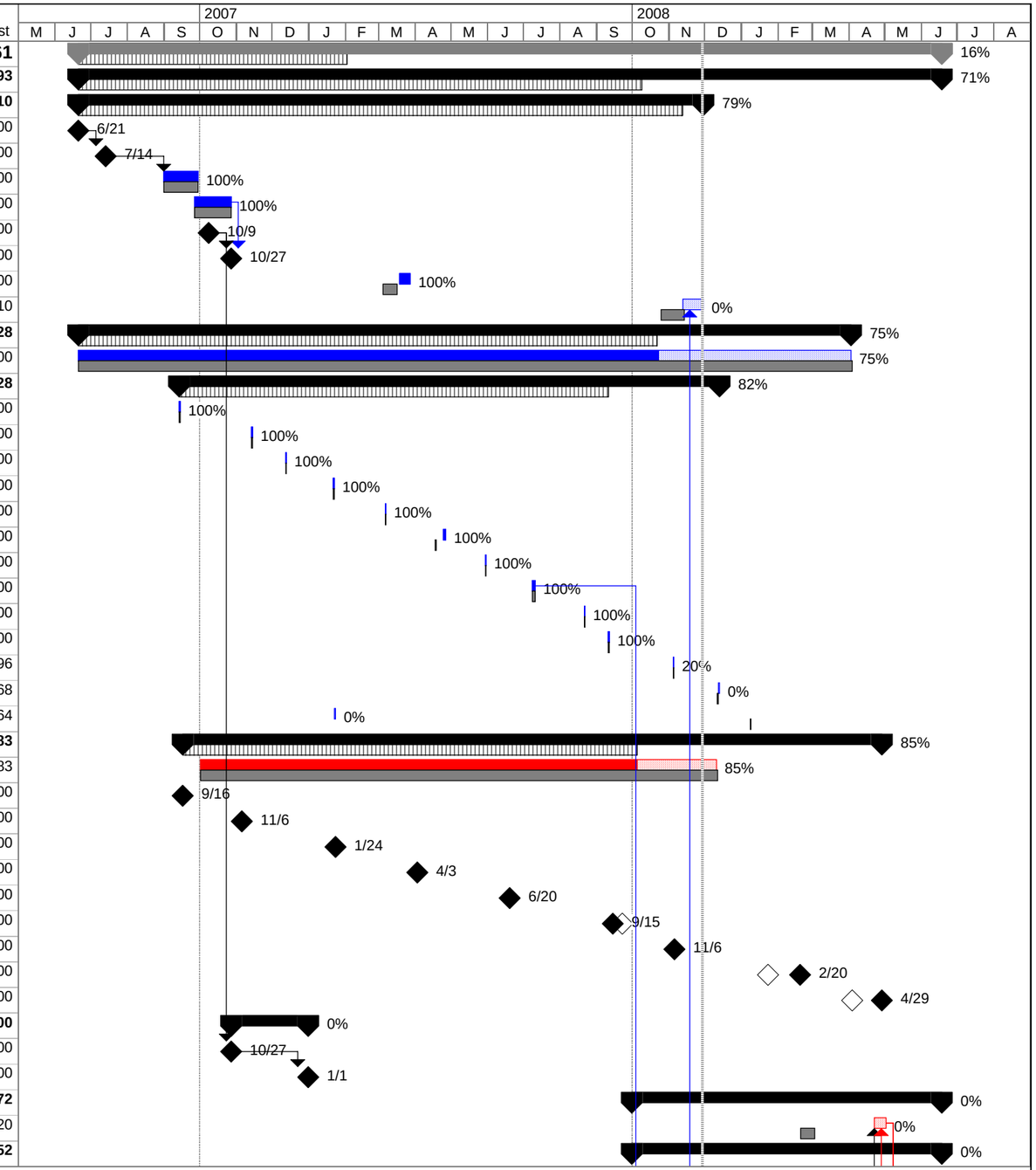
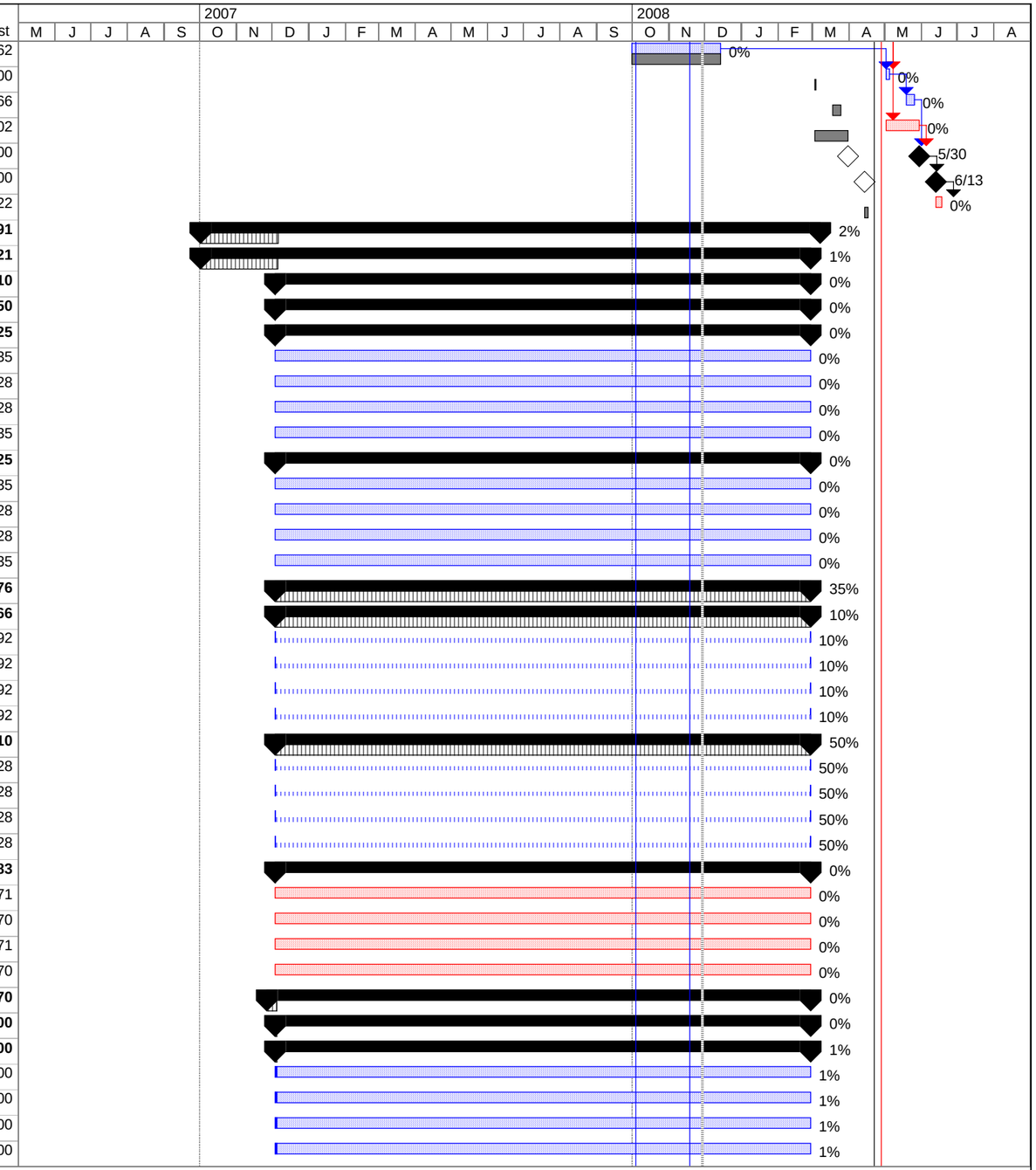
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
0	**0**	**NGAO System Design Phase Schedule**		**59%**	**11,390.2 hrs**	**4,652.45 hrs**	**$291,081.61**
1	**1**	**SD Phase Management**	**PW**	**64%**	**2,108 hrs**	**752.7 hrs**	**$44,491.93**
2	**1.1**	**Planning and Contracting**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



