



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

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SUNSPOT RESULTS FOR AUGUST 2001

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	2135	8	56	136	17	20	190	890	148	1.0	2.0	2.0	3963
04	2155	10	84	184	17	27	197	1531	201	1.5	2.0	2.0	3964
05													
06													
07	2245	10	61	161	17	16	186	1336	173	1.5	2.0	2.0	3965
08	2120	10	57	157	17	23	193	1105	145	2.0	2.0	2.0	3966
09	2220	7	45	115	16	10	170	1192	168	2.0	3.0	3.0	3967
10	2200	7	65	135	22	19	239	1405	177	2.0	2.0	2.5	3968
11	2040	11	59	169	19	21	211	1068	197	2.0	2.5	2.0	3969
12	2105	10	44	144	15	17	167	717	195	1.5	2.5	2.5	3970
13													
14													
15	2105	13	26	156	14	7	147	524	146	2.5	2.5	2.5	3971
16													
17													
18	2110	11	45	155	16	16	176	729	179	1.5	2.5	2.5	3972
19	2200	9	42	132	16	8	168	857	169	2.0	2.5	2.5	3973
20													
21													
22													
23	2125	11	47	157	14	17	157	1108	188	2.0	2.0	2.0	3974
24													
25	2140	7	55	125	11	29	139	1494	137	2.0	2.0	2.5	3975
26	2115	7	61	131	13	21	151	1830	133	1.5	2.0	2.0	3976
27	2105	11	59	169	18	15	195	1676	210	1.5	2.5	2.5	3977
28													
29													
30													
31													
Σ	—	142	806	2226	242	266	2686	17462	2566	26.5	34.0	34.5	—
NOBS	—	15	15	15	15	15	15	15	15	15	15	15	—
MNS	—	9.47	53.73	148.40	16.13	17.73	179.07	1164.13	171.07	1.77	2.27	2.30	—

MEAN CONDITION = 2.1111 TRUNCATED WOLF NUMBER = 132.80 QUALITY COUNT = 28.73 SQUARED QUALITY COUNT = 101.93



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR AUGUST 2001

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 umbræ 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	2135	64	8	36	20	0	0	1.0	2.0	2.0	3963
04	2155	92	8	56	26	1	1	1.5	2.0	2.0	3964
05											
06											
07	2245	68	7	43	15	2	1	1.5	2.0	2.0	3965
08	2120	64	7	32	22	2	1	2.0	2.0	2.0	3966
09	2220	50	5	33	10	2	0	2.0	3.0	3.0	3967
10	2200	71	6	45	19	1	0	2.0	2.0	2.5	3968
11	2040	68	9	36	21	2	0	2.0	2.5	2.0	3969
12	2105	50	6	24	16	3	1	1.5	2.5	2.5	3970
13											
14											
15	2105	34	8	16	5	3	2	2.5	2.5	2.5	3971
16											
17											
18	2110	51	6	26	14	3	2	1.5	2.5	2.5	3972
19	2200	47	5	30	8	4	0	2.0	2.5	2.5	3973
20											
21											
22											
23	2125	54	7	28	15	2	2	2.0	2.0	2.0	3974
24											
25	2140	60	5	24	29	2	0	2.0	2.0	2.5	3975
26	2115	65	4	38	20	2	1	1.5	2.0	2.0	3976
27	2105	67	8	42	14	2	1	1.5	2.5	2.5	3977
28											
29											
30											
31											
Σ	—	905	99	509	254	31	12	26.5	34.0	34.5	—
NOBS	—	15	15	15	15	15	15	15	15	15	—
MNS	—	60.33	6.60	33.93	16.93	2.07	0.80	1.77	2.27	2.30	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR AUGUST 2001

