



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

MONTHLY SUNSPOT REPORTS

1994

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GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR JANUARY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2120	4	47	87	10	17	117	1276	145	2.0	3.0	3.0	2560
02													
03	2020	4	69	109	17	30	200	2073	121	2.0	2.0	2.5	2561
04													
05	2235	4	71	111	16	26	186	1877	139	1.5	2.0	2.0	2562
06	2145	4	54	94	15	15	165	1670	177	1.5	2.0	2.5	2563
07	2205	4	44	84	13	15	145	1475	141	2.0	3.0	2.5	2564
08													
09													
10													
11													
12													
13	1920	2	25	45	6	16	76	788	45	1.5	2.5	2.5	2565
14	2005	3	8	38	3	5	35	110	40	2.0	2.5	2.5	2566
15													
16	1930	2	10	30	2	3	23	296	50	1.5	2.0	2.5	2567
17	2045	1	14	24	2	3	23	504	48	1.5	2.0	2.5	2568
18	1940	2	16	36	2	3	23	544	49	1.5	2.5	2.5	2569
19													
20	2000	2	29	49	3	18	48	1012	58	2.0	3.0	2.5	2570
21													
22													
23													
24	2040	5	39	89	6	17	77	1002	84	1.5	2.0	2.0	2571
25													
26	2000	4	33	73	6	13	73	714	89	3.0	3.0	3.0	2572
27	2030	4	20	60	7	5	75	330	99	2.5	3.0	2.5	2573
28	1955	5	16	66	5	7	57	206	56	1.5	2.5	2.5	2574
29	2035	3	10	40	2	8	28	97	25	2.5	3.0	2.5	2575
30													
31	1945	3	11	41	3	5	35	203	33	1.5	2.5	2.5	2576
Σ	—	56	516	1076	118	206	1386	14177	1399	31.5	42.5	42.5	—
NOBS	—	17	17	17	17	17	17	17	17	17	17	17	—
MNS	—	3.29	30.35	63.29	6.94	12.12	81.53	833.94	82.29	1.85	2.50	2.50	—

MEAN WEIGHT = 0.4462

MEAN CONDITION = 2.2843

QUALITY COUNT = 12.53



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR JANUARY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbra spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2120	51	4	30	17	0	0	2.0	3.0	3.0	2560
02											
03	2020	72	3	38	30	1	0	2.0	2.0	2.5	2561
04											
05	2235	75	4	45	26	0	0	1.5	2.0	2.0	2562
06	2145	58	4	39	15	0	0	1.5	2.0	2.5	2563
07	2205	48	4	29	15	0	0	2.0	3.0	2.5	2564
08											
09											
10											
11											
12											
13	1920	27	2	9	16	0	0	1.5	2.5	2.5	2565
14	2005	10	2	3	4	0	1	2.0	2.5	2.5	2566
15											
16	1930	12	2	7	3	0	0	1.5	2.0	2.5	2567
17	2045	15	1	11	3	0	0	1.5	2.0	2.5	2568
18	1940	17	1	13	2	0	1	1.5	2.5	2.5	2569
19											
20	2000	30	1	11	17	0	1	2.0	3.0	2.5	2570
21											
22											
23											
24	2040	42	3	22	15	0	2	1.5	2.0	2.0	2571
25											
26	2000	37	4	20	13	0	0	3.0	3.0	3.0	2572
27	2030	24	4	15	5	0	0	2.5	3.0	2.5	2573
28	1955	20	4	9	6	0	1	1.5	2.5	2.5	2574
29	2035	12	2	1	8	1	0	2.5	3.0	2.5	2575
30											
31	1945	12	1	5	4	1	1	1.5	2.5	2.5	2576
Σ	—	562	46	307	199	3	7	31.5	42.5	42.5	—
NOBS	—	17	17	17	17	17	17	17	17	17	—
MNS	—	33.06	2.71	18.06	11.71	0.18	0.41	1.85	2.50	2.50	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR JANUARY 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01	2120	0 ; 0	0 ; 0	1 ; 2	2 ; 6/14	0 ; 0	1 ; 25	0 ; 0	0 ; 0	0 ; 0
02										
03	2020	0 ; 0	0 ; 0	0 ; 0	1 ; 7	1 ; 26	1 ; 35	0 ; 0	0 ; 0	1 ; 1
04										
05	2235	0 ; 0	0 ; 0	0 ; 0	2 ; 3/17	1 ; 29	1 ; 22	0 ; 0	0 ; 0	0 ; 0
06	2145	0 ; 0	0 ; 0	0 ; 0	1 ; 3	1 ; 20	2 ; 8/23	0 ; 0	0 ; 0	0 ; 0
07	2205	0 ; 0	0 ; 0	0 ; 0	1 ; 3	1 ; 5	2 ; 12/24	0 ; 0	0 ; 0	0 ; 0
08										
09										
10										
11										
12										
13	1920	0 ; 0	0 ; 0	1 ; 4	0 ; 0	0 ; 0	1 ; 21	0 ; 0	0 ; 0	0 ; 0
14	2005	1 ; 1	0 ; 0	1 ; 2	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
15										
16	1930	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0
17	2045	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 14	0 ; 0	0 ; 0	0 ; 0
18	1940	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 15	0 ; 0	0 ; 0	0 ; 0
19										
20	2000	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 28	0 ; 0	0 ; 0	0 ; 0
21										
22										
23										
24	2040	2 ; 1/1	0 ; 0	1 ; 5	1 ; 11	0 ; 0	1 ; 21	0 ; 0	0 ; 0	0 ; 0
25										
26	2000	0 ; 0	1 ; 2	1 ; 5	1 ; 15	0 ; 0	1 ; 11	0 ; 0	0 ; 0	0 ; 0
27	2030	0 ; 0	0 ; 0	1 ; 3	3 ; 5/6/6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
28	1955	1 ; 1	1 ; 2	1 ; 4	2 ; 4/5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29	2035	0 ; 0	1 ; 3	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
30										
31	1945	1 ; 1	0 ; 0	0 ; 0	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
TOTALS	—	7 ; 7	4 ; 9	8 ; 31	16 ; 119	4 ; 80	14 ; 267	0 ; 0	0 ; 0	3 ; 3

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
12.5	7.1	14.3	28.6	7.1	25.0	0.0	0.0	5.4	56

NOBS = 17

\bar{p}/\bar{g} mean = 2.0216

\bar{f}/\bar{g} mean = 9.3627

\bar{p}/\bar{g} mean = 2.1071

\bar{f}/\bar{g} mean = 9.2143

GROUP COMPLEXITY INDEX (GCI) = 11.3214



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NEW ZEALAND

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SUNSPOT RESULTS FOR FEBRUARY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2135	3	8	38	3	5	35	93	34	1.5	3.0	3.0	2577
02	2200	4	7	47	4	3	43	114	43	2.0	3.0	2.5	2578
03													
04													
05													
06	1940	3	20	50	4	11	51	329	38	2.0	2.0	2.5	2579
07													
08													
09	2000	4	20	60	6	9	69	326	72	2.0	2.5	2.5	2580
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20	2050	3	15	45	2	10	30	228	31	1.5	1.5	2.0	2581
21	2045	4	12	52	3	5	35	207	40	1.5	1.5	2.5	2582
22	2055	4	12	52	3	5	35	226	31	2.0	2.0	2.5	2583
23													
24	1950	4	11	51	4	6	46	163	50	1.5	2.0	2.5	2584
25													
26	2000	5	12	62	3	8	38	165	43	2.0	2.5	2.5	2585
27	2215	4	8	48	4	4	44	90	45	2.0	3.0	3.5	2586
28	1945	4	20	60	6	11	71	256	53	2.0	2.0	2.5	2587
29													
30													
31													
Σ	—	42	145	565	42	77	497	2197	480	20.0	25.0	28.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	11	11	—
MNS	—	3.82	13.18	51.36	3.82	7.00	45.18	199.73	43.64	1.82	2.27	2.59	—

