

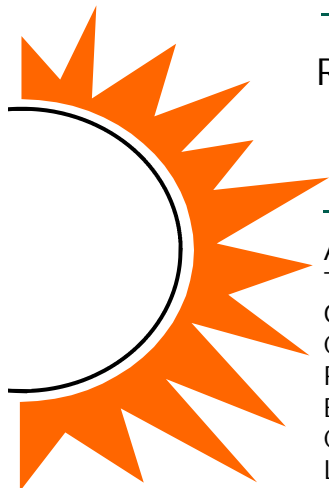
Georgi Dobrovolski Solar Observatory

Sunspot Region Co-ordinates and Classifications for 2011

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REGION CO-ORDINATES AND CLASSIFICATIONS FOR JANUARY 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5283	2011 / 01 / 01	1950	244.4	1140	+32	-54	190	1	1	0	0	0	0	1	0	HSX	—
				1142	-14	-36	208	7	3	3	1	4	3	0	0	DAC	—
				1141	+35	+23	267	5	2	2	1	3	2	0	0	DAI	—
5284	2011 / 01 / 02	2020	231.0	1140	+32	-42	189	1	1	0	0	0	0	1	0	HSX	—
				1142	-13	-24	207	5	3	1	1	4	1	0	0	DAI	class correct
				1141	+35	+37	268	1	0	1	0	0	0	0	1	AXX	big
5285	2011 / 01 / 07	1925	165.6	1143	-22	-19	147	2	1	1	1	1	1	0	0	CSO	small
				1140	+33	+21	187	1	1	0	0	0	0	1	0	HSX	big
5286	2011 / 01 / 09	2030	138.7	1140	+32	+46	185	1	1	0	0	0	0	1	0	HSX	—
5287	2011 / 01 / 10	2005	125.7	1146	+23	-49	077	1	0	1	0	0	0	0	1	AXX	small
				1140	+32	+58	184	1	1	0	0	0	0	1	0	HSX	—
5288	2011 / 01 / 11	1935	112.8	1146	+33	-37	076	2	0	2	1	0	2	0	0	BXO	small
				1140	+23	+72	185	1	1	0	0	0	0	1	0	HSX	—
5289	2011 / 01 / 14	2035	72.8	—	—	—	—	0	0	0	0	0	0	0	0	—	—
5290	2011 / 01 / 16	1945	46.9	1147	+27	-68	339	1	1	0	0	0	0	1	0	HSX	—
5291	2011 / 01 / 25	1955	288.3	1149	+17	+59	347	2	1	1	1	1	1	0	0	CSO	—
				1147	+24	+63	351	1	1	0	0	0	0	1	0	HSX	—
5292	2011 / 01 / 26	2000	275.1	1149	+17	+74	349	1	1	0	0	0	0	1	0	HSX	—
				1147	+24	+74	349	1	1	0	0	0	0	1	0	HSX	—
5293	2011 / 01 / 31	2000	209.3	1150	-21	-27	182	8	2	6	1	2	6	0	0	DSI	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR FEBRUARY 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5294	2011 / 02 / 09	2120	90.1	1156	-14	-26	064	4	0	4	1	0	4	0	0	BXI	—
				1157	+22	-21	069	2	1	1	1	1	1	0	0	CRO	small
5295	2011 / 02 / 11	2030	64.2	1158	-19	-28	036	3	2	1	1	2	1	0	0	DSI	small
				1156	-21	+04	068	1	1	0	0	0	0	1	0	HRX	small
5296	2011 / 02 / 12	2155	50.2	1158	-19	-12	038	13	4	6	1	7	6	0	0	EAC	short
				1159	+19	-11	039	2	1	1	1	1	1	0	0	CSO	—
				1157	+18	+17	067	5	2	2	1	3	2	0	0	DAI	resighted
5297	2011 / 02 / 13	2025	37.9	1158	-20	-04	034	22	3	6	1	16	6	0	0	EKC	short
				1159	+19	-04	034	1	0	1	0	0	0	0	1	AXX	—
				1157	+18	+27	065	3	2	0	1	3	0	0	0	DAO	—
5298	2011 / 02 / 16	2010	358.5	1161	+13	-29	330	8	2	5	1	3	5	0	0	DSI	—
				1158	-21	+34	033	17	5	9	1	8	9	0	0	EKC	long
5299	2011 / 02 / 17	2015	345.3	1161	+12	-16	329	5	3	1	1	4	1	0	0	DAC	—
				1158	-19	+49	034	17	6	4	1	13	4	0	0	FKC	—
5300	2011 / 02 / 18	2045	331.9	1161	+12	-01	331	9	2	5	1	4	5	0	0	EAI	—
				1162	+18	+04	336	15	3	8	1	7	8	0	0	DAC	—
				1158	-19	+62	034	10	3	4	1	6	4	0	0	EAC	—
5301	2011 / 02 / 19	2020	318.9	1161	+11	+13	332	20	4	12	1	8	12	0	0	EAC	—
				1162	+18	+17	336	13	3	8	1	5	8	0	0	DAC	—
				1158	-19	+76	035	5	3	2	1	3	2	0	0	ESC	—
5302	2011 / 02 / 23	2120	265.7	1161	+11	+66	332	1	1	0	0	0	0	1	0	HSX	—
				1162	+17	+71	337	1	0	1	0	0	0	0	0	1	AXX
5303	2011 / 02 / 25	2045	239.7	—	—	—	—	0	0	0	0	0	0	0	0	—	—
5304	2011 / 02 / 26	2135	226.0	1164	+28	-62	164	4	1	0	1	4	0	0	0	HKX	—
				1165	-22	-45	181	1	0	1	0	0	0	0	0	1	AXX

