

VLBA ACQUISITION MEMO #385

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To: VLBA Data Acquisition Group
From: Alan E.E. Rogers
Subject: Minutes of Telecon Held 19 October 1994 at 1300 EDT

Attendees: AOC
J. Campbell J. Romney
B. Clark C. Walker
G. Peck
M. Rosales
Haystack
H. Hinteregger
A. Rogers

Cardboard shipping boxes

Owing to the problem with canister latches breaking, tapes are now being shipped in a canister inside a cardboard box. NRAO is also looking into molded foam inserts to replace the canister. Elimination of the canister would substantially reduce the shipping weight. There is still a remote possibility that the weak plastic latches could be replaced with stronger metal latches, but 3M is not willing to take on the responsibility. 3M claims that our problem is due to the use of 2" canisters to ship a 1" reel of tape. However, tests made with 2" reels of tape shows that the latch is just as easily broken in a drop of several feet.

Loop dropping

Tape loop dropping is still a problem at the VLBA correlator although it is less of a problem at the sites. The current level at the correlator is about two per day and much less at the sites. Barry Clark points out that while the correlator runs somewhat more tape, the higher tape speed at the correlator is a likely cause. If the problem is worse at higher tape speed then capstan slip might be the root cause. Another possible cause is the marginal reel servo operation which results from dirty sensor windows. George has removed the windows and reattached them with a better glue which allows the operators to clean the windows with alcohol without having them fall out. In addition, George has instituted regular checks of the reel servo sensor adjustments. Haystack will gather some loop dropping statistics at the Haystack MkIII.

Hans has arranged with Metrum for the purchase or retrofit of capstans with deep grooves which provide more air relief and reduce the tendency for capstans to slip at speed.

Reel motor noise

Haystack has made no progress in this area and further progress on this problem at the AOC awaits the return of Ron Weimer from vacation. Haystack has not experienced a problem with reel motor noise on the MkIV drives at Haystack. It is, however, thought that the higher playback speed and presence of unterminated write cables are likely reasons why motor noise is more of a problem at the AOC

"Triple cap" headstack

Hans has promised to start looking at the triple cap headstack and will first see if the performance is as good as the current design and later measure its wear properties which are expected to be much superior to the current design. If the evaluation can be completed within a few months, NRAO may consider including some triple caps in their next order for headstacks from Metrum.

Connector problem

Penny and Giles has informed us that the Amp connector used on the current headstack is shortly to become obsolete. Metrum has asked their purchasing department to investigate.

Formatter firmware

NRAO is preparing to release a new version of the firmware. Unfortunately, most of the foreign sites with VLBA recorders have the old A/D board which is not supported by the new firmware. In the long run, it would be highly desirable for these sites to acquire the new DS boards.

Record checks

The VLBA now performs read checks whenever there is more than 2 minutes available between scans. Recently the AOC received blank tapes from some sites and there is concern that some sites may not be performing read checks.