

## THE QUIET SUN AT 88-CM WAVELENGTH

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An attempt has been made to measure the one-dimensional brightness distribution of the sun at 88-cm wavelength. Strip scans of the sun made with a 4.8 fan beam have been superimposed and the lower envelope drawn, after the manner of Christiansen [1].

The scans were made in the period 1957 March to December, a period of considerable solar activity.

The superimposed records for 1957 April are shown in Fig. 1. The lower envelope of these scans is seen to depend strongly on one or two scans; hence it raises the possibility that none of the scans reaches down to the quiet sun level. A smooth lower envelope drawn to this set of scans, however, similarly fits the scans from the other months of 1957. This lower envelope is similar in shape to that determined by Swarup and Parthasarathy at 60 cm [2], and fits reasonably well to a brightness distribution consisting of a uniform disk 44 minutes of arc in diameter. The apparent temperature of this quiet sun is  $1.0 \times 10^6$  K (calculated in the usual manner, assuming a disk of photospheric size). The Cygnus source was used as a comparison source, and its flux at 88 cm assumed to be  $40 \times 10^{-24}$  watts  $\text{m}^{-2}(\text{c/s})^{-1}$ .

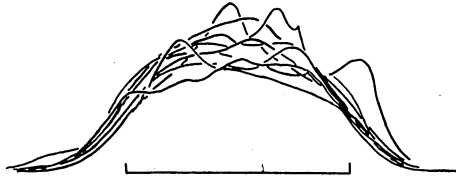


FIG. 1. The superimposed scans of the sun at 88-cm wavelength for 1957 April. The straight line under the scans indicates the extent of the optical disk.

## REFERENCES

- [1] Christiansen, W. N., and Warburton, J. A. *Aust. J. Phys.* **6**, 262, 1953.  
 [2] Swarup, G., and Parthasarathy, R. *The Observatory*, **75**, 8, 1955.