Space Weather Highlights
26 June - 02 July 2023

SWPC PRF 2496
03 July 2023

Solar activity was generally at R1 (Minor) levels until 02 Jul when R3 (Strong) levels were reached. Weak M-class activity was observed from Regions 3340 (N20, L=234, class/area Eki/350 on 26 Jun) on 26-28 Jun, Region 3354 (N15, L=168, class/area Fkc/1150 on 02 Jul) on 29 Jun and Region 3359 (S22, L=068, class/area Dai/060 on 02 Jul) on 01-02 Jul. Region 3354 produced an X1 flare at 02/2314 UTC. No Earth-directed CMEs were observed during the period.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on 27 Jun through 02 Jul with a maximum flux of 3,510 pfu observed at 28/1555 UTC.

Geomagnetic field activity was at mostly quiet to isolated unsettled levels throughout the period. A brief interval of active levels were observed the later half of 29 Jun due to a solar sector crossing from a negative to a positive sector.

Space Weather Outlook
03 July - 29 July 2023

Solar activity is expected to be at low to R1-R2 (Minor-Moderate) levels throughout the forecast period.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to reach high levels on 03-06 Jul and 14-29 Jul due to CH HSS influence.

Geomagnetic field activity is expected to reach unsettled levels on 04-05 Jul, unsettled to active levels on 09-10 Jul with G1-G2 (Minor-Moderate) levels likely on 12-13 Jul due to recurrent CH HSS activity. Quiet to unsettled levels are expected on 14-29 Jul.

Daily Solar Data

Date	Radio Flux 10.7cm	Sun spot No.	Sunspot Area (10^{-6} hemi.)	X-ray Background Flux	Flares							
					X-ray			Optical				
					C	M	X	S	1	2	3	4
26 June	158	158	720	B8.9	13	1	0	14	3	0	0	0
27 June	151	141	900	B9.4	15	1	0	21	1	1	0	0
28 June	155	141	1160	B9.8	9	1	0	14	0	1	0	0
29 June	162	112	1060	C1.0	8	1	0	6	0	1	0	0
30 June	159	87	930	C1.2	8	0	0	5	1	0	0	0
01 July	166	119	1290	C1.4	9	1	0	14	0	0	0	0
02 July	170	126	1350	C1.4	8	1	1	17	0	0	0	0

Daily Particle Data

Date	Proton Fluence (protons/cm^2 -day -sr)		Electron Fluence (electrons/cm^2 -day -sr)
	>1 MeV	>10 MeV	>2MeV
26 June	4.6e+04	2.1e+04	1.7e+07
27 June	3.7e+04	2.1e+04	6.2e+07
28 June	3.5e+04	2.2e+04	1.1e+08
29 June	1.2e+05	2.1e+04	6.2e+07
30 June	8.9e+04	2.1e+04	9.4e+07
01 July	6.4e+04	2.1e+04	1.3e+08
02 July	8.2e+04	2.1e+04	1.2e+08

