



Georgi Dobrovolski Solar Observatory

Sunspot Co-ordinates and Classifications

2005

CONTENTS:

JANUARY	2-3
FEBRUARY	4
MARCH	5-6
APRIL	7-8
MAY	9
JUNE	10-11
JULY	12
AUGUST	13-14
SEPTEMBER	15
OCTOBER	16
NOVEMBER	17
DECEMBER	18-19

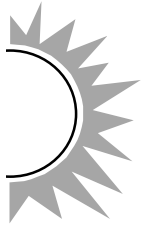


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS 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 .
 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
4483	2005 / 01 / 10	0240	253.9	0719	-08	-62	192	3	2	1	1	2	1	0	0	DSI	—
				0718	-08	-52	202	2	2	0	1	2	0	0	0	DSO	—
4484	2005 / 01 / 12	1945	218.2	0720	+13	-39	179	16	1	2	1	14	2	0	0	CAI	penumbra almost ring-shaped
				0719	-06	-26	192	2	1	1	1	1	1	0	0	CSO	—
				0718	-08	-18	200	7	1	4	1	3	4	0	0	CAI	—
4485	2005 / 01 / 13	2105	204.3	0720	+13	-25	179	26	1	4	1	22	4	0	0	DKI	—
				0719	-06	-14	190	14	3	4	1	10	4	0	0	DAC	—
				0718	-08	-03	201	8	1	5	1	3	5	0	0	CAI	—
4486	2005 / 01 / 14	2205	190.5	0720	+13	-11	180	20	1	3	1	17	3	0	0	EKI	short
				0719	-05	-01	190	13	1	4	1	9	4	0	0	CAI	—
				0718	-08	+09	200	6	1	3	1	3	3	0	0	CAI	—
4487	2005 / 01 / 18	1945	139.2	0723	+07	-66	073	1	1	0	0	0	0	1	0	HSX	—
				0724	-12	+04	143	1	0	1	0	0	0	0	1	AXX	—
				0720	+13	+41	180	34	6	7	1	27	7	0	0	EKC	—
				0719	-06	+51	190	3	1	1	1	2	1	0	0	CAO	—
				0718	-07	+62	201	1	1	0	0	0	0	1	0	HSX	—
4488	2005 / 01 / 20	2120	112.0	0726	-02	-43	069	3	1	2	1	1	2	0	0	CSI	—
				0723	+06	-37	075	1	1	0	0	0	0	1	0	HSX	—
				0725	-12	+31	132	4	1	2	1	2	2	0	0	CAI	—
				0720	+14	+68	180	12	4	2	1	10	2	0	0	EKC	—
4489	2005 / 01 / 21	2025	99.3	0726	-02	-30	069	3	2	1	1	2	1	0	0	DSI	small
				0723	+06	-25	074	1	1	0	0	0	0	1	0	HSX	—
				0725	-04	+33	132	12	2	4	1	8	4	0	0	DAI	—
				0720	+13	+80	179	4	2	0	1	4	0	0	0	EKO	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

JANUARY 2005 *continued.*

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4490	2005 / 01 / 23	1930	73.5	0723	+06	+01	074	2	1	1	1	1	1	0	0	CSO	–
				0725	-03	+61	134	3	1	2	1	1	2	0	0	CSI	–
4491	2005 / 01 / 25	1935	47.0	0727	-09	-28	019	12	3	3	1	9	3	0	0	DAC	–
				0723	+06	+27	074	1	1	0	0	0	0	1	0	HSX	–
4492	2005 / 01 / 26	1950	33.8	0727	-09	-15	019	11	2	5	1	6	5	0	0	DAI	–
				0723	+06	+40	074	1	1	0	0	0	0	1	0	HSX	–
4493	2005 / 01 / 28	2125	6.6	0727	-05	+13	020	5	2	2	1	3	2	0	0	DAI	–
				0723	+05	+67	074	1	1	0	0	0	0	1	0	HSX	–
4494	2005 / 01 / 30	1955	341.1	0728	-13	-04	337	1	0	1	0	0	0	0	1	AXX	–
				0727	-09	+39	020	8	2	5	1	3	5	0	0	DAI	–
4495	2005 / 01 / 31	1955	327.9	0729	-10	-22	306	5	3	2	1	3	2	0	0	DSC	small
				0727	-09	+49	017	3	2	0	1	3	0	0	0	DAO	–



