



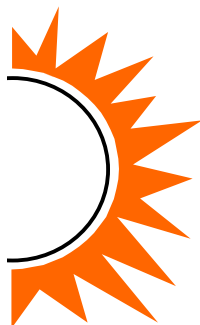
Georgi Dobrovolski Solar Observatory

Sunspot Co-ordinates and Classifications

2004

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Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

JANUARY 2004

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

CM is stated in degrees .

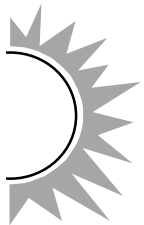
Region Numbers are NOAA/SEC Numbers .

B = Heliographic Latitude (+ if NORTH , - if SOUTH) .

CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .

L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4357	2004 / 01 / 01	2010	153.5	0536	-11	-76	078	1	1	0	0	0	0	1	0	HHX	big
				0534	-06	-31	123	13	4	5	1	8	5	0	0	DAC	-
				0535	-19	+35	189	1	1	0	0	0	0	1	0	HSX	-
4358	2004 / 01 / 02	1945	140.6	0536	-11	-67	074	8	2	2	1	6	2	0	0	EKI	-
				0534	-06	-19	122	11	3	4	1	7	4	0	0	DAC	small
				0535	-19	+47	188	6	3	2	1	4	2	0	0	DAC	-
4359	2004 / 01 / 04	2035	113.8	0536	-10	-40	074	16	4	4	1	12	4	0	0	EKC	-
				0534	-05	+11	125	9	2	6	1	3	6	0	0	DAI	-
				0535	-21	+74	188	3	1	1	1	2	1	0	0	CAO	-
4360	2004 / 01 / 07	2000	74.6	0537	+05	-67	008	9	2	2	1	7	2	0	0	DAI	-
				0539	+09	-32	043	2	2	0	1	2	0	0	0	DSO	-
				0538	+07	-07	068	2	0	2	1	0	2	0	0	BXO	-
				0536	-12	+01	076	27	4	9	1	18	9	0	0	DKC	long
4361	2004 / 01 / 09	1950	48.3	0537	+05	-39	009	9	3	3	1	6	3	0	0	DAC	-
				0536	-12	+26	074	25	3	7	1	18	7	0	0	DKC	long
4362	2004 / 01 / 10	2010	35.0	0537	+05	-26	009	8	2	3	1	5	3	0	0	DAI	-
				0536	-12	+39	074	19	3	4	1	15	4	0	0	DKC	long
4363	2004 / 01 / 15	1950	329.3	0542	+11	-69	260	2	1	1	1	1	1	0	0	CSO	small
				0540	-13	-45	284	12	3	4	1	8	4	0	0	EAC	-
				?	+06	-10	319	1	0	1	0	0	0	0	1	AXX	-
				0541	-09	+01	330	4	1	2	1	2	2	0	0	CAI	small
				0537	+04	+41	010	9	1	3	1	6	3	0	0	CAI	-
4364	2004 / 01 / 17	1955	303.0	0540	-14	-17	286	13	2	6	1	7	6	0	0	EAO	-
				0541	-09	+29	332	3	2	0	1	3	0	0	0	DAO	-
				0537	+04	+68	011	5	2	1	1	4	1	0	0	DAI	-



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

JANUARY 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4365	2004 / 01 / 19	2035	276.3	0544	+08	-24	252	10	2	2	1	8	2	0	0	DAI	—
				0542	+08	-17	259	11	2	4	1	7	4	0	0	DAI	—
				0543	-18	-07	269	6	2	2	1	4	2	0	0	DAI	—
				0540	-14	+08	284	17	3	8	1	9	8	0	0	FSI	—
4366	2004 / 01 / 21	2110	249.6	0544	+08	+02	252	10	2	6	1	4	6	0	0	DAI	—
				0542	+10	+14	264	14	5	7	1	7	7	0	0	DAC	—
				0543	-16	+19	269	7	3	4	1	3	4	0	0	DSC	—
				0540	-14	+33	283	6	2	4	1	2	4	0	0	FSO	—
4367	2004 / 01 / 25	2030	197.3	—	—	—	—	0	0	0	0	0	0	0	0	—	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

FEBRUARY 2004

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

CM is stated in degrees .

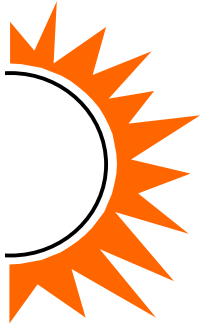
Region Numbers are NOAA/SEC Numbers .

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CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .

L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4368	2004 / 02 / 12	1955	320.6	0554	-10	-15	306	7	2	4	1	3	4	0	0	DSI	—
				0556	+16	-09	312	8	3	2	1	5	3	0	0	DAC	small
				0557	-11	+16	337	3	1	1	1	2	1	0	0	CAO	—
				0551	-08	+65	026	1	1	0	0	0	0	1	0	HSX	—
4369	2004 / 02 / 13	2030	307.1	0558	-15	-38	269	2	1	1	1	1	1	0	0	CSO	—
				0554	-08	-01	306	8	2	5	1	3	5	0	0	DSI	—
				0556	+16	+02	309	4	1	3	1	1	3	0	0	CSI	—
				0559	+07	+26	333	2	0	2	1	0	2	0	0	BXO	—
				0557	-11	+30	337	3	2	0	1	3	0	0	0	DAO	small
4370	2004 / 02 / 14	2020	294.1	0561	+02	-80	214	1	1	0	0	0	0	1	0	HSX	—
				0558	-16	-24	270	1	0	1	0	0	0	0	1	AXX	—
				0554	-09	+10	304	6	2	3	1	3	3	0	0	DSI	—
				0556	+17	+16	310	2	0	2	1	0	2	0	0	BXO	—
				0559	+07	+39	333	4	2	1	1	3	1	0	0	DSI	—
4371	2004 / 02 / 16	2110	267.3	0561	+02	-54	213	1	1	0	0	0	0	1	0	HSX	small
				0554	-08	+41	308	1	1	0	0	0	0	1	0	HSX	—
				0559	+07	+66	333	1	0	1	0	0	0	0	1	AXX	—
4372	2004 / 02 / 21	2100	201.5	0563	-24	-54	148	1	1	0	0	0	0	1	0	HSX	—
				0562	-13	-48	154	1	1	0	0	0	0	1	0	HSX	small
				0564	+14	-45	157	11	4	5	1	6	5	0	0	DAC	—