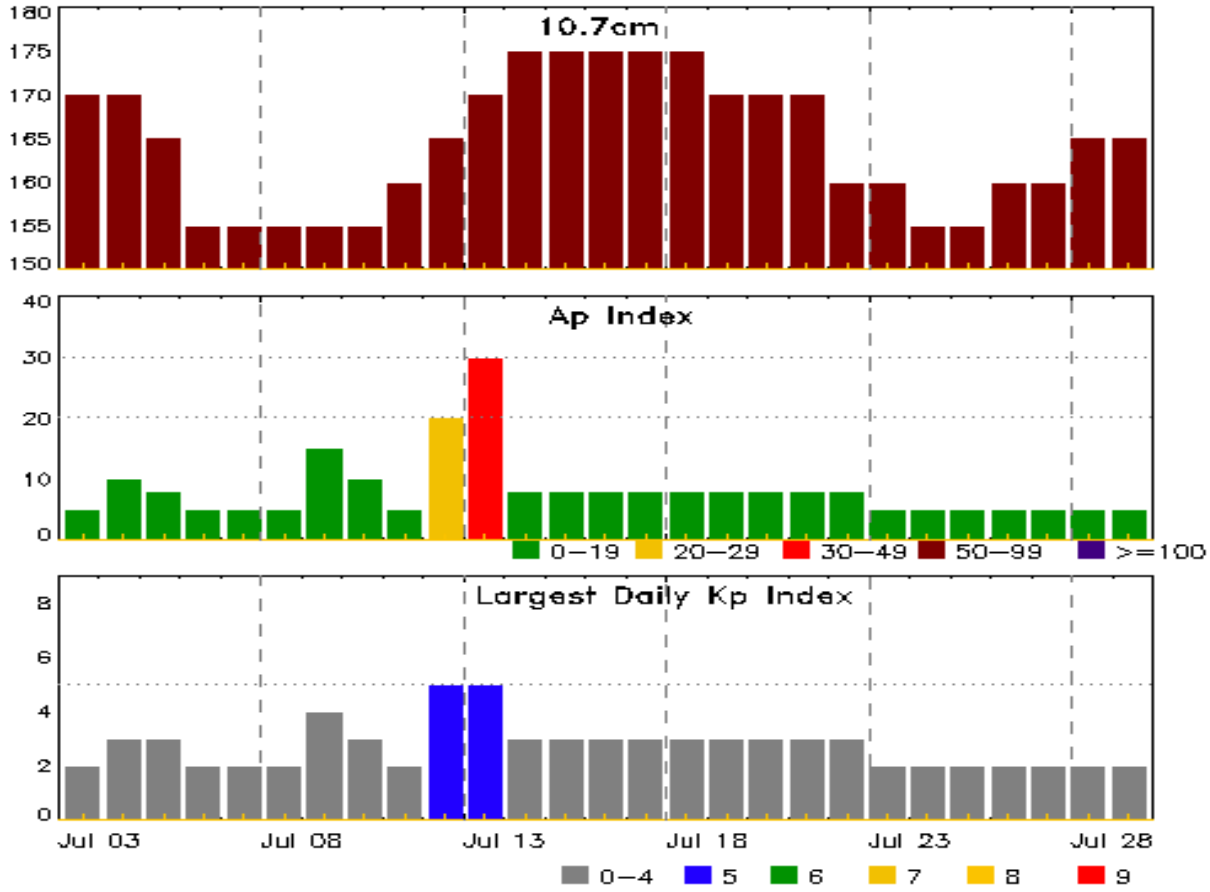
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
26 June	11	2-2-2-3-3-3-2-3	24	3-3-3-4-4-6-2-2	11	3-2-2-3-3-3-2-3
27 June	7	2-2-2-2-2-2-2-2	17	3-3-3-5-3-3-2-2	8	2-2-3-2-2-2-2-2
28 June	8	2-2-2-3-2-2-2-2	9	2-3-2-4-2-1-1-1	8	2-2-2-2-2-1-2-2
29 June	13	2-3-3-3-2-3-3-3	23	3-5-3-5-3-3-3-3	17	3-3-3-3-2-4-4-4
30 June	8	3-1-3-2-2-2-1-1	12	3-2-3-4-4-2-0-0	8	3-2-2-2-3-2-1-0
01 July	6	2-1-1-2-2-1-2-2	3	2-2-0-0-1-0-1-2	5	2-2-1-1-1-1-1-2
02 July	8	1-2-1-3-3-2-2-1	5	1-1-1-2-3-2-0-0	5	1-1-2-2-2-1-1-1