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR FEBRUARY 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 .
 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
4496	2005 / 02 / 03	2000	288.4	0729	-11	+22	310	1	1	0	0	0	0	1	0	HSX	—
4497	2005 / 02 / 09	2215	208.1	0734	-04	-72	136	1	1	0	0	0	0	1	0	HSX	—
				0733	-08	-55	153	1	1	0	0	0	0	1	0	HHX	—
				?	+31	-37	171	1	0	1	0	0	0	0	1	AXX	big
				0730	-21	-10	198	4	1	2	1	2	2	0	0	CAI	—
4498	2004 / 02 / 11	1945	183.2	0735	-08	-63	120	3	2	1	1	2	1	0	0	DHI	—
				0734	-04	-47	136	1	1	0	0	0	0	1	0	HSX	—
				0733	-08	-34	149	3	1	0	1	3	0	0	0	HKX	—
				?	+31	-12	171	2	0	2	1	0	2	0	0	BXO	—
				0732	+11	+01	184	2	0	2	1	0	2	0	0	BXO	—
				0730	-20	+16	199	2	1	0	1	2	0	0	0	HAX	—
4499	2005 / 02 / 16	2000	117.2	0735	-07	+04	121	21	2	14	1	7	14	0	0	DHI	tight
				0734	-04	+21	138	2	1	0	1	2	0	0	0	HAX	—
				0733	-08	+37	154	4	2	2	1	2	2	0	0	DSI	—
4500	2005 / 02 / 17	2115	103.3	0735	-10	+16	119	13	2	10	1	3	10	0	0	DHI	tight
				0734	-05	+32	135	2	1	0	1	2	0	0	0	HAX	—
				0733	-08	+50	153	3	2	1	1	2	1	0	0	DSI	—
				0732	+09	+83	186	1	1	0	0	0	0	1	0	HSX	resighted
4501	2005 / 02 / 19	2015	77.5	0735	-09	+42	120	6	2	2	1	4	2	0	0	DKI	tight
				0734	-05	+60	138	1	0	1	0	0	0	0	1	AXX	—
				0733	-08	+77	155	1	1	0	0	0	0	1	0	HSX	—
4502	2005 / 02 / 20	2020	64.3	0736	+13	+48	112	2	1	0	1	2	0	0	0	HAX	—
				0735	-09	+56	120	4	2	1	1	3	1	0	0	DKI	tight
4503	2005 / 02 / 23	2200	23.9	0737	-07	+29	053	5	2	2	1	3	2	0	0	DAI	small
4504	2005 / 02 / 26	2020	345.3	0739	-04	-54	291	1	0	1	0	0	0	0	1	AXX	—
4505	2005 / 02 / 28	2025	318.9	—	—	—	—	0	0	0	0	0	0	0	0	—	—

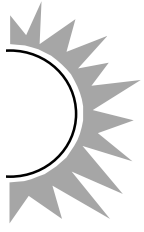


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR MARCH 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 .
 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
4506	2005 / 03 / 01	2045	305.6	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4507	2005 / 03 / 04	2035	266.1	0741	+12	-72	194	1	1	0	0	0	0	1	0	HSX	—
4508	2005 / 02 / 05	2025	253.0	0741	+12	-60	193	4	1	1	1	3	1	0	0	CAO	—
4509	2005 / 03 / 08	2015	213.6	0742	-06	-59	155	9	4	4	1	5	4	0	0	DAC	long
				0741	+14	-20	194	6	2	1	1	5	1	0	0	DAI	tight
4510	2005 / 03 / 09	2035	200.2	0743	-09	-78	122	1	1	0	0	0	0	1	0	HHX	—
				0742	-06	-45	155	13	3	7	1	6	7	0	0	EAC	short
				0741	+12	-05	195	9	1	5	1	4	5	0	0	CAI	—
4511	2005 / 03 / 11	2030	173.9	0743	-07	-53	121	2	1	0	1	2	0	0	0	HKX	—
				0742	-05	-21	153	16	4	7	1	9	7	0	0	EAC	short
				0741	+13	+21	195	3	1	2	1	1	2	0	0	CSI	—
4512	2005 / 03 / 12	2100	160.5	0743	-08	-37	123	1	1	0	0	0	0	1	0	HHX	—
				0742	-06	-04	156	18	4	9	1	9	9	0	0	EAC	short
				0741	+12	+40	200	1	1	0	0	0	0	1	0	HSX	—
4513	2005 / 03 / 14	2110	134.0	0743	-07	-11	123	2	1	0	1	2	0	0	0	HKX	—
				0742	-05	+23	157	14	3	3	1	11	3	0	0	EAC	short
				0741	+12	+67	201	2	2	0	1	2	0	0	0	DSO	—
4514	2005 / 03 / 15	2050	121.0	0743	-08	+03	124	2	1	1	1	1	1	0	0	CHO	—
				0742	-05	+38	159	23	3	14	1	9	14	0	0	EAC	short
4515	2005 / 03 / 16	2045	107.9	0743	-08	+15	123	4	1	2	1	2	2	0	0	CKI	—
				0742	-06	+48	156	8	3	2	1	6	2	0	0	EKC	short
4516	2005 / 03 / 18	2040	81.6	0743	-08	+42	124	9	3	3	1	6	3	0	0	DHC	—
				0742	-06	+78	160	3	1	2	1	1	2	0	0	CHI	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

