	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Adkins					10.7 hrs	40.85 hrs	26.1 hrs	17.48 hrs	37.87 hrs	23.08 hrs	30.08 hrs	
System Design Report												
Observatory Interface Requirements					8 hrs							
Observatory Requirements Rev 2								5.33 hrs	4.67 hrs			
Traceability Matrix Rev 2									8 hrs			
Instrument Balance TS						7 hrs	3 hrs					
Science Instrument Re-use Cost/Benefit TS (m3)						28 hrs	12 hrs					
Science Instruments Function Allocation Ver 1											13.33 hrs	
Science Instruments Function Allocation Ver 2												
OSIRIS							5.03 hrs	5.52 hrs	4.8 hrs	0.63 hrs		
Interferometer					2.7 hrs	2.7 hrs	2.58 hrs	2.83 hrs	2.47 hrs	2.7 hrs		
OHANA									3.2 hrs	3.52 hrs	1.28 hrs	
Near-IR Imager						3.15 hrs	3.48 hrs	3.8 hrs	3.32 hrs	3.63 hrs	3.48 hrs	
Visible Imager												
Visible IFU												
Deployable Near-IR IFU									11.43 hrs	12.57 hrs	12 hrs	
Thermal Near-IR Imager												
Cost Estimation												
Adkins(IPM)				4 hrs	26 hrs							
SD Phase Contracts Generated				4 hrs	26 hrs							
Identify Reviewers												
Review Package Distributed												
Reviewer Comments Addressed												
System Design Review Support												
Response to Reviewer Report & Distribution												
Ammons						50.67 hrs	29.33 hrs					
Anchor to LAO Lab Experiments						50.67 hrs	29.33 hrs					
Bauman				4 hrs	5.33 hrs	66.67 hrs	20 hrs	34.75 hrs	24.32 hrs	54.75 hrs	72.63 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				4 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Adaptive Secondary Mirror option TS (m5)										24 hrs		
Optical Relay TS (m6)								8.92 hrs	8.1 hrs	8.92 hrs	4.05 hrs	
Field Rotation Strategy TS (m6)								17.83 hrs	16.22 hrs	17.83 hrs	8.1 hrs	
Stand-alone vs DM on T/T Stage TS (m3)					4 hrs	44 hrs	12 hrs					
Correcting Fast T/T with DM TS					1.33 hrs	14.67 hrs	4 hrs					
AO System Functional Requirements Ver 1											11.6 hrs	
AO System Functional Requirements Ver 2												
AO System Architecture											7.12 hrs	
Field Rotation											4 hrs	
Optical Relay											5 hrs	
Optical Switchyard											5 hrs	
Optical Support Structure												
Tip/Tilt Corrector												
Deformable Mirror											19.77 hrs	
Cost Estimation												
Bell												
Bouchez				4 hrs	37.95 hrs	36.12 hrs	27.78 hrs	17.08 hrs	44.1 hrs	16.92 hrs	8.05 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				4 hrs								
Team Meeting #2 (CIT)						4 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								4 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											4 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Science Operations Requirements					8.8 hrs	7.2 hrs						
Throughput					10.83 hrs	10.83 hrs	10.33 hrs					
Document Proposal Analysis					10 hrs							
Develop Background Performance Budget					8.32 hrs	14.08 hrs	13.43 hrs	4.17 hrs				
Point Source Sensitivities												
K & L-band Science TS (m5)									36 hrs	4 hrs		
AO Enclosure Temperature TS (m6)								8.92 hrs	8.1 hrs	8.92 hrs	4.05 hrs	
NGS Acquisition Camera												
LGS Acquisition Camera												
Britton				4 hrs	19.2 hrs	58.47 hrs	60.52 hrs	61.82 hrs		4 hrs	8 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				4 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
Photometric Accuracy					19.2 hrs	35.2 hrs	33.6 hrs	32 hrs				
Astrometric Accuracy						15.27 hrs	22.92 hrs	21.82 hrs				
Cameron						15.27 hrs	22.92 hrs	25.08 hrs	21.82 hrs	24 hrs	22.92 hrs	
Astrometric Accuracy						15.27 hrs	22.92 hrs	25.08 hrs	21.82 hrs	24 hrs	22.92 hrs	
Chin								5.33 hrs	4.67 hrs		72.48 hrs	
System Design Review Support												
Observatory Requirements Rev 2								5.33 hrs	4.67 hrs			
Observing Uptime												
AO System Functional Requirements Ver 1											11.6 hrs	
AO System Functional Requirements Ver 2												
Laser System Functional Requirements Ver 1											22 hrs	
Laser System Functional Requirements Ver 2												
Non-RTC Electronics												
Laser Beam Transport											2 hrs	
Laser Pointing & Diagnostics											8 hrs	
Laser Launch Telescope											14.22 hrs	
Personnel and Equipment Safety Systems												
Aircraft, Satellite & Laser Traffic Control Safety Systems												
Laser System Electronics												
AO-Instrument Maintenance Plan												
AO-Instrument Environment Monitoring											14.67 hrs	
Cost Estimation												
Configuration Management Plan												
Clare					12.8 hrs	3.2 hrs						
Agreement between Sky Coverage Codes					12.8 hrs	3.2 hrs						
Dekany	1.55 hrs	4.05 hrs	4.43 hrs	29.05 hrs	57.77 hrs	65.97 hrs	21 hrs	62.23 hrs	51.72 hrs	53.5 hrs	57.45 hrs	
SD Phase System Engineering Management Plan				15 hrs								
SD Phase Contracts Generated				2 hrs	13 hrs							
Mid-year Replan										8 hrs		
FY08 Replan												
Executive Committee Telecons	1.55 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.23 hrs	4.23 hrs	4.05 hrs	4.43 hrs	3.85 hrs	4.23 hrs	4.05 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Report Preparation/Presentation					3.52 hrs	3.52 hrs	3.37 hrs	3.68 hrs	0.92 hrs			
Support Advancement Office												
System Design Report												
Identify Reviewers												
Reviewer Comments Addressed												
System Design Review Support												
Response to Reviewer Report & Distribution												
Agreement between Sky Coverage Codes					9.6 hrs	2.4 hrs						
Document WFE Budget Rev 1					17.6 hrs	17.6 hrs	4.8 hrs					
Document WFE Budget Rev 2							4.8 hrs	35.2 hrs				
Encircled Energy vs Sky Coverage					9.8 hrs	30.2 hrs						
Performance Budgets Summary Ver 1								2 hrs	38 hrs			
Performance Budgets Summary Ver 2												
Optical Relay TS (m6)								8.92 hrs	8.1 hrs	8.92 hrs	4.05 hrs	
System Architecture Ver 1									0.83 hrs	18.33 hrs	10.83 hrs	
System Architecture Ver 2												
AO System Architecture											3.55 hrs	
Optical Relay											1.77 hrs	
Deformable Mirror											25.2 hrs	
System Design Manual												
WBS and Task Definition												
Cost Estimation												
Major Project Milestones												
Develop Full Schedule (MS Project Plan)												
Risk Assessment & Management Plan												
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)										10 hrs		
Preliminary Design Phase Plan Version 2												
Preliminary Design Phase Plan Final Version												
Project Management Plan												
SEMP Document												
Flicker			29.33 hrs	35.62 hrs	65.23 hrs	130.25 hrs	118.2 hrs	78.35 hrs	59.42 hrs	122.93 hrs	100.13 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Traceability Matrix Rev 2									24 hrs			
Tools in place & 1st release			23.33 hrs	16.67 hrs								
Release updated data (every two months)				1.95 hrs	4.3 hrs	4.3 hrs	4.1 hrs	4.48 hrs	3.9 hrs	4.3 hrs	4.1 hrs	
Telescope dynamic performance data					30 hrs	30 hrs						
