

VLB ARRAY MEMO No. 578

VLBA Electronics Memo No. 80

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

(861008)

October 6, 1986

To: VLBA Electronics Group
From: Dick Thompson
Subject: VLBA Electronics Meeting, October 2, 1986
Attendees: Beale, Brundage, Campbell, Lilie, Mauzy, Norrod,
Oty, Schlecht, Simon, Thompson, Walter.

The A, B and C racks for the Pie Town station, and front ends for 330/610 MHz, 1.5, 4.8, 10.7 and 15 GHz, were shipped from Charlottesville on September 24 and arrived at the VLA site on October 2. Development of front ends for 2.3 and 23 GHz is just starting, and these frequencies together with 8.4 GHz will be added to the Pie Town antenna during 1987. Except for 43 GHz, the Pie Town antenna will then have a full complement of front ends. Initial outfitting for succeeding antennas will include only front ends for 1.5, 4.8 and 23 GHz, and the other frequencies will be added later in the construction project. The next construction goal for electronics is to have four more sets for initial outfitting completed by the end of 1987, by which time NRAO will have contracted for a total of five antennas. In particular, the electronics for the second antenna (Kitt Peak) must be ready for shipment from Charlottesville by April 30, 1987.

Roger Norrod is testing a commercially available HEMT (FHR01FH) made by Fujitsu as a possible first stage for 4.8 GHz. If these transistors prove to be of sufficiently uniform quality they can be used for most frequencies up to about 15 GHz in the available packaging.

Of the five model 22 refrigerators on the life test at Green Bank, four have now been running for over 12,000 hours. Two of these are now showing temperatures of about 25 K on the second stage, and will be removed for servicing. Two analyses of gas samples from the test system have recently been made by different laboratories, and are not consistent with regard to the amount of contaminants present.

A shipment of bins has been received at the VLA site from the manufacturer in Albuquerque. Twenty-seven are required at Charlottesville to complete the balance of the VLBA order. Of these, two should go to Haystack.