MARCH 2005 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4517	2005 / 03 / 21	2150	41.4	0745	+12	-55	346	3	1	1	1	2	1	0	0	CAO	–
				0744	-12	+12	053	11	3	5	1	6	5	0	0	DAC	–
				0743	-08	+83	124	1	1	0	0	0	0	1	0	HHX	–
4518	2005 / 03 / 22	2050	28.8	0745	+12	-45	344	7	2	4	1	3	4	0	0	DAI	–
				0744	-13	+24	053	9	2	3	1	6	3	0	0	DAI	–
4519	2005 / 03 / 29	2120	296.2	–	–	–	–	0	0	0	0	0	0	0	0	–	–
4520	2005 / 03 / 30	2055	283.2	0748	+10	-74	209	1	0	1	0	0	0	0	1	AXX	big
4521	2005 / 03 / 31	2145	269.6	0748	+09	-61	209	1	0	1	0	0	0	0	1	AXX	big



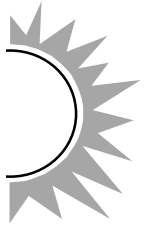
Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

APRIL 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 .
 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
4522	2005 / 04 / 01	2100	256.8	0748	+09	-48	209	1	1	0	0	0	0	1	0	HSX	very small
				0747	-09	-12	245	2	0	2	1	0	2	0	0	BXO	—
4523	2005 / 04 / 02	2120	243.4	0749	-06	-78	165	1	1	0	0	0	0	1	0	HSX	—
				0748	+09	-35	208	1	1	0	0	0	0	1	0	HSX	small
				0747	-07	+02	245	8	2	3	1	5	3	0	0	DAI	—
4524	2005 / 04 / 03	2105	230.3	0749	-06	-65	165	1	1	0	0	0	0	1	0	HSX	—
				0748	+11	-22	208	1	1	0	0	0	0	1	0	HSX	small
				0747	-05	+17	247	15	3	10	1	5	10	0	0	DAC	—
4525	2005 / 04 / 06	2105	190.7	0750	-07	-68	123	2	1	1	1	1	1	0	0	CSO	—
				0749	-05	-27	164	1	1	0	0	0	0	1	0	HSX	small
				0747	-05	+56	247	5	2	3	1	2	3	0	0	DSC	—
4526	2005 / 04 / 07	2150	177.1	0750	-07	-53	124	4	1	2	1	2	2	0	0	CAI	—
				0749	-05	-13	164	1	1	0	0	0	0	1	0	HSX	small
				0747	-06	+72	249	2	1	1	1	1	1	0	0	CSO	—
4527	2005 / 04 / 09	2140	150.8	0750	-07	-26	125	9	2	5	1	4	5	0	0	DSI	—
				0749	-05	+15	166	1	1	0	0	0	0	1	0	HSX	small
				0751	-07	+72	223	3	1	2	1	1	2	0	0	CSI	small, long
4528	2005 / 04 / 10	2140	137.6	0750	-07	-14	124	6	2	4	1	2	4	0	0	DSI	—
				0751	-07	+81	219	1	1	0	0	0	0	1	0	HSX	small
4529	2005 / 04 / 12	2135	111.3	0752	+00	-78	033	3	2	0	1	3	0	0	0	EAO	—
				0750	-07	+13	124	5	1	4	1	1	4	0	0	CS1	—
4530	2005 / 04 / 13	2125	98.2	0752	+01	-58	040	7	3	2	1	5	2	0	0	EAC	short
				0753	+12	+04	102	1	0	1	0	0	0	0	1	AXX	big
				0750	-07	+26	124	3	1	2	1	1	2	0	0	CSI	—
4531	2005 / 04 / 14	2140	84.8	0754	-08	-53	032	4	2	1	1	3	1	0	0	DSI	—
				0752	+01	-45	040	5	2	1	1	4	1	0	0	EAI	short
				0753	+12	+17	102	2	0	2	1	0	2	0	0	BXO	—
				0750	-07	+39	124	2	1	1	1	1	1	0	0	CSO	—

