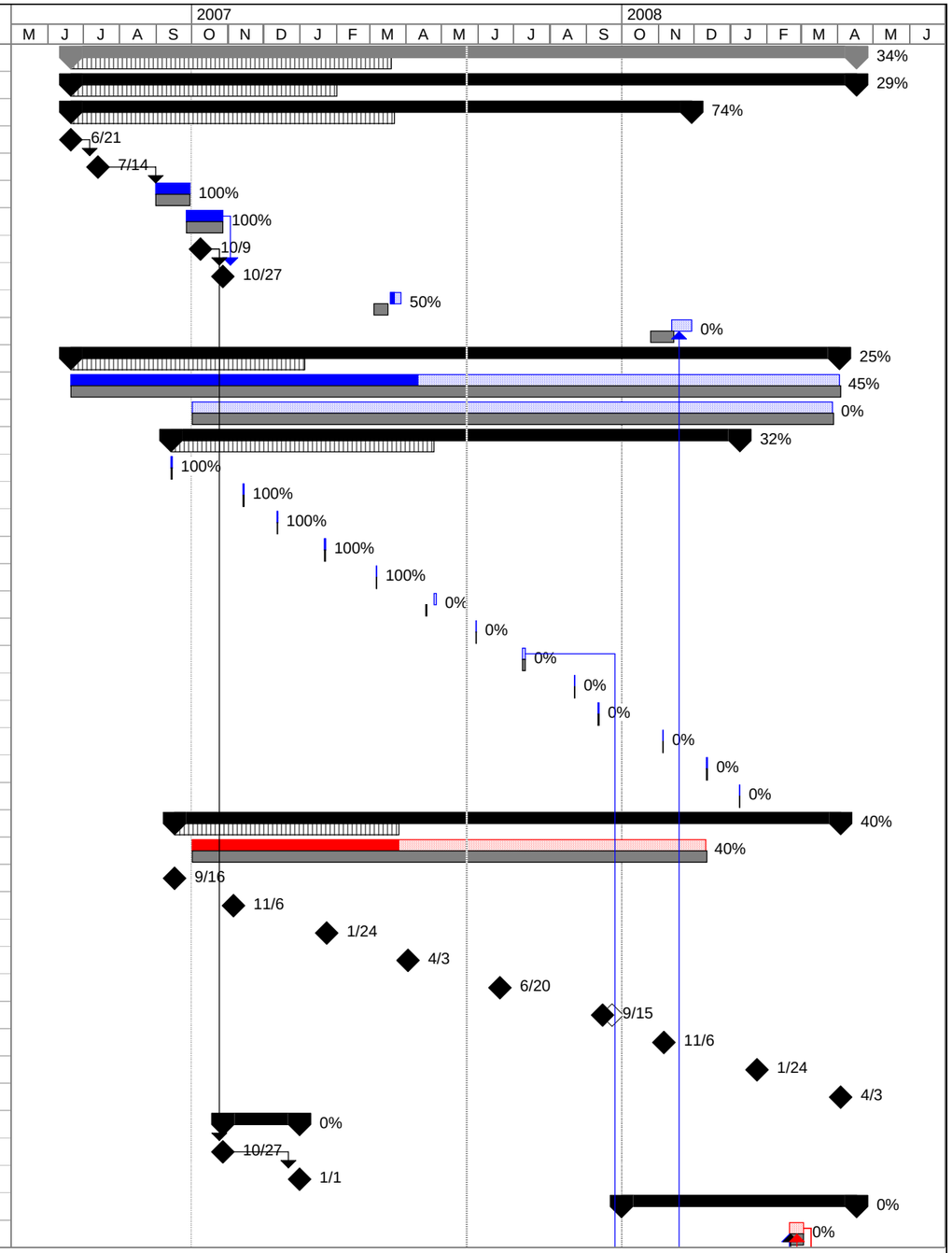
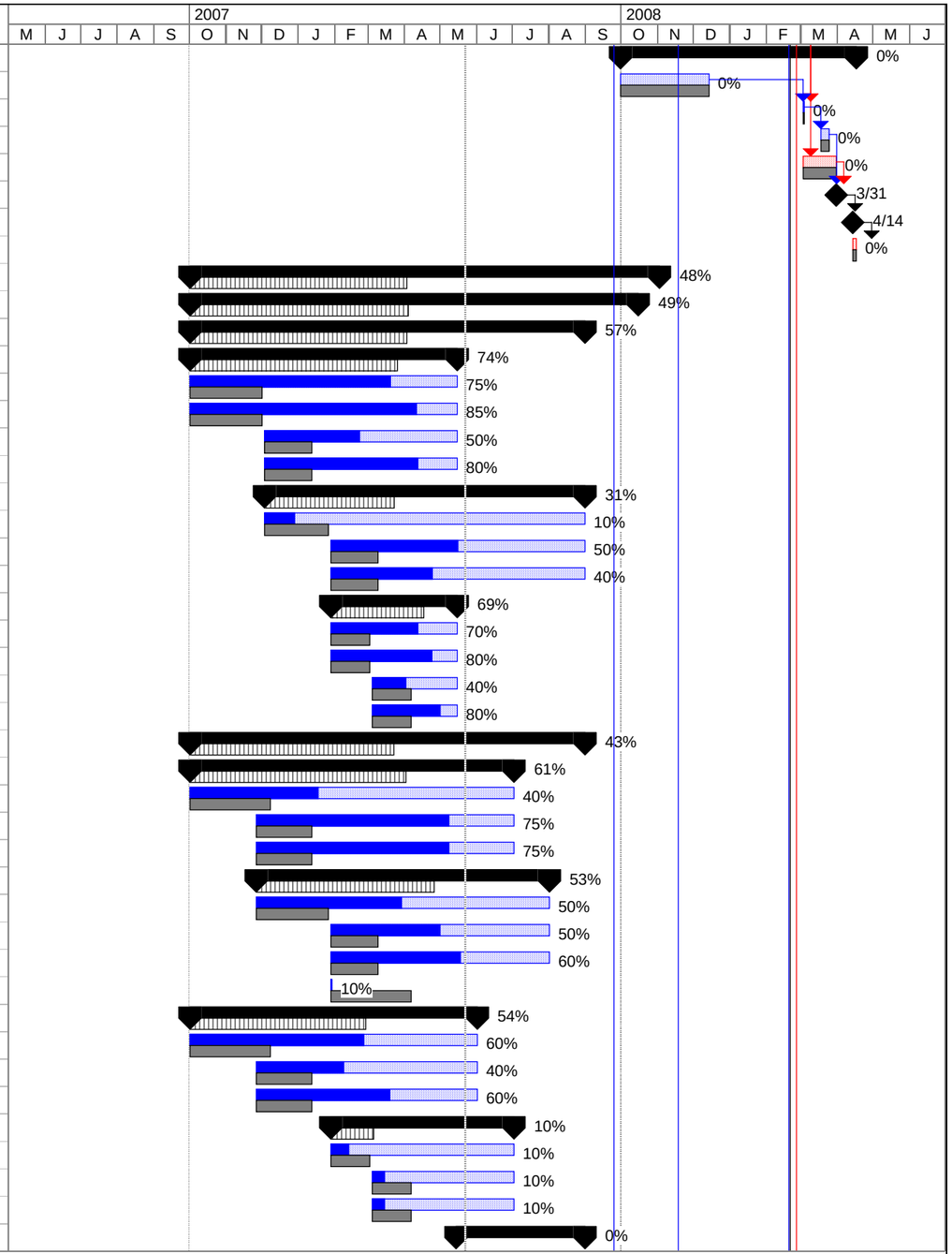
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
0	**0**	**NGAO System Design Phase Schedule**		**15,840 hrs**	**Wed 6/21/06**	**Thu 4/17/08**		
1	**1**	**SD Phase Management**	**PW**	**2,164 hrs**	**Wed 6/21/06**	**Thu 4/17/08**		
2	**1.1**	**Planning and Contracting**	**PW**	**230 hrs**	**Wed 6/21/06**	**Thu 11/29/07**		
3	1.1.1	NGAO Proposal to SSC		0 hrs	Wed 6/21/06	Wed 6/21/06	4	
4	1.1.2	Management Structure Decision by Directors		0 hrs	Fri 7/14/06	Fri 7/14/06	5	3
5	1.1.3	SD Phase System Engineering Management Plan	PW	80 hrs	Fri 9/1/06	Fri 9/29/06		4
6	1.1.4	SD Phase Contracts Generated	PW	60 hrs	Wed 9/27/06	Fri 10/27/06	8	
7	1.1.5	Director Approval		0 hrs	Mon 10/9/06	Mon 10/9/06	,40FS+3 wks	
8	1.1.6	SD Partner Contracts Issued	PW	0 hrs	Fri 10/27/06	Fri 10/27/06		6,7
9	1.1.7	Mid-year Replan	PW	40 hrs	Mon 3/19/07	Tue 3/27/07		
10	1.1.8	FY08 Replan	PW	50 hrs	Mon 11/12/07	Thu 11/29/07		371
11	**1.2**	**Project Meetings**		**1,352 hrs**	**Wed 6/21/06**	**Wed 4/2/08**		
12	1.2.1	Executive Committee Telecons	PW...	360 hrs	Wed 6/21/06	Wed 4/2/08		
13	1.2.2	Science Advisory Committee Telecons	CM	40 hrs	Mon 10/2/06	Thu 3/27/08		
14	**1.2.3**	**Team Meetings**		**952 hrs**	**Thu 9/14/06**	**Wed 1/9/08**		
15	1.2.3.1	Team Meeting #1 (mgmt, science & technical - Ir		68 hrs	Thu 9/14/06	Thu 9/14/06		
16	1.2.3.2	Team Meeting #2 (CIT)		80 hrs	Tue 11/14/06	Tue 11/14/06		
17	1.2.3.3	Team Videocon #3		44 hrs	Wed 12/13/06	Wed 12/13/06		
18	1.2.3.4	Team Meeting #4 (Keck)		80 hrs	Mon 1/22/07	Mon 1/22/07		
19	1.2.3.5	Team Videocon #5		44 hrs	Wed 3/7/07	Wed 3/7/07		
20	1.2.3.6	Team Meeting #6 (UCSC)		80 hrs	Wed 4/25/07	Thu 4/26/07		
21	1.2.3.7	Team Videocon #7		44 hrs	Wed 5/30/07	Wed 5/30/07		
22	1.2.3.8	Team Retreat #8 (UCSC)		220 hrs	Mon 7/9/07	Wed 7/11/07	1FS+55 days	
23	1.2.3.9	Team Videocon #9		44 hrs	Wed 8/22/07	Wed 8/22/07		
24	1.2.3.10	Team Meeting #10 (CIT)		80 hrs	Tue 9/11/07	Tue 9/11/07		
25	1.2.3.11	Team Videocon #11		44 hrs	Mon 11/5/07	Mon 11/5/07		
26	1.2.3.12	Team Meeting #12 (Keck)		80 hrs	Wed 12/12/07	Wed 12/12/07		
27	1.2.3.13	Team Videocon #13		44 hrs	Wed 1/9/08	Wed 1/9/08		
28	**1.3**	**Tracking and Reporting**	**PW**	**120 hrs**	**Sat 9/16/06**	**Thu 4/3/08**		
29	1.3.1	Report Preparation/Presentation	PW	120 hrs	Mon 10/2/06	Tue 12/11/07		
30	1.3.2	Keck Science Meeting 06 (UCI)		0 hrs	Sat 9/16/06	Sat 9/16/06		
31	1.3.3	SSC meeting (UCLA)		0 hrs	Mon 11/6/06	Mon 11/6/06		
32	1.3.4	SSC meeting (Keck)		0 hrs	Wed 1/24/07	Wed 1/24/07		
33	1.3.5	SSC meeting (CA)		0 hrs	Tue 4/3/07	Tue 4/3/07		
34	1.3.6	SSC meeting (Keck)		0 hrs	Wed 6/20/07	Wed 6/20/07		
35	1.3.7	Keck Science Meeting 07		0 hrs	Sat 9/15/07	Sat 9/15/07		
36	1.3.8	SSC meeting (CA)		0 hrs	Tue 11/6/07	Tue 11/6/07		
37	1.3.9	SSC meeting (Keck)		0 hrs	Thu 1/24/08	Thu 1/24/08		
38	1.3.10	SSC meeting (CA)		0 hrs	Thu 4/3/08	Thu 4/3/08		
39	**1.4**	**Proposals & Fundraising**		**0 hrs**	**Fri 10/27/06**	**Mon 1/1/07**		
40	1.4.1	Dates & deliverables identified by Directors		0 hrs	Fri 10/27/06	Fri 10/27/06	41	7FS+3 wks
41	1.4.2	Support Advancement Office		0 hrs	Mon 1/1/07	Mon 1/1/07		40
42	**1.5**	**System Design Report & Review**	**SA**	**462 hrs**	**Mon 10/1/07**	**Thu 4/17/08**		
43	1.5.1	System Design Report	PW	40 hrs	Wed 2/20/08	Mon 3/3/08	46,48	389,366,130



