

ID	WBS	Task Name	Lead	% Work Com	Work	Remaining Work	Remaining Cost	Start	2007												2008														
									M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
0	0	NGAO System Design Phase Schedule		59%	11,390.2 hrs	4,652.45 hrs	\$291,081.61	Wed 6/21/06																											16%
1	1	SD Phase Management	PW	64%	2,108 hrs	752.7 hrs	\$44,491.93	Wed 6/21/06																											72%
2	1.1	Planning and Contracting	PW	78%	230 hrs	50 hrs	\$3,145.10	Wed 6/21/06																											79%
3	1.1.1	NGAO Proposal to SSC		100%	0 hrs	0 hrs	\$0.00	Wed 6/21/06																											
4	1.1.2	Management Structure Decision by Directors		100%	0 hrs	0 hrs	\$0.00	Fri 7/14/06																											
5	1.1.3	SD Phase System Engineering Management Plan	PW	100%	80 hrs	0 hrs	\$0.00	Fri 9/1/06																											100%
6	1.1.4	SD Phase Contracts Generated	PW	100%	60 hrs	0 hrs	\$0.00	Wed 9/27/06																											100%
7	1.1.5	Director Approval		100%	0 hrs	0 hrs	\$0.00	Mon 10/9/06																											
8	1.1.6	SD Partner Contracts Issued	PW	100%	0 hrs	0 hrs	\$0.00	Fri 10/27/06																											
9	1.1.7	Mid-year Replan	PW	100%	40 hrs	0 hrs	\$0.00	Mon 3/19/07																											100%
10	1.1.8	FY08 Replan	PW	0%	50 hrs	50 hrs	\$3,145.10	Tue 11/13/07																											0%
11	1.2	Project Meetings		79%	1,352 hrs	289.2 hrs	\$18,762.28	Wed 6/21/06																											75%
12	1.2.1	Executive Committee Telecons	PW...	75%	360 hrs	90 hrs	\$5,787.00	Wed 6/21/06																											75%
13	1.2.2	Team Meetings		80%	992 hrs	199.2 hrs	\$12,975.28	Thu 9/14/06																											82%
14	1.2.2.1	Team Meeting #1 (mgmt, science & technical -		100%	68 hrs	0 hrs	\$0.00	Thu 9/14/06																											100%
15	1.2.2.2	Team Meeting #2 (CIT)		100%	80 hrs	0 hrs	\$0.00	Tue 11/14/06																											100%
16	1.2.2.3	Team Videocon #3		100%	44 hrs	0 hrs	\$0.00	Wed 12/13/06																											100%
17	1.2.2.4	Team Meeting #4 (Keck)		100%	80 hrs	0 hrs	\$0.00	Mon 1/22/07																											100%
18	1.2.2.5	Team Videocon #5		100%	44 hrs	0 hrs	\$0.00	Wed 3/7/07																											100%
19	1.2.2.6	Team Meeting #6 (UCSC)		100%	80 hrs	0 hrs	\$0.00	Wed 4/25/07																											100%
20	1.2.2.7	Team Videocon #7		100%	44 hrs	0 hrs	\$0.00	Wed 5/30/07																											100%
21	1.2.2.8	Team Retreat #8 (UCSC)		100%	220 hrs	0 hrs	\$0.00	Mon 7/9/07																											100%
22	1.2.2.9	Team Videocon #9		100%	44 hrs	0 hrs	\$0.00	Wed 8/22/07																											100%
23	1.2.2.10	Team Meeting #10 (CIT)		100%	80 hrs	0 hrs	\$0.00	Tue 9/11/07																											100%
24	1.2.2.11	Team Videocon #11		20%	44 hrs	35.2 hrs	\$2,504.96	Mon 11/5/07																											20%
25	1.2.2.12	Team Meeting #12		0%	92 hrs	92 hrs	\$5,867.68	Thu 12/13/07																											0%
26	1.2.2.13	Team Videocon #13		0%	72 hrs	72 hrs	\$4,602.64	Tue 1/23/07																											0%
27	1.3	Tracking and Reporting	PW	94%	120 hrs	7.5 hrs	\$429.83	Sat 9/16/06																											85%
28	1.3.1	Report Preparation/Presentation	PW	94%	120 hrs	7.5 hrs	\$429.83	Mon 10/2/06																											85%
29	1.3.2	Keck Science Meeting 06 (UCI)		100%	0 hrs	0 hrs	\$0.00	Sat 9/16/06																											
30	1.3.3	SSC meeting (UCLA)		100%	0 hrs	0 hrs	\$0.00	Mon 11/6/06																											
31	1.3.4	SSC meeting (Keck)		100%	0 hrs	0 hrs	\$0.00	Wed 1/24/07																											
32	1.3.5	SSC meeting (CA)		100%	0 hrs	0 hrs	\$0.00	Tue 4/3/07																											
33	1.3.6	SSC meeting (Keck)		100%	0 hrs	0 hrs	\$0.00	Wed 6/20/07																											
34	1.3.7	Keck Science Meeting 07		100%	0 hrs	0 hrs	\$0.00	Sat 9/15/07																											
35	1.3.8	SSC meeting (CA)		20%	0 hrs	0 hrs	\$0.00	Tue 11/6/07																											20%
36	1.3.9	SSC meeting (Keck)		0%	0 hrs	0 hrs	\$0.00	Wed 2/20/08																											0%
37	1.3.10	SSC meeting (CA)		0%	0 hrs	0 hrs	\$0.00	Wed 4/30/08																											0%
38	1.4	Proposals & Fundraising		0%	0 hrs	0 hrs	\$0.00	Fri 10/27/06																											0%
39	1.4.1	Dates & deliverables identified by Directors		0%	0 hrs	0 hrs	\$0.00	Fri 10/27/06																											
40	1.4.2	Support Advancement Office		0%	0 hrs	0 hrs	\$0.00	Mon 1/1/07																											
41	1.5	System Design Report & Review	SA	0%	406 hrs	406 hrs	\$22,154.72	Mon 10/1/07																											0%
42	1.5.1	System Design Report	PW	0%	40 hrs	40 hrs	\$2,432.20	Mon 3/3/08																											0%
43	1.5.2	System Design Review	PW	0%	366 hrs	366 hrs	\$19,722.52	Mon 10/1/07																											0%

