Class 3; the latter was associated with the large sunspot group mentioned above.

In accordance with the reduction of flare activity, there were only 7 S.I.D.s reported by Cable and Wireless Ltd., and 4 S.E.A.s on 26·5 kc/s recorded at Herstmonceux.

The accompanying diagram shows the descent from maximum phase of the present and previous sunspot cycles (separated by ten years) based on smoothed Zürich sunspot numbers. The years 1947–1954 are represented by a broken, and 1957–1962 by a continuous, line. The epochs of the maxima were 1947·5 and 1957·9, respectively, the interval between maximum and minimum phase of the earlier cycle being 6·8 years.

P. S. LAURIE

PROMINENCES

The following table gives the mean daily areas and numbers of calcium prominences at the limb as derived from spectroheliograms obtained at Kodaikanal during 1962:

	Area in square minutes of arc					Numbers				
1962	N	S	E	W	Total	N	S	E	W	Total
January–June	1·74	1·33	1·57	1·50	3·07	4·76	4·04	4·43	4·37	8·80
July–December	1·18	0·77	0·81	1·14	1·95	3·60	2·70	3·00	3·30	6·30
Whole year (weighted mean)	1·53	1·12	1·29	1·36	2·65	4·33	3·52	3·87	3·98	7·85

The figures show a considerable decrease in prominence activity as compared with the previous year, the decrease in area being 47·3 per cent and in numbers 23·7 per cent.

The distribution of areas in the northern hemisphere in five-degree ranges of latitude showed a broad peak of activity extending from 5°–15°. There was a secondary maximum in the latitude belt 35°–40°. In the southern hemisphere the maximum activity was in the zone 20°–30°.

Three sudden disappearances of dark absorption markings were observed during the period.

The mean daily areas and numbers of hydrogen absorption markings on the disk as obtained from Kodaikanal records were as follows:

1962	H-alpha dark marking area (in millionths of the Sun's visible hemisphere uncorrected for foreshortening) N	S	E	W	Total	Numbers N	S	E	W	Total
January–June	1252	933	1070	1115	2185	10·1	6·6	7·8	8·9	16·7
July–December	1488	635	1027	1096	2123	9·8	4·8	7·3	7·3	14·6
Whole year (weighted mean)	1297	787	1016	1068	2084	9·97	5·88	7·60	8·25	15·85

Compared to the previous year there was a decrease in the activity of the absorption markings judged both by areas and numbers. The decrease in area amounted to 36·3 per cent while the numbers showed a decrease of 30·2 per cent. In the northern hemisphere, the peak of activity was in the latitude belt 20°–25° with a secondary maximum in the zone 10°–15°. In the southern hemisphere the maximum activity was in the zone 20°–30°.

M. K. VAINU BAPPU

COMETS (1962)

Cometary activity was quite high in the first half of 1962, and the brighter comets encouraged a good number of observations; one comet during this period reached naked-eye brightness. Regular observations of the fainter comets continued to be made by Dr Elizabeth Roemer (U.S. Naval Observatory, Flagstaff, Arizona). The outstanding value to computers of her measurements of position is already widely recognized, but her store of photographs has also yielded other remarkable results, and some of these she has described in the Donohoe Lecture given to the Astronomical Society of the Pacific at Victoria, B.C. The time-honoured belief that comets show changes only when they are close to the Sun is evidently in need of revision, and the observations quoted will also be of interest to those engaged in research on interplanetary space.

During the year fifteen comets were under observation, two of which were new discoveries; four periodic comets were also recovered on the basis of good predictions. Seven comets were followed from the previous year, and observations were made of the two annual comets, although identification of P/Oterma is somewhat uncertain.

Comet Oterma is at present undergoing severe perturbations by Jupiter, and every opportunity has been taken by Miss Roemer to follow the comet. Its position in close proximity to Jupiter makes photography of so faint an object very difficult and, although weak images were found on a pair of 120-min. exposures on August 7, no certain identification has proved possible.