

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: Gemini Near InfraRed Spectrograph (GNIRS)

WBS: 5.1

Project Description: 1-5 um Spectrograph with multiple filters, slits, Deckers, prisms, gratings and cameras.

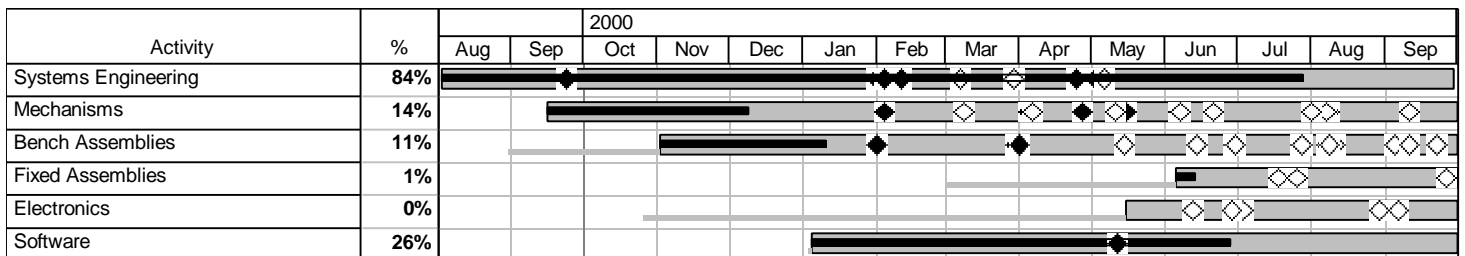
WPM: N. Gaughan

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$3,391,232	\$950,243	\$2,440,989	\$3,391,232
Capital	\$836,462	\$222,009	\$614,453	\$836,462

Key Personnel		
Title	Name	% Dedicated
PM	Gaughan	100
PS	Elias	100
ME	Hileman	100
ME	Muller	100
EE	Penegor	100
MD	Andrew	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$98,952	\$75,981	\$55,385	\$106,421	\$94,730	\$129,787	\$114,861	\$123,511	\$139,690	\$104,821
Actual Labor	\$51,277	\$47,901	\$48,380	\$67,504	\$53,823	\$65,825	\$73,198	\$76,808	\$23,411	
Cum (Over)/Under	\$10,578	\$138,658	\$145,663	\$184,580	\$225,487	\$289,449	\$331,112	\$377,815	\$494,094	
FTE Loading (FTE)										
Planned	14	13	13	14	16	19	20	19	18	18
Actual	12.8	12.0	12.1	16.9	13.5	16.5	18.3	19.2	5.9	
Capital										
Planned Capital	\$6,250	\$9,810	\$8,780	\$19,450	\$1,500	\$8,851	\$81,330	\$53,940	\$12,1906	\$8,219
Actual Capital	\$718	\$4,409	\$4,351	\$17,057	\$30,828	\$12,604	\$42,713	\$17,597	\$56	

Key Milestones		
Activity	Date	Status
Project Start	1/1/99	C
Pre-Fab Review	5/11/00	



% Complete: 23%
Total Milestones: 192
Completed Milestones: 15
Key Milestone: Pre-Fabrication Review

BCWS	1,181,581	SPI	0.59
BCWP	692,039	CPI	0.92
ACWP	749,970		

Scope Changes:

- There are no new technical scope changes.

Pending Issues & Resolutions:

- Several mechanical design and fab activities are behind their scheduled starts due to the concentration on the bench design and analysis. We are working on a recovery plan to address this.
- Prototype testing is behind schedule. Parts are being fabricated for an additional Rotary Prototype to address the mechanism flexure issue. The Linear Prototype has been delayed getting into cold testing.
- The structural analysis will not be complete until mid to late July. This is delaying the start of bench fabrication, which should start in August at the latest.
- The financial and milestone information in this report is in the process of being updated.

Project Manager's Assessment of Project Health:

- Good.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Systems Engineering

WBS: 5.2

Project Description: Includes analyses, prototyping, and optical design updates.

