

GBT Monthly Systems Report on Project Coordination for March 1998

M. McKinnon

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A draft of the GBT commissioning plan was written. More detailed plans and schedules for commissioning will be developed from this general plan.

Fisher, Maddalena, Braatz, and McKinnon reviewed Condon's ideas on the detailed astronomical observations required for commissioning. Essentially all of these observations are of the same type ("self-correcting" cross-scans of radio sources) and therefore require similar data analysis procedures. Condon emphasized the importance of collimating and focusing the telescope before conducting general pointing observations. He also emphasized the need to completely understand the expected performance of the telescope before its commissioning. Srikanth can provide much of the RF performance information. The spectral processor may be needed for total power measurements during commissioning for polarimetry and RFI rejection.

Chuck Beverage agreed to maintain schedules for outfitting and commissioning the GBT. He will start his scheduling work by updating Norrod's initial outfitting schedule.

A budget was prepared for items required at the GBT site for the telescope's commissioning and initial operation. The budget total is \$1.2M. Items in the budget were prioritized. \$178K was requested for items this year. Of this amount, it appears Green Bank will receive only \$70K, and that is for optical fiber cable.

Other NRAO sites were asked to provide technician labor to help terminate cables on surface panel actuators. Tucson may be able to provide two technicians for two months provided the cables are terminated during the summer shutdown of the NRAO 12-meter Telescope. Socorro volunteered one man-month to the effort.

The uncertainty in the contractor's schedule makes it difficult to plan a specific date for cable termination. This activity needs to be coordinated with the contractor so that NRAO staff can work in a level actuator room.

The scientific staff in Green Bank discussed the fate of the 140-Foot Telescope. The current plan is to cease general user observations on the 140-Foot at the end of 1998. At that time, telescope operator positions can be transferred to the GBT provided that no other users can pay for operating the 140-Foot.

Priorities were suggested for items in the 1998 Green Bank Research Equipment (RE) plan. The top two priorities were the GBT Q-band receiver and new receiver calibration devices. A topic of particular interest in the RE meeting was the 26-40 GHz receiver. It may be possible to produce a single receiver to cover the entire band in linear polarization. Two receivers, one at 26-33 GHz and another at 33-40 GHz, are required if circular polarization is required. RF engineers are evaluating the trade-off in system noise for the single broad-band receiver. Condon solicited input from the NRAO scientific staff on the relative importance of the 26-33 GHz and the 33-40 GHz bands. The staff stated that 26-33 GHz is the scientifically more important band.

Norrod, Hunt, Maddalena, Clark, Ford, Brandt, and McKinnon discussed software support for the mockup because mockup testing had been stalled due to apparent software problems. Many problems occurred because mockup tests and software development tests were not coordinated. A "sign-up" board has been installed near the mockup to avoid future problems in the scheduling of tests. As a result of this discussion, a "generic" device in the form of a VME computer was assembled for Maddalena so that he could test his operator/engineer interfaces independently of specific devices.

Gary Anderson inquired if solar observations would be made with the GBT prime focus receiver. His inquiry was forwarded to Tim Bastian (NRAO-AOC), who doesn't "expect any requests to point the GBT at the Sun in the near term". However, future observations of the Sun with a high-frequency multi-feed array may be desirable.

Applications for the mechanical engineering position were reviewed, and a short list of potential candidates was made. One candidate has been interviewed, and others will be interviewed in April.