MEAN WEIGHT = 0.4582

MEAN CONDITION = 2.2121

QUALITY COUNT = 9.45



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR FEBRUARY 1994

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Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbra spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2135	10	2	2	5	1	0	1.5	3.0	3.0	2577
02	2200	9	2	2	3	2	0	2.0	3.0	2.5	2578
03											
04											
05											
06	1940	22	2	8	11	1	0	2.0	2.0	2.5	2579
07											
08											
09	2000	23	3	11	8	0	1	2.0	2.5	2.5	2580
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20	2050	17	2	5	9	0	1	1.5	1.5	2.0	2581
21	2045	13	1	6	3	1	2	1.5	1.5	2.5	2582
22	2055	14	2	7	3	0	2	2.0	2.0	2.5	2583
23											
24	1950	13	2	4	5	1	1	1.5	2.0	2.5	2584
25											
26	2000	14	2	3	6	1	2	2.0	2.5	2.5	2585
27	2215	11	3	4	3	0	1	2.0	3.0	3.5	2586
28	1945	23	3	9	10	0	1	2.0	2.0	2.5	2587
29											
30											
31											
Σ	—	169	24	61	66	7	11	20.0	25.0	28.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	—
MNS	—	15.36	2.18	5.55	6.00	0.64	1.00	1.82	2.27	2.59	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR FEBRUARY 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01	2135	0 ; 0	0 ; 0	2 ; 3/4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
02	2200	0 ; 0	0 ; 0	2 ; 2/3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1
03										
04										
05										
06	1940	0 ; 0	0 ; 0	1 ; 5	1 ; 14	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
07										
08										
09	2000	1 ; 1	0 ; 0	1 ; 2	2 ; 5/12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20	2050	1 ; 1	1 ; 2	0 ; 0	1 ; 12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21	2045	2 ; 1/1	0 ; 0	0 ; 0	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
22	2055	2 ; 1/1	0 ; 0	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2
23										
24	1950	1 ; 1	0 ; 0	1 ; 4	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
25										
26	2000	2 ; 1/1	1 ; 3	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
27	2215	1 ; 1	0 ; 0	2 ; 2/2	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
28	1945	1 ; 1	0 ; 0	2 ; 4/5	1 ; 10	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29										
30										
31										
TOTALS	—	11 ; 11	2 ; 5	11 ; 36	10 ; 84	0 ; 0	0 ; 0	0 ; 0	0 ; 0	8 ; 9

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
26.2	4.8	26.2	23.8	0.0	0.0	0.0	0.0	19.0	42

NOBS = 11

\bar{p} / \bar{g} mean = 1.0091

\bar{f} / \bar{g} mean = 3.5667

\bar{p} / \bar{g} mean = 1.0000

\bar{f} / \bar{g} mean = 3.4524

GROUP COMPLEXITY INDEX (GCI) = 4.4524



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SUNSPOT RESULTS FOR MARCH 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02	2210	4	33	73	9	14	104	504	83	2.0	3.0	3.0	2588
03	2100	5	32	82	6	19	79	452	51	2.0	2.5	2.5	2589
04	2000	4	19	59	4	9	49	336	47	1.5	2.0	2.5	2590
05	2120	5	22	72	6	13	73	306	69	1.5	2.0	2.5	2591
06	2005	5	32	82	7	16	86	513	78	1.5	2.0	2.0	2592
07													
08	2105	5	21	71	5	12	62	276	54	1.5	2.0	2.0	2593
09													
10	1950	2	10	30	2	5	25	166	23	2.0	3.0	3.0	2594
11	2120	3	10	40	3	6	36	118	33	2.0	2.0	2.0	2595
12	2020	3	15	45	4	8	48	170	40	2.0	3.0	3.0	2596
13													
14													
15	1950	3	10	40	2	6	26	105	20	1.5	2.0	2.5	2597
16	2035	3	12	42	2	7	27	113	22	2.0	2.5	2.5	2598
17	2145	2	6	26	2	2	22	77	19	2.0	2.5	2.5	2599
18	2040	3	6	36	2	4	24	40	24	2.0	2.5	3.0	2600
19	2030	2	3	23	1	2	12	20	12	1.5	2.5	2.5	2601
20	1955	1	1	11	1	0	10	37	10	2.0	2.5	2.5	2602
21	2005	3	7	37	3	4	34	92	34	2.0	2.5	2.5	2603
22	2000	2	12	32	3	5	35	186	34	1.5	2.0	2.5	2604
23	2015	2	5	25	2	3	23	40	23	2.0	2.0	2.5	2605
24	2005	2	3	23	2	1	21	53	21	2.5	3.0	2.5	2606
25	2000	4	10	50	1	9	19	56	18	2.5	2.5	2.5	2607
26	2050	4	9	49	1	8	18	52	17	2.5	3.5	3.0	2608
27													
28													
29	2040	2	10	30	3	5	35	199	26	2.5	2.5	2.5	2609
30	2230	4	17	57	5	10	60	248	58	2.0	3.0	2.5	2610
31	2025	3	12	42	2	9	29	92	22	1.5	3.0	3.0	2611
Σ	—	76	317	1077	78	177	957	4251	838	46.0	60.0	61.5	—
NOBS	—	24	24	24	24	24	24	24	24	24	24	24	—
MNS	—	3.17	13.21	44.88	3.25	7.38	39.88	177.12	34.92	1.92	2.50	2.56	—

MEAN WEIGHT = 0.4371

MEAN CONDITION = 2.3264

QUALITY COUNT = 8.46



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR MARCH 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02	2210	37	4	19	14	0	0	2.0	3.0	3.0	2588
03	2100	36	4	13	18	0	1	2.0	2.5	2.5	2589
04	2000	22	3	10	8	0	1	1.5	2.0	2.5	2590
05	2120	27	5	9	13	0	0	1.5	2.0	2.5	2591
06	2005	36	4	15	16	1	0	1.5	2.0	2.0	2592
07											
08	2105	25	4	9	11	0	1	1.5	2.0	2.0	2593
09											
10	1950	11	1	5	4	0	1	2.0	3.0	3.0	2594
11	2120	13	3	4	6	0	0	2.0	2.0	2.0	2595
12	2020	18	3	7	8	0	0	2.0	3.0	3.0	2596
13											
14											
15	1950	11	1	3	5	1	1	1.5	2.0	2.5	2597
16	2035	14	2	4	7	1	0	2.0	2.5	2.5	2598
17	2145	7	1	3	2	1	0	2.0	2.5	2.5	2599
18	2040	11	1	3	5	1	1	2.0	2.5	3.0	2600
19	2030	4	1	1	1	0	1	1.5	2.5	2.5	2601
20	1955	1	0	0	0	1	0	2.0	2.5	2.5	2602
21	2005	9	2	3	3	0	1	2.0	2.5	2.5	2603
22	2000	14	2	7	5	0	0	1.5	2.0	2.5	2604
23	2015	7	2	2	3	0	0	2.0	2.0	2.5	2605
24	2005	4	1	1	1	1	0	2.5	3.0	2.5	2606
25	2000	13	3	1	8	0	1	2.5	2.5	2.5	2607
26	2050	11	2	1	6	0	2	2.5	3.5	3.0	2608
27											
28											
29	2040	11	1	4	5	1	0	2.5	2.5	2.5	2609
30	2230	21	4	7	10	0	0	2.0	3.0	2.5	2610
31	2025	14	2	3	8	0	1	1.5	3.0	3.0	2611
Σ	—	377	56	134	167	8	12	46.0	60.0	61.5	—
NOBS	—	24	24	24	24	24	24	24	24	24	—
MNS	—	15.71	2.33	5.58	6.96	0.33	0.50	1.92	2.50	2.56	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR MARCH 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02	2210	0 ; 0	0 ; 0	2 ; 4/5	2 ; 9/15	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
03	2100	1 ; 1	1 ; 7	1 ; 5	1 ; 17	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2
04	2000	1 ; 1	1 ; 4	1 ; 2	0 ; 0	1 ; 12	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05	2120	0 ; 0	2 ; 2/3	1 ; 2	2 ; 6/9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
06	2005	0 ; 0	1 ; 3	1 ; 4	2 ; 7/17	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
07										
08	2105	1 ; 1	1 ; 2	2 ; 2/4	1 ; 12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
09										
10	1950	1 ; 1	0 ; 0	0 ; 0	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
11	2120	0 ; 0	1 ; 3	1 ; 2	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
12	2020	0 ; 0	0 ; 0	2 ; 4/6	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
13										
14										
15	1950	1 ; 1	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
16	2035	0 ; 0	1 ; 3	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
17	2145	0 ; 0	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
18	2040	0 ; 0	1 ; 2	2 ; 2/2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
19	2030	1 ; 1	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
20	1955	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
21	2005	1 ; 1	0 ; 0	1 ; 2	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
22	2000	0 ; 0	0 ; 0	1 ; 3	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23	2015	0 ; 0	0 ; 0	2 ; 2/3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
24	2005	0 ; 0	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
25	2000	1 ; 1	2 ; 2/3	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
26	2050	2 ; 1/1	1 ; 3	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
27										
28										
29	2040	0 ; 0	0 ; 0	0 ; 0	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
30	2230	0 ; 0	1 ; 2	1 ; 3	2 ; 5/7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
31	2025	1 ; 1	0 ; 0	2 ; 3/8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
TOTALS	—	11 ; 11	13 ; 39	27 ; 101	16 ; 145	1 ; 12	0 ; 0	0 ; 0	0 ; 0	8 ; 9

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
14.5	17.1	35.5	21.1	1.3	0.0	0.0	0.0	10.5	76