Agreement between Tomography Codes			6 hrs	9 hrs								
Anchor to On-sky MGSU Experiments						10 hrs						
Anchor to LAO Lab Experiments						25.33 hrs	14.67 hrs					
Document WFE Budget Rev 2							4.08 hrs	25.92 hrs				
Photometric Accuracy					9.6 hrs	17.6 hrs	16.8 hrs	16 hrs				
Companion Sensitivity						20.37 hrs	30.55 hrs	9.08 hrs				
All-In Science Simulations												
Other												
GLAO for non-NGAO Instruments TS (m5)									18 hrs	2 hrs		
Telescope Wavefront Errors TS							40 hrs					
Deformable Mirror Stroke Requirement TS (m6)								14.87 hrs	13.52 hrs	14.87 hrs	6.75 hrs	
Correcting Fast T/T with DM TS					1.33 hrs	14.67 hrs	4 hrs					
LGS Asterism Geometry & Size TS (m2)					20 hrs							
Tip/Tilt Corrector												
Deformable Mirror											12.92 hrs	
Alignment, Calibration, Diagnostics, Metrology and Monitoring											9.7 hrs	
RTC Architecture Analysis and Design Study										17.78 hrs	18.67 hrs	
AO-Instrument Performance Prediction										40 hrs	20 hrs	
AO-Instrument Real-Time Optimization										40 hrs	20 hrs	
Gavel	1.55 hrs	4.05 hrs	8.43 hrs	35.05 hrs	40.17 hrs	116.3 hrs	77.47 hrs	16.12 hrs	5.6 hrs	53.47 hrs	37.55 hrs	
SD Phase System Engineering Management Plan				15 hrs								

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
SD Phase Contracts Generated				2 hrs	13 hrs							
Mid-year Replan										8 hrs		
FY08 Replan												
Executive Committee Telecons	1.55 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.23 hrs	4.23 hrs	4.05 hrs	4.43 hrs	3.85 hrs	4.23 hrs	4.05 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
Report Preparation/Presentation					3.52 hrs	3.52 hrs	3.37 hrs	3.68 hrs	0.92 hrs			
Support Advancement Office												
System Design Report												
Identify Reviewers												
Reviewer Comments Addressed												
System Design Review Support												
Response to Reviewer Report & Distribution												
Sodium return vs laser format						20 hrs						
Agreement between Tomography Codes			4 hrs	6 hrs								
Agreement between Sky Coverage Codes					9.6 hrs	2.4 hrs						
Anchor to LAO Lab Experiments						2.53 hrs	1.47 hrs					
Encircled Energy vs Sky Coverage					9.8 hrs	30.8 hrs	29.4 hrs					
MOAO & MCAO TS						44.8 hrs	35.2 hrs					
System Architecture Ver 1									0.83 hrs	18.33 hrs	10.83 hrs	
System Architecture Ver 2												
Technology Drivers Summary												
Technical Risk Analysis Ver 1												
Technical Risk Analysis Ver 2												
AO System Architecture											5.33 hrs	
RTC Architecture Analysis and Design Study										8.88 hrs	9.33 hrs	
System Design Manual												
WBS and Task Definition												
Cost Estimation												
Develop Full Schedule (MS Project Plan)												
Risk Assessment & Management Plan												
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)										10 hrs		
Preliminary Design Phase Plan Version 2												
Preliminary Design Phase Plan Final Version												
Project Management Plan												
SEMP Document												
Ireland									28.8 hrs	11.2 hrs		
Polarimetric Accuracy									28.8 hrs	11.2 hrs		
Johansson								5.33 hrs	4.67 hrs	28.02 hrs	47.13 hrs	
System Design Review Support												
Observatory Requirements Rev 2								5.33 hrs	4.67 hrs			
Observing Uptime												
AO System Functional Requirements Ver 1											11.6 hrs	
AO System Functional Requirements Ver 2												
AO System Architecture											7.12 hrs	
Non-RTC Software												
RTC Architecture Analysis and Design Study										17.78 hrs	18.67 hrs	
RTC Software Module Definition												
RTC Hardware Module Definition												
Laser System Software												
Instrument, AO & Telescope Observer Interfaces										10.23 hrs	9.77 hrs	
AO-Instrument Health Monitoring & Automated Recovery												
AO-Instrument User Interfaces												
Cost Estimation												
Johnson												
Non-RTC Software												
Configuration Management Plan												
Kellner					2.67 hrs	29.33 hrs	118 hrs	1.62 hrs	4.05 hrs	4.47 hrs	69.85 hrs	
System Design Review Support												

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Rayleigh Rejection TS (m3)					2.67 hrs	29.33 hrs	8 hrs					
LOWFS Architecture TS							80 hrs					
Number & Type of LOWFS TS (m4)							30 hrs					
Centroid Anisoplanatism TS (m7)											9.6 hrs	
Focus Compensation TS (m6)								1.62 hrs	4.05 hrs	4.47 hrs	4.25 hrs	
Low Order NGS Wavefront Sensors												
Calibration Wavefront Sensor												
Atmospheric Dispersion Correction												
Laser Beam Transport											8 hrs	
Laser Pointing & Diagnostics											28 hrs	
Laser Launch Telescope											20 hrs	
Kupke						50.67 hrs	29.33 hrs					
Anchor to LAO Lab Experiments						50.67 hrs	29.33 hrs					
Le Mignant				4 hrs	17.6 hrs	43.28 hrs	41.33 hrs	66.98 hrs	27.13 hrs	17.3 hrs	22.4 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				4 hrs								
Team Meeting #2 (CIT)						4 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								4 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											4 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Science Operations Requirements					17.6 hrs	14.4 hrs						
Observatory Requirements Rev 2								8.53 hrs	7.47 hrs			
Observing Efficiency									12 hrs	8 hrs		
Observing Model TS						24.88 hrs	37.33 hrs	17.78 hrs				
Science Operations Functional Requirements Ver 1											13.33 hrs	
Science Operations Functional Requirements Ver 2												
AO-Instrument Observing Modes								36.67 hrs	3.33 hrs			
AO-Instrument Operations Support									4.33 hrs	5.3 hrs	5.07 hrs	
AO-Instrument Configuration & Setup												
AO-Instrument Nighttime Operation Modes												
Cost Estimation												
Lockwood											10 hrs	
Field Rotation											2 hrs	
Optical Relay											3 hrs	
Optical Switchyard											5 hrs	
Optical Support Structure												
Macintosh						33.93 hrs	50.92 hrs	15.15 hrs				
Companion Sensitivity						33.93 hrs	50.92 hrs	15.15 hrs				
Max	1.55 hrs	4.05 hrs	4.43 hrs	27.05 hrs	29.98 hrs	17.98 hrs	13.63 hrs	18.33 hrs	95 hrs	39.27 hrs	17.63 hrs	
SD Phase System Engineering Management Plan				15 hrs								
Mid-year Replan										6 hrs		
FY08 Replan												
Executive Committee Telecons	1.55 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.23 hrs	4.23 hrs	4.05 hrs	4.43 hrs	3.85 hrs	4.23 hrs	4.05 hrs	
Science Advisory Committee Telecons					2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
Report Preparation/Presentation					3.52 hrs	3.52 hrs	3.37 hrs	3.68 hrs	3.2 hrs	3.52 hrs	3.37 hrs	
Support Advancement Office												
System Design Report												
Identify Reviewers												
Reviewer Comments Addressed												

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
System Design Review Support												
Response to Reviewer Report & Distribution												
Science Requirements Summary Rev 1					20 hrs							
