

**GBT Systems Report on Project Coordination for March 2000**  
**M. McKinnon**

The assembly of the four-beam, dual polarization Q-band receiver is nearly complete. The Green Bank machine shop fabricated the receiver's four feed horns, and the Central Development Laboratory delivered the receiver's eight low noise amplifiers. The initial cool-down and testing of the receiver will begin in April.

At the end of March, 1985 of the 2004 panels had been installed on the telescope. Approximately 1770 of the 2209 actuator cables have been tested.

A metrology integration meeting was held on March 22 to review the schedule of activities required to measure the GBT structure with the ground rangefinders. Brandt made the telescope commanded track available to the metrology system, and Creager verified that the track provided the proper information. COMSAT installed the azimuth and elevation encoders; however, additional work is needed to finalize the encoder installation. In order to synchronize data collection, the same IRIG time stamp was made available to monitor and control (M&C), the rangefinders, and the accelerometers. The servo monitor built by NRAO was installed at the telescope. The calibration procedure for the surface retroreflectors was developed, and 1437 of the 2209 retroreflectors have been calibrated. These retroreflectors are placed at a 45 degree angle within their mounts. The enhancements to the test jig needed for the 25 and 35 degree-mounted retroreflectors are being made in the machine shop.

The NRAO staff reviewed and returned comments on COMSAT's Servo Site Test Procedure, Operations and Maintenance Manual, Site Restoration Plan, Optics Alignment Procedure, and Final Testing and Acceptance Plan.

The two-element, 100-meter baseline, 12 GHz interferometer was placed into operation the week of March 6. The interferometer is a replica of the device used for ALMA site monitoring. This project was a cooperative effort between NRAO Tucson and Green Bank.

The project budget was revised to reflect the extension of the project through the third quarter of 2000. Overruns caused by the project extension were covered by diverting funds from the project's M&C budget. The resulting shortfall in the M&C budget was covered by a \$75K supplement from the Observatory's research equipment budget. An additional \$80K for data analysis computers is expected from a Sun Microsystems grant. The Observatory's research equipment budget also supported allocations for the Q-band tertiary mirror (\$10K) and prime focus receiver 2 (\$20K).

As part of a laser safety measure, four engineers and technicians completed "baseline" eye examinations. If these personnel incur any eye damage as a result of their exposure to the lasers, the damage should be apparent by comparing the baseline examination with the results of future examinations.