WPM: J. Elias

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$166,174	\$183,107	-\$16,933	\$166,174
Capital	\$16,910	\$38,668	-\$21,758	\$16,910

Key Personnel		
Title	Name	% Dedicated
PS	Elias	100
ME	Hileman	100
ME	Muller	100
OE	Liang	10
IM	Rath	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$36,877	\$20,824	\$13,982	\$26,756	\$5,130	\$0	\$0	\$0	\$0	\$0
Actual Labor	\$20,913	\$17,980	\$17,224	\$25,122	\$11,865	\$10,876	\$20,636	\$22,123	\$8,293	
Cum (Over)/Under	\$50,494	\$53,338	\$50,096	\$51,730	\$44,995	\$34,119	\$13,483	-\$8,640	-\$16,933	
FTE Loading (FTE)										
Planned	6	3	2	2	1	0	0	0	0	0
Actual	5.2	4.5	4.3	6.3	3.0	2.7	5.2	5.5	2.1	
Capital										
Planned Capital	\$5,000	\$8,810	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Actual Capital	\$197	\$2,186	\$4,544	\$18,351	\$1,654	\$3,259	\$4,453	\$1,311	\$10	

Key Milestones		
Activity	Date	Status
Analysis		
Cold Motor T&E		
Prototyping		
Optics Update		

Activity	%	2000													
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Thermal analysis	100%														
Structural Analysis	44%														
Update Optics Design	100%														
Mechanism Test Set	82%														
Cold Motor Testing & Evaluation	100%														
Rotary Prototype #1 Mechanism	87%														
Linear Prototype Mechanism	88%														
Prototype Optics Mounts	100%														

% Complete: 84%

Total Milestones: 10

Completed Milestones: 7

Scope Changes:

- None.

Pending Issues & Resolutions:

- Prototype testing and evaluation.
- Key issue is mechanism flexure. This is being addressed in a second version of the Rotary Prototype.

Project Manager's Assessment of Work Package Health:

- Acceptable.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Mechanisms

WBS: 5.3.1

Project Description: Includes the design, fabrication and test of the 9 mechanisms used in GNIRS.

WPM: G. Muller

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$607,628	\$123,324	\$484,304	\$607,628
Capital	\$274,217	\$34,472	\$239,745	\$274,217

Key Personnel		
Title	Name	% Dedicated
ME	Muller	100
MD	Andrew	100
MD	Rosin	100
MD	Downey	100
MD	Robles	100
MT	Davis	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$ 18,012	\$ 18,411	\$ 17,560	\$ 28,447	\$ 33,220	\$ 39,303	\$ 45,729	\$ 52,896	\$ 46,751	\$ 26,039
Actual Labor	\$ 12,274	\$ 10,033	\$ 9,187	\$ 12,676	\$ 17,321	\$ 23,937	\$ 18,570	\$ 11,587	\$ 5,725	
Cum (Over)/Under	\$ 7,847	\$ 16,225	\$ 24,598	\$ 40,369	\$ 56,267	\$ 71,634	\$ 98,793	\$ 140,102	\$ 181,127	
FTE Loading (FTE)										
Planned	3	3	3	5	5	6	8	9	8	4
Actual	3.1	2.5	2.3	3.2	4.3	6.0	4.6	2.9	14	
Capital										
Planned Capital	\$0	\$0	\$4,080	\$4,450	\$0	\$7,151	\$6,380	\$52,000	\$103,500	\$5,219
Actual Capital	\$472	\$6	\$7	\$0	\$28,644	\$0	\$0	\$4,858	\$10	

Key Milestones		
Activity	Date	Status

Activity	%	2000																
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Camera Assembly	20%																	
Detector Focus Assembly	0%																	
Environmental Cover Assembly	81%																	
Acquisition Mirror Assembly	13%																	
Slit/Decker Assembly	4%																	
Filter Wheel Assembly	6%																	
Grating Turret	2%																	
Prism Turret	1%																	

% Complete: 14%
Total Milestones: 46
Completed Milestones: 4

Scope Changes:

- None.