Project: NGAO System Design Phase
Date: Tue 5/22/07

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			

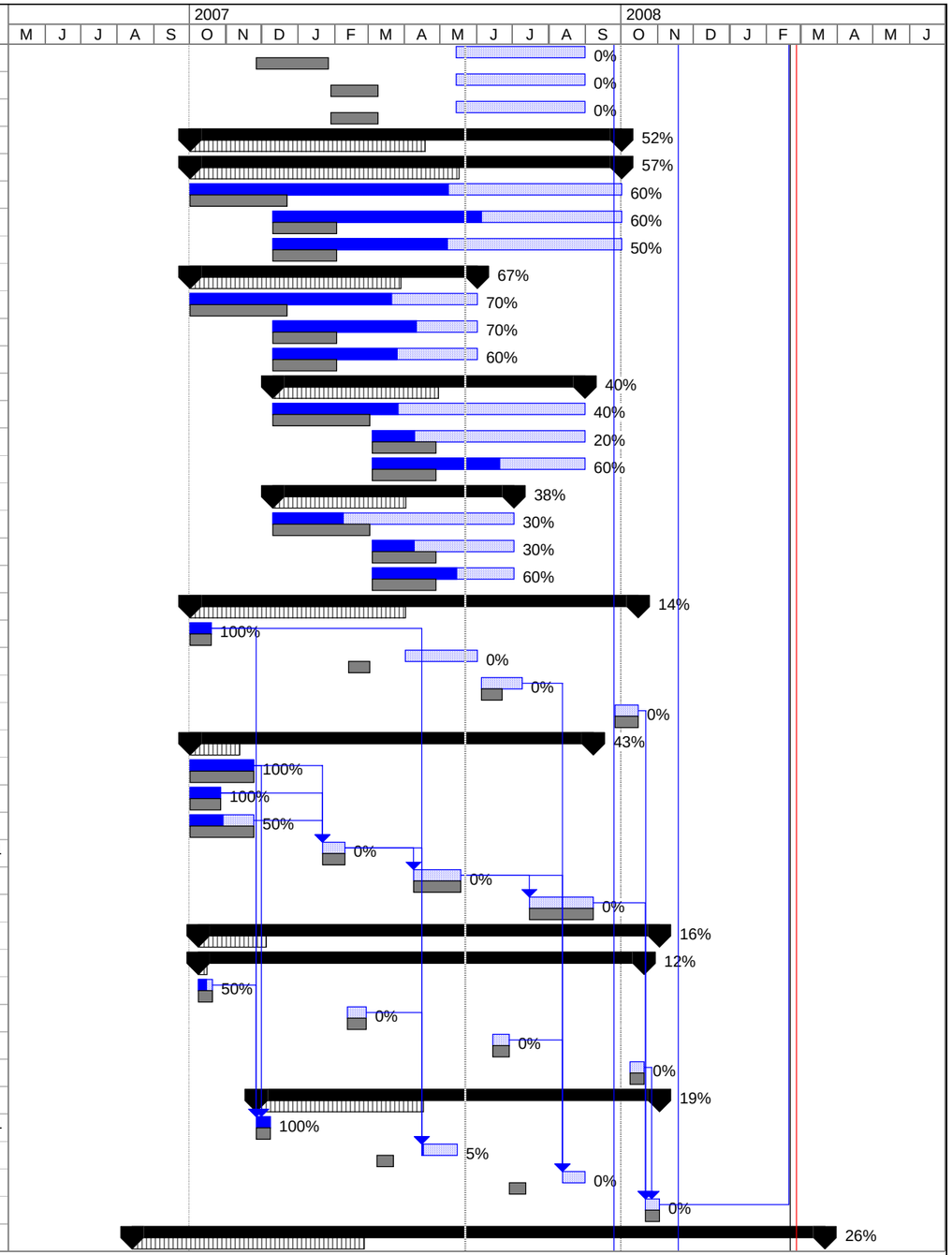
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
44	**1.5.2**	**System Design Review**	**PW**	**422 hrs**	**Mon 10/1/07**	**Thu 4/17/08**		
45	1.5.2.1	Identify Reviewers	SA	12 hrs	Mon 10/1/07	Fri 12/14/07	46	
46	1.5.2.2	Review Package Distributed	SA	8 hrs	Mon 3/3/08	Tue 3/4/08	7FS+10 days	43,45
47	1.5.2.3	Reviewer Comments Addressed	PW	120 hrs	Tue 3/18/08	Tue 3/25/08	49	46FS+10 days
48	1.5.2.4	System Design Review Support	PW	242 hrs	Mon 3/3/08	Mon 3/31/08	49	43
49	1.5.2.5	System Design Review Meeting	SA	0 hrs	Mon 3/31/08	Mon 3/31/08	0FS+10 days	48,47
50	1.5.2.6	Reviewer Report Received		0 hrs	Mon 4/14/08	Mon 4/14/08	51	49FS+10 days
51	1.5.2.7	Response to Reviewer Report & Distribution	PW	40 hrs	Mon 4/14/08	Thu 4/17/08		50
52	**2**	**System Requirements**	**PW**	**3,254 hrs**	**Mon 10/2/06**	**Fri 11/2/07**		
53	**2.1**	**Science Requirements**	**CM**	**2,890 hrs**	**Mon 10/2/06**	**Mon 10/15/07**		
54	**2.1.1**	**Solar System Science Requirements**	**FM**	**650 hrs**	**Mon 10/2/06**	**Fri 8/31/07**		
55	**2.1.1.1**	**Companions & Multiplicity of Small Solar Sys**	**FM**	**250 hrs**	**Mon 10/2/06**	**Tue 5/15/07**		
56	2.1.1.1.1	Point Source Companion Sensitivity Require		100 hrs	Mon 10/2/06	Tue 5/15/07		
57	2.1.1.1.2	Spectral Sensitivity & Spectral Resolution R		100 hrs	Mon 10/2/06	Tue 5/15/07		
58	2.1.1.1.3	Observing Scenarios	DLM	25 hrs	Mon 12/4/06	Tue 5/15/07		
59	2.1.1.1.4	Science Instrument Requirements		25 hrs	Mon 12/4/06	Tue 5/15/07		
60	**2.1.1.2**	**Moons of the Giant Planets**	**FM**	**150 hrs**	**Mon 12/4/06**	**Fri 8/31/07**		
61	2.1.1.2.1	Performance Requirements		100 hrs	Mon 12/4/06	Fri 8/31/07		
62	2.1.1.2.2	Observing Scenarios	DLM	25 hrs	Mon 1/29/07	Fri 8/31/07		
63	2.1.1.2.3	Science Instrument Requirements		25 hrs	Mon 1/29/07	Fri 8/31/07		
64	**2.1.1.3**	**Shape & Size of Asteroids**	**FM**	**250 hrs**	**Mon 1/29/07**	**Tue 5/15/07**		
65	2.1.1.3.1	Spatial Resolution Requirements		100 hrs	Mon 1/29/07	Tue 5/15/07		
66	2.1.1.3.2	Spectral Sensitivity & Spectral Resolution R		100 hrs	Mon 1/29/07	Tue 5/15/07		
67	2.1.1.3.3	Observing Scenarios		25 hrs	Mon 3/5/07	Tue 5/15/07		
68	2.1.1.3.4	Science Instrument Requirements		25 hrs	Mon 3/5/07	Tue 5/15/07		
69	**2.1.2**	**Galactic Science Requirements**	**ML**	**1,000 hrs**	**Mon 10/2/06**	**Fri 8/31/07**		
70	**2.1.2.1**	**Galactic Center Proper Motions: Astrometry**	**AG**	**200 hrs**	**Mon 10/2/06**	**Mon 7/2/07**		
71	2.1.2.1.1	Astrometry requirements		150 hrs	Mon 10/2/06	Mon 7/2/07		
72	2.1.2.1.2	Observing Scenarios		25 hrs	Mon 11/27/06	Mon 7/2/07		
73	2.1.2.1.3	Science Instrument Requirements		25 hrs	Mon 11/27/06	Mon 7/2/07		
74	**2.1.2.2**	**Galactic Center Radial Velocities & Stellar Po**	**AG**	**200 hrs**	**Mon 11/27/06**	**Wed 8/1/07**		
75	2.1.2.2.1	Performance Requirements		150 hrs	Mon 11/27/06	Wed 8/1/07		
76	2.1.2.2.2	Observing Scenarios		25 hrs	Mon 1/29/07	Wed 8/1/07		
77	2.1.2.2.3	Science Instrument Requirements		25 hrs	Mon 1/29/07	Wed 8/1/07		
78	2.1.2.3	*Galactic Center Nature of Sgr A*: 3-5 um Color &*	*Cancel*	0 hrs	Mon 1/29/07	Mon 1/29/07		
79	**2.1.2.4**	**Planets around Low Mass Stars & Brown Dwa**	**ML**	**200 hrs**	**Mon 10/2/06**	**Fri 6/1/07**		
80	2.1.2.4.1	Companion Sensitivity Performance Require		150 hrs	Mon 10/2/06	Fri 6/1/07		
81	2.1.2.4.2	Observing Scenarios		25 hrs	Mon 11/27/06	Fri 6/1/07		
82	2.1.2.4.3	Science Instrument Requirements		25 hrs	Mon 11/27/06	Fri 6/1/07		
83	**2.1.2.5**	**Debris Disks, Protostellar Envelopes & Outflo**	**LH**	**200 hrs**	**Mon 1/29/07**	**Mon 7/2/07**		
84	2.1.2.5.1	Contrast Performance Requirements		150 hrs	Mon 1/29/07	Mon 7/2/07		
85	2.1.2.5.2	Observing Scenarios		25 hrs	Mon 3/5/07	Mon 7/2/07		
86	2.1.2.5.3	Science Instrument Requirements		25 hrs	Mon 3/5/07	Mon 7/2/07		
87	**2.1.2.6**	**Debris Disks, Protostellar Envelopes & Outflo**		**200 hrs**	**Tue 5/15/07**	**Fri 8/31/07**		