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REGION CO-ORDINATES AND CLASSIFICATIONS FOR MARCH 2011

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/SWPC Numbers .

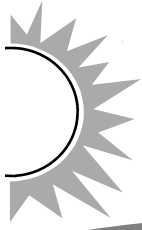
B = Heliographic Latitude (+ if NORTH , - if SOUTH) .

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

L = Carrington Longitude .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5305	2011 / 03 / 06	2100	121.0	1166	+11	-30	091	11	4	4	1	7	4	0	0	FKC	short
				?	+15	-25	096	1	0	1	0	0	0	0	1	AXX	—
				1167	+09	+04	125	2	0	2	1	0	2	0	0	BXO	—
				1164	+24	+44	165	14	5	2	1	12	2	0	0	EAC	H-shaped
				1165	-20	+65	186	8	3	5	1	3	5	0	0	FSC	—
5306	2011 / 03 / 07	2105	107.8	1169	+20	-47	061	3	2	1	1	2	1	0	0	DSI	—
				1166	+11	-15	093	23	5	7	1	16	7	0	0	FHC	short
				?	+16	-09	099	1	0	1	0	0	0	0	1	AXX	—
				1164	+24	+56	164	11	5	2	1	9	2	0	0	EKC	—
				1165	-20	+74	182	5	2	2	1	3	2	0	0	DAI	long
5307	2011 / 03 / 08	2115	94.5	1169	+19	-33	061	9	4	3	1	6	3	0	0	DAC	—
				1166	+11	-01	093	22	7	5	1	17	5	0	0	EKC	long
				1170	-26	+66	160	2	1	1	1	1	1	0	0	CSO	—
				1164	+23	+69	163	8	4	2	1	6	2	0	0	EAC	—
5308	2011/03/09	2105	81.4	1169	+20	-20	061	13	4	6	1	7	6	0	0	EAC	—
				1166	+09	+11	092	25	5	8	1	17	8	0	0	EKC	—
5309	2011 / 03 / 10	2055	68.3	1169	+20	-06	062	9	3	3	1	6	3	0	0	EAC	—
				1166	+09	+24	092	19	5	6	1	13	6	0	0	EKC	—
5310	2011 / 03 / 11	2110	55.0	1169	+20	+07	062	9	2	4	1	5	4	0	0	EAI	—
				1166	+09	+37	092	20	6	3	1	17	3	0	0	EKC	—
5311	2011 / 03 / 12	2115	41.8	1169	+19	+22	064	7	2	2	1	5	2	0	0	DAI	—
				1166	+09	+49	091	17	5	3	1	14	3	0	0	EAC	—
5312	2011 / 03 / 13	2050	28.8	1169	+20	+33	062	9	1	3	1	6	3	0	0	CKI	—
				1166	+10	+63	092	11	3	6	1	5	6	0	0	EAC	—
5313	2011 / 03 / 14	2100	15.6	1169	+18	+44	060	7	1	1	1	6	1	0	0	CKO	—
				1166	+09	+75	091	3	3	0	1	3	0	0	0	EAC	—