Project: NGAO System Design Phase
Date: Thu 11/29/07

Critical		Task		Baseline		Milestone		Project Summary		Deadline	
Critical Split		Split		Baseline Split		Summary Progress		External Tasks			
Critical Progress		Task Progress		Baseline Milestone		Summary		External Milestone			

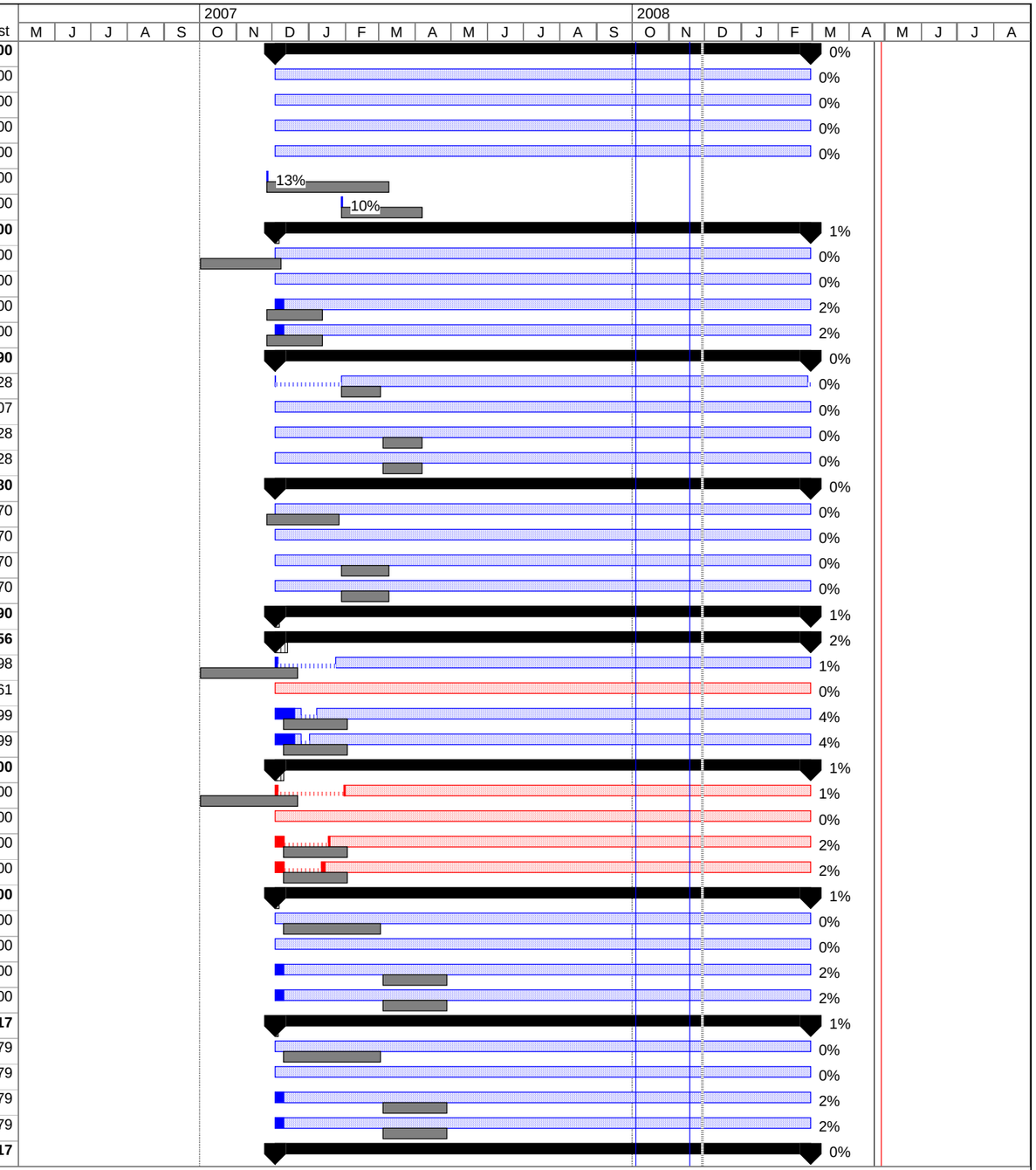
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
44	1.5.2.1	Identify Reviewers	SA	0%	12 hrs	12 hrs	$114.62
45	1.5.2.2	Review Package Distributed	SA	0%	8 hrs	8 hrs	$0.00
46	1.5.2.3	Reviewer Comments Addressed	PW	0%	120 hrs	120 hrs	$6,516.66
47	1.5.2.4	System Design Review Support	PW	0%	186 hrs	186 hrs	$10,919.02
48	1.5.2.5	System Design Review Meeting	SA	0%	0 hrs	0 hrs	$0.00
49	1.5.2.6	Reviewer Report Received		0%	0 hrs	0 hrs	$0.00
50	1.5.2.7	Response to Reviewer Report & Distribution	PW	0%	40 hrs	40 hrs	$2,172.22
51	**2**	**System Requirements**	**PW**	**56%**	**959.2 hrs**	**425.57 hrs**	**$11,048.91**
52	**2.1**	**Science Requirements**	**CM**	**50%**	**705.2 hrs**	**355.57 hrs**	**$7,037.21**
53	**2.1.1**	**Solar System Science Requirements**	**FM**	**69%**	**165.2 hrs**	**50.77 hrs**	**$2,682.10**
54	**2.1.1.1**	**Multiplicity of Minor Planets (Key)**	**FM**	**80%**	**100 hrs**	**20 hrs**	**$918.50**
55	**2.1.1.1.1**	**Minor Planets Survey Requirements**		**80%**	**50 hrs**	**10 hrs**	**$459.25**
56	2.1.1.1.1.1	MP Survey Science Requirements		80%	12.5 hrs	2.5 hrs	$86.35
57	2.1.1.1.1.2	MP Survey AO Requirements		80%	12.5 hrs	2.5 hrs	$143.28
58	2.1.1.1.1.3	MP Survey Observing Requirements		80%	12.5 hrs	2.5 hrs	$143.28
59	2.1.1.1.1.4	MP Survey Instrument Requirements		80%	12.5 hrs	2.5 hrs	$86.35
60	**2.1.1.1.2**	**Minor Planet Orbit Determination Requ**		**80%**	**50 hrs**	**10 hrs**	**$459.25**
61	2.1.1.1.2.1	MP Orbit Science Requirements		80%	12.5 hrs	2.5 hrs	$86.35
62	2.1.1.1.2.2	MP Orbit AO Requirements		80%	12.5 hrs	2.5 hrs	$143.28
63	2.1.1.1.2.3	MP Orbit Observing Requirements		80%	12.5 hrs	2.5 hrs	$143.28
