

## Sunspot Activity.

	Number of observations	Reduction-factor on Wolf's unit		Number of comparisons
		whole disc	central zone	
		Catania	68	
Greenwich/Cape	76	0.81	1.00	50
Kiew	46	0.89	0.94	32
Lyons	69	0.82	0.78	53
Roma (Campidoglio)	48	0.99	0.76	36
South Hadley	45	1.00	—	32
Stonyhurst	58	0.85	0.82	40
Tokyo	73	0.93	0.87	49
Zürich	77	0.60	0.60	—

Relative-numbers for the whole sun disc 1929

	Jan.	Febr.	March
1	77 b	E 31 c	44 ad
2	71 d	37	47
3	69	32	W 59 c
4	71	E 44 cd	66 d
5	48	46 d	52
6	E 42 c	74 ad	73
7	61	81	73
8	78 a	E 91 c	88 b
9	85	117 a	103
10	79 a	121 b	91 b
11	44 d	87 b	E 92 bc
12	M 82 c	83 a	94
13	82 a	70	77
14	96 a	75	66
15	77	68	W 65 abc
16	113 d	E 51 c	58
17	90 b	56	40
18	89	54	24
19	77	W 32 c	19
20	92	56	15
21	77 b	58 a	11 b
22	69	58 d	18
23	102 d	57	E 25 c
24	74 a	65	28
25	69	60	22
26	65 b	70	35
27	55	69 a	39
28	20	52	18 a
29	22		W 20 c
30	M 29 c		40
31	31 a		55 d
Mean	68.9	64.1	50.2

Relative-numbers for the central circle zone 1929

	Jan.	Febr.	March
1	49	17	37
2	51	21	16
3	23	0	15
4	16	8	2
5	6	14	6
6	7	20	27
7	29	30	33
8	46	39	40
9	31	47	72
10	24	62	55
11	11	65	34
12	50	58	39
13	39	61	33
14	58	50	29
15	68	25	27
16	53	8	16
17	36	0	0
18	34	0	0
19	38	10	0
20	37	13	15
21	36	23	11
22	27	26	15
23	52	26	10
24	37	10	2
25	55	18	0
26	47	28	19
27	26	44	31
28	20	40	18
29	7		20
30	13		26
31	16		0
Mean	33.6	27.3	20.9

## Intensity of the ultra-violet Radiation.

(Mount Wilson)

The figures give the ratio ultra-violet  
( $\lambda = 0.32 \mu$ ) to green ( $\lambda = 0.50 \mu$ )  
(Ratio for June 1924 = 1)

1929

	Jan.	Febr.	March
1	1.11		1.32
2	1.10		
3	1.19		1.22
4			1.23
5			1.33
6			
7			1.58
8		1.45	
9		1.53	
10		1.28	
11		1.46	
12	1.16	1.53	
13		1.53	
14	1.22	1.60	1.46
15			1.31
16		1.33	1.35
17			1.38
18			1.56
19			1.30
20		1.14	1.26
21		1.26	
22		1.25	1.34
23		1.20	1.59
24	1.30	1.42	
25	1.43		
26	1.38		
27		1.22	1.35
28		1.30	1.31
29	1.35		1.28
30			1.33
31			1.25
Mean	1.25	1.37	1.36

a) Passage of an average sized group through the central meridian.

b) Passage of a large group or large spot through the central meridian.

c) New formation of a large or average sized centre of activity. E: on the eastern part of the Sun's disc, W: on the western part, M: in the central circle zone.

d) Entrance of a large or average sized centre of activity on the east limb.