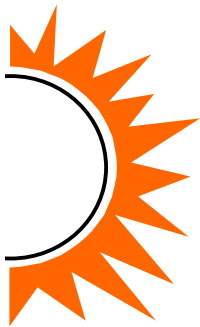


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

APRIL 2005 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4532	2005 / 04 / 15	2145	71.6	0754	-08	-40	032	3	1	2	1	1	2	0	0	CSI	–
				0752	+01	-32	040	5	2	2	1	3	2	0	0	DAI	–
				0750	-07	+52	124	2	1	1	1	1	1	0	0	CSO	tight
4533	2005 / 04 / 17	2135	45.3	0755	-11	-78	327	1	0	1	0	0	0	0	1	AXX	big
				0754	-08	-13	032	3	1	2	1	1	2	0	0	CSI	–
				0752	+02	-02	043	6	1	4	1	2	4	0	0	CAI	–
4534	2005 / 04 / 18	2140	32.0	0755	-11	-69	323	2	0	2	1	0	2	0	0	BXO	big
				0754	-07	-02	030	3	1	2	1	1	2	0	0	CSI	–
				0752	+01	+11	043	4	1	2	1	2	2	0	0	CAI	–
4535	2005 / 04 / 21	2215	352.1	0755	-12	-22	330	1	0	1	0	0	0	0	1	AXX	–
				0752	+03	+54	046	1	1	0	0	0	0	0	1	0	HSX
4536	2005 / 04 / 24	2155	312.6	0756	-06	-83	230	1	1	0	0	0	0	1	0	HHX	–
				0755	-12	+14	327	2	0	2	1	0	2	0	0	BXO	–
4537	2005 / 04 / 26	2155	286.2	0756	-06	-56	230	7	1	2	1	5	2	0	0	CKI	–
				0755	-13	+41	327	1	0	1	0	0	0	0	1	AXX	–
4538	2005 / 04 / 29	2145	246.6	?	-10	-47	200	1	0	1	0	0	0	0	1	AXX	–
				0756	-06	-19	228	23	1	4	1	19	4	0	0	EKI	class correct
				0757	-05	+08	255	5	2	2	1	3	2	0	0	DAI	–



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

MAY 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 .

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
4539	2005 / 05 / 04	2205	180.4	0758	-07	-50	130	15	4	7	1	8	7	0	0	EAC	widespread
				0756	-07	+51	231	17	1	3	1	14	3	0	0	CKI	-
4540	2005 / 05 / 05	2210	167.1	0758	-06	-39	128	23	6	8	1	15	8	0	0	EAC	-
				0756	-09	+63	230	11	3	2	1	9	2	0	0	DKC	-
4541	2005 / 05 / 06	2210	153.9	0758	-07	-25	129	13	6	5	1	8	5	0	0	EAC	-
				0756	-08	+77	231	6	3	0	1	6	0	0	0	DKC	-
4542	2005 / 05 / 08	2145	127.7	0759	+12	-73	055	6	2	2	1	4	2	0	0	EKI	-
				0761	+04	-77	051	1	0	1	0	0	0	0	1	AXX	-
				0758	-08	+04	132	27	8	14	1	13	14	0	0	FAC	-
4543	2005 / 05 / 10	2235	100.8	0759	+12	-52	049	8	4	1	1	7	1	0	0	EHC	-
				0762	-08	-20	081	14	4	6	1	8	6	0	0	DAC	-
				0758	-10	+34	135	31	6	12	1	19	12	0	0	FAC	-
4544	2005 / 05 / 22	2155	302.4	0767	-07	-68	234	3	2	1	1	2	1	0	0	DSI	-
				0766	+15	-63	239	1	1	0	0	0	0	1	0	HSX	-
4545	2005 / 05 / 24	2215	275.8	0767	-08	-41	235	9	4	3	1	6	3	0	0	DAC	-
				0766	+13	-38	238	6	1	4	1	2	4	0	0	CAI	-

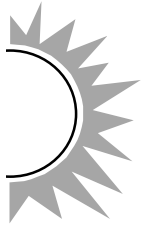


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR JUNE 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 .
 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	
4546	2005 / 06 / 01	2325	169.3	0773	-12	-76	093	4	3	0	1	4	0	0	0	DAC	long	
				0772	-18	-36	133	12	3	3	1	9	3	0	0	DAC	-	
				0769	-10	-30	139	1	1	0	0	0	0	1	0	HSX	-	
				0771	+25	+58	227	1	0	1	0	0	0	0	0	1	AXX	-
				0767	-08	+72	241	2	1	1	1	1	1	0	0	0	CSO	-
4547	2005 / 06 / 05	2305	116.5	0776	-05	-71	045	3	2	0	1	3	0	0	0	DHO	long	
				0775	+12	-61	055	3	1	1	1	2	1	0	0	CKO	-	
				0773	-13	-23	093	6	2	3	1	3	3	0	0	DAI	long	
				0772	-18	+18	134	11	4	5	1	6	5	0	0	DAC	-	
				0774	+04	+21	137	6	3	2	1	4	2	0	0	DAC	-	
4548	2005 / 06 / 06	2255	103.4	0776	-05	-62	041	9	2	3	1	6	3	0	0	DKI	-	
				0775	+12	-49	054	4	2	1	1	3	1	0	0	DKI	-	
				0773	-12	-10	093	6	2	3	1	3	3	0	0	DAI	-	
				0772	-18	+29	132	11	3	4	1	7	4	0	0	DAC	-	
				0774	+06	+30	133	3	1	2	1	1	2	0	0	CSI	-	
4549	2005 / 06 / 08	2250	76.9	0776	-06	-35	042	17	3	5	1	12	5	0	0	EKC	short	
				0775	+10	-23	054	9	2	0	1	9	0	0	0	DKO	-	
				0773	-14	+16	093	5	2	3	1	2	3	0	0	DSI	long	
				0772	-18	+56	133	7	2	3	1	4	3	0	0	DAI	-	
4550	2005 / 06 / 09	2255	63.6	0777	+05	-72	352	1	0	1	0	0	0	0	1	AXX	-	
				0776	-06	-22	042	24	7	5	1	19	5	0	0	EKC	-	
				0775	+08	-10	054	15	3	4	1	11	4	0	0	DHC	-	
				0773	-14	+29	093	2	1	1	1	1	1	0	0	CSO	long	
				0772	-18	+69	133	3	2	0	1	3	0	0	0	DAO	-	
4551	2005 / 06 / 19	2305	291.2	0780	-07	-39	252	5	2	1	1	4	1	0	0	DAI	-	
				0779	-17	+44	335	13	2	5	1	8	5	0	0	EAI	-	