64	2.1.1.1.2.4	MP Orbit Instrument Requirements		80%	12.5 hrs	2.5 hrs	$86.35
65	**2.1.1.2**	**Giant Planets & Their Moons**	**IdP**	**35%**	**32 hrs**	**20.82 hrs**	**$1,192.76**
66	**2.1.1.2.1**	**Giant Planet Requirements**		**10%**	**12 hrs**	**10.82 hrs**	**$619.66**
67	2.1.1.2.1.1	GP Science Requirements		10%	3 hrs	2.7 hrs	$154.92
68	2.1.1.2.1.2	GP AO Requirements		10%	3 hrs	2.7 hrs	$154.92
69	2.1.1.2.1.3	GP Observing Requirements		10%	3 hrs	2.7 hrs	$154.92
70	2.1.1.2.1.4	GP Instrument Requirements		10%	3 hrs	2.7 hrs	$154.92
71	**2.1.1.2.2**	**Giant Planet Moons Requirements**		**50%**	**20 hrs**	**10 hrs**	**$573.10**
72	2.1.1.2.2.1	GP Moons Science Requirements		50%	5 hrs	2.5 hrs	$143.28
73	2.1.1.2.2.2	GP Moons AO Requirements		50%	5 hrs	2.5 hrs	$143.28
74	2.1.1.2.2.3	GP Moons Observing Requirements		50%	5 hrs	2.5 hrs	$143.28
75	2.1.1.2.2.4	GP Moons Instrument Requirements		50%	5 hrs	2.5 hrs	$143.28
76	**2.1.1.3**	**Shape & Size of Asteroids**	**FM**	**70%**	**33.2 hrs**	**9.97 hrs**	**$570.83**
77	2.1.1.3.1	Asteroids Science Requirements		70%	8.3 hrs	2.48 hrs	$142.71
78	2.1.1.3.2	Asteroids AO Requirements		70%	8.3 hrs	2.48 hrs	$142.70
79	2.1.1.3.3	Asteroids Observing Requirements		70%	8.3 hrs	2.48 hrs	$142.71
80	2.1.1.3.4	Asteroids Instrument Requirements		70%	8.3 hrs	2.48 hrs	$142.70
81	**2.1.2**	**Galactic Science Requirements**	**ML**	**32%**	**144 hrs**	**97.6 hrs**	**$1,242.70**
82	**2.1.2.1**	**General Relativity at the Galactic Center (K**	**AG**	**50%**	**60 hrs**	**30 hrs**	**$0.00**
83	**2.1.2.1.1**	**GR Astrometry Requirements**	**AG**	**50%**	**40 hrs**	**20 hrs**	**$0.00**
84	2.1.2.1.1.1	GR Astrometry Science Requiremen		50%	10 hrs	5 hrs	$0.00
85	2.1.2.1.1.2	GR Astrometry AO Requirements		50%	10 hrs	5 hrs	$0.00
86	2.1.2.1.1.3	GR Astrometry Observing Requirem		50%	10 hrs	5 hrs	$0.00
87	2.1.2.1.1.4	GR Astrometry Instrument Requirem		50%	10 hrs	5 hrs	$0.00



