

VLB ARRAY MEMO No. 484

VLBA Electronics Memo No. 51

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

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To: VLBA Electronics Group
From: Dick Thompson
Subject: VLBA Electronics Meeting, September 5, 1985

Rich Bradley reported on progress in assembling components for breadboard tests of parts of the LO Transmitter and LO Receiver modules, which incorporate the round-trip phase measurement on the LO reference cable. Parts of the digital phase meter are ready for prototype construction on a wire-wrap board. On the 2-16 GHz synthesizer the new YIG oscillator with YIG filter to reduce harmonic output is being tested, and the digital control circuitry to connect it to the monitor and control interface board has been designed. On the L-band front end some final details, including the controller for the model 350 refrigerator, are being worked on.

A 3.5 K refrigerator system, which should become the prototype for the 43 GHz SIS front end, has been running under test at Green Bank for about one week. Larry D'Addario reported on the start up of the development of the 43 GHz SIS receiver, which has largely involved assembly of the necessary test equipment.

The 10.7 GHz front end has been assembled in the Charlottesville laboratory, and testing will be started during the coming month. Erich Schlecht reported that at Charlottesville a prototype front end monitor and control unit, incorporating the standard interface card, has been set up, attached to an AT&T personal computer. Tests of this system are in progress. Prototype versions of the 330/610 MHz front end unit and several frequency converter modules are in various stages of completion.

At the VLA site Durga Bagri reported that tests have been made to compare interference levels of the VLBA standard interface card and a typical VLA monitor and control module (an antenna buffer without cover). The level from the VLBA interface was about 10 dB lower. However, it is not clear what level of shielding should be used with the interface card for the VLBA.

Harry Dill is planning the sequence of VLBA jobs through the Green Bank machine shop. Any new work for the machine shop should be integrated into his schedule.