Reprinted from the JOURNAL OF THE BRITISH ASTRONOMICAL ASSOCIATION
Vol. 70, No. 2

COMMUNICATIONS TO THE ASSOCIATION

FILAMENTARY STRUCTURE BETWEEN SUNSPOTS PHOTOGRAPHED IN INTEGRATED LIGHT

FROM THE REV. R. A. MILLER, S.J.
Chief of Solar Division, Manila Observatory

A routine daily photograph of the Sun at $23^h\ 40^m$ U.T. on 1958 November 5 (Plate 9*a*), taken at the Manila Observatory, Baguio, Philippines, shows in integrated light filamentary structure which apparently follows lines of magnetic force. Figure 1 is a drawing made from the photograph, and shows

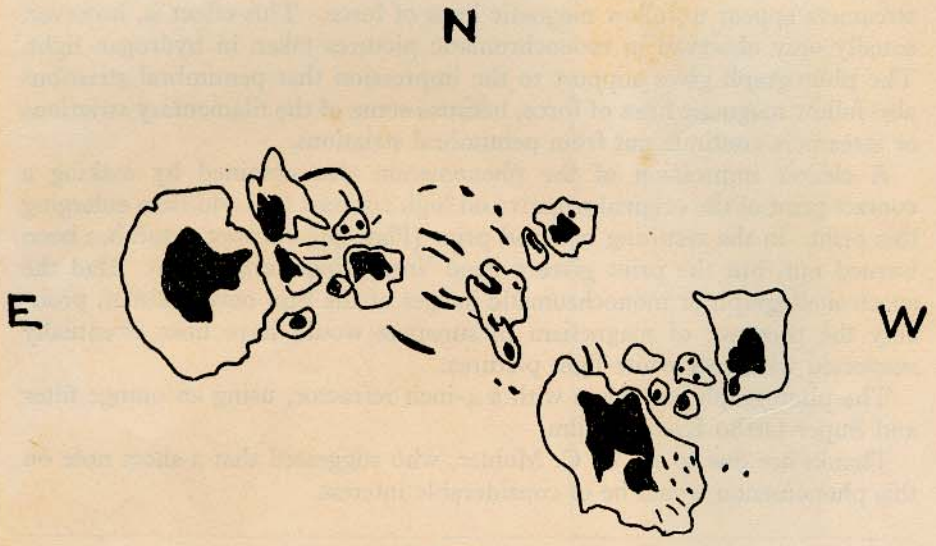

FIG. 1.

the filamentary structure more clearly. From Mount Wilson Observatory, T. A. Cragg kindly sent photographic copies of the area taken both in integrated light and with the spectroheliograph in hydrogen alpha. Neither of the plates taken at Mount Wilson on November 5 and November 6 shows the extended penumbral filamentary structure visible on the Manila Observatory enlargement. Cragg reasonably supposes, therefore, that the structure must have been a short-term phenomenon. The hydrogen-alpha spectroheliogram taken $6\frac{3}{4}$ hours before the Philippine photograph fails to show the 'iron filings' pattern normally associated with bipolar fields, though Mount Wilson magnetic observations indicate, according to Cragg, that it was quite probable that the filamentary structure was between two spots of opposite polarity.