

GNIRS PROGRESS REPORT

September 24 – October 24, 2002

Accomplishments / Status

Summary: 94% of the work from the Restart Review to delivery has been completed. The first (diagnostic) cold test cycle has been completed, as well as several items noted for rework resulting from the cold test, including adjustments to the cold shields and removal of some mechanical interferences. Shield modifications will be completed by the end of this month. All mechanisms functioned properly at cold temperature with the exception of a mechanical interference on the prism turret and a motor drive shaft misalignment on the focus mechanism. Also the prism turret home switch was misaligned (problem seen warm). These have been corrected. The prism turret flat mirror was damaged in this test due to insufficient clearance between the mirror and its mask. The mask has been reworked and the mirror returned to the vendor for recoating. The mirror has been repaired and will be returned to NOAO on October 25th.

Inspection after the diagnostic cold cycle revealed minor contamination on several mirrors including the OIWFS gimbal mirror, collimator mirror, and the long-camera fold mirrors. These mirrors have been successfully cleaned. There were also mechanical interference problems with the long camera fixed folds and the OIWFS field lens (all fused silica) which produced small cracks but which do not appear to require rework of the optics.

The OIWFS gimbal mirror mechanism failed during the cold test. This mechanism and the filter wheel and focus mechanisms were returned to the IfA for repair and upgrade, and were received back in less than one week. OIWFS reassembly and test has begun.

The last SR camera lens has been tested and re-installed into the camera. The entire camera mechanism is ready for reinstallation into the post-slit bench.

Next Milestones: A complete set of milestones for the remainder of the project has been prepared and is available for viewing on the GNIRS web site. The next major project milestones are:

- Warm tests with Mux – November
- Next cold test begins – late November

Earned Value:

	February	March	April	May	June	July	August	September	October
BCWS	\$3,344,496	\$3,413,125	\$3,462,160	\$3,504,878	\$3,546,177	\$3,567,153	\$3,572,138	\$3,572,138	\$3,572,138
BCWP	\$2,930,888	\$2,970,031	\$3,035,216	\$3,156,912	\$3,173,288	\$3,202,553	\$3,186,692	\$3,206,344	\$3,216,275
ACWP	\$3,453,168	\$3,537,018	\$3,756,257	\$3,858,289	\$3,956,665	\$4,068,240	\$4,137,200	\$4,205,116	\$4,283,803
SPI	0.88	0.87	0.88	0.90	.89	.90	.89	.90	.90
CPI	0.85	0.84	0.81	0.82	.80	.79	.77	.76	.75

This table reflects planned and actual charges to the project as of October 23, 2002. We have spent \$1,552,796 in capital to date. BCWS did not change for this reporting period because of MS Project is reporting this number to the August 2000 baseline schedule, which does not reflect adjustments to subsequent schedule revisions. This number would change if the project schedule baseline is updated. We have no plans to update the baseline at this late date in the project.

Project Management: (93% complete) The project plan may be viewed on the GNIRS web site at: <http://www.noao.edu/ets/gnirs/> under Management, Planning. The current delivery of the GNIRS instrument is March 2002. A schedule showing work left on the project has been prepared and may also be viewed on the GNIRS web site. The instrument is scheduled to ship to Chile in the second quarter of calendar 2003.

Systems Engineering: (100% complete).

Mechanical Design, Fabrication, Assembly and Test: (96% overall). The major activity is shipping container fabrication.

Mechanisms: (100% complete).

Benches: (100% complete).

Fixed Assemblies: (93% complete overall). Only the Shipping container fabrication is left. This work is being done internally at NOAO, and should be completed in December.

Electronics: (88% complete overall). Only updating of the documentation to reflect the as-built configuration is left.

Software Development: (100% complete).

Alignment and Integration: (66% complete overall)

	March	April	May	June	July	August	September	October
Telescope Simulator	69%	88%	93%	99%	99%	99%	99%	99%
I. Dewar and Structure	-	-	-	-	-	31%	100%	-
II. Mechanical Integration	-	43%	43%	43%	80%	94%	95%	100%
III. Warm Tests	-	-	-	9%	-	-	-	90%
IV. Cold Tests	-	-	-	-	-	-	-	-

Deliverables: (57% complete overall). Roy Autry has joined the project to oversee and coordinate the writing and review of the Software Maintenance Manual and the Service and Calibration Manual. Jay Elias remains responsible for the User's Manual.

	October
Test Plans	99%
Software Maintenance Manual	66%
Service & Calibration Manual	19%
User's Manual	17%
As-Built Fabrication Drawings	75%

Procurement: (99% complete overall). The only items being procured are miscellaneous parts and supplies. Travel and shipping costs to Chile also remain.

Problems / Solutions

No major items have surfaced as a result of the first (diagnostic) cool down of the instrument.

Key Personnel

Roy Autry has joined the project part time to assist in writing of manuals. Paul Schmitt has joined the project to assist in the integration and test of the instrument.