Project: NGAO System Design Phase
Date: Tue 12/11/07

Critical

Critical Split

Critical Progress

Task

Split

Task Progress

Baseline

Baseline Split

Baseline Milestone

Milestone

Summary Progress

Summary

Project Summary

External Tasks

External Milestone

Deadline

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44	1.5.2.1	Identify Reviewers	SA	0%	12 hrs	12 hrs	\$114.62	Mon 10/1/07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

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88	2.1.2.1.2	GR Radial Velocity Requirements	AG	50%	20 hrs	10 hrs	\$0.00	Mon 12/4/06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

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132	2.1.3.5.1	QSO Science Requirements		20%	6 hrs	4.8 hrs	\$165.79	Mon 12/4/06																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											

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									M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
176	3.1.1.5	Wavefront Error vs Sky Coverage	RD	48%	115 hrs	60 hrs	\$5,333.40	Mon 10/2/06																										
177	3.1.1.5.1	Document WFE Budget Rev 1	RD	100%	55 hrs	0 hrs	\$0.00	Mon 10/2/06																										
178	3.1.1.5.2	Document WFE Budget Rev 2	RD	0%	60 hrs	60 hrs	\$5,333.40	Mon 11/5/07																										
179	3.1.1.6	Encircled Energy vs Sky Coverage	DG	100%	110 hrs	0 hrs	\$0.00	Mon 10/23/06																										
180	3.1.1.7	Photometric Accuracy	MB	100%	240 hrs	0 hrs	\$0.00	Mon 10/16/06																										
181	3.1.1.8	Astrometric Accuracy	BC	100%	240 hrs	0 hrs	\$0.00	Mon 11/13/06																										
182	3.1.1.9	Polarimetric Accuracy	MI	75%	40 hrs	10 hrs	\$0.00	Mon 2/5/07																										
183	3.1.1.10	Companion Sensitivity	RF	100%	180 hrs	0 hrs	\$0.00	Mon 11/13/06																										
184	3.1.1.11	Observing Efficiency	DLM	50%	20 hrs	10 hrs	\$573.10	Mon 2/5/07																										
185	3.1.1.12	Observing Uptime	EJ	50%	20 hrs	10 hrs	\$573.10	Mon 8/27/07																										
186	3.1.1.13	Performance Budgets Summary		67%	60 hrs	20 hrs	\$1,777.80	Mon 5/28/07																										
187	3.1.1.13.1	Performance Budgets Summary Ver 1	MB	100%	40 hrs	0 hrs	\$0.00	Mon 5/28/07																										
188	3.1.1.13.2	Performance Budgets Summary Ver 2	MB	0%	20 hrs	20 hrs	\$1,777.80	Tue 2/5/08																										
189	3.1.1.14	Science Products		0%	20 hrs	20 hrs	\$1,777.80	Tue 2/5/08																										
190	3.1.1.14.1	All-In Science Simulations (cancelled)	CN	0%	0 hrs	0 hrs	\$0.00	Tue 2/5/08																										
191	3.1.1.14.2	Additional Science Characterization R		0%	20 hrs	20 hrs	\$1,777.80	Wed 2/6/08																										
192	3.1.1.14.2.1	Point Source Sensitivities	AB	0%	20 hrs	20 hrs	\$1,777.80	Wed 2/6/08																										
193	3.1.2	Trade Studies	RD	96%	1,330 hrs	56 hrs	\$4,977.82	Mon 10/16/06																										