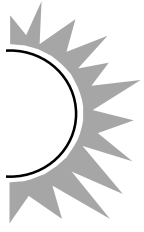


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR MARCH 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
 B = Heliographic Latitude (+ if NORTH , - if SOUTH) .
 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4373	2004 / 03 / 01	2015	83.4	0567	-13	-14	069	17	2	11	1	6	11	0	0	DAI	—
				0565	-04	+61	144	2	1	1	1	1	1	0	0	CSO	tight
				0564	+13	+77	160	1	1	0	0	0	0	1	0	HHX	—
4374	2004 / 03 / 02	2040	70.0	0567	-12	+01	071	19	4	11	1	8	11	0	0	EAC	short
				0565	-03	+75	145	1	1	0	0	0	0	1	0	HSX	—
4375	2004 / 03 / 03	2035	56.9	0567	-12	+13	070	22	3	12	1	10	12	0	0	EAC	—
4376	2004 / 03 / 04	2035	43.7	0569	-11	-33	011	4	2	1	1	3	1	0	0	DAI	—
				0567	-12	+26	070	14	4	6	1	8	6	0	0	EAC	—
4377	2004 / 03 / 06	2040	17.3	0570	-13	-72	305	3	2	0	1	3	0	0	0	FHO	—
				0569	-11	-05	012	9	2	3	1	6	3	0	0	DAI	—
				0567	-12	+53	070	7	3	2	1	5	2	0	0	EAC	small
4378	2004 / 03 / 07	2045	4.1	0570	-14	-62	302	8	3	2	1	6	2	0	0	FHC	—
				0569	-11	+08	012	3	1	2	1	1	2	0	0	CSI	—
				0567	-14	+63	067	2	1	1	1	1	1	0	0	CSO	—
4379	2004 / 03 / 09	2025	337.9	0570	-14	-37	301	16	3	7	1	9	6	0	0	FKC	—
				0569	-12	+37	015	2	1	1	1	1	1	0	0	CSO	small
				?	-09	+65	043	1	0	1	0	0	0	0	1	AXX	—
4380	2004 / 03 / 10	2050	324.5	0570	-14	-22	302	19	2	2	1	17	2	0	0	FKO	class correct
				0571	-14	+11	335	1	0	1	0	0	0	0	1	AXX	small
				0569	-12	+52	016	1	1	0	0	0	0	1	0	HSX	small
4381	2004 / 03 / 15	2025	258.8	0573	-12	-35	224	2	1	0	1	2	0	0	0	HAX	—
				0572	+19	+43	302	3	1	1	1	2	1	0	0	CAO	—
				0570	-14	+44	303	2	2	0	1	2	0	0	0	DSO	—
4382	2004 / 03 / 17	2030	232.4	0577	-01	-79	153	1	1	0	0	0	0	1	0	HSX	—
				0574	-02	-58	174	15	4	5	1	10	5	0	0	DAC	long
				0573	-12	-08	224	1	1	0	0	0	0	1	0	HSX	small
				0575	-18	-00	232	1	0	1	0	0	0	0	1	AXX	—
				0576	-18	+36	268	3	2	1	1	2	1	0	0	DSI	—
				0570	-14	+78	310	2	2	0	1	2	0	0	0	DSO	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

MARCH 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4383	2004 / 03 / 20	2100	192.6	0578	+15	-49	144	9	4	3	1	6	3	0	0	EAC	small
				0577	-01	-41	152	1	1	0	0	0	0	1	0	HSX	–
				0574	-04	-16	177	17	3	14	1	3	14	0	0	ESC	small
4384	2004 / 03 / 23	2155	152.5	0578	+15	-07	146	26	5	11	1	15	11	0	0	FAC	–
				0577	-01	-01	152	4	2	1	1	3	1	0	0	DSI	small
				0574	-04	+23	176	19	4	12	1	7	12	0	0	EAC	–
4385	2004 / 03 / 25	2120	126.5	0582	+16	-73	053	5	2	2	1	3	2	0	0	DHI	–
				0581	-03	-67	059	2	1	1	1	1	1	0	0	CSO	–
				0584	-13	-48	078	2	1	1	1	1	1	0	0	CRO	–
				0578	+15	+20	146	21	4	6	1	15	6	0	0	FAC	–
				0580	-06	+20	146	4	2	1	1	3	1	0	0	DSI	–
				0577	-00	+24	150	3	2	0	1	3	0	0	0	DAO	–
				0574	-04	+51	177	8	2	2	1	6	2	0	0	EAI	–
4386	2004 / 03 / 28	2120	86.9	0587	-13	-75	012	1	0	1	0	0	0	0	1	AXX	big
				0585	-14	-42	045	5	2	2	1	3	2	0	0	DAI	small
				0582	+15	-32	055	16	4	10	1	6	10	0	0	EAC	–
				0581	-03	-26	061	1	1	0	0	0	0	1	0	HSX	–
				0584	-13	-10	077	1	0	1	0	0	0	0	1	AXX	–
				0577	-03	+66	153	1	0	1	0	0	0	0	1	AXX	–
4387	2004 / 03 / 29	2140	73.5	0587	-12	-65	009	3	3	0	1	3	0	0	0	DSC	minute
				0585	-14	-27	047	2	0	2	1	0	2	0	0	BXO	–
				0582	+14	-20	054	19	4	12	1	7	12	0	0	ESC	–
				0581	-04	-13	061	1	1	0	0	0	0	1	0	HSX	–



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

APRIL 2004

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

CM is stated in degrees .