Science Requirements Summary Rev 2									85.72 hrs	14.28 hrs		
Science Requirements Summary Rev 3												
Science Requirements Summary Final												
WBS and Task Definition												
Develop Full Schedule (MS Project Plan)												
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)										5 hrs		
Preliminary Design Phase Plan Version 2												
Preliminary Design Phase Plan Final Version												
Project Management Plan												
SEMP Document												
Meguro								23.17 hrs	20.88 hrs	17.83 hrs	19.7 hrs	
Observatory Requirements Rev 2								5.33 hrs	4.67 hrs			
AO Enclosure Temperature TS (m6)								11.9 hrs	10.82 hrs	11.9 hrs	5.4 hrs	
Field Rotation Strategy TS (m6)								5.95 hrs	5.4 hrs	5.95 hrs	2.7 hrs	
AO System Functional Requirements Ver 1											11.6 hrs	
AO System Functional Requirements Ver 2												
AO Enclosure												
High Order LGS Wavefront Sensors												
High Order NGS Wavefront Sensor												
Low Order NGS Wavefront Sensors												
Laser Enclosure												
Cost Estimation												
Moore						79.07 hrs	49.48 hrs	27.92 hrs	50.95 hrs	56.03 hrs	103.87 hrs	
System Design Review Support												
Science Instrument Re-use Cost/Benefit TS (m3)						56 hrs	24 hrs					
Science Instruments Function Allocation Ver 1											22.22 hrs	
Science Instruments Function Allocation Ver 2												
Laser Pointing & Diagnostics											28.17 hrs	
Near-IR Imager						23.07 hrs	25.48 hrs	27.92 hrs	24.28 hrs	26.7 hrs	25.48 hrs	
Visible Imager												
Visible IFU												
Deployable Near-IR IFU									26.67 hrs	29.33 hrs	28 hrs	
Thermal Near-IR Imager												
Neyman			6 hrs	17 hrs	140.37 hrs	162.72 hrs	145.78 hrs	68 hrs	262.22 hrs	81.62 hrs	115.32 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Development Requirements					4.4 hrs	3.6 hrs						
Observatory Interface Requirements					8 hrs							
Observatory Requirements Rev 2								12.8 hrs	11.2 hrs			
Observatory Requirements Rev 3											10.67 hrs	
Observatory Requirements Rev 4												
Traceability Matrix Rev 1					10 hrs							
Traceability Matrix Rev 2									24 hrs			
Traceability Matrix Rev 3												
Traceability Matrix Rev 4												
SRD Rev 2										20 hrs		
SRD Rev 3												
SRD Final SD Phase Version												
Telescope dynamic performance data					30 hrs	30 hrs						
Telescope static wavefront errors					10 hrs	10 hrs						
Sodium return vs laser format						20 hrs						
Agreement between Tomography Codes			6 hrs	9 hrs								
Anchor to Keck II LGS AO PSFs					40 hrs							
Photometric Accuracy					9.6 hrs	17.6 hrs	16.8 hrs	16 hrs				
Companion Sensitivity						27.15 hrs	40.73 hrs	12.12 hrs				

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Performance Budgets Summary Ver 1								3 hrs	57 hrs			
Performance Budgets Summary Ver 2												
All-In Science Simulations												
PSF Uniformity & Stability												
NGAO versus Keck AO upgrades TS (meeting 5)									54 hrs	6 hrs		
Keck Interferometer Support TS (m5)					21.6 hrs	39.6 hrs	37.8 hrs	1 hr				
Telescope Wavefront Errors TS							40 hrs					
Free Space vs Fiber TS (m7)								8 hrs	80 hrs	12 hrs		
AO System Functional Requirements Ver 1											34.78 hrs	
AO System Functional Requirements Ver 2												
Technology Drivers Summary												
Technical Risk Analysis Ver 1												
Technical Risk Analysis Ver 2												
AO System Architecture											8.88 hrs	
Alignment, Calibration, Diagnostics, Metrology and Monitoring											9.7 hrs	
Laser Beam Transport											14 hrs	
Interferometer					6.77 hrs	6.77 hrs	6.47 hrs	7.08 hrs	6.15 hrs	6.77 hrs		
OHANA									3.2 hrs	3.52 hrs	1.28 hrs	
Deployable Near-IR IFU									26.67 hrs	29.33 hrs	28 hrs	
AO System Test Plan												
Laser System Test Plan												
Science Operations Test Plan												
Science Instruments Test Plan												
System Integration & Test Plans												
Randolph												
Configuration Management Plan												
Reinig										35.55 hrs	37.33 hrs	
Non-RTC Electronics												
RTC Architecture Analysis and Design Study										35.55 hrs	37.33 hrs	
RTC Software Module Definition												
RTC Hardware Module Definition												
Stomski											21.6 hrs	
AO System Functional Requirements Ver 1											11.6 hrs	
AO System Functional Requirements Ver 2												
Laser System Functional Requirements Ver 1											10 hrs	
Laser System Functional Requirements Ver 2												
Non-RTC Software												
Laser System Software												
Summers												
AO-Instrument Laser Traffic Control												
Sweeney												
Velur				4 hrs	20 hrs	8 hrs	79.57 hrs	180.68 hrs	31.47 hrs	56.7 hrs	150.28 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				4 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
System Design Review Support												
Dichroics & Beamsplitters TS (m6)								17.83 hrs	16.22 hrs	17.83 hrs	8.1 hrs	
LGS WFS Type TS (m4)							17.15 hrs	12.85 hrs				
LGS WFS number of subapertures TS (m4)							11.43 hrs	8.57 hrs				
Slow WFS TS (m7)											19.2 hrs	
LOWFS Architecture TS							32 hrs	36.8 hrs	11.2 hrs			
Number & Type of LOWFS TS (m4)							15 hrs	15 hrs				
Focus Compensation TS (m6)								1.62 hrs	4.05 hrs	4.47 hrs	4.25 hrs	
Laser Pulse Format TS (m6)								80 hrs				
Variable vs fixed LGS Asterism Cost/Benefit TS (m2)					20 hrs							
Laser System Functional Requirements Ver 1											22 hrs	
Laser System Functional Requirements Ver 2												
AO System Architecture											7.12 hrs	
High Order LGS Wavefront Sensors												
High Order NGS Wavefront Sensor												

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Low Order NGS Wavefront Sensors												
Laser System Architecture										30.4 hrs	33.6 hrs	
Laser												
Laser Pointing & Diagnostics											28 hrs	
Laser Launch Telescope											20 hrs	
Cost Estimation												
van Dam										26.67 hrs	13.33 hrs	
AO-Instrument Calibrations												
AO-Instrument Performance Prediction										13.33 hrs	6.67 hrs	
AO-Instrument Real-Time Optimization										13.33 hrs	6.67 hrs	
Wizinowich	1.55 hrs	4.05 hrs	4.43 hrs	47.05 hrs	53.05 hrs	40.65 hrs	29.22 hrs	22.48 hrs	90.28 hrs	81.93 hrs	26.18 hrs	
SD Phase System Engineering Management Plan				35 hrs								
Mid-year Replan										18 hrs		
FY08 Replan												
Executive Committee Telecons	1.55 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.23 hrs	4.23 hrs	4.05 hrs	4.43 hrs	3.85 hrs	4.23 hrs	4.05 hrs	
Team Meeting #1 (mgmt, science & technical - Irvine)				8 hrs								
Team Meeting #2 (CIT)						8 hrs						
Team Videocon #3							4 hrs					
Team Meeting #4 (Keck)								8 hrs				
Team Videocon #5										4 hrs		
Team Meeting #6 (UCSC)											8 hrs	
Team Videocon #7												
Team Retreat #8 (UCSC)												
Team Videocon #9												