NOBS = 24

\bar{p}/\bar{g} mean = 1.0125

\bar{f}/\bar{g} mean = 3.8708

\bar{p}/\bar{g} mean = 1.0263

\bar{f}/\bar{g} mean = 4.1711

GROUP COMPLEXITY INDEX (GCI) = 5.1974



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR APRIL 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02	2210	1	2	12	0	2	2	8	2	1.5	2.5	2.5	2612
03	2140	1	1	11	0	1	1	4	1	1.5	2.5	2.5	2613
04	2120	0	0	0	0	0	0	0	0	2.0	3.0	2.5	2614
05													
06													
07	2110	0	0	0	0	0	0	0	0	2.0	3.0	3.0	2615
08	2005	1	1	11	0	1	1	4	1	2.0	2.5	2.5	2616
09	2035	1	1	11	1	0	10	37	10	1.5	2.0	2.5	2617
10													
11													
12													
13													
14													
15	2010	2	4	24	1	3	13	24	43	2.0	2.5	3.0	2618
16													
17	2035	1	2	12	1	1	11	16	41	1.5	2.5	2.5	2619
18	2215	1	2	12	1	1	11	16	41	2.0	3.0	3.0	2620
19													
20	2225	3	9	39	3	5	35	101	61	2.0	2.5	2.5	2621
21	2050	3	12	42	4	6	46	215	73	1.5	2.0	2.5	2622
22	2125	3	15	45	5	5	55	276	106	2.0	2.5	3.0	2623
23	2105	4	12	52	4	6	46	194	75	2.5	3.5	3.0	2624
24													
25													
26	2030	5	9	59	3	6	36	132	95	2.0	2.0	2.5	2625
27	2125	3	5	35	2	2	22	72	49	2.5	3.0	3.0	2626
28													
29	2315	2	3	23	1	2	12	45	12	2.5	3.5	3.0	2627
30	2215	2	3	23	0	3	3	12	3	2.0	2.5	2.5	2628
31													
Σ	—	33	81	411	26	44	304	1156	613	33.0	45.0	46.0	—
NOBS	—	17	17	17	17	17	17	17	17	17	17	17	—
MNS	—	1.94	4.76	24.18	1.53	2.59	17.88	68.00	36.06	1.94	2.65	2.71	—

MEAN WEIGHT = 0.4177

MEAN CONDITION = 2.4314

QUALITY COUNT = 4.82



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR

APRIL 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02	2210	3	1	0	2	0	0	1.5	2.5	2.5	2612
03	2140	1	0	0	0	0	1	1.5	2.5	2.5	2613
04	2120	0	0	0	0	0	0	2.0	3.0	2.5	2614
05											
06											
07	2110	0	0	0	0	0	0	2.0	3.0	3.0	2615
08	2005	1	0	0	0	0	1	2.0	2.5	2.5	2616
09	2035	1	0	0	0	1	0	1.5	2.0	2.5	2617
10											
11											
12											
13											
14											
15	2010	6	2	1	3	0	0	2.0	2.5	3.0	2618
16											
17	2035	3	1	1	1	0	0	1.5	2.5	2.5	2619
18	2215	3	1	1	1	0	0	2.0	3.0	3.0	2620
19											
20	2225	11	2	3	5	1	0	2.0	2.5	2.5	2621
21	2050	14	2	5	6	1	0	1.5	2.0	2.5	2622
22	2125	17	2	9	5	1	0	2.0	2.5	3.0	2623
23	2105	15	3	5	6	1	0	2.5	3.5	3.0	2624
24											
25											
26	2030	11	2	1	5	2	1	2.0	2.0	2.5	2625
27	2125	6	1	2	1	1	1	2.5	3.0	3.0	2626
28											
29	2315	4	1	0	2	1	0	2.5	3.5	3.0	2627
30	2215	4	1	0	2	0	1	2.0	2.5	2.5	2628
31											
Σ	—	100	19	28	39	9	5	33.0	45.0	46.0	—
NOBS	—	17	17	17	17	17	17	17	17	17	—
MNS	—	5.88	1.12	1.65	2.29	0.53	0.29	1.94	2.65	2.71	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR APRIL 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02	2210	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
03	2140	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
04	2120	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05										
06										
07	2110	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
08	2005	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
09	2035	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
10										
11										
12										
13										
14										
15	2010	0 ; 0	1 ; 2	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
16										
17	2035	0 ; 0	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
18	2215	0 ; 0	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
19										
20	2225	0 ; 0	0 ; 0	2 ; 3/5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
21	2050	0 ; 0	0 ; 0	1 ; 2	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
22	2125	0 ; 0	0 ; 0	1 ; 2	1 ; 12	0 ; 0	0 ; 0	0 ; 0	1 ; 1	0 ; 0
23	2105	0 ; 0	1 ; 2	1 ; 2	1 ; 7	0 ; 0	0 ; 0	0 ; 0	1 ; 1	0 ; 0
24										
25										
26	2030	1 ; 1	1 ; 2	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1	0 ; 0
27	2125	1 ; 1	0 ; 0	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1	0 ; 0
28										
29	2315	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
30	2215	1 ; 1	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
31										
TOTALS	—	5 ; 5	6 ; 12	10 ; 27	3 ; 28	0 ; 0	0 ; 0	0 ; 0	5 ; 5	4 ; 4
REGIONAL PERCENTAGES										
A	B	C	D	E	F	G	H	J	Σg	
15.2	18.2	30.3	9.1	0.0	0.0	0.0	15.1	12.1	33	
		NOBS = 17	\bar{p}/\bar{g} mean = 0.6844			\bar{f}/\bar{g} mean = 2.1644				
			\bar{p}/\bar{g} mean = 0.7879			\bar{f}/\bar{g} mean = 2.4545				
GROUP COMPLEXITY INDEX (GCI) = 3.2424										



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

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SUNSPOT RESULTS FOR MAY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02													
03	2315	2	5	25	0	5	5	20	5	1.5	2.5	2.5	2629
04	2105	2	5	25	1	4	14	36	13	1.5	2.0	2.5	2630
05													
06	2035	1	7	17	0	7	7	28	3	2.0	2.0	2.5	2631
07													
08	2045	2	7	27	1	5	15	52	10	1.5	2.0	2.5	2632
09													
10	2035	2	4	24	0	4	4	16	4	2.0	2.5	2.5	2633
11	2235	3	6	36	1	4	14	36	41	2.5	2.5	2.5	2634
12													
13	2050	3	10	40	4	3	43	166	66	2.0	2.0	2.5	2635
14	2220	4	16	56	4	9	49	186	58	1.5	2.0	2.0	2636
15	2055	3	16	46	4	9	49	224	68	2.0	2.0	2.5	2637
16	2220	3	16	46	3	9	39	226	60	2.5	2.5	2.5	2638
17	2110	5	17	67	3	12	42	206	63	2.0	2.5	2.5	2639
18	2120	3	16	46	3	10	40	224	59	2.0	2.5	3.0	2640
19													
20	2200	2	17	37	4	8	48	216	55	1.0	2.0	2.5	2641
21													
22													
23													
24	2210	0	0	0	0	0	0	0	0	2.0	2.5	2.5	2642
25													
26	2100	0	0	0	0	0	0	0	0	2.0	2.5	3.0	2643
27	2100	0	0	0	0	0	0	0	0	2.5	3.0	3.0	2644
28	2220	0	0	0	0	0	0	0	0	2.0	2.5	3.0	2645
29	2130	0	0	0	0	0	0	0	0	2.0	2.5	3.0	2646
30	2140	0	0	0	0	0	0	0	0	2.5	2.5	2.5	2647
31	2105	1	1	11	0	1	1	4	1	2.5	2.5	2.5	2648
Σ	—	36	143	503	28	90	370	1640	506	39.5	47.0	52.0	—
NOBS	—	20	20	20	20	20	20	20	20	20	20	20	—
MNS	—	1.80	7.15	25.15	1.40	4.50	18.50	82.00	25.30	1.98	2.35	2.60	—

MEAN WEIGHT = 0.4388

MEAN CONDITION = 2.3083

QUALITY COUNT = 4.35



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR MAY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02											
03	2315	7	2	0	5	0	0	1.5	2.5	2.5	2629
04	2105	6	1	1	3	0	1	1.5	2.0	2.5	2630
05											
06	2035	8	1	0	7	0	0	2.0	2.0	2.5	2631
07											
08	2045	8	1	2	4	0	1	1.5	2.0	2.5	2632
09											
10	2035	5	1	0	3	0	1	2.0	2.5	2.5	2633
11	2235	8	2	2	3	0	1	2.5	2.5	2.5	2634
12											
13	2050	12	2	7	2	0	1	2.0	2.0	2.5	2635
14	2220	19	3	7	8	0	1	1.5	2.0	2.0	2636
15	2055	18	2	7	8	0	1	2.0	2.0	2.5	2637
16	2220	19	3	7	9	0	0	2.5	2.5	2.5	2638
17	2110	21	4	5	11	0	1	2.0	2.5	2.5	2639
18	2120	18	2	6	9	0	1	2.0	2.5	3.0	2640
19											
20	2200	19	2	9	8	0	0	1.0	2.0	2.5	2641
21											
22											
23											
24	2210	0	0	0	0	0	0	2.0	2.5	2.5	2642
25											
26	2100	0	0	0	0	0	0	2.0	2.5	3.0	2643
27	2100	0	0	0	0	0	0	2.5	3.0	3.0	2644
28	2220	0	0	0	0	0	0	2.0	2.5	3.0	2645
29	2130	0	0	0	0	0	0	2.0	2.5	3.0	2646
30	2140	0	0	0	0	0	0	2.5	2.5	2.5	2647
31	2105	1	0	0	0	0	1	2.5	2.5	2.5	2648
Σ	—	169	26	53	80	0	10	39.5	47.0	52.0	—
NOBS	—	20	20	20	20	20	20	20	20	20	—
MNS	—	8.45	1.30	2.65	4.00	0.00	0.50	1.98	2.35	2.60	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR MAY 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02										
03	2315	0 ; 0	2 ; 2/3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
04	2105	1 ; 1	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05										
06	2035	0 ; 0	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
07										
08	2045	1 ; 1	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
09										
10	2035	1 ; 1	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
11	2235	1 ; 1	1 ; 2	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
12										
13	2050	1 ; 1	0 ; 0	0 ; 0	2 ; 4/5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
14	2220	1 ; 1	1 ; 2	1 ; 6	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
15	2055	1 ; 1	0 ; 0	1 ; 5	1 ; 10	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
16	2220	0 ; 0	1 ; 3	1 ; 2	1 ; 11	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
17	2110	1 ; 1	2 ; 2/2	1 ; 3	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
18	2120	1 ; 1	0 ; 0	1 ; 5	1 ; 10	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
19										
20	2200	0 ; 0	0 ; 0	1 ; 9	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21										
22										
23										
24	2210	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
25										
26	2100	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
27	2100	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
28	2220	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29	2130	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
30	2140	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
31	2105	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
TOTALS	—	10 ; 10	9 ; 26	9 ; 43	8 ; 64	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
27.8	25.0	25.0	22.2	0.0	0.0	0.0	0.0	0.0	36

