Prominences.—The mean daily areas and numbers of calcium prominences as derived from photographs taken at Kodaikanal on 258 days during the year are as follows:—

	Areas			*Numbers*		
	North	South	Total	North	South	Total
January to June	2·64	1·94	4·58 sq. mins.	5·17	4·70	9·87
July to December	1·61	1·54	3·15 ,,	4·79	3·89	8·68

Compared with figures of the previous year, the areas show an increase in the first half of the year and decrease in the second half; the numbers show a slight decrease. Both areas and numbers show a general preponderance over the northern hemisphere. The distribution of areas in latitude shows a maximum between 55° and 60° in the northern hemisphere and between 50° and 55° in the southern hemisphere. The numbers are maximum between 55° and 55° of latitude in both the hemispheres.

35 metallic prominences were observed with the prominence spectroscope, 24 in the northern and 11 in the southern hemisphere. Four of these appeared in the latitude zone 50° to 55° and the rest in lower latitudes.

Doppler displacements of the $H\alpha$ line in prominences were observed on 171 occasions, 56 towards the red, 59 towards the violet and 56 in both ways. The largest displacement of 8 A. towards the red was shown by a prominence on the South-east limb of the Sun at latitude 52° on 1946 September 29.

Observations with the spectrohelioscope showed Doppler displacements in prominences in 80 cases, 26 being towards red, 14 towards violet and 40 both ways. An eruptive arch-type prominence of height 6′ was photographed on the North-west limb of the Sun at latitude 42° on 1946 December 20.

The mean daily area of hydrogen absorption markings (without foreshortening correction) was 4907 millionths of the Sun's visible hemisphere—i. e. more than double the value for the previous year. The latitudinal distribution showed maxima between 35° and 40° N. and 20° and 30° S.

A. K. DAS.

COMETS

Three comets under observation at the end of 1945 were recorded also at the beginning of 1946, by G. van Biesbroeck at the Yerkes Observatory, before they were lost in twilight: the periodic comet Kopff 1945 b at magnitude 15 and the comet Väisälä 1944 b at magnitude 16·5, both on January 2, and that periodic comet of special interest, Schwassmann-Wachmann (1) = 1925 II, which was also under observation by H. M. Jeffers at the Lick Observatory.

This last-named comet, which has been photographed nearly every year since its discovery in 1927, and is noted for its extraordinary physical behaviour, experienced one of its most remarkable outbursts. It was 18^m in 1945 December and 16^m on January 1 when it showed a broad tail but hardly any coma. It then brightened rapidly from 13^m on January 11th to $9^m{\cdot}4$ on the 26th, during which time it developed a coma of 30″ and the nucleus lost its stellar appearance and appeared as a disk which expanded by the end of the month to about 20″. On January 26, while it was at its brightest, George H. Herbig successfully obtained plates with the nebular spectrograph of the Crossley telescope at Lick. These showed a solar type spectrum with no evidence of conspicuous bright lines. The comet then faded rapidly and by February 8 had dropped to 15^m, a fuzzy coma 45″ in diameter. On March 1, when last observed by Jeffers, it was a faint