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
27 Jun 1308	ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
28 Jun 0338	ALERT: Type II Radio Emission	28/0222
28 Jun 1047	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
29 Jun 0540	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
29 Jun 0543	WARNING: Geomagnetic K = 4	29/0543 - 1200
29 Jun 1126	EXTENDED WARNING: Geomagnetic K = 4	29/0543 - 1500
29 Jun 1714	WARNING: Geomagnetic K = 4	29/1715 - 2100
29 Jun 1732	ALERT: Geomagnetic K = 4	29/1719
29 Jun 1908	EXTENDED WARNING: Geomagnetic K = 4	29/1715 - 2359
30 Jun 1224	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
01 Jul 0702	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
02 Jul 0307	ALERT: Type II Radio Emission	02/0243
02 Jul 0540	CONTINUED ALERT: Electron 2MeV Integral Flux >= 1000pfu	27/1250
02 Jul 2309	ALERT: X-ray Flux exceeded M5	02/2307
02 Jul 2333	SUMMARY: 10cm Radio Burst	02/2308 - 2313

Twenty-seven Day Outlook



Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index	Date	Radio Flux 10.7cm	Planetary A Index	Largest Kp Index
03 Jul	170	5	2	17 Jul	175	8	3
04	170	10	3	18	175	8	3
05	165	8	3	19	170	8	3
06	155	5	2	20	170	8	3
07	155	5	2	21	170	8	3
08	155	5	2	22	160	8	3
09	155	15	4	23	160	5	2
10	155	10	3	24	155	5	2
11	160	5	2	25	155	5	2
12	165	20	5	26	160	5	2
13	170	30	5	27	160	5	2
14	175	8	3	28	165	5	2
15	175	8	3	29	165	5	2
16	175	8	3				

Energetic Events

	Time			X-ray		Optical Information			Peak Radio Flux		Sweep Freq Intensity	
Date	Begin	Max	Half Max	Class	Integ Flux	Imp/ Brtns	Location Lat CMD	Rgn #	245	2695	II	IV
26 Jun	1608	1622	1634	M1.6	0.012	1N	N23W38	3340				
27 Jun	1457	1514	1519	M1.2	0.004	SF	N14E17	3340				
28 Jun	0826	0844	0859	M1.9	0.020	2N	N20W62	3340				
29 Jun	1400	1415	1423	M3.8	0.022	2B	N17W14	3354				
01 Jul	2207	2223	2231	M1.1	0.009	SN	S20E55	3359	410			
02 Jul	0229	0235	0240	M2.0	0.007			3359	42000			3
02 Jul	2254	2314	2358	X1.0	0.260			3354		200		

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
26 Jun	0047	0056	0105	C2.1	SF	S20W33	3339
26 Jun	0131	0136	0142	C2.2	SF	N25W30	3340
26 Jun	0219	0230	0247	C2.1	SF	N23W30	3340
26 Jun	0349	0402	0426	C7.0	1F	N23W31	3340
26 Jun	0437	0438	0442		SF	S20W37	3339
26 Jun	0509	0513	0518	C1.7	SF	S12W11	3341
26 Jun	0535	0630	1317	C3.0	1F	N22W34	3340
26 Jun	0823	0830	0837	C1.2			
26 Jun	1143	1152	1211	C2.9	SF	N23E27	3351
26 Jun	1157	1204	1214		SF	N21W69	3337
26 Jun	1213	1225	1231	C7.4			3340
26 Jun	1430	1430	1442		SF	N23W38	3340
26 Jun	1608	1622	1634	M1.6	1N	N23W38	3340
26 Jun	1721	1726	1736		SF	N23W39	3340
26 Jun	1749	1750	1759		SF	N23W39	3340
26 Jun	1946	1956	2000	C3.4	SF	N25W40	3340
26 Jun	2029	2031	2037		SF	N25W40	3340
26 Jun	2216	2221	2226	C2.3	SF	N25W40	3340
26 Jun	2312	2320	2325	C3.6			
26 Jun	2340	2350	A2359	C2.2	SF	N24W43	3340
27 Jun	0000	0000	0047		SN	N26W42	3340
27 Jun	0119	0141	0201	C2.9	SF	N24W43	3340
27 Jun	0324	0330	0350	C1.4	SF	N15E25	3354
27 Jun	0515	0528	0546		SF	N22W46	3340

