

# VLBA ACQUISITION MEMO #175

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To: VLBA Data Acquisition Group  
From: Alan E.E. Rogers  
Subject: Performance of 3M5358 relative to Sony D1K

3M5358 is virtually identical in magnetic performance to Sony D1K and not quite as good as some S-VHS tapes (see Acquisition Memo #172). The abrasivity was measured using the method of alternating tape thicknesses (see Acquisition Memo #170) - to be  $\approx 0.002 \mu\text{m}/\text{hour}$  (2 dB lost in 12 hours of "flattening" the profile with 5358 at 77°F and 10% RH). Apparently 3M5358 follows the tradition of low abrasivity associated with 5198 and 3M S-VHS. The good performance was, however, not maintained after a Fuji H621 tape was shuttled for twelve hours. Following the long shuttle of H621 (which is nominally the same thickness as 5358), the short one micron wavelength response was 4 dB down relative to D1K and would not recover after a 24 hour shuttle and repeated head cleaning. I now suspect that the good initial performance was achieved as a result of the higher head to tape pressure present following its use with a headstack contoured with the 13 micron profile of the D1K. This now points out the need to study the pressure sensitivity of the short wavelength response on new tapes.