## Sunspot Activity.

	Number of observations	Reduction-factor on Wolf's unit		Number of comparisons
		whole disc	central zone	
		Batavia	69	
Catania	84	0.82	0.81	76
Greenwich/Cape	74	0.78	0.82	69
Kiew	73	0.73	0.80	68
Lyons	86	0.86	0.82	79
Roma/Campidoglio	56	1.00	0.89	51
South Hadley	44	0.94	0.92	38
Stonyhurst	79	0.75	0.72	70
Tokyo	49	0.73	0.76	46
Zürich/Arosa	87	0.60	0.60	—

Relative-numbers for the whole sun disc  
1929

	April	May	June
1	47	65 a	27
2	51	94	30
3	46	M 94 bc	26
4	32	74 a	W 47 cd
5	37	74	54
6	M 63 ac	83	60
7	54 a	E 68 c	81
8	61 b	79 d	63
9	65 d	77	58 b
10	M 76 c	62 aa	68 a
11	69 d	52	82
12	73	46	88 a
13	59 d	76	84
14	71	71 a	79
15	59 a	73	M 80 c
16	62	E 73 cc	M 76 c
17	M 47 ac	53	64 aa
18	50 a	47 a	76 dd
19	58	27	70 a
20	E 62 c	32 a	86
21	57	30	M 101 c
22	47	34 d	110 d
23	48	30	104
24	36	E 49 c	84 bb
25	40 d	61	80 a
26	44	59 a	85
27	43	59	62
28	36 d	59 b	E 65 ac
29	E 38 cc	35	E 79 c
30	53	35	84 d
31		34	
Mean	52.8	58.2	71.9

Relative-numbers for the central circle zone  
1929

	April	May	June
1	0	26	7
2	0	62	0
3	0	70	0
4	10	59	22
5	23	55	16
6	63	16	10
7	54	7	27
8	55	13	44
9	38	39	44
10	29	41	52
11	13	46	60
12	24	28	41
13	9	28	32
14	14	12	12
15	15	10	32
16	35	26	38
17	40	19	43
18	37	40	41
19	46	40	17
20	17	17	8
21	19	16	25
22	16	0	55
23	17	0	56
24	28	0	62
25	10	20	46
26	0	31	38
27	0	41	20
28	0	28	17
29	11	24	8
30	13	23	18
31		9	
Mean	21.2	27.3	29.7

## Intensity of the ultra-violet Radiation.

(Mount Wilson)

The figures give the ratio ultra-violet  
( $\lambda = 0.32 \mu$ ) to green ( $\lambda = 0.50 \mu$ )  
(Ratio for June 1924 = 1)

1929

	April	May	June
1		1.35	1.17
2	1.39	1.22	1.20
3		1.18	1.29
4		1.22	1.38
5		1.19	
6	1.50	1.20	
7	1.33	1.14	
8	1.45		
9	1.31		
10	1.42		
11	1.50		1.25
12	1.36	1.25	1.23
13	1.30		1.18
14	1.28		1.20
15		1.30	1.29
16	1.12	1.22	
17		1.25	1.29
18	1.20	1.33	
19		1.16	1.11
20	1.16		1.10
21	1.14	1.08	1.00
22		1.08	1.09
23	1.17	0.99	
24	1.28	1.12	
25		1.20	
26		1.28	1.10
27	1.07	1.23	1.05
28	1.13	1.30	1.14
29	1.32	1.30	1.28
30	1.28	1.22	1.23
31		1.35	
Mean	1.29	1.22	1.19

a) Passage of an average sized group through the central meridian.

b) Passage of a large group or large spot through the central meridian.

c) New formation of a large or average sized centre of activity. E: on the eastern part of the Sun's disc, W: on the western part, M: in the central circle zone.

d) Entrance of a large or average sized centre of activity on the east limb.

## Sunspot Activity.

	Number of observations	Reduction-factor on Wolf's unit		Number of comparisons
		whole disc	central zone	
Batavia	88	0.99	0.99	70
Catania	80	0.73	0.72	63
Greenwich/Cape	83	0.84	0.93	65
Kiew	55	0.74	0.81	37
Lyons	89	0.81	0.80	71
Roma/Campidoglio	65	0.79	0.85	55
South Hadley				
Stonyhurst	74	0.74	0.70	58
Tokyo	62	0.60	0.61	48
Zürich/Arosa	89	0.60	0.60	—