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
27 Jun	0557	0608	0613	C2.9	SF	N15E23	3354
27 Jun	0705	0715	0722	C5.3	SN	N20W79	3337
27 Jun	0738	0739	0747		SF	S20W19	3341
27 Jun	0806	0806	0810		SF	N22W46	3340
27 Jun	0827	0830	0833		SF	N22W46	3340
27 Jun	0911	0919	0924	C1.8	SF	N22W46	3340
27 Jun	0938	0941	0952		SF	N21W48	3340
27 Jun	1138	1139	1143		SF	N22W47	3340
27 Jun	1453	1512	1639		2B	N22W49	3340
27 Jun	1457	1514	1519	M1.2	SF	N14E17	3340
27 Jun	1557	1603	1607	C2.0			
27 Jun	1630	1651	1704	C5.6	1N	S16W23	3341
27 Jun	1732	1734	1740		SF	S13W26	3341
27 Jun	1743	1746	1750	C2.3			
27 Jun	1751	1755	1811	C2.6	SF	N16E14	3354
27 Jun	1835	1835	1840	C1.7	SF	N26W53	3340
27 Jun	1927	1938	1939	C1.8	SF	N15E18	3354
27 Jun	2010	2018	2022	C2.0	SF	N21W59	3340
27 Jun	2111	2119	2128	C1.9	SF	N15E15	3354
27 Jun	2222	2233	2248	C4.4	SF	N15E15	3354
27 Jun	2317	2324	2331	C1.7			3351
27 Jun	2339	2324	2349		SF	N24E09	3351
28 Jun	0029	0032	0039	C1.4			3354
28 Jun	0214	0223	0233	C3.3			
28 Jun	0328	0335	0344	C1.3	SF	N14E11	3354
28 Jun	0402	0409	0415	C1.6			3354
28 Jun	0422	0422	0424		SF	N14E11	3354
28 Jun	0500	0549	0556		SF	N13E09	3354
28 Jun	0603	0603	0613		SF	N16E03	3354
28 Jun	0623	0635	0638		SF	N12E11	3354
28 Jun	0647	0648	0702		SF	N12E11	3354
28 Jun	0821	U0822	0825		SF	N12E10	3354
28 Jun	0826	0844	0859	M1.9	2N	N20W62	3340
28 Jun	0916	0916	0919		SF	N12E10	3354
28 Jun	0959	1000	1003		SF	N12E09	3354
28 Jun	1331	1332	1338		SF	N14E05	3354
28 Jun	1506	1507	1512		SF	S22W36	3341
28 Jun	1641	1644	1648	C1.8			