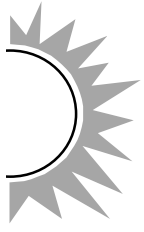
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OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4388	2004 / 04 / 02	2105	21.1	0588	-12	-65	316	1	1	0	0	0	0	1	0	HSX	—
				0587	-13	-12	009	8	1	4	1	4	4	0	0	CAI	—
				0582	+14	+34	055	4	1	3	1	1	3	0	0	CHI	long
				0581	-05	+40	061	1	1	0	0	0	0	1	0	HSX	—
4389	2004 / 04 / 06	2115	328.2	0588	-15	-15	313	12	4	2	1	10	2	0	0	DSC	—
				0587	-13	+44	012	5	1	3	1	2	3	0	0	CAI	—
4390	2004 / 04 / 07	2145	314.7	0588	-17	-02	313	10	5	2	1	8	2	0	0	DSC	—
				0587	-13	+58	013	2	1	0	1	2	0	0	0	HAX	very small
4391	2004 / 04 / 13	2150	235.5	0591	-16	+13	248	11	2	5	1	6	5	0	0	DAI	—
				0588	-13	+80	315	1	1	0	0	0	0	1	0	HSX	—
4392	2004 / 04 / 14	2120	222.6	0594	+15	-72	151	1	1	0	0	0	0	1	0	HSX	—
				0592	-12	-49	174	1	0	1	0	0	0	0	1	AXX	big
				0593	-20	-46	177	1	0	1	0	0	0	0	1	AXX	—
				0591	-16	+22	245	13	3	7	1	6	7	0	0	DAC	—
4393	2004 / 04 / 15	2230	208.7	0594	+15	-58	151	1	1	0	0	0	0	1	0	HSX	—
				0592	-12	-35	174	1	0	1	0	0	0	0	1	AXX	small
				0593	-20	-32	177	1	0	1	0	0	0	0	1	AXX	big
				?	-07	+07	216	2	0	2	1	0	2	0	0	BXO	small
				0591	-16	+36	245	6	2	2	1	4	2	0	0	DAI	—
4394	2004 / 04 / 16	2235	195.5	?	-04	-70	125	1	0	1	0	0	0	0	1	AXX	small
				0595	-09	-69	126	2	0	2	1	0	2	0	0	BXO	—
				0594	+15	-41	154	2	1	0	1	2	0	0	0	HAX	—
				0592	-11	-20	175	1	1	0	0	0	0	1	0	HSX	small
				0591	-16	+51	246	4	1	1	1	3	1	0	0	CAO	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

APRIL 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4395	2004 / 04 / 18	2215	169.2	0596	-08	-61	108	12	2	4	1	8	4	0	0	DAI	–
				0595	-08	-41	128	8	2	2	1	6	2	0	0	DAI	–
				0594	+15	-15	154	1	1	0	0	0	0	1	0	HSX	small
				0593	-18	+10	179	9	3	2	1	7	2	0	0	DAC	–
4396	2004 / 04 / 21	2145	129.9	0596	-07	-21	109	14	4	5	1	9	5	0	0	EKC	short
				0595	-06	-02	128	4	1	2	1	2	2	0	0	CAI	–
				0598	-05	+28	158	1	0	1	0	0	0	0	1	AXX	big
				0593	-18	+49	179	1	0	1	0	0	0	0	1	AXX	–
				0597	-06	+70	200	2	1	1	1	1	1	1	0	0	CSO
4397	2004 / 04 / 25	2140	77.1	0599	+15	-29	048	11	4	2	1	9	2	0	0	DAC	–
				0596	-08	+34	111	3	1	0	1	3	0	0	0	HKX	–
4398	2004 / 04 / 27	2150	50.6	0599	+14	-04	047	8	2	2	1	6	2	0	0	DAI	–
				0596	-08	+65	116	2	2	0	1	2	0	0	0	DSO	tight

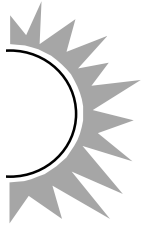


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR MAY 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
 B = Heliographic Latitude (+ if NORTH , - if SOUTH) .
 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4399	2004 / 05 / 05	2145	304.9	0604	-19	-25	280	3	2	1	1	2	1	0	0	DSI	—
				0605	-12	+14	319	12	3	4	1	8	4	0	0	DSC	—
4400	2004 / 05 / 06	2155	291.6	0604	-19	-13	279	2	0	2	1	0	2	0	0	BXO	—
				0605	-11	+27	319	2	1	1	1	1	1	0	0	CSO	—
4401	2004 / 05 / 15	2140	172.7	0615	+17	-80	093	1	1	0	0	0	0	1	0	HSX	—
				0613	-08	-54	119	1	1	0	0	0	0	1	0	HSX	—
				0609	-03	+03	176	18	3	6	1	12	6	0	0	DAC	—
				0612	+10	+19	192	7	2	2	1	5	2	0	0	DAI	—
				0606	-09	+24	197	3	1	1	1	2	1	0	0	CAO	—
4402	2004 / 05 / 16	2205	159.2	0616	+08	-73	086	1	1	0	0	0	0	1	0	HSX	—
				0613	-08	-40	119	1	1	0	0	0	0	1	0	HSX	—
				0609	-03	+17	176	13	4	3	1	10	3	0	0	DAC	—
				0612	+11	+32	191	10	2	4	1	6	4	0	0	DAI	—
				0606	-08	+37	196	5	2	3	1	2	3	0	0	DSI	—
4403	2004 / 05 / 17	2225	145.8	0615	+16	-53	093	2	1	0	1	2	0	0	0	HAX	—
				0613	-09	-27	119	1	1	0	0	0	0	1	0	HSX	—
				0617	-12	-13	133	4	2	2	1	2	2	0	0	DSI	small
				0609	-03	+29	175	16	4	4	1	12	4	0	0	DAC	—
				0612	+10	+44	190	5	1	3	1	2	3	0	0	CAI	—
4404	2004 / 05 / 18	2240	132.5	0606	-08	+51	197	2	1	1	1	1	1	0	0	CSO	tight
				0615	+17	-39	093	2	1	0	1	2	0	0	0	HAX	—
				0613	-09	-13	119	1	1	0	0	0	0	1	0	HSX	—
				0617	-11	+03	135	7	2	4	1	3	4	0	0	DAI	v. small
				0609	-03	+45	177	13	4	5	1	8	5	0	0	DAC	—
4404	2004 / 05 / 18	2240	132.5	0612	+10	+58	190	3	1	1	1	2	1	0	0	CAO	—
				0606	-10	+66	198	1	1	0	0	0	0	1	0	HSX	—