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REGION CO-ORDINATES AND CLASSIFICATIONS FOR MARCH 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5314	2011 / 03 / 15	2105	2.3	1172	+10	-17	345	2	0	2	1	0	2	0	0	BXO	—
				1169	+17	+58	060	5	2	1	1	4	1	0	0	DAI	long
5315	2011 / 03 / 16	2110	349.1	1173	-28	-41	308	2	1	1	1	1	1	0	0	CSO	—
				1169	+17	+73	062	1	1	0	0	0	0	1	0	HHX	—
5316	2011 / 03 / 18	2105	322.8	1175	+13	+07	330	4	2	2	1	2	2	0	0	DSI	—
5317	2011 / 03 / 28	2110	190.9	1183	+15	-56	135	8	3	4	1	4	4	0	0	EAC	—
				1181	-26	-33	158	1	0	1	0	0	0	0	1	AXX	—
				1180	+24	-28	163	1	1	0	0	0	0	1	0	HSX	—
				1178	-15	-19	172	4	1	2	1	2	2	0	0	CAI	—
				1176	-17	+09	200	7	3	3	1	4	3	0	0	FAO	—
5318	2011 / 03 / 29	2230	177.0	1183	+15	-41	136	9	4	2	1	7	2	0	0	EAC	—
				1181	-25	-20	157	1	0	1	0	0	0	0	1	AXX	big
				1180	+24	-15	162	1	1	0	0	0	0	1	0	HSX	—
				1178	-16	-06	171	2	0	2	1	0	2	0	0	BXO	—
				1176	-16	+22	199	5	2	2	1	3	2	0	0	FAO	—
5319	2011 / 03 / 31	2055	151.4	1183	+15	-16	135	11	3	4	1	7	4	0	0	EAC	—
				1180	+24	+11	162	1	1	0	0	0	0	1	0	HSX	small
				1176	-16	+50	201	6	2	4	1	2	4	0	0	FSO	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR APRIL 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5320	2011 / 04 / 02	2155	124.5	1183	+15	+09	134	8	2	3	1	5	3	0	0	EAI	—
				1180	+24	+35	160	1	1	0	0	0	0	1	0	HSX	—
5321	2011 / 04 / 03	2215	111.1	1184	+18	-02	109	10	2	3	1	7	3	0	0	DAI	—
				1183	+17	+28	139	3	1	0	1	3	0	0	0	HAX	—
				1180	+25	+49	160	1	1	0	0	0	0	1	0	HSX	small
5322	2011 / 04 / 07	2210	58.4	1185	+24	-25	033	3	1	2	1	1	2	0	0	CRI	—
				1184	+16	+55	113	1	1	0	0	0	0	1	0	HSX	—
5323	2011 / 04 / 09	2220	31.9	1187	-18	-40	352	1	0	1	0	0	0	0	1	AXX	—
				1186	+23	-20	012	4	1	3	1	1	3	0	0	CSI	—
5324	2011 / 04 / 10	2230	18.6	1186	+23	-08	011	4	1	3	1	1	3	0	0	CSI	—
				1185	+17	+06	025	8	2	5	1	3	5	0	0	DAI	—
5325	2011 / 04 / 11	2245	5.3	1190	+12	-26	339	4	2	2	1	2	2	0	0	DSI	—
				1186	+23	+06	011	2	1	0	1	2	0	0	0	HAX	—
				1185	+17	+21	026	5	2	2	1	3	2	0	0	DAI	—
5326	2011 / 04 / 18	2235	272.9	1193	+17	-07	266	12	3	5	1	7	5	0	0	EHC	long
				1191	+08	+06	279	1	1	0	0	0	0	1	0	HSX	—
				1190	+13	+66	339	3	1	0	1	3	0	0	0	HKX	—
5327	2011 / 04 / 28	2225	140.9	1203	+19	-79	062	1	1	0	0	0	0	1	0	HSX	—
				1199	+18	+47	188	6	2	3	1	3	3	0	0	DAI	—
				1195	-18	+51	192	5	2	3	1	2	3	0	0	DHI	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR MAY 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5328	2011 / 05 / 06	2150	35.5	1204	+17	+12	048	7	2	2	1	5	2	0	0	DAI	—
				1203	+17	+26	062	1	1	0	0	0	0	1	0	HSX	—
5329	2011 / 05 / 11	2200	329.3	1208E	+13	-16	313	2	1	1	1	1	1	0	0	CSO	—
				1208W	+11	-05	324	1	1	0	0	0	0	1	0	HSX	—
				1210	+19	+19	348	1	1	0	0	0	0	1	0	HSX	—
5330	2011 / 05 / 13	2215	302.7	1208E	+13	+12	315	1	0	1	0	0	0	0	1	AXX	—
				1208W	+12	+23	326	1	1	0	0	0	0	1	0	HSX	small
				1210	+19	+47	350	1	0	1	0	0	0	0	1	AXX	—
5331	2011 / 05 / 16	2215	263.0	1216	-14	-68	195	1	1	0	0	0	0	1	0	HSX	—
				1214	-24	+09	272	11	3	6	1	5	6	0	0	EAC	—
				1208	+08	+63	326	1	0	1	0	0	0	0	1	AXX	—
5332	2011 / 05 / 21	2235	196.7	1216	-15	-04	193	1	1	0	0	0	0	1	0	HSX	—
5333	2011 / 05 / 22	2215	183.7	1216	-15	+10	194	1	1	0	0	0	0	1	0	HSX	—
5334	2011 / 05 / 23	2220	170.4	1216	-15	+24	194	1	1	0	0	0	0	1	0	HSX	—
5335	2011 / 05 / 28	2240	104.1	1226	-19	-66	038	7	2	2	1	5	2	0	0	DAI	—
				1225	+17	-44	060	1	1	0	0	0	0	1	0	HSX	—
				1224	+20	+27	131	6	3	1	1	5	1	0	0	DAC	—
5336	2011 / 05 / 31	2220	64.6	1228	+17	-51	014	1	1	0	0	0	0	1	0	HSX	—
				1227	-18	-41	024	2	2	0	1	2	0	0	0	DSO	—
				1226	-22	-28	037	9	3	4	1	5	4	0	0	DAC	—
				1229	+16	-25	040	1	1	0	0	0	0	1	0	HSX	—
				1225	+16	-05	060	1	1	0	0	0	0	1	0	HSX	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR JUNE 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5337	2011 / 06 / 04	2245	11.4	1232	+10	-34	337	1	1	0	0	0	0	1	0	HSX	—
				1228	+17	+07	018	2	1	1	1	1	1	0	0	CSO	—
				1227	-19	+13	024	3	1	2	1	1	2	0	0	CSI	—
				1226	-21	+25	036	8	2	3	1	5	3	0	0	DAI	—
5338	2011 / 06 / 17	2240	199.4	1236	+17	-34	165	12	3	7	1	5	7	0	0	EKC	—
				1234	-16	+47	246	9	3	6	1	3	6	0	0	DSC	—
5339	2011 / 06 / 20	2245	159.6	1236	+17	+06	166	6	2	4	1	2	4	0	0	EHI	—
5340	2011 / 06 / 26	2235	80.3	—	—	—	—	0	0	0	0	0	0	0	0	—	—
5341	2011 / 06 / 29	2255	40.4	1243	+16	-51	349	1	0	1	0	0	0	0	1	AXX	big
				1242	+17	+16	056	8	2	5	1	3	5	0	0	DAI	—
5342	2011 / 06 / 30	2240	27.3	1243	+17	-37	350	6	2	3	1	3	3	0	0	DAI	—
				1244	+15	-03	024	1	0	1	0	0	0	0	1	AXX	big
				1242	+18	+30	057	7	2	3	1	4	3	0	0	DAI	—

