

12 METER MILLIMETER WAVE TELESCOPE

MEMO No. 216

National Radio Astronomy Observatory
Tucson, Arizona

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MEMORANDUM

TO: John Payne, John Findlay

FROM: R. Howard

SUBJECT: 1.33 mm Prime Focus Results (Feb. 17 - 19, 1983)

Radiometric measurements were made at 1.33 mm using the room temperature prime focus receiver after the latest (and last) "fine" adjustments of the panels. The results are summarized below.

1) The aperture efficiency is $.19 \pm .02$. This is the average of measurements made on two days on Jupiter, Venus and Saturn.

2) The measured HPBW's on Jupiter, Venus and Saturn are consistent with a true HPBW of 28-29 seconds of arc.

3) The focus curve is now symmetric and just slightly broader than theoretical (see Figure 1).

4) Using $\eta_0 = .50$ and $.19$ for the aperture efficiency at 1.33 mm, the implied RMS surface tolerance is $105 \pm 6 \mu\text{m}$.

FIGURE 1

