

NATIONAL RADIO ASTRONOMY OBSERVATORY
Charlottesville, Virginia

July 21, 1972

MEMORANDUM

To: W. E. Howard
From: Courtney and Kurt Gordon
Subj: Pointing corrections for the traveling-feed on the 300-ft telescope.

While observing with the traveling feed on the 300-ft in July 1972, we discovered that, using the standard pointing corrections supplied us, we were off in our telescope pointing by 5' arc on-axis and 7' arc off-axis (10^m E or W). We determined this by RA and DEC wobbles on the source 3C 123. (If this type of error existed at all declinations, we lost ~10% of our observing time because of the resulting 10% loss of power.)

We found out later that Dick Manchester had more recently re-determined on-axis corrections and says he gave this data to NRAO. Unfortunately nobody seemed to know about this work and so we used the older standard printing corrections. On axis, our check showed Dick's corrections to be completely accurate in DEC and very close in RA (45" arc off) for this one source.

Recommendations and Conclusions

- I. The next traveling-feed observer should be given time to re-determine the off-axis pointing corrections. This has apparently not been done for at least 1-1/2 years.
- II. Dick Manchester's on-axis pointing corrections are probably much better than the presently used standard corrections, but this should be checked for more than one source.

Dick Manchester's on-axis pointing corrections for traveling feed system on 300-ft telescope:

	-20°	0	+20°	+40°	+60°	+80°	+100°
RA	0.001	0.068	0.050	0.025	0.000	-0.208	0.000
DEC	-0.224	-0.184	-0.140	-0.096	-0.053	-0.010	0.000

cc: B. Brundage K. Kellermann B. Vance
 F. Crews J. Lockman G. Verschuur
 D. Hogg C. Moore B. Viers