Georgi Dobrovolski Solar Observatory

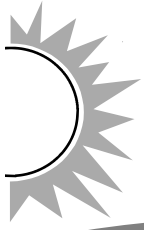


REGION CO-ORDINATES AND CLASSIFICATIONS FOR JULY 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5343	2011 / 07 / 02	2250	0.7	1243	+16	-10	351	5	1	3	1	2	3	0	0	CAI	—
				1244	+15	+22	023	2	0	2	1	0	2	0	0	BXO	—
5344	2011 / 07 / 10	2245	254.9	1250	-25	-49	206	2	1	1	1	1	1	0	0	CSO	—
				1245	+15	-19	236	1	1	0	0	0	0	1	0	HSX	—
				1249	-16	-12	243	1	1	0	0	0	0	1	0	HRX	—
				1247	-18	+14	269	8	3	3	1	5	3	0	0	EAC	short
5345	2011 / 07 / 11	2240	241.7	1251	+15	-70	172	1	1	0	0	0	0	1	0	HSX	—
				1250	-27	-34	208	3	2	0	1	3	0	0	0	DSO	class correct
				1245	+12	-07	235	1	1	0	0	0	0	1	0	HSX	small
				1249	-18	+02	244	1	0	1	0	0	0	0	1	AXX	—
				1247	-18	+27	269	4	1	3	1	1	3	0	0	CSI	—
5346	2011 / 07 / 15	2235	188.8	1254	-22	-51	138	1	1	0	0	0	0	1	0	HSX	small
				1256	+09	-36	153	2	1	1	1	1	1	0	0	CSO	small
				1251	+17	-19	170	1	1	0	0	0	0	1	0	HSX	—
				1250	-27	+19	208	1	1	0	0	0	0	1	0	HSX	—
5347	2011 / 07 / 16	2240	175.5	1254	-22	-38	138	3	1	1	1	2	1	0	0	CAO	—
				1256	+08	-23	153	1	0	1	0	0	0	0	1	AXX	big
				1251	+16	-06	170	1	1	0	0	0	0	1	0	HSX	—
				1250	-26	+32	208	2	1	0	1	2	0	0	0	HAX	—
5348	2011 / 07 / 17	2255	162.2	1254	-23	-25	137	5	2	2	1	3	2	0	0	DAI	small
				1256	+09	-08	154	3	0	3	1	0	3	0	0	BXI	—
				1251	+16	+07	169	1	1	0	0	0	0	1	0	HSX	—
				1250	-26	+47	209	1	1	0	0	0	0	1	0	HSX	—
				1257	+19	+55	217	7	2	4	1	3	4	0	0	DAI	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR JULY 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5349	2011 / 07 / 18	2245	149.0	1259	+26	-71	078	1	1	0	0	0	0	1	0	HSX	small
				1254	-22	-13	136	5	3	1	1	4	1	0	0	DAC	—
				1251	+16	+20	169	1	1	0	0	0	0	1	0	HSX	—
				1258	+11	+36	185	2	0	2	1	0	2	0	0	BXO	—
				1250	-27	+60	209	1	1	0	0	0	0	1	0	HSX	small
				1257	+20	+68	217	6	2	3	1	3	3	0	0	DSI	—
5350	2011 / 07 / 24	2245	69.6	—	—	—	—	0	0	0	0	0	0	0	—	—	
5351	2011 / 07 / 25	2250	56.4	1260	+20	-59	357	3	1	2	1	1	2	0	0	CSI	small
5352	2011 / 07 / 26	2220	43.4	1261	+16	-73	330	2	2	0	1	2	0	0	0	DHO	—
				1260	+20	-46	357	6	3	2	1	4	2	0	0	DAC	—
5353	2011 / 07 / 27	2240	30.0	1261	+15	-63	327	3	2	0	1	3	0	0	0	DKO	—
				1260	+18	-33	357	12	5	3	1	9	3	0	0	DAC	long