Project: NGAO System Design Phase
Date: Tue 5/22/07

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			

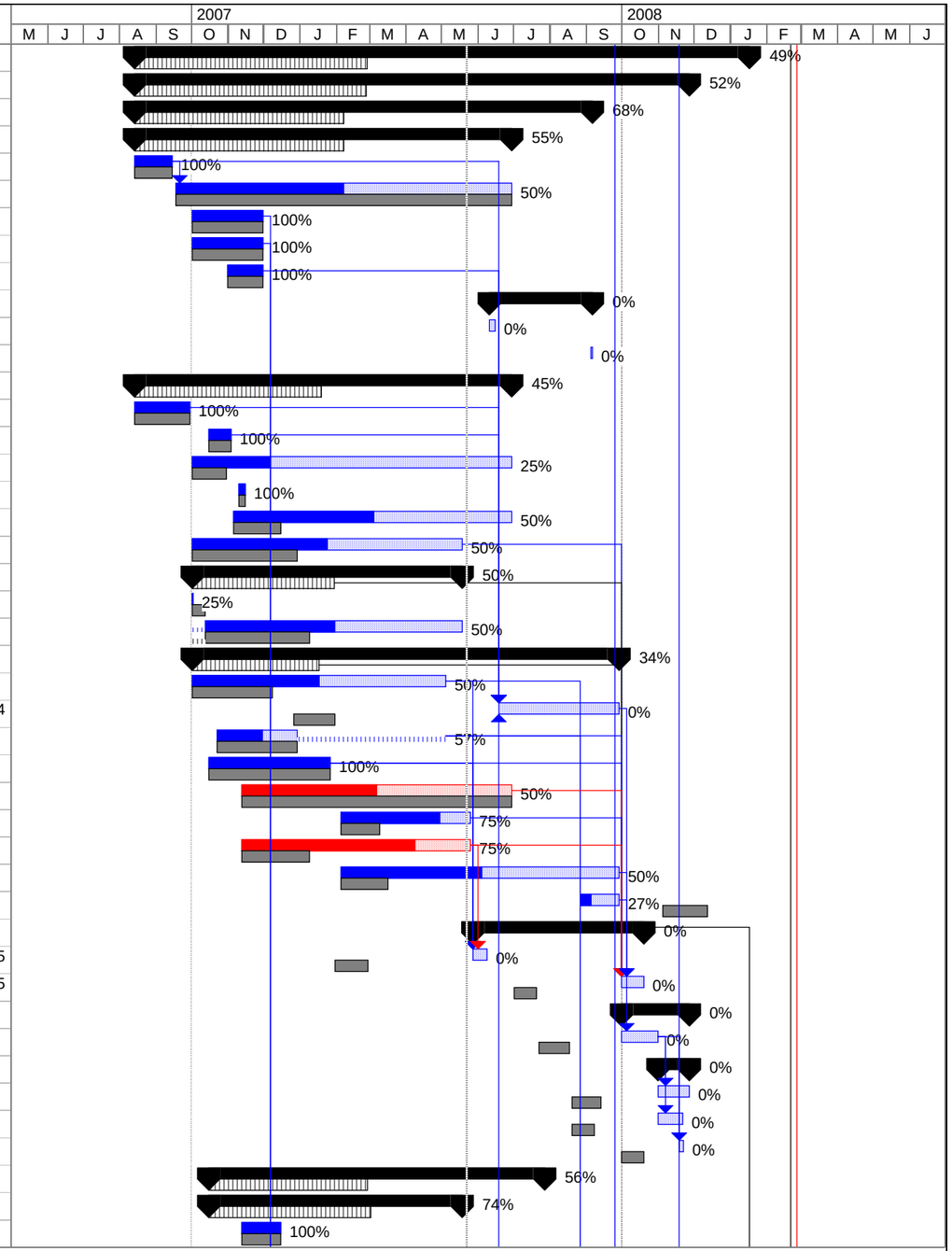
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
88	2.1.2.6.1	Polarimetry Performance Requirements		150 hrs	Tue 5/15/07	Fri 8/31/07		
89	2.1.2.6.2	Observing Scenarios		25 hrs	Tue 5/15/07	Fri 8/31/07		
90	2.1.2.6.3	Science Instrument Requirements		25 hrs	Tue 5/15/07	Fri 8/31/07		
91	**2.1.3**	**Extragalactic Science Requirements**	**CM**	**1,000 hrs**	**Mon 10/2/06**	**Mon 10/1/07**		
92	**2.1.3.1**	**Resolved Stellar Populations in Crowded Fiel**		**300 hrs**	**Mon 10/2/06**	**Mon 10/1/07**		
93	2.1.3.1.1	Performance Requirements		250 hrs	Mon 10/2/06	Mon 10/1/07		
94	2.1.3.1.2	Observing Scenarios		25 hrs	Mon 12/11/06	Mon 10/1/07		
95	2.1.3.1.3	Science Instrument Requirements		25 hrs	Mon 12/11/06	Mon 10/1/07		
96	**2.1.3.2**	**High Redshift Galaxies**		**300 hrs**	**Mon 10/2/06**	**Fri 6/1/07**		
97	2.1.3.2.1	Encircled Energy (& d-IFU) Performance Re		200 hrs	Mon 10/2/06	Fri 6/1/07		
98	2.1.3.2.2	Observing Scenarios		50 hrs	Mon 12/11/06	Fri 6/1/07		
99	2.1.3.2.3	Science Instrument Requirements		50 hrs	Mon 12/11/06	Fri 6/1/07		
100	**2.1.3.3**	**Nearby Galaxies**		**200 hrs**	**Mon 12/11/06**	**Fri 8/31/07**		
101	2.1.3.3.1	Encircled Energy & PSF Performance Requ		150 hrs	Mon 12/11/06	Fri 8/31/07		
102	2.1.3.3.2	Observing Scenarios		25 hrs	Mon 3/5/07	Fri 8/31/07		
103	2.1.3.3.3	Science Instrument Requirements		25 hrs	Mon 3/5/07	Fri 8/31/07		
104	**2.1.3.4**	**Gravitational Lensing**		**200 hrs**	**Mon 12/11/06**	**Mon 7/2/07**		
105	2.1.3.4.1	Encircled Energy & PSF Performance Requ		150 hrs	Mon 12/11/06	Mon 7/2/07		
106	2.1.3.4.2	Observing Scenarios		25 hrs	Mon 3/5/07	Mon 7/2/07		
107	2.1.3.4.3	Science Instrument Requirements		25 hrs	Mon 3/5/07	Mon 7/2/07		
108	**2.1.4**	**Science Case Requirements Document**	**CM**	**240 hrs**	**Mon 10/2/06**	**Mon 10/15/07**		
109	2.1.4.1	Science Case Requirements Doc Rev 1		40 hrs	Mon 10/2/06	Thu 10/19/06	127,128	
110	2.1.4.2	Science Case Requirements Doc Rev 2		120 hrs	Mon 4/2/07	Fri 6/1/07		
111	2.1.4.3	Science Case Requirements Doc Rev 3		40 hrs	Tue 6/5/07	Mon 7/9/07	129	
112	2.1.4.4	Science Case Requirements Doc Final		40 hrs	Wed 9/26/07	Mon 10/15/07	130	
113	**2.2**	**Observatory Requirements**	**CN**	**224 hrs**	**Mon 10/2/06**	**Fri 9/7/07**		
114	2.2.1	Development Requirements	CN	16 hrs	Mon 10/2/06	Fri 11/24/06	117FS+8 wks	
115	2.2.2	Observatory Interface Requirements	CN	24 hrs	Mon 10/2/06	Fri 10/27/06	117FS+8 wks	
116	2.2.3	Science Operations Requirements	DLM	64 hrs	Mon 10/2/06	Fri 11/24/06	117FS+8 wks	
117	2.2.4	Observatory Requirements Rev 2	PW	80 hrs	Mon 1/22/07	Fri 2/9/07	118FS+8 wks	114FS+8 wks,1
118	2.2.5	Observatory Requirements Rev 3	CN	20 hrs	Mon 4/9/07	Fri 5/18/07	119FS+8 wks	117FS+8 wks
119	2.2.6	Observatory Requirements Rev 4	CN	20 hrs	Mon 7/16/07	Fri 9/7/07	130	118FS+8 wks
120	**2.3**	**System Requirements Document**		**140 hrs**	**Mon 10/9/06**	**Fri 11/2/07**		
121	**2.3.1**	**Traceability Matrix**	**CN**	**60 hrs**	**Mon 10/9/06**	**Sat 10/20/07**		
122	2.3.1.1	Traceability Matrix Rev 1	CN	10 hrs	Mon 10/9/06	Fri 10/20/06	127	
123	2.3.1.2	Traceability Matrix Rev 2	PW	10 hrs	Mon 2/12/07	Tue 2/27/07	128	
124	2.3.1.3	Traceability Matrix Rev 3	CN	20 hrs	Fri 6/15/07	Thu 6/28/07	129	
125	2.3.1.4	Traceability Matrix Rev 4	CN	20 hrs	Tue 10/9/07	Sat 10/20/07	130	
126	**2.3.2**	**System Requirements Document**	**PW**	**80 hrs**	**Mon 11/27/06**	**Fri 11/2/07**		
127	2.3.2.1	SRD Rev 1	PW	20 hrs	Mon 11/27/06	Fri 12/8/06		109,122,114,11
128	2.3.2.2	SRD Rev 2	PW	20 hrs	Mon 4/16/07	Tue 5/15/07		123,117,109
129	2.3.2.3	SRD Rev 3	PW	20 hrs	Mon 8/13/07	Fri 8/31/07		111,124,118
130	2.3.2.4	SRD Final SD Phase Version	PW	20 hrs	Mon 10/22/07	Fri 11/2/07	43	112,125,119
131	**3**	**System Design**	**PW**	**9,282 hrs**	**Mon 8/14/06**	**Fri 3/21/08**		