194	3.1.2.1	System Architecture Trade Studies		100%	616 hrs	0 hrs	\$0.00	Mon 10/16/06																										
195	3.1.2.1.1	MOAO & MCAO TS	DG	100%	80 hrs	0 hrs	\$0.00	Mon 11/13/06																										
196	3.1.2.1.2	NGAO versus Keck AO upgrades TS (me	PW	100%	100 hrs	0 hrs	\$0.00	Mon 2/5/07																										
197	3.1.2.1.3	Adaptive Secondary Mirror option TS (m5	PW	100%	16 hrs	0 hrs	\$0.00	Fri 4/6/07																										
198	3.1.2.1.4	Keck Interferometer Support TS (m5)	CN	100%	120 hrs	0 hrs	\$0.00	Mon 10/16/06																										
199	3.1.2.1.5	GLAO for non-NGAO Instruments TS (m5	RF	100%	20 hrs	0 hrs	\$0.00	Mon 2/5/07																										
200	3.1.2.1.6	Science Instrument Re-use Cost/Benefit 1	AM	100%	120 hrs	0 hrs	\$0.00	Mon 11/13/06																										
201	3.1.2.1.7	Telescope Wavefront Errors TS	CN	100%	80 hrs	0 hrs	\$0.00	Mon 12/4/06																										
202	3.1.2.1.8	Observing Model TS	DLM	100%	80 hrs	0 hrs	\$0.00	Mon 11/13/06																										
203	3.1.2.2	Adaptive Optics System Trade Studies		89%	514 hrs	56 hrs	\$4,977.82	Mon 10/30/06																										
204	3.1.2.2.1	Rayleigh Rejection TS (m3)	VV	100%	72 hrs	0 hrs	\$0.00	Mon 10/30/06																										
205	3.1.2.2.2	LGS WFS Type TS (m4)	VV	100%	30 hrs	0 hrs	\$0.00	Mon 12/4/06																										
206	3.1.2.2.3	LGS WFS number of subapertures TS (m	VV	100%	20 hrs	0 hrs	\$0.00	Mon 12/4/06																										
207	3.1.2.2.4	LOWFS Architecture TS	RF	100%	220 hrs	0 hrs	\$0.00	Mon 12/4/06																										
208	3.1.2.2.5	Number & Type of LOWFS TS (m4)	RC	100%	60 hrs	0 hrs	\$0.00	Mon 12/4/06																										
209	3.1.2.2.6	d-IFU & LOWFS AO & Object Selection T	AM	50%	112 hrs	56 hrs	\$4,977.82	Mon 5/28/07																										
210	3.1.2.3	Laser Facility Trade Studies		100%	140 hrs	0 hrs	\$0.00	Mon 10/16/06																										
211	3.1.2.3.1	LGS Asterism Geometry & Size TS (m2)	RF	100%	20 hrs	0 hrs	\$0.00	Mon 10/23/06																										
212	3.1.2.3.2	Variable vs fixed LGS Asterism Cost/Bene	VV	100%	20 hrs	0 hrs	\$0.00	Mon 10/16/06																										
213	3.1.2.3.3	Uplink compensation	DG	100%	100 hrs	0 hrs	\$0.00	Mon 5/21/07																										
214	3.1.2.4	Trade Study Conclusions Summary	CN	100%	60 hrs	0 hrs	\$0.00	Mon 5/14/07																										
215	3.1.3	System Architecture	RD	88%	1,556 hrs	184.8 hrs	\$11,778.06	Tue 5/8/07																										
216	3.1.3.1	Candidate Subsystems	RD	100%	480 hrs	0 hrs	\$0.00	Mon 5/21/07																										
217	3.1.3.1.1	Define Candidate Subsystems	RD	100%	228 hrs	0 hrs	\$0.00	Mon 5/21/07																										
218	3.1.3.1.2	Subsystems Performance Evaluation	RD	100%	72 hrs	0 hrs	\$0.00	Mon 6/4/07																										
219	3.1.3.1.3	Subsystems Cost Evaluation	CN	100%	72 hrs	0 hrs	\$0.00	Mon 6/4/07																										