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR AUGUST 2011

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/SWPC Numbers .

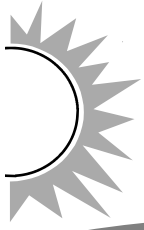
B = Heliographic Latitude (+ if NORTH , - if SOUTH) .

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

L = Carrington Longitude .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5354	2011 / 08 / 03	2245	297.4	1263	+17	+04	301	13	3	2	1	11	2	0	0	EHC	short
				1261	+16	+36	333	17	2	8	1	9	8	0	0	EAC	short
				1260	+18	+61	358	1	1	0	0	0	0	1	0	HHX	—
5355	2011 / 08 / 12	2255	178.3	—	—	—	—	0	0	0	0	0	0	0	0	—	—
5356	2011 / 08 / 16	2300	125.4	1272	-19	-68	057	1	1	0	0	0	0	1	0	HSX	—
				1271	+15	-63	062	8	4	4	1	4	4	0	0	EAC	—
				1273	-18	-11	114	1	0	1	0	0	0	0	1	AXX	—
5357	2011 / 08 / 17	2220	112.5	1272	-19	-57	056	1	1	0	0	0	0	1	0	HSX	—
				1271	+16	-51	062	9	3	5	1	4	5	0	0	EAC	—
				1273	-18	+01	114	1	0	1	0	0	0	0	1	AXX	small
5358	2011 / 08 / 18	2215	99.3	1272	-21	-43	056	1	1	0	0	0	0	1	0	HSX	—
				1271	+16	-40	059	10	3	6	1	4	6	0	0	EAC	—
5359	2011 / 08 / 19	2215	86.1	1272	-21	-29	057	2	1	1	1	1	1	0	0	CSO	tight
				1271	+16	-27	059	8	3	4	1	4	4	0	0	EAC	—
5360	2011 / 08 / 20	2205	73.0	1272	-22	-17	056	3	1	2	1	1	2	0	0	CSI	—
				1271	+16	-12	061	11	3	6	1	5	6	0	0	EAC	—
5361	2011 / 08 / 21	2210	59.7	1274	+18	-59	001	1	0	1	0	0	0	0	1	AXX	—
				1272	-21	-06	054	8	3	2	1	6	2	0	0	DAC	—
				1271	+16	-01	059	12	4	3	1	9	3	0	0	EAC	—
5362	2011 / 08 / 25	2200	7.0	1279	+14	-76	291	1	1	0	0	0	0	1	0	HSX	—
				1277	+17	-63	304	1	1	0	0	0	0	1	0	HSX	—
				1271	+17	+54	061	6	4	1	1	5	1	0	0	DAC	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR AUGUST 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5363	2011 / 08 / 26	2255	353.3	1279	+13	-61	292	3	1	1	1	2	1	0	0	CAO	—
				1277	+17	-50	303	1	1	0	0	0	0	1	0	HSX	—
				1280	+17	-24	329	2	1	1	1	1	1	0	0	CSO	—
				1275	+07	-05	348	1	1	0	0	0	0	1	0	HSX	—
				1271	+17	+68	061	3	2	1	1	2	1	0	0	DSI	—
5364	2011 / 08 / 27	2250	340.1	1279	+13	-49	291	3	1	1	1	2	1	0	0	CAO	—
				1277	+17	-38	302	1	1	0	0	0	0	1	0	HSX	—
				1280	+17	-12	328	2	1	1	1	1	1	0	0	CSO	—
				1275	+07	+06	346	1	0	1	0	0	0	0	1	AXX	—
				1271	+16	+78	058	1	1	0	0	0	0	1	0	HSX	—