NOBS = 20

\bar{p}/\bar{g} mean = 0.6857

\bar{f}/\bar{g} mean = 3.9810

\bar{p}/\bar{g} mean = 0.7778

\bar{f}/\bar{g} mean = 3.9722

GROUP COMPLEXITY INDEX (GCI) = 4.7500



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR JUNE 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2135	0	0	0	0	0	0	0	0	2.0	2.0	2.0	2649
02	2100	0	0	0	0	0	0	0	0	1.0	2.5	2.5	2650
03	2145	0	0	0	0	0	0	0	0	3.0	3.5	3.0	2651
04	2150	0	0	0	0	0	0	0	0	2.5	2.5	2.5	2652
05	2120	0	0	0	0	0	0	0	0	3.0	3.0	3.0	2653
06	2105	2	5	25	1	3	13	36	10	2.5	2.5	3.0	2654
07													
08													
09													
10	2050	5	21	71	5	12	62	312	82	1.5	2.5	2.5	2655
11													
12													
13	2100	4	15	55	6	7	67	269	65	1.5	2.5	2.5	2656
14													
15	2215	4	21	61	6	13	73	307	65	2.0	3.0	3.0	2657
16													
17													
18	2135	2	4	24	0	4	4	16	4	2.0	2.5	3.0	2658
19													
20													
21	2255	1	5	15	0	5	5	20	3	1.5	2.0	2.5	2659
22	2205	1	6	16	1	5	15	48	9	1.0	2.0	2.5	2660
23													
24													
25	2210	0	0	0	0	0	0	0	0	2.0	2.5	3.0	2661
26	2140	1	1	11	0	1	1	4	1	2.5	3.0	2.5	2662
27													
28	2215	1	6	16	1	4	14	48	9	1.5	2.5	3.0	2663
29	2210	2	13	33	2	7	27	100	10	1.5	1.5	2.5	2664
30	2215	1	16	26	2	10	30	128	9	2.0	2.0	2.5	2665
31													
Σ	—	24	113	353	24	71	311	1288	267	33.0	42.0	45.5	—
NOBS	—	17	17	17	17	17	17	17	17	17	17	17	—
MNS	—	1.41	6.65	20.76	1.41	4.18	18.29	75.76	15.71	1.94	2.47	2.68	—

MEAN WEIGHT = 0.4340

MEAN CONDITION = 2.3627

QUALITY COUNT = 3.71



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR JUNE 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2135	0	0	0	0	0	0	2.0	2.0	2.0	2649
02	2100	0	0	0	0	0	0	1.0	2.5	2.5	2650
03	2145	0	0	0	0	0	0	3.0	3.5	3.0	2651
04	2150	0	0	0	0	0	0	2.5	2.5	2.5	2652
05	2120	0	0	0	0	0	0	3.0	3.0	3.0	2653
06	2105	6	1	2	2	0	1	2.5	2.5	3.0	2654
07											
08											
09											
10	2050	26	5	6	12	0	0	1.5	2.5	2.5	2655
11											
12											
13	2100	18	3	7	7	1	0	1.5	2.5	2.5	2656
14											
15	2215	24	3	7	13	1	0	2.0	3.0	3.0	2657
16											
17											
18	2135	5	1	0	3	0	1	2.0	2.5	3.0	2658
19											
20											
21	2255	6	1	0	5	0	0	1.5	2.0	2.5	2659
22	2205	7	1	1	5	0	0	1.0	2.0	2.5	2660
23											
24											
25	2210	0	0	0	0	0	0	2.0	2.5	3.0	2661
26	2140	1	0	0	0	0	1	2.5	3.0	2.5	2662
27											
28	2215	7	1	2	4	0	0	1.5	2.5	3.0	2663
29	2210	14	1	6	6	0	1	1.5	1.5	2.5	2664
30	2215	17	1	6	10	0	0	2.0	2.0	2.5	2665
31											
Σ	—	131	18	40	67	2	4	33.0	42.0	45.5	—
NOBS	—	17	17	17	17	17	17	17	17	17	—
MNS	—	7.71	1.06	2.35	3.94	0.12	0.24	1.94	2.47	2.68	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR JUNE 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01	2135	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
02	2100	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
03	2145	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
04	2150	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05	2120	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
06	2105	1 ; 1	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
07										
08										
09										
10	2050	0 ; 0	1 ; 2	2 ; 3/6	1 ; 8	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
11										
12										
13	2100	0 ; 0	0 ; 0	1 ; 2	2 ; 5/7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
14										
15	2215	0 ; 0	0 ; 0	2 ; 4/5	1 ; 11	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
16										
17										
18	2135	1 ; 1	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
19										
20										
21	2255	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
22	2205	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23										
24										
25	2210	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
26	2140	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
27										
28	2215	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29	2210	1 ; 1	0 ; 0	1 ; 12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
30	2215	0 ; 0	0 ; 0	1 ; 16	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
31										
TOTALS	—	4 ; 4	3 ; 10	10 ; 64	4 ; 31	0 ; 0	0 ; 0	0 ; 0	1 ; 2	2 ; 2

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
16.7	12.5	41.7	16.7	0.0	0.0	0.0	4.2	8.3	24

NOBS = 17

\bar{p}/\bar{g} mean = 0.8636

\bar{f}/\bar{g} mean = 5.2909

\bar{p}/\bar{g} mean = 1.0000

\bar{f}/\bar{g} mean = 4.7083

GROUP COMPLEXITY INDEX (GCI) = 5.7083



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR JULY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2140	1	23	33	3	13	43	414	31	1.5	2.0	2.0	2666
02													
03	2255	3	17	47	3	10	40	304	64	2.0	2.5	2.5	2667
04													
05	2150	2	9	29	3	4	34	72	21	2.0	3.0	3.0	2668
06													
07													
08	2215	4	25	65	5	16	66	366	54	2.0	3.0	3.0	2669
09	2140	3	30	60	5	23	73	350	52	1.5	2.0	2.0	2670
10	2220	5	30	80	6	19	79	358	64	2.0	2.0	2.5	2671
11													
12	2150	6	18	78	6	11	71	211	70	2.5	2.5	2.5	2672
13	2115	5	10	60	2	8	28	106	27	2.0	3.0	3.0	2673
14													
15													
16													
17	2200	4	9	49	1	8	18	48	47	1.5	2.5	2.0	2674
18	2215	2	5	25	1	4	14	36	43	1.0	2.5	2.5	2675
19	2120	3	6	36	1	5	15	36	45	2.0	3.0	3.0	2676
20	2250	3	8	38	1	7	17	52	45	1.5	2.5	2.5	2677
21	2055	2	5	25	1	4	14	36	43	2.0	2.5	2.5	2678
22													
23													
24													
25													
26	2030	1	1	11	1	0	10	44	40	2.0	2.5	2.5	2679
27													
28	2050	1	1	11	0	1	1	4	1	2.0	2.5	2.5	2680
29	2045	1	1	11	0	1	1	4	1	1.5	2.0	2.5	2681
30	2100	0	0	0	0	0	0	0	0	1.0	2.0	2.5	2682
31													
Σ	—	46	198	658	39	134	524	2441	648	30.0	42.0	43.0	—
NOBS	—	17	17	17	17	17	17	17	17	17	17	17	—
MNS	—	2.71	11.65	38.71	2.29	7.88	30.82	143.59	38.12	1.76	2.47	2.53	—

