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# KODAIKANAL OBSERVATORY

**Bulletin No. CLXXIII**

*Published on 12th July, 1969 ( 19th Asadha, 1891 )*

ERRATA FOR KODAIKANAL OBSERVATORY BULLETIN NO. CLXXIII

Part I

Solar Data

Page No.	Heading	Text	Read as
1	First line under Summary of Prominences and Calcium flocculus observations for the second half of 1963	Kodikanal	KodaiKANal
3	4th Para, 2nd line	areas	area
9	16th September, Col. 9	0.80	1.80
9	23th October (21st line)	**0740	**0440
10	14th September (8th line) Column 3	0650	-
10	14th September (8th line) Column 4	-	0650

Part II

Magnetic Data

Page No.	Table No.	Date/Line.	Hour/Column.	Read	for
14	5	27	11	37.3	39.3
16	6	2	14	38.8	33.8
16	6	10	14	37.9	37.7
16	6	11	14	38.1	37.9
13	7	33	03	38.1	43.1
13	7	Head line	-	1963	1962
19	7	Head line	-	1963	1962
21	8	1	-	1963	1962
21	8	10	20	37.6	37.4
26	11	15	04	594	-
27	11	9	31	9	9+
27	11	31	31	31++	31+
33	14	19	18	531	533
35	16	19	04	620	720
40	18	31	01	183	18
42	19	22	06	96	196
43	19	22	28	88	188
47	21	15	26	185	785

Contd ..... 2

Page No.	Table No.	Date/Line.	Hour/Column.	Read	for
48	22	07	12	164	664
48	22	07	13	168	163
48	22	07	10	163	168
48	22	13	07	156	616
48	22	15	04	155	216
48	22	15	06	151	641
48	22	15	09	155	115
48	22	15	13	162	152
48	22	16	07	158	152
48	22	16	13	156	158
48	22	17	13	162	152
48	22	17	14	162	165
48	22	18	11	162	165
48	22	19	13	161	154
48	22	20	07	130	138
48	22	21	06	149	189
48	22	21	08	142	112
48	22	21	11	156	556
48	22	23	08	137	387
48	22	26	08	139	119
50	23	December 2	11	4	-

Part III  
Ionospheric Data

Page No.	Table No.	Line/Date.	Column/ Hour.	Read	for
52	24	Median	09	7.0	7.1
52	24	27	10	5.6H	6.6
53	24	30	13	6.9	7.9
54	24 (Contd)	3	1130	6.8	.8
55	"	17	1930	7.6	7.0
70	28 (Contd)	3	0130	1.1	-
70	"	4	0130	Delete	1.1
75	29 (Contd)	4	1430	2.5	3.5
75	"	4	1530	3.5	2.5
75	"	5	1531	2.1	3.1
75	"	30	1730	1.6	2.6
76	30	08	08	300	310
79	30 (Contd)	4	1430	360	310
79	"	5	1430	L	335
79	"	8	1430	370	360
79	"	9	1430	385	L
82	31 (Contd)	20	0530	220	260
88	33	6	07	110	100
95	34 (Contd)	18	1530	3.10	2.10

Contd..... 3

Page No.	Table No.	Line/Date.	Column/ Hour	Read	for
98	35 (Contd)	21	0130	E	E
101	35	17	16	4.2U	-
116	40	Count	10	29	27
125	42	1	13	185H	115H
130	45	Count	11	27	17
153	43 (Contd)	Mean	0630	3.35	3.55
133		Mean	1130	2.60	2.
181	56	Count	15	29	-
185	57	Median	17	10.0	10.
189	58	Count	13	17	7
201	61	Median	23	2.2	22
201	"	Mean	23	2.2	22
207	62 (Contd)	Mean	1430	2.3	2.
240	71	5	00	3.2S	3.25
245	72	22	23	-	Nil
245	72	23	21 & 22	,	Nil, Nil
252	74	9	9	300	00
252	74	Count	6	1	-
253	74	Count	17	1	-
253	74	Mean	17	-	1
257	75	Count	13	29	2
272	70	Count	11	29	27
284	82	6	00	2.0	-
285	82	31	14	2.6	10.0
291	83 (Contd)	28	2130	2.2	Nil

