

VLBA ACQUISITION MEMO #189

NRAO THIN TAPE PROCUREMENT

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The NRAO has sent out a RFP for an initial field testable quantity of magnetic recording tapes for the VLBA. NRAO plans to purchase between 50 and 200 14" reels of tape, depending on price. When the proposals for this initial purchase have been received, NRAO and Haystack will evaluate the proposals, and may request sample quantities of the proposed tapes from the potential vendors. The proposers have been requested to indicate the expected future availability of the tape(s) which they are proposing, however a guarantee of future availability is not required. It is expected that this purchase will enable NRAO and Haystack to evaluate the tape which is chosen, to determine if it is suitable for the purchase of a larger operational quantity of approximately 1000 reels of tape within about one year. When the VLBA becomes fully operational, it is estimated that the supply of about 1000 reels will require 20% annual replacement.

The attached copy of NRAO specification A54001N002 was included with the RFP. The specification is intentionally very general because it is desirable to allow proposals for all tapes which could satisfy VLBA requirements. Most of the tape vendors do not currently stock a tape which completely meets the requirements of the specification, so any product which they propose would be a special order. The potential vendors have even been encouraged to include any tapes which would fit this specification in their proposal, and can include more than one tape. At this early point in the process of obtaining tapes for the VLBA, care is being taken not to exclude potentially acceptable products.

NATIONAL RADIO ASTRONOMY OBSERVATORY
SOCORRO, NEW MEXICO

VERY LONG BASELINE ARRAY PROJECT

Specification No. A54001N002 REV-

Title: THIN MAGNETIC TAPE

Date: November 29, 1989

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Approved by: P. D. Shapiro

1.0 BACKGROUND INFORMATION

This specification defines the instrumentation magnetic tape which is to be used by the NRAO for the VLBA (Very Long Baseline Array) project. The tape is to be used on modified Honeywell 96 tape transports, recording digital data at a density of 56,000 fci using a recording speed of 80 ips. It is planned to achieve a long recording time of 12 hours per reel by recording 14 passes of 36 tracks each on the tape. The track width is 38 microns. Tests have been carried out at MIT's Haystack Observatory for a number of years with both D-1 type and Super VHS type tapes, with satisfactory results. The tape may contain some imperfections causing dropouts without adverse affects, as this application is not sensitive to dropouts.

The VLBA intends to record tapes around the clock at 10 sites, and up to 10 additional sites from around the world may participate at any given time. It is likely that other radio observatories, both within the USA and foreign, will use the same tape as are used for the VLBA project.

2.0 Tape Width

The tape should be 1" wide, industry tolerance.

3.0 Magnetic Coating

The magnetic coating is to be D-1 type, Super VHS type, or an approved equivalent.

4.0 Tape Thickness

A goal of 13 microns has been set for tape thickness, however bids are encouraged within the window of 10 to 20 microns.

5.0 Tape Packaging

The desired packaging is a 14" industry standard reel. Other packaging which allows NRAO to transfer the tape to 14" reels with no more than 5 splices per reel is acceptable.