

Palomar LGSAO test schedule
4-6 January 2007 (local)

v2.0: 01/04/07 - AB

Spotters requested 20:00-06:00 (on station 20:30-05:45)

Test ID	PDT start	PDT end	suns	12°	LST	12°	sunr	Obs mode	Target	Description	Priority	Duration	Lead	Clear sky	Laser	
01/04/07			17:01	17:51	7:11	5:54	6:44									
	9:00	11:00	Cable AO system					closed	zen			1	2.00	MD	N	N
	11:00	15:00	Install LLT					closed	zen			1	4.00	MD	N	N
1	13:30	16:00	AO bench setup and checkout					closed	zen	Switch dichroic, co-focus WFS, setup chopper & delay generator.		1	2.50	JR	N	N
	14:00	14:30	<i>status and safety meeting</i>										0.50			
2	14:30	15:30	BTO/LLT alignment and checkout					closed	zen	<i>Cannot align LLT until AO control established.</i>		1	1.00	AB	N	N
3	16:00	16:30	Test safety interlocks					closed	NA	Install barriers and test interlocks.		1	0.50	JC		
4	16:30	17:00	Align laser to BTO					closed	NA	Align CSFL to BTO in Coude lab.		1	0.50	AB	N	N
5	16:00	17:30	Calibrate PHARO					closed	zen	Focus PHARO, check pupil alignment, calibrate centroid offsets.		1	1.50	JH		
	17:00	18:00	<i>dinner</i>										1.00			
6	18:30	20:00	Test-fire laser in dome.					closed	zen	Verify BTO alignment & Q3 interlock. Measure transmission.		1	1.50	AB	N	Y
01/05/07			17:02	17:52	7:15	5:54	6:44									
1	12:00	15:00	Test LGS computer					closed	NA	Set up LGS computer in Coude lab, test temp. control		1	3.00	SG	N	N
	14:00	14:30	<i>status and safety meeting</i>										0.50			
2	16:00	16:30	Test safety interlocks					closed	NA	Install barriers and test interlocks.		1	0.50	JC		
3	16:30	17:00	Test-fire laser in dome.					closed	zen	Verify BTO alignment & Q3 interlock. Measure transmission.		1	0.50	AB	N	Y
	17:00	18:00	<i>dinner</i>										1.00			
4	17:30	18:00	AO Checkout					NGS	V=8	check seeing, NGS performance.		2	0.50	JH	N	N
5	18:00	19:30	LLT boresighting					NGS	V=3	Check and correct LLT boresighting.		1	1.50	HP	N	N
6	19:30	21:30	LLT image quality					NGS	V=3	Optimize LLT image quality.		2	2.00	AM	N	N
7	21:30	22:30	LGS characterization					LGS	zen	Project laser at zenith, focus, measure photometry.		1	1.00	MT	Y	Y
8	22:30	0:30	LGS bright star performance					LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD		1	2.00	MT	Y	Y
9	0:30	4:30	LGS science demo					LGS	V=15	Observe 2 science targets		1	4.00	AB	Y	Y
10	4:30	6:00	Off-axis acquisition procedure					LGS	V=10	Demonstrate off-axis NGS acquisition procedure		2	1.50	AB	N	Y
01/06/07			17:02	17:52	7:19	5:54	6:44									
	10:00	16:00	<i>daytime contingency</i>					closed		Possible COO all-hands meeting at 13:00.			6.00		N	
	14:00	14:30	<i>status and safety meeting</i>										0.50			
1	16:00	16:30	Test safety interlocks					closed	NA	Install barriers and test interlocks.		1	0.50	JC		
2	16:30	17:00	Test-fire laser in dome.					closed	zen	Verify BTO alignment & Q3 interlock.		1	0.50	AB	N	Y
	17:00	18:00	<i>dinner</i>										1.00			

3	17:30	18:00	AO Checkout	NGS	V=8	check seeing, NGS performance.	2	0.50	JH	N	N
4	18:00	20:30	NGS low-light tests	NGS	V=15	Compare low-light centroid algorithms and reconstructors.	2	2.50	CS	Y	N
5	20:30	21:30	LGS characterization	LGS	zen	Project laser at zenith, focus, measure photometry.	1	1.00	MT	Y	Y
6	21:30	22:30	LGS bright star performance	LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD	1	1.00	MT	Y	Y
7	22:30	1:30	LGS faint star performance	LGS	V=17	Optimize TT, measure Strehl & PSD for V=14,15,16,17	2	3.00	JR	Y	Y
8	1:30	2:30	Rayleigh scatter characterization	LGS	zen	Quantify altitude of scattering components on WFS.	3	1.00	AB	Y	Y
9	2:30	4:30	LGS science demo	LGS	V=15	Observe 1 science target	3	2.00	AB	Y	Y
	4:30	5:30	LGS contingency	LGS			3	1.00			Y

Proposed LGS experiments

1	0:00	1:00	UTT performance	LGS	zen	Investigate UTT performance (ideas, anyone?)	3	1.00	MT	Y	Y
2	1:00	3:00	LGS performance vs. airmass	LGS	V=10	Measure laser magnitude & Strehl at el=90,60,45	3	2.00	AB	Y	Y
3	3:00	5:00	LGS isoplanatism	LGS	V=10	Measure LGS and NGS isoplanatic angles	3	2.00	AB	Y	Y

Proposed NGS experiments

1	0:00	2:00	LOWFS flexure	NGS	V=4	Good cloudy night test	1	2.00	MT	N	N
2	2:00	5:00	LOWFS performance	NGS	V=16	continue LOWFS performance test from Sep. run	2	3.00	JR	Y	N
3	5:00	6:00	LOWFS focus performance	NGS	V=17	Measure LOWFS focus in dual NGS mode	3	1.00	AB	N	N

Proposed closed-dome experiments

1	0:00	2:00	AO software debugging and testing	NA	NA	Debug BTO logging, others...	1	2.00	JA	N	N
2	2:00	4:00	LOWFS diagnostics	WL	zen	Swap electronics between LOWFS and HOWFS	1	2.00	JR	N	N
3	4:00	6:00	AO bench drawings	NA	zen	Measure location of the HOWFS and LOWFS.	1	2.00	JR	N	N
4	6:00	8:00	LOWFS flexure	WL	move	Measure flexure of LOWFS using white light stimulus.	1	2.00	MT	N	N
5	8:00	10:00	Recalibrate BTO model	LGS	move	Extend current model to higher airmass.	1	2.00	AB	N	660
6	10:00	12:00	Field-dependent LOWFS focus	WL	zen		1	2.00	JR	N	N

Background experiments

1			Aircraft camera sensitivity	NGS		Gather statistics on camera vs. spotter aircraft sensitivity	2		JC	N	N
1			RADAR sensitivity	NGS		Note range and SNR of all RADAR aircraft detections	3		JC	N	N
2			Laser diagnostics benches	LGS		Calibrate output of photodiodes & cameras.	2		AM	N	Y