Project: NGAO System Design Phase
Date: Thu 11/29/07

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

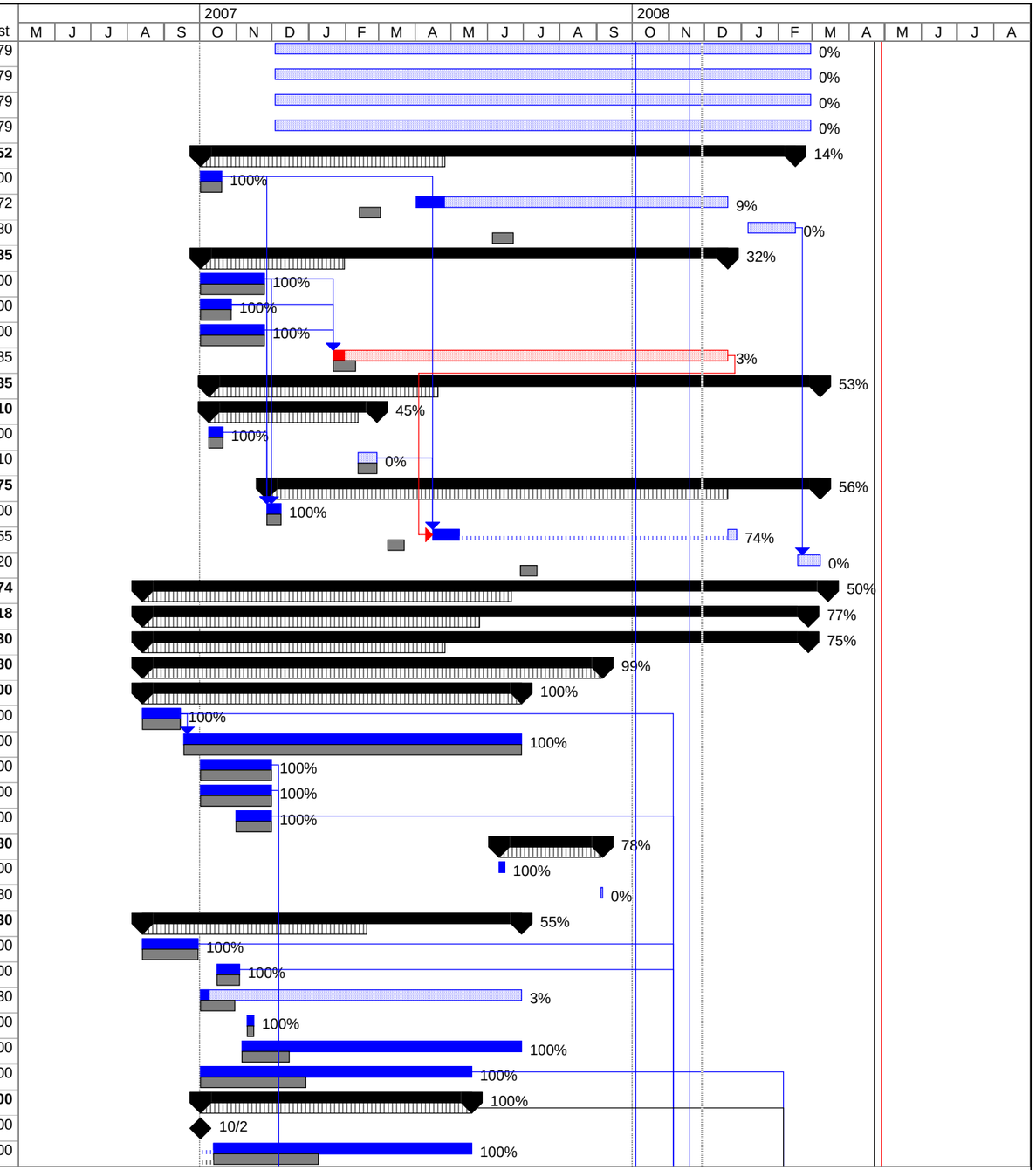
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
88	**2.1.2.1.2**	**GR Radial Velocity Requirements**	**AG**	**50%**	**20 hrs**	**10 hrs**	**$0.00**
89	2.1.2.1.2.1	GR RV Science Requirements		50%	5 hrs	2.5 hrs	$0.00
90	2.1.2.1.2.2	GR RV AO Requirements		50%	5 hrs	2.5 hrs	$0.00
91	2.1.2.1.2.3	GR RV Observing Requirements		50%	5 hrs	2.5 hrs	$0.00
92	2.1.2.1.2.4	GR RV Instrument Requirements		50%	5 hrs	2.5 hrs	$0.00
93	2.1.2.2	*Resolved Stellar Populations at the Galactic C*	*PDR*	0%	0 hrs	0 hrs	$0.00
94	2.1.2.3	*Galactic Center Nature of Sgr A*: 3-5 um Colo*	*Cancel*	10%	0 hrs	0 hrs	$0.00
95	**2.1.2.4**	**Planets around Low Mass Stars & Brown D**	**ML**	**60%**	**24 hrs**	**9.6 hrs**	**$0.00**
96	2.1.2.4.1	Companion Sensitivity Science Requirem		60%	6 hrs	2.4 hrs	$0.00
97	2.1.2.4.2	Companion Sensitivy AO Requirements		60%	6 hrs	2.4 hrs	$0.00
98	2.1.2.4.3	Companion Sensitivity Observing Require		60%	6 hrs	2.4 hrs	$0.00
99	2.1.2.4.4	Companion Sensitivity Instrument Requir		60%	6 hrs	2.4 hrs	$0.00
100	**2.1.2.5**	**Debris & Protoplanetary Disks**	**MF,PK**	**10%**	**20 hrs**	**18 hrs**	**$551.90**
101	2.1.2.5.1	Disk Science Requirements		10%	5 hrs	4.5 hrs	$143.28
102	2.1.2.5.2	Disk AO Requirements		10%	5 hrs	4.5 hrs	$122.07
103	2.1.2.5.3	Disk Observing Requirements		10%	5 hrs	4.5 hrs	$143.28
104	2.1.2.5.4	Disk Instrument Requirements		10%	5 hrs	4.5 hrs	$143.28
105	**2.1.2.6**	**Young Stellar Objects**	**MP,JE**	**0%**	**40 hrs**	**40 hrs**	**$690.80**
106	2.1.2.6.1	YSO Science Requirements		0%	10 hrs	10 hrs	$172.70
107	2.1.2.6.2	YSO AO Requirements		0%	10 hrs	10 hrs	$172.70
108	2.1.2.6.3	YSO Observing Requirements		0%	10 hrs	10 hrs	$172.70
109	2.1.2.6.4	YSO Instrument Requirements		0%	10 hrs	10 hrs	$172.70
110	**2.1.3**	**Extragalactic Science Requirements**	**CM**	**51%**	**196 hrs**	**95.2 hrs**	**$1,733.90**
111	**2.1.3.1**	**Resolved Stellar Populations in Crowded F**	**CM**	**60%**	**52 hrs**	**20.8 hrs**	**$407.56**
112	2.1.3.1.1	Stellar Populations Science Requirements		60%	13 hrs	5.2 hrs	$75.98
113	2.1.3.1.2	Stellar Populations AO Requirements		60%	13 hrs	5.2 hrs	$179.61
114	2.1.3.1.3	Stellar Populations Observing Requireme		60%	13 hrs	5.2 hrs	$75.99
115	2.1.3.1.4	Stellar Populations Instrument Requireme		60%	13 hrs	5.2 hrs	$75.99
116	**2.1.3.2**	**High Redshift Galaxies (Key)**	**CM**	**70%**	**56 hrs**	**16.8 hrs**	**$0.00**
117	2.1.3.2.1	High Redshift Science Requirements		70%	14 hrs	4.2 hrs	$0.00
118	2.1.3.2.2	High Redshift AO Requirements		70%	14 hrs	4.2 hrs	$0.00
119	2.1.3.2.3	High Redshift Observing Requirements		70%	14 hrs	4.2 hrs	$0.00
120	2.1.3.2.4	High Redshift Instrument Requirements		70%	14 hrs	4.2 hrs	$0.00
121	**2.1.3.3**	**Nearby Active Galactic Nuclei (Key)**	**CM**	**40%**	**32 hrs**	**19.2 hrs**	**$0.00**
122	2.1.3.3.1	AGN Science Requirements		40%	8 hrs	4.8 hrs	$0.00
123	2.1.3.3.2	AGN AO Requirements		40%	8 hrs	4.8 hrs	$0.00
124	2.1.3.3.3	AGN Observing Requirements		40%	8 hrs	4.8 hrs	$0.00
125	2.1.3.3.4	AGN Instrument Requirements		40%	8 hrs	4.8 hrs	$0.00
126	**2.1.3.4**	**Gravitational Lensing**	**EM**	**40%**	**32 hrs**	**19.2 hrs**	**$663.17**
127	2.1.3.4.1	Lensing Science Requirements		40%	8 hrs	4.8 hrs	$165.79
128	2.1.3.4.2	Lensing AO Requirements		40%	8 hrs	4.8 hrs	$165.79
129	2.1.3.4.3	Lensing Observing Requirements		40%	8 hrs	4.8 hrs	$165.79
130	2.1.3.4.4	Lensing Instrument Requirements		40%	8 hrs	4.8 hrs	$165.79
131	**2.1.3.5**	**QSO Host Galaxies**	**EM**	**20%**	**24 hrs**	**19.2 hrs**	**$663.17**



