Georgi Dobrovolski Solar Observatory

NEW ZEALAND

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SUNSPOT RESULTS FOR JANUARY 2005

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 .
WN = Wolf Number ; SN = Pettisindex ; BX = Beckindex ; CV = Classification Value ;
QC = Quality Count ; QC² = Squared Quality Count .
Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .
S = Sharpness [ie. clarity] refer to Kiepenheuer scale .
T = Transparency where 1 = excellent , 5 = worthless .

DATE	UT*	g	f	WN	p	s	SN	BX	CV	QC	QC²	Q	S	T	Ref.
01															
02															
03															
04															
05															
06															
07															
08															
09															
10	0240	2	5	25	4	1	41	90	53	8	32	1.5	2.0	2.0	4483-5
11															
12	1945	3	25	55	3	7	37	200	29	9	27	2.0	3.0	3.0	4484-5
13	2105	3	48	78	5	13	63	784	86	11	41	2.0	2.5	2.5	4485-5
14	2205	3	39	69	3	10	40	652	65	11	43	2.0	2.5	2.5	4486-5
15															
16															
17															
18	1945	5	40	90	9	9	99	952	85	13	43	1.5	2.0	2.0	4487-5
19															
20	2120	4	20	60	7	6	76	393	87	13	47	1.5	2.5	2.0	4488-5
21	2025	4	20	60	7	5	75	507	104	14	52	2.0	2.5	2.0	4489-5
22															
23	1930	2	5	25	2	3	23	40	23	6	18	1.0	2.0	2.0	4490-5
24															
25	1935	2	13	33	4	3	43	253	41	6	20	1.0	2.0	2.5	4491-5
26	1950	2	12	32	3	5	35	235	32	6	20	2.5	2.5	2.5	4492-5
27															
28	2125	2	6	26	3	2	32	127	32	6	20	3.0	3.0	2.5	4493-5
29															
30	1955	2	9	29	2	6	26	148	23	5	17	1.5	2.0	2.0	4494-6
31	1955	2	8	28	5	2	52	144	53	8	32	2.0	2.0	1.5	4495-6
TOTALS	——	36	250	610	57	72	642	4525	713	116	412	23.5	30.5	29.0	——
NOBS	——	13	13	13	13	13	13	13	13	13	13	13	13	13	——
MNS	——	2.77	19.23	46.92	4.38	5.54	49.38	348.08	54.85	8.92	31.69	1.81	2.35	2.23	——

MEAN WEIGHT = 0.4826 MEAN CONDITION = 2.1282 TRUNCATED WOLF NUMBER = 45.23

**** Stated times approximate Co-ordinated Universal Time / Temps Universel Coordonné (UTC).***

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR

JANUARY 2005

All observations carried out by HOWARD BARNES .
Telescope : 76 mm refractor (f . l . 910 mm) .
Observed by PROJECTION . Full disc diameter = 145 mm approx .
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 .
Q = Quietness [ie. steadiness] refer to Kiepenheuer scale .
S = Sharpness [ie. clarity] refer to Kiepenheuer scale .
T = Transparency where 1 = excellent , 5 = worthless .

DATE	UT	IS	gr	grfp	grf	efp	ef	Q	S	T	Ref.
01											
02											
03											
04											
05											
06											
07											
08											
09											
10	0240	7	2	4	1	0	0	1.5	2.0	2.0	4483-5
11											
12	1945	28	3	18	7	0	0	2.0	3.0	3.0	4484-5
13	2105	51	3	35	13	0	0	2.0	2.5	2.5	4485-5
14	2205	42	3	29	10	0	0	2.0	2.5	2.5	4486-5
15											
16											
17											
18	1945	42	2	29	8	2	1	1.5	2.0	2.0	4487-5
19											
20	2120	23	3	13	6	1	0	1.5	2.5	2.0	4488-5
21	2025	23	3	14	5	1	0	2.0	2.5	2.0	4489-5
22											
23	1930	7	2	2	3	0	0	1.0	2.0	2.0	4490-5
24											
25	1935	14	1	9	3	1	0	1.0	2.0	2.5	4491-5
26	1950	13	1	6	5	1	0	2.5	2.5	2.5	4492-5
27											
28	2125	7	1	3	2	1	0	3.0	3.0	2.5	4493-5
29											
30	1955	10	1	3	5	0	1	1.5	2.0	2.0	4494-6
31	1955	10	2	6	2	0	0	2.0	2.0	1.5	4495-6
TOTALS	——	277	27	171	70	7	2	23.5	30.5	29.0	——
NOBS	——	13	13	13	13	13	13	13	13	13	——
MNS	——	21.31	2.08	13.15	5.38	0.54	0.15	1.81	2.35	2.23	——