Team Meeting #10 (CIT)												
Team Videocon #11												
Team Meeting #12 (Keck)												
Team Videocon #13												
Report Preparation/Presentation					3.52 hrs	3.52 hrs	3.37 hrs	3.68 hrs	3.2 hrs	3.52 hrs	3.37 hrs	
Support Advancement Office												
System Design Report												
Identify Reviewers												
Reviewer Comments Addressed												
System Design Review Support												
Response to Reviewer Report & Distribution												
Science Requirements Summary Rev 1					20 hrs							
Science Requirements Summary Rev 2									17.15 hrs	2.85 hrs		
Science Requirements Summary Rev 3												
Science Requirements Summary Final												
Development Requirements					4.4 hrs	3.6 hrs						
Observatory Interface Requirements					8 hrs							
Science Operations Requirements					8.8 hrs	7.2 hrs						
Traceability Matrix Rev 2									24 hrs			
SRD Rev 1						8 hrs	12 hrs					
NGAO versus Keck AO upgrades TS (meeting 5)									36 hrs	4 hrs		
Adaptive Secondary Mirror option TS (m5)										16 hrs		
Keck Interferometer Support TS (m5)					2.4 hrs	4.4 hrs	4.2 hrs	4.6 hrs	4 hrs	0.4 hrs		
System Architecture Ver 1									0.55 hrs	12.22 hrs	7.22 hrs	
System Architecture Ver 2												
AO System Architecture											3.55 hrs	
Interferometer					1.7 hrs	1.7 hrs	1.62 hrs	1.77 hrs	1.53 hrs	1.7 hrs		
System Design Manual												
WBS and Task Definition												
Cost Estimation												
Major Project Milestones												
Develop Full Schedule (MS Project Plan)												
Risk Assessment & Management Plan												
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)										15 hrs		
Preliminary Design Phase Plan Version 2												
Preliminary Design Phase Plan Final Version												
Project Management Plan												
SEMP Document												
Woillez									9.6 hrs	10.57 hrs	3.83 hrs	
OHANA									9.6 hrs	10.57 hrs	3.83 hrs	
Postdoc					165 hrs	165 hrs	251.25 hrs	237.92 hrs	110.83 hrs	80.47 hrs	69.53 hrs	
Performance Requirements					91.67 hrs	91.67 hrs	66.67 hrs					
Observing Scenarios							9.38 hrs	14.38 hrs	1.25 hrs			
Science Instrument Requirements							9.38 hrs	14.38 hrs	1.25 hrs			
Encircled Energy (& d-IFU) Performance Requirements					73.33 hrs	73.33 hrs	53.33 hrs					
Observing Scenarios							18.75 hrs	28.75 hrs	2.5 hrs			

	Jun '06	Jul '06	Aug '06	Sep '06	Oct '07	Nov '07	Dec '07	Jan '07	Feb '07	Mar '07	Apr '07	May '07
Science Instrument Requirements							18.75 hrs	28.75 hrs	2.5 hrs			
Encircled Energy & PSF Performance Requirements							37.5 hrs	57.5 hrs	50 hrs	5 hrs		
Observing Scenarios										12.5 hrs	12.5 hrs	
Science Instrument Requirements										12.5 hrs	12.5 hrs	
Encircled Energy & PSF Performance Requirements							37.5 hrs	57.5 hrs	50 hrs	5 hrs		
Observing Scenarios										12.5 hrs	12.5 hrs	
Science Instrument Requirements										12.5 hrs	12.5 hrs	
AO Guide Star Interface												
Science Observations Simulation Tools												
Acquisition										10.23 hrs	9.77 hrs	
Observing Sequences										10.23 hrs	9.77 hrs	
Science Data Quality Monitoring												
Generic Data Products												
Science Data Quality Assessment												
Science Data Archiving												
AO-Instrument Observing Modes								36.67 hrs	3.33 hrs			
AO-Instrument Science Acquisition & Control												
Student1					97.78 hrs	97.78 hrs	87.78 hrs	95.67 hrs	193.33 hrs	67.67 hrs	10 hrs	
Point Source Companion Sensitivity Requirements					48.88 hrs	48.88 hrs	2.22 hrs					
Spectral Sensitivity & Spectral Resolution Requirements					48.88 hrs	48.88 hrs	2.22 hrs					
Observing Scenarios							16.67 hrs	8.33 hrs				
Science Instrument Requirements							16.67 hrs	8.33 hrs				
Performance Requirements							50 hrs	50 hrs				
Observing Scenarios								2.5 hrs	16.67 hrs	5.83 hrs		
Science Instrument Requirements								2.5 hrs	16.67 hrs	5.83 hrs		
Spatial Resolution Requirements								12 hrs	80 hrs	8 hrs		
Spectral Sensitivity & Spectral Resolution Requirements								12 hrs	80 hrs	8 hrs		
Observing Scenarios										20 hrs	5 hrs	
Science Instrument Requirements										20 hrs	5 hrs	
Student2					132 hrs	170.1 hrs	236 hrs	207.9 hrs	306.67 hrs	127.33 hrs	20 hrs	
Astrometry requirements					66 hrs	66 hrs	18 hrs					
Observing Scenarios						2.85 hrs	15 hrs	7.15 hrs				
Science Instrument Requirements						2.85 hrs	15 hrs	7.15 hrs				
Performance Requirements						13.33 hrs	70 hrs	66.67 hrs				
Observing Scenarios								2.5 hrs	16.67 hrs	5.83 hrs		
Science Instrument Requirements								2.5 hrs	16.67 hrs	5.83 hrs		
Performance Requirements								18 hrs	120 hrs	12 hrs		
Observing Scenarios										20 hrs	5 hrs	
Science Instrument Requirements										20 hrs	5 hrs	
Companion Sensitivity Performance Requirements					66 hrs	66 hrs	18 hrs					
Observing Scenarios						2.85 hrs	15 hrs	7.15 hrs				
Science Instrument Requirements						2.85 hrs	15 hrs	7.15 hrs				
Contrast Performance Requirements								18 hrs	120 hrs	12 hrs		
Observing Scenarios										20 hrs	5 hrs	
Science Instrument Requirements										20 hrs	5 hrs	
Polarimetry Performance Requirements						13.33 hrs	70 hrs	66.67 hrs				
Observing Scenarios								2.5 hrs	16.67 hrs	5.83 hrs		
Science Instrument Requirements								2.5 hrs	16.67 hrs	5.83 hrs		
Other					5.75 hrs	5.75 hrs	31.95 hrs	35 hrs	108.9 hrs	74.63 hrs	52 hrs	
Observing Efficiency									48 hrs	32 hrs		
Science Operations Functional Requirements Ver 1											20 hrs	
Science Operations Functional Requirements Ver 2												
OSIRIS							26.47 hrs	28.98 hrs	25.2 hrs	3.37 hrs		
Interferometer					5.75 hrs	5.75 hrs	5.5 hrs	6.02 hrs	5.23 hrs	5.75 hrs		
Deployable Near-IR IFU									30.48 hrs	33.52 hrs	32 hrs	
Total	6.2 hrs	16.2 hrs	57.07 hrs	214.82 hrs	939.35 hrs	1,488.02 hrs	1,567.57 hrs	1,324.4 hrs	1,594.28 hrs	1,169.9 hrs	1,219.3 hrs	

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Adkins	14.73 hrs	9.02 hrs	9.87 hrs	8.58 hrs	17.85 hrs	36.23 hrs			4.8 hrs	0.2 hrs		322.98 hrs
System Design Report									4.8 hrs	0.2 hrs		5 hrs
Observatory Interface Requirements												8 hrs
Observatory Requirements Rev 2												10 hrs
Traceability Matrix Rev 2												8 hrs
Instrument Balance TS												10 hrs
Science Instrument Re-use Cost/Benefit TS (m3)												40 hrs
Science Instruments Function Allocation Ver 1												30 hrs
Science Instruments Function Allocation Ver 2					4.8 hrs	15.2 hrs						20 hrs
OSIRIS												15.98 hrs
Interferometer												15.98 hrs
OHANA												8 hrs
Near-IR Imager												24.02 hrs
Visible Imager	3.88 hrs	4.07 hrs	4.25 hrs	3.7 hrs	4.25 hrs	1.3 hrs						24.03 hrs
Visible IFU		3.52 hrs	3.68 hrs	3.2 hrs	3.68 hrs	1.92 hrs						16 hrs
Deployable Near-IR IFU	10.85 hrs											60 hrs
Thermal Near-IR Imager		1.43 hrs	1.93 hrs	1.68 hrs	1.93 hrs	1.02 hrs						8 hrs
Cost Estimation					3.18 hrs	16.82 hrs						20 hrs
Adkins(IPM)					4.18 hrs	4 hrs	1.82 hrs			40 hrs	4 hrs	84 hrs