Project: NGAO System Design Phase
Date: Thu 11/29/07

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

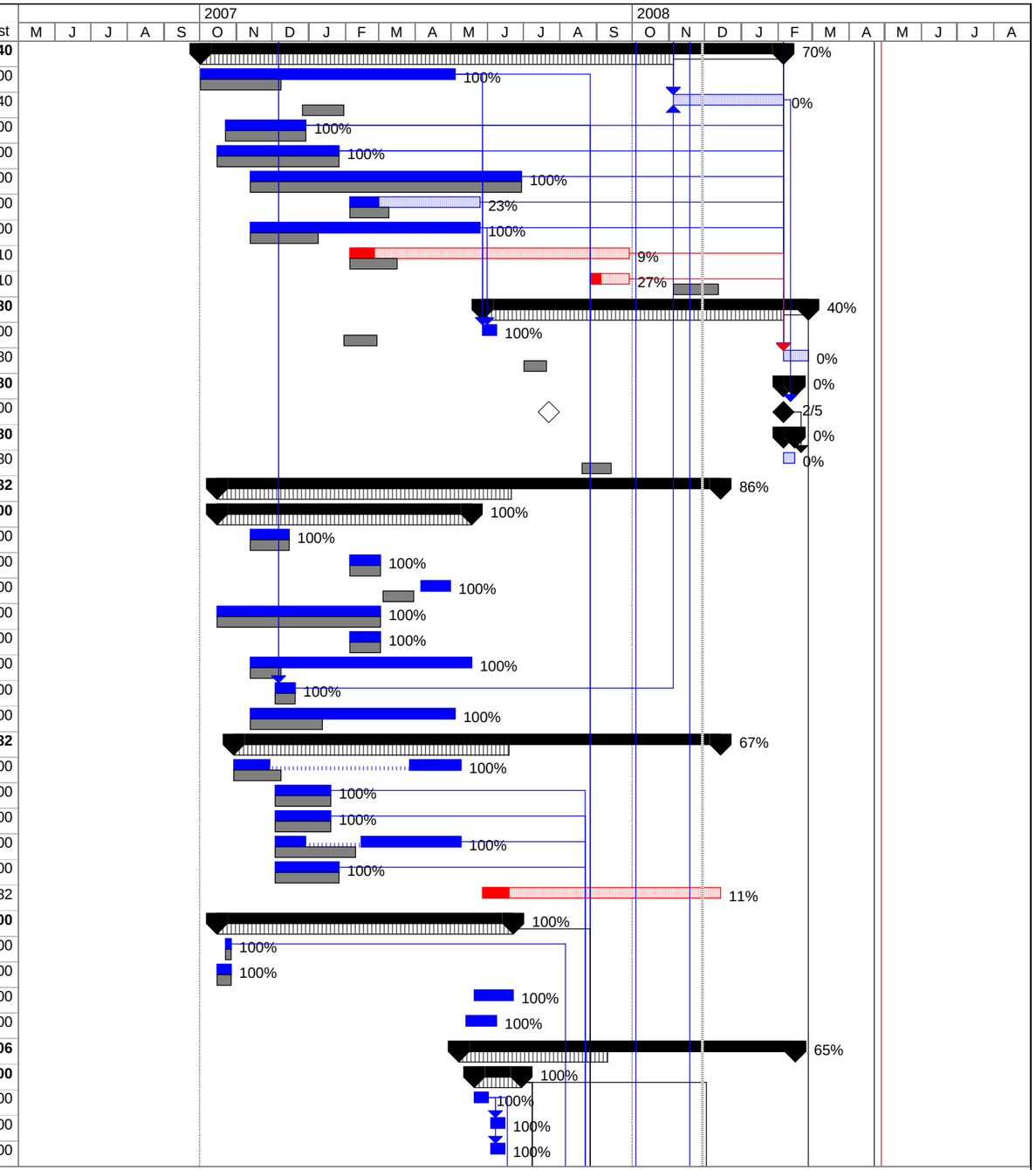
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
132	2.1.3.5.1	QSO Science Requirements		20%	6 hrs	4.8 hrs	$165.79
133	2.1.3.5.2	QSO AO Requirements		20%	6 hrs	4.8 hrs	$165.79
134	2.1.3.5.3	QSO Observing Requirements		20%	6 hrs	4.8 hrs	$165.79
135	2.1.3.5.4	QSO Instrument Requirements		20%	6 hrs	4.8 hrs	$165.79
136	**2.1.4**	**Science Case Requirements Document**	**CM**	**44%**	**200 hrs**	**112 hrs**	**$1,378.52**
137	2.1.4.1	Science Case Requirements Doc Rev 1		100%	40 hrs	0 hrs	$0.00
138	2.1.4.2	Science Case Requirements Doc Rev 2		40%	120 hrs	72 hrs	$687.72
139	2.1.4.3	Science Case Requirements Doc Rev 3		0%	40 hrs	40 hrs	$690.80
140	**2.2**	**Observatory Requirements**	**CN**	**80%**	**174 hrs**	**35 hrs**	**$2,005.85**
141	2.2.1	Development Requirements	CN	100%	16 hrs	0 hrs	$0.00
142	2.2.2	Observatory Interface Requirements	CN	100%	24 hrs	0 hrs	$0.00
143	2.2.3	Science Operations Requirements	DLM	100%	64 hrs	0 hrs	$0.00
144	2.2.4	Observatory Requirements Rev 2	PW	50%	70 hrs	35 hrs	$2,005.85
145	**2.3**	**System Requirements Document**		**56%**	**80 hrs**	**35 hrs**	**$2,005.85**
146	**2.3.1**	**Traceability Matrix**	**CN**	**50%**	**20 hrs**	**10 hrs**	**$573.10**
147	2.3.1.1	Traceability Matrix Rev 1	CN	100%	10 hrs	0 hrs	$0.00
148	2.3.1.2	Traceability Matrix Rev 2	PW	0%	10 hrs	10 hrs	$573.10
149	**2.3.2**	**System Requirements Document**	**PW**	**58%**	**60 hrs**	**25 hrs**	**$1,432.75**
150	2.3.2.1	SRD Rev 1	PW	100%	20 hrs	0 hrs	$0.00
151	2.3.2.2	SRD Rev 2	PW	75%	20 hrs	5 hrs	$286.55
152	2.3.2.3	SRD Rev 3	PW	0%	20 hrs	20 hrs	$1,146.20
153	**3**	**System Design**	**PW**	**65%**	**7,337 hrs**	**2,536.17 hrs**	**$171,135.74**
154	**3.1**	**Systems Engineering**	**RD**	**91%**	**4,585 hrs**	**408.8 hrs**	**$29,095.18**
155	**3.1.1**	**Performance Budgets**	**RD**	**90%**	**1,699 hrs**	**168 hrs**	**$12,339.30**
156	**3.1.1.1**	**Model Assumptions**	**CN**	**97%**	**288 hrs**	**8 hrs**	**$584.80**
157	**3.1.1.1.1**	**TMT site monitoring data mining**	**RF**	**100%**	**80 hrs**	**0 hrs**	**$0.00**
158	3.1.1.1.1.1	Tools in place & 1st release	RF	100%	40 hrs	0 hrs	$0.00
159	3.1.1.1.1.2	Release updated data (every two mc	RF	100%	40 hrs	0 hrs	$0.00
160	3.1.1.1.2	Telescope dynamic performance data	CN	100%	120 hrs	0 hrs	$0.00
161	3.1.1.1.3	Telescope static wavefront errors	CN	100%	20 hrs	0 hrs	$0.00
162	3.1.1.1.4	Sodium return vs laser format	DG	100%	40 hrs	0 hrs	$0.00
163	**3.1.1.1.5**	**Evaluate & Adopt New Model Assumpt**	**RD**	**71%**	**28 hrs**	**8 hrs**	**$584.80**
164	3.1.1.1.5.1	New Model Assumptions Rev 1	RD	100%	20 hrs	0 hrs	$0.00
165	3.1.1.1.5.2	New Model Assumptions Rev 2	RD	0%	8 hrs	8 hrs	$584.80
166	**3.1.1.2**	**Model/Tool Validation**	**CN**	**90%**	**294 hrs**	**30 hrs**	**$1,719.30**
167	3.1.1.2.1	Agreement between Tomography Codes	DG	100%	40 hrs	0 hrs	$0.00
168	3.1.1.2.2	Agreement between Sky Coverage Code	RD	100%	40 hrs	0 hrs	$0.00
169	3.1.1.2.3	Anchor to Keck II LGS AO PSFs	CN	25%	40 hrs	30 hrs	$1,719.30
170	3.1.1.2.4	Anchor to On-sky MGSU Experiments	RF	100%	10 hrs	0 hrs	$0.00
171	3.1.1.2.5	Anchor to LAO Lab Experiments	DG	100%	164 hrs	0 hrs	$0.00
172	3.1.1.3	Throughput	AB	100%	32 hrs	0 hrs	$0.00
173	**3.1.1.4**	**Background**	**AB**	**100%**	**40 hrs**	**0 hrs**	**$0.00**
174	3.1.1.4.1	Document Proposal Analysis	AB	100%	0 hrs	0 hrs	$0.00
175	3.1.1.4.2	Develop Background Performance Budge	AB	100%	40 hrs	0 hrs	$0.00



Project: NGAO System Design Phase
Date: Thu 11/29/07

Critical		Task		Baseline		Milestone		Project Summary		Deadline	
Critical Split		Split		Baseline Split		Summary Progress		External Tasks			
Critical Progress		Task Progress		Baseline Milestone		Summary		External Milestone			