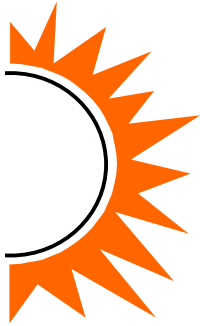


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

MAY 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4405	2004 / 05 / 20	2225	106.1	0618	-10	-70	036	3	1	2	1	1	2	0	0	CRI	–
				0615	+18	-15	091	3	1	1	1	2	1	0	0	CAO	–
				0613	-09	+13	119	1	1	0	0	0	0	1	0	HSX	–
				0617	-10	+31	137	7	2	5	1	2	5	0	0	DSI	small
				0609	-03	+69	175	5	2	2	1	3	2	0	0	DAI	–
4406	2004 / 05 / 23	2155	66.7	0620	-15	-36	031	4	1	2	1	2	2	0	0	CAI	–
				0618	-10	-28	039	28	4	15	1	13	15	0	0	EAC	–
				0615	+17	+25	092	1	1	0	0	0	0	1	0	HSX	–
				0619	-09	+35	102	3	1	2	1	1	2	0	0	CSI	small
				0613	-09	+53	120	1	1	0	0	0	0	1	0	HSX	–
4407	2004 / 05 / 25	2235	39.9	0618	-10	-01	039	32	4	15	1	17	15	0	0	EAC	–
				0615	+17	+52	092	1	1	0	0	0	0	1	0	HSX	–
				0613	-09	+80	120	1	1	0	0	0	0	1	0	HSX	–
4408	2004 / 05 / 26	2250	26.5	0618	-10	+12	039	27	6	12	1	15	12	0	0	EAC	–
				0615	+17	+65	092	1	1	0	0	0	0	1	0	HSX	–



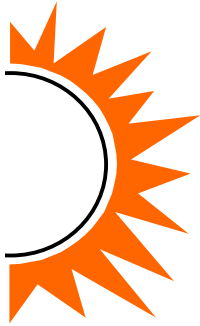
Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR JUNE 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
 B = Heliographic Latitude (+ if NORTH , - if SOUTH) .
 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks	
4409	2004 / 06 / 07	2235	227.9	0629	-04	-24	204	2	1	1	1	1	1	0	0	CSO	small	
				0628	-09	-15	213	2	1	1	1	1	1	0	0	CSO	-	
				0627	-08	-06	222	6	2	3	1	3	3	0	0	DAI	-	
				0621	-14	+55	283	1	0	1	0	0	0	0	0	1	AXX	-
4410	2004 / 06 / 10	2205	188.4	0632	-12	-67	121	1	1	0	0	0	0	1	0	HSX	-	
				0631	-10	-30	158	3	1	2	1	1	2	0	0	CSI	-	
				0622	-11	+71	259	2	0	2	1	0	2	0	0	BXO	-	
4411	2004 / 06 / 11	2220	175.0	0632	-11	-54	121	1	1	0	0	0	0	1	0	HSX	-	
				0631	-10	-16	159	4	2	1	1	3	1	0	0	DAI	-	
4412	2004 / 06 / 12	2250	161.5	0632	-11	-40	122	1	1	0	0	0	0	1	0	HSX	-	
				0631	-10	-04	158	2	1	1	1	1	1	0	0	CSO	-	
4413	2004 / 06 / 13	2255	148.3	0634	+12	-74	074	8	3	3	1	5	3	0	0	EHC	-	
				0633	-05	-38	110	2	0	2	1	0	2	0	0	BXO	-	
				0632	-11	-27	121	1	1	0	0	0	0	1	0	HSX	-	
				0631	-10	+09	157	2	0	2	1	0	2	0	0	BXO	small	
4414	2004 / 06 / 14	2305	134.9	?	-12	-79	056	2	2	0	1	2	0	0	0	DSO	-	
				0635	-08	-71	064	4	2	1	1	3	1	0	0	FAI	-	
				0634	+13	-61	074	8	3	3	1	5	3	0	0	FKC	-	
				0633	-06	-25	110	1	0	1	0	0	0	0	0	1	AXX	-
				0632	-11	-14	121	1	1	0	0	0	0	0	1	0	HSX	-
4415	2004 / 06 / 22	2215	29.5	0636	-10	-04	025	3	0	3	1	0	3	0	0	BXI	-	
				0635S *	-17	+19	048	7	2	5	1	2	5	0	0	DSI	-	
				0635	-11	+28	057	18	5	6	1	12	6	0	0	FKC	-	
				?	-22	+33	062	1	1	0	0	0	0	1	0	HSX	small	
				0634	+12	+44	073	1	1	0	0	0	0	1	0	HHX	-	
4416	2004 / 06 / 23	2235	16.0	0637	+08	-39	337	1	0	1	0	0	0	0	1	AXX	-	
				0635S	-17	+32	048	6	2	3	1	3	3	0	0	DAI	-	
				0635	-12	+40	056	20	4	7	1	13	7	0	0	FKC	-	
				0634	+12	+57	073	3	1	2	1	1	2	0	0	CHI	-	

* GDSO designation.