Project: NGAO System Design Phase
Date: Tue 5/22/07

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

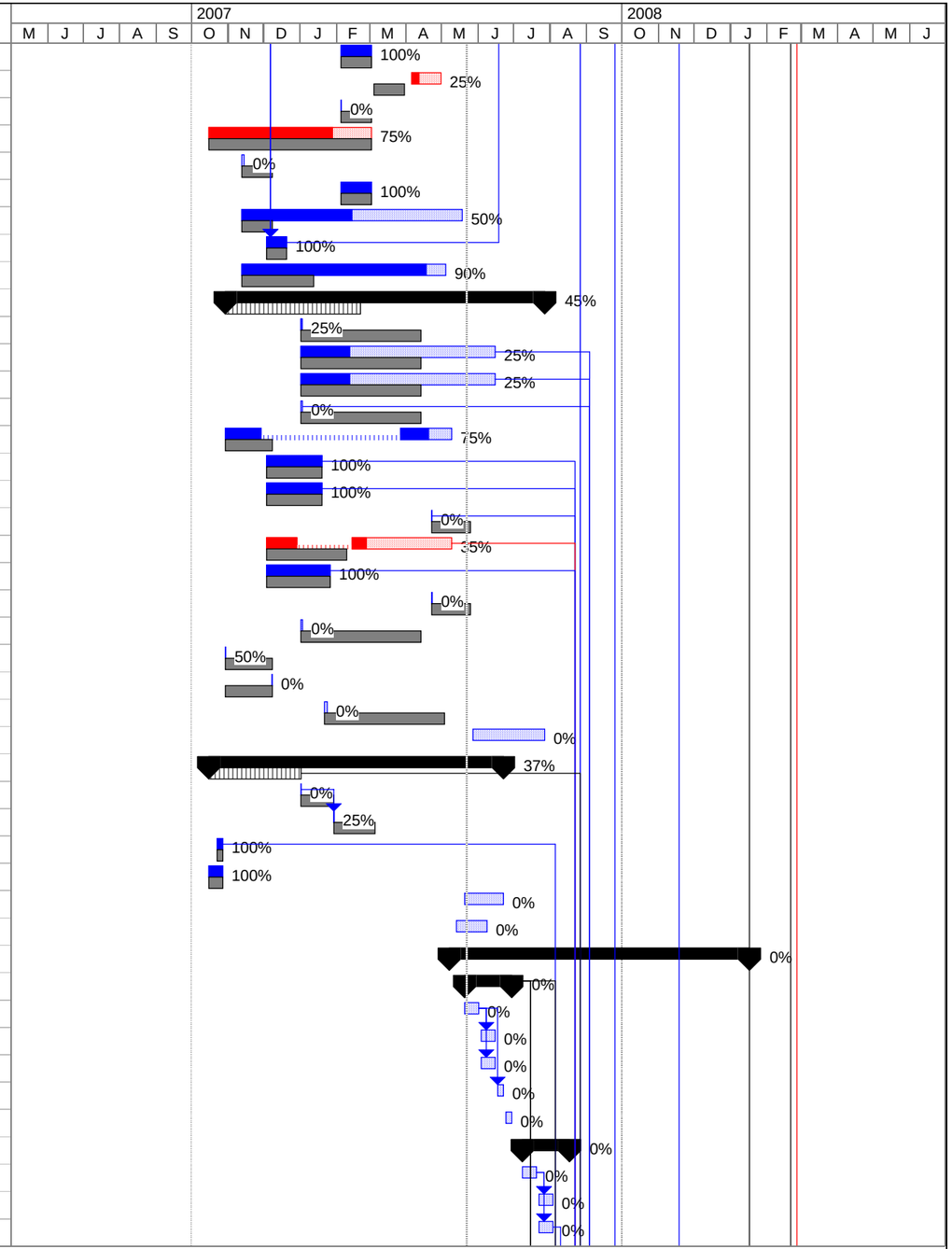
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
132	**3.1**	**Systems Engineering**	**RD**	**5,208 hrs**	**Mon 8/14/06**	**Thu 1/17/08**		
133	**3.1.1**	**Performance Budgets**	**RD**	**2,144 hrs**	**Mon 8/14/06**	**Tue 11/27/07**		
134	**3.1.1.1**	**Model Assumptions**	**CN**	**292 hrs**	**Mon 8/14/06**	**Thu 9/6/07**		
135	**3.1.1.1.1**	**TMT site monitoring data mining**	**RF**	**80 hrs**	**Mon 8/14/06**	**Fri 6/29/07**		
136	3.1.1.1.1.1	Tools in place & 1st release	RF	40 hrs	Mon 8/14/06	Thu 9/14/06	137,156	
137	3.1.1.1.1.2	Release updated data (every two montl	RF	40 hrs	Mon 9/18/06	Fri 6/29/07		136
138	3.1.1.1.2	Telescope dynamic performance data	CN	120 hrs	Mon 10/2/06	Thu 11/30/06	183	
139	3.1.1.1.3	Telescope static wavefront errors	CN	20 hrs	Mon 10/2/06	Thu 11/30/06	183	
140	3.1.1.1.4	Sodium return vs laser format	DG	40 hrs	Wed 11/1/06	Thu 11/30/06	156	
141	**3.1.1.1.5**	**Evaluate & Adopt New Model Assumptio**	**RD**	**32 hrs**	**Mon 6/11/07**	**Thu 9/6/07**		
142	3.1.1.1.5.1	New Model Assumptions Rev 1	RD	20 hrs	Mon 6/11/07	Fri 6/15/07		
143	3.1.1.1.5.2	New Model Assumptions Rev 2	RD	12 hrs	Wed 9/5/07	Thu 9/6/07		
144	**3.1.1.2**	**Model/Tool Validation**	**CN**	**334 hrs**	**Mon 8/14/06**	**Fri 6/29/07**		
145	3.1.1.2.1	Agreement between Tomography Codes	DG	40 hrs	Mon 8/14/06	Fri 9/29/06	156	
146	3.1.1.2.2	Agreement between Sky Coverage Codes	RD	40 hrs	Mon 10/16/06	Fri 11/3/06	156	
147	3.1.1.2.3	Anchor to Keck II LGS AO PSFs	CN	40 hrs	Mon 10/2/06	Fri 6/29/07		
148	3.1.1.2.4	Anchor to On-sky MGSU Experiments	RF	10 hrs	Fri 11/10/06	Wed 11/15/06		
149	3.1.1.2.5	Anchor to LAO Lab Experiments	DG	204 hrs	Mon 11/6/06	Fri 6/29/07		
150	3.1.1.3	Throughput	AB	32 hrs	Mon 10/2/06	Fri 5/18/07	166	
151	**3.1.1.4**	**Background**	**AB**	**41 hrs**	**Mon 10/2/06**	**Fri 5/18/07**	**166**	
152	3.1.1.4.1	Document Proposal Analysis	AB	1 hr	Mon 10/2/06	Mon 10/2/06		
153	3.1.1.4.2	Develop Background Performance Budget	AB	40 hrs	Mon 10/2/06	Fri 5/18/07		
154	**3.1.1.5**	**Wavefront Error vs Sky Coverage**	**RD**	**125 hrs**	**Mon 10/2/06**	**Fri 9/28/07**	**166**	
155	3.1.1.5.1	Document WFE Budget Rev 1	RD	55 hrs	Mon 10/2/06	Fri 5/4/07	165,268	
156	3.1.1.5.2	Document WFE Budget Rev 2	RD	70 hrs	Tue 6/19/07	Fri 9/28/07	168	136,140,183,14
157	3.1.1.6	Encircled Energy vs Sky Coverage	DG	110 hrs	Mon 10/23/06	Fri 5/4/07	166,165,268	
158	3.1.1.7	Photometric Accuracy	MB	240 hrs	Mon 10/16/06	Fri 1/26/07	166,165	
159	3.1.1.8	Astrometric Accuracy	BC	240 hrs	Mon 11/13/06	Fri 6/29/07	166	
160	3.1.1.9	Polarimetric Accuracy	MI	40 hrs	Mon 2/5/07	Fri 5/25/07	166	
161	3.1.1.10	Companion Sensitivity	RF	180 hrs	Mon 11/13/06	Fri 5/25/07	166,165	
162	3.1.1.11	Observing Efficiency	DLM	100 hrs	Mon 2/5/07	Fri 9/28/07	166	
163	3.1.1.12	Observing Uptime	EJ	80 hrs	Mon 8/27/07	Fri 9/28/07	166	
164	**3.1.1.13**	**Performance Budgets Summary**		**100 hrs**	**Mon 5/28/07**	**Fri 10/19/07**	**368**	
165	3.1.1.13.1	Performance Budgets Summary Ver 1	MB	40 hrs	Mon 5/28/07	Fri 6/8/07		157,158,161,15
166	3.1.1.13.2	Performance Budgets Summary Ver 2	MB	60 hrs	Mon 10/1/07	Fri 10/19/07		154,157,158,15
167	**3.1.1.14**	**Science Products**		**230 hrs**	**Mon 10/1/07**	**Tue 11/27/07**		
168	3.1.1.14.1	All-In Science Simulations	CN	80 hrs	Mon 10/1/07	Wed 10/31/07	171,170,172	156
169	**3.1.1.14.2**	**Additional Science Characterization Resu**		**150 hrs**	**Thu 11/1/07**	**Tue 11/27/07**		
170	.1.1.14.2.1	Point Source Sensitivities	AB	30 hrs	Thu 11/1/07	Tue 11/27/07		168
171	.1.1.14.2.2	PSF Uniformity & Stability	CN	100 hrs	Thu 11/1/07	Wed 11/21/07		168
172	.1.1.14.2.3	Other	RF	20 hrs	Mon 11/19/07	Thu 11/22/07		168
173	**3.1.2**	**Trade Studies**	**RD**	**1,462 hrs**	**Mon 10/16/06**	**Fri 7/27/07**		
174	**3.1.2.1**	**System Architecture Trade Studies**		**618 hrs**	**Mon 10/16/06**	**Fri 5/18/07**		
175	3.1.2.1.1	MOAO & MCAO TS	DG	80 hrs	Mon 11/13/06	Fri 12/15/06		