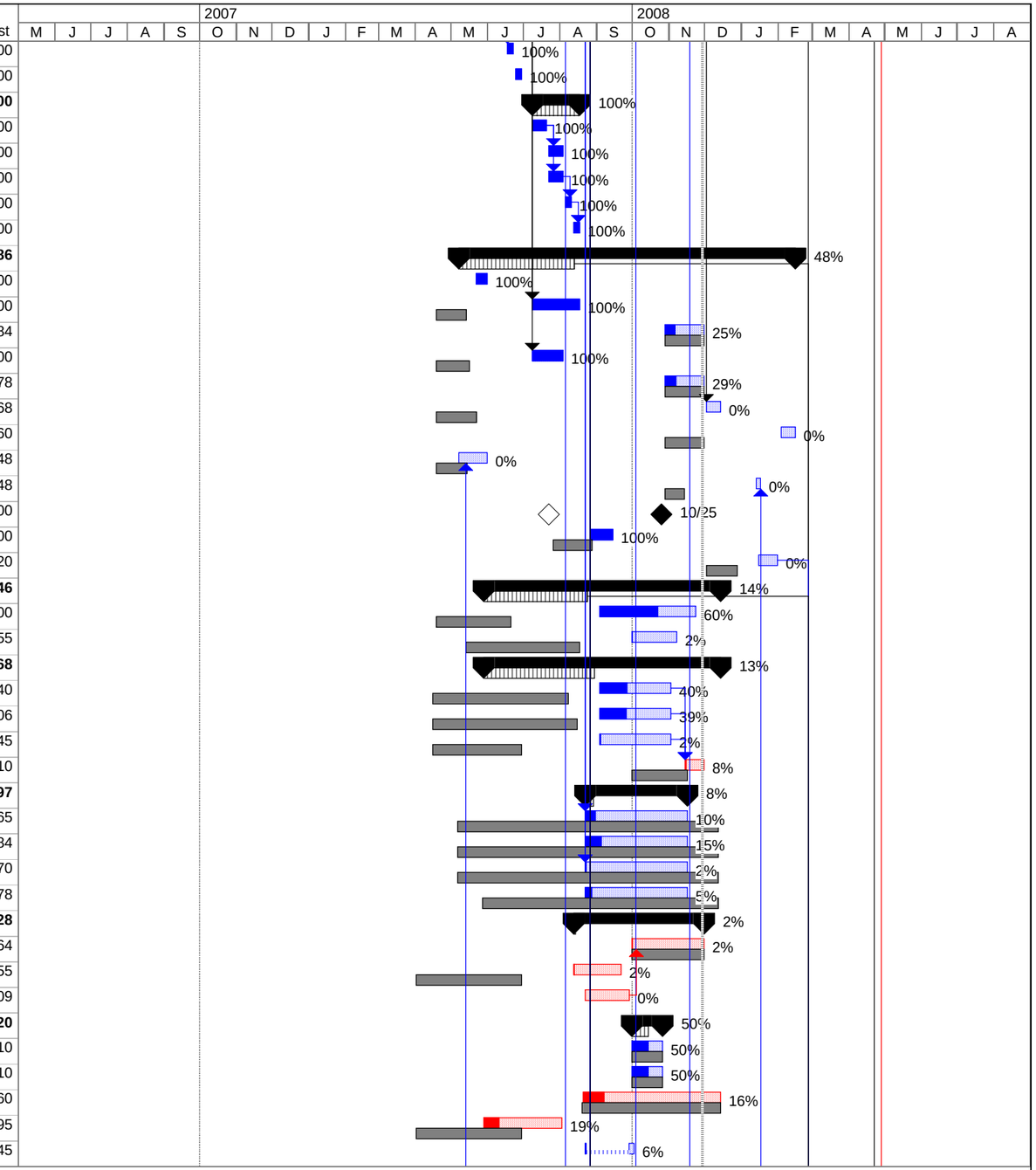
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
176	**3.1.1.5**	**Wavefront Error vs Sky Coverage**	**RD**	**48%**	**115 hrs**	**60 hrs**	**$5,333.40**
177	3.1.1.5.1	Document WFE Budget Rev 1	RD	100%	55 hrs	0 hrs	$0.00
178	3.1.1.5.2	Document WFE Budget Rev 2	RD	0%	60 hrs	60 hrs	$5,333.40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



Project: NGAO System Design Phase
Date: Thu 11/29/07

Critical		Task		Baseline		Milestone		Project Summary		Deadline	
Critical Split		Split		Baseline Split		Summary Progress		External Tasks			
Critical Progress		Task Progress		Baseline Milestone		Summary		External Milestone			

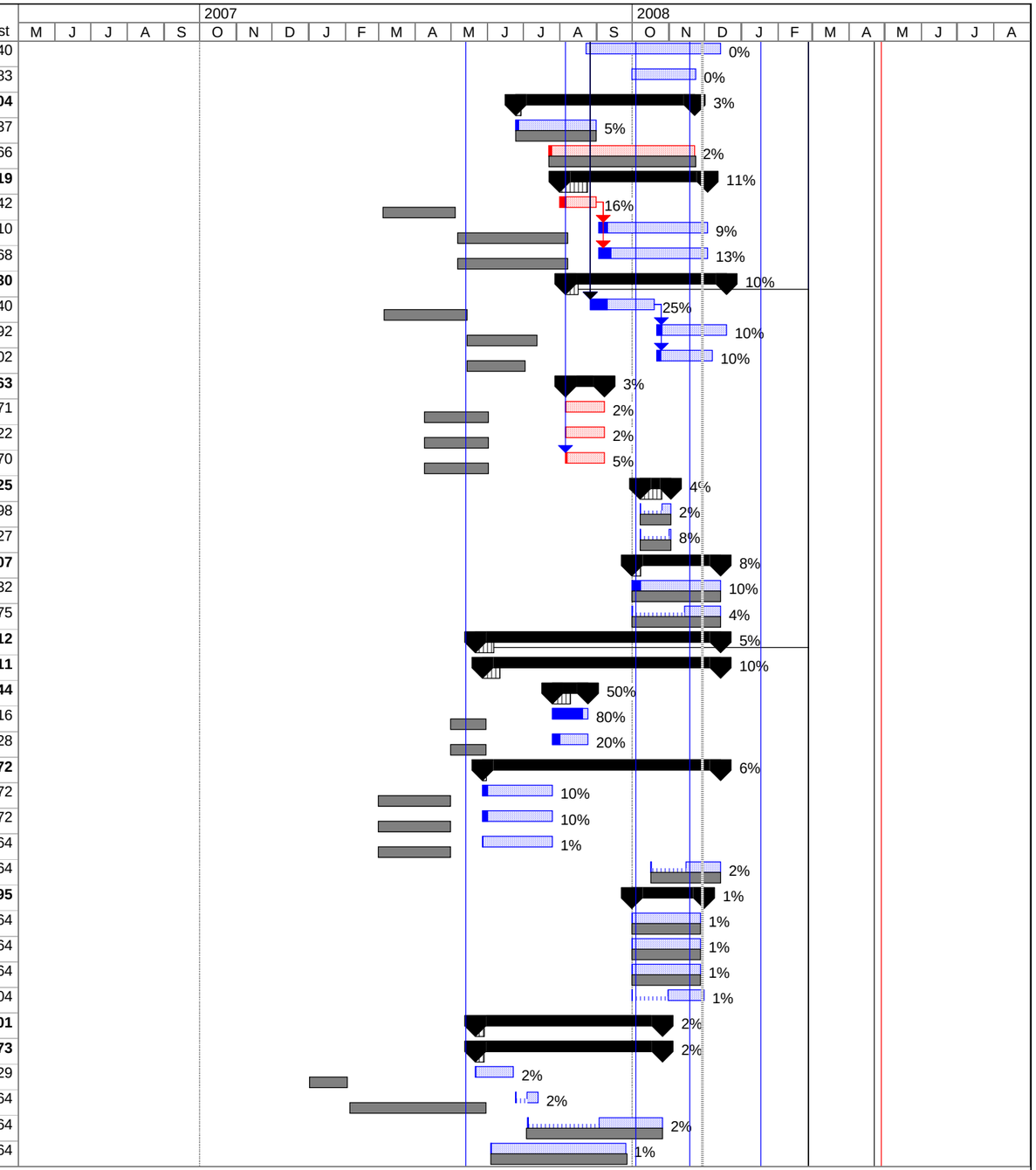
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
220	3.1.3.1.4	Subsystems Risk Analysis	CN	100%	36 hrs	0 hrs	$0.00
221	3.1.3.1.5	Organize Candidate Subsystems	RD	100%	72 hrs	0 hrs	$0.00
222	**3.1.3.2**	**Candidate Architectures**	**RD**	**100%**	**556 hrs**	**0 hrs**	**$0.00**
223	3.1.3.2.1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