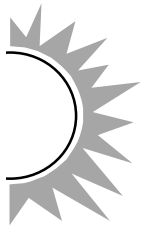


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR JULY 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
 B = Heliographic Latitude (+ if NORTH , - if SOUTH) .
 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4417	2004 / 07 / 02	2320	256.5	0639	+09	-07	250	4	1	2	1	2	2	0	0	CAI	—
				0640	-09	-03	254	5	3	2	1	3	2	0	0	DSC	small
4418	2004 / 07 / 04	0150	241.9	0639	+08	+11	253	6	1	3	1	3	3	0	0	CAI	—
				0640	-09	+14	256	1	0	1	0	0	0	0	1	AXX	—
4419	2004 / 07 / 07	2225	190.9	0642	-08	-65	126	2	0	2	1	0	2	0	0	BXO	—
4420	2004 / 07 / 09	2240	164.2	0644	+11	-84	080	1	1	0	0	0	0	1	0	HSX	—
				0642	-07	-40	124	8	2	5	1	3	5	0	0	DAI	—
				0643	-08	+05	169	3	1	2	1	1	2	0	0	CSI	—
4421	2004 / 07 / 10	2250	150.9	0644	+11	-71	080	1	1	0	0	0	0	1	0	HSX	—
				0642	-07	-28	123	13	4	7	1	6	7	0	0	DAC	—
				0645	+12	+09	160	2	1	1	1	1	1	0	0	CSO	—
				0643	-09	+20	171	2	1	1	1	1	1	0	0	CSO	small
4422	2004 / 07 / 11	2300	137.6	0644	+12	-60	078	1	1	0	0	0	0	1	0	HSX	—
				0642	-07	-14	124	14	5	6	1	8	6	0	0	DAC	—
				0648	+14	-07	131	1	0	1	0	0	0	0	1	AXX	small
				0645	+11	+16	154	5	1	4	1	1	4	0	0	CSI	—
4423	2004 / 07 / 12	2250	124.4	0649	-10	-77	047	5	1	1	1	4	1	0	0	CAO	—
				0651	-18	-72	052	1	0	1	0	0	0	0	1	AXX	—
				0650	-10	-63	061	1	0	1	0	0	0	0	1	AXX	—
				0644	+11	-45	079	4	1	3	1	1	3	0	0	CSI	—
				0642	-07	-00	124	16	3	8	1	8	8	0	0	DAC	—
				0648	+14	+07	131	6	2	3	1	3	3	0	0	DSI	small
				0645	+11	+31	155	12	3	4	1	8	4	0	0	DAC	—
4424	2004 / 07 / 13	2305	111.1	0649	-10	-65	046	22	4	5	1	17	5	0	0	EKC	—
				0651	-17	-59	052	1	0	1	0	0	0	0	1	AXX	small
				0650	-09	-50	061	1	0	1	0	0	0	0	1	AXX	big
				0644	+11	-31	080	7	2	2	1	5	2	0	0	DAI	—
				0642	-07	+15	126	8	3	3	1	5	3	0	0	DAC	—
				0648	+16	+21	132	6	1	5	1	1	5	0	0	CSI	—
				0646	+13	+59	170	9	4	2	1	7	2	0	0	DAC	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

JULY 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4425	2004 / 07 / 17	2210	58.7	0653	-14	-73	346	6	2	0	1	6	0	0	0	DAO	–
				0652	+05	-72	347	14	4	3	1	11	3	0	0	FKC	big
				0649	-10	-15	044	21	3	6	1	15	6	0	0	EAC	–
				0651	-16	-03	056	2	0	2	1	0	2	0	0	BXO	–
				0644	+13	+18	077	7	1	5	1	2	5	0	0	CAI	–
				0642	-07	+67	126	2	1	1	1	1	1	0	0	CSO	–
4426	2004 / 07 / 18	2225	45.3	0653	-14	-59	346	11	3	3	1	8	3	0	0	DAC	–
				0652	+05	-59	346	34	4	8	1	26	8	0	0	FKC	–
				?	+20	-30	015	1	0	1	0	0	0	0	1	AXX	–
				?	-16	-11	034	1	0	1	0	0	0	0	1	AXX	–
				0649	-10	-01	044	24	5	11	1	13	11	0	0	EAC	–
				0651	-16	+09	054	2	0	2	1	0	2	0	0	BXO	–
				0644	+13	+32	077	1	1	0	0	0	0	1	0	HSX	–
4427	2004 / 07 / 21	2225	5.6	0653	-12	-22	344	7	2	3	1	4	3	0	0	DAI	–
				0652	+08	-21	345	49	6	10	1	39	10	0	0	FKC	–
				0649	-10	+39	045	11	3	5	1	6	5	0	0	DAC	–
				0644	+12	+71	077	1	1	0	0	0	0	1	0	HSX	–
4428	2004 / 07 / 23	2215	339.2	0653	-13	+08	347	6	1	4	1	2	4	0	0	CAI	–
				0652	+08	+09	348	62	6	14	1	48	14	0	0	FKC	–
				0649	-11	+73	052	1	1	0	0	0	0	1	0	HSX	–
4429	2004 / 07 / 24	2210	326.1	0652	+08	+20	346	58	7	15	1	45	13	0	0	FKC	–
				0653	-12	+22	348	2	1	1	1	1	1	0	0	CSO	–
4430	2004 / 07 / 25	2220	312.7	0654	+08	-53	260	4	2	2	1	2	2	0	0	DSI	small
				0652	+08	+34	347	55	7	15	1	40	15	0	0	FKC	–
				0653	-12	+37	350	1	1	0	0	0	0	1	0	HSX	–
4431	2004 / 07 / 30	2215	246.6	0655	-09	-72	175	1	1	0	0	0	0	1	0	HSX	–
				0654	+08	+14	261	11	2	6	1	5	6	0	0	DAI	long
4432	2004 / 07 / 31	2225	233.3	0655	-09	-58	175	2	1	1	1	1	1	0	0	CSO	–
				0654	+08	+27	260	6	2	3	1	3	3	0	0	DAI	long