Project: NGAO System Design Phase
Date: Tue 12/11/07

Critical

Critical Split

Critical Progress

Task

Split

Task Progress

Baseline

Baseline Split

Baseline Milestone

Milestone

Summary Progress

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External Tasks

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Deadline

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ID	WBS	Task Name	Lead	% Work Coi	Work	Remaining Work	Remaining Cost	Start	2007												2008												
									M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M
220	3.1.3.1.4	Subsystems Risk Analysis	CN	100%	36 hrs	0 hrs	\$0.00	Mon 6/18/07																									
221	3.1.3.1.5	Organize Candidate Subsystems	RD	100%	72 hrs	0 hrs	\$0.00	Mon 6/25/07																									
222	3.1.3.2	Candidate Architectures	RD	100%	556 hrs	0 hrs	\$0.00	Mon 7/9/07																									
223	3.1.3.2.1	Define Candidate Architectures	RD	100%	328 hrs	0 hrs	\$0.00	Mon 7/9/07																									
224	3.1.3.2.2	Architectures Performance Evaluation	RD	100%	72 hrs	0 hrs	\$0.00	Mon 7/23/07																									
225	3.1.3.2.3	Architectures Cost Evaluation	CN	100%	72 hrs	0 hrs	\$0.00	Mon 7/23/07																									
226	3.1.3.2.4	Architecture Risk Analysis	CN	100%	36 hrs	0 hrs	\$0.00	Mon 8/6/07																									
227	3.1.3.2.5	Adopt Baseline Architecture(s)	RD	100%	48 hrs	0 hrs	\$0.00	Mon 8/13/07																									
228	3.1.3.3	Functional Requirements	PW	66%	480 hrs	164.8 hrs	\$10,631.86	Tue 5/8/07																									
229	3.1.3.3.1	Draft Functional Requirements Document	PW	100%	20 hrs	0 hrs	\$0.00	Tue 5/22/07																									
230	3.1.3.3.2	AO System Functional Requirements Ver	CN	100%	160 hrs	0 hrs	\$0.00	Mon 7/9/07																									
231	3.1.3.3.3	AO System Functional Requirements Ver	CN	25%	80 hrs	60 hrs	\$4,461.84	Mon 10/29/07																									
232	3.1.3.3.4	Laser System Functional Requirements V	JC	100%	96 hrs	0 hrs	\$0.00	Mon 7/9/07																									
233	3.1.3.3.5	Laser System Functional Requirements V	CN	40%	48 hrs	28.8 hrs	\$2,178.78	Mon 10/29/07																									
234	3.1.3.3.6	Science Operations Functional Requirem	DLM	0%	30 hrs	30 hrs	\$1,582.68	Mon 12/3/07																									
235	3.1.3.3.7	Science Operations Functional Requirem	DLM	0%	30 hrs	30 hrs	\$1,491.60	Mon 2/4/08																									
236	3.1.3.3.8	Science Instruments Function Allocation \	SA	0%	8 hrs	8 hrs	\$458.48	Tue 5/8/07																									
237	3.1.3.3.9	Science Instruments Function Allocation \	SA	0%	8 hrs	8 hrs	\$458.48	Mon 1/14/08																									
238	3.1.3.4	Technology Drivers Summary	Cancel	0%	0 hrs	0 hrs	\$0.00	Thu 10/25/07																									
