

National Radio Astronomy Observatory

Socorro, New Mexico June 18, 1984

To: VLBA Electronics Group Members

VLBA Electronics Memo No. 16

From: A. R. Thompson

Subject: VLBA Electronics Group Meeting, June 14, 1984

Attendees: Balister, Bradley, Brundage, Campbell, Coe,
Dill, Hvatum, Mauzy, Porter, Thompson, Walker.

Front Ends

Harry Dill reported that the 8.4 GHz front end cooled to 13K in 11 hours with no power on the amplifiers (as of June 18 the latest result is 16K in 12 hours with power on). The new lower-mass polarizers expected in July should allow a decrease in cool-down time.

Mike Balister reported that tests of HEMTs from TRW by S. Weinreb look promising. At 23 GHz the gain is more than 10 dB per stage, and a two-stop amplifier had a noise temperature of 37K.

Local Oscillator

Bob Mauzy has made some preliminary tests of the HP sampling mixer using a 300 MHz comb as the local oscillator. The response varied by only a few dB over most of the 2-16 GHz range.

Electronics Construction Plan

More than half of the meeting was devoted to discussion of a tentative construction plan developed by Dick Thompson and Mike Balister. This indicates units to be built during each year by the various groups at Green Bank, Charlottesville, and the VLA. Some of the points made were as follows:

The Green Bank engineers and technicians should not be expected to spend more than 3/4 time on VLBA tasks because of commitments to Green Bank projects.

Some drafting will be required at Green Bank and possibly the VLA as well as at Charlottesville.