SD Phase Contracts Generated												30 hrs
Identify Reviewers					4.18 hrs	4 hrs	1.82 hrs					10 hrs
Review Package Distributed										8 hrs		8 hrs
Reviewer Comments Addressed										16 hrs		16 hrs
System Design Review Support										16 hrs		16 hrs
Response to Reviewer Report & Distribution											4 hrs	4 hrs
Ammons												80 hrs
Anchor to LAO Lab Experiments												80 hrs
Bauman	47.77 hrs	38 hrs	11 hrs	8 hrs	21.55 hrs	52.45 hrs	8 hrs	4 hrs		12 hrs		573.98 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												4 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										12 hrs		12 hrs
Adaptive Secondary Mirror option TS (m5)												24 hrs
Optical Relay TS (m6)												29.98 hrs
Field Rotation Strategy TS (m6)												59.98 hrs
Stand-alone vs DM on T/T Stage TS (m3)												60 hrs
Correcting Fast T/T with DM TS												20 hrs
AO System Functional Requirements Ver 1												25 hrs
AO System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
AO System Architecture	12.45 hrs											40.02 hrs
Field Rotation	7.63 hrs	8 hrs	2 hrs									30 hrs
Optical Relay	9.55 hrs	10 hrs	5 hrs									40 hrs
Optical Switchyard	9.55 hrs											25 hrs
Optical Support Structure					9.85 hrs	5.15 hrs						15 hrs
Tip/Tilt Corrector					5.12 hrs	4.88 hrs						10 hrs
Deformable Mirror	8.58 hrs											50 hrs
Cost Estimation					4.78 hrs	25.22 hrs						30 hrs
Bell												
Bouchez		20 hrs	20 hrs	18 hrs	40 hrs	4 hrs	4 hrs	4 hrs		4 hrs		310 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												4 hrs
Team Meeting #2 (CIT)												4 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												4 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												4 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				4 hrs								4 hrs
Team Videocon #11						4 hrs						4 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Team Meeting #12 (Keck)							4 hrs					4 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										4 hrs		4 hrs
Science Operations Requirements												16 hrs
Throughput												32 hrs
Document Proposal Analysis												10 hrs
Develop Background Performance Budget												40 hrs
Point Source Sensitivities			16 hrs	14 hrs								30 hrs
K & L-band Science TS (m5)												40 hrs
AO Enclosure Temperature TS (m6)												29.98 hrs
NGS Acquisition Camera					20 hrs							20 hrs
LGS Acquisition Camera					20 hrs							20 hrs
Britton		20 hrs	4 hrs	8 hrs		4 hrs	8 hrs	4 hrs				268 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												4 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
Photometric Accuracy												120 hrs
Astrometric Accuracy												60 hrs
Cameron	22.92 hrs											180 hrs
Astrometric Accuracy	22.92 hrs											180 hrs
Chin	0.63 hrs	7.78 hrs	25.55 hrs	22.22 hrs	120.43 hrs	139.85 hrs	24.15 hrs			8 hrs		503 hrs
System Design Review Support										8 hrs		8 hrs
Observatory Requirements Rev 2												10 hrs
Observing Uptime						28.57 hrs	11.43 hrs					40 hrs
AO System Functional Requirements Ver 1												25 hrs
AO System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
Laser System Functional Requirements Ver 1												55 hrs
Laser System Functional Requirements Ver 2					3 hrs	22 hrs						25 hrs
Non-RTC Electronics		7.78 hrs	25.55 hrs	22.22 hrs	25.55 hrs	18.88 hrs						99.98 hrs
Laser Beam Transport	0.13 hrs											5.02 hrs
Laser Pointing & Diagnostics	0.5 hrs											20 hrs
Laser Launch Telescope												20 hrs
Personnel and Equipment Safety Systems					18 hrs	2 hrs						20 hrs
Aircraft, Satellite & Laser Traffic Control Safety Systems					18 hrs	2 hrs						20 hrs
Laser System Electronics					29.27 hrs	28 hrs	12.73 hrs					70 hrs
AO-Instrument Maintenance Plan					20 hrs							20 hrs
AO-Instrument Environment Monitoring												20 hrs
Cost Estimation					3.18 hrs	16.82 hrs						20 hrs
Configuration Management Plan					1.63 hrs	8.37 hrs						10 hrs
Clare												16 hrs
Agreement between Sky Coverage Codes												16 hrs
Dekany	13.63 hrs	52.43 hrs	21.43 hrs	19.95 hrs	95.75 hrs	65.37 hrs	39.42 hrs	58.5 hrs	24.85 hrs	52.25 hrs	8.58 hrs	888.02 hrs
SD Phase System Engineering Management Plan												15 hrs
SD Phase Contracts Generated												15 hrs
Mid-year Replan												8 hrs
FY08 Replan					4.07 hrs	5.93 hrs						10 hrs
Executive Committee Telecons	4.05 hrs	4.23 hrs	4.43 hrs	3.85 hrs	4.43 hrs	4.23 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.05 hrs	0.58 hrs	90 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Report Preparation/Presentation												15 hrs
Support Advancement Office												
System Design Report									4.8 hrs	0.2 hrs		5 hrs
Identify Reviewers					0.42 hrs	0.4 hrs	0.18 hrs					1 hr
Reviewer Comments Addressed										24 hrs		24 hrs
System Design Review Support										24 hrs		24 hrs
Response to Reviewer Report & Distribution											8 hrs	8 hrs
Agreement between Sky Coverage Codes												12 hrs
Document WFE Budget Rev 1												40 hrs
Document WFE Budget Rev 2												40 hrs
Encircled Energy vs Sky Coverage												40 hrs
Performance Budgets Summary Ver 1												40 hrs
Performance Budgets Summary Ver 2		20 hrs										20 hrs
Optical Relay TS (m6)												29.98 hrs
System Architecture Ver 1												30 hrs
System Architecture Ver 2		7 hrs	13 hrs									20 hrs
AO System Architecture	6.22 hrs											19.98 hrs
Optical Relay	3.37 hrs	1.2 hrs										10.02 hrs
Deformable Mirror												30 hrs
System Design Manual								20 hrs				20 hrs
WBS and Task Definition				7 hrs	53 hrs							60 hrs
Cost Estimation					4.78 hrs	25.22 hrs						30 hrs
Major Project Milestones					12.38 hrs	7.62 hrs						20 hrs
Develop Full Schedule (MS Project Plan)						0.73 hrs	19.27 hrs					20 hrs
Risk Assessment & Management Plan				1.1 hrs	10.15 hrs	3.75 hrs						15 hrs
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)												10 hrs
Preliminary Design Phase Plan Version 2					6.52 hrs	13.48 hrs						20 hrs
Preliminary Design Phase Plan Final Version								18 hrs				18 hrs
Project Management Plan							7.93 hrs	12.07 hrs				20 hrs
SEMP Document									16 hrs			16 hrs
Flicker	26.72 hrs	48 hrs	56 hrs	8 hrs	85.12 hrs	8.88 hrs	8 hrs	4 hrs		16 hrs		1,037 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										16 hrs		16 hrs
Traceability Matrix Rev 2												24 hrs
Tools in place & 1st release												40 hrs
Release updated data (every two months)	4.1 hrs											40.02 hrs
Telescope dynamic performance data												60 hrs
Agreement between Tomography Codes												15 hrs
Anchor to On-sky MGSU Experiments												10 hrs
Anchor to LAO Lab Experiments												40 hrs
Document WFE Budget Rev 2												30 hrs
Photometric Accuracy												60 hrs
Companion Sensitivity												60 hrs
All-In Science Simulations		28 hrs	52 hrs									80 hrs