Relative-numbers for the whole sun disc 1929

	July	Aug.	Sept.
1	71	66	9
2	82	70 <sup>a</sup>	17
3	86	47	30
4	59 <sup>a</sup>	E 37 <sup>c</sup>	27
5	W 67 <sup>cd</sup>	41	M 47 <sup>c</sup>
6	68 <sup>b</sup>	56 <sup>ad</sup>	47
7	79	61 <sup>d</sup>	M 60 <sup>c</sup>
8	73	48	53
9	M 57 <sup>c</sup>	56	57
10	73 <sup>b</sup>	M 64 <sup>c</sup>	56
11	95 <sup>d</sup>	E 62 <sup>acc</sup>	39
12	79	76 <sup>a</sup>	31
13	86	M 76 <sup>ac</sup>	53
14	76 <sup>d</sup>	M 101 <sup>c</sup>	25
15	92 <sup>d</sup>	132	32
16	88	125 <sup>ab</sup>	26
17	70 <sup>b</sup>	115	38 <sup>d</sup>
18	70	W 107 <sup>c</sup>	17
19	73	110	20
20	82 <sup>aa</sup>	E 93 <sup>c</sup>	W 43 <sup>c</sup>
21	100	69	55
22	78	74 <sup>a</sup>	44 <sup>a</sup>
23	63	M 67 <sup>c</sup>	35
24	E 50 <sup>c</sup>	54	13
25	40	54	10
26	M 46 <sup>c</sup>	E 47 <sup>c</sup>	E 23 <sup>c</sup>
27	67	32	25
28	58 <sup>a</sup>	33 <sup>a</sup>	17
29	45 <sup>b</sup>	28	43 <sup>d</sup>
30	E 44 <sup>c</sup>	28	40 <sup>a</sup>
31	60 <sup>d</sup>	10	
Mean	70.2	65.8	34.4

Relative-numbers for the central circle zone 1929

	July	Aug.	Sept.
1	20	16	9
2	46	26	17
3	38	16	17
4	35	19	13
5	37	23	25
6	41	32	33
7	38	26	14
8	18	20	19
9	21	8	26
10	42	19	27
11	69	35	24
12	61	35	8
13	16	37	24
14	25	71	9
15	29	101	9
16	20	54	8
17	13	45	15
18	29	24	8
19	31	22	8
20	65	42	8
21	65	45	15
22	41	54	11
23	20	37	17
24	13	11	0
25	16	0	0
26	26	0	0
27	38	10	0
28	47	16	8
29	45	21	34
30	15	26	28
31	8	0	
Mean	33.2	28.7	14.5

## Intensity of the ultra-violet Radiation.

(Mount Wilson)

The figures give the ratio ultra-violet  
( $\lambda = 0.32 \mu$ ) to green ( $\lambda = 0.50 \mu$ )  
(Ratio for June 1924 = 1)

1929

	July	Aug.	Sept.
1	1.08	1.52	
2	1.22	1.22	1.19
3	1.25	1.16	1.29
4	1.20	1.26	1.31
5	1.14	1.25	
6	1.17	1.16	
7	1.17	1.17	
8	1.25	1.19	1.34
9	1.28	1.22	1.25
10	1.25	1.28	1.20
11	1.17	1.17	1.28
12	1.17	1.31	1.23
13			1.34
14		1.56	1.15
15		1.72	1.22
16	1.22	1.49	1.14
17	1.31	1.22	
18	1.30	1.08	
19	1.46	1.02	
20	1.25	1.08	1.17
21	1.36	1.06	
22	1.22	1.08	
23	1.37	1.08	1.25
24	1.39	1.49	1.08
25	1.50	1.19	1.14
26	1.30	1.31	1.17
27	1.33	1.37	1.34
28	1.28	1.28	1.14
29	1.14	1.18	1.53
30	1.14	1.09	1.26
31	1.39		
Mean	1.26	1.25	1.24

a) Passage of an average sized group through the central meridian.

b) Passage of a large group or large spot through the central meridian.

c) New formation of a large or average sized centre of activity. E: on the eastern part of the Sun's disc, W: on the western part, M: in the central circle zone.

d) Entrance of a large or average sized centre of activity on the east limb.