239	3.1.3.5	Technical Risk Analysis Ver 1	CN	100%	20 hrs	0 hrs	\$0.00	Mon 8/27/07																									
240	3.1.3.6	Technical Risk Analysis Ver 2	CN	0%	20 hrs	20 hrs	\$1,146.20	Wed 1/16/08																									
241	3.2	AO System	DG	15%	1,269 hrs	1,078.38 hrs	\$76,295.46	Tue 5/29/07																									
242	3.2.1	AO System Architecture	DG	60%	40 hrs	16 hrs	\$1,776.00	Tue 9/4/07																									
243	3.2.2	AO Enclosure	JM	2%	40 hrs	39.2 hrs	\$2,246.55	Mon 10/1/07																									
244	3.2.3	Opto-mechanical	BB	14%	781 hrs	671.98 hrs	\$51,227.68	Tue 5/29/07																									
245	3.2.3.1	Field Rotation	CL	40%	45 hrs	27 hrs	\$1,940.40	Tue 9/4/07																									
246	3.2.3.2	Optical Relay	RK	40%	60 hrs	36 hrs	\$2,490.06	Tue 9/4/07																									
247	3.2.3.3	Optical Switchyard	RK	2%	50 hrs	49 hrs	\$3,873.45	Tue 9/4/07																									
248	3.2.3.4	Optical Support Structure	CL	5%	30 hrs	28.5 hrs	\$2,867.10	Thu 11/15/07																									
249	3.2.3.5	Wavefront Sensors	VV	8%	240 hrs	220 hrs	\$16,896.97	Wed 8/22/07																									
250	3.2.3.5.1	High Order LGS Wavefront Sensors	VV	10%	80 hrs	72 hrs	\$5,831.65	Wed 8/22/07																									
251	3.2.3.5.2	High Order NGS Wavefront Sensor	VV	15%	40 hrs	34 hrs	\$2,753.84	Wed 8/22/07																									
252	3.2.3.5.3	Low Order NGS Wavefront Sensors	VV	5%	80 hrs	76 hrs	\$6,133.70	Wed 8/22/07																									
253	3.2.3.5.4	Calibration Wavefront Sensor	CN	5%	40 hrs	38 hrs	\$2,177.78	Wed 8/22/07																									
254	3.2.3.6	Wavefront Correctors	CN	2%	75 hrs	73.53 hrs	\$4,459.28	Mon 8/13/07																									
255	3.2.3.6.1	Tip/Tilt Corrector	CN	2%	10 hrs	9.8 hrs	\$561.64	Mon 10/1/07																									
256	3.2.3.6.2	Deformable Mirror	CN	2%	40 hrs	39.2 hrs	\$2,246.55	Mon 8/13/07																									
257	3.2.3.6.3	Tip/tilt Vibration Mitigation	CN	2%	25 hrs	24.53 hrs	\$1,651.09	Wed 8/22/07																									
258	3.2.3.7	Acquisition Cameras	CN	50%	40 hrs	20 hrs	\$1,146.20	Mon 10/1/07																									
259	3.2.3.7.1	NGS Acquisition Camera	CN	50%	20 hrs	10 hrs	\$573.10	Mon 10/1/07																									
260	3.2.3.7.2	LGS Acquisition Camera	CN	50%	20 hrs	10 hrs	\$573.10	Mon 10/1/07																									
261	3.2.3.8	Atmospheric Dispersion Correction	RD	30%	24 hrs	16.8 hrs	\$1,461.60	Tue 8/21/07																									
262	3.2.3.9	Alignment, Calibration, Diagnostics, Metrology	CN	25%	60 hrs	45 hrs	\$2,578.95	Tue 5/29/07																									
263	3.2.3.10	Atmospheric Profiler	MB	2%	12 hrs	11.77 hrs	\$1,007.45	Wed 8/22/07																									