MEAN WEIGHT = 0.4514

MEAN CONDITION = 2.2549

QUALITY COUNT = 6.71



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR JULY 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2140	24	1	10	13	0	0	1.5	2.0	2.0	2666
02											
03	2255	19	2	6	10	1	0	2.0	2.5	2.5	2667
04											
05	2150	11	2	5	4	0	0	2.0	3.0	3.0	2668
06											
07											
08	2215	28	3	9	15	0	1	2.0	3.0	3.0	2669
09	2140	33	3	7	23	0	0	1.5	2.0	2.0	2670
10	2220	35	5	11	19	0	0	2.0	2.0	2.5	2671
11											
12	2150	23	5	6	11	1	0	2.5	2.5	2.5	2672
13	2115	12	2	0	7	2	1	2.0	3.0	3.0	2673
14											
15											
16											
17	2200	11	2	1	6	0	2	1.5	2.5	2.0	2674
18	2215	6	1	1	3	0	1	1.0	2.5	2.5	2675
19	2120	8	2	1	4	0	1	2.0	3.0	3.0	2676
20	2250	10	2	1	6	0	1	1.5	2.5	2.5	2677
21	2055	6	1	1	3	0	1	2.0	2.5	2.5	2678
22											
23											
24											
25											
26	2030	1	0	0	0	1	0	2.0	2.5	2.5	2679
27											
28	2050	1	0	0	0	0	1	2.0	2.5	2.5	2680
29	2045	1	0	0	0	0	1	1.5	2.0	2.5	2681
30	2100	0	0	0	0	0	0	1.0	2.0	2.5	2682
31											
Σ	—	229	31	59	124	5	10	30.0	42.0	43.0	—
NOBS	—	17	17	17	17	17	17	17	17	17	—
MNS	—	13.47	1.82	3.47	7.29	0.29	0.59	1.76	2.47	2.53	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR JULY 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g;f	B g;f	C g;f	D g;f	E g;f	F g;f	G g;f	H g;f	J g;f
01	2140	0;0	0;0	0;0	1;23	0;0	0;0	0;0	0;0	0;0
02										
03	2255	0;0	1;2	0;0	1;14	0;0	0;0	0;0	1;1	0;0
04										
05	2150	0;0	0;0	2;4/5	0;0	0;0	0;0	0;0	0;0	0;0
06										
07										
08	2215	1;1	0;0	1;7	2;8/9	0;0	0;0	0;0	0;0	0;0
09	2140	0;0	0;0	2;8/11	1;11	0;0	0;0	0;0	0;0	0;0
10	2220	0;0	1;3	3;3/5/6	1;13	0;0	0;0	0;0	0;0	0;0
11										
12	2150	0;0	1;3	3;2/3/4	1;5	0;0	0;0	0;0	0;0	1;1
13	2115	1;1	2;3/4	0;0	0;0	0;0	0;0	0;0	0;0	2;1/1
14										
15										
16										
17	2200	2;1/1	1;4	1;3	0;0	0;0	0;0	0;0	0;0	0;0
18	2215	1;1	0;0	1;4	0;0	0;0	0;0	0;0	0;0	0;0
19	2120	1;1	1;2	1;3	0;0	0;0	0;0	0;0	0;0	0;0
20	2250	1;1	1;2	1;5	0;0	0;0	0;0	0;0	0;0	0;0
21	2055	1;1	0;0	1;4	0;0	0;0	0;0	0;0	0;0	0;0
22										
23										
24										
25										
26	2030	0;0	0;0	0;0	0;0	0;0	0;0	0;0	1;1	0;0
27										
28	2050	1;1	0;0	0;0	0;0	0;0	0;0	0;0	0;0	0;0
29	2045	1;1	0;0	0;0	0;0	0;0	0;0	0;0	0;0	0;0
30	2100	0;0	0;0	0;0	0;0	0;0	0;0	0;0	0;0	0;0
31										
TOTALS	—	10;10	8;23	16;77	7;83	0;0	0;0	0;0	2;2	3;3

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
21.7	17.4	34.8	15.2	0.0	0.0	0.0	4.3	6.5	46

NOBS = 17

\bar{p}/\bar{g} mean = 0.8708

\bar{f}/\bar{g} mean = 4.7083

\bar{p}/\bar{g} mean = 0.8478

\bar{f}/\bar{g} mean = 4.3043

GROUP COMPLEXITY INDEX (GCI) = 5.1522



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

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SUNSPOT RESULTS FOR AUGUST 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02	2150	2	5	25	1	3	13	36	10	2.0	2.5	2.5	2683
03													
04	2055	2	8	28	1	5	15	60	10	1.5	2.0	2.5	2684
05	2050	1	8	18	1	5	15	64	9	2.0	3.0	3.0	2685
06	2115	1	6	16	1	4	14	48	9	2.0	2.0	2.5	2686
07	2220	1	6	16	1	4	14	48	9	2.5	2.5	2.5	2687
08	2150	1	7	17	1	5	15	56	9	2.5	2.5	2.5	2688
09	2120	1	9	19	1	7	17	72	9	2.0	2.0	2.5	2689
10	2025	1	5	15	1	3	13	40	9	2.0	2.0	2.5	2690
11	2105	3	3	33	2	1	21	85	51	2.0	2.0	2.0	2691
12	2045	3	19	49	4	12	52	341	43	1.5	2.0	2.0	2692
13													
14													
15	2110	3	19	49	4	8	48	424	45	1.0	2.0	2.5	2693
16													
17	2205	4	15	55	4	6	46	324	45	2.0	2.0	2.5	2694
18	2140	4	18	58	6	9	69	357	67	2.0	2.5	2.5	2695
19	2020	3	11	41	4	4	44	197	43	2.0	3.0	2.5	2696
20	2315	2	5	25	1	4	14	36	13	2.0	3.0	3.0	2697
21	2030	1	3	13	1	1	11	24	8	2.0	2.5	2.5	2698
22	2055	1	2	12	1	1	11	16	11	1.5	2.0	2.0	2699
23													
24	2250	1	4	14	2	0	20	72	19	2.0	2.5	3.0	2700
25	2155	1	6	16	2	2	22	108	22	2.5	2.5	2.5	2701
26													
27	2115	2	3	23	0	3	3	12	3	1.5	2.5	2.5	2702
28													
29													
30	2100	4	9	49	3	5	35	132	96	1.5	2.0	2.5	2703
31	2045	3	16	46	5	7	57	368	111	1.5	2.0	2.5	2704
Σ	—	45	187	637	47	99	569	2920	651	41.5	51.0	55.0	—
NOBS	—	22	22	22	22	22	22	22	22	22	22	22	—
MNS	—	2.05	8.50	28.95	2.14	4.50	25.86	132.73	29.59	1.89	2.32	2.50	—

MEAN WEIGHT = 04536

MEAN CONDITION = 2.2348

QUALITY COUNT = 5.64



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR AUGUST 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbra spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02	2150	6	1	2	2	0	1	2.0	2.5	2.5	2683
03											
04	2055	9	1	3	4	0	1	1.5	2.0	2.5	2684
05	2050	9	1	3	5	0	0	2.0	3.0	3.0	2685
06	2115	7	1	2	4	0	0	2.0	2.0	2.5	2686
07	2220	7	1	2	4	0	0	2.5	2.5	2.5	2687
08	2150	8	1	2	5	0	0	2.5	2.5	2.5	2688
09	2120	10	1	2	7	0	0	2.0	2.0	2.5	2689
10	2025	6	1	2	3	0	0	2.0	2.0	2.5	2690
11	2105	3	0	0	0	2	1	2.0	2.0	2.0	2691
12	2045	21	2	6	12	1	0	1.5	2.0	2.0	2692
13											
14											
15	2110	21	2	10	8	1	0	1.0	2.0	2.5	2693
16											
17	2205	17	2	8	5	1	1	2.0	2.0	2.5	2694
18	2140	21	3	8	9	1	0	2.0	2.5	2.5	2695
19	2020	13	2	6	4	1	0	2.0	3.0	2.5	2696
20	2315	6	1	1	3	0	1	2.0	3.0	3.0	2697
21	2030	4	1	2	1	0	0	2.0	2.5	2.5	2698
22	2055	3	1	1	1	0	0	1.5	2.0	2.0	2699
23											
24	2250	5	1	4	0	0	0	2.0	2.5	3.0	2700
25	2155	7	1	4	2	0	0	2.5	2.5	2.5	2701
26											
27	2115	4	1	0	2	0	1	1.5	2.5	2.5	2702
28											
29											
30	2100	11	2	3	4	1	1	1.5	2.0	2.5	2703
31	2045	18	2	8	7	1	0	1.5	2.0	2.5	2704
Σ	—	216	29	79	92	9	7	41.5	51.0	55.0	—
NOBS	—	22	22	22	22	22	22	22	22	22	—
MNS	—	9.82	1.32	3.59	4.18	0.41	0.32	1.89	2.32	2.50	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR AUGUST 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02	2150	1 ; 1	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
03										
04	2055	1 ; 1	0 ; 0	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05	2050	0 ; 0	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
06	2115	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
07	2220	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
08	2150	0 ; 0	0 ; 0	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
09	2120	0 ; 0	0 ; 0	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
10	2025	0 ; 0	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
11	2105	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1	1 ; 1
12	2045	0 ; 0	0 ; 0	1 ; 2	1 ; 16	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
13										
14										
15	2110	0 ; 0	1 ; 3	0 ; 0	0 ; 0	1 ; 15	0 ; 0	0 ; 0	0 ; 0	1 ; 1
16										
17	2205	1 ; 1	1 ; 2	0 ; 0	0 ; 0	1 ; 11	0 ; 0	0 ; 0	0 ; 0	1 ; 1
18	2140	0 ; 0	1 ; 3	0 ; 0	1 ; 6	1 ; 8	0 ; 0	0 ; 0	0 ; 0	1 ; 1
19	2020	0 ; 0	0 ; 0	1 ; 2	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
20	2315	1 ; 1	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21	2030	0 ; 0	0 ; 0	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
22	2055	0 ; 0	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23										
24	2250	0 ; 0	0 ; 0	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
25	2155	0 ; 0	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
26										
27	2115	1 ; 1	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
28										
29										
30	2100	1 ; 1	1 ; 3	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	1 ; 1	0 ; 0
31	2045	0 ; 0	0 ; 0	1 ; 3	0 ; 0	1 ; 12	0 ; 0	0 ; 0	1 ; 1	0 ; 0
TOTALS	—	7 ; 7	5 ; 13	14 ; 68	6 ; 44	4 ; 46	0 ; 0	0 ; 0	3 ; 3	6 ; 6

