

Palomar LGSAO test schedule
2-6 March 2007 (local)

v2.0: 04/03/07 - AB & JR
 Spotters requested 19:30-05:40 (on station 20:10-05:30)

Test ID	PDT start	PDT end	Test Name					Obs mode	Target	Description	Priority	Duration	Lead	Clear sky r0>10cm	Laser
04/02/07			19:15	20:02	12:58	5:39	6:27								
1	10:00	13:00	Install LLT					closed	zen		1	3.00	Doyle	N	N
2	10:00	14:00	AO bench setup and checkout					closed	zen	Setup Aerotech controller, co-focus WFS, setup chopper & delay	1	4.00	Roberts	N	N
3	13:00	14:00	BTO setup and checkout					closed	zen	Test Q3, servo control.	1	1.00	Angione	N	N
	14:00	14:30	<i>status and safety meeting</i>									0.50			660
4	14:30	15:30	Prepare laser for observing					closed	NA	Final alignment and testing of laser, control loops.	1	1.00	Tripathi	N	N
5	14:30	16:00	LLT alignment and checkout					closed	zen	Align stimulus laser to LLT.	1	1.50	Bouchez	N	N
6	15:30	16:00	Align laser to BTO					closed	NA	Align CSFL to BTO in Coude lab.	1	0.50	Bouchez	N	N
7	16:00	16:30	Test safety interlocks					closed	NA	Install barriers and test interlocks.	1	0.50	Cromer		
8	16:30	17:30	Laser alignment in dome.					closed	zen	Low/high power laser projection in the dome.	1	1.00	Bouchez	N	N
9	18:00	19:00	Calibrate PHARO					closed	NA	Calibrate centroids for both refl. spot & dichroic.	1	1.00	Hickey		
	18:00	19:00	<i>dinner</i>									1.00			
10	19:45	20:15	AO Checkout					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Hickey	N	N
11	20:15	20:30	Calibrate Acq Cam (NGS)					NGS	V=6	Image calibrated binary with Acq and PHARO.	1	0.25	Bouchez	N	N
12	20:30	22:00	LLT boresighting					NGS	V=3	Check and correct LLT boresighting.	1	1.50	Moore	N	N
13	22:00	23:00	LLT image quality					NGS	V=3	Measure and optimize LLT image quality.	2	1.00	Roberts	N	N
14	23:00	0:00	Laser acquisition					LGS	zen	Project laser at zenith, focus, UTT optimization	1	1.00	Troy	N	N
15	0:00	0:30	Zenith LGS optimization					LGS	zen	Adjust chopper, UTT.	1	0.50	Roberts	Y	N
16	0:30	3:00	LGS bright star performance					LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD	1	2.50	Roberts	Y	Y
17	3:00	3:30	Off-axis acquisition procedure					LGS	V=10	Demonstrate off-axis NGS acquisition procedure	2	0.50	Bouchez	N	N
18	3:30	4:45	LGS science demo					LGS	V=15	Observe 1 science target and test dithering & backgrounds	2	1.25	Bouchez	Y	Y
19	4:45	5:15	Field dependent LOWFS focus					NGS	V=10	Acquire star at several points in LOWFS patrol field, record focus.	2	0.50	Bouchez	N	N
20	5:15	6:15	LOWFS transfer curves					NGS	V=10	Measure TT and Focus transfer curves	3	1.00	Roberts	N	N

04/03/07			19:16	20:03	13:02	5:38	6:25											
	14:00	14:30	status and safety meeting								0.50							
1	14:30	15:30	Prepare laser for observing				closed	NA	Final alignment and testing of laser, control loops.				1	1.00	Tripathi	N	N	N
2	15:30	16:00	Align laser to BTO				closed	NA	Align CSFL to BTO in Coude lab.				1	0.50	Bouchez	N	N	N
3	16:00	16:30	Test safety interlocks				closed	NA	Install barriers and test interlocks.				1	0.50	Cromer			
4	16:30	17:30	Laser alignment in dome.				closed	zen	Low/high power laser projection in the dome.				1	1.00	Bouchez	N	N	N
	18:00	19:00	dinner								1.00							
5	19:45	20:15	AO Checkout				NGS	V=8	Measure seeing, NGS performance.				1	0.50	Hickey	N	N	N
6	20:15	21:00	Laser acquisition				LGS	zen	Project laser at zenith, focus				1	0.75	Troy	Y	N	Y
7	21:00	22:00	Calibrate Acq Cam (LGS)				LGS	V=10	Acquire on-axis LGS target; calibrate Acq with star on PHARO				1	1.00	Bouchez	Y	N	Y
8	22:00	23:00	HO loop optimization				LGS	V=10	Practice coarse optimization of HO servo loop.				1	1.00	Roberts	Y	Y	Y
9	23:00	1:30	LO loop rough optimization				LGS	V=17	Acquire and optimize for V=14,15,16,17				1	2.50	Roberts	Y	Y	Y
10	1:30	4:00	LGS science demo				LGS	V=15	Observe 2 science targets and test dithering & backgrounds				2	2.50	Bouchez	Y	Y	Y
11	4:00	4:45	UTT vs. CR angle				LGS	V=17	Test new reconstructor software				2	0.75	Bouchez	Y	N	Y
12	4:45	5:45	Field dependent LOWFS focus				NGS	V=10	Acquire star at several points in LOWFS patrol field. record focus.				2	1.00	Bouchez	N	N	N