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		B		C		D		E		F		G		H		J	
		g	f	g	f	g	f	g	f	g	f	g	f	g	f	g	f	g	f
01																			
02																			
03	2135	0	0	2	2/6	1	3	5	3/4/9/13/16	0	0	0	0	0	0	0	0	0	0
04	2155	1	1	0	0	3	2/2/3	4	5/9/22/27	1	12	0	0	0	0	0	0	1	1
05																			
06																			
07	2245	1	1	1	2	1	2	2	10/10	2	7/25	0	0	0	0	0	0	3	1/1/2
08	2120	1	1	0	0	3	3/3/4	2	8/12	1	22	0	0	0	0	0	0	3	1/1/2
09	2220	0	0	0	0	0	0	3	7/8/9	0	0	1	17	0	0	0	0	3	1/1/2
10	2200	0	0	0	0	0	0	5	4/4/12/15/17	0	0	1	12	0	0	0	0	1	1
11	2040	0	0	2	2/3	0	0	6	2/2/5/8/14/19	0	0	0	0	0	0	0	0	3	1/1/2
12	2105	1	1	1	2	2	4/5	3	2/12/15	0	0	0	0	0	0	0	0	3	1/1/1
13																			
14																			
15	2105	2	1/1	0	0	3	2/2/3	2	3/4	1	3	0	0	0	0	0	0	5	1/1/1/2/2
16																			
17																			
18	2110	2	1/1	0	0	3	3/4/4	3	3/9/17	0	0	0	0	0	0	0	0	3	1/1/1
19	2200	0	0	0	0	1	2	3	3/13/18	0	0	0	0	0	0	1	1	4	1/1/1/2
20																			
21																			
22																			
23	2125	2	1/1	1	2	2	2/4	2	2/15	0	0	1	16	0	0	1	2	2	1/1
24																			
25	2140	0	0	0	0	1	4	2	10/11	0	0	1	26	0	0	0	0	3	1/1/2
26	2115	1	1	0	0	1	3	2	5/9	0	0	1	41	0	0	0	0	2	1/1
27	2105	1	1	1	3	0	0	5	2/2/4/4/6	0	0	1	33	0	0	0	0	3	1/1/2
28																			
29																			
30																			
31																			
TOTALS	—	12	12	8	22	21	64	49	443	5	69	6	145	0	0	2	3	39	48

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
8.5	5.6	14.8	34.5	3.5	4.2	0.0	1.4	27.5	142

NOBS = 15

$\overline{p/g}$ mean = 1.7685

$\overline{f/g}$ mean = 5.9762

$\overline{p/g}$ mean = 1.7042

$\overline{f/g}$ mean = 5.6761

GROUP COMPLEXITY INDEX (GCI) = 7.3803



**SMOOTHED RESULTS OF OBSERVED VALUES FOR THE
LAST 12 MONTHS (OBTAINABLE)
USING THE WALDMEIER & BARNES-13 METHODS.**

DATA BELOW ARE PRELIMINARY. FINAL VALUES WILL BE PUBLISHED IN THE GDSO ANNUAL REPORTS.

WALDMEIER METHOD

MONTH	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2000 MARCH	8.54	147.85	167.88	1509.9	163.94	27.14	68.45
APRIL	8.57	149.39	170.40	1536.9	164.86	27.34	69.76
MAY	8.56	147.98	168.20	1480.2	163.14	27.22	68.48
JUNE	8.61	147.41	167.16	1426.8	162.43	27.23	67.47
JULY	8.72	149.15	170.05	1428.6	164.50	27.62	68.21
AUGUST	8.70	149.18	171.29	1439.2	164.10	27.62	68.46
SEPTEMBER	8.54	146.69	169.59	1429.2	158.97	27.13	67.36
OCTOBER	8.39	142.73	165.93	1381.5	153.81	26.46	64.80
NOVEMBER	8.24	138.20	162.24	1314.1	149.88	25.83	61.64
DECEMBER	8.21	136.50	162.20	1276.9	148.25	25.71	60.22
2001 JANUARY	8.05	131.46	155.91	1154.6	143.18	25.02	56.64
FEBRUARY	7.78	125.52	148.96	1055.4	138.47	24.10	53.21

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2000 MARCH	8.74	151.55	170.20	1528.6	170.71	27.91	70.35
APRIL	8.98	156.55	176.40	1596.0	174.14	28.70	73.08
MAY	9.10	158.32	179.10	1610.4	174.12	28.98	73.78
JUNE	9.13	158.60	180.80	1607.8	172.97	29.04	73.73
JULY	9.06	157.01	180.52	1583.1	170.08	28.77	72.84
AUGUST	8.81	151.85	175.57	1506.4	163.56	27.89	70.06
SEPTEMBER	8.46	144.68	168.12	1401.5	155.14	26.70	66.17
OCTOBER	8.16	138.10	161.29	1299.4	148.64	25.68	62.37
NOVEMBER	7.94	132.78	155.82	1213.8	144.21	24.92	59.09
DECEMBER	7.82	129.35	152.48	1154.3	141.35	24.48	56.77
2001 JANUARY	7.75	126.55	149.53	1095.9	139.05	24.16	54.60
FEBRUARY	7.73	125.05	148.49	1068.2	138.43	24.05	53.23