



# Georgi Dobrovolski Solar Observatory

NEW ZEALAND

E-MAIL: [gdso@earthling.net](mailto:gdso@earthling.net)

WEBSITE: [www.freewebs.com/gdso](http://www.freewebs.com/gdso)

## SUNSPOT RESULTS FOR FEBRUARY 2007

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 ; QC? = 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 .

Stated times (UT) approximate Co-ordinated Universal Time / Temps Universel Coordonne (UTC).

DATE	UT	g	f	WN	p	s	SN	BX	CV	QC	QC?	Q	S	T	Ref.
01															
02	2025	2	12	32	4	6	46	242	98	7	25	2.0	3.0	3.0	4763-2
03	2000	2	9	29	4	5	45	188	98	7	25	1.5	2.5	2.5	4764-2
04															
05	2040	2	5	25	2	3	23	76	82	6	18	1.5	3.0	3.0	4765-3
06															
07	1955	2	2	22	2	0	20	81	50	5	13	1.5	2.5	2.5	4766-3
08	2000	1	1	11	1	0	10	37	10	2	4	1.0	2.5	2.5	4767-3
09															
10															
11															
12	2010	0	0	0	0	0	0	0	0	0	0	2.5	2.5	2.5	4768-3
13	2025	0	0	0	0	0	0	0	0	0	0	2.0	2.5	2.0	4769-3
14	2010	0	0	0	0	0	0	0	0	0	0	1.0	2.5	2.0	4770-3
15															
16	2020	1	1	11	0	1	1	4	1	1	1	2.0	3.0	2.0	4771-3
17	2035	1	1	11	1	0	10	37	10	2	4	1.5	2.5	2.0	4772-3
18															
19															
20															
21	2050	1	2	12	0	2	2	8	2	2	4	1.5	2.0	2.0	4773-3
22	2045	2	2	22	1	1	11	41	11	3	5	2.0	2.5	2.5	4774-3
23															
24	2020	1	1	11	1	0	10	37	10	2	4	2.5	3.0	3.0	4775-3
25															
26	2000	2	2	22	1	1	11	41	11	3	5	2.5	2.5	2.5	4776-3
27															
28															
29	—														
30	—														
31	—														
TOTALS	—	17	38	208	17	19	189	792	383	40	108	25.0	36.5	34.0	—
NOBS	—	14	14	14	14	14	14	14	14	14	14	14	14	14	—
MNS	—	1.21	2.71	14.86	1.21	1.36	13.50	56.57	27.36	2.86	7.71	1.79	2.61	2.43	—

MEAN WEIGHT = 0.4472

MEAN CONDITION = 2.2738

TRUNCATED WOLF NUMBER = 11.64

# Georgi Dobrovolski Solar Observatory

## SUNSPOT DISTRIBUTION & INTER-SOL INDICES FOR FEBRUARY 2007

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 umbr? within penumbr? 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	2025	13	1	5	6	1	0	2.0	3.0	3.0	4763-2
03	2000	10	1	3	5	1	0	1.5	2.5	2.5	4764-2
04											
05	2040	6	1	1	3	1	0	1.5	3.0	3.0	4765-3
06											
07	1955	2	0	0	0	2	0	1.5	2.5	2.5	4766-3
08	2000	1	0	0	0	1	0	1.0	2.5	2.5	4767-3
09											
10											
11											
12	2010	0	0	0	0	0	0	2.5	2.5	2.5	4768-3
13	2025	0	0	0	0	0	0	2.0	2.5	2.0	4769-3
14	2010	0	0	0	0	0	0	1.0	2.5	2.0	4770-3
15											
16	2020	1	0	0	0	0	1	2.0	3.0	2.0	4771-3
17	2035	1	0	0	0	1	0	1.5	2.5	2.0	4772-3
18											
19											
20											
21	2050	3	1	0	2	0	0	1.5	2.0	2.0	4773-3
22	2045	2	0	0	0	1	1	2.0	2.5	2.5	4774-3
23											
24	2020	1	0	0	0	1	0	2.5	3.0	3.0	4775-3
25											
26	2000	2	0	0	0	1	1	2.5	2.5	2.5	4776-3
27											
28											
29	—										
30	—										
31	—										
TOTALS	—	42	4	9	16	10	3	25.0	36.5	34.0	—
NOBS	—	14	14	14	14	14	14	14	14	14	—
MNS	—	3.00	0.29	0.64	1.14	0.71	0.21	1.79	2.61	2.43	—

