

GBT Systems Report on Project Coordination for May 2000
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Tim Weadon and GBT telescope operators completed the setting of the corners on the GBT surface panels on May 18.

Detailed plans for installing the four laser rangefinders on the feed arm of the GBT were developed. The plans begin with reinforcing the ladder that provides access to one of the lower lasers. The ladder reinforcements are being fabricated in the machine shop. A fall protection device will be installed after the ladder is reinforced. The laser mounts will also be fabricated in the machine shop. The lasers should be installed in early August.

On May 22, Joe Brandt and Ray Creager successfully tested the monitor and control interface to the metrology system by controlling a laser rangefinder. This achievement is a significant milestone in integrating the metrology system into telescope monitor and control.

Detailed plans were developed for installing the optical fiber cable that carries signals between the GBT and the control room in the new Jansky lab. The azimuth cable wrap will be installed in mid-June before the cable is installed in mid-July. Terminating the fibers in the cable will follow cable installation.

Plans were also made to reroute the road around the GBT. The new road will prevent vehicles from passing through the path of ground laser rangefinders. The road will be covered with gravel initially. The road will be paved with asphalt as future funds allow.

Plans were also made to test the quality of commercial and conditioned AC power in the new Jansky lab. Apparently, RFI filters in the shielded rooms corrupt the AC power, causing UPS systems to switch on and off.

The machine shop completed the fabrication of the track covers and the 340 MHz feed for the prime focus receiver. Components for the triplet assembly are being fabricated. Materials for the prime focus box handler were ordered.

Major components in the RF section of PF Rx 2 were assembled to test the ability of a Model 1020 refrigerator to cool down the receiver dewar. Initial test results indicate that the 1020 may be a suitable refrigerator for the receiver.

Preparations are being made to move weather station number 2 from the 140-Foot Telescope to its permanent location on the north side of the GBT.

Steve White's paper on the "Implementation of a photonic automatic gain control system for correcting gain variations in the Green Bank Telescope fiber optic system" was accepted for publication in Review of Scientific Instruments.

S. Srikanth and G. Anderson measured the frequency-dependent phase centers of the feed horn for the S-band receiver.

In a meeting on May 17, Richard Prestage discussed detailed plans for installing an optical guide telescope on the GBT. Initially, the guide telescope will not be integrated into the GBT monitor and control system. Possible locations for the guide telescope were discussed at the meeting.

Don Wells analyzed data recorded with the 12 ground rangefinders during the April 28th experiment. Discrepancies identified in the data are being investigated by the metrology group.