Project: NGAO System Design Phase
Date: Tue 5/22/07

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	Start	Finish	Successors	Predecessors
176	3.1.2.1.2	NGAO versus Keck AO upgrades TS (meeti	PW	100 hrs	Mon 2/5/07	Fri 3/2/07		
177	3.1.2.1.3	Adaptive Secondary Mirror option TS (m5)	PW	16 hrs	Fri 4/6/07	Mon 4/30/07		
178	3.1.2.1.4	*K & L-band Science TS (m5)*	*Cancel*	1 hr	Mon 2/5/07	Mon 2/5/07		
179	3.1.2.1.5	Keck Interferometer Support TS (m5)	CN	120 hrs	Mon 10/16/06	Fri 3/2/07		
180	3.1.2.1.6	*Instrument Balance TS*	*Cancel*	1 hr	Mon 11/13/06	Tue 11/14/06		
181	3.1.2.1.7	GLAO for non-NGAO Instruments TS (m5)	RF	20 hrs	Mon 2/5/07	Fri 3/2/07		
182	3.1.2.1.8	Science Instrument Re-use Cost/Benefit TS	AM	120 hrs	Mon 11/13/06	Fri 5/18/07		
183	3.1.2.1.9	Telescope Wavefront Errors TS	CN	80 hrs	Mon 12/4/06	Wed 12/20/06	156	138,139
184	3.1.2.1.10	Observing Model TS	DLM	80 hrs	Mon 11/13/06	Fri 5/4/07		
185	**3.1.2.2**	**Adaptive Optics System Trade Studies**		**642 hrs**	**Mon 10/30/06**	**Fri 7/27/07**		
186	3.1.2.2.1	*AO Enclosure Temperature TS (m6)*	*Cancel*	1 hr	Tue 1/2/07	Wed 1/3/07		
187	3.1.2.2.2	Optical Relay TS (m6)	RD	60 hrs	Tue 1/2/07	Fri 6/15/07	240	
188	3.1.2.2.3	Field Rotation Strategy TS (m6)	RD	60 hrs	Tue 1/2/07	Fri 6/15/07	239	
189	3.1.2.2.4	*Dichroics & Beamsplitters TS (m6)*	*Cancel*	1 hr	Tue 1/2/07	Wed 1/3/07	241	
190	3.1.2.2.5	Rayleigh Rejection TS (m3)	VV	72 hrs	Mon 10/30/06	Wed 5/9/07		
191	3.1.2.2.6	LGS WFS Type TS (m4)	VV	30 hrs	Mon 12/4/06	Fri 1/19/07	244	
192	3.1.2.2.7	LGS WFS number of subapertures TS (m4)	VV	20 hrs	Mon 12/4/06	Fri 1/19/07	244	
193	3.1.2.2.8	*Slow WFS TS (m7)*	*Cancel*	1 hr	Mon 4/23/07	Mon 4/23/07	247	
194	3.1.2.2.9	LOWFS Architecture TS	RF	220 hrs	Mon 12/4/06	Wed 5/9/07	246	
195	3.1.2.2.10	Number & Type of LOWFS TS (m4)	RC	60 hrs	Mon 12/4/06	Fri 1/26/07	246	
196	3.1.2.2.11	*Centroid Anisoplanatism TS (m7)*	*Cancel*	1 hr	Mon 4/23/07	Mon 4/23/07		
197	3.1.2.2.12	*Deformable Mirror Stroke Requirement TS (*	*Cancel*	1 hr	Tue 1/2/07	Wed 1/3/07		
198	3.1.2.2.13	*Stand-alone vs DM on T/T Stage TS (m3)*	*Cancel*	1 hr	Mon 10/30/06	Mon 10/30/06		
199	3.1.2.2.14	*Correcting Fast T/T with DM TS*	*Cancel*	1 hr	Fri 12/8/06	Fri 12/8/06		
200	3.1.2.2.15	*Focus Compensation TS (m6)*	*Cancel*	1 hr	Mon 1/22/07	Wed 1/24/07		
201	3.1.2.2.16	d-IFU & LOWFS AO & Object Selection TS	AM	112 hrs	Mon 5/28/07	Fri 7/27/07		
202	**3.1.2.3**	**Laser Facility Trade Studies**		**142 hrs**	**Mon 10/16/06**	**Fri 6/22/07**	**268**	
203	3.1.2.3.1	*Laser Pulse Format TS (m6)*	*Cancel*	1 hr	Tue 1/2/07	Tue 1/2/07	204	
204	3.1.2.3.2	*Free Space vs Fiber TS (m7)*	*Cancel*	1 hr	Tue 1/30/07	Tue 1/30/07		203
205	3.1.2.3.3	LGS Asterism Geometry & Size TS (m2)	RF	20 hrs	Mon 10/23/06	Fri 10/27/06	274	
206	3.1.2.3.4	Variable vs fixed LGS Asterism Cost/Benefit	VV	20 hrs	Mon 10/16/06	Fri 10/27/06		
207	3.1.2.3.5	Uplink compensation	DG	100 hrs	Mon 5/21/07	Fri 6/22/07		
208	3.1.2.4	Trade Study Conclusions Summary	CN	60 hrs	Mon 5/14/07	Fri 6/8/07		
209	**3.1.3**	**System Architecture**	**RD**	**1,602 hrs**	**Tue 5/8/07**	**Thu 1/17/08**		
210	**3.1.3.1**	**Candidate Subsystems**	**RD**	**480 hrs**	**Mon 5/21/07**	**Fri 6/29/07**	**224,226,228**	
211	3.1.3.1.1	Define Candidate Subsystems	RD	228 hrs	Mon 5/21/07	Fri 6/1/07	214,213,212	
212	3.1.3.1.2	Subsystems Performance Evaluation	RD	72 hrs	Mon 6/4/07	Fri 6/15/07		211
213	3.1.3.1.3	Subsystems Cost Evaluation	CN	72 hrs	Mon 6/4/07	Fri 6/15/07		211
214	3.1.3.1.4	Subsystems Risk Analysis	CN	36 hrs	Mon 6/18/07	Fri 6/22/07		211
215	3.1.3.1.5	Organize Candidate Subsystems	RD	72 hrs	Mon 6/25/07	Fri 6/29/07		
216	**3.1.3.2**	**Candidate Architectures**	**RD**	**556 hrs**	**Mon 7/9/07**	**Fri 8/17/07**		
217	3.1.3.2.1	Define Candidate Architectures	RD	328 hrs	Mon 7/9/07	Fri 7/20/07	218,219	
218	3.1.3.2.2	Architectures Performance Evaluation	RD	72 hrs	Mon 7/23/07	Fri 8/3/07		217
219	3.1.3.2.3	Architectures Cost Evaluation	CN	72 hrs	Mon 7/23/07	Fri 8/3/07	220	217



Project: NGAO System Design Phase
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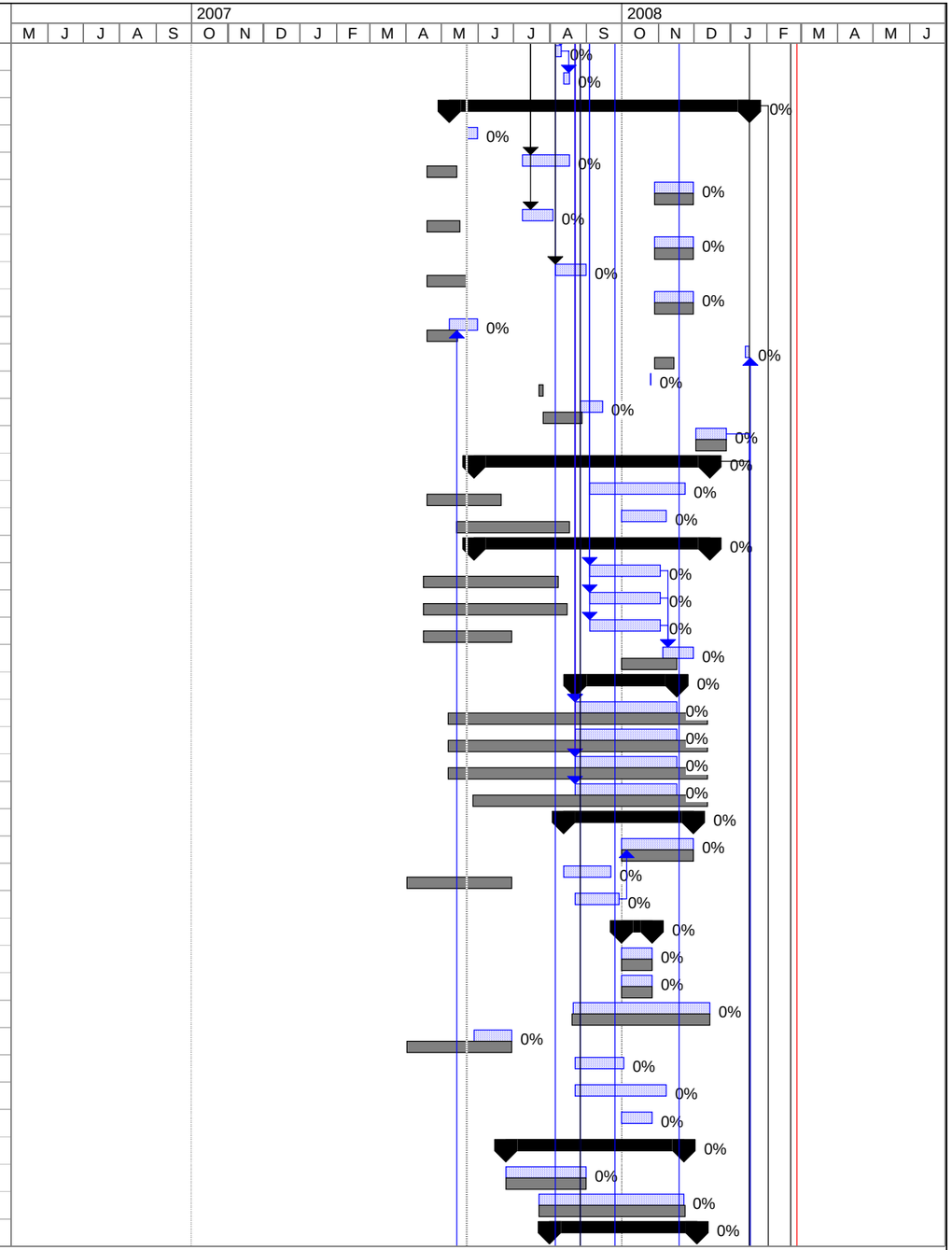
Critical	Task	Baseline	Milestone	Project Summary	Deadline
Critical Split	Split	Baseline Split	Summary Progress	External Tasks	
Critical Progress	Task Progress	Baseline Milestone	Summary	External Milestone	

ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
220	3.1.3.2.4	Architecture Risk Analysis	CN	36 hrs	Mon 8/6/07	Fri 8/10/07	221	219
221	3.1.3.2.5	Adopt Baseline Architecture(s)	RD	48 hrs	Mon 8/13/07	Fri 8/17/07		220
222	**3.1.3.3**	**Functional Requirements**	**PW**	**520 hrs**	**Tue 5/8/07**	**Thu 1/17/08**	**368**	
223	3.1.3.3.1	Draft Functional Requirements Document	PW	20 hrs	Tue 5/22/07	Thu 5/31/07		
224	3.1.3.3.2	AO System Functional Requirements Ver 1	CN	160 hrs	Mon 7/9/07	Fri 8/17/07		210
225	3.1.3.3.3	AO System Functional Requirements Ver 2	CN	80 hrs	Mon 10/29/07	Fri 11/30/07		
226	3.1.3.3.4	Laser System Functional Requirements Ver	JC	96 hrs	Mon 7/9/07	Fri 8/3/07		210
227	3.1.3.3.5	Laser System Functional Requirements Ver	JC	48 hrs	Mon 10/29/07	Fri 11/30/07		
228	3.1.3.3.6	Science Operations Functional Requirement	DLM	50 hrs	Mon 8/6/07	Fri 8/31/07		210
229	3.1.3.3.7	Science Operations Functional Requirement	DLM	50 hrs	Mon 10/29/07	Fri 11/30/07		
230	3.1.3.3.8	Science Instruments Function Allocation Ver	SA	8 hrs	Tue 5/8/07	Thu 5/31/07		316
231	3.1.3.3.9	Science Instruments Function Allocation Ver	SA	8 hrs	Mon 1/14/08	Thu 1/17/08		319
232	3.1.3.4	*Technology Drivers Summary*	*Cancel*	1 hr	Thu 10/25/07	Thu 10/25/07		
233	3.1.3.5	Technical Risk Analysis Ver 1	CN	20 hrs	Mon 8/27/07	Fri 9/14/07		
234	3.1.3.6	Technical Risk Analysis Ver 2	CN	25 hrs	Mon 12/3/07	Fri 12/28/07	368	
235	**3.2**	**AO System**	**DG**	**1,709 hrs**	**Tue 5/29/07**	**Fri 12/14/07**	**368**	
236	3.2.1	AO System Architecture	DG	40 hrs	Tue 9/4/07	Fri 11/23/07		
237	3.2.2	AO Enclosure	JM	40 hrs	Mon 10/1/07	Wed 11/7/07		
238	**3.2.3**	**Opto-mechanical**	**BB**	**959 hrs**	**Tue 5/29/07**	**Fri 12/14/07**		
239	3.2.3.1	Field Rotation	BB	45 hrs	Tue 9/4/07	Fri 11/2/07	242	188
240	3.2.3.2	Optical Relay	BB	60 hrs	Tue 9/4/07	Fri 11/2/07	242	187
241	3.2.3.3	Optical Switchyard	BB	50 hrs	Tue 9/4/07	Fri 11/2/07	242	189
242	3.2.3.4	Optical Support Structure	BB	45 hrs	Mon 11/5/07	Fri 11/30/07		239,240,241
243	**3.2.3.5**	**Wavefront Sensors**	**VV**	**240 hrs**	**Wed 8/22/07**	**Fri 11/16/07**		
244	3.2.3.5.1	High Order LGS Wavefront Sensors	VV	80 hrs	Wed 8/22/07	Fri 11/16/07		191,192
245	3.2.3.5.2	High Order NGS Wavefront Sensor	VV	40 hrs	Wed 8/22/07	Fri 11/16/07		
246	3.2.3.5.3	Low Order NGS Wavefront Sensors	VV	80 hrs	Wed 8/22/07	Fri 11/16/07		194,195
247	3.2.3.5.4	Calibration Wavefront Sensor	CN	40 hrs	Wed 8/22/07	Fri 11/16/07		193
248	**3.2.3.6**	**Wavefront Correctors**	**CN**	**115 hrs**	**Mon 8/13/07**	**Fri 11/30/07**		
249	3.2.3.6.1	Tip/Tilt Corrector	BB	20 hrs	Mon 10/1/07	Fri 11/30/07		251
250	3.2.3.6.2	Deformable Mirror	CN	50 hrs	Mon 8/13/07	Fri 9/21/07		
251	3.2.3.6.3	Tip/tilt Vibration Mitigation	CN	45 hrs	Wed 8/22/07	Fri 9/28/07	249	
252	**3.2.3.7**	**Acquisition Cameras**	**CN**	**40 hrs**	**Mon 10/1/07**	**Fri 10/26/07**		
253	3.2.3.7.1	NGS Acquisition Camera	CN	20 hrs	Mon 10/1/07	Fri 10/26/07		
254	3.2.3.7.2	LGS Acquisition Camera	CN	20 hrs	Mon 10/1/07	Fri 10/26/07		
255	3.2.3.8	Atmospheric Dispersion Correction	RD	24 hrs	Tue 8/21/07	Fri 12/14/07		
256	3.2.3.9	Alignment, Calibration, Diagnostics, Metrology ar	CN	60 hrs	Tue 5/29/07	Fri 6/29/07		
257	3.2.3.10	Atmospheric Profiler	MB	50 hrs	Wed 8/22/07	Tue 10/2/07		
258	3.2.3.11	d-IFU & LOWFS AO & Object Selection	AM	200 hrs	Wed 8/22/07	Wed 11/7/07		
259	3.2.3.12	PSF Monitoring Camera	MB	30 hrs	Mon 10/1/07	Fri 10/26/07		
260	**3.2.4**	**Non-real-time Control**	**EJ**	**330 hrs**	**Mon 6/25/07**	**Thu 11/22/07**		
261	3.2.4.1	Non-RTC Software	EJ	170 hrs	Mon 6/25/07	Fri 8/31/07		
262	3.2.4.2	Non-RTC Electronics	EJ	160 hrs	Mon 7/23/07	Thu 11/22/07		
263	**3.2.5**	**Real-time Control**	**DG**	**340 hrs**	**Wed 8/1/07**	**Mon 12/3/07**		



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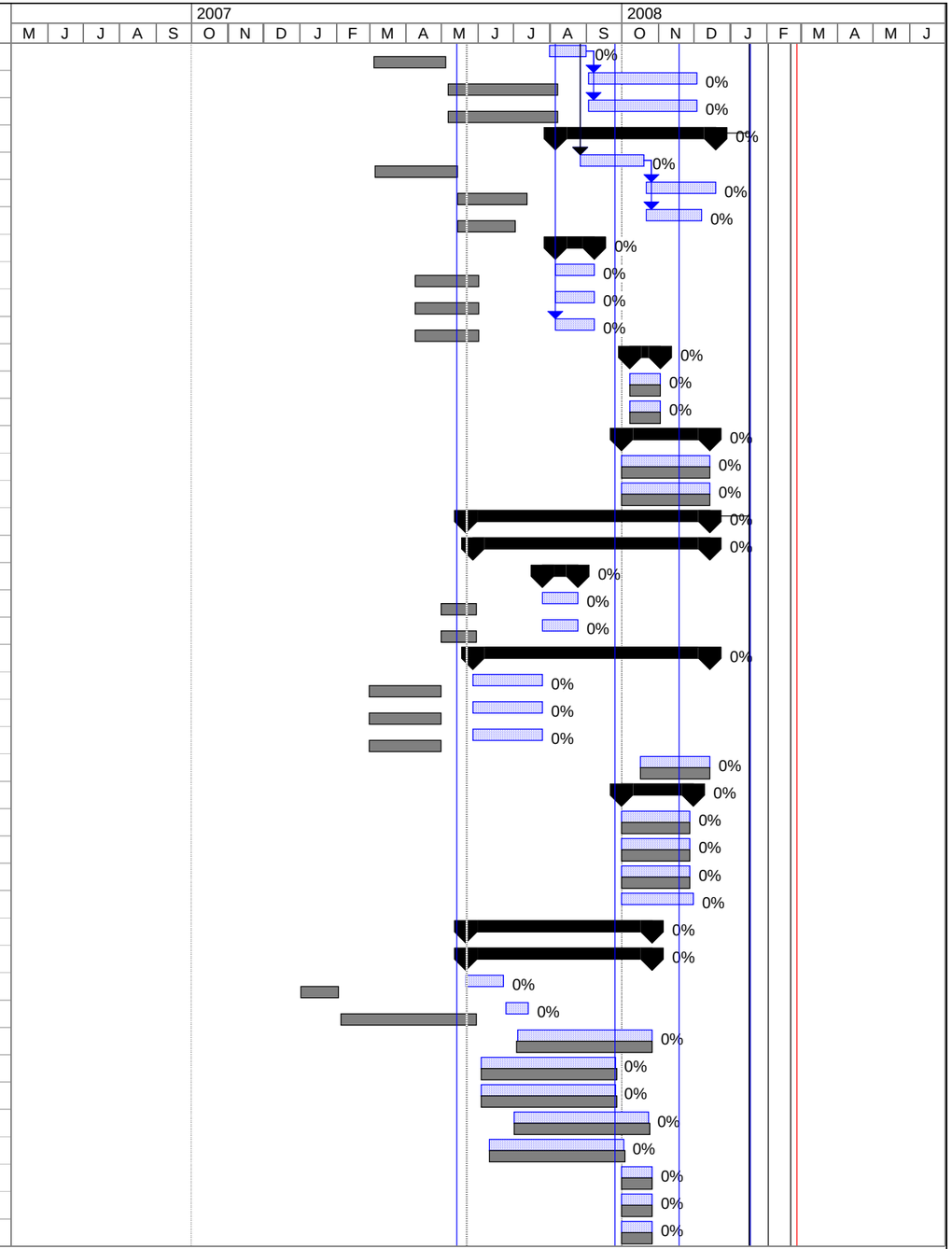
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
264	3.2.5.1	RTC Architecture Analysis and Design Study	DG	180 hrs	Wed 8/1/07	Fri 8/31/07	265,266	
265	3.2.5.2	RTC Software Module Definition	EJ	80 hrs	Mon 9/3/07	Mon 12/3/07		264
266	3.2.5.3	RTC Hardware Module Definition	MR	80 hrs	Mon 9/3/07	Mon 12/3/07		264
267	**3.3**	**Laser Facility**		**570 hrs**	**Mon 8/6/07**	**Wed 12/19/07**	**368**	
268	3.3.1	Laser System Architecture	VV	80 hrs	Mon 8/27/07	Fri 10/19/07	270,269	157,202,155
269	3.3.2	Laser Enclosure	JM	80 hrs	Mon 10/22/07	Wed 12/19/07		268
270	3.3.3	Laser	DG	20 hrs	Mon 10/22/07	Fri 12/7/07		268
271	**3.3.4**	**Laser Launch Facility**	**VV**	**200 hrs**	**Mon 8/6/07**	**Fri 9/7/07**		
272	3.3.4.1	Laser Beam Transport	CN	50 hrs	Mon 8/6/07	Fri 9/7/07		
273	3.3.4.2	Laser Pointing & Diagnostics	VV	80 hrs	Mon 8/6/07	Fri 9/7/07		
274	3.3.4.3	Laser Launch Telescope	VV	70 hrs	Mon 8/6/07	Fri 9/7/07		205
275	**3.3.5**	**Laser Safety Systems**	**JC**	**40 hrs**	**Mon 10/8/07**	**Fri 11/2/07**		
276	3.3.5.1	Personnel and Equipment Safety Systems	JC	20 hrs	Mon 10/8/07	Fri 11/2/07		
277	3.3.5.2	Aircraft, Satellite & Laser Traffic Control Safety S	JC	20 hrs	Mon 10/8/07	Fri 11/2/07		
278	**3.3.6**	**Laser System Control**	**JC**	**150 hrs**	**Mon 10/1/07**	**Fri 12/14/07**		
279	3.3.6.1	Laser System Software	EJ	80 hrs	Mon 10/1/07	Fri 12/14/07		
280	3.3.6.2	Laser System Electronics	JC	70 hrs	Mon 10/1/07	Fri 12/14/07		
281	**3.4**	**Science Operations**	**DLM**	**790 hrs**	**Tue 5/22/07**	**Fri 12/14/07**	**368**	
282	**3.4.1**	**Astronomical Observations Operations**	**DLM**	**340 hrs**	**Mon 5/28/07**	**Fri 12/14/07**		
283	**3.4.1.1**	**Pre-Observing Interfaces**	**DLM**	**60 hrs**	**Thu 7/26/07**	**Fri 8/24/07**		
284	3.4.1.1.1	AO Guide Star Interface	EM	20 hrs	Thu 7/26/07	Fri 8/24/07		
285	3.4.1.1.2	Science Observations Simulation Tools	EM	40 hrs	Thu 7/26/07	Fri 8/24/07		
286	**3.4.1.2**	**Observing Interfaces**	**DLM**	**80 hrs**	**Mon 5/28/07**	**Fri 12/14/07**		
287	3.4.1.2.1	Acquisition	EM	20 hrs	Mon 5/28/07	Wed 7/25/07		
288	3.4.1.2.2	Observing Sequences	EM	20 hrs	Mon 5/28/07	Wed 7/25/07		
289	3.4.1.2.3	Instrument, AO & Telescope Observer Interf	EJ	20 hrs	Mon 5/28/07	Wed 7/25/07		
290	3.4.1.2.4	Science Data Quality Monitoring	EM	20 hrs	Wed 10/17/07	Fri 12/14/07		
291	**3.4.1.3**	**Post-Observing Interfaces**	**DLM**	**200 hrs**	**Mon 10/1/07**	**Fri 11/30/07**		
292	3.4.1.3.1	Generic Data Products	EM	20 hrs	Mon 10/1/07	Tue 11/27/07		
293	3.4.1.3.2	Science Data Quality Assessment	EM	20 hrs	Mon 10/1/07	Tue 11/27/07		
294	3.4.1.3.3	Science Data Archiving	EM	40 hrs	Mon 10/1/07	Tue 11/27/07		
295	3.4.1.3.4	PSF Reconstruction	DLM	120 hrs	Mon 10/1/07	Fri 11/30/07		
296	**3.4.2**	**AO-Instrument Operations**	**DLM**	**450 hrs**	**Tue 5/22/07**	**Fri 10/26/07**		
297	**3.4.2.1**	**AO-Instrument Operations Architecture**	**DLM**	**270 hrs**	**Tue 5/22/07**	**Fri 10/26/07**		
298	3.4.2.1.1	AO-Instrument Observing Modes	DLM	80 hrs	Tue 5/22/07	Fri 6/22/07		
299	3.4.2.1.2	AO-Instrument Operations Support	DLM	20 hrs	Mon 6/25/07	Fri 7/13/07		
300	3.4.2.1.3	AO-Instrument Configuration & Setup	DLM	20 hrs	Thu 7/5/07	Fri 10/26/07		
301	3.4.2.1.4	AO-Instrument Calibrations	MvD	20 hrs	Mon 6/4/07	Tue 9/25/07		
302	3.4.2.1.5	AO-Instrument Nighttime Operation Modes	DLM	20 hrs	Mon 6/4/07	Tue 9/25/07		
303	3.4.2.1.6	AO-Instrument Science Acquisition & Contrc	EM	20 hrs	Mon 7/2/07	Tue 10/23/07		
304	3.4.2.1.7	AO-Instrument Health Monitoring & Automat	EJ	20 hrs	Mon 6/11/07	Tue 10/2/07		
305	3.4.2.1.8	AO-Instrument Laser Traffic Control	DS	10 hrs	Mon 10/1/07	Fri 10/26/07		
306	3.4.2.1.9	AO-Instrument User Interfaces	EJ	40 hrs	Mon 10/1/07	Fri 10/26/07		
307	3.4.2.1.10	AO-Instrument Maintenance Plan	EJ	20 hrs	Mon 10/1/07	Fri 10/26/07		



