



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: www.cv-helios.net/gdso

SUNSPOT RESULTS FOR NOVEMBER 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	1945	6	66	126	16	19	179	1628	177	2.0	2.5	2.5	4007
04	2020	7	82	152	18	27	207	2073	197	2.0	2.0	2.5	4008
05	1940	9	74	164	20	24	224	1869	246	2.5	3.5	3.0	4009
06													
07													
08													
09	2030	11	103	213	25	35	285	3206	232	1.5	2.5	2.5	4010
10													
11													
12													
13	2005	10	55	155	13	17	147	1498	211	2.0	2.0	2.0	4011
14	2015	11	57	167	14	18	158	1536	231	2.0	2.0	2.0	4012
15	2000	8	47	127	15	12	162	1278	235	2.0	2.5	2.5	4013
16													
17													
18	1925	8	41	121	14	12	152	795	200	1.5	2.0	2.5	4014
19	2105	6	44	104	10	18	118	830	156	2.0	2.5	3.0	4015
20													
21													
22													
23													
24	1930	6	33	93	8	16	96	780	78	1.5	2.0	2.0	4016
25	2005	8	37	117	8	13	93	623	84	1.5	2.0	2.0	4017
26													
27													
28													
29													
30													
31													
Σ	—	90	639	1539	161	211	1821	16116	2047	20.5	25.5	26.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	11	11	—
MNS	—	8.18	58.09	139.91	14.64	19.18	165.55	1465.09	186.09	1.86	2.32	2.41	—

MEAN CONDITION = 2.1970 TRUNCATED WOLF NUMBER = 128.36 QUALITY COUNT = 26.64 SQUARED QUALITY COUNT = 102.82



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR NOVEMBER 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	1945	70	4	46	18	1	1	2.0	2.5	2.5	4007
04	2020	88	6	54	27	1	0	2.0	2.0	2.5	4008
05	1940	80	6	48	23	2	1	2.5	3.5	3.0	4009
06											
07											
08											
09	2030	109	6	64	34	4	1	1.5	2.5	2.5	4010
10											
11											
12											
13	2005	62	7	35	17	3	0	2.0	2.0	2.0	4011
14	2015	64	7	37	16	2	2	2.0	2.0	2.0	4012
15	2000	53	6	33	12	2	0	2.0	2.5	2.5	4013
16											
17											
18	1925	46	5	26	12	3	0	1.5	2.0	2.5	4014
19	2105	48	4	24	18	2	0	2.0	2.5	3.0	4015
20											
21											
22											
23											
24	1930	39	6	17	16	0	0	1.5	2.0	2.0	4016
25	2005	42	5	23	11	1	2	1.5	2.0	2.0	4017
26											
27											
28											
29											
30											
31											
Σ	—	701	62	407	204	21	7	20.5	25.5	26.5	—
NOBS	—	11	11	11	11	11	11	11	11	11	—
MNS	—	63.73	5.64	37.00	18.55	1.91	0.64	1.86	2.32	2.41	—



GEORGI DOBROVOLSKI SOLAR OBSERVATORY

SUNSPOT CENSUS BY CLASSIFICATION FOR NOVEMBER 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	1945	1	1	0	0	0	0	2	7/20	1	21	1	16	0	0	0	0	1	1
04	2020	0	0	0	0	1	3	3	6/11/15	1	20	1	26	0	0	0	0	1	1
05	1940	1	1	0	0	0	0	4	7/8/9/13	1	9	1	25	0	0	0	0	2	1/1
06																			
07																			
08																			
09	2030	1	1	0	0	2	2/4	1	6	1	18	2	15/53	0	0	0	0	4	1/1/1/1
10																			
11																			
12																			
13	2005	0	0	1	2	4	2/3/4/5	1	2	0	0	1	34	0	0	1	1	2	1/1
14	2015	2	1/1	0	0	3	2/4/4	2	2/9	0	0	1	29	0	0	1	3	2	1/1
15	2000	0	0	0	0	0	0	3	4/5/16	0	0	1	14	0	0	1	4	3	1/1/2
16																			
17																			
18	1925	0	0	0	0	0	0	5	3/4/6/11/14	0	0	0	0	0	0	0	0	3	1/1/1
19	2105	0	0	0	0	0	0	4	6/10/12/14	0	0	0	0	0	0	0	0	2	1/1
20																			
21																			
22																			
23																			
24	1930	0	0	2	2/4	1	2	1	9	0	0	1	14	0	0	0	0	1	2
25	2005	2	1/1	1	2	1	10	1	12	1	8	0	0	0	0	0	0	2	1/2
26																			
27																			
28																			
29																			
30																			
31																			
TOTALS	—	7	7	4	10	12	45	27	241	5	76	9	226	0	0	3	8	23	26

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	Σg
7.8	4.4	13.3	30.0	5.6	10.0	0.0	3.3	25.6	90

NOBS = 11

\bar{p}/\bar{g} mean = 1.8119

\bar{f}/\bar{g} mean = 7.2218

\bar{p}/\bar{g} mean = 1.7889

\bar{f}/\bar{g} mean = 7.1000

GROUP COMPLEXITY INDEX (GCI) = 8.8889



**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 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
MARCH	7.95	128.81	155.32	1100.1	144.66	24.81	54.96
APRIL	8.28	134.01	162.38	1149.5	152.74	25.88	57.06
MAY	8.43	136.39	164.70	1186.5	156.86	26.32	58.00

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 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
MARCH	7.90	127.24	152.53	1092.6	142.11	24.56	53.83
APRIL	8.15	130.80	157.98	1125.0	147.42	25.31	54.99
MAY	8.38	134.26	162.98	1158.1	152.64	26.01	56.30