

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

v1.0: 03/21/07 - 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
	suns	12°	LST	12°	sunr											
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	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	N
3	13:00	14:00	BTO setup and checkout					closed	zen	Test Q3, servo control.	1	1.00	Angione	N	N	660
	14:00	14:30	status and safety meeting									0.50				
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	N
5	14:30	16:00	LLT alignment and checkout					closed	zen	Align stimulus laser to LLT.	1	1.50	Bouchez	N	N	660
6	15:30	16:00	Align laser to BTO					closed	NA	Align CSFL to BTO in Coude lab.	1	0.50	Bouchez	N	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	N
9	18:00	19:00	Calibrate PHARO					closed	NA	Focus PHARO, check pupil alignment, calibrate centroid offsets.	1	1.00	Burruss			
	18:00	19:00	dinner									1.00				
10	19:45	20:15	AO Checkout					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Burruss	N	N	N
11	20:15	22:00	LLT boresighting					NGS	V=3	Check and correct LLT boresighting.	1	1.75	Moore	N	N	N
12	22:00	23:00	LLT image quality					NGS	V=3	Optimize LLT image quality.	2	1.00	Roberts	N	N	N
13	23:00	0:00	LGS acquisition					LGS	zen	Project laser at zenith, focus, UTT optimization (1hr)	1	1.00	Troy	Y	N	Y
14	0:00	3:00	LGS bright star performance					LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD	1	3.00	Roberts	Y	Y	Y
15	3:00	4:00	Off-axis acquisition procedure					LGS	V=10	Demonstrate off-axis NGS acquisition procedure	2	1.00	Bouchez	N	N	Y
16	4:00	5:30	LGS science demo					LGS	V=15	Observe 1 science target and test dithering & backgrounds	1	1.50	Bouchez	Y	Y	Y
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
	17:30	18:30	dinner									1.00				
5	19:45	20:15	AO Checkout					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Burruss	N	N	N
6	20:15	21:00	LGS acquisition					LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y
7	21:00	2:00	LGS faint target practice					LGS	V=17	Acquire and measure Strehl for 2 stars each at V=14,15,16,17	1	5.00	Roberts	Y	Y	Y
8	2:00	3:30	LGS science demo					LGS	V=15	Observe 1 science target and test dithering & backgrounds	2	1.50	Bouchez	Y	Y	Y
9	3:30	4:30	UTT vs. CR angle					LGS	V=17	Test new reconstructor software	2	1.00	Bouchez	Y	N	Y
10	4:30	5:30	Circular polarization experiment					LGS	zen	Repeat Jul. 06 experiment. Requires person at prime focus.	3	1.00	Bouchez	Y	N	Y

04/04/07			19:17	20:04	13:06	5:37	6:24							
	14:00	14:30	<i>status and safety meeting</i>						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		
	17:30	18:30	<i>dinner</i>					1.00						
5	19:45	20:15	AO Checkout	NGS	V=8	Measure seeing, NGS performance.	2	0.50	Burruss	N	N	N		
6	20:15	21:00	LGS acquisition	LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y		
7	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							
	14:00	14:30	<i>status and safety meeting</i>						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		
	17:30	18:30	<i>dinner</i>					1.00						
5	19:45	20:15	AO Checkout	NGS	V=8	Measure seeing, NGS performance.	1	0.50	Burruss	N	N	N		
6	20:15	21:00	LGS acquisition	LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y		
7	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							
	14:00	14:30	<i>status and safety meeting</i>						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		
	17:30	18:30	<i>dinner</i>					1.00						
5	19:45	20:15	AO Checkout	NGS	V=8	Measure seeing, NGS performance.	1	0.50	Burruss	N	N	N		
6	20:15	21:00	LGS acquisition	LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y		
7	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
17	5:30	6:30	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