

# VLBA ACQUISITION MEMO #299

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HAYSTACK OBSERVATORY

WESTFORD, MASSACHUSETTS 01886

19 May 1992

Telephone: 508-692-4764

Fax: 617-981-0590

To: VLBA Data Acquisition Group  
From: Alan E.E. Rogers, Hans F. Hinteregger  
Subject: **DRAFT** - Tape Procurement Specification

## Tape Specifications

Width - 1" nominal  $0.998 \pm 0.001$   
Thickness - 16  $\mu\text{m}$  nominal  
Length - 18,000' (5500m) nominal 18,000' +200,-0  
Packaging - a) 14" "self-packing" glass reel<sup>1</sup> - preferred  
1.002  $\pm$  0.002 at hub  
0.990 + 0.014 at rim (tentative)  
-0.0  
with "clamping" reel band - preferred  
with indefinitely reusable shipper - preferred  
- b) or, if glass reel is not available, 14" standard metal reel (or unpackaged)

Other physical properties as per relevant industry standards

Magnetic - D1, Super VHS or equivalent

## Acceptance tests

### 1] Mechanical

Tape will be wound at 3.0N (0.67 lb) tension and speed 1.72 m/s (67 IPS) using a transport or winding machine without packing arm onto a take-up reel and then back onto the supply reel. The tape pack should always remain free of "spokes" or bumps as judged by visual inspection.

### 2] Magnetic

Output at 0.9 micron wavelength should not be less than 2 dB below a reference tape (tape supplied by NRAO from previous purchase of the same type of tape).

<sup>1</sup>21,600' (6600 m) on 15" glass reel might also be considered with additional tests on shipping, handling, and transport performance. (We have no operational experience with 15" reels.)