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
15.6	11.1	31.1	13.3	8.9	0.0	0.0	6.7	13.3	45

NOBS = 22

\bar{p}/\bar{g} mean = 1.0492

\bar{f}/\bar{g} mean = 4.5303

\bar{p}/\bar{g} mean = 1.0444

\bar{f}/\bar{g} mean = 4.1556

GROUP COMPLEXITY INDEX (GCI) = 5.2000



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR SEPTEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2120	4	17	57	7	6	76	435	110	2.0	2.5	2.5	2705
02													
03													
04													
05	2135	4	27	67	5	16	66	524	144	2.0	2.5	2.5	2706
06													
07	2200	4	24	64	6	15	75	333	116	2.5	2.5	2.5	2707
08													
09	2110	4	9	49	4	5	45	130	104	2.0	2.5	3.0	2708
10	2130	3	6	36	2	3	23	44	53	2.0	2.5	3.0	2709
11	2315	1	2	12	1	0	10	88	37	2.5	3.0	3.0	2710
12	2055	1	2	12	1	0	10	88	37	1.5	2.0	2.5	2711
13	2015	1	2	12	1	0	10	88	37	1.5	2.0	2.0	2712
14													
15	2205	0	0	0	0	0	0	0	0	2.0	2.5	2.5	2713
16													
17													
18	2210	2	3	23	1	2	12	20	12	2.0	2.5	2.5	2714
19	2000	0	0	0	0	0	0	0	0	2.0	2.5	3.0	2715
20	2035	0	0	0	0	0	0	0	0	1.5	2.0	2.5	2716
21													
22	2000	1	5	15	1	4	14	40	9	2.5	2.5	3.0	2717
23	2035	1	6	16	2	2	22	108	22	2.0	2.5	2.5	2718
24													
25	2145	3	10	40	3	5	35	185	33	2.0	2.5	2.5	2719
26	2045	4	10	50	3	5	35	157	35	1.5	2.0	2.0	2720
27													
28	2125	2	3	23	1	2	12	45	12	1.5	2.0	2.0	2721
29	2145	1	1	11	1	0	10	37	10	1.5	2.0	2.0	2722
30	2020	2	2	22	2	0	20	74	20	1.0	2.0	2.0	2723
31													
Σ	—	38	129	509	41	65	475	2396	791	35.5	44.5	47.5	—
NOBS	—	19	19	19	19	19	19	19	19	19	19	19	—
MNS	—	2.00	6.79	26.79	2.16	3.42	25.00	126.11	41.63	1.87	2.34	2.50	—

MEAN WEIGHT = 0.4569

MEAN CONDITION = 2.2368

QUALITY COUNT = 5.26



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR SEPTEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2120	18	1	9	5	2	1	2.0	2.5	2.5	2705
02											
03											
04											
05	2135	30	3	10	16	1	0	2.0	2.5	2.5	2706
06											
07	2200	27	3	8	15	1	0	2.5	2.5	2.5	2707
08											
09	2110	11	2	2	5	2	0	2.0	2.5	3.0	2708
10	2130	8	2	3	2	0	1	2.0	2.5	3.0	2709
11	2315	3	1	2	0	0	0	2.5	3.0	3.0	2710
12	2055	3	1	2	0	0	0	1.5	2.0	2.5	2711
13	2015	3	1	2	0	0	0	1.5	2.0	2.0	2712
14											
15	2205	0	0	0	0	0	0	2.0	2.5	2.5	2713
16											
17											
18	2210	4	1	1	1	0	1	2.0	2.5	2.5	2714
19	2000	0	0	0	0	0	0	2.0	2.5	3.0	2715
20	2035	0	0	0	0	0	0	1.5	2.0	2.5	2716
21											
22	2000	6	1	1	4	0	0	2.5	2.5	3.0	2717
23	2035	7	1	4	2	0	0	2.0	2.5	2.5	2718
24											
25	2145	11	1	4	4	1	1	2.0	2.5	2.5	2719
26	2045	12	2	4	4	1	1	1.5	2.0	2.0	2720
27											
28	2125	4	1	0	2	1	0	1.5	2.0	2.0	2721
29	2145	1	0	0	0	1	0	1.5	2.0	2.0	2722
30	2020	2	0	0	0	2	0	1.0	2.0	2.0	2723
31											
Σ	—	150	21	52	60	12	5	35.5	44.5	47.5	—
NOBS	—	19	19	19	19	19	19	19	19	19	—
MNS	—	7.89	1.11	2.74	3.16	0.63	0.26	1.87	2.34	2.50	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR SEPTEMBER 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01	2120	1 ; 1	0 ; 0	0 ; 0	0 ; 0	1 ; 14	0 ; 0	0 ; 0	1 ; 1	1 ; 1
02										
03										
04										
05	2135	0 ; 0	0 ; 0	2 ; 3/7	0 ; 0	1 ; 16	0 ; 0	0 ; 0	1 ; 1	0 ; 0
06										
07	2200	0 ; 0	0 ; 0	2 ; 4/7	1 ; 12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
08										
09	2110	0 ; 0	0 ; 0	2 ; 3/4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1
10	2130	1 ; 1	0 ; 0	2 ; 2/3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
11	2315	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
12	2055	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
13	2015	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
14										
15	2205	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
16										
17										
18	2210	1 ; 1	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
19	2000	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
20	2035	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21										
22	2000	0 ; 0	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23	2035	0 ; 0	0 ; 0	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
24										
25	2145	1 ; 1	0 ; 0	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
26	2045	1 ; 1	1 ; 2	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
27										
28	2125	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
29	2145	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
30	2020	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1
31										
TOTALS	—	5 ; 5	2 ; 4	10 ; 40	4 ; 32	2 ; 30	0 ; 0	0 ; 0	5 ; 8	10 ; 10

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
13.2	5.3	26.3	10.5	0.0	0.0	0.0	13.2	26.3	38

NOBS = 19

\bar{p} / \bar{g} mean = 1.0573

\bar{f} / \bar{g} mean = 3.0677

\bar{p} / \bar{g} mean = 1.0789

\bar{f} / \bar{g} mean = 3.3947

GROUP COMPLEXITY INDEX (GCI) = 4.4737



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR OCTOBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02	2005	2	4	24	2	2	22	61	22	2.0	2.5	3.0	2724
03													
04	2015	3	6	36	3	3	33	113	59	2.0	3.0	3.0	2725
05													
06													
07	2020	4	24	64	5	16	66	331	53	2.5	2.5	2.5	2726
08													
09	2240	4	14	54	5	5	55	201	52	2.0	4.0	4.0	2727
10	2005	4	19	59	5	10	60	221	53	2.5	2.5	2.5	2728
11													
12	1940	3	21	51	5	8	58	416	81	1.5	2.0	2.5	2729
13													
14	1910	5	34	84	7	22	92	683	85	2.0	2.0	2.5	2730
15	1910	4	30	70	5	20	70	727	74	1.5	2.0	2.5	2731
16	2015	3	33	63	5	21	71	816	43	1.5	2.0	2.5	2732
17													
18													
19	1910	4	29	69	4	17	57	261	102	2.5	3.5	3.5	2733
20													
21	2005	4	17	57	3	12	42	120	55	2.5	2.5	2.5	2734
22	2015	3	15	45	3	9	39	120	30	2.0	2.0	2.5	2735
23													
24													
25	1855	2	11	31	4	5	45	173	44	1.5	2.0	2.0	2736
26	2040	5	22	72	6	13	73	418	68	2.0	2.0	2.5	2737
27													
28													
29													
30													
31	1955	4	29	69	6	16	76	636	113	2.0	2.5	2.5	2738
Σ	—	54	308	848	68	179	859	5297	934	30.0	37.0	40.5	—
NOBS	—	15	15	15	15	15	15	15	15	15	15	15	—
MNS	—	3.60	20.53	56.53	4.53	11.93	57.27	353.13	62.27	2.00	2.47	2.70	—