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

JUNE 2005 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4552	2005 / 06 / 25	2255	211.9	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4553	2005 / 06 / 26	2310	198.5	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4554	2005 / 06 / 29	2300	158.9	0784	+16	-71	088	2	1	1	1	1	1	0	0	CSO	—
				0783	-01	-60	099	5	2	1	1	4	1	0	0	DAI	—
				0781	+15	-54	105	1	1	0	0	0	0	1	0	HSX	—
				0785	-18	-36	123	2	0	2	1	0	2	0	0	BXO	—
				0782	-17	-10	149	6	3	2	1	4	2	0	0	DAC	—
4555	2005 / 06 / 30	2240	145.8	0784	+16	-58	088	5	2	1	1	4	1	0	0	DAI	—
				0783	-02	-47	099	9	2	2	1	7	2	0	0	DAI	—
				0781	+14	-38	108	4	1	2	1	2	2	0	0	CAI	—
				0785	-18	-22	124	4	1	2	1	2	2	0	0	CAI	—
				0782	-17	+03	149	14	5	5	1	9	5	0	0	DAC	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR JULY 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 .
 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
4556	2005 / 07 / 01	2325	132.2	0788	-06	-84	048	1	1	0	0	0	0	1	0	HSX	—
				0786N*	-10	-77	055	2	1	1	1	1	1	0	0	CSO	—
				0786S*	-13	-75	057	2	2	0	1	2	0	0	0	DSO	—
				0784	+18	-44	088	5	2	2	1	3	2	0	0	DAI	—
				0783	-03	-34	098	15	4	7	1	8	7	0	0	DAC	—
				0781	+13	-24	108	1	1	0	0	0	0	1	0	HSX	—
				0785	-19	-08	124	6	1	4	1	2	4	0	0	CAI	—
				0782	-18	+18	150	11	2	3	1	8	3	0	0	DAI	—
				0787	-11	+20	152	3	2	0	1	3	0	0	0	DAO	—
4557	2005 / 07 / 08	2220	40.1	?	+18	-31	009	1	0	1	0	0	0	0	1	AXX	—
				0789	+15	-25	015	7	2	4	1	3	4	0	0	DAI	—
				0788	-05	+09	049	2	1	0	1	2	0	0	0	HAX	—
				0786	+12	+15	055	16	5	5	1	11	5	0	0	DAC	—
				0783	-02	+61	101	10	5	3	1	7	3	0	0	EAC	—
4558	2005 / 07 / 13	2235	333.8	0790	-10	+33	007	3	2	1	1	2	1	0	0	DSI	small
				0789	+17	+36	010	2	2	0	1	2	0	0	0	DSO	—
				0788	-05	+74	048	1	1	0	0	0	0	1	0	HSX	—
				0786	+11	+82	056	3	2	0	1	3	0	0	0	EKO	near W limb
4559	2005 / 07 / 19	2220	254.6	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4560	2005 / 07 / 20	2225	241.3	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4561	2005 / 07 / 21	2250	227.8	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4562	2005 / 07 / 23	2240	201.4	0791	+13	-50	151	7	2	3	1	4	3	0	0	DAI	—
				?	+17	+12	213	2	0	2	1	0	2	0	0	BXO	small
4563	2005 / 07 / 28	2220	135.5	0792	+12	-78	057	5	4	0	1	5	0	0	0	DAC	—
				0793	+14	-25	110	3	2	0	1	3	0	0	0	DAO	—
				0791	+14	+20	155	6	3	2	1	4	2	0	0	DAC	—
4564	2005 / 07 / 29	2215	122.3	0792	+11	-67	055	12	5	3	1	9	3	0	0	DAC	—
				0793	+14	-12	110	5	2	3	1	2	3	0	0	DSI	—
				0791	+14	+32	154	3	1	2	1	1	2	0	0	CSI	—

* GDSO designation.