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SUNSPOT CENSUS BY CLASSIFICATION FOR

JANUARY 2005

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																			
05																			
06																			
07																			
08																			
09																			
10	2040	0	0	0	0	0	0	2	2/3	0	0	0	0	0	0	0	0	0	0
11																			
12	1945	0	0	0	0	3	2/7/16	0	0	0	0	0	0	0	0	0	0	0	0
13	2105	0	0	0	0	1	8	2	14/26	0	0	0	0	0	0	0	0	0	0
14	2205	0	0	0	0	2	6/13	0	0	1	20	0	0	0	0	0	0	0	0
15																			
16																			
17																			
18	1945	1	1	0	0	1	3	0	0	1	34	0	0	0	0	0	0	2	1/1
19																			
20	2120	0	0	0	0	2	3/4	0	0	1	12	0	0	0	0	0	0	1	1
21	2025	0	0	0	0	0	0	2	3/12	0	0	0	0	1	4	0	0	1	1
22																			
23	1930	0	0	0	0	2	2/3	0	0	0	0	0	0	0	0	0	0	0	0
24																			
25	1935	0	0	0	0	0	0	1	12	0	0	0	0	0	0	0	0	1	1
26	1950	0	0	0	0	0	0	1	11	0	0	0	0	0	0	0	0	1	1
27																			
28	2125	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	1	1
29																			
30	1955	1	1	0	0	0	0	1	8	0	0	0	0	0	0	0	0	0	0
31	1955	0	0	0	0	0	0	2	3/5	0	0	0	0	0	0	0	0	0	0
TOTALS	——	2	2	0	0	11	67	12	104	3	66	0	0	1	4	0	0	7	7

REGIONAL PERCENTAGES

A	B	C	D	E	F	G	H	J	SIGMAg
5.6	0.0	30.6	33.3	8.3	0.0	2.8	0.0	19.4	36

NOBS = 13 $\overline{p / g}$ mean = 1.5744 $\overline{f / g}$ mean = 6.4872

$\overline{p} / \overline{g}$ mean = 1.5833 $\overline{f} / \overline{g}$ mean = 6.9444

GROUP COMPLEXITY INDEX (GCI) = 8.5278

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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	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2003 AUGUST	4.68	77.77	95.55	703.2	94.97	14.95	34.28
SEPTEMBER	4.55	76.06	93.48	700.0	92.65	14.61	33.78
OCTOBER	4.41	73.76	90.28	690.5	88.82	14.13	32.79
NOVEMBER	4.29	71.92	88.12	673.5	85.40	13.74	32.00
DECEMBER	4.19	69.26	84.25	630.5	82.43	13.37	30.28
2004 JANUARY	4.00	65.23	78.05	575.9	77.59	12.71	28.00
FEBRUARY	3.75	61.35	72.76	548.3	72.73	11.90	26.48
MARCH	3.56	58.70	70.01	537.4	70.74	11.30	25.59
APRIL	3.53	57.59	70.08	508.8	70.66	11.20	24.77
MAY	3.57	57.74	71.00	503.5	71.37	11.34	24.58
JUNE	3.47	56.82	70.02	515.1	70.41	11.12	24.53
JULY	3.35	54.72	66.85	494.3	67.50	10.69	23.50

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2003 AUGUST	4.84	82.11	101.07	786.7	98.76	15.58	37.12
SEPTEMBER	4.60	78.06	95.50	750.9	93.61	14.85	35.37
OCTOBER	4.35	73.60	89.51	704.8	88.15	14.07	33.20
NOVEMBER	4.14	69.20	83.99	644.3	82.96	13.34	30.79
DECEMBER	3.96	65.01	78.56	577.5	78.19	12.69	28.24
2004 JANUARY	3.80	61.44	73.72	524.8	73.91	12.09	26.12
FEBRUARY	3.68	59.12	70.59	500.3	70.85	11.63	24.88
MARCH	3.61	57.85	69.17	492.8	69.40	11.33	24.29
APRIL	3.58	57.27	68.92	486.3	68.87	11.18	23.97
MAY	3.57	57.45	69.47	497.3	69.37	11.18	24.20
JUNE	3.52	57.42	69.76	520.6	69.89	11.11	24.67
JULY	3.43	56.59	69.09	529.8	69.48	10.90	24.68

ERRATA: BX observed values for March & April 2004 should read 620.73 & 271.36 respectively, hence, the BX smoothed values (above) are corrected.