

VLBA ACQUISITION MEMO #190

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30 January 1990

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To: VLBA Data Recording Group
From: Alan E.E. Rogers
Subject: A Quick Test of 8 mm Evaporated Metal Tape (MET)

Hans Hinteregger purchased a small quantity of Canon Hi8 Metal-E E6-120 tape and provided an 8 mm E-casting for the Model 96. Best performance was obtained by using the highest available write current. The output was the highest yet obtained from any tape tested - about 7 dB higher than our D1K reference tape at a wavelength of 1 micron. The wavelength response was very similar (but with 3 dB more output) to that reported in VLBA Acquisition Memo #184, which fit very well with a 0.13 μm "spacing" loss. Thus while we see the expected high output from MET I am still puzzled by the apparently large spacing loss when compared to a spacing loss of 0.03 μm reported by Irving Wolf and Tom Neuman of AMPEX at a recent THIC meeting. Wolf and Neuman used a Hi-band 8 mm VCR and made their measurements by changing the frequency while recording at a constant speed. Therefore, they have to correct their data for the frequency response of the head and electronics whereas the constant frequency method used in Memo #184 is more straightforward and requires no calibration of the head and electronics. A better understanding of the short wavelength limits should prove useful in any future iterations of the VLBA headstack. At present, it is unlikely we could afford MET or even be able to purchase it in one inch width.