Project: NGAO System Design Phase
Date: Tue 12/11/07

Critical

Critical Split

Critical Progress

Task

Split

Task Progress

Baseline

Baseline Split

Baseline Milestone

Milestone

Summary Progress

Summary

Project Summary

External Tasks

External Milestone

Deadline

ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost	Start	2007												2008															
									M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J		
264	3.2.3.11	d-IFU & LOWFS AO & Object Selection	DG	0%	120 hrs	120 hrs	\$10,477.40	Thu 8/23/07																												
265	3.2.3.12	PSF Monitoring Camera	MB	2%	25 hrs	24.4 hrs	\$2,028.83	Mon 10/1/07																												
266	3.2.4	Non-real-time Control	EJ	10%	178 hrs	160.2 hrs	\$9,181.04	Mon 6/25/07																												
267	3.2.4.1	Non-RTC Software	EJ	10%	106 hrs	95.4 hrs	\$5,467.37	Mon 6/25/07																												
268	3.2.4.2	Non-RTC Electronics	EJ	10%	72 hrs	64.8 hrs	\$3,713.66	Mon 7/23/07																												
269	3.2.5	Real-time Control	DG	17%	230 hrs	191 hrs	\$11,864.19	Wed 8/1/07																												
270	3.2.5.1	RTC Architecture Analysis and Design Study	DG	20%	110 hrs	88 hrs	\$5,955.42	Wed 8/1/07																												
271	3.2.5.2	RTC Software Module Definition	EJ	10%	70 hrs	63 hrs	\$3,612.10	Mon 9/3/07																												
272	3.2.5.3	RTC Hardware Module Definition	MR	20%	50 hrs	40 hrs	\$2,296.68	Mon 9/3/07																												
273	3.3	Laser Facility	CN	10%	465 hrs	420.3 hrs	\$29,189.30	Mon 8/6/07																												
274	3.3.1	Laser System Architecture	VV	25%	80 hrs	60 hrs	\$5,333.40	Mon 8/27/07																												
275	3.3.2	Laser Enclosure	JB	20%	40 hrs	32 hrs	\$1,833.92	Mon 10/22/07																												
276	3.3.3	Laser	DG	10%	20 hrs	18 hrs	\$1,600.02	Mon 10/22/07																												
277	3.3.4	Laser Launch Facility	VV	3%	171 hrs	165.78 hrs	\$12,139.63	Mon 8/6/07																												
278	3.3.4.1	Laser Beam Transport	CN	2%	46 hrs	45.08 hrs	\$3,078.71	Mon 8/6/07																												
279	3.3.4.2	Laser Pointing & Diagnostics	VV	2%	65 hrs	63.7 hrs	\$4,894.22	Mon 8/6/07																												
280	3.3.4.3	Laser Launch Telescope	VV	5%	60 hrs	57 hrs	\$4,166.70	Mon 8/6/07																												
281	3.3.5	Laser Safety Systems	CN	2%	14 hrs	13.72 hrs	\$786.25	Mon 10/8/07																												
282	3.3.5.1	Personnel and Equipment Safety Systems	CN	2%	6 hrs	5.88 hrs	\$336.98	Mon 10/8/07																												
283	3.3.5.2	Aircraft, Satellite & Laser Traffic Control Safety	CN	2%	8 hrs	7.83 hrs	\$449.27	Mon 10/8/07																												
284	3.3.6	Laser System Control	JC	7%	140 hrs	130.8 hrs	\$7,496.07	Mon 10/1/07																												
285	3.3.6.1	Laser System Software	EJ	10%	80 hrs	72 hrs	\$4,126.32	Mon 10/1/07																												
286	3.3.6.2	Laser System Electronics	CN	2%	60 hrs	58.8 hrs	\$3,369.75	Mon 10/1/07																												
287	3.4	Science Operations	DLM	9%	390 hrs	356 hrs	\$18,869.12	Tue 5/22/07																												
288	3.4.1	Astronomical Observations Operations	DLM	13%	230 hrs	199.4 hrs	\$11,010.11	Mon 5/28/07																												
289	3.4.1.1	Pre-Observing Interfaces	DLM	40%	60 hrs	36 hrs	\$1,243.44	Thu 7/26/07																												
290	3.4.1.1.1	AO Guide Star Interface	EM	80%	20 hrs	4 hrs	\$138.16	Thu 7/26/07																												
291	3.4.1.1.2	Science Observations Simulation Tools	EM	20%	40 hrs	32 hrs	\$1,105.28	Thu 7/26/07																												
292	3.4.1.2	Observing Interfaces	DLM	7%	60 hrs	55.6 hrs	\$2,366.72	Mon 5/28/07																												
293	3.4.1.2.1	Acquisition	EM	10%	20 hrs	18 hrs	\$621.72	Mon 5/28/07																												
294	3.4.1.2.2	Observing Sequences	EM	10%	20 hrs	18 hrs	\$621.72	Mon 5/28/07																												
295	3.4.1.2.3	Instrument, AO & Telescope Observer Int	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 5/28/07																												
296	3.4.1.2.4	Science Data Quality Monitoring	DLM	2%	10 hrs	9.8 hrs	\$561.64	Wed 10/17/07																												
297	3.4.1.3	Post-Observing Interfaces	DLM	2%	110 hrs	107.8 hrs	\$7,399.95	Mon 10/1/07																												
298	3.4.1.3.1	Generic Data Products	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 10/1/07																												
299	3.4.1.3.2	Science Data Quality Assessment	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 10/1/07																												
300	3.4.1.3.3	Science Data Archiving	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 10/1/07																												
301	3.4.1.3.4	PSF Reconstruction	DLM	2%	80 hrs	78.4 hrs	\$5,715.04	Mon 10/1/07																												
302	3.4.2	AO-Instrument Operations	DLM	2%	160 hrs	156.6 hrs	\$7,859.01	Tue 5/22/07																												
303	3.4.2.1	AO-Instrument Operations Architecture	DLM	2%	140 hrs	137 hrs	\$6,735.73	Tue 5/22/07																												
304	3.4.2.1.1	AO-Instrument Observing Modes	DLM	2%	50 hrs	48.8 hrs	\$2,127.29	Tue 5/22/07																												
305	3.4.2.1.2	AO-Instrument Operations Support	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 6/25/07																												
306	3.4.2.1.3	AO-Instrument Configuration & Setup	DLM	2%	10 hrs	9.8 hrs	\$561.64	Thu 7/5/07																												
307	3.4.2.1.4	AO-Instrument Calibrations	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 6/4/07																												