MEAN WEIGHT = 0.4300

MEAN CONDITION = 2.3889

QUALITY COUNT = 10.40



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR OCTOBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbra spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02	2005	5	1	1	2	1	0	2.0	2.5	3.0	2724
03											
04	2015	7	1	1	3	2	0	2.0	3.0	3.0	2725
05											
06											
07	2020	27	3	7	16	1	0	2.5	2.5	2.5	2726
08											
09	2240	17	3	8	5	1	0	2.0	4.0	4.0	2727
10	2005	22	3	8	10	1	0	2.5	2.5	2.5	2728
11											
12	1940	24	3	13	8	0	0	1.5	2.0	2.5	2729
13											
14	1910	37	3	11	21	1	1	2.0	2.0	2.5	2730
15	1910	31	1	9	18	1	2	1.5	2.0	2.5	2731
16	2015	34	1	11	20	1	1	1.5	2.0	2.5	2732
17											
18											
19	1910	32	3	11	17	1	0	2.5	3.5	3.5	2733
20											
21	2005	20	3	5	11	0	1	2.5	2.5	2.5	2734
22	2015	18	3	6	9	0	0	2.0	2.0	2.5	2735
23											
24											
25	1855	13	2	6	5	0	0	1.5	2.0	2.0	2736
26	2040	26	4	8	13	1	0	2.0	2.0	2.5	2737
27											
28											
29											
30											
31	1955	33	4	13	16	0	0	2.0	2.5	2.5	2738
Σ	—	225	38	118	174	11	5	30.0	37.0	40.5	—
NOBS	—	15	15	15	15	15	15	15	15	15	—
MNS	—	23.07	2.53	7.87	11.60	0.73	0.33	2.00	2.47	2.70	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR OCTOBER 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02	2005	0 ; 0	0 ; 0	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
03										
04	2015	0 ; 0	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1	1 ; 1
05										
06										
07	2020	0 ; 0	0 ; 0	2 ; 5/7	1 ; 11	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
08										
09	2240	0 ; 0	0 ; 0	2 ; 2/5	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
10	2005	0 ; 0	0 ; 0	2 ; 7/7	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
11										
12	1940	0 ; 0	0 ; 0	0 ; 0	2 ; 7/12	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2
13										
14	1910	1 ; 1	1 ; 3	1 ; 6	0 ; 0	1 ; 23	0 ; 0	0 ; 0	1 ; 1	0 ; 0
15	1910	2 ; 1/1	0 ; 0	0 ; 0	0 ; 0	1 ; 27	0 ; 0	0 ; 0	1 ; 1	0 ; 0
16	2015	1 ; 1	0 ; 0	0 ; 0	0 ; 0	1 ; 31	0 ; 0	0 ; 0	0 ; 0	1 ; 1
17										
18										
19	1910	0 ; 0	0 ; 0	3 ; 4/8/16	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
20										
21	2005	1 ; 1	1 ; 3	2 ; 6/7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
22	2015	0 ; 0	0 ; 0	3 ; 3/4/8	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23										
24										
25	1855	0 ; 0	0 ; 0	1 ; 6	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0
26	2040	0 ; 0	1 ; 2	2 ; 3/3	0 ; 0	1 ; 13	0 ; 0	0 ; 0	0 ; 0	1 ; 1
27										
28										
29										
30										
31	1955	0 ; 0	1 ; 2	1 ; 5	0 ; 0	1 ; 20	0 ; 0	0 ; 0	1 ; 2	0 ; 0
TOTALS	—	5 ; 5	4 ; 10	21 ; 119	5 ; 40	6 ; 119	0 ; 0	0 ; 0	4 ; 5	9 ; 10

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
9.3	7.4	38.9	9.3	11.1	0.0	0.0	7.4	16.7	54

NOBS = 15

\bar{p} / \bar{g} mean = 1.2789

\bar{f} / \bar{g} mean = 5.6133

\bar{p} / \bar{g} mean = 1.2593

\bar{f} / \bar{g} mean = 5.7037

GROUP COMPLEXITY INDEX (GCI) = 6.9630



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR NOVEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01	2050	3	15	45	5	8	58	362	87	2.5	3.5	3.0	2739
02	1915	3	11	41	4	5	45	230	73	1.5	2.5	2.5	2740
03	1925	3	7	37	2	5	25	48	22	2.0	2.5	2.5	2741
04	2010	3	4	34	2	2	22	57	52	2.0	2.0	2.5	2742
05	1940	4	4	44	2	2	22	89	52	2.0	2.0	2.5	2743
06													
07													
08	1920	2	3	23	2	1	21	53	21	2.0	2.5	2.5	2744
09	1910	3	3	33	2	1	21	78	21	2.5	3.0	2.5	2745
10	2000	4	5	45	1	4	14	28	11	2.0	2.5	3.0	2746
11	2035	2	3	23	1	2	12	20	6	2.5	2.5	2.5	2747
12	1915	0	0	0	0	0	0	0	0	2.0	2.0	2.5	2748
13	1925	0	0	0	0	0	0	0	0	1.5	2.0	2.0	2749
14													
15													
16	1935	0	0	0	0	0	0	0	0	2.0	2.5	2.5	2750
17													
18	2005	2	2	22	1	1	11	41	11	2.0	2.5	2.5	2751
19	1950	0	0	0	0	0	0	0	0	2.5	2.5	2.5	2752
20	2025	1	1	11	0	1	1	4	1	2.5	3.5	3.5	2753
21													
22	1955	1	1	11	1	0	10	37	10	2.0	2.5	2.5	2754
23	1940	1	1	11	0	1	1	4	1	2.0	2.0	2.5	2755
24													
25	2050	1	7	17	2	3	23	126	22	2.0	2.5	2.5	2756
26	1945	1	18	28	2	13	33	324	22	2.0	2.0	2.5	2757
27	1940	1	16	26	2	9	29	400	23	2.5	3.0	2.5	2758
28	1920	1	7	17	1	5	15	56	9	2.0	2.5	2.5	2759
29	2130	1	3	13	1	2	12	24	12	2.0	2.5	2.0	2760
30													
31													
Σ	—	37	111	481	31	65	375	1981	456	46.0	55.0	56.0	—
NOBS	—	22	22	22	22	22	22	22	22	22	22	22	—
MNS	—	1.68	5.05	21.86	1.41	2.95	17.05	90.05	20.73	2.09	2.50	2.55	—

MEAN WEIGHT = 0.4262

MEAN CONDITION = 2.3788

QUALITY COUNT = 4.00



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR NOVEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbral spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbral spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01	2050	18	3	7	8	0	0	2.5	3.5	3.0	2739
02	1915	14	3	6	5	0	0	1.5	2.5	2.5	2740
03	1925	10	3	2	5	0	0	2.0	2.5	2.5	2741
04	2010	5	1	1	1	1	1	2.0	2.0	2.5	2742
05	1940	4	0	0	0	2	2	2.0	2.0	2.5	2743
06											
07											
08	1920	4	1	1	1	1	0	2.0	2.5	2.5	2744
09	1910	3	0	0	0	2	1	2.5	3.0	2.5	2745
10	2000	6	1	1	1	0	3	2.0	2.5	3.0	2746
11	2035	4	1	1	1	0	1	2.5	2.5	2.5	2747
12	1915	0	0	0	0	0	0	2.0	2.0	2.5	2748
13	1925	0	0	0	0	0	0	1.5	2.0	2.0	2749
14											
15											
16	1935	0	0	0	0	0	0	2.0	2.5	2.5	2750
17											
18	2005	2	0	0	0	1	1	2.0	2.5	2.5	2751
19	1950	0	0	0	0	0	0	2.5	2.5	2.5	2752
20	2025	1	0	0	0	0	1	2.5	3.5	3.5	2753
21											
22	1955	1	0	0	0	1	0	2.0	2.5	2.5	2754
23	1940	1	0	0	0	0	1	2.0	2.0	2.5	2755
24											
25	2050	8	1	4	3	0	0	2.0	2.5	2.5	2756
26	1945	19	1	5	13	0	0	2.0	2.0	2.5	2757
27	1940	17	1	7	9	0	0	2.5	3.0	2.5	2758
28	1920	8	1	2	5	0	0	2.0	2.5	2.5	2759
29	2130	4	1	1	2	0	0	2.0	2.5	2.0	2760
30											
31											
Σ	—	129	18	38	54	8	11	46.0	55.0	56.0	—
NOBS	—	22	22	22	22	22	22	22	22	22	—
MNS	—	5.86	0.82	1.73	2.45	0.36	0.50	2.09	2.50	2.55	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR NOVEMBER 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f.l. 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01	2050	0 ; 0	0 ; 0	1 ; 3	0 ; 0	1 ; 10	0 ; 0	0 ; 0	1 ; 2	0 ; 0
02	1915	0 ; 0	0 ; 0	1 ; 2	1 ; 7	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
03	1925	0 ; 0	1 ; 2	2 ; 2/3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
04	2010	1 ; 1	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
05	1940	2 ; 1/1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1	1 ; 1
06										
07										
08	1920	0 ; 0	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
09	1910	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1
10	2000	3 ; 1/1/1	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
11	2035	1 ; 1	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
12	1915	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
13	1925	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
14										
15										
16	1935	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
17										
18	2005	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
19	1950	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
20	2025	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21										
22	1955	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 1
23	1940	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
24										
25	2050	0 ; 0	0 ; 0	0 ; 0	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
26	1945	0 ; 0	0 ; 0	0 ; 0	1 ; 18	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
27	1940	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 16	0 ; 0	0 ; 0	0 ; 0	0 ; 0
28	1920	0 ; 0	0 ; 0	1 ; 7	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29	2130	0 ; 0	0 ; 0	1 ; 3	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
30										
31										
TOTALS	—	11 ; 11	1 ; 2	10 ; 28	3 ; 32	2 ; 26	0 ; 0	0 ; 0	3 ; 5	7 ; 7
REGIONAL PERCENTAGES										
A	B	C	D	E	F	G	H	J	Σg	
29.7	2.7	27.0	8.1	5.4	0.0	0.0	8.1	18.9	37	
		NOBS = 22	\bar{p}/\bar{g} mean = 0.9306			\bar{f}/\bar{g} mean = 4.0880				
			\bar{p}/\bar{g} mean = 0.8378			\bar{f}/\bar{g} mean = 3.0000				
GROUP COMPLEXITY INDEX (GCI) = 3.8378										



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR DECEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) k considered as 1 .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value .