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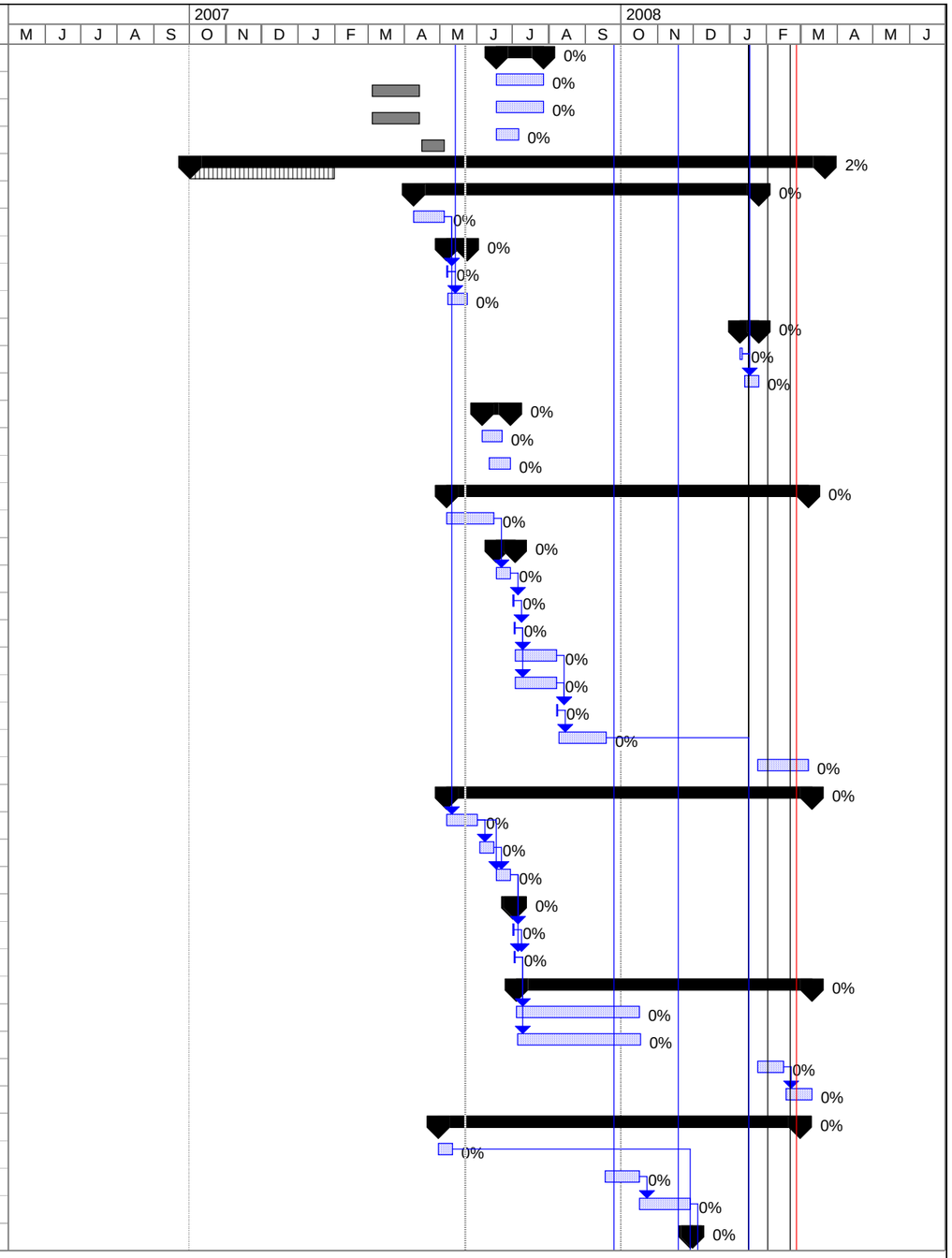
Task Progress
Baseline
Baseline Split
Baseline Milestone
Milestone
Summary Progress
Summary
Project Summary
External Tasks
External Milestone
Deadline