Other					80 hrs							80 hrs
GLAO for non-NGAO Instruments TS (m5)												20 hrs
Telescope Wavefront Errors TS												40 hrs
Deformable Mirror Stroke Requirement TS (m6)												50 hrs
Correcting Fast T/T with DM TS												20 hrs
LGS Asterism Geometry & Size TS (m2)												20 hrs
Tip/Tilt Corrector					5.12 hrs	4.88 hrs						10 hrs
Deformable Mirror	12.92 hrs											39.98 hrs
Alignment, Calibration, Diagnostics, Metrology and Monitoring	9.7 hrs											30.02 hrs
RTC Architecture Analysis and Design Study												40 hrs
AO-Instrument Performance Prediction												60 hrs
AO-Instrument Real-Time Optimization												60 hrs
Gavel	13.38 hrs	49.58 hrs	35.08 hrs	19.95 hrs	83.37 hrs	57.77 hrs	55.42 hrs	58.5 hrs	24.85 hrs	52.25 hrs	8.58 hrs	880.03 hrs
SD Phase System Engineering Management Plan												15 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
SD Phase Contracts Generated												15 hrs
Mid-year Replan												8 hrs
FY08 Replan					4.07 hrs	5.93 hrs						10 hrs
Executive Committee Telecons	4.05 hrs	4.23 hrs	4.43 hrs	3.85 hrs	4.43 hrs	4.23 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.05 hrs	0.58 hrs	90 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
Report Preparation/Presentation												15 hrs
Support Advancement Office												
System Design Report									4.8 hrs	0.2 hrs		5 hrs
Identify Reviewers					0.42 hrs	0.4 hrs	0.18 hrs					1 hr
Reviewer Comments Addressed										24 hrs		24 hrs
System Design Review Support										24 hrs		24 hrs
Response to Reviewer Report & Distribution											8 hrs	8 hrs
Sodium return vs laser format												20 hrs
Agreement between Tomography Codes												10 hrs
Agreement between Sky Coverage Codes												12 hrs
Anchor to LAO Lab Experiments												4 hrs
Encircled Energy vs Sky Coverage												70 hrs
MOAO & MCAO TS												80 hrs
System Architecture Ver 1												30 hrs
System Architecture Ver 2		7 hrs	13 hrs									20 hrs
Technology Drivers Summary		16 hrs										16 hrs
Technical Risk Analysis Ver 1		2.35 hrs	13.65 hrs									16 hrs
Technical Risk Analysis Ver 2							16 hrs					16 hrs
AO System Architecture	9.33 hrs											30 hrs
RTC Architecture Analysis and Design Study												20 hrs
System Design Manual								20 hrs				20 hrs
WBS and Task Definition				7 hrs	53 hrs							60 hrs
Cost Estimation					4.78 hrs	25.22 hrs						30 hrs
Develop Full Schedule (MS Project Plan)						0.73 hrs	19.27 hrs					20 hrs
Risk Assessment & Management Plan				1.1 hrs	10.15 hrs	3.75 hrs						15 hrs
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)												10 hrs
Preliminary Design Phase Plan Version 2					6.52 hrs	13.48 hrs						20 hrs
Preliminary Design Phase Plan Final Version								18 hrs				18 hrs
Project Management Plan							7.93 hrs	12.07 hrs				20 hrs
SEMP Document									16 hrs			16 hrs
Ireland												40 hrs
Polarimetric Accuracy												40 hrs
Johansson	49.13 hrs	66.77 hrs	48.32 hrs	4.82 hrs	62.43 hrs	74.58 hrs	18.7 hrs			16 hrs		486 hrs
System Design Review Support										16 hrs		16 hrs
Observatory Requirements Rev 2												10 hrs
Observing Uptime						28.57 hrs	11.43 hrs					40 hrs
AO System Functional Requirements Ver 1												25 hrs
AO System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
AO System Architecture	12.45 hrs											40.02 hrs
Non-RTC Software	8 hrs	35.2 hrs	36.8 hrs									80 hrs
RTC Architecture Analysis and Design Study												40 hrs
RTC Software Module Definition	18.8 hrs	19.7 hrs	4.48 hrs									60 hrs
RTC Hardware Module Definition	6.27 hrs	6.57 hrs	1.5 hrs									20 hrs
Laser System Software					16.73 hrs	16 hrs	7.27 hrs					40 hrs
Instrument, AO & Telescope Observer Interfaces												20 hrs
AO-Instrument Health Monitoring & Automated Recovery	3.62 hrs	5.3 hrs	5.55 hrs	4.82 hrs	0.72 hrs							20 hrs
AO-Instrument User Interfaces					40 hrs							40 hrs
Cost Estimation					3.18 hrs	16.82 hrs						20 hrs
Johnson	4 hrs	17.6 hrs	18.4 hrs		3.25 hrs	17.6 hrs	16.8 hrs	12.35 hrs				90 hrs
Non-RTC Software	4 hrs	17.6 hrs	18.4 hrs									40 hrs
Configuration Management Plan					3.25 hrs	17.6 hrs	16.8 hrs	12.35 hrs				50 hrs
Kellner	12.93 hrs	11.72 hrs	14.62 hrs	15.37 hrs	17.67 hrs	16.9 hrs	6.62 hrs			8 hrs		412.98 hrs
System Design Review Support										8 hrs		8 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Rayleigh Rejection TS (m3)												40 hrs
LOWFS Architecture TS												80 hrs
Number & Type of LOWFS TS (m4)												30 hrs
Centroid Anisoplanatism TS (m7)												40 hrs
Focus Compensation TS (m6)												14.98 hrs
Low Order NGS Wavefront Sensors	5.32 hrs	5.57 hrs	5.82 hrs	5.07 hrs	5.82 hrs	5.57 hrs	2.03 hrs					40 hrs
Calibration Wavefront Sensor	5.87 hrs	6.15 hrs	6.43 hrs	5.6 hrs	6.43 hrs	6.15 hrs	2.23 hrs					39.98 hrs
Atmospheric Dispersion Correction			2.35 hrs	4.7 hrs	5.42 hrs	5.18 hrs	2.35 hrs					20 hrs
Laser Beam Transport	0.5 hrs											20 hrs
Laser Pointing & Diagnostics												30 hrs
Laser Launch Telescope	1.25 hrs											50 hrs
Kupke												80 hrs
Anchor to LAO Lab Experiments												80 hrs
Le Mignant	4.82 hrs	30.12 hrs	15.08 hrs	13.15 hrs	11.22 hrs	47.6 hrs	4 hrs	4 hrs		16 hrs		421.98 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												4 hrs
Team Meeting #2 (CIT)												4 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												4 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												4 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				4 hrs								4 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							4 hrs					4 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										16 hrs		16 hrs
Science Operations Requirements												32 hrs
Observatory Requirements Rev 2												16 hrs
Observing Efficiency												20 hrs
Observing Model TS												80 hrs
Science Operations Functional Requirements Ver 1												40 hrs
Science Operations Functional Requirements Ver 2					4.8 hrs	35.2 hrs						40 hrs
AO-Instrument Observing Modes												40 hrs
AO-Instrument Operations Support												20 hrs
AO-Instrument Configuration & Setup		4.82 hrs	5.55 hrs	4.82 hrs	4.82 hrs							20 hrs
AO-Instrument Nighttime Operation Modes	4.82 hrs	5.3 hrs	5.55 hrs	4.33 hrs								20 hrs
Cost Estimation					1.6 hrs	8.4 hrs						10 hrs
Lockwood	14.08 hrs	4 hrs	1 hr		19.72 hrs	10.28 hrs						80 hrs
Field Rotation	3.82 hrs	4 hrs	1 hr									15 hrs
Optical Relay	0.73 hrs											10 hrs
Optical Switchyard	9.55 hrs											25 hrs
Optical Support Structure					19.72 hrs	10.28 hrs						30 hrs
Macintosh												100 hrs
Companion Sensitivity												100 hrs
Max	29.63 hrs	29.98 hrs	14.33 hrs	26.85 hrs	45.48 hrs	21.67 hrs	32.02 hrs	34.73 hrs	27.07 hrs	56.37 hrs	10.58 hrs	611.97 hrs
SD Phase System Engineering Management Plan												15 hrs
Mid-year Replan												6 hrs