**KODAIKANAL OBSERVATORY**

**Bulletin No. CLXXIII**

PART I

*Summary of Prominence and Calcium Flocculus Observations for the second half of 1963*

The results of observations of prominences and calcium flocculi made at Kodikanal Observatory during second half of 1963, supplemented by data derived from photographs supplied by Meudon Observatory for those days on which Kodikanal had imperfect or no observations due to cloudy sky conditions are summarised in Part I of this bulletin. Our thanks are due to the Meudon observatory for the photographs supplied.

*Calcium Prominences on the limb* — During the half-year under review photographs of calcium prominences were secured at Kodikanal on 102 days. Spectroheliograms for 47 days were obtained from Meudon Observatory. In all observations were available on 116 effective days after giving due weightage to the quality of the photographs.

The mean daily area (in square minutes of arc) and mean daily number of prominences derived from all the above records are as follows —

	Combined data	
	Mean daily area	Mean daily number
North	1.31	3.88
South	0.92	2.86
TOTAL	2.23	6.74

These figures, when compared with the previous half-year's values show a decrease of 11.2% in area whereas in the case of number there is an increase of 1.7%.

The distribution of areas and numbers in five degree ranges of latitude, as obtained from the combined data is presented in diagram I. The peak of activity of areas in the northern hemisphere is centred in the latitude belt 15°-50° whereas numbers show maximum activity in the belt 40°-45°. In the southern hemisphere there are two peaks of activity of both area and numbers in the latitude belts 20°-25° and 40°-45°.

The monthly, quarterly and half-yearly areas, numbers, heights and extents of prominences as derived from all the available records are tabulated below —

1963 Months	No. of effective days	Area (Sq minutes)	Numbers	Daily means		Mean height	Mean extent
				Area (Sq minutes)	Number		
July	23	37.05	121	1.61	5.26	34.96	2.79
August	21½	36.25	153	1.71	7.20	34.22	2.36
September	18½	48.50	145	2.62	7.84	39.86	2.63
October	20½	53.70	143	2.62	6.98	41.64	3.19
November	15	38.90	85	2.59	5.67	45.82	3.23
December	17½	44.25	135	2.49	6.43	39.85	2.75
Third Quarter	62½	121.80	419	1.94	6.68	36.38	2.58
Fourth Quarter	53½	136.85	363	2.57	6.81	41.96	3.03
Second half-year	116	258.65	782	2.23	6.74	38.97	2.79









































TABLE 9

Hourly values of Declination (Westerly), 1963

(Averages for sixty minutes centred at the full hours of Greenwich Mean Time)