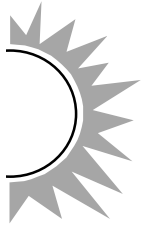


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR AUGUST 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
 B = Heliographic Latitude (+ if NORTH , - if SOUTH) .
 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4433	2004 / 08 / 02	2210	207.0	0655	-09	-34	173	13	5	5	1	8	5	0	0	EAC	short
				0654	+08	+55	262	4	2	2	1	2	2	0	0	DSI	long
4434	2004 / 08 / 10	2140	101.5	0659	+17	-61	041	2	1	0	1	2	0	0	0	HAX	—
				?	-10	-42	060	1	0	1	0	0	0	0	1	AXX	—
				0657	+11	-27	075	2	1	1	1	1	1	0	0	CSO	—
				0656	-12	-20	082	47	9	12	1	35	12	0	0	EKC	—
4435	2004 / 08 / 12	2135	75.1	0661	+08	-86	349	1	1	0	0	0	0	1	0	HSX	—
				0660	-07	-50	025	3	1	2	1	1	2	0	0	CSI	—
				0659	+18	-35	040	1	1	0	0	0	0	1	0	HRX	—
				?	-11	-18	057	1	0	1	0	0	0	0	1	AXX	small
				0657	+10	+00	075	1	1	0	0	0	0	1	0	HSX	—
				0656	-13	+07	082	62	6	9	1	53	9	0	0	FKC	—
4436	2004 / 08 / 15	2310	34.6	0661	+07	-47	348	3	2	0	1	3	0	0	0	DKO	—
				0660	-07	-05	030	1	1	0	0	0	0	1	0	HSX	small
				0656	-13	+47	082	43	5	6	1	37	6	0	0	FKC	—
4437	2004 / 08 / 16	2305	21.4	?	+12	-37	344	2	0	2	1	0	2	0	0	BXO	—
				0661	+07	-33	348	8	3	2	1	6	2	0	0	DKC	—
				0660	-07	+09	030	1	0	1	0	0	0	0	1	AXX	—
				0656	-13	+61	082	35	7	6	1	29	6	0	0	FKC	—
4438	2004 / 08 / 18	2210	355.5	0662	+12	-29	326	9	3	5	1	4	5	0	0	DAC	small
				?	+13	-12	343	2	0	2	1	0	2	0	0	BXO	small
				0661	+09	-08	347	12	2	9	1	3	9	0	0	DKI	—
4439	2004 / 08 / 19	2220	342.2	0663	+08	-76	266	1	1	0	0	0	0	1	0	HSX	—
				0662	+13	-14	328	8	2	3	1	5	3	0	0	DAI	—
				?	+14	+02	344	1	0	1	0	0	0	0	1	AXX	small
				0661	+09	+05	347	10	2	7	1	3	7	0	0	DKI	—



REGION CO-ORDINATES AND CLASSIFICATIONS FOR
AUGUST 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4440	2004 / 08 / 20	2200	329.1	?	+16	-75	254	1	1	0	0	0	0	1	0	HSX	small umbra
				0663	+10	-66	263	2	1	1	1	1	1	0	0	CSO	–
				0664	-11	-41	288	9	3	4	1	5	4	0	0	DAC	–
				0662	+13	-01	328	11	4	4	1	7	4	0	0	DAC	–
				0661	+08	+18	347	9	3	2	1	7	2	0	0	DKC	–
4441	2004 / 08 / 23	2255	289.0	0663	+11	-27	262	4	2	2	1	2	2	0	0	DSI	long
				0664	-11	+02	291	9	3	3	1	6	3	0	0	DAC	long
				0661	+07	+59	348	3	2	0	1	3	0	0	0	DKO	–
4442	2004 / 08 / 24	2200	276.3	0663	+10	-13	263	3	1	2	1	1	2	0	0	CSI	–
				0664	-11	+15	291	8	3	4	1	4	4	0	0	DAO	class correct
				0661	+06	+72	348	5	2	1	1	4	1	0	0	DKI	–
4443	2004 / 08 / 25	2150	263.2	0663	+10	-00	263	5	1	3	1	2	3	0	0	CAI	long
				0664	-11	+28	291	4	1	3	1	1	3	0	0	CSI	–
				0661	+06	+83	346	1	1	0	0	0	0	1	0	HHX	–
4444	2004 / 08 / 26	2235	249.5	0663	+10	+13	263	7	2	3	1	4	3	0	0	DAI	long
				0664	-11	+41	291	1	1	0	0	0	0	1	0	HSX	–
4445	2004 / 08 / 27	2220	236.5	0663	+10	+27	263	4	2	1	1	3	1	0	0	EAO	short, class correct
				0664	-11	+57	293	1	1	0	0	0	0	1	0	HSX	–
4446	2004 / 08 / 28	2130	223.7	0663	+09	+39	263	2	2	0	1	2	0	0	0	ESO	short
				0664	-11	+71	295	1	1	0	0	0	0	1	0	HSX	–
4447	2004 / 08 / 29	2150	210.3	0663	+08	+59	269	1	1	0	0	0	0	1	0	HSX	–
4448	2004 / 08 / 30	2240	196.7	0663	+05	+72	269	3	2	1	1	2	1	0	0	DSI	–



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

SEPTEMBER 2004

All observations carried out by HOWARD BARNES .