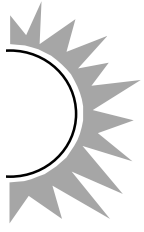


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS 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 .
 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	
4565	2005 / 08 / 02	2210	69.5	0795	+15	-51	018	1	1	0	0	0	0	1	0	HSX	—	
				0794	-11	-47	022	7	2	4	1	3	4	0	0	DKI	—	
				0792	+12	-12	057	19	6	7	1	12	7	0	0	DKC	—	
				0793	+13	+42	111	3	1	1	1	2	1	0	0	CAI	—	
4566	2005 / 08 / 03	2215	56.2	0795	+15	-38	018	1	1	0	0	0	0	1	0	HSX	—	
				0794	-11	-34	022	11	5	5	1	6	5	0	0	DKC	—	
				0796	-07	-05	051	1	0	1	0	0	0	0	0	1	AXX	big
				0792	+11	+01	057	12	4	4	1	8	4	0	0	DAC	—	
4567	2005 / 08 / 04	2240	42.7	0795	+13	-29	014	1	1	0	0	0	0	1	0	HSX	—	
				0794	-11	-21	022	16	4	9	1	7	9	0	0	DSC	—	
				0792	+11	+14	057	8	1	6	1	2	6	0	0	CAI	—	
4568	2005 / 08 / 08	2200	350.2	0795	+12	+26	016	1	1	0	0	0	0	1	0	HSX	—	
				0794	-13	+35	025	7	1	4	1	3	4	0	0	CAI	—	
				0796	-08	+63	053	2	2	0	1	2	0	0	0	DSO	resighted	
				0792	+11	+67	057	6	2	3	1	3	3	0	0	DAI	—	
4569	2005 / 08 / 13	2305	283.5	0798	-05	-68	216	1	0	1	0	0	0	0	1	AXX	—	
				0797	-13	-30	254	16	5	6	1	10	6	0	0	DAC	—	
4570	2005 / 08 / 16	2305	243.8	0798	-08	-27	217	1	0	1	0	0	0	0	1	AXX	big	
				0797	-14	+08	252	6	2	3	1	3	3	0	0	DAI	—	
4571	2005 / 08 / 17	2155	231.3	0798	-09	-14	217	1	0	1	0	0	0	0	1	AXX	small	
				0797	-14	+21	252	2	1	1	1	1	1	0	0	CSO	—	
4572	2005 / 08 / 18	2205	218.0	0800	+16	-61	157	1	0	1	0	0	0	0	1	AXX	big	
				0798	-10	+03	221	12	4	3	1	9	3	0	0	DAC	—	
				0797	-14	+36	254	3	1	2	1	1	2	0	0	CSI	—	
4573	2005 / 08 / 19	2150	204.9	0801	+06	-70	135	1	0	1	0	0	0	0	1	AXX	small	
				0800	+16	-48	157	2	1	0	1	2	0	0	0	HAX	—	
				0798	-10	+17	222	13	4	4	1	9	4	0	0	DAC	—	
				0797	-13	+50	255	1	1	0	0	0	0	1	0	HSX	—	
				0799	-10	+68	273	1	0	1	0	0	0	0	0	1	AXX	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

AUGUST 2005 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
4574	2005 / 08 / 21	2210	178.3	0800	+17	-21	157	10	2	3	1	7	3	0	0	DAI	small
				0798	-11	+46	224	15	2	3	1	12	3	0	0	DAI	–
				0797	-14	+76	254	1	1	0	0	0	0	1	0	HSX	–
4575	2005 / 08 / 25	2145	125.6	0803	+12	-70	056	8	3	4	1	4	4	0	0	DAC	–
				0804	+11	-15	111	2	1	1	1	1	1	0	0	CSO	–
				0800	+17	+32	158	7	2	3	1	4	3	0	0	EAO	–
4576	2005 / 08 / 28	2125	86.2	0805	-08	-62	024	2	1	0	1	2	0	0	0	HAX	–
				0803	+11	-29	057	7	2	3	1	4	3	0	0	DAI	–
				0801	+09	+42	128	1	1	0	0	0	0	1	0	HSX	small
				0800	+16	+67	153	1	0	1	0	0	0	0	1	AXX	–
4577	2005 / 08 / 29	2130	72.9	0806	-17	-52	021	5	2	2	1	3	2	0	0	DAI	–
				0805	-08	-49	024	2	1	0	1	2	0	0	0	HAX	–
				0803	+11	-16	057	7	2	4	1	3	4	0	0	DAI	small
				0801	+09	+55	128	1	0	1	0	0	0	0	1	AXX	–
4578	2005 / 08 / 30	2150	59.6	0806	-17	-39	021	4	2	2	1	2	2	0	0	DSI	–
				0805	-08	-36	024	3	1	1	1	2	1	0	0	CAO	–
				0803	+11	-03	057	5	0	5	1	0	5	0	0	BXI	–



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

SEPTEMBER 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 .