November

2° plus tabular quantities

Date	Hours G M T														
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14
1	37 9	37 8	37 9	38 2	38 6	39 3	39 2	39 2	38 2	37 9	37 8	37 6	37 6	37 5	37 3
2	37 3	37 5	37 8	37 9	38 6	39 2	40 0	39 3	37 9	37 3	37 2	37 3	37 5	37 3	37 5
3	37 8	38 0	37 9	37 7	37 6	38 0	38 1	37 9	37 6	37 3	37 3	37 4	37 4	37 6	37 6
4	37 7	38 0	38 0	38 5	39 1	39 5	40 2	39 5	38 9	38 1	38 0	37 7	38 0	37 8	37 5
5†	38 0	38 1	38 1	38 4	38 9	39 5	40 3	40 2	39 2	38 1	37 8	37 7	37 8	37 7	37 7
6	38 1	38 7	39 1	39 7	40 6	41 1	40 9	40 2	38 8	37 8	37 2	36 8	37 4	37 5	37 2
7††	38 2	38 5	38 8	38 7	39 0	39 4	38 6	38 3	38 3	38 3	37 9	36 6	36 8	36 8	36 8
8††	38 3	38 4	38 2	38 4	38 3	39 0	38 6	38 3	37 9	38 3	38 6	38 0	37 6	36 8	37 6
9††	38 3	38 7	39 0	39 0	38 6	39 1	39 4	39 4	38 7	38 3	38 2	38 0	37 7	36 8	36 8
10††	38 3	39 0	38 9	39 0	39 2	39 4	39 7	39 4	38 8	38 3	37 0	37 1	37 7	37 7	37 7
11	38 8	39 2	39 5	39 9	40 1	39 8	39 8	39 7	39 2	38 4	38 1	37 0	37 6	37 7	38 0
12	38 4	38 5	39 1	39 0	39 4	39 0	38 4	38 1	37 8	37 4	36 9	37 0	37 6	38 1	38 3
13	38 4	38 7	39 4	39 4	39 5	39 2	38 7	38 4	38 1	37 8	37 6	37 1	37 7	37 8	37 8
14	38 4	39 2	39 7	39 8	39 4	39 2	39 1	38 4	38 1	38 0	37 8	37 8	38 0	38 1	38 0
15	38 4	39 1	39 2	39 1	39 6	39 9	39 5	38 4	37 4	37 1	37 2	37 4	37 9	38 1	38 2
16†	38 6	39 2	39 6	39 3	39 5	39 8	39 9	39 3	38 5	38 4	38 4	38 5	38 4	38 2	38 4
17	38 9	38 8	39 5	39 8	39 6	39 9	40 5	40 0	39 9	39 2	38 4	38 2	38 1	38 4	38 5
18†	38 2	38 1	38 5	38 9	39 1	39 6	39 8	39 6	38 5	38 2	38 4	38 2	38 4	38 2	38 1
19†	38 4	38 5	38 5	38 5	38 9	39 5	39 8	39 6	38 6	38 2	38 1	38 2	38 4	38 4	38 4
20	38 5	39 2	39 2	39 1	39 1	39 3	39 8	39 6	38 5	37 9	37 9	38 1	38 2	38 4	38 4
21†	38 6	38 9	39 2	39 6	39 9	40 1	40 3	39 9	39 0	38 5	37 9	37 8	37 9	38 0	38 0
22	38 6	38 9	39 3	39 6	39 9	40 0	39 9	39 3	39 2	38 9	38 5	37 9	37 9	38 5	38 5
23	38 7	39 3	39 2	38 6	38 6	39 0	39 6	39 3	38 0	37 2	36 9	37 2	37 9	38 0	38 2
24††	38 9	39 3	40 0	40 4	40 1	39 9	39 4	38 6	37 9	37 6	36 9	36 5	36 9	37 5	37 9
25	38 2	38 5	39 0	39 2	39 1	39 2	38 6	38 6	38 2	37 8	37 8	38 1	37 8	37 7	37 8
26	38 5	38 9	39 2	38 6	38 4	38 6	38 5	38 6	38 5	38 4	38 2	37 8	37 7	37 5	37 8
27	38 6	39 1	39 3	39 0	38 7	39 1	39 4	39 5	39 1	38 8	38 5	38 3	38 0	38 0	38 0
28	39 1	39 5	39 8	39 7	39 0	38 8	39 0	39 1	38 7	38 5	38 4	38 3	38 1	37 8	38 1
29	38 5	39 1	39 7	39 6	39 0	38 4	37 9	37 6	37 6	37 9	37 9	37 7	37 7	37 7	37 7
30	38 3	38 6	38 9	38 7	38 6	38 4	38 7	38 4	38 3	37 9	37 7	37 6	37 7	37 6	37 7
Mean	38 4	38 7	39 0	39 0	39 1	39 3	39 4	39 1	38 4	38 3	37 8	37 6	37 8	37 8	37 9
Mean†	38 4	38 6	38 8	38 9	39 3	39 7	40 0	39 7	38 8	38 3	38 1	38 1	38 2	38 1	38 1
Mean††	38 4	38 8	39 0	39 1	39 0	39 4	39 1	38 8	38 3	38 2	37 7	37 2	37 3	37 1	37 4

