

July 7, 1988

TO: VLBA Electronics Group

FROM: Dick Thompson

SUBJECT: VLBA Electronics Division Meeting, July 7 1988.

Attendees: Campbell, Koski, Morris, Napier, Rhodes, Schlecht, Simon, Spaulding, Stetten, Thompson, Wireman.

The status of construction for 1988 was reviewed. The number of modules to be completed by the end of the year is the same as shown in VLBA EM No.102 (Feb. 12, 1988) with the exception that the total number of F.E. Interface modules in column 4 of the table should be increased from 27 to 30. The number of these modules to be completed then becomes 12. Construction is progressing well, and orders for most of the components required have by now been placed. For the Data Acquisition racks orders for circuit boards are about to be placed. Otherwise components for the racks are on order.

Erich Schlecht discussed the status of serial 2, 23-GHz Front End. The receiver temperature is about 60 K in the range 22.6 - 23.3 GHz, but rises to about 100 K at the upper and lower ends of the band. At the lower end the increased noise comes from noise generated in the LO amplifier, converted to the first IF band by mixing with the second harmonic of the LO. At the high end of the band the increased noise results from fall-off of the gain of the cryogenic stages. We believe that the best way to cure both problems is to add 10-15 dB more gain in the signal-frequency band ahead of the mixer. Ambient temperature amplifiers will be required, and we are starting to look for the best source for these amplifiers.

Serial 5 Racks A, B and C will be tested and shipped to the VLA site by late August.

The possible need for a reset line to all monitors and control cards in the system was discussed. Wayne Koski is looking into the possibility of initiating any required reset through firmware on the board. A decision on whether a reset line is required will be made in about one month, to allow adequate time to study the problem.