## Sunspot Activity.

	Number of observations	Reduction-factor on Wolf's unit		Number of comparisons
		whole disc	central zone	
Batavia	69	1.11	1.13	50
Catania	83	1.02	1.04	58
Greenwich/Cape	80	0.91	0.97	58
Kiew	37	0.73	0.71	27
Lyons	61	0.87	0.85	49
Roma/Campidoglio	54	0.97	1.00	42
South Hadley	53	0.95	0.92	40
Stonyhurst	53	0.75	0.69	38
Tokyo	49	0.61	0.60	34
Zürich/Arosa	82	0.60	0.60	—

Relative-numbers for the whole sun disc  
1929

	Oct.	Nov.	Dec.
1	47	66	140 bd
2	53	80	125 a
3	64	75 bd	122
4	55 b	92	98
5	55	86	86
6	E 64 c	100 d	91 dd
7	71 d	80	68 a
8	68	91	56
9	76	79 bd	57
10	84 b	94	58 dd
11	77	71	103 a
12	79 b	68 a	128 b
13	78 b	E 82 c	139
14	70	96 a	E 137 c
15	56	93 a	139
16	40	65 ad	139 bb
17	37	67	145 bb
18	26	67	137
19	18	49	139 a
20	19	44	133 ad
21	32	44 ad	133
22	22	41	128
23	33	51 d	M 126 ac
24	17 d	60 d	118 a
25	31	81	133
26	M 36 c	90	107 b
27	M 68 c	119 b	95 b
28	97 a	127 a	93 a
29	57	146 b	72
30	76 b	129 b	M 65 c
31	E 69 c		37 a
Mean	54.0	81.1	108.0

Relative-numbers for the central circle zone  
1929

	Oct.	Nov.	Dec.
1	25	32	103
2	20	54	84
3	32	34	53
4	36	56	32
5	35	51	19
6	41	25	21
7	23	17	8
8	8	14	11
9	22	21	8
10	46	22	28
11	66	26	47
12	37	17	53
13	38	36	56
14	45	74	69
15	23	68	85
16	0	47	79
17	10	29	102
18	7	18	76
19	8	8	51
20	8	17	49
21	7	17	36
22	0	18	33
23	8	17	35
24	0	0	38
25	14	19	49
26	19	35	62
27	30	62	63
28	35	71	63
29	43	85	51
30	54	78	21
31	42		15
Mean	25.2	35.6	48.4

## Intensity of the ultra-violet Radiation.

(Mount Wilson)

The figures give the ratio ultra-violet  
( $\lambda = 0.32 \mu$ ) to green ( $\lambda = 0.50 \mu$ )  
(Ratio for June 1924 = 1)

1929

	Oct.	Nov.	Dec.
1		1.18	1.25
2		1.25	1.19
3	1.43	1.19	1.25
4		1.25	1.28
5	1.25	1.12	
6	1.29	1.19	1.14
7		1.20	1.22
8	1.43	1.17	1.28
9	1.26	1.19	1.58
10	1.22	1.18	
11	1.14	1.17	1.23
12	1.11	1.41	1.25
13	1.19	1.31	1.43
14	1.42	1.28	1.47
15		1.12	1.25
16	1.39	1.07	
17	1.40	1.03	
18	1.20	1.13	
19	1.19	1.12	1.25
20	1.04	1.14	1.37
21	1.06	1.25	1.49
22	1.06	1.16	1.19
23	1.11	1.22	1.35
24	1.12	1.17	1.38
25	1.25	1.29	
26		1.25	1.25
27	1.19	1.20	1.19
28			1.14
29	1.53	1.13	1.31
30	1.58	1.23	1.25
31	1.60		
Mean	1.27	1.19	1.29

- a) Passage of an average sized group through the central meridian.  
 b) Passage of a large group or large spot through the central meridian.  
 c) New formation of a large or average sized centre of activity. E: on the eastern part of the Sun's disc, W: on the western part, M: in the central circle zone.  
 d) Entrance of a large or average sized centre of activity on the east limb.