# Georgi Dobrovolski Solar Observatory

## SUNSPOT CENSUS BY CLASSIFICATION FOR FEBRUARY 2007

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	2025	0	0	0	0	0	0	1	11	0	0	0	0	0	0	1	1	0	0
03	2000	0	0	0	0	0	0	1	8	0	0	0	0	0	0	1	1	0	0
04																			
05	2040	0	0	0	0	1	4	0	0	0	0	0	0	0	0	1	1	0	0
06																			
07	1955	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
08	2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
09																			
10																			
11																			
12	2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	2025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	2010	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15																			
16	2020	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	2035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18																			
19																			
20																			
21	2050	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	2045	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
23																			
24	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
25																			
26	2000	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
27																			
28																			
29	—																		
30	—																		
31	—																		
<b>TOTALS</b>	—	3	3	1	2	1	4	2	19	0	0	0	0	0	0	4	4	6	6
<b>REGIONAL PERCENTAGES</b>																			
A	B	C	D	E	F	G	H	J	SIGMA g										
17.6	5.9	5.9	11.8	0.0	0.0	0.0	23.5	35.3	17										
NOBS = 14				$\overline{p/g}$ mean = 0.9091						$\overline{f/g}$ mean = 2.0000									
				$\overline{p/g}$ mean = 1.0000						$\overline{f/g}$ mean = 2.2353									
GROUP COMPLEXITY INDEX (GCI) = 3.2353																			

# 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 GDSO ANNUAL REPORTS.

### WALDMEIER METHOD

MONTH	$g(S^W)$	$WN(S^W)$	$SN(S^W)$	$BX(S^W)$	$CV(S^W)$	$QC(S^W)$	$IS(S^W)$
2005 SEPTEMBER	2.11	32.64	42.97	243.8	43.20	6.65	13.02
OCTOBER	2.08	32.20	42.68	242.2	42.17	6.52	12.81
NOVEMBER	2.06	31.17	40.20	221.1	40.18	6.31	11.88
DECEMBER	1.93	28.14	34.77	182.9	34.93	5.71	10.00
2006 JANUARY	1.75	25.12	30.36	161.9	30.74	5.06	8.69
FEBRUARY	1.58	22.75	27.18	153.1	28.70	4.62	7.88
MARCH	1.48	21.18	25.31	145.5	27.42	4.40	7.27
APRIL	1.50	21.21	25.00	139.5	27.07	4.43	7.06
MAY	1.56	21.92	25.55	140.9	27.90	4.57	7.20
JUNE	1.48	21.01	24.39	138.9	27.71	4.38	7.13
JULY	1.41	20.26	23.39	138.1	28.14	4.24	7.06
AUGUST	1.48	21.13	24.22	141.8	30.33	4.44	7.25

### BARNES-13 METHOD

MONTH	$g(S^{B13})$	$WN(S^{B13})$	$SN(S^{B13})$	$BX(S^{B13})$	$CV(S^{B13})$	$QC(S^{B13})$	$IS(S^{B13})$
2005 SEPTEMBER	2.15	33.32	44.22	249.2	44.31	6.78	13.33
OCTOBER	2.01	30.56	40.00	223.5	40.02	6.22	11.80
NOVEMBER	1.93	28.43	36.02	197.0	36.23	5.78	10.37
DECEMBER	1.83	26.24	31.96	170.5	32.19	5.31	8.97
2006 JANUARY	1.70	24.02	28.49	151.3	28.81	4.83	7.91
FEBRUARY	1.59	22.37	26.11	140.4	26.87	4.51	7.29
MARCH	1.55	21.71	25.18	137.1	26.35	4.42	7.10
APRIL	1.53	21.56	24.84	135.8	26.44	4.41	7.08
MAY	1.49	21.08	24.29	134.5	26.52	4.36	7.01
JUNE	1.41	20.24	23.57	135.4	26.76	4.24	6.98
JULY	1.38	20.02	23.53	140.6	27.97	4.25	7.13
AUGUST	1.41	20.48	24.07	145.9	29.83	4.39	7.32