Pending Issues & Resolutions:

- The following have been delayed by the bench design/analysis activity:
 - Filter wheel 3D/2D/fab
 - Acquisition Mirror 2D/fab
 - Slit/Decker 2D/fab
 - Camera barrel fab
 - Camera hub 3D
 - Prism turret 3D
 - Grating turret 3D/2D
- It was necessary to firm up bench-to-mechanism interfaces before proceeding.

Project Manager's Assessment of work Package Health:

- Recovery may require a short period of overtime to get back on schedule.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Bench Assemblies

WBS: 5.3.2

Project Description: Design and fabrication of the four cold bench assemblies used in GNIRS.

WPM: E. Hileman

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$194,142	\$46,871	\$147,271	\$194,142
Capital	\$101,069	\$259	\$100,810	\$101,069

Key Personnel		
Title	Name	% Dedicated
ME	Hileman	100
MD	Andrew	100
MT	Davis	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$12,312	\$2,204	\$0	\$228	\$14,478	\$12,008	\$17,708	\$13,566	\$13,984	\$16,302
Actual Labor	\$7,025	\$8,270	\$6,953	\$5,890	\$4,804	\$7,072	\$3,336	\$1,855	\$0	
Cum (Over)/Under	\$17,605	\$11,539	\$4,586	-\$1,076	\$8,598	\$13,534	\$27,906	\$39,617	\$53,601	
FTE Loading (FTE)										
Planned	2	1	2	2	2	2	3	2	2	3
Actual	18	2.1	17	15	12	18	0.8	0.5	0.0	
Capital										
Planned Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000	\$0	\$12,606	\$0
Actual Capital	\$283	\$0	-\$306	\$0	\$0	\$0	\$0	\$0	\$0	

Activity	%	2000														
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Post-Slit Bench	18%															
OIWFS Assembly	13%															
Collimator Assembly	13%															
Pre-Slit Bench Assembly	7%															

% Complete: 11%
Total Milestones: 23
Completed Milestones: 3

Scope Changes:

- None.

Pending Issues & Resolutions:

- The Pre- and Post-Slit, OIWFS and Bench solid model designs required rework to mesh into a NASTRAN model for analysis.
- The analysis will not be complete until mid to late July. This means fabrication of the benches will begin in mid-August at the earliest.

Project Manager's Assessment of Work Package Health:

- Acceptable.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Fixed Assemblies

WBS: 5.3.3

Project Description: All assemblies with no moving parts except the optical benches.

WPM: G. Muller

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$353,533	\$4,962	\$348,571	\$353,533
Capital	\$188,986	\$107	\$188,879	\$188,986

Key Personnel		
Title	Name	% Dedicated
ME	Muller/Hilemar	100
MD	Andrew	100
MD	Rosin	100
MD	Downey	100
MD	Robles	100
MT	Davis	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$0	\$0	\$0	\$0	\$0	\$9,044	\$4,636	\$6,612	\$19,646	\$12,426
Actual Labor	\$195	\$0	\$0	\$0	\$130	\$388	\$3,257	\$559	\$75	
Cum (Over)/Under	-\$553	-\$553	-\$553	-\$553	-\$683	\$7,973	\$9,352	\$15,405	\$34,976	
FTE Loading (FTE)										
Planned	0	0	0	0	0	1	1	1	3	2
Actual	0.0	0.0	0.0	0.0	0.0	0.1	0.8	0.1	0.0	
Capital										
Planned Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$640	\$1,500	\$0
Actual Capital	\$18	\$0	\$0	\$0	\$0	\$0	\$0	\$79	\$10	

Key Milestones		
Activity	Date	Status

Activity	%	2000													
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Entrance Window Assembly	0%														
Detector Mount Assembly	0%														
Cryo Cooler Assembly	0%														
Environmental Cover Filter	0%														
Bulkhead Assembly	3%														
Front Radiation Shield Assembly	0%														
Rear Radiation Shield Assembly	0%														
Front Dewar Shell	9%														
Rear Dewar Shell and Covers	0%														
Vertical Installation Frame Assembly	1%														
Horizontal Installation Frame Assembly	1%														
Dewar Mount Truss Assembly	0%														
Thermal Enclosure Mount Assembly	2%														

% Complete: 1%
Total Milestones: 67
Completed Milestones: 0

Scope Changes:

- None.

