ARRA Infrastructure Improvements
at the
National Optical Astronomy Observatory

Quarterly Scientific Report (3)

for

February 1, 2010 – April 30, 2010

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ACTIVITIES AND FINDINGS

Activity related to infrastructure improvement projects in the third quarter (February through April) of FY10 included the following:

TUCSON INFRASTRUCTURE

Renovate computer room electrical, cooling, and fire detection/suppression systems:
General planning and discussion activities are ongoing with the affected computer-area staff. Testing was conducted within the area to evaluate current constraints on renovation efforts, and the HVAC system changes are being developed. New fire suppression systems and potential generators are also being evaluated.

Replace and renovate electrical supply/distribution equipment: The “Engineering Design Scope of Work” was completed; a bid and contract are now in place with a local engineering firm (Monrad). Meetings are ongoing with NOAO Tucson staff to identify and clarify power issues to finalize the design and prepare the construction documentation.

Replace 15-year-old building energy management and control system: Preliminary planning, research, and discussion activities are ongoing with facilities staff to incorporate the needs of the ongoing projects noted above. Documentation regarding design requirements is being assembled for preparation of bid documentation.

KPNNO MOUNTAIN INFRASTRUCTURE

Handicapped access lift for Visitor Center public telescope: Project Completed. The contracted installation effort was completed by Abbey Elevator Co. The installation was inspected by a reviewing authority and certified for usage in mid April 2010. The new Handicapped Access Lift was released to the Visitor Center for routine usage.

KPNO water system renovation: The “Engineering Design Scope of Work” was completed, bid, and a contract put in place with an engineering firm (Environmental Engineering Consultants). The engineering firm also is reviewing proposed EPA regulations to evaluate the impact on system design and operation.

Kitt Peak instrument handling facility: Various locations were evaluated within the Kitt Peak prime lease area, and a preferred site was identified. Usage planning, review, and discussion activities are ongoing with NOAO North staff to refine the project scope and begin development and clarification of construction requirements.

CTIO MOUNTAIN INFRASTRUCTURE

Pachón water system renovation: Work is in progress. Water pumps for ~US$25K were purchased, but they have not arrived yet. More components will be ordered soon.

Pachón kitchen & dining facility: A conceptual drawing was completed.
Coudé room upgrades/handling for new instruments: All new equipment was purchased. Most of the components have been received, installed, and are in use.

Blanco 4-m computing room & console upgrade for DECam: Ceiling and floor tiles/components have been ordered.

Cerro Tololo UPS upgrade: The uninterruptible power system (UPS) unit was ordered, but has not arrived yet; awaiting a firm quotation for spare parts.

Mountain electronic laboratory equipment renewal: Almost all of the items were received; only one order is outstanding.

Cerro Pachón dorm emergency generator: The generator was purchased; awaiting delivery and installation.

LA SERENA INFRASTRUCTURE

OTDR unit: The optical time domain reflectometer (OTDR) unit was purchased; this project is done.

Repair and renewal of security fencing for La Serena compound: A contract for relocation of the main gate has been let.

SUMMARY OF THIRD QUARTER EXPENDITURES

The following table provides a summary of the account, showing cumulative expenditures to date (April 30, 2010) and the total funds remaining.

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<thead>
<tr>
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<th>Award Amount</th>
<th>Prior Expenses</th>
<th>Total Expenses</th>
<th>Funds Available</th>
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