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
28 Jun	1822	1839	1904	C5.4	SN	N17W02	3354
28 Jun	1846	1853	1904	C5.0	SF	S31W12	3348
28 Jun	1944	1951	2002	C1.5			
28 Jun	2112	2118	2231		SF	N15W01	3354
28 Jun	2302	2312	2324	C1.6			
29 Jun	0250	0300	0319	C1.7	SF	N14W01	3354
29 Jun	0350	0403	0410	C2.8	SF	S32W20	3348
29 Jun	0410	0420	0426	C3.3	SF	S15W46	3341
29 Jun	0803	0809	0814	C2.7	SF	N14W01	3354
29 Jun	1055	1115	1140	C3.4	SF	N14W11	3354
29 Jun	1227	1238	1300	C3.1	SF	N14W11	3354
29 Jun	1400	1415	1423	M3.8	2B	N17W14	3354
29 Jun	2002	2013	2030	C3.0			3340
29 Jun	2152	2207	2223	C5.3			
30 Jun	0609	0616	0622	C1.8	SF	N14W20	3354
30 Jun	0707	0731	0755	C3.1			3354
30 Jun	0951	1003	1021	C5.7	1F	N16W25	3354
30 Jun	1116	1121	1129	C1.9	SF	N14W21	3354
30 Jun	1239	1247	1251	C2.9			3340
30 Jun	1307	1307	1314		SF	N14W24	3354
30 Jun	1334	1352	1404	C4.2	SF	N17W30	3354
30 Jun	1456	1457	1504		SF	N13W70	
30 Jun	1853	1857	1901	C3.7			3354
30 Jun	1903	1907	1911	C2.8			3340
01 Jul	0700	0706	0710	C2.5			3358
01 Jul	0718	0725	0729	C2.4			3357
01 Jul	0912	0919	0926	C2.1			3354
01 Jul	1134	1139	1144	C3.5			3354
01 Jul	1247	1256	1300	C4.1			3360
01 Jul	1336	1344	1346		SF	N18W42	3354
01 Jul	1356	1420	1452	C3.7			3358
01 Jul	1528	1530	1540		SF	N26E65	
01 Jul	1552	1557	1603	C3.0	SF	N26E63	3360
01 Jul	1604	1607	1614		SF	N14W39	3354
01 Jul	1811	1811	1815		SF	N25E63	
01 Jul	1822	1823	1827		SF	S11E60	3358
01 Jul	1905	1916	1925	C4.0			3359
01 Jul	1957	2006	2020	C2.6			3354

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
01 Jul	2001	2002	2013		SF	N26E62	3360
01 Jul	2009	2010	2024		SF	N16W42	3354
01 Jul	2039	2039	2042		SF	N13W39	3354
01 Jul	2101	2102	2106		SF	N26E62	
01 Jul	2151	2153	2154		SF	S05E34	3357
01 Jul	2207	2223	2231	M1.1	SN	S20E55	3359
01 Jul	2238	2238	2243		SF	S05E33	3357
01 Jul	2319	2321	2324		SF	N18W50	3351
02 Jul	0007	0018	0023		SF	S20E54	3359
02 Jul	0036	0036	0046		SF	S20E54	3359
02 Jul	0229	0235	0240	M2.0			3359
02 Jul	0246	0256	0302	C4.1			3359
02 Jul	0327	0334	0338	C2.9			3354
02 Jul	0507	0518	0525		SF	N17W47	3354
02 Jul	0709	0709	0712		SF	N15W49	3354
02 Jul	0817	0824	0834	C6.5	SF	N17W49	3354
02 Jul	0840	0844	0856		SF	S10E51	3358
02 Jul	0845	0853	0858	C8.8	SN	N16W51	3354
02 Jul	0900	0900	0908		SF	S21E48	3359
02 Jul	0936	0938	0940		SF	N15W51	3354
02 Jul	0937	U0941	A1009		SF	N15W48	3351
02 Jul	B1029	U1035	A1055		SF	S21E48	3359
02 Jul	1106	1109	1124	C2.4			3354
02 Jul	1107	1114	1126		SF	N16W52	3354
02 Jul	1128	1129	1132		SF	N15W52	3354
02 Jul	1302	1306	1312		SF	N15W50	3354
02 Jul	1342	U1342	A1344		SF	S16E50	3359
02 Jul	1418	1422	1424		SF	N15W54	3354
02 Jul	1725	1735	1748	C2.6			
02 Jul	2119	2126	2131	C7.3	SF	S13E46	3359
02 Jul	2216	2229	2240	C5.7			
02 Jul	2254	2314	2358	X1.0			3354

Region Summary

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 3334													
13 Jun	N17E68	293	90	1	Hax	3	A	1							
14 Jun	N17E56	291	60	1	Hax	2	A				1				
15 Jun	N17E47	288	10	1	Axx	1	A								
16 Jun	N17E36	286	10	1	Axx	1	A								
17 Jun	N16E21	287	plage												
18 Jun	N16E07	288	plage					1							
19 Jun	N16W07	289	plage												
20 Jun	N16W21	290	plage												
21 Jun	N16W35	290	plage												
22 Jun	N17W40	282	20	4	Bxo	3	B								
23 Jun	N17W54	283	plage					1							
24 Jun	N17W68	284	plage												
25 Jun	N17W82	284	plage												
								3	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 288

