

Addendum

PTCS In Progress Review

December 3-4, 2003, Green Bank

External Reviewers:

Peter Napier (NRAO Socorro)
Patrick Wallace (Starlink/HMNAO, UK)
David Woody (OVRO, Chair)

Terms of Reference:

The Review Panel is advisory to the GBT Site Director, Phil Jewell. This is an In Progress Review. The primary goal is to assess progress since the Conceptual Design Review, and in particular progress towards the key intermediate milestone of Q-band operation by Winter 2003. The panel is also requested to comment on the goals and technical work which will be presented, which cover the next year of development (to October 2004).

Review Presentations:

Title	Presenter
Introduction/Project Update	Prestage
Refined Scientific Requirements	Condon
Thermal Focus and Pointing Corrections	Constantikes
Current GBT Performance	Balser
Holography /Efficiency Status Update	Maddalena, Schwab, Ghigo
Antenna Instrumentation	Constantikes
Future Development Work	Constantikes
EMS/LRF Status	Prestage
LRF Update: 9/5/03 Experiment	Constantikes

Written Material:

- PTCS/PN/30 Project Update by Richard Prestage. Provides a general overview of progress since the April 2003 ConceptualDesignReview.
- PTCS/PN/27 Revised Scientific Requirements by Jim Condon. Presents refinements to the scientific requirements on the basis of new instrumentation, observations and analysis by the project team.
- PTCS/PN/10 Quick Astronomical Corrections for GBT Pointing and Focus Tracking by Jim Condon. Describes the scientific requirements and calibration procedures for performing "peak" and "focus" measurements.
- PTCS/PN/24 Systematic Elevation-Dependent Pointing Errors by Dana Balser and Richard Prestage. Describes the elevation-dependent systematic errors in the traditional pointing model as we understood them by September 2003.
- PTCS/PN/25 Thermally-Neutral Traditional Pointing Models and Thermal Corrections to Pointing and Focus by Kim Constantikes (contains color figures). Describes algorithms to simultaneously fit for traditional pointing model coefficients and thermal offsets, and hence obtain a "thermally neutral" pointing model, as well as algorithms to provide real-time corrections for pointing and focus on the basis of measured structural temperatures.
- PTCS/PN/26 GBT Offset Tracking and Focusing Performance at 9 GHz by Jim Condon. Provides an analysis of recent pointing/focus commissioning data and concludes that the current performance meets the scientific requirements for Q-band observing under benign conditions.
- PTCS/PN/28 Improved "Traditional" Pointing Constants for the GBT by Balser, Condon, Constantikes, Prestage. Describes updates to the traditional pointing model coefficients.
- PTCS/PN/29 Rationale for the Temporary Postponement of Further Laser Rangefinder Development by Richard Prestage. Explains why I made the programmatic decision to temporarily postpone further laser rangefinder development work until April 2004.
- Written input to the Review Panel by Don Wells and David Parker (compiled by Richard Prestage, December 2, 2003).