04/04/07			19:17	20:04	13:06	5:37	6:24							
1	14:30	15:30	Prepare laser for observing	closed	NA	Final alignment and testing of laser, control loops.	1	1.00	Tripathi	N	N	N		
	15:30	16:00	<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	Cromer					
3	16:30	17:30	Verify BTO alignment	closed	zen	Verify laser alignment to BTO in Coude, Dome, LLT.	1	1.00	Bouchez	N	N	N		
	18:00	19:00	<i>dinner</i>					1.00						
4	19:45	20:15	AO Checkout	NGS	V=8	Measure seeing, NGS performance.	2	0.50	Burruss	N	N	N		
5	20:15	21:00	LGS acquisition	LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y		
6	21:00	5:30	Shared-risk Science	LGS	V=17	LGS-AO Multiplicity and Planet Formation at Bottom of IMF	1	8.50	Hillenbran	Y	N	Y		

04/05/07			19:17	20:05	13:09	5:35	6:23							
1	14:30	15:30	Prepare laser for observing	closed	NA	Final alignment and testing of laser, control loops.	1	1.00	Tripathi	N	N	N		
	15:30	16:00	<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	Cromer					
3	16:30	17:30	Verify BTO alignment	closed	zen	Verify laser alignment to BTO in Coude, Dome, LLT.	1	1.00	Bouchez	N	N	N		
	18:00	19:00	<i>dinner</i>					1.00						
4	19:45	20:15	AO Checkout	NGS	V=8	Measure seeing, NGS performance.	1	0.50	Hickey	N	N	N		
5	20:15	21:00	LGS acquisition	LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y		
6	21:00	5:30	Shared-risk Science	LGS	V=17	LGS-AO Multiplicity and Planet Formation at Bottom of IMF	1	8.50	Hillenbran	Y	N	Y		

04/06/07			19:18	20:06	13:13	5:34	6:21											
1	14:30	15:30	Prepare laser for observing				closed	NA	Final alignment and testing of laser, control loops.				1	1.00	Tripathi	N	N	N
	15:30	16:00	<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	Cromer			
3	16:30	17:30	Verify BTO alignment				closed	zen	Verify laser alignment to BTO in Coude, Dome, LLT.				1	1.00	Bouchez	N	N	N
	18:00	19:00	<i>dinner</i>											1.00				
4	19:45	20:15	AO Checkout				NGS	V=8	Measure seeing, NGS performance.				1	0.50	Burruss	N	N	N
5	20:15	21:00	LGS acquisition				LGS	zen	Project laser at zenith, focus, UTT optimization				1	0.75	Troy	Y	N	Y
6	21:00	5:30	Shared-risk Science				LGS	V=17	LGS-AO Observations of Ultraluminous IR Galaxies				1	8.50	Surace	Y	N	Y

Other proposed LGS experiments

1	0:00	1:00	LGS bright star performance	LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD	1	1.00	Roberts	Y	Y	Y
2	1:00	4:00	LGS faint star performance	LGS	V=17	Optimize TT, measure Strehl & PSD for V=14,15,16,17	2	3.00	Roberts	Y	Y	Y
3	4:00	5:00	Rayleigh scatter characterization	LGS	zen	Quantify altitude of scattering components on WFS.	3	1.00	Bouchez	Y	N	Y
4	5:00	6:30	Off-axis acquisition procedure	LGS	V=10	Demonstrate off-axis NGS acquisition procedure	2	1.50	Bouchez	N	N	Y
5	6:30	7:30	UTT performance	LGS	zen	Investigate UTT performance. GOOD.	3	1.00	?	Y	Y	Y
6	7:30	9:30	LGS performance vs. airmass	LGS	V=10	Measure laser magnitude & Strehl at el=90,60,45	3	2.00	?	Y	Y	Y
7	9:30	11:30	LGS isoplanatism	LGS	V=10	Measure LGS and NGS isoplanatic angles	3	2.00	AB	Y	Y	Y
8	11:30	12:30	Test laser frequency lock	LGS	zen	Test effects of etalon dither on HOWFS return.	2	1.00	Bouchez	Y	N	Y
##	#####	#####	Circular polarization experiment	LGS	zen	Repeat Jul. 06 experiment. Requires person at prime focus.	2	1.00	Bouchez	Y	N	Y

Other proposed NGS experiments

1	0:00	2:00	Demo flexure compensation.	NGS	V=4	Good cloudy night test.	1	2.00	Bouchez	N	N	N
2	2:00	4:00	Leaky integrator testing	NGS	V=4	Requires stable seeing, clear sky.	1	2.00	Troy	N	N	N
3	4:00	7:00	Faint object NGS testing	NGS	V=15	Need a clear test plan.	1	3.00	Shelton	N	N	N
4	7:00	10:00	LOWFS performance	NGS	V=16	Continue LOWFS performance test from Sep. run	2	3.00	Roberts	Y	Y	N

Proposed closed-dome experiments

1	0:00	2:00	Adjust PF diagnostics bench filters	NA	zen	Using high-power laser in dome.	1	2.00	Moore	N	N	Y
2	2:00	4:00	Demo flexure compensation.	WL	move	Measure flexure of LOWFS using white light stimulus.	2	2.00	Bouchez	N	N	N
3	4:00	6:00	Measure LGS NCP flexure	WL	move	Re-measure flexure while locked on LOWFS.	2	2.00	Bouchez	N	N	N
4	6:00	8:00	Measure NGS NCP flexure	WL	move	Measure flexure while locked on HOWFS.	2	2.00	Bouchez	N	N	N
5	8:00	10:00	Field-dependent LOWFS focus	WL	zen	Does not take into account telescope field curvature.	3	2.00	Roberts	N	N	N

Background experiments

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