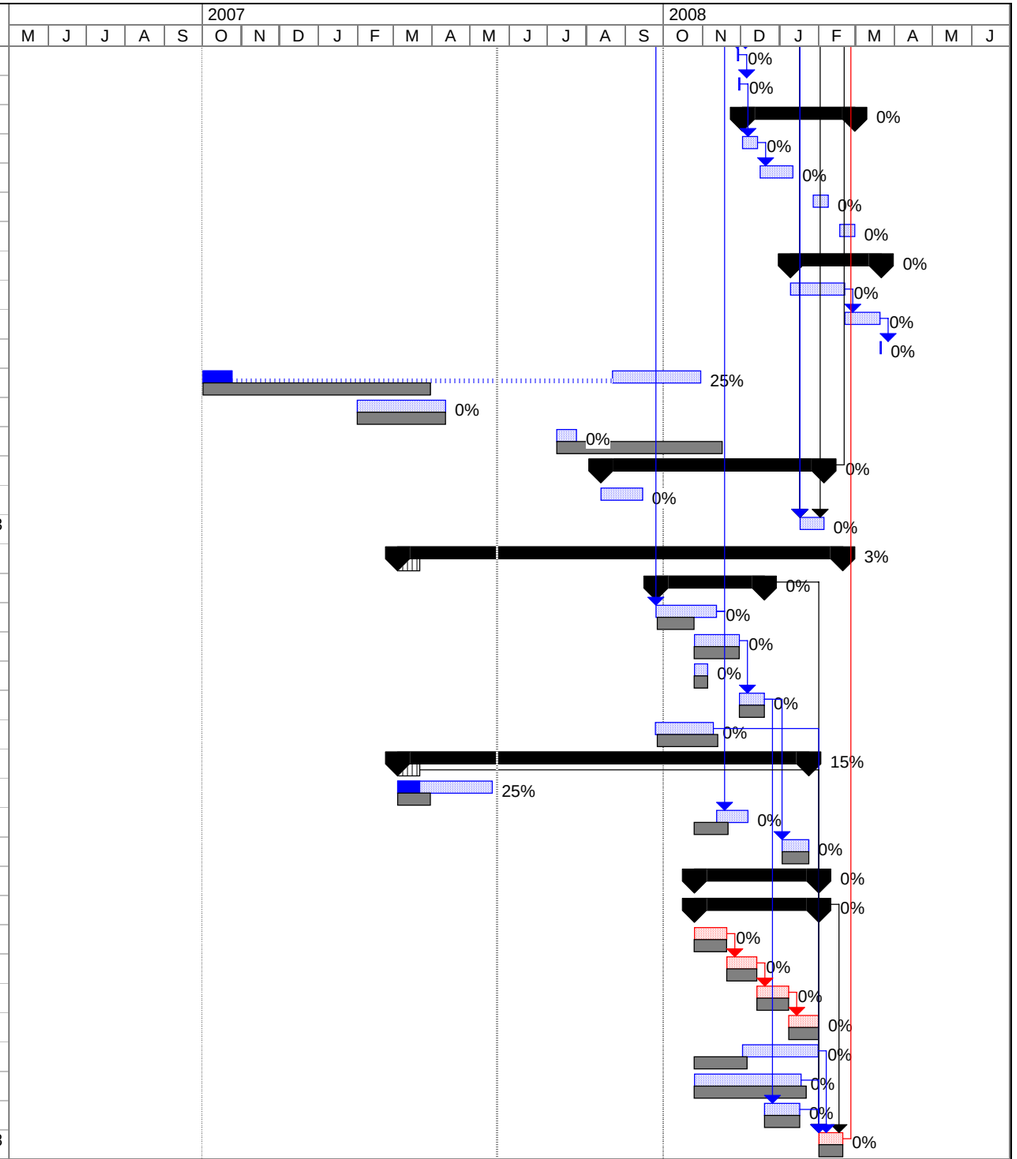
ID	WBS	Task Name	Lead	Work	Start	Finish	Successors	Predecessors
308	**3.4.2.2**	**AO-Instrument Operations Optimization**	**DLM**	**180 hrs**	**Mon 6/18/07**	**Fri 7/27/07**		
309	3.4.2.2.1	AO-Instrument Performance Prediction	MvD	80 hrs	Mon 6/18/07	Fri 7/27/07		
310	3.4.2.2.2	AO-Instrument Real-Time Optimization	MvD	80 hrs	Mon 6/18/07	Fri 7/27/07		
311	3.4.2.2.3	AO-Instrument Environment Monitoring	EJ	20 hrs	Mon 6/18/07	Fri 7/6/07		
312	**3.5**	**Science Instruments**	**SA**	**865 hrs**	**Mon 10/2/06**	**Fri 3/21/08**		
313	**3.5.1**	**Instrument Requirements & Initial Definitions**	**SA**	**132 hrs**	**Mon 4/9/07**	**Fri 1/25/08**		
314	3.5.1.1	Top Level Instrument Requirements & Definitions	SA	16 hrs	Mon 4/9/07	Fri 5/4/07	316,336	
315	**3.5.1.2**	**Instrument Suite Version 1**	**SA**	**13 hrs**	**Mon 5/7/07**	**Thu 5/24/07**		
316	3.5.1.2.1	Instrument Function Allocation Review with S	SA	3 hrs	Mon 5/7/07	Mon 5/7/07	317,230	314
317	3.5.1.2.2	Summary Descriptions of Instruments	SA	10 hrs	Tue 5/8/07	Thu 5/24/07		316
318	**3.5.1.3**	**Instrument Suite Version 2**	**SA**	**23 hrs**	**Thu 1/10/08**	**Fri 1/25/08**		
319	3.5.1.3.1	Instrument Review with Science Team	SA	3 hrs	Thu 1/10/08	Fri 1/11/08	320,231	
320	3.5.1.3.2	Revised Summary Descriptions of Instrumer	SA	20 hrs	Mon 1/14/08	Fri 1/25/08		319
321	**3.5.1.4**	**Instrument Interfaces**	**SA**	**80 hrs**	**Wed 6/6/07**	**Fri 6/29/07**		
322	3.5.1.4.1	Hardware Instrument Interfaces	SA	40 hrs	Wed 6/6/07	Fri 6/22/07		
323	3.5.1.4.2	Software Instrument Interfaces	SA	40 hrs	Tue 6/12/07	Fri 6/29/07		
324	**3.5.2**	**Deployable NIR IFU (DNIRI)**	**SA**	**278 hrs**	**Mon 5/7/07**	**Fri 3/7/08**		
325	3.5.2.1	DNIRI Concept Development	SA	50 hrs	Mon 5/7/07	Fri 6/15/07	327	
326	**3.5.2.2**	**DNIRI AO Interface Issues**	**SA**	**40 hrs**	**Mon 6/18/07**	**Tue 7/3/07**		
327	3.5.2.2.1	Object Selection for DNIRI	SA	32 hrs	Mon 6/18/07	Fri 6/29/07	328	325
328	3.5.2.2.2	AO Design for DNIRI	SA	4 hrs	Mon 7/2/07	Mon 7/2/07	329	327
329	3.5.2.2.3	DNIRI AO Boundary	SA	4 hrs	Tue 7/3/07	Tue 7/3/07	330,331	328
330	3.5.2.3	DNIRI Spectrograph Concepts	SA	60 hrs	Wed 7/4/07	Tue 8/7/07	332	329
331	3.5.2.4	DNIRI Imager Concepts	SA	60 hrs	Wed 7/4/07	Tue 8/7/07	332	329
332	3.5.2.5	DNIRI Concept Review with AO Team	SA	8 hrs	Wed 8/8/07	Wed 8/8/07	333	330,331
333	3.5.2.6	DNIRI Report ver 1	SA	40 hrs	Fri 8/10/07	Tue 9/18/07	368	332
334	3.5.2.7	DNIRI Report ver 2	SA	20 hrs	Fri 1/25/08	Fri 3/7/08		
335	**3.5.3**	**Single Object Imagers/Low Resolution Spectrogra**	**SA**	**139 hrs**	**Mon 5/7/07**	**Mon 3/10/08**		
336	3.5.3.1	SOI/LRS Coronagraph Requirements	SA	20 hrs	Mon 5/7/07	Fri 6/1/07	337,338	314
337	3.5.3.2	SOI/LRS Spectrograph Requirements	SA	5 hrs	Mon 6/4/07	Fri 6/15/07	338	336
338	3.5.3.3	SOI/LRS Concept Development	SA	24 hrs	Mon 6/18/07	Fri 6/29/07	340,341	337,336
339	**3.5.3.4**	**SOI/LRS Concept Review**	**SA**	**6 hrs**	**Mon 7/2/07**	**Tue 7/3/07**		
340	3.5.3.4.1	SOI/LRS Concept Review with Science Tea	SA	3 hrs	Mon 7/2/07	Mon 7/2/07	341	338
341	3.5.3.4.2	SOI/LRS Concept Review with AO Team	SA	3 hrs	Tue 7/3/07	Tue 7/3/07	343,344	340,338
342	**3.5.3.5**	**SOI/LRS Reports**	**SA**	**84 hrs**	**Thu 7/5/07**	**Mon 3/10/08**		
343	3.5.3.5.1	SOI/LRS Near-IR ver 1	SA	30 hrs	Thu 7/5/07	Tue 10/16/07		341
344	3.5.3.5.2	SOI/LRS Visibile ver 1	SA	30 hrs	Fri 7/6/07	Wed 10/17/07		341
345	3.5.3.5.3	SOI/LRS Near-IR ver 2	SA	12 hrs	Fri 1/25/08	Fri 2/15/08	346	
346	3.5.3.5.4	SOI/LRS Visible ver 2	SA	12 hrs	Mon 2/18/08	Mon 3/10/08		345
347	**3.5.4**	**Single Object IFUs (SOIFU)**	**SA**	**134 hrs**	**Mon 4/30/07**	**Fri 2/29/08**		
348	3.5.4.1	Near-IR IFU Requirements Review	SA	5 hrs	Mon 4/30/07	Fri 5/11/07	352	
349	3.5.4.2	Visible IFU Requirements Review	SA	8 hrs	Tue 9/18/07	Tue 10/16/07	350	
350	3.5.4.3	Visible IFU Concept Development	SA	45 hrs	Wed 10/17/07	Wed 11/28/07	352	349
351	**3.5.4.4**	**SOIFU Concept Review**	**SA**	**6 hrs**	**Thu 11/29/07**	**Fri 11/30/07**		



Project: NGAO System Design Phase
Date: Tue 5/22/07

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	Start	Finish	Successors	Predecessors
352	3.5.4.4.1	SOIFU Concept Review with Science Team	SA	3 hrs	Thu 11/29/07	Thu 11/29/07	353	348,350
353	3.5.4.4.2	SOIFU Concept Review with AO Team	SA	3 hrs	Fri 11/30/07	Fri 11/30/07	355	352
354	**3.5.4.5**	**Single Object IFU Reports**	**SA**	**70 hrs**	**Mon 12/3/07**	**Fri 2/29/08**		
355	3.5.4.5.1	SOIFU Near-IR ver 1	SA	12 hrs	Mon 12/3/07	Fri 12/14/07	356	353
356	3.5.4.5.2	SOIFU Visible ver 1	SA	30 hrs	Mon 12/17/07	Fri 1/11/08		355
357	3.5.4.5.3	SOIFU Near-IR ver 2	SA	8 hrs	Mon 1/28/08	Fri 2/8/08		
358	3.5.4.5.4	SOIFU Visible ver 2	SA	20 hrs	Mon 2/18/08	Fri 2/29/08		
359	**3.5.5**	**Special Purpose High Contrast Instrument (HCI)**	**SA**	**61 hrs**	**Thu 1/10/08**	**Fri 3/21/08**		
360	3.5.5.1	HCI Requirements Development	SA	13 hrs	Thu 1/10/08	Thu 2/21/08	361	
361	3.5.5.2	HCI Concept Development	SA	40 hrs	Fri 2/22/08	Thu 3/20/08	362	360
362	3.5.5.3	HCI Concept & Need Review with Science Team	SA	8 hrs	Fri 3/21/08	Fri 3/21/08		361
363	3.5.6	Interferometer	CN	80 hrs	Mon 10/2/06	Tue 10/30/07		
364	3.5.7	OHANA	CN	40 hrs	Thu 2/1/07	Wed 4/11/07		
365	3.5.8	*Thermal Near-IR Imager*	*Cancel*	1 hr	Mon 7/9/07	Tue 7/24/07		
366	**3.6**	**System Design Manual (SDM)**	**PW**	**140 hrs**	**Mon 8/13/07**	**Tue 2/5/08**	**43**	
367	3.6.1	SDM v1	PW	60 hrs	Mon 8/13/07	Fri 9/14/07		
368	3.6.2	SDM v2	PW	80 hrs	Thu 1/17/08	Tue 2/5/08		164,222,234,23
369	**4**	**Systems Engineering Management Plan (SEMP)**	**PW**	**1,140 hrs**	**Mon 3/5/07**	**Wed 2/20/08**		
370	**4.1**	**Project Plan**	**PW**	**480 hrs**	**Tue 9/25/07**	**Thu 12/20/07**	**389**	
371	4.1.1	WBS and Task Definition	PW	200 hrs	Tue 9/25/07	Mon 11/12/07	10,378	22FS+55 days
372	4.1.2	Cost Estimation	PW	160 hrs	Fri 10/26/07	Fri 11/30/07	374	
373	4.1.3	Major Project Milestones	PW	30 hrs	Fri 10/26/07	Mon 11/5/07		
374	4.1.4	Develop Full Schedule (MS Project Plan)	PW	90 hrs	Fri 11/30/07	Thu 12/20/07	S+2 wks,388	372
375	4.2	Risk Assessment & Management Plan	DG	40 hrs	Tue 9/25/07	Fri 11/9/07	389	
376	**4.3**	**Preliminary Design Phase Plan**	**PW**	**200 hrs**	**Mon 3/5/07**	**Thu 1/24/08**	**389**	
377	4.3.1	Preliminary Design Phase Plan Version 1 (to Support	PW	40 hrs	Mon 3/5/07	Fri 5/18/07		
378	4.3.2	Preliminary Design Phase Plan Version 2	PW	80 hrs	Mon 11/12/07	Fri 12/7/07		371
379	4.3.3	Preliminary Design Phase Plan Final Version	PW	80 hrs	Thu 1/3/08	Thu 1/24/08		374FS+2 wks
380	**4.4**	**Integration and Test Plans**	**CN**	**180 hrs**	**Fri 10/26/07**	**Fri 2/1/08**		
381	**4.4.1**	**Subsystem Testing Plans**	**CN**	**80 hrs**	**Fri 10/26/07**	**Fri 2/1/08**	**389**	
382	4.4.1.1	AO System Test Plan	CN	20 hrs	Fri 10/26/07	Tue 11/20/07	383	
383	4.4.1.2	Laser System Test Plan	CN	20 hrs	Tue 11/20/07	Fri 12/14/07	384	382
384	4.4.1.3	Science Operations Test Plan	DLM	20 hrs	Fri 12/14/07	Tue 1/8/08	385	383
385	4.4.1.4	Science Instruments Test Plan	SA	20 hrs	Tue 1/8/08	Fri 2/1/08		384
386	4.4.2	System Integration & Test Plans	CN	100 hrs	Mon 12/3/07	Thu 1/31/08	389	
387	4.5	Configuration Management Plan	EJ	80 hrs	Fri 10/26/07	Fri 1/18/08	389	
388	4.6	Project Management Plan	PW	80 hrs	Thu 12/20/07	Thu 1/17/08	389	374
389	4.7	SEMP Document	PW	80 hrs	Fri 2/1/08	Wed 2/20/08	43	370,376,381,38



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Project Summary
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Deadline