Project: NGAO System Design Phase
Date: Thu 11/29/07

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

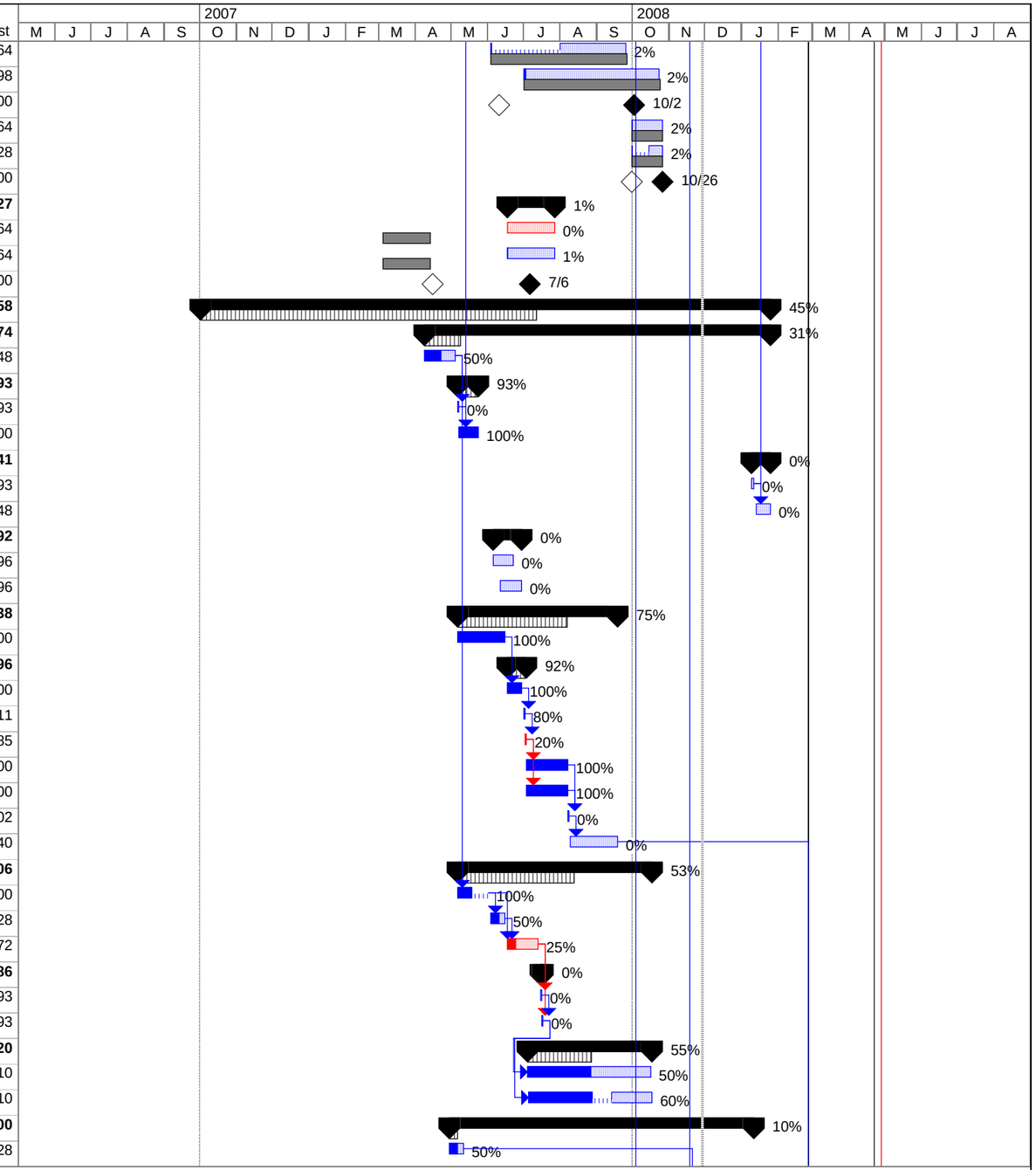
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
264	3.2.3.11	d-IFU & LOWFS AO & Object Selection	DG	0%	120 hrs	120 hrs	$10,477.40
265	3.2.3.12	PSF Monitoring Camera	MB	2%	25 hrs	24.4 hrs	$2,028.83
266	**3.2.4**	**Non-real-time Control**	**EJ**	**10%**	**178 hrs**	**160.2 hrs**	**$9,181.04**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