Telescope : 76 mm refractor (f . l . 910 mm) .

Observed by PROJECTION . Full disc diameter = 145 mm approx .

CM is stated in degrees .

Region Numbers are NOAA/SEC Numbers .

B = Heliographic Latitude (+ if NORTH , - if SOUTH) .

CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .

L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4449	2004/09/04	2135	131.2	0667	-10	-38	093	2	1	0	1	2	0	0	0	HKX	—
				?	-05	+34	165	1	1	0	0	0	0	1	0	HSX	small
				0668	-10	+47	178	7	2	4	1	3	4	0	0	DAI	—
4450	2004/09/05	2140	118.0	0669	-06	-37	081	2	2	0	1	2	0	0	0	DSO	—
				0667	-11	-25	093	2	1	1	1	1	1	0	0	CKO	—
				0668	-11	+61	179	3	1	2	1	1	2	0	0	CSI	—
4451	2004/09/06	2120	104.9	0669	-07	-21	084	8	3	3	1	5	3	0	0	DAC	—
				0667	-11	-11	094	3	1	1	1	2	1	0	0	CKO	—
				0671	-10	+27	132	6	3	3	1	3	3	0	0	DSC	small
4452	2004/09/13	2105	12.6	0672	+04	-25	348	24	7	9	1	15	9	0	0	DAC	—
				0669	-04	+78	091	1	1	0	0	0	0	1	0	HSX	small
4453	2004/09/14	2115	359.3	0672	+05	-12	347	28	6	11	1	17	11	0	0	DAC	—
4454	2004/09/16	2115	332.9	0673	-12	-64	269	5	3	1	1	4	1	0	0	DHC	—
				0672	+05	+15	348	23	4	16	1	7	16	0	0	DAC	—
4455	2004/09/19	2110	293.4	0673	-13	-24	269	15	3	7	1	8	7	0	0	DHC	—
				0672	+05	+56	349	6	2	3	1	3	3	0	0	DAI	—
4456	2004/09/25	2100	214.3	0675	-08	-77	137	1	1	0	0	0	0	1	0	HSX	—
				0673	-13	+55	269	1	1	0	0	0	0	1	0	HHX	—
4457	2004/09/28	2105	174.6	0676	-11	-78	097	1	1	0	0	0	0	1	0	HSX	—
				0675	-08	-37	138	1	1	0	0	0	0	1	0	HSX	—

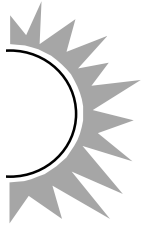


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR OCTOBER 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
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 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4458	2004 / 10 / 02	2120	121.7	0676	-12	-27	095	2	1	0	1	2	0	0	0	HAX	—
				0675	-09	+17	139	3	1	2	1	1	2	0	0	0	CSI
4459	2004 / 10 / 05	2115	82.18	0676	-12	+13	095	3	1	2	1	1	2	0	0	CSI	—
				0675	-11	+57	139	1	1	0	0	0	0	1	0	HSX	—
4460	2004 / 10 / 16	2030	297.5	0683	-09	-37	260	2	1	1	1	1	1	0	0	CSO	—
				0682	-14	-25	272	11	3	4	1	7	4	0	0	DAC	—
4461	2004 / 10 / 18	2050	270.9	0684	-05	-55	216	1	1	0	0	0	0	1	0	HSX	—
				0685	-05	-28	243	5	2	3	1	2	3	0	0	DSI	—
				0683	-10	-10	261	4	2	2	1	2	2	0	0	DSI	—
				0682	-13	+01	272	11	4	3	1	8	3	0	0	DAC	—
4462	2004 / 10 / 20	2005	245.0	0687	+10	-68	177	3	2	0	1	3	0	0	0	DAO	—
				0684	-05	-30	215	1	1	0	0	0	0	1	0	HSX	—
				0685	-06	-01	244	7	2	4	1	3	4	0	0	DAO	—
				0683	-11	+15	260	2	0	2	1	0	2	0	0	BXO	—
				0682	-13	+30	275	18	3	6	1	12	6	0	0	EAC	—
				0688	-08	+45	290	3	1	1	1	2	1	0	0	CAO	—
4463	2004 / 10 / 21	2135	230.9	0689	+12	-76	155	1	1	0	0	0	0	1	0	HSX	—
				0687	+10	-54	177	4	2	0	1	4	0	0	0	DKO	tight
				0684	-05	-16	215	4	2	2	1	2	2	0	0	DSI	—
				0685	-06	+13	244	3	2	0	1	3	0	0	0	DAO	—
				0682	-13	+44	275	13	3	4	1	9	4	0	0	EAC	—
				0688	-08	+59	290	1	1	0	0	0	0	1	0	HSX	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

OCTOBER 2004 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4464	2004 / 10 / 26	2020	165.7	0691W*	+17	-41	125	4	1	3	1	1	3	0	0	CSI	small
				0691	+12	-30	136	5	1	1	1	4	1	0	0	CAO	—
				0690	+00	-29	137	6	2	1	1	5	1	0	0	DAI	—
				0689	+12	-13	153	2	1	1	1	1	1	0	0	CSO	—
				0692	-18	-06	160	4	2	1	1	3	1	0	0	DAI	—
				0687	+12	+08	174	31	6	9	1	22	9	0	0	EAC	—
				0684	-05	+51	217	2	1	0	1	2	0	0	0	HAX	—
4465	2004 / 10 / 30	1955	113.2	0695	-15	-70	043	2	1	1	1	1	1	0	0	CSO	—
				0693	-16	-36	077	19	5	11	1	8	11	0	0	FKC	—
				0694	+15	+04	117	2	0	2	1	0	2	0	0	BXO	—
				0691	+14	+24	137	14	2	4	1	10	4	0	0	DKI	—
				0690	+01	+25	138	3	1	1	1	2	1	0	0	CAO	—
				0689	+12	+41	154	1	1	0	0	0	0	1	0	HSX	—
				0687	+12	+64	177	2	1	0	1	2	0	0	0	HAX	—
4466	2004 / 10 / 31	2035	99.6	0695	-15	-58	042	2	1	1	1	1	1	0	0	CSO	—
				0693	-16	-25	075	22	7	6	1	16	6	0	0	FKC	—
				0690	-02	+38	138	5	1	3	1	2	3	0	0	CAI	—
				0691	+13	+39	139	13	3	4	1	9	4	0	0	DKC	—
				0689	+11	+54	154	1	1	0	0	0	0	1	0	HSX	—
				0687	+12	+77	177	1	1	0	0	0	0	1	0	HSX	small