Project: NGAO System Design Phase

Date: Tue 12/11/07

Critical

Critical Split

Critical Progress

Task

Split

Task Progress

Baseline

Baseline Split

Baseline Milestone

Milestone

Summary Progress

Summary

Project Summary

External Tasks

External Milestone

Deadline

ID	WBS	Task Name	Lead	% Work C	Work	Remaining Work	Remaining Cost	Start
308	3.4.2.1.5	AO-Instrument Nighttime Operation Mode	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 6/4/07
309	3.4.2.1.6	AO-Instrument Science Acquisition & Cor	EM	2%	20 hrs	19.6 hrs	\$676.98	Mon 7/2/07
310	3.4.2.1.7	AO-Instrument Health Monitoring & Auton	Cancel	0%	0 hrs	0 hrs	\$0.00	Tue 10/2/07
311	3.4.2.1.8	AO-Instrument Laser Traffic Control	DS	2%	10 hrs	9.8 hrs	\$561.64	Mon 10/1/07
312	3.4.2.1.9	AO-Instrument User Interfaces	EJ	2%	20 hrs	19.6 hrs	\$1,123.28	Mon 10/1/07
313	3.4.2.1.10	AO-Instrument Maintenance Plan	Cancel	0%	0 hrs	0 hrs	\$0.00	Fri 10/26/07
314	3.4.2.2	AO-Instrument Operations Optimization	DLM	2%	20 hrs	19.6 hrs	\$1,123.27	Mon 6/18/07
315	3.4.2.2.1	AO-Instrument Performance Prediction	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 6/18/07
316	3.4.2.2.2	AO-Instrument Real-Time Optimization	DLM	2%	10 hrs	9.8 hrs	\$561.64	Mon 6/18/07
317	3.4.2.2.3	AO-Instrument Environment Monitoring	Cancel	0%	0 hrs	0 hrs	\$0.00	Fri 7/6/07
318	3.5	Science Instruments	SA	61%	488 hrs	192.68 hrs	\$11,238.58	Mon 10/2/06
319	3.5.1	Instrument Requirements & Initial Definitions	SA	25%	72 hrs	54 hrs	\$3,094.74	Mon 4/9/07
320	3.5.1.1	Top Level Instrument Requirements & Definitic	SA	50%	16 hrs	8 hrs	\$458.48	Mon 4/9/07
321	3.5.1.2	Instrument Suite Version 1	SA	77%	13 hrs	3 hrs	\$171.93	Mon 5/7/07
322	3.5.1.2.1	Instrument Function Allocation Review wi	SA	0%	3 hrs	3 hrs	\$171.93	Mon 5/7/07
323	3.5.1.2.2	Summary Descriptions of Instruments	SA	100%	10 hrs	0 hrs	\$0.00	Tue 5/8/07
324	3.5.1.3	Instrument Suite Version 2	SA	0%	11 hrs	11 hrs	\$630.41	Thu 1/10/08
325	3.5.1.3.1	Instrument Review with Science Team	SA	0%	3 hrs	3 hrs	\$171.93	Thu 1/10/08
326	3.5.1.3.2	Revised Summary Descriptions of Instrun	SA	0%	8 hrs	8 hrs	\$458.48	Mon 1/14/08
327	3.5.1.4	Instrument Interfaces	SA	0%	32 hrs	32 hrs	\$1,833.92	Wed 6/6/07
328	3.5.1.4.1	Hardware Instrument Interfaces	SA	0%	16 hrs	16 hrs	\$916.96	Wed 6/6/07
329	3.5.1.4.2	Software Instrument Interfaces	SA	0%	16 hrs	16 hrs	\$916.96	Tue 6/12/07
330	3.5.2	Deployable NIR IFU (DNIRI)	SA	81%	258 hrs	49.6 hrs	\$3,038.38	Mon 5/7/07