Georgi Dobrovolski Solar Observatory

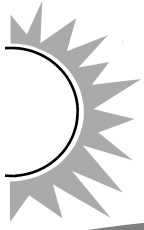


REGION CO-ORDINATES AND CLASSIFICATIONS FOR SEPTEMBER 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5365	2011 / 09 / 04	2205	234.8	1287	-32	-52	183	1	1	0	0	0	0	1	0	HSX	—
				1283	+13	-12	223	23	5	12	1	11	12	0	0	EAC	—
				1281	-19	+23	258	4	1	3	1	1	3	0	0	CSI	—
				1282	+24	+65	300	1	1	0	0	0	0	1	0	HSX	—
5366	2011 / 09 / 05	2200	221.7	1287	-31	-39	183	1	1	0	0	0	0	1	0	HHX	—
				1288	+18	-37	185	1	0	1	0	0	0	0	1	AXX	—
				1283	+14	+02	224	19	5	8	1	11	8	0	0	DAC	long
				1281	-18	+37	259	1	1	0	0	0	0	1	0	HSX	—
				1282	+22	+80	302	1	1	0	0	0	0	1	0	HSX	—
5367	2011 / 09 / 07	2150	195.4	1289	+23	-67	128	3	1	1	1	2	1	0	0	CKO	—
				1287	-30	-10	185	1	1	0	0	0	0	1	0	HSX	—
				1283	+14	+31	226	11	3	7	1	4	7	0	0	DAC	—
5368	2011 / 09 / 08	2155	182.1	1289	+21	-53	129	2	1	0	1	2	0	0	0	HKX	—
				1287	-30	+04	186	1	1	0	0	0	0	1	0	HSX	—
				1283	+16	+40	222	9	2	2	1	7	2	0	0	DAI	—
5369	2011 / 09 / 09	2145	169.0	1289	+22	-39	130	5	2	0	1	5	0	0	0	DKO	—
				1290	-15	-32	137	3	2	1	1	2	1	0	0	DSI	—
				1291	+23	-13	156	2	0	2	1	0	2	0	0	BXO	—
				1287	-29	+14	183	1	1	0	0	0	0	1	0	HSX	—
				1283	+17	+52	221	6	2	2	1	4	2	0	0	DAI	—
5370	2011 / 09 / 22	2120	357.6	1302	+11	-76	282	2	2	0	1	2	0	0	0	DHO	—
				1301	+19	-32	326	4	2	2	1	2	2	0	0	ESO	—
				1295	+22	+60	058	12	4	6	1	6	6	0	0	EAC	—
5371	2011 / 09 / 23	2110	344.5	1302	+13	-61	283	8	3	2	1	6	2	0	0	FKC	—
				1301	+20	-15	329	4	2	2	1	2	2	0	0	ESO	short
				1295	+24	+73	057	6	4	0	1	6	0	0	0	EAC	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR SEPTEMBER 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5372	2011 / 09 / 25	2045	318.3	1305	+12	-72	246	1	1	0	0	0	0	1	0	HSX	—
				1302	+12	-39	279	16	3	4	1	12	4	0	0	FKC	—
				1304	+12	-09	309	3	2	1	1	2	1	0	0	DSI	—
				1301	+18	+11	329	1	1	0	0	0	0	1	0	HSX	—
5373	2011 / 09 / 26	2110	304.9	1305	+13	-61	244	1	1	0	0	0	0	1	0	HSX	—
				1302	+13	-26	279	16	4	5	1	11	5	0	0	FKC	—
				1304	+13	+04	309	2	0	2	1	0	2	0	0	BXO	—
				1301	+17	+20	325	1	1	0	0	0	0	1	0	HSX	—
5374	2011 / 09 / 29	2050	265.5	1306	+14	-36	229	1	1	0	0	0	0	1	0	HSX	—
				1305	+13	-18	247	4	1	2	1	2	2	0	0	CAI	—
				1302	+13	+14	279	17	4	5	1	12	5	0	0	FKC	—