Project: NGAO System Design Phase
Date: Thu 11/29/07

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

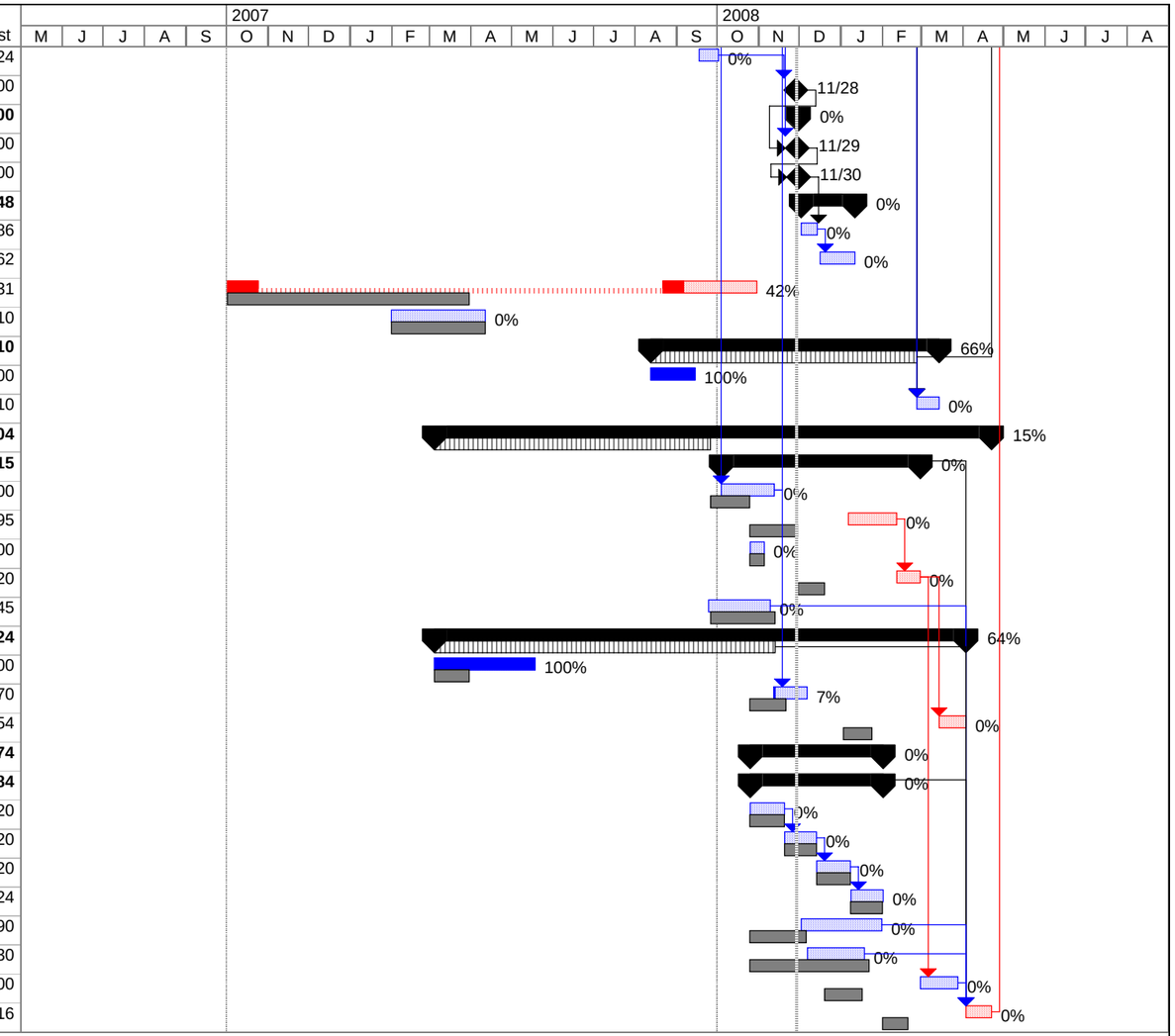
ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
308	3.4.2.1.5	AO-Instrument Nighttime Operation Mode	DLM	2%	10 hrs	9.8 hrs	$561.64
309	3.4.2.1.6	AO-Instrument Science Acquisition & Cor	EM	2%	20 hrs	19.6 hrs	$676.98
310	3.4.2.1.7	*AO-Instrument Health Monitoring & Auton*	*Cancel*	0%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



Project: NGAO System Design Phase
Date: Thu 11/29/07

Critical	Task	Baseline	Milestone	Project Summary	Deadline
Critical Split	Split	Baseline Split	Summary Progress	External Tasks	
Critical Progress	Task Progress	Baseline Milestone	Summary	External Milestone	

ID	WBS	Task Name	Lead	% Work Co	Work	Remaining Work	Remaining Cost
352	3.5.4.2	Visible IFU Requirements Review	SA	0%	4 hrs	4 hrs	$229.24
353	3.5.4.3	Visible IFU Concept Development	SA	0%	0 hrs	0 hrs	$0.00
354	**3.5.4.4**	**SOIFU Concept Review**	**SA**	**0%**	**0 hrs**	**0 hrs**	**$0.00**
355	3.5.4.4.1	SOIFU Concept Review with Science Tea	SA	0%	0 hrs	0 hrs	$0.00
356	3.5.4.4.2	SOIFU Concept Review with AO Team	SA	0%	0 hrs	0 hrs	$0.00
357	**3.5.4.5**	**Single Object IFU Reports**	**SA**	**0%**	**8 hrs**	**8 hrs**	**$458.48**
358	3.5.4.5.1	SOIFU Near-IR ver 1	SA	0%	6 hrs	6 hrs	$343.86
359	3.5.4.5.2	SOIFU Visible ver 1	SA	0%	2 hrs	2 hrs	$114.62
360	3.5.5	Interferometer	CN	33%	36 hrs	24.08 hrs	$1,380.31
361	3.5.6	OHANA	CN	0%	10 hrs	10 hrs	$573.10
362	**3.6**	**System Design Manual (SDM)**	**PW**	**43%**	**140 hrs**	**80 hrs**	**$6,448.10**
363	3.6.1	SDM v1	PW	100%	60 hrs	0 hrs	$0.00
364	3.6.2	SDM v2	PW	0%	80 hrs	80 hrs	$6,448.10
365	**4**	**Systems Engineering Management Plan (SEMP)**	**PW**	**5%**	**986 hrs**	**938 hrs**	**$64,405.04**
366	**4.1**	**Project Plan**	**PW**	**0%**	**410 hrs**	**410 hrs**	**$29,992.15**
367	4.1.1	WBS and Task Definition	PW	0%	140 hrs	140 hrs	$10,288.00
368	4.1.2	Cost Estimation	PW	0%	160 hrs	160 hrs	$11,951.95
369	4.1.3	Major Project Milestones	PW	0%	20 hrs	20 hrs	$1,462.00
370	4.1.4	Develop Full Schedule (MS Project Plan)	PW	0%	90 hrs	90 hrs	$6,290.20
371	4.2	Risk Assessment & Management Plan	DG	0%	40 hrs	40 hrs	$3,571.45
372	**4.3**	**Preliminary Design Phase Plan**	**PW**	**25%**	**192 hrs**	**144 hrs**	**$10,120.24**
373	4.3.1	Preliminary Design Phase Plan Version 1 (to Suppo	PW	100%	40 hrs	0 hrs	$0.00
374	4.3.2	Preliminary Design Phase Plan Version 2	PW	10%	80 hrs	72 hrs	$5,202.70
375	4.3.3	Preliminary Design Phase Plan Final Version	PW	0%	72 hrs	72 hrs	$4,917.54
376	**4.4**	**Integration and Test Plans**	**CN**	**0%**	**154 hrs**	**154 hrs**	**$8,825.74**
377	**4.4.1**	**Subsystem Testing Plans**	**CN**	**0%**	**64 hrs**	**64 hrs**	**$3,667.84**
378	4.4.1.1	AO System Test Plan	CN	0%	20 hrs	20 hrs	$1,146.20
379	4.4.1.2	Laser System Test Plan	CN	0%	20 hrs	20 hrs	$1,146.20
380	4.4.1.3	Science Operations Test Plan	DLM	0%	20 hrs	20 hrs	$1,146.20
381	4.4.1.4	Science Instruments Test Plan	SA	0%	4 hrs	4 hrs	$229.24
382	4.4.2	System Integration & Test Plans	CN	0%	90 hrs	90 hrs	$5,157.90
383	4.5	Configuration Management Plan	EJ	0%	30 hrs	30 hrs	$1,719.30
384	4.6	Project Management Plan	PW	0%	80 hrs	80 hrs	$5,144.00
385	4.7	SEMP Document	PW	0%	80 hrs	80 hrs	$5,032.16



Project: NGAO System Design Phase
Date: Thu 11/29/07

Critical		Task		Baseline		Milestone		Project Summary		Deadline	
Critical Split		Split		Baseline Split		Summary Progress		External Tasks			
Critical Progress		Task Progress		Baseline Milestone		Summary		External Milestone			