CM is stated in degrees .

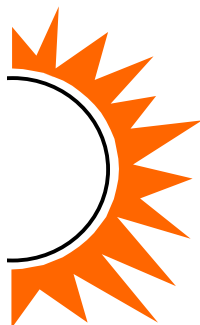
Region Numbers are NOAA/SEC Numbers .

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
4579	2005 / 09 / 01	2155	33.1	0805	-10	-10	023	2	1	1	1	1	1	0	0	CSO	—
4580	2005 / 09 / 02	2150	19.9	0805	-10	+02	022	2	1	1	1	1	1	0	0	CSO	—
4581	2005 / 09 / 14	2035	222.1	0808	-11	+08	230	46	9	13	1	33	13	0	0	EKC	—
4582	2005 / 09 / 19	2225	155.1	0810	+10	-52	103	8	3	4	1	4	4	0	0	EKC	small
				0808	-11	+77	232	1	1	0	0	0	0	1	0	HHX	—
4583	2005 / 09 / 20	2135	142.4	0810	+10	-38	104	6	3	2	1	4	2	0	0	EAC	—
4584	2005 / 09 / 23	2135	102.8	0812	-01	-75	028	1	0	1	0	0	0	0	1	AXX	—
				0810	+09	+04	107	6	1	4	1	2	4	0	0	CKI	—
4585	2005 / 09 / 26	2210	62.9	0812	-01	-33	030	1	1	0	0	0	0	1	0	HSX	—
				0810	+08	+48	111	2	1	0	1	2	0	0	0	HKX	—
4586	2005 / 09 / 29	2045	24.1	0812	-03	+06	030	1	1	0	0	0	0	1	0	HSX	small



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

OCTOBER 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 .

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
4587	2005 / 10 / 06	2000	292.1	0813	-08	-07	285	11	2	7	1	4	7	0	0	DAI	--
4588	2005 / 10 / 09	2205	251.4	0814	-07	-16	235	2	0	2	1	0	2	0	0	BXO	--
4589	2005 / 10 / 11	2030	225.9	0814	-06	+09	235	1	0	1	0	0	0	0	1	AXX	elongated
4590	2005 / 10 / 16	2035	159.9	0815	+08	-49	111	1	1	0	0	0	0	1	0	HSX	--
4591	2005 / 10 / 17	2030	146.7	0815	+08	-35	112	1	1	0	0	0	0	1	0	HSX	--
4592	2005 / 10 / 23	2000	67.9	--	--	--	--	0	0	0	0	0	0	0	0	--	--
4593	2005 / 10 / 24	2125	53.9	--	--	--	--	0	0	0	0	0	0	0	0	--	--
4594	2005 / 10 / 25	2010	41.4	--	--	--	--	0	0	0	0	0	0	0	0	--	--
4595	2005 / 10 / 26	2040	27.9	--	--	--	--	0	0	0	0	0	0	0	0	--	--
4596	2005 / 10 / 30	1955	335.6	0818	-06	-51	285	3	2	1	1	2	1	0	0	DSI	small
4597	2005 / 10 / 31	1940	322.6	0818/9	-08	-33	290	5	3	2	1	3	2	0	0	ESC	small/short



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR NOVEMBER 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 .
 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
4598	2005 / 11 / 08	2005	216.9	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4599	2005 / 11 / 09	2150	202.7	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4600	2005 / 11 / 10	2015	190.4	—	—	—	—	0	0	0	0	0	0	0	0	—	—
4601	2005 / 11 / 13	2015	150.8	0822	-06	-68	083	9	2	2	1	7	2	0	0	EKI	—
4602	2005 / 11 / 14	2015	137.7	0822	-06	-58	080	21	4	5	1	16	5	0	0	FKC	—
4603	2005 / 11 / 17	1955	98.3	0822	-07	-18	080	25	7	11	1	14	11	0	0	FKC	—
4604	2005 / 11 / 21	2145	44.6	0824	-12	-60	345	4	2	2	1	2	2	0	0	DSI	—
				0822	-08	+34	079	13	4	4	1	9	4	0	0	FKI	class correct
4605	2005 / 11 / 22	2005	32.3	0824	-12	-49	343	4	2	2	1	2	2	0	0	ESI	lopsided
				0822	-07	+48	080	8	4	2	1	6	2	0	0	FKO	—
4606	2005 / 11 / 24	1930	6.3	0825	-06	-27	339	5	2	2	1	3	2	0	0	DAI	—
				0824	-12	-20	346	4	2	2	1	2	2	0	0	DSI	—
				0822	-09	+82	088	3	1	2	1	1	2	0	0	CHI	long
4607	2005 / 11 / 26	1930	339.9	0824	-14	+03	343	4	1	3	1	1	3	0	0	CSI	—
4608	2005 / 11 / 29	1955	300.1	0824	-14	+46	346	1	1	0	0	0	0	1	0	HSX	—
4609	2005 / 11 / 30	2020	286.7	0827	+08	-58	229	2	1	1	1	1	1	0	0	CSO	—
				0826	-02	-38	249	11	4	3	1	8	3	0	0	DAC	long
				0824	-14	+59	346	1	1	0	0	0	0	1	0	HSX	—

