

VLBA ACQUISITION MEMO #202

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

HAYSTACK OBSERVATORY

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26 April 1990

Area Code 508

692-4764

To: VLBA Data Acquisition Group
From: Alan E.E. Rogers
Subject: Proposed plan for the integration of thin tapes into the MKIII A and VLBA operations.

Introduction

Making a transition from the use of thick (25 μm) to thin (13-17 μm) tape normally requires some time to condition the head profile (see VLBA Acquisition Memos 168 and 200) and, as a result, we need some careful planning in order to support operations with a mixture of tapes.

Proposed Rules:

- 1] Field sites will be designated as thick or thin users and will not mix tapes. If a site has to make the transition from thick to thin, sufficient time (a few days, minimum) will be given for the site personnel to condition the headstacks and verify performance with thin tape.
- 2] The processing centers (at Bonn, Haystack, Washington, JPL and Kashima) who supply tapes to the field sites will be made aware of which sites are using thin tapes and all other sites will be assumed to use thick tape.
- 3] Haystack Observatory will coordinate the assignment of thin tape sites in order to make correlation manageable - given that some time may be required to condition processor headstacks for playback of thin tapes.
- 4] All organizations purchasing thin tapes will be strongly encouraged to place them on semi-permanent loan to the NASA/CDP/VLBI Network tape pool.
- 5] Organizations using "private tape pools" will be responsible for correlation of these tapes and for making special arrangements that may be required. Sites designated as thin tape sites should not use thick tapes and should return any thick tapes sent to them without running them on their transport.

Suggestions:

1] Pie Town, Kitt Peak, Los Alamos, *Hawaii, *Haystack, and *Westford be designated as thin tape sites. Other sites may be added later.

2] Haystack will work out methods for processor transports to make a rapid transition to thin tape. The options currently under consideration are:

a] Mounting "thick" and "thin" headstacks on the transport and protecting the "thin" headstack during the use of thick tape.

or b] Using a thin lapping tape to rapidly condition headstacks for thin tape.

or c] Using wide headstep headstacks.

or d] Operating at high vacuum levels.

*The designation of these sites to thin tape will have to be worked out with NASA, NGS and other agencies using these sites.