

VLBA ACQUISITION MEMO #380

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To: VLBA Data Acquisition Group
From: Alan E.E. Rogers *A.E.R.*
Subject: Minutes of VLBA Recorder Telecon held 16 February 1994
at 1300 EST

Attendees: NRAO AOC Haystack
Carl Bignell Roger Cappallo
George Peck Hans Hinteregger
Jon Romney Alan Rogers
Craig Walker Mike Titus

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Problems noted in recent geodesy experiments

Mike Titus noted that speed variations of 0.1 to 0.2% were evident on the MK, OV and NL tapes processed at Haystack from the January geodetic experiments. Hans suggested that these sites may have slipping capstans, but poorly adjusted capstan servo boards are perhaps a more likely cause. Alan Rogers promised to seek more clues from a closer look at the tapes. Other problems were a 300 micron calibration offset in one of the Brewster recorders and more missing tracks in the forward direction on the MK tapes. George Peck was confident that this missing track problem has been fixed.

Speed calibration

Both the Bonn and Haystack correlators need well calibrated tape speed because of the relatively small playback buffers in these processors. Mike Titus agreed to send the speed constants measured at the Haystack correlator (using the VLBA logs to identify the recorder number at each site) to George Peck. George will then use these measurements to determine the capstan diameter to be entered into the recorder specific set-up files associated with the recorder control screens.

Dropping vacuum

Jon Romney reported that some drives at the VLBA correlator are occasionally "dropping vacuum". Following vacuum loss, the software tries to reload the tape, and in the process tapes can occasionally be broken. It was suggested that in the case of vacuum loss the event should be logged and a vigorous attempt made to determine the cause. In some cases vacuum is lost because of a stretched or damaged section of tape which in other cases it might be the result of marginal operation of the vacuum cut-out switch. George Peck agreed to check the vacuum cut-out switch set points. Hans Hinteregger recommended a setting of about 3-4" for operation at 7.5".

Improvements in self-packing glass reels

Hans Hinteregger reported the results of his tests on glass reels. His basic conclusions are:

1] The new hub specification which provides a greater clearance at the hub is definitely advantageous. This specification is now in effect - but some of the Acrometal reels from the first procurement have hubs to the old specification.

2] Increasing the flange curvature so that the flange separation specification at the rim is reduced by 6 mils to 0.98-0.99 reduces "flange forcing" and improves the pack.

Hans plans to write up his tests and recommend that item #2 above result in a negotiation with Acrometal for a change in specification for future procurement.

Broken reels

George Peck reported that, so far, one reel has been broken - presumably in shipment. The break is a fairly clean radial crack. This is unusual, in the past, the glass of the very few broken reels has been completely shattered.