GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

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SUNSPOT RESULTS FOR FEBRUARY 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													
04	2015	10	45	145	15	15	165	1171	147	1.5	2.0	2.0	3874
05													
06	2050	7	76	146	15	45	195	2355	157	2.0	2.5	2.5	3875
07													
08	2030	10	49	149	16	25	185	1254	161	2.0	2.0	2.0	3876
09	2120	11	46	156	18	21	201	1039	178	1.5	2.0	2.0	3877
10													
11													
12													
13	2215	7	24	94	10	10	110	420	111	1.0	2.0	2.0	3878
14													
15													
16													
17	2005	7	20	90	8	8	88	349	75	2.0	2.0	2.5	3879
18													
19													
20	2130	8	50	130	14	16	156	854	129	2.0	2.5	3.0	3880
21	2035	10	41	141	9	20	110	606	93	1.5	1.5	2.0	3881
22													
23	2020	5	25	75	8	9	89	425	76	2.0	2.5	2.5	3882
24	2035	4	23	63	6	13	73	354	67	1.5	2.0	2.0	3883
25													
26	2055	4	36	76	8	15	95	544	56	2.0	2.0	2.0	3884
27	2025	4	28	68	4	15	55	479	45	1.5	2.0	2.5	3885
28	2045	4	30	70	5	19	69	475	57	1.5	2.0	2.5	3886
29													
30													
31													
Σ	——	91	493	1403	136	231	1591	10325	1352	22.0	27.0	29.5	——
NOBS	——	13	13	13	13	13	13	13	13	13	13	13	——
MNS	——	7.00	37.92	107.92	10.46	17.77	122.38	794.23	104.00	1.69	2.08	2.27	——

MEAN CONDITION = 2.0128 TRUNCATED WOLF NUMBER = 90.08 QUALITY COUNT = 21.00 SQUARED QUALITY COUNT = 76.54

GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR

FEBRUARY 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 penumbræ 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											
04	2015	51	6	28	13	2	2	1.5	2.0	2.0	3874
05											
06	2050	82	6	31	44	0	1	2.0	2.5	2.5	3875
07											
08	2030	57	8	23	24	1	1	2.0	2.0	2.0	3876
09	2120	53	7	23	19	2	2	1.5	2.0	2.0	3877
10											
11											
12											
13	2215	29	5	12	10	2	0	1.0	2.0	2.0	3878
14											
15											
16											
17	2005	22	2	9	6	3	2	2.0	2.0	2.5	3879
18											
19											
20	2130	55	5	32	15	2	1	2.0	2.5	3.0	3880
21	2035	46	5	19	17	2	3	1.5	1.5	2.0	3881
22											
23	2020	28	3	15	8	1	1	2.0	2.5	2.5	3882
24	2035	27	4	10	13	0	0	1.5	2.0	2.0	3883
25											
26	2055	39	3	21	14	0	1	2.0	2.0	2.0	3884
27	2025	30	2	12	14	1	1	1.5	2.0	2.5	3885
28	2045	33	3	10	19	1	0	1.5	2.0	2.5	3886
29											
30											
31											
Σ	——	552	59	245	216	17	15	22.0	27.0	29.5	——
NOBS	——	13	13	13	13	13	13	13	13	13	——
MNS	——	42.46	4.54	18.85	16.62	1.31	1.15	1.69	2.08	2.27	——

GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR

FEBRUARY 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																			
04	2015	2	1/1	1	2	0	0	2	4/6	2	5/8	1	16	0	0	0	0	2	1/1
05																			
06	2050	1	1	0	0	1	4	1	4	1	15	3	11/14/27	0	0	0	0	0	0
07																			
08	2030	1	1	1	2	3	2/2/2	0	0	2	11/14	1	12	1	2	0	0	1	1
09	2120	2	1/1	0	0	2	2/2	3	3/6/16	1	7	0	0	1	6	0	0	2	1/1
10																			
11																			
12																			
13	2215	0	0	0	0	2	2/3	3	4/5/8	0	0	0	0	0	0	0	0	2	1/1
14																			
15																			
16																			
17	2005	2	1/1	0	0	1	4	1	11	0	0	0	0	0	0	0	0	3	1/1/1
18																			
19																			
20	2130	1	1	0	0	2	3/4	3	5/8/27	0	0	0	0	0	0	0	0	2	1/1
21	2035	3	1/1/1	2	2/5	1	3	2	7/19	0	0	0	0	0	0	0	0	2	1/1
22																			
23	2020	1	1	0	0	1	3	2	9/11	0	0	0	0	0	0	0	0	1	1
24	2035	0	0	0	0	2	2/4	2	7/10	0	0	0	0	0	0	0	0	0	0
25																			
26	2055	1	1	0	0	2	4/5	1	26	0	0	0	0	0	0	0	0	0	0
27	2025	1	1	0	0	1	3	1	23	0	0	0	0	0	0	0	0	1	1
28	2045	0	0	1	6	0	0	2	8/15	0	0	0	0	0	0	0	0	1	1
29																			
30																			
31																			
TOTALS	——	15	15	5	17	18	54	23	242	6	60	5	80	2	8	0	0	17	17

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
16.5	5.5	19.8	25.3	6.6	5.5	2.2	0.0	18.7	91

NOBS = 13 $\overline{p / g}$ mean = 1.4962 $\overline{f / g}$ mean = 5.7942

$\overline{p} / \overline{g}$ mean = 1.4945 $\overline{f} / \overline{g}$ mean = 5.4176

GROUP COMPLEXITY INDEX (GCI) = 6.9121

GEORGI DOBROVOLSKI SOLAR OBSERVATORY

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)
1999 SEPTEMBER	6.99	115.90	129.49	1041.7	132.31	21.70	50.86
OCTOBER	7.42	124.67	139.44	1154.3	143.68	23.32	55.65
NOVEMBER	7.72	131.11	146.09	1251.5	149.83	24.33	59.32
DECEMBER	7.81	133.42	148.92	1300.7	151.72	24.69	60.78
2000 JANUARY	7.96	137.71	155.60	1401.8	155.56	25.37	63.72
FEBRUARY	8.30	143.82	163.09	1471.6	160.19	26.42	66.58
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

'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})
1999 SEPTEMBER	6.89	115.04	129.59	1073.2	130.63	21.43	50.90
OCTOBER	7.10	119.71	135.18	1147.0	136.87	22.28	53.66
NOVEMBER	7.30	124.39	140.23	1219.1	142.31	23.08	56.46
DECEMBER	7.51	128.40	144.02	1265.1	146.76	23.80	58.61
2000 JANUARY	7.84	134.68	150.78	1334.7	153.59	24.94	61.82
FEBRUARY	8.32	143.47	160.74	1430.8	162.77	26.51	66.17
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