† Five International quiet days

†† Five International disturbed days

Δ Loss of record, day omitted for means.

















































































































































































































































































































































































































Characteristic f<sub>b</sub>E<sub>s</sub>

TABLE 61—Contd

Latitude, 10 2° N.

Unit Mc

Ionospheric Data

Longitude, 77 5° E.

Month October 1963

75°E Mean Time

Date	0030	0130	0230	0330	0430	0530	0630	0730	0830	0930	1030	1130
1							G	2.7	3.1	3.3	3.5	3.6
2							G	2.8	3.1	3.5	3.6	3.6
3							G	C	C	3.4	3.5	3.5
4							G	2.8	3.0	3.4	3.5	3.6
5							G	G	3.1	3.5	3.6	3.7
6							G	2.8	3.2	3.5	3.5	3.6
7							G	G	3.1	3.2	3.5	3.6
8							2.4	2.9	3.2	3.5	3.7	3.7
9	1.6						G	2.8	3.1	3.1	3.6	3.6
10							G	G	3.1	3.4	3.6	3.6
11								2.8	3.2	3.5	3.7	3.7
12							G	G	3.1	3.5	3.6	3.8
13							2.2	2.8	3.1	C	C	C
14							G	2.7	3.2	3.1	3.8	3.8
15							G	2.8	3.2	3.1	3.6	3.7
16	1.6s						2.3	2.8	3.3	3.6	3.8	3.8
17							2.4	2.9	3.2	3.6	3.7	3.9 <sub>II</sub>
18							G	2.8	3.2	3.4	3.6	3.7
19							G	3.0	3.3	C	3.8	3.8
20							G	3.1	3.2	3.6	3.7	3.8
21							C	C	C	C	C	C
22							G	3.0	3.2	3.6	3.6	3.6
23							G	2.8	3.1	3.1	3.5	3.5
24							G	G	3.0	3.4	3.5	3.6
25							G	G	3.2	3.3	3.5	3.6
26							G	3.8	3.1	3.4	3.4	3.7
27							G	G	3.1	3.5	3.6	3.7
28							G	G	.	3.6	3.8	3.8
29	2.8				1.4		2.7	3.1	3.4	3.7	3.6	3.6
30							2.2	3.0	3.1	3.3	3.6	4.6
31							2.2	2.7	3.1	3.4	3.5	3.6
Count	3				1		27	29	28	28	29	29
Median							G	2.8	3.1	3.4	3.6	3.7
Mean							2.3	2.9	3.1	3.4	3.6	3.7