* GDSO designation



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR NOVEMBER 2004

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 Telescope : 76 mm refractor (f . l . 910 mm) .
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OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks
4467	2004 / 11 / 01	2015	86.6	0696	+09	-66	021	4	2	1	1	3	1	0	0	DAI	small
				0695	-15	-42	045	3	2	0	1	3	0	0	0	DAO	-
				0693	-16	-11	076	31	6	5	1	26	5	0	0	FKC	-
				0690	-02	+51	138	1	1	0	0	0	0	1	0	HSX	-
				0691	+13	+52	139	5	2	1	1	4	1	0	0	DAI	-
				0689	+11	+68	155	1	1	0	0	0	0	1	0	HSX	small
4468	2004 / 11 / 03	1955	60.4	0696	+09	-34	026	14	2	2	1	12	2	0	0	DAI	-
				0695	-14	-14	046	2	2	0	1	2	0	0	0	DSO	-
				0693	-15	+16	076	34	3	8	1	26	8	0	0	FKC	-
				0691	+13	+79	139	4	2	1	1	3	1	0	0	DAI	-
4469	2004 / 11 / 04	2030	46.9	0696	+09	-21	026	19	2	4	1	15	4	0	0	DKI	-
				0695	-14	-02	045	1	1	0	0	0	0	1	0	HSX	-
				0693	-15	+29	076	22	7	5	1	17	5	0	0	FKC	-
4470	2004 / 11 / 05	2000	34.0	0696	+09	-08	026	28	2	2	1	26	2	0	0	DKI	-
				0695	-14	+11	045	4	2	1	1	3	1	0	0	DAI	-
				0693	-15	+42	076	17	5	4	1	13	4	0	0	FAC	-
4471	2004 / 11 / 07	2000	7.6	0696	+08	+19	027	30	5	4	1	26	4	0	0	EKC	-
				0698	-09	+53	061	9	3	3	1	6	3	0	0	DAC	-
				0693	-17	+68	076	11	3	5	1	6	5	0	0	FAC	-
4472	2004 / 11 / 18	2030	222.4	0704	+12	-78	144	1	1	0	0	0	0	1	0	HSX	-
				0701	-15	+19	241	1	1	0	0	0	0	1	0	HSX	-
				0702	-10	+37	259	4	2	1	1	3	1	0	0	DAI	-
4473	2004 / 11 / 24	1950	143.6	0706	-08	-74	070	3	1	2	1	1	2	0	0	CSO	-
				0707	-16	-71	073	1	1	0	0	0	0	1	0	HSX	-
				0704	+13	+01	145	3	1	0	1	3	0	0	0	HAX	-
				0705	-04	+77	221	1	1	0	0	0	0	1	0	HSX	v.small
4474	2004 / 11 / 29	2210	76.5	0708	+10	-41	035	1	1	0	0	0	0	1	0	HHX	small
				0706	-08	-06	070	1	1	0	0	0	0	1	0	HSX	-
				0707	-14	-03	073	6	2	1	1	5	1	0	0	DAI	-



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR DECEMBER 2004

All observations carried out by HOWARD BARNES .
 Telescope : 76 mm refractor (f . l . 910 mm) .
 Observed by PROJECTION . Full disc diameter = 145 mm approx .
 CM is stated in degrees .
 Region Numbers are NOAA/SEC Numbers .
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 CMD = Degrees of Longitude in respect to the Central Meridian (- if EAST , + if WEST) .
 L = Carrington Longitude .

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks	
4475	2004 / 12 / 05	2145	357.6	0708	+09	+39	037	1	1	0	0	0	0	1	0	HSX	--	
				0706	-07	+72	070	1	1	0	0	0	0	0	1	0	HSX	--
				0707	-13	+75	073	1	1	0	0	0	0	0	1	0	HSX	--
4476	2004 / 12 / 07	2050	331.8	0708	+10	+64	036	1	1	0	0	0	0	1	0	HSX	--	
4477	2004 / 12 / 08	2130	318.2	0708	+09	+79	037	1	1	0	0	0	0	1	0	HSX	--	
4478	2004 / 12 / 16	2050	213.2	0710	-06	+59	272	2	2	0	1	2	0	0	0	DSO	--	
4479	2004 / 12 / 21	2100	147.2	0713	-08	-24	123	13	2	7	1	6	7	0	0	EAI	--	
				0714	-04	-14	133	2	1	1	1	1	1	0	0	0	CSO	--
4480	2004 / 12 / 23	2015	121.3	0713	-08	+04	125	12	5	4	1	8	4	0	0	EAC	--	
				0714	-03	+14	135	2	2	0	1	2	0	0	0	0	DSO	--
4481	2004 / 12 / 26	1955	82.0	0713	-08	+46	128	1	1	0	0	0	0	1	0	HSX	--	
4482	2004 / 12 / 27	1955	68.8	0713	-09	+62	131	1	1	0	0	0	0	1	0	HSX	--	