moving to target.
0035 Laser power has dropped to 3 W; Called Renu out to check.
0050 Found AOM driver set to incorrect frequency. Somehow fixed it (?)
0102 Acquisition complete.
HOWFS: 220 cts @ 100 Hz through thin clouds.
LOWFS: 200 cts @ 300 Hz on R=13.7 TT ref, 30" away.
Data quality look good.
0213 Moving to target 3
0224 Acquisition complete. 11 min. including slew.
HOWFS: 100 cts @ 100 Hz through thickening clouds.
LOWFS: 70 cts @ 200 Hz on R=14.5 TTref, 45" away.
Image quality poor.
0245 Quitting due to clouds.
0353 Clearing somewhat in east. Sending spotters out.
0358 Moving to target 4
0411 Acquisition complete. 13 min including slew.
HOWFS: 180 cts @ 100 Hz through thin clouds.
LOWFS: 140 cts @ 150 Hz on R=14.7, 45" away.
Performance good.
0448 Shuttering for FAA compliance. Switching to NGS science.