Sweep 1.0 Mc to 25.0 Mc in 27 seconds









Characteristic fmin  
Unit Mc  
Month October, 1963

TABLE 62--Contd  
Ionospheric Data  
75°E Mean Time

Latitude 10 2° N  
Longitude 77 5° E

	1230	1330	1430	1530	1630	1730	1830	1930	2030	2130	2230	2330	Date
2.5	2.5	2.3	2.3	1.8	1.9	1.9	2.1	1.2	1.2	1.2	E		1
2.6	2.6	2.3	2.6	2.7	1.9	1.9	1.9	1.5	1.4	1.5	1.5		2
2.4	2.5	2.2	2.5	2.1	1.9	1.5	1.5	1.4	1.7	1.3	1.2		3
2.5	2.6	2.4	2.4	2.8	2.2	2.0	1.6	1.4	1.2	E	E		4
2.6	2.5	2.3	2.2	2.0	1.9	2.0	1.8	1.5	1.5	1.4	1.1		5
2.5	2.5	2.4	2.4	2.0	1.9	1.5	1.6	1.5	1.4	1.4	1.1		6
2.8	2.1	2.3	2.2	2.0	2.1	1.5	1.6	1.5	1.5	1.6	1.6		7
2.6	2.4	2.3	2.1	1.9	1.6	2.0	1.9	1.6	1.5	1.5	C		8
2.4	2.3	2.0	2.0	2.0	1.9	1.8	1.9	S	1.4	1.2	1.8		9
2.5	2.6	2.3	2.2	2.0	2.0	2.0	1.6	2.0	1.9	1.8	2.0		10
2.7	2.5	2.3	2.5	2.1	1.6	1.3	2.0	2.2	2.0	2.5	2.1		11
2.4	2.4	2.2	1.9	1.8	1.3	1.9	1.6	1.4	1.9	1.6	1.4		12
C	C	C	C	2.6	2.1	1.9	1.9	C	C	1.9	1.9		13
1.6	2.3	1.9	2.5	1.9	1.8	1.9	1.8	C	1.5	1.4	1.4		14
2.5	2.4	2.4	2.2	2.0	1.6	1.5	1.4	1.5	1.4	1.6	1.6		15
2.8	2.5	1.6	1.0	2.3	1.5	1.6	1.6	1.6 <sup>US</sup>	1.7	1.6	1.6		16
2.8	2.6	2.8	3.0	2.4	1.7	1.7	1.5	1.7 <sup>US</sup>	1.7	1.3	1.7 <sup>R</sup>		17
2.6	2.7	2.3	2.2	2.3	2.2	1.6	1.6 <sup>US</sup>	1.6	1.6	1.7	1.7		18
3.0	2.6	2.7	2.9	2.7	1.7	1.4 <sup>US</sup>	1.7	S	1.6	2.2	1.9		19
2.6	2.6	2.0	2.0	1.9	1.6	1.9	1.8	2.0	1.6	C	1.4		20
C	C	C	1.0	C	2.1	2.0	1.9	1.7	2.0	1.8	1.4		21
2.6	2.6	2.6	2.5	2.2	1.7	1.6	1.5	1.6	1.8	1.4	1.4		22
2.4	2.5	2.4	2.4	2.0	1.7	1.5	1.5	1.7	1.7	1.8	1.7		23
2.4	2.1	2.0	1.4	2.6	1.8	2.2	1.8	1.9	1.8	1.8	1.7		24
2.6	2.4	2.4	2.2	2.0	1.6	1.5	1.2	1.5	1.7	1.7	1.4		25
2.9	2.6	2.2	2.6	2.2	1.7	1.8	1.7	2.0	1.6	1.6	1.6		26
2.7	2.5	2.3	2.3	2.2	1.7	1.9	1.9	1.6	1.5	1.0	1.4		27
2.0	2.8	2.5	2.8	2.1	1.4	1.6	1.7	1.8	1.7	1.4	1.6		28
2.6	2.5	2.2	2.4	1.8	1.6	1.6	1.7	1.8	1.7	1.6	2.2		29
2.9	2.6	2.8	2.4	2.2	1.9	1.7	1.9	1.7	1.8	1.6	1.4		30
2.5	2.6	2.3	2.7	2.4	2.0	1.9	1.6	1.6	1.7	1.7	1.8		31
													Count
2.9	2.9	2.9	3.0	3.0	3.1	3.1	3.1	2.7	3.0	3.0	3.0		Median
2.6	2.5	2.3	2.4	2.1	1.8	1.8	1.7	1.6	1.6	1.6	1.6		Mean
2.6	2.5	2.2	2.4	2.2	1.8	1.7	1.7	1.6	1.6	1.6	1.6		

Sweep 1.0 Mc to 25.0 Mc in 27 seconds















































































































































































































































