

Prominences.—The mean daily areas and numbers of calcium prominences at the limb as derived from photographs taken at Kodaikanal are given below :

1953	Area in square minutes					Number				
	North	South	East	West	Total	North	South	East	West	Total
Jan.—June	0.90	0.92	0.78	1.04	1.82	3.63	3.43	3.17	3.89	7.06
July—Dec.	0.99	0.99	0.92	1.06	1.98	3.47	3.53	3.34	3.66	7.00
Whole year (weighted mean)	0.94	0.95	0.84	1.05	1.89	3.56	3.47	3.24	3.79	7.03

Compared with the previous year prominence activity as represented by areas shows a decrease of about 19 per cent while the numbers show a decrease of about 16 per cent.

The distribution of areas in 5° ranges of latitude shows maximum activity in the zone 35° – 40° in both the hemispheres. There is a secondary maximum of activity between 20° – 25° in the northern hemisphere and two secondary maxima between 10° – 15° and 20° – 25° in the southern hemisphere. There was very little activity beyond 45° in both the hemispheres. The east–west distribution of prominences showed that both areas and numbers were in excess on the west limb.

Doppler shifts of the H-alpha line observed in prominences and absorption markings with the prominence spectroscop and the spectrohelioscope are given below :

	North	South	East	West	To red	To violet	Both ways	Total
Prominences	21	7	16	12	2	1	25	28
Dark markings	12	2	8	6	14	14

The heights of 13 prominences were measured in H-alpha, D_3 and H-beta lines with the prominence spectroscop. These were compared with the corresponding heights in the K line as obtained from the spectroheliograms. The average heights were:

K	H-alpha	D_3	H-beta
$50''\cdot 1$	$47''\cdot 0$	$43''\cdot 1$	$40''\cdot 8$

There were 6 occasions during the year when sudden disappearances of hydrogen absorption markings on the disk or of prominences on the limb were observed.

One metallic prominence was observed during the year.

An eruptive prominence was observed on the N.E. limb between 04^h 30^m and 05^h 45^m U.T. on February 26. The prominence reached a maximum height of 260", after which it disintegrated. Maximum Doppler shifts of about 6 Å to red were observed in some parts of the prominence. An interesting feature associated with this eruptive prominence was a synchronous radio noise burst recorded by the 100 Mc/s radio telescope of this observatory (*Nature*, 132, 446).

The mean daily areas and numbers of hydrogen absorption markings on the disk as obtained from Kodaikanal records are given below :

1953	Area (in millionths of the Sun's visible hemisphere) uncorrected for foreshortening					Number				
	North	South	East	West	Total	North	South	East	West	Total
Jan.-June	621.7	583.2	589.0	615.9	1204.9	5.96	5.73	5.86	5.83	11.69
July-Dec.	686.3	351.7	510.2	527.8	1038.0	7.50	4.13	5.61	6.02	11.63
Whole year (weighted mean)	650.6	483.9	555.7	578.8	1134.5	6.64	5.04	5.76	5.92	11.68

Compared with the previous year's values both the areas and numbers show a decrease of 38 per cent.

The distribution of areas in 5° ranges of latitude shows two peaks of activity in both the hemispheres, between 20°-25° and 40°-45° in the northern hemisphere and between 5°-10° and 35°-40° in the southern hemisphere. There was little activity of dark markings beyond latitude 50°. Both areas and numbers of H-alpha dark markings show western excess.

A. K. DAS.