DATE	UT	g	f	WN	p	s	SN	BX	CV	Q	S	T	Ref.
01													
02													
03													
04	1900	1	4	14	1	3	13	32	12	2.0	3.5	3.0	2761
05	1925	1	5	15	1	4	14	40	12	2.0	2.5	2.5	2762
06	1915	1	5	15	1	4	14	40	12	2.0	3.0	2.5	2763
07	1940	2	5	25	1	3	13	36	10	2.5	2.05	2.5	2764
08	1940	3	4	34	2	2	22	82	19	2.0	2.5	3.0	2765
09	1935	3	15	45	5	7	57	268	53	2.0	2.0	2.5	2766
10													
11													
12	2210	3	25	55	6	9	69	583	58	2.5	4.0	4.0	2767
13													
14	1855	1	24	34	6	8	68	864	57	2.0	3.0	3.0	2768
15	1935	1	22	32	5	13	63	792	57	2.5	2.5	2.5	2769
16													
17	1930	3	12	42	4	6	46	408	98	1.5	2.0	2.5	2770
18	2225	2	10	30	3	5	35	232	59	2.0	3.0	2.5	2771
19	2000	2	6	26	1	4	14	40	41	2.0	2.5	2.5	2772
20	2040	2	7	27	1	5	15	52	10	2.5	2.5	2.5	2773
21													
22	2000	1	13	23	1	11	21	104	12	1.5	2.0	2.5	2774
23	1955	2	11	31	1	9	19	84	13	1.5	2.0	2.0	2775
24	2120	2	8	28	1	6	16	56	14	2.0	2.0	2.0	2776
25													
26	1955	3	8	38	2	6	26	88	32	2.0	2.5	2.5	2777
27													
28	1945	2	5	25	0	5	5	20	4	1.5	2.5	2.5	2778
29	2215	1	1	11	0	1	1	4	1	2.0	3.5	3.5	2779
30													
31	1935	0	0	0	0	0	0	0	0	1.5	2.5	2.5	2780
Σ	—	36	190	550	42	111	531	3825	574	39.5	52.5	53.0	—
NOBS	—	20	20	20	20	20	20	20	20	20	20	20	—
MNS	—	1.80	9.50	27.50	2.10	5.55	26.55	191.25	28.70	1.98	2.62	2.65	—

MEAN WEIGHT = 0.4231

MEAN CONDITION = 2.4167

QUALITY COUNT = 4.80



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR DECEMBER 1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

IS = Inter-Sol Index .

gr = number of multi-spot groups .

grfp = number of umbrae within penumbrae within the groups (gr) .

grf = number of non-penumbra spots within the groups (gr) .

efp = number of single penumbral spots :

ef = number of single non-penumbra spots .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02											
03											
04	1900	5	1	1	3	0	0	2.0	3.5	3.0	2761
05	1925	6	1	1	4	0	0	2.0	2.5	2.5	2762
06	1915	6	1	1	4	0	0	2.0	3.0	2.5	2763
07	1940	6	1	2	2	0	1	2.5	2.05	2.5	2764
08	1940	5	1	0	2	2	0	2.0	2.5	3.0	2765
09	1935	18	3	8	7	0	0	2.0	2.0	2.5	2766
10											
11											
12	2210	26	1	16	7	0	2	2.5	4.0	4.0	2767
13											
14	1855	25	1	16	8	0	0	2.0	3.0	3.0	2768
15	1935	23	1	9	13	0	0	2.5	2.5	2.5	2769
16											
17	1930	13	1	5	5	1	1	1.5	2.0	2.5	2770
18	2225	12	2	5	5	0	0	2.0	3.0	2.5	2771
19	2000	8	2	2	4	0	0	2.0	2.5	2.5	2772
20	2040	8	1	2	4	0	1	2.5	2.5	2.5	2773
21											
22	2000	14	1	2	11	0	0	1.5	2.0	2.5	2774
23	1955	12	1	2	8	0	1	1.5	2.0	2.0	2775
24	2120	10	2	2	6	0	0	2.0	2.0	2.0	2776
25											
26	1955	10	2	2	5	0	1	2.0	2.5	2.5	2777
27											
28	1945	6	1	0	4	0	1	1.5	2.5	2.5	2778
29	2215	1	0	0	0	0	1	2.0	3.5	3.5	2779
30											
31	1935	0	0	0	0	0	0	1.5	2.5	2.5	2780
Σ	—	214	24	76	102	3	9	39.5	52.5	53.0	—
NOBS	—	20	20	20	20	20	20	20	20	20	—
MNS	—	10.70	1.20	3.80	5.10	0.15	0.45	1.98	2.62	2.65	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR DECEMBER 1994

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 IF 2 OR MORE REGIONS ARE OF THE SAME CLASSIFICATION , THEN SUNSPOT COUNTS
 ARE SEPARATED BY SOLIDI (/) .

DATE	UT	A g ; f	B g ; f	C g ; f	D g ; f	E g ; f	F g ; f	G g ; f	H g ; f	J g ; f
01										
02										
03										
04	1900	0 ; 0	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
05	1925	0 ; 0	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
06	1915	0 ; 0	0 ; 0	1 ; 5	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
07	1940	0 ; 0	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
08	1940	0 ; 0	1 ; 2	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	2 ; 1/1
09	1935	0 ; 0	0 ; 0	1 ; 4	1 ; 9	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 2
10										
11										
12	2210	2 ; 1/1	0 ; 0	0 ; 0	0 ; 0	1 ; 23	0 ; 0	0 ; 0	0 ; 0	0 ; 0
13										
14	1855	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 24	0 ; 0	0 ; 0	0 ; 0
15	1935	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 22	0 ; 0	0 ; 0	0 ; 0
16										
17	1930	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	1 ; 10	0 ; 0	1 ; 1	0 ; 0
18	2225	0 ; 0	0 ; 0	0 ; 0	1 ; 8	0 ; 0	0 ; 0	0 ; 0	1 ; 2	0 ; 0
19	2000	0 ; 0	1 ; 2	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
20	2040	1 ; 1	0 ; 0	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
21										
22	2000	0 ; 0	0 ; 0	1 ; 13	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
23	1955	1 ; 1	0 ; 0	1 ; 10	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
24	2120	0 ; 0	1 ; 2	1 ; 6	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
25										
26	1955	1 ; 1	1 ; 3	0 ; 0	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
27										
28	1945	1 ; 1	1 ; 4	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
29	2215	1 ; 1	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
30										
31	1935	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0	0 ; 0
TOTALS	—	9 ; 9	5 ; 13	10 ; 61	3 ; 21	1 ; 23	3 ; 56	0 ; 0	2 ; 3	3 ; 4

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
25.0	13.9	27.8	8.3	2.8	8.3	0.0	5.6	8.3	36

NOBS = 20

\bar{p}/\bar{g} mean = 1.3333

\bar{f}/\bar{g} mean = 6.3860

\bar{p}/\bar{g} mean = 1.1667

\bar{f}/\bar{g} mean = 5.2778

GROUP COMPLEXITY INDEX (GCI) = 6.4444



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

OBSERVED ANNUAL MEANS OF SUNSPOT DATA FOR

1994

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f.l. 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .

S = Sharpness [ie. clarity] refer to Kiepenheuer scale .

T = Transparency where 1 = excellent , 5 = worthless .

g	=	2.37
f	=	11.03
Wolf Number	=	34.70
Truncated Wolf Number	=	—
p	=	2.64
s	=	5.96
Pettisindex	=	32.39
Beckindex	=	197.14
Classification Value	=	36.91
Quality Count	=	6.47
Inter-Sol Index	=	12.62
Mean Weight	=	0.4389
Q	=	1.93
S	=	2.46
T	=	2.58
Mean Condition	=	2.3220
Total Number of Observations	=	221