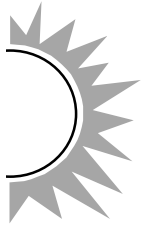


Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR DECEMBER 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 .
 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
4610	2005 / 12 / 11	2115	141.3	0835	+18	-56	085	7	3	3	1	4	3	0	0	EAC	short
				0834	-07	-52	089	1	1	0	0	0	0	1	0	HSX	-
				0830	+12	+40	181	1	1	0	0	0	0	1	0	HSX	-
4611	2005 / 12 / 12	2030	128.5	?	-09	-62	067	1	0	1	0	0	0	0	1	AXX	small
				0835	+20	-43	086	10	3	5	1	5	5	0	0	EAC	short
				0834	-06	-40	089	1	1	0	0	0	0	1	0	HSX	-
				0830	+10	+52	181	1	1	0	0	0	0	1	0	HSX	-
4612	2005 / 12 / 17	1940	63.1	0837	-10	-25	038	1	0	1	0	0	0	0	1	AXX	-
				0835	+19	+24	087	1	1	0	0	0	0	1	0	HSX	big
				0834	-07	+29	092	4	1	3	1	1	3	0	0	CSI	-
4613	2005 / 12 / 18	2110	49.1	0837	-10	-11	038	12	3	5	1	7	5	0	0	DAC	-
				0835	+20	+38	087	1	1	0	0	0	0	1	0	HSX	-
				0834	-06	+43	092	1	1	0	0	0	0	1	0	HSX	-
4614	2005 / 12 / 19	1955	36.6	0837	-10	+01	038	14	4	6	1	8	6	0	0	DAC	-
				0835	+20	+50	087	2	1	1	1	1	1	0	0	CSO	-
				0834	-06	+55	092	1	1	0	0	0	0	1	0	HSX	-
4615	2005 / 12 / 26	1915	304.8	0843	+13	-70	235	1	1	0	0	0	0	1	0	HSX	-
				0841	+12	-50	255	5	2	2	1	3	2	0	0	DAI	-
				0840	-03	-43	262	1	1	0	0	0	0	1	0	HSX	-
				0842	-06	-20	285	1	1	0	0	0	0	1	0	HSX	small
				0838	+16	+15	320	3	1	2	1	1	2	0	0	CSI	long
				0839	+18	+62	007	1	0	1	0	0	0	0	0	1	AXX
4616	2005 / 12 / 27	2000	291.2	0843	+12	-56	235	3	1	2	1	1	2	0	0	CSI	-
				0841	+12	-36	255	3	2	1	1	2	1	0	0	DSI	-
				0840	-03	-29	262	1	1	0	0	0	0	1	0	HSX	-
				0842	-06	-06	285	1	1	0	0	0	0	1	0	HSX	small
				0838	+16	+32	323	1	1	0	0	0	0	1	0	HSX	-



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR

DECEMBER 2005 continued.

OBS	DATE	UT	CM	REG.No	B	CMD	L	f	p	s	gr	grp	grf	efp	ef	Class.	Remarks	
4617	2005 / 12 / 28	1920	278.4	0843	+12	-43	235	2	1	1	1	1	1	0	0	CSO	–	
				0841	+12	-24	254	3	1	2	1	1	2	0	0	CSI	–	
				0840	-03	-17	261	1	1	0	0	0	0	0	1	0	HRX	–
				0842	-06	+07	285	1	0	1	0	0	0	0	0	1	AXX	–
				0838	+16	+46	324	1	1	0	0	0	0	0	1	0	HSX	–
4618	2005 / 12 / 29	1915	265.2	0843	+12	-30	235	2	1	1	1	1	1	0	0	CSO	–	
				0841	+12	-11	254	3	1	2	1	1	2	0	0	CSI	–	
				0840	-03	-04	261	1	1	0	0	0	0	0	1	0	HRX	–
				0844	-15	+56	321	5	2	1	1	4	1	0	0	DAI	–	
				0838	+16	+59	324	1	1	0	0	0	0	0	1	0	HSX	–