Palomar LGSAO test schedule
23-27 March 2007 (local)

v1.0: 04/17/07 - AB
Spotters requested 19:55-05:15 (on station 20:25-05:05)

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									
04/23/07			19:31 | 20:20 | 14:20 | 5:11 | 6:00									
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	13:30	BTO setup and checkout	closed	zen	Test Q3, servo control.	1	0.50	Angione	N	N	660
4	13:30	15:30	Prepare laser for observing	closed	NA	Final alignment and testing of laser, control loops.	1	2.00	Tripathi	N	N	N
5	13:30	15:30	LLT alignment and checkout	closed	zen	Align stimulus laser to LLT.	1	2.00	Moore	N	N	660
	15:30	16:00	*status and safety meeting*					0.50				
6	16:00	16:30	Test safety interlocks	closed	NA	Install barriers and test interlocks.	1	0.50	Cromer			
7	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
8	18:00	19:00	Calibrate PHARO	closed	NA	Calibrate centroids for both refl. spot & dichroic.	1	1.00	Hickey			
	18:00	19:00	*dinner*					1.00				
9	20:00	20:30	**AO Checkout**	NGS	V=8	Measure seeing, NGS performance.	1	0.50	Hickey	N	N	N
10	20:30	21:30	**LLT boresighting**	LGS	zen	Project laser at zenith; Check and optimize boresighting.	1	1.00	Moore	N	N	Y
11	21:30	22:30	**LLT image quality**	LGS	zen	Optimize LGS spot size by translating LLT secondary.	2	1.00	Petrie	N	N	Y
12	22:30	23:00	**LGS acquisition**	LGS	zen	Complete LGS acquisition test plan…	1	0.50	Bouchez	N	N	Y
13	23:00	1:30	**LGS bright star performance**	LGS	V=10	Acquire star, optimize servo loops, measure Strehl & PSD	1	2.50	Roberts	Y	Y	Y
14	1:30	2:30	**UTT vs. CR angle**	LGS	V=17	Test new reconstructor software	2	1.00	Bouchez	N	N	Y
15	2:30	5:00	**LGS science demo**	LGS	V=15	Observe 2 science targets and test dithering & backgrounds	2	2.50	Bouchez	Y	Y	Y
16	5:00	5:30	**Field dependent LOWFS focus**	NGS	V=10	Acquire star at several points in LOWFS patrol field, record focus.	2	0.50	Bouchez	N	N	N

04/24/07			19:32	20:21	14:24	5:10	5:59											
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	*status and safety meeting*									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	*dinner*									1.00				
4	20:00	20:30	**AO Checkout**					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Hickey	N	N	N
5	20:30	21:15	**LGS acquisition**					LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y
6	21:15	1:15	**LGS faint target performance**					LGS	V=17	Acquire and measure Strehl for 2 stars each at V=14,15,16,17	1	4.00	Roberts	Y	Y	Y
7	1:15	4:00	**LGS science demo**					LGS	V=15	Observe 2 science targets and test dithering & backgrounds	2	2.75	Bouchez	Y	Y	Y
8	4:00	5:00	**Circular polarization experiment**					LGS	zen	Repeat Jul. 06 experiment. Requires person at prime focus.	3	1.00	Bouchez	Y	N	Y
9	5:00	5:30	**LOWFS transfer curves**					NGS	V=10	Measure TT and Focus transfer curves	3	0.50	Roberts	N	N	N

04/25/07			19:32	20:22	14:28	5:08	5:58											
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	*status and safety meeting*									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	*dinner*									1.00				
4	20:00	20:30	**AO Checkout**					NGS	V=8	Measure seeing, NGS performance.	2	0.50	Burruss	N	N	N
5	20:30	21:15	**LGS acquisition**					LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Bouchez	Y	N	Y
6	21:15	5:00	**Shared-risk Science**					LGS	V=17	LGS-AO Multiplicity and Planet Formation at Bottom of IMF	1	7.75	Surace	Y	N	Y

04/26/07			19:33	20:23	14:32	5:07	5:57											
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	*status and safety meeting*									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	*dinner*									1.00				
4	20:00	20:30	**AO Checkout**					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Hickey	N	N	N
5	20:30	21:15	**LGS acquisition**					LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y
6	21:15	5:00	**Shared-risk Science**					LGS	V=17	LGS-AO Multiplicity and Planet Formation at Bottom of IMF	1	7.75	Lowrance	Y	N	Y

04/27/07			19:34	20:24	14:36	5:06	5:56											
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	*status and safety meeting*									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	*dinner*									1.00				
4	20:00	20:30	**AO Checkout**					NGS	V=8	Measure seeing, NGS performance.	1	0.50	Burruss	N	N	N
5	20:30	21:15	**LGS acquisition**					LGS	zen	Project laser at zenith, focus, UTT optimization	1	0.75	Troy	Y	N	Y
6	21:15	5:00	**Shared-risk Science**					LGS	V=17	LGS-AO Observations of Ultraluminous IR Galaxies	1	7.75	Lowrance	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

Other proposed NGS experiments

1	0:00	0:30	Field dependent LOWFS focus	NGS	V=10	Acquire star at several points in LOWFS patrol field, record focus.	2	0.50	Bouchez	N	N	N
2	0:30	1:30	LOWFS transfer curves	NGS	V=10	Measure TT and Focus transfer curves	3	1.00	Roberts	N	N	N
3	1:30	3:30	Demo flexure compensation.	NGS	V=4	Good cloudy night test.	1	2.00	Bouchez	N	N	N
4	3:30	5:30	Leaky intergrator testing	NGS	V=4	Requires stable seeing, clear sky.	1	2.00	Troy	N	N	N
5	5:30	8:30	Faint object NGS testing	NGS	V=15	Need a clear test plan.	1	3.00	Shelton	N	N	N
6	8:30	11:30	LOWFS performance	NGS	V=16	Continue LOWFS performance test from Sep. run	2	3.00	Roberts	Y	Y	N

Proposed closed-dome experments

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