

NATIONAL RADIO ASTRONOMY OBSERVATORY  
Charlottesville, Virginia

(860522)

May 21, 1986

To: VLBA Electronics Group

From: Dick Thompson

Subject: VLBA Electronics Meeting, May 8, 1986

Attendees: Balister, Bradley, Beale, Dill, Greenberg, Koski,  
Lilie, Mauzy, Norrod, Romney, Schlecht, Simon,  
Thompson, Walker.

The three front ends for 1.4 GHz have now been completed, and the first one has been shipped to the VLA site and received. There it will be used for tests on a VLA antenna. Roger Norrod is now starting to construct three 4.8 GHz receivers, and the first of these should be ready for initial cooldown tests by the end of the month. Harry Dill reported that parts for the first 15 GHz front end are in hand, and assembly and first cooldown tests should occur during June. On the cryogenic refrigerator test setup at Green Bank, four of the five units are now consistently showing temperatures as high as 25K, and one runs mostly in the range 17-18K with occasional excursions to 25K. These units have been running for periods of 8000 to 11000 hours since previous maintenance. It is now planned to take one or more out of the system for examination, and to send gas samples and dust to CTI for analysis.

Bob Mauzy reported that the three 2-16 GHz synthesizer modules are now virtually complete. Final changes involved redesign of one circuit board. Work is proceeding on the 100 MHz to 500 MHz multiplier for the LO Transmitter module. Rich Bradley now has a breadboard version of the LO Transmitter, LO Receiver, and Round-Trip Monitor modules almost complete. The remaining item is phase comparator using 100 MHz clock pulses. Three printed circuit boards require layout for final packaging. Joe Greenberg has a breadboard model of an analog fringe rotator based on the use of a number controlled oscillator. Initial tests look promising, and will be reported on in detail at the VLBA design review meeting.