

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
HAYSTACK OBSERVATORY
WESTFORD, MASSACHUSETTS 01886
13 March 1987

Area Code 617
692-4765

To: VLBA Data Acquisition/Recording Group
From: Alan E.E. Rogers
Subject: Minutes of the Data Acquisition/Recording Group Telecon Held
11 March 1987 at 1300 EST

Attendees: Jon Romney - NRAO
Craig Walker - NRAO
Jack Campbell - NRAO
Durga Baghri - NRAO
Alan Rogers - Haystack
John Webber - Haystack

Jon Romney kindly provided the agenda for this meeting. The following topics were discussed:

Negotiations with Honeywell

Honeywell has offered only modest quantity discounts for the large VLBA procurement of Model 96 transports in a letter to Haystack. An appeal from NRAO to higher Honeywell management might be fruitful. Since Joe Salah has already established contact with the upper echelon of Honeywell, he should probably be contacted by NRAO before making an approach to Honeywell Test Instruments Division (still part of Honeywell despite Honeywell's sale of it's computer division).

System Tests at the VLA

The initial shipment of Baseband converters to the VLA had many problems some of which were already known and understood and others were discovered by Durga in a series of tests he made recently. Some of these problems and fixes are described in Acquisition Memo #80. Some items which are not yet fully resolved and may require more study and tests are as follows:

AGC Phase Shift

While a factor of 3 improvement in the phase shift with gain has been made, variations are still at the level of 10 degrees peak to peak at 10 MHz (1 degree peak at 1 MHz) over the 30 dB range of the AGC. Further improvement awaits a new pc board design.

L.O. Leakage

The present L.O. leakage level is 1% in a 62 KHz bandwidth when the L.O. of one converter lies in the bandpass of another. It may be possible to reduce

this level by a more extensive use of double shielded cables. Another method of ameliorating the problem would be to increase the I.F. level from -34 dBm/500 MHz to a higher level. In any event the software should probably prevent observations with an L.O. in the bandpass in most circumstances.

MCB Protocol Changes

The baseband converter and I.F. distributor MCB interfaces have just been redesigned to make them compatible with multiple user software - details are now being documented and tests will be made at the VLA in about a week.

Progress on Formatter and Recorder

These units are still being checked out - no problems have yet been encountered.

Tape for the VLBA

John Webber clarified some of the details of the VLBA tape described in Acquisition Memo #81 and agreed to make a cost estimate for the tape and reels.

Recorder Review at Haystack

At this time, it is still not possible to set a date for this meeting. We still hope that by 18 March we will be able to accurately estimate completion date for the recorder and a reasonable date for the review.

Recorder Power Loss

John Webber agreed to study the question of what happens to the tape when the A.C. power is lost or interrupted. Of particular concern is tape damage and the ability to reload an unattended recorder.