		Region 3335													
14 Jun	S15E63	284	140	2	Dao	5	B	5			10	1			
15 Jun	S15E51	284	150	11	Eso	9	B	1			2				
16 Jun	S15E37	285	380	11	Ehi	18	BG	1							
17 Jun	S15E24	284	390	13	Eki	18	BG	1							
18 Jun	S15E10	285	360	13	Eki	18	BG	2			3				
19 Jun	S15W03	284	200	13	Eai	22	B	4			5				
20 Jun	S15W16	284	200	13	Eai	18	B				2				
21 Jun	S15W28	283	220	11	Eai	17	B				1				
22 Jun	S15W44	284	230	11	Esi	9	B								
23 Jun	S15W58	287	230	8	Dso	9	B	1			2				
24 Jun	S14W73	288	220	6	Cso	4	B	4			4				
25 Jun	S15W87	289	200	2	Hax	1	A	2			1				
								21	0	0	30	1	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 284

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 3336												
14 Jun	S20E66	281	160	6	Cso	5	B								
15 Jun	S21E54	281	130	9	Dao	9	B	2			2				
16 Jun	S21E44	278	80	6	Cao	8	B								
17 Jun	S21E31	277	30	3	Cro	5	B	1							
18 Jun	S22E17	278	30	4	Cro	5	B	2	2		1		1		
19 Jun	S23E03	279	20	9	Cro	7	B								
20 Jun	S22W11	282	plage								1				
21 Jun	S19W30	284	plage								3				
22 Jun	S19W44	286	plage												
23 Jun	S19W58	287	plage												
24 Jun	S19W72	288	plage												
25 Jun	S19W86	288	plage												
								5	2	0	7	0	1	0	0

Crossed West Limb.
Absolute heliographic longitude: 279

			Region 3337												
15 Jun	N17E69	266	10	1	Axx	1	A								
16 Jun	N17E59	263	10	1	Axx	1	A		1						
17 Jun	N17E45	263	plage												
18 Jun	N17E31	264	plage												
19 Jun	N17E18	264	10	1	Axx	1	A								
20 Jun	N16E04	264	plage												
21 Jun	N20W07	262	120	4	Cso	10	B	1	1		2				
22 Jun	N20W24	266	60	5	Dro	6	B	2			3				
23 Jun	N20W38	267	80	7	Dao	6	B	3			4				
24 Jun	N21W51	267	60	7	Cao	6	B	3	1		5				
25 Jun	N21W61	263	30	3	Hax	3	A	2			3				
26 Jun	N15W75	264	10	1	Hrx	1	A				1				
27 Jun	N15W90	266	10	1	Axx	1	A	1			1				
								12	3	0	19	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 264

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 3338													
14 Jun	N11E83	265	plage					1							
15 Jun	N11E73	262	20	8	Cao	2	B	1			3				
16 Jun	N11E59	263	140	6	Cso	4	B	1	1		1				
17 Jun	N11E45	263	130	8	Cso	6	B				1				
18 Jun	N11E31	264	120	9	Cao	6	B								
19 Jun	N11E17	264	70	10	Dao	10	B	1							
20 Jun	N11E04	264	50	11	Eso	8	B								
21 Jun	N11W08	262	40	8	Cso	5	B								
22 Jun	N11W22	264	30	8	Cso	4	B								
23 Jun	N11W37	266	20	4	Cro	5	B	1			2				
24 Jun	N11W51	266	20	2	Hrx	4	A	1							
25 Jun	N11W64	266	20	2	Cro	3	B	1			2				
26 Jun	N09W78	267	10	2	Axx	2	A								
								7	1	0	9	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 264

