

VLBA ACQUISITION MEMO #304

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HAYSTACK OBSERVATORY

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To: VLBA Data Acquisition Group
From: Alan E.E. Rogers
Subject: Minutes of Recorder Telecon held 8 April 1992 at 1300 EDT

Attendees: @ Charlottesville: @ Haystack
 Jon. Romney Ray Gonzales
 Don Wells Hans Hinteregger
@ Socorro: Alan Rogers
 Durga Bagri
 Jack Campbell
 Barry Clark
 George Peck
 Craig Walker

Transport Upgrade

- a) New hard points
 George Peck will place an order for 100 alumina plates from Coors - enough for all the VLBA transports.
- b) I/O Roller Sleeves
 Viet Tran has another batch on order from an outside machine shop. The first batch were manufactured using a process which involved machining the inner and outer finish on different machines with misalignment of the axes which produced excessive eccentricity. The next batch will be made in a "single chuck" operation on one machine. Assuming the new sleeves are satisfactory enough, additional sleeves will be ordered for all the VLBA transports.
- c) Precision plates
 An order for all additional precision plates will be placed by George following verification from Metrum (to be made by Hans) that there are no errors in the machine tapes used to make the plates. (Some of the plates recently purchased by Haystack had one of the mounting screw holes slightly misplaced.)
- d) E-casing
 Haystack is generating a complete set of drawings for a new E-casting. One E-casting will be made from these drawings by an outside machine shop. If the new part is satisfactory, additional E-castings could be procured for all the VLBA transports.

- e) Front door
A new front door made of solid copper with a "Needox" coating (nickel impregnated with teflon) will be made and tested further as a replacement for the copper taped version.
- f) Miscellaneous parts
Some miscellaneous parts (triangle prices, I/O rollers, etc.) still need to be procured. George will send a list to Ken Wilson at Haystack for comments.
- g) Upgrade plan and costs
Alan Rogers agreed to have all the details and costs for the completion of the mechanical upgrade (new door, E-casting, etc.) ready by 15 May 1992 so that orders can be placed by that date.

VME Monitor Boards

Haystack will send two new monitor boards to Charlottesville and receive the old boards back. The old boards will be sent out for removal of the old wires and wrapping with the new list.

Delivery of 1991 Production Recorders

Haystack will deliver all the 1991 production transports (except those on loan to the MKIII correlator) by the end of May 1992.

New Write Printed Circuit Board

The new write board is now being tested by Viet Tran and the new design should be available to George by 10 April 1992.

High Error Rates

Jon Romney reported that some tracks on the test tapes from Pie Town and Los Alamos had high error rates. Alan and Hans suggested that:

- 1) All transports should have a scope to view the eye patterns.
- 2) Tapes in question be sent to Haystack for analysis.

It was also suggested that a collection of pictures of eye patterns with various problems be put into a memo on recorder problem diagnosis.

George is going to test an inexpensive scope before placing an order for all transports.

Jon Romney also reported that the VLBA format test tapes do not produce valid spectra and more work is needed to diagnose the problems. Earlier, Barry Clark had suggested using the data buffer to capture some data bits from the formatter.