FY08 Replan					3.05 hrs	6.95 hrs						10 hrs
Executive Committee Telecons	4.05 hrs	4.23 hrs	4.43 hrs	3.85 hrs	4.43 hrs	4.23 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.05 hrs	0.58 hrs	90 hrs
Science Advisory Committee Telecons	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.23 hrs	2.12 hrs		40.08 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
Report Preparation/Presentation	3.37 hrs	3.52 hrs	3.68 hrs	1.6 hrs								40.02 hrs
Support Advancement Office												
System Design Report									4.8 hrs	0.2 hrs		5 hrs
Identify Reviewers					0.42 hrs	0.4 hrs	0.18 hrs					1 hr
Reviewer Comments Addressed										26 hrs		26 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
System Design Review Support										24 hrs		24 hrs
Response to Reviewer Report & Distribution											10 hrs	10 hrs
Science Requirements Summary Rev 1												20 hrs
Science Requirements Summary Rev 2												100 hrs
Science Requirements Summary Rev 3	20 hrs											20 hrs
Science Requirements Summary Final				4.17 hrs	15.83 hrs							20 hrs
WBS and Task Definition				7 hrs	13 hrs							20 hrs
Develop Full Schedule (MS Project Plan)						0.37 hrs	9.63 hrs					10 hrs
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)												5 hrs
Preliminary Design Phase Plan Version 2					6.52 hrs	3.48 hrs						10 hrs
Preliminary Design Phase Plan Final Version								12 hrs				12 hrs
Project Management Plan							7.93 hrs	12.07 hrs				20 hrs
SEMP Document									16 hrs			16 hrs
Meguro	75.72 hrs	55.13 hrs	25.85 hrs	6.33 hrs	12.27 hrs	36.98 hrs	2.53 hrs					360 hrs
Observatory Requirements Rev 2												10 hrs
AO Enclosure Temperature TS (m6)												40.02 hrs
Field Rotation Strategy TS (m6)												20 hrs
AO System Functional Requirements Ver 1												25 hrs
AO System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
AO Enclosure	30 hrs	31.43 hrs	18.57 hrs									100 hrs
High Order LGS Wavefront Sensors	2.65 hrs	2.78 hrs	2.92 hrs	2.53 hrs	2.92 hrs	2.78 hrs	1.02 hrs					20 hrs
High Order NGS Wavefront Sensor	1.33 hrs	1.4 hrs	1.45 hrs	1.27 hrs	1.45 hrs	1.4 hrs	0.5 hrs					10 hrs
Low Order NGS Wavefront Sensors	2.65 hrs	2.78 hrs	2.92 hrs	2.53 hrs	2.92 hrs	2.78 hrs	1.02 hrs					20 hrs
Laser Enclosure	39.07 hrs	16.75 hrs										80 hrs
Cost Estimation					3.18 hrs	16.82 hrs						20 hrs
Moore	53.77 hrs	55.78 hrs	60.63 hrs	52.72 hrs	75.03 hrs	70.47 hrs				16 hrs		854.02 hrs
System Design Review Support										16 hrs		16 hrs
Science Instrument Re-use Cost/Benefit TS (m3)												80 hrs
Science Instruments Function Allocation Ver 1												50 hrs
Science Instruments Function Allocation Ver 2					14.4 hrs	45.6 hrs						60 hrs
Laser Pointing & Diagnostics												30 hrs
Near-IR Imager												176 hrs
Visible Imager	28.43 hrs	29.78 hrs	31.13 hrs	27.08 hrs	31.13 hrs	9.48 hrs						176 hrs
Visible IFU		18.48 hrs	19.32 hrs	16.8 hrs	19.32 hrs	10.08 hrs						84 hrs
Deployable Near-IR IFU	25.33 hrs											140 hrs
Thermal Near-IR Imager		7.52 hrs	10.17 hrs	8.85 hrs	10.17 hrs	5.3 hrs						42 hrs
Neyman	73.45 hrs	139.52 hrs	141.32 hrs	37.17 hrs	57.2 hrs	128.33 hrs	68.97 hrs	30.13 hrs	0.37 hrs	26 hrs		1,841.98 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										26 hrs		26 hrs
Development Requirements												8 hrs
Observatory Interface Requirements												8 hrs
Observatory Requirements Rev 2												24 hrs
Observatory Requirements Rev 3												20 hrs
Observatory Requirements Rev 4		6 hrs	11.5 hrs	2.5 hrs								20 hrs
Traceability Matrix Rev 1												10 hrs
Traceability Matrix Rev 2												24 hrs
Traceability Matrix Rev 3	20 hrs											20 hrs
Traceability Matrix Rev 4					20 hrs							20 hrs
SRD Rev 2												20 hrs
SRD Rev 3	2 hrs	18 hrs										20 hrs
SRD Final SD Phase Version					16 hrs	4 hrs						20 hrs
Telescope dynamic performance data												60 hrs
Telescope static wavefront errors												20 hrs
Sodium return vs laser format												20 hrs
Agreement between Tomography Codes												15 hrs
Anchor to Keck II LGS AO PSFs												40 hrs
Photometric Accuracy												60 hrs
Companion Sensitivity												80 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Performance Budgets Summary Ver 1												60 hrs
Performance Budgets Summary Ver 2		40 hrs										40 hrs
All-In Science Simulations		28 hrs	52 hrs									80 hrs
PSF Uniformity & Stability			53.33 hrs	26.67 hrs								80 hrs
NGAO versus Keck AO upgrades TS (meeting 5)												60 hrs
Keck Interferometer Support TS (m5)												100 hrs
Telescope Wavefront Errors TS												40 hrs
Free Space vs Fiber TS (m7)												100 hrs
AO System Functional Requirements Ver 1												75 hrs
AO System Functional Requirements Ver 2					3 hrs	22 hrs						25 hrs
Technology Drivers Summary		24 hrs										24 hrs
Technical Risk Analysis Ver 1		3.52 hrs	20.48 hrs									24 hrs
Technical Risk Analysis Ver 2							24 hrs					24 hrs
AO System Architecture	15.55 hrs											49.98 hrs
Alignment, Calibration, Diagnostics, Metrology and Monitoring	9.7 hrs											30.02 hrs
Laser Beam Transport	0.88 hrs											35.02 hrs
Interferometer												40 hrs
OHANA												8 hrs
Deployable Near-IR IFU	25.33 hrs											140 hrs
AO System Test Plan					4.63 hrs	15.37 hrs						20 hrs
Laser System Test Plan						9.63 hrs	10.37 hrs					20 hrs
Science Operations Test Plan							13.48 hrs	6.52 hrs				20 hrs
Science Instruments Test Plan								19.63 hrs	0.37 hrs			20 hrs
System Integration & Test Plans					13.57 hrs	73.33 hrs	13.1 hrs					100 hrs
Randolph					3.25 hrs	16.75 hrs						20 hrs
Configuration Management Plan					3.25 hrs	16.75 hrs						20 hrs
Reinig	25.07 hrs	34.05 hrs	31.53 hrs	22.22 hrs	25.55 hrs	18.88 hrs						259.98 hrs
Non-RTC Electronics		7.78 hrs	25.55 hrs	22.22 hrs	25.55 hrs	18.88 hrs						99.98 hrs
RTC Architecture Analysis and Design Study												80 hrs
RTC Software Module Definition	6.27 hrs	6.57 hrs	1.5 hrs									20 hrs
RTC Hardware Module Definition	18.8 hrs	19.7 hrs	4.48 hrs									60 hrs
Stomski	8 hrs	35.2 hrs	36.8 hrs		20.33 hrs	42.4 hrs	7.27 hrs					200 hrs
AO System Functional Requirements Ver 1												25 hrs
AO System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
Laser System Functional Requirements Ver 1												25 hrs
Laser System Functional Requirements Ver 2					1.8 hrs	13.2 hrs						15 hrs
Non-RTC Software	8 hrs	35.2 hrs	36.8 hrs									80 hrs
Laser System Software					16.73 hrs	16 hrs	7.27 hrs					40 hrs
Summers					10 hrs							10 hrs
AO-Instrument Laser Traffic Control					10 hrs							10 hrs
Sweeney												
Velur	88.32 hrs	38.17 hrs	20.02 hrs	21.92 hrs	23.78 hrs	66.53 hrs	13.57 hrs	4 hrs		16 hrs		1,048.97 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												4 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
System Design Review Support										16 hrs		16 hrs
Dichroics & Beamsplitters TS (m6)												59.98 hrs
