

A PROMINENCE WITH LARGE DOPPLER DISPLACEMENTS

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When the sun was examined with the spectrohelioscope at 14^h 40^m G.C.T. on April 25, 1939, a small but rather bright prominence of the sunspot type was observed at the east limb in latitude 21° S. Its appearance was very ordinary, like a single column extending about 30,000 km above the chromosphere, but when H α was moved off the second slit, the prominence remained visible over a large range in wave length with only slight changes in form. With the second slit wide open and the solar image stationary, H α appeared very broad with large displacements, especially toward the violet (Plate XXIV, *a*). Similar displacements were observed in the D3 line of helium. Well-exposed photographs showed extensions of H α as far as 7 Å to the violet of its normal position.

By 15^h G.C.T. the top of the prominence had curved to the north, forming a half-arch, and by 15^h 15^m the arch was complete, being about 45,000 km high and 60,000 wide at its base. Shortly after 15^h 15^m observing was stopped by clouds. No spots were visible at the base of the prominence on April 25, but on the next day the spots in that position had come into view. They were group No. 6414.

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SUMMARY OF MOUNT WILSON MAGNETIC OBSERVATIONS OF SUNSPOTS FOR MARCH AND APRIL, 1939

Solar activity was greater in March and April than in January and February. Three groups large enough to be seen without telescopic aid were Nos. 6395, 6406, and 6407, the latter two both crossing the central meridian on April 26.5.

Magnetic storms were recorded on March 21–23 and 27–31, April 17–18, 23, and 24–25. The first of these was probably due to group No. 6347 which was 57° west of the central meridian when the storm began. The first storm in April was associated with the large active group No. 6395. A red auroral display was