

National Radio Astronomy Observatory

12-meter Telescope Meeting No. 20

November 3, 1981

1. Present

CV - H. Hvatum, J. Findlay, J. Payne, L. King, M. Balister, W-Y. Wong,
J. Marymor
GB - R. Moore, J. Ralston, T. Hamed, G. Peery, D. Madron, R. Weimer,
R. Lacasse, a. Steinemann
SOC - W. Horne
TUC - D. Ross, D. Webb, P. Rhodes

2. Memos (HH)

No. 89 PERT. Completion date is now November 24, 1982.
No. 90 Inductosyn estimate.
HH - The 900 hours of shop could cost \$16k.
GP - Two months of design time needed.
JWF/HH - Can we have a time chart for the inductosyn project?
Yes. G. Peery will do.
JP - It might be better to run two or three months with the
present system--then put on inductosyns.
No. 91 LK has removed the troublesome interface number.

3. The Sub-reflector Movement Problem (Memo No. 92).

LK has looked at the deformations--we get about 0.14" instead of about 0.5" (ESSCO). Lee's results will be published as a memo.

Movements of the sub-reflector needed are all below a few millimeters. However, the method in the paper from SG&H must be used to check the gain effects.

JP will ask for R. Fisher's help to analyze and decide this problem. JP also raised the possible effects of temperature, and the computer ability to introduce these corrections.

T. Hamed - Do we have enough room around the focal point?
M. Gordon - Why not change to carbon fiber for feed legs?
W. Horne - We could control feed leg temperatures and stay with steel.

4. Surface Plates and Measuring (JWF)

WYW reported that the template design is complete and parts are being made.

JWF--the Apple II computer and its CRT, printer and disk have arrived. The main program (MEASURE) has been written by JWF and looks OK.

D. Schiebel is designing the 16-channel multiplexer. The whole system will soon be moved to GB (probably after Dec. 1) for checks of stability, calibration, etc.

WGH and GRP - Have looked at impact forces on panels in ESSCO packing. We should put some vibration damping into the system--perhaps use an air-ride vehicle.

5. B.U. Structure Support at GB

WYW - We will try not to alter the GB warehouse--this means some differences in the BUS support at GB as opposed to Tucson.

WGH will provide some restraints to the BUS to simulate the feed legs and elevation bearings.

6. BUS Bids (WGH)

One response (too high) already in. This is about \$8/pound for steel--WHG's estimate was nearer to \$3/pound.

JWF - There are three routes to go:

- (a) Get better bids.
- (b) Try to share task with a small fabricator.
- (c) Turn the job over to the GB shops.

WGH - There might be effort possibly at the VLA.

WGH - A. Steinemann should work to estimate the man-hours, then schedule can be considered. Even if we have to pay a time penalty, it may be acceptable.

JWF/pj