331	3.5.2.1	DNIRI Concept Development	SA	100%	50 hrs	0 hrs	\$0.00	Mon 5/7/07
332	3.5.2.2	DNIRI AO Interface Issues	SA	96%	40 hrs	1.6 hrs	\$116.96	Mon 6/18/07
333	3.5.2.2.1	Object Selection for DNIRI	SA	100%	32 hrs	0 hrs	\$0.00	Mon 6/18/07
334	3.5.2.2.2	AO Design for DNIRI	SA	80%	4 hrs	0.8 hrs	\$71.11	Mon 7/2/07
335	3.5.2.2.3	DNIRI AO Boundary	SA	80%	4 hrs	0.8 hrs	\$45.85	Tue 7/3/07
336	3.5.2.3	DNIRI Spectrograph Concepts	SA	100%	60 hrs	0 hrs	\$0.00	Wed 7/4/07
337	3.5.2.4	DNIRI Imager Concepts	SA	100%	60 hrs	0 hrs	\$0.00	Wed 7/4/07
338	3.5.2.5	DNIRI Concept Review with AO Team	SA	0%	8 hrs	8 hrs	\$629.02	Wed 8/8/07
339	3.5.2.6	DNIRI Report ver 1	SA	0%	40 hrs	40 hrs	\$2,292.40	Fri 8/10/07
340	3.5.3	Single Object Imagers/Low Resolution Spectrog	SA	57%	95 hrs	40.5 hrs	\$2,321.06	Mon 5/7/07
341	3.5.3.1	SOI/LRS Coronagraph Requirements	SA	100%	10 hrs	0 hrs	\$0.00	Mon 5/7/07
342	3.5.3.2	SOI/LRS Spectrograph Requirements	SA	50%	5 hrs	2.5 hrs	\$143.28	Mon 6/4/07
343	3.5.3.3	SOI/LRS Concept Development	SA	50%	24 hrs	12 hrs	\$687.72	Mon 6/18/07
344	3.5.3.4	SOI/LRS Concept Review	SA	0%	6 hrs	6 hrs	\$343.86	Mon 7/16/07
345	3.5.3.4.1	SOI/LRS Concept Review with Science T	SA	0%	3 hrs	3 hrs	\$171.93	Mon 7/16/07
346	3.5.3.4.2	SOI/LRS Concept Review with AO Team	SA	0%	3 hrs	3 hrs	\$171.93	Tue 7/17/07
347	3.5.3.5	SOI/LRS Reports	SA	60%	50 hrs	20 hrs	\$1,146.20	Thu 7/5/07
348	3.5.3.5.1	SOI/LRS Near-IR ver 1	SA	60%	25 hrs	10 hrs	\$573.10	Thu 7/5/07
349	3.5.3.5.2	SOI/LRS Visible ver 1	SA	60%	25 hrs	10 hrs	\$573.10	Fri 7/6/07
350	3.5.4	Single Object IFUs (SOIFU)	SA	15%	17 hrs	14.5 hrs	\$831.00	Mon 4/30/07
351	3.5.4.1	Near-IR IFU Requirements Review	SA	50%	5 hrs	2.5 hrs	\$143.28	Mon 4/30/07

Project: NGAO System Design Phase
Date: Tue 12/11/07

Critical Critical Split Critical Progress Task

ID	WBS	Task Name	Lead	% Work Coi	Work	Remaining Work	Remaining Cost	Start	2007					2008																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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352	3.5.4.2	Visible IFU Requirements Review	SA	0%	4 hrs	4 hrs	\$229.24	Tue 9/18/07																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												



Project: NGAO System Design Phase

Date: Tue 12/11/07

Critical

Critical Split

Critical Progress

Task

Split

Task Progress

Baseline

Baseline Split

Baseline Milestone

Milestone

Summary Progress

Summary

Project Summary

External Tasks

External Milestone

Deadline