Pending Issues & Resolutions:

- None.

Project Manager's Assessment of Work Package Health:

Acceptable.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Electronics

WBS: 5.4

Project Description: Design and fabrication of the GNIRS electronics subsystems

WPM: J. Penegor

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$132,658	\$736	\$131,922	\$132,658
Capital	\$11,900	\$1,029	\$10,871	\$11,900

Key Personnel		
Title	Name	% Dedicated
PS	Elias	20
EE	Penegor	100

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Labor Costs										
Planned Labor	\$12,16	\$6,080	\$8,512	\$16,606	\$12,312	\$22,800	\$12,768	\$11,552	\$5,776	\$0
Actual Labor	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,691	\$2,554	
Cum (Over)/Under	\$6,725	\$12,805	\$21,317	\$37,923	\$50,235	\$73,035	\$85,803	\$93,664	\$96,886	
FTE Loading (FTE)										
Planned	0	1	1	3	2	4	2	2	1	1
Actual	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6	
Capital										
Planned Capital	\$750	\$0	\$4,200	\$1,500	\$200	\$750	\$3,000	\$0	\$0	\$0
Actual Capital	\$364	\$3	\$0	\$0	\$0	\$0	\$0	\$4,283	\$86	

Key Milestones		
Activity	Date	Status
Project Start	1/1/1999	C

Activity	%	2000														
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	
Spectrograph Thermal Enclosure	0%															
Ext. Inst Wiring & Cables	0%															
Dewar Electronics	0%															
Software Test Fixture	0%															

% Complete: 0%
Total Milestones: 14
Completed Milestones: 0

Scope Changes:

- None.

Pending Issues & Resolutions:

- None

Project Manager's Assessment of Work Package Health:

- Acceptable.

GNIRS BI-WEEKLY REPORT

August 99 to May 00

Project Title: GNIRS Software

WBS: 5.5

Project Description: Design, code and test of the GNIRS Engineering and System software.

WPM: R. Wolff

	Original Budget	Actual Spent Cum	Est. To Go	Est. Project Total
Labor Cost	\$156,256	\$21,644	\$134,612	\$156,256
Capital	\$0	\$32	-\$32	\$0

Key Personnel				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul
Title	Name	% Dedicated											
PS	Elias	10	Labor Costs										
P1	Wolff	100	Planned Labor	\$0	\$0	\$0	\$6,080	\$0	\$7,600	\$10,032	\$13,376	\$13,376	\$12,160
P2	TBD	100	Actual Labor	\$0	\$0	\$994	\$5,238	\$4,636	\$5,170	\$3,225	\$2,148	\$233	
			Cum (Over)/Under	\$0	\$0	-\$994	-\$152	-\$4,788	-\$2,358	\$4,449	\$15,677	\$28,820	
			FTE Loading (FTE)										
			Planned	0	0	0	1	1	1	1	1	1	1
			Actual	0.0	0.0	0.2	1.3	1.2	1.3	0.8	0.5	0.1	
			Capital										
			Planned Capital	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
			Actual Capital	\$0	\$0	\$0	\$32	\$0	\$0	\$0	\$0	\$0	\$0

Activity	%	2000													
		Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Software Plan	100%														
Component Controller Software	50%														
Lab Support Software	0%														
Detector Interface Software	0%														

% Complete: 26%
Total Milestones: 10
Completed Milestones: 1

Scope Changes:

- None.

Pending Issues & Resolutions:

- None.

Project Manager's Assessment of Project Health:

- Excellent.