Georgi Dobrovolski Solar Observatory

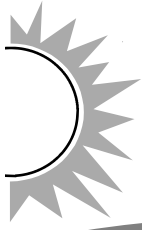


REGION CO-ORDINATES AND CLASSIFICATIONS FOR OCTOBER 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks		
5375	2011 / 10 / 03	2105	212.6	1309	+24	-58	155	2	2	0	1	2	0	0	0	DSO	tight		
				1310	-33	-19	194	1	1	0	0	0	0	0	1	0	HSX	—	
				1306	+14	+17	230	1	1	0	0	0	0	0	0	1	0	HSX	—
				1305	+11	+34	247	1	1	0	0	0	0	0	0	1	0	HHX	—
				1302	+13	+67	280	5	2	1	1	4	1	0	0	0	0	EAI	short
5376	2011 / 10 / 13	1940	81.4	1317	-27	-45	036	1	1	0	0	0	0	1	0	HSX	—		
				1319	+10	-33	048	11	4	5	1	6	5	0	0	0	DAC	—	
				1316	-12	-32	049	8	3	1	1	7	1	0	0	0	DAC	—	
				1314	+27	-24	057	1	1	0	0	0	0	0	1	0	HHX	—	
				1318	+20	+15	096	5	2	2	1	3	2	0	0	0	DAI	—	
				1313	-14	+35	116	2	1	1	1	1	1	1	0	0	0	CSO	—
				1312	+23	+39	120	1	1	0	0	0	0	0	0	1	0	HHX	—
				1309	+23	+72	153	1	1	0	0	0	0	0	0	1	0	HSX	—
5377	2011 / 10 / 15	2030	54.6	1317	-26	-18	037	1	1	0	0	0	0	1	0	HSX	—		
				1316	-12	-06	049	9	3	2	1	7	2	0	0	0	DAC	—	
				1319	+11	-04	051	16	7	7	1	9	7	0	0	0	EAC	—	
				1314	+28	+01	056	1	1	0	0	0	0	0	1	0	HHX	—	
				1313	-16	+62	117	1	1	0	0	0	0	0	1	0	HSX	small	
				1312	+23	+66	121	1	1	0	0	0	0	0	0	1	0	HHX	—
5378	2011 / 10 / 19	1950	2.2	1325	+16	-84	278	1	1	0	0	0	0	1	0	HSX	—		
				1324	+12	-57	305	15	6	4	1	11	4	0	0	0	EAC	—	
				1323	+24	-31	331	1	0	1	0	0	0	0	0	1	AXX	—	
				1321	-14	-00	002	1	0	1	0	0	0	0	0	1	AXX	—	
				1317	-27	+34	036	1	1	0	0	0	0	0	1	0	HSX	—	
				1316	-12	+47	049	4	2	2	1	2	2	0	0	0	0	DSI	—
				1319	+10	+50	052	9	3	3	1	6	3	0	0	0	0	EKC	—
				1314	+28	+55	057	1	1	0	0	0	0	0	1	0	0	HHX	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR OCTOBER 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5379	2011 / 10 / 23	2040	309.0	1330	+08	-62	247	9	2	2	1	7	2	0	0	EHI	—
				1325	+15	-31	278	6	1	2	1	4	2	0	0	CAI	—
				1324	+12	-02	307	14	3	6	1	8	6	0	0	EAC	small
				1327	-21	+27	336	7	2	3	1	4	3	0	0	DAI	—
5380	2011 / 10 / 29	2020	230.0	1332	+30	-13	217	1	1	0	0	0	0	1	0	HSX	—
				1333	+15	+14	244	2	1	1	1	1	1	0	0	CSO	—
				1330	+07	+19	249	21	5	11	1	10	11	0	0	FKC	—
5381	2011 / 10 / 30	2010	216.9	1334	+13	-29	188	9	4	4	1	5	4	0	0	DAC	—
				1332	+29	-01	216	1	1	0	0	0	0	1	0	HSX	—
				1333	+15	+29	246	1	0	1	0	0	0	0	1	AXX	—
				1330	+08	+32	249	16	3	7	1	9	7	0	0	FKC	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR NOVEMBER 2011

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/SWPC 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 .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5382	2011 / 11 / 03	2105	163.7	1339	+18	-60	104	23	4	3	1	20	3	0	0	FKC	—
				1338	-14	-43	121	4	2	1	1	3	1	0	0	DAI	—
				1337	+17	-29	135	2	1	1	1	1	1	0	0	CSO	—
				1334	+12	+31	195	1	1	0	0	0	0	1	0	HSX	—
5383	2011 / 11 / 10	1955	72.0	1343	+27	-26	046	1	1	0	0	0	0	1	0	HHX	small
				1342	+15	-18	054	1	1	0	0	0	0	1	0	HSX	big
				1341	+08	-17	055	4	1	2	1	2	2	0	0	CAI	—
				1340	-09	+01	073	1	1	0	0	0	0	1	0	HSX	—
				1345	-25	+13	085	6	2	3	1	3	3	0	0	DAI	—
				1344	-19	+28	100	9	3	5	1	4	5	0	0	DAC	—
				1339	+19	+30	102	24	4	9	1	15	9	0	0	EKC	—
				1338	-13	+48	120	4	2	2	1	2	2	0	0	DSI	—
5384	2011 / 11 / 14	2045	18.8	1350	+26	-69	310	3	2	0	1	3	0	0	0	DAO	—
				1346	-18	-42	337	4	2	1	1	3	1	0	0	DAI	tight
				1347	+08	-30	349	1	0	1	0	0	0	0	1	AXX	—
				1343	+28	+24	043	1	1	0	0	0	0	1	0	HSX	—
				1341	+09	+33	052	6	3	3	1	3	3	0	0	ESC	—
				1342	+17	+46	065	1	1	0	0	0	0	1	0	HSX	big
				1340	-08	+56	075	1	1	0	0	0	0	1	0	HSX	—
5385	2011 / 11 / 16	2030	352.6	1352	-23	-68	285	1	1	0	0	0	0	1	0	HSX	—
				1350	+26	-45	308	4	2	1	1	3	1	0	0	DAI	—
				1346	-18	-14	339	3	1	2	1	1	2	0	0	CSI	—
				1347	+09	-06	347	1	0	1	0	0	0	0	1	AXX	—
				1343	+28	+49	042	1	1	0	0	0	0	1	0	HSX	—
				1341	+09	+61	054	4	2	2	1	2	2	0	0	DSI	—
				1342	+15	+70	063	2	1	1	1	1	1	0	0	CSO	—

Georgi Dobrovolski Solar Observatory



REGION CO-ORDINATES AND CLASSIFICATIONS FOR DECEMBER 2011

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/SWPC Numbers .