LGS WFS Type TS (m4)												30 hrs
LGS WFS number of subapertures TS (m4)												20 hrs
Slow WFS TS (m7)												80 hrs
LOWFS Architecture TS												80 hrs
Number & Type of LOWFS TS (m4)												30 hrs
Focus Compensation TS (m6)												14.98 hrs
Laser Pulse Format TS (m6)												80 hrs
Variable vs fixed LGS Asterism Cost/Benefit TS (m2)												20 hrs
Laser System Functional Requirements Ver 1												55 hrs
Laser System Functional Requirements Ver 2					3 hrs	22 hrs						25 hrs
AO System Architecture	12.45 hrs											40.02 hrs
High Order LGS Wavefront Sensors	7.97 hrs	8.35 hrs	8.73 hrs	7.6 hrs	8.73 hrs	8.35 hrs	3.03 hrs					59.98 hrs
High Order NGS Wavefront Sensor	3.98 hrs	4.18 hrs	4.37 hrs	3.8 hrs	4.37 hrs	4.18 hrs	1.52 hrs					30 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Low Order NGS Wavefront Sensors	2.65 hrs	2.78 hrs	2.92 hrs	2.53 hrs	2.92 hrs	2.78 hrs	1.02 hrs					20 hrs
Laser System Architecture												80 hrs
Laser	60 hrs	2.85 hrs										100 hrs
Laser Pointing & Diagnostics												40 hrs
Laser Launch Telescope	1.25 hrs											50 hrs
Cost Estimation					4.78 hrs	25.22 hrs						30 hrs
van Dam	4.82 hrs	5.3 hrs	5.55 hrs	4.33 hrs								60 hrs
AO-Instrument Calibrations	4.82 hrs	5.3 hrs	5.55 hrs	4.33 hrs								20 hrs
AO-Instrument Performance Prediction												20 hrs
AO-Instrument Real-Time Optimization												20 hrs
Wizinowich	33.63 hrs	34.77 hrs	25.12 hrs	26.95 hrs	108.02 hrs	63.07 hrs	60.07 hrs	92.5 hrs	55.23 hrs	58.87 hrs	10.58 hrs	992.02 hrs
SD Phase System Engineering Management Plan												35 hrs
Mid-year Replan												18 hrs
FY08 Replan					9.17 hrs	10.83 hrs						20 hrs
Executive Committee Telecons	4.05 hrs	4.23 hrs	4.43 hrs	3.85 hrs	4.43 hrs	4.23 hrs	4.05 hrs	4.43 hrs	4.05 hrs	4.05 hrs	0.58 hrs	90 hrs
Team Meeting #1 (mgmt, science & technical - Irvine)												8 hrs
Team Meeting #2 (CIT)												8 hrs
Team Videocon #3												4 hrs
Team Meeting #4 (Keck)												8 hrs
Team Videocon #5												4 hrs
Team Meeting #6 (UCSC)												8 hrs
Team Videocon #7												4 hrs
Team Retreat #8 (UCSC)		20 hrs										20 hrs
Team Videocon #9			4 hrs									4 hrs
Team Meeting #10 (CIT)				8 hrs								8 hrs
Team Videocon #11						4 hrs						4 hrs
Team Meeting #12 (Keck)							8 hrs					8 hrs
Team Videocon #13								4 hrs				4 hrs
Report Preparation/Presentation	3.37 hrs	3.52 hrs	3.68 hrs	3.2 hrs	3.68 hrs	3.52 hrs	1.2 hrs					50.02 hrs
Support Advancement Office												
System Design Report									19.18 hrs	0.82 hrs		20 hrs
Identify Reviewers					0.83 hrs	0.8 hrs	0.37 hrs					2 hrs
Reviewer Comments Addressed										30 hrs		30 hrs
System Design Review Support										24 hrs		24 hrs
Response to Reviewer Report & Distribution											10 hrs	10 hrs
Science Requirements Summary Rev 1												20 hrs
Science Requirements Summary Rev 2												20 hrs
Science Requirements Summary Rev 3	20 hrs											20 hrs
Science Requirements Summary Final				4.17 hrs	15.83 hrs							20 hrs
Development Requirements												8 hrs
Observatory Interface Requirements												8 hrs
Science Operations Requirements												16 hrs
Traceability Matrix Rev 2												24 hrs
SRD Rev 1												20 hrs
NGAO versus Keck AO upgrades TS (meeting 5)												40 hrs
Adaptive Secondary Mirror option TS (m5)												16 hrs
Keck Interferometer Support TS (m5)												20 hrs
System Architecture Ver 1												19.98 hrs
System Architecture Ver 2		7 hrs	13 hrs									20 hrs
AO System Architecture	6.22 hrs											19.98 hrs
Interferometer												10.02 hrs
System Design Manual								40 hrs				40 hrs
WBS and Task Definition				7 hrs	53 hrs							60 hrs
Cost Estimation					1.6 hrs	8.4 hrs						10 hrs
Major Project Milestones					6.2 hrs	3.8 hrs						10 hrs
Develop Full Schedule (MS Project Plan)						1.47 hrs	38.53 hrs					40 hrs
Risk Assessment & Management Plan				0.73 hrs	6.77 hrs	2.5 hrs						10 hrs
Preliminary Design Phase Plan Version 1 (to Support Observatory FY08 Planning)												15 hrs
Preliminary Design Phase Plan Version 2					6.52 hrs	23.48 hrs						30 hrs
Preliminary Design Phase Plan Final Version								32 hrs				32 hrs
Project Management Plan							7.93 hrs	12.07 hrs				20 hrs
SEMP Document									32 hrs			32 hrs
Woillez												24 hrs
OHANA												24 hrs
Postdoc		5.3 hrs	5.55 hrs	4.82 hrs	53.27 hrs	46.42 hrs	4.65 hrs					1,260 hrs
Performance Requirements												250 hrs
Observing Scenarios												25.02 hrs
Science Instrument Requirements												25.02 hrs
Encircled Energy (& d-IFU) Performance Requirements												200 hrs
Observing Scenarios												50 hrs

	Jun '07	Jul '07	Aug '07	Sep '07	Oct '08	Nov '08	Dec '08	Jan '08	Feb '08	Mar '08	Apr '08	**Total**
Science Instrument Requirements												50 hrs
Encircled Energy & PSF Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Encircled Energy & PSF Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
AO Guide Star Interface												20 hrs
Science Observations Simulation Tools												40 hrs
Acquisition												20 hrs
Observing Sequences												20 hrs
Science Data Quality Monitoring					5.12 hrs	10.23 hrs	4.65 hrs					20 hrs
Generic Data Products					10.95 hrs	9.05 hrs						20 hrs
Science Data Quality Assessment					10.95 hrs	9.05 hrs						20 hrs
Science Data Archiving					21.9 hrs	18.1 hrs						40 hrs
AO-Instrument Observing Modes												40 hrs
AO-Instrument Science Acquisition & Control		5.3 hrs	5.55 hrs	4.82 hrs	4.33 hrs							20 hrs
Student1												650.02 hrs
Point Source Companion Sensitivity Requirements												99.98 hrs
Spectral Sensitivity & Spectral Resolution Requirements												99.98 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Performance Requirements												100 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Spatial Resolution Requirements												100 hrs
Spectral Sensitivity & Spectral Resolution Requirements												100 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Student2												1,200 hrs
Astrometry requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Companion Sensitivity Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Contrast Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Polarimetry Performance Requirements												150 hrs
Observing Scenarios												25 hrs
Science Instrument Requirements												25 hrs
Other	28.95 hrs				7.2 hrs	52.8 hrs						477.98 hrs
Observing Efficiency												80 hrs
Science Operations Functional Requirements Ver 1												60 hrs
Science Operations Functional Requirements Ver 2					7.2 hrs	52.8 hrs						60 hrs
OSIRIS												84.02 hrs
Interferometer												34 hrs
Deployable Near-IR IFU	28.95 hrs											160 hrs
Total	646.1 hrs	808.22 hrs	647.05 hrs	349.33 hrs	1,023.92 hrs	1,103.82 hrs	383.98 hrs	310.72 hrs	137.17 hrs	397.93 hrs	42.33 hrs	16,724.92 hrs