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(Paper 69D12-591)

A Report of Measurements

D. Barber¹ and J. F. R. Gower²

Summary: The main results are values of the flux density for Jupiter at 610 Mc/s (normalized to 4.04 A.U.):

Flux density = $6.6 \pm 0.3 \times 10^{-26} \text{ Wm}^{-2} (\text{c/s})^{-1}$ at 610 Mc/s

Flux density = $5.1 \pm 0.8 \times 10^{-26} \text{ Wm}^{-2} (\text{c/s})^{-1}$ at 178 Mc/s.

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(Paper 69D12-592)

The following will replace the paper "A Report of Measurements" on page 1563.

A Report of Measurements

D. Barber¹ and J. F. R. Gower²

Summary: Values for the flux density of Jupiter have been obtained simultaneously at 610 Mc/s and 178 Mc/s [Barber and Gower 1965³]:

$$S_{610} = \text{average flux density} = 6.6 \pm 0.3 \times 10^{-26} \text{ W m}^{-2} (\text{c/s})^{-1} \text{ at } 610 \text{ Mc/s}$$

$$S_{178} = \text{average flux density} = 5.1 \pm 0.8 \times 10^{-26} \text{ W m}^{-2} (\text{c/s})^{-1} \text{ at } 178 \text{ Mc/s}$$

These are the average values over all Jovian longitudes (and have been normalized to 4.04 A.U.). At 610 Mc/s, the variation of flux density with Jupiter's rotation, attributed to the beaming effect, could be picked out; and the flux density corresponding to zero planetocentric magnetic latitude of the Earth, that is, in the plane of Jupiter's magnetic equator, was determined [Barber 1966⁴]:

$$S_{610}^0 = \text{flux density for zero magnetic latitude} = 7.05 \pm 0.20 \text{ W m}^{-2} (\text{c/s})^{-1} \text{ at } 610 \text{ Mc/s.}$$

(Paper 69 D12-592)

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³ Barber, D., and Gower, J. F. R. (1965), The spectral index of the radiation from Jupiter between 178 and 610 megacycles/second, *Planet Space Sci.* **13**, 889-899.

⁴ Barber, D. (1966), The polarisation, periodicity and angular diameter of the radiation from Jupiter at 610 Mc/s, *Mon. Not. R.A.S.*, in press.