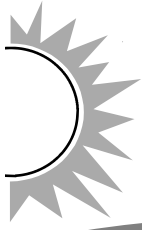
B = Heliographic Latitude (+ if NORTH , - if SOUTH) .

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

L = Carrington Longitude .

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

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks
5386	2011 / 12 / 02	2040	141.6	1364	+19	-38	104	1	1	0	0	0	0	1	0	HSX	—
				1363	-20	-32	110	15	4	5	1	10	5	0	0	DAC	long
				1365	+20	-17	125	4	1	2	1	2	2	0	0	CAI	—
				1362	+08	-12	130	9	3	4	1	5	4	0	0	EAC	—
				1361	+20	+29	171	2	1	1	1	1	1	0	0	CSO	—
				1358	+20	+51	193	1	1	0	0	0	0	0	1	0	HSX
5387	2011 / 12 / 07	1920	76.4	1374	-16	-85	351	1	1	0	0	0	0	1	0	HSX	—
				1366	+17	-16	060	2	1	1	1	1	1	0	0	CSO	—
				1371	+09	-16	060	2	1	1	1	1	1	0	0	CRO	—
				1367	-26	-00	076	2	1	1	1	1	1	0	0	CSO	small
				1364	+18	+27	103	4	1	3	1	1	3	0	0	CSI	—
				1363	-22	+29	105	8	3	3	1	5	3	0	0	EKC	—
				1362	+06	+56	132	5	1	4	1	1	4	0	0	ESO	—
5388	2011 / 12 / 08	2035	62.6	1374	-16	-72	351	1	1	0	0	0	0	1	0	HSX	big
				1375	+08	-69	354	1	0	1	0	0	0	0	1	AXX	big
				1372	+10	-16	047	3	1	2	1	1	2	0	0	CSI	—
				1366	+18	-04	059	3	1	2	1	1	2	0	0	CSI	—
				1364	+17	+40	103	2	2	0	1	2	0	0	0	DSO	—
				1363	-21	+44	107	1	1	0	0	0	0	1	0	HHX	—
				1362	+07	+68	131	1	1	0	0	0	0	1	0	HSX	—
5389	2011 / 12 / 18	1925	291.5	1380	-20	-58	233	1	1	0	0	0	0	1	0	HSX	small
				1381/2	-18	-26	265	12	3	8	1	4	8	0	0	DAC	—
				1377	+12	+08	299	2	1	0	1	2	0	0	0	HAX	small
				1376	+20	+15	306	1	0	1	0	0	0	0	1	AXX	—
				1374	-18	+60	351	2	0	2	1	0	2	0	0	BXO	—
				1375	+09	+67	358	1	1	0	0	0	0	1	0	HSX	—



Georgi Dobrovolski Solar Observatory

REGION CO-ORDINATES AND CLASSIFICATIONS FOR DECEMBER 2011 continued.

OBS	DATE	UT	CM	REG.	B	CMD	L	f	p	s	gr	grfp	grf	efp	ef	Class.	Remarks		
5390	2011 / 12 / 20	1940	265.0	1384	+12	-64	201	4	1	2	1	2	2	0	0	CAI	—		
				1383	+03	-57	208	1	0	1	0	0	0	0	0	1	AXX	big	
				1381/2	-18	-05	260	18	5	11	1	7	11	0	0	0	0	ESC	—
				1376	+19	+43	308	10	4	4	1	6	4	0	0	0	0	DAC	—
5391	2011 / 12 / 23	1935	225.5	1386	-16	-76	150	1	1	0	0	0	0	1	0	HSX	small		
				1384	+13	-29	197	8	2	2	1	6	2	0	0	0	DHI	—	
				1383	+03	-17	209	2	1	1	1	1	1	0	0	0	CSO	small, tight	
				1381/2	-19	+35	261	9	3	6	1	3	6	0	0	0	0	ESI	short
				1376	+16	+82	308	1	1	0	0	0	0	0	1	0	0	HSX	—
5392	2011 / 12 / 24	1930	212.4	1386	-18	-66	146	4	2	1	1	3	1	0	0	DAI	—		
				1384	+13	-15	197	10	2	3	1	7	3	0	0	0	DKI	largest penumbra circular	
				1383	+03	-03	209	2	1	1	1	1	1	0	0	0	CSO	tight	
				1385	-32	+13	225	2	0	2	1	0	2	0	0	0	0	BXO	—
				1381	-19	+52	264	1	1	0	0	0	0	0	1	0	0	HSX	big