



Georgi Dobrovolski Solar Observatory

NEW ZEALAND

E-MAIL: gdso@earthling.net

WEBSITE: <http://gdso.cv-helios.net>

SUNSPOT RESULTS FOR AUGUST 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	QC ²	Q	S	T	Ref.
01															
02	2210	4	30	70	10	12	112	529	120	13	45	1.5	2.0	1.5	4565-2
03	2215	4	25	65	10	10	110	455	97	11	37	1.5	2.0	2.0	4566-2
04	2240	3	25	55	6	15	75	389	53	9	29	1.0	2.0	2.0	4567-2
05															
06															
07															
08	2200	4	16	56	6	7	67	237	66	13	45	2.0	2.5	2.5	4568-3
09															
10															
11															
12															
13	2305	2	17	37	5	7	57	292	32	5	17	2.0	3.0	3.0	4569-3
14															
15															
16	2305	2	7	27	2	4	24	112	23	5	17	2.0	2.5	2.5	4570-3
17	2155	2	3	23	1	2	12	20	12	4	10	2.0	2.0	2.0	4571-3
18	2205	3	16	46	5	6	56	244	44	8	26	1.5	2.0	2.0	4572-3
19	2150	5	18	68	6	6	66	353	50	10	26	1.5	2.0	2.0	4573-3
20															
21	2210	3	26	56	5	6	56	487	54	10	36	1.5	2.0	2.5	4574-3
22															
23															
24															
25	2145	3	17	47	6	8	68	510	62	11	41	2.0	2.5	2.0	4575-3
26															
27															
28	2125	4	11	51	4	4	44	241	40	9	25	1.5	2.0	2.0	4576-3
29	2130	4	15	55	5	7	57	294	52	11	37	1.0	2.0	2.0	4577-3
30	2150	3	12	42	3	8	38	116	39	9	29	1.5	2.5	2.5	4578-3
31															
TOTALS	—	46	238	698	74	102	842	4279	744	128	420	22.5	31.0	30.5	—
NOBS	—	14	14	14	14	14	14	14	14	14	14	14	14	14	—
MNS	—	3.29	17.00	49.86	5.29	7.29	60.14	305.64	53.14	9.14	30.00	1.61	2.21	2.18	—

MEAN WEIGHT = 0.5098

MEAN CONDITION = 2.0000

TRUNCATED WOLF NUMBER = 41.71

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

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SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR AUGUST 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	2210	33	3	17	12	1	0	1.5	2.0	1.5	4565-2
03	2215	27	2	14	9	1	1	1.5	2.0	2.0	4566-2
04	2240	27	2	9	15	1	0	1.0	2.0	2.0	4567-2
05											
06											
07											
08	2200	19	3	8	7	1	0	2.0	2.5	2.5	4568-3
09											
10											
11											
12											
13	2305	18	1	10	6	0	1	2.0	3.0	3.0	4569-3
14											
15											
16	2305	8	1	3	3	0	1	2.0	2.5	2.5	4570-3
17	2155	4	1	1	1	0	1	2.0	2.0	2.0	4571-3
18	2205	18	2	10	5	0	1	1.5	2.0	2.0	4572-3
19	2150	20	2	11	4	1	2	1.5	2.0	2.0	4573-3
20											
21	2210	28	2	19	6	1	0	1.5	2.0	2.5	4574-3
22											
23											
24											
25	2145	20	3	9	8	0	0	2.0	2.5	2.0	4575-3
26											
27											
28	2125	13	2	6	3	1	1	1.5	2.0	2.0	4576-3
29	2130	18	3	8	6	0	1	1.0	2.0	2.0	4577-3
30	2150	15	3	4	8	0	0	1.5	2.5	2.5	4578-3
31											
TOTALS	—	268	30	129	93	7	9	22.5	31.0	30.5	—
NOBS	—	14	14	14	14	14	14	14	14	14	—
MNS	—	19.14	2.14	9.21	6.64	0.50	0.64	1.61	2.21	2.18	—

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SUNSPOT CENSUS BY CLASSIFICATION FOR

AUGUST 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	2210	0	0	0	0	1	3	2	7/19	0	0	0	0	0	0	0	0	1	1
03	2215	1	1	0	0	0	0	2	11/12	0	0	0	0	0	0	0	0	1	1
04	2240	0	0	0	0	1	8	1	16	0	0	0	0	0	0	0	0	1	1
05																			
06																			
07																			
08	2200	0	0	0	0	1	7	2	2/6	0	0	0	0	0	0	0	0	1	1
09																			
10																			
11																			
12																			
13	2305	1	1	0	0	0	0	1	16	0	0	0	0	0	0	0	0	0	0
14																			
15																			
16	2305	1	1	0	0	0	0	1	6	0	0	0	0	0	0	0	0	0	0
17	2155	1	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0
18	2205	1	1	0	0	1	3	1	12	0	0	0	0	0	0	0	0	0	0
19	2150	2	1/1	0	0	0	0	1	13	0	0	0	0	0	0	0	0	2	1/2
20																			
21	2210	0	0	0	0	0	0	2	10/15	0	0	0	0	0	0	0	0	1	1
22																			
23																			
24																			
25	2145	0	0	0	0	1	2	1	8	0	0	0	0	1	7	0	0	0	0
26																			
27																			
28	2125	1	1	0	0	0	0	1	7	0	0	0	0	0	0	0	0	2	1/2
29	2130	1	1	0	0	0	0	2	5/7	0	0	0	0	0	0	0	0	1	2
30	2150	0	0	1	5	1	3	1	4	0	0	0	0	0	0	0	0	0	0
31																			
TOTALS	—	9	9	1	5	7	28	18	176	0	0	0	0	1	7	0	0	10	13
REGIONAL PERCENTAGES																			
A	B	C	D	E	F	G	H	J	Σg										
19.6	2.2	15.2	39.1	0.0	0.0	2.2	0.0	21.7	46										
NOBS = 14				$\overline{p/g}$ mean = 1.5917						$\overline{f/g}$ mean = 5.2393									
				$\overline{p/g}$ mean = 1.6087						$\overline{f/g}$ mean = 5.1739									
GROUP COMPLEXITY INDEX (GCI) = 6.7826																			

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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 GDSO ANNUAL REPORTS.

WALDMEIER METHOD

MONTH	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2004 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
AUGUST	3.28	53.46	64.65	482.4	66.12	10.40	22.91
SEPTEMBER	3.15	51.44	61.95	464.3	64.60	9.98	22.12
OCTOBER	3.05	49.75	59.58	444.3	62.91	9.67	21.33
NOVEMBER	2.95	48.53	59.05	446.4	62.64	9.47	21.14
DECEMBER	2.87	48.18	60.36	456.1	63.75	9.40	21.60
2005 JANUARY	2.83	47.36	60.71	432.0	64.03	9.38	21.14
FEBRUARY	2.81	46.03	59.67	391.9	62.75	9.27	20.02

BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2004 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
AUGUST	3.33	55.33	67.92	526.0	68.88	10.65	24.38
SEPTEMBER	3.21	53.53	65.96	508.9	67.87	10.34	23.68
OCTOBER	3.10	51.52	63.32	486.0	66.22	10.02	22.72
NOVEMBER	2.95	48.95	60.06	459.0	63.78	9.58	21.54
DECEMBER	2.80	46.43	57.15	426.5	61.36	9.13	20.38
2005 JANUARY	2.72	44.53	55.15	390.9	59.85	8.85	19.33
FEBRUARY	2.67	43.30	54.11	362.6	58.93	8.70	18.55