		Region 3339													
17 Jun	S19E70	238	100	2	Hsx	1	A	2							
18 Jun	S19E56	239	120	2	Hsx	1	A								
19 Jun	S19E42	239	180	4	Hsx	1	A								
20 Jun	S18E28	240	140	4	Hax	2	A	1			1				
21 Jun	S18E15	239	140	5	Cao	5	B				1				
22 Jun	S20E03	239	140	6	Cao	9	B								
23 Jun	S20W11	240	110	8	Cao	9	B								
24 Jun	S20W23	239	110	5	Cso	7	B	1							
25 Jun	S20W37	239	90	4	Cso	6	B	1							
26 Jun	S23W51	240	150	9	Cso	10	B	1			2				
27 Jun	S20W65	241	60	6	Cso	3	B								
28 Jun	S21W78	238	40	2	Hax	1	A								
29 Jun	S19W91	239	30	1	Hax	1	A								
								6	0	0	4	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 239

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 3340													
18 Jun	N23E59	236	100	4	Cao	6	B	1			1				
19 Jun	N23E45	237	100	4	Dao	6	B	2			5				
20 Jun	N21E31	238	80	6	Cao	7	BG				3				
21 Jun	N21E19	235	120	8	Dai	12	BG				1				
22 Jun	N22E07	235	130	10	Dsi	12	B		1		1				
23 Jun	N22W07	236	160	11	Esi	13	B	1			2				
24 Jun	N22W19	235	200	11	Eai	18	B	3			3				
25 Jun	N23W31	233	300	11	Ekc	18	BD	8			6				
26 Jun	N20W45	234	350	11	Eki	22	BG	8	1		9	3			
27 Jun	N23W58	234	260	12	Eki	17	BG	4	1		11		1		
28 Jun	N23W72	235	220	11	Eai	14	BG		1				1		
29 Jun	N23W86	236	80	11	Eai	7	BG	1							
								28	4	0	42	3	2	0	0

Crossed West Limb.
Absolute heliographic longitude: 235

		Region 3341													
19 Jun	S13E62	219	100	8	Cso	2	B		2		1				
20 Jun	S15E58	218	110	7	Dao	4	BG	3		1	3				
21 Jun	S15E48	211	190	6	Cso	7	B	1	1		2	1			
22 Jun	S16E35	207	180	6	Cso	7	B	2	1		2	1			
23 Jun	S16E22	207	200	5	Cso	5	B	1							
24 Jun	S16E09	207	140	4	Cao	4	B	3			2				
25 Jun	S16W05	207	130	4	Cao	5	B	1			2	1			
26 Jun	S15W19	208	120	10	Cao	9	B	1			1				
27 Jun	S15W33	209	50	6	Cao	2	B	1			2	1			
28 Jun	S15W47	210	30	2	Hax	1	A				1				
29 Jun	S15W61	211	20	2	Hax	2	A	1			1				
30 Jun	S16W75	211	10	1	Axx	1	A								
01 Jul	S16W88	211	10	1	Axx	1	A								
								14	4	1	17	4	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 207

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 3343													
19 Jun	N16W01	282	10	4	Bxo	4	B								
20 Jun	N16W14	282	plage												
21 Jun	N16W28	283	plage												
22 Jun	N16W42	284	plage												
23 Jun	N16W56	285	plage												
24 Jun	N16W70	286	plage												
25 Jun	N16W84	286	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 282

		Region 3345													
20 Jun	N10E59	209	30	2	Dso	3	B								
21 Jun	N09E48	209	80	5	Cso	5	B				1				
22 Jun	N09E33	209	40	5	Cso	5	B								
23 Jun	N08E19	210	20	4	Cro	3	B								
24 Jun	N09E04	212	10	1	Hrx	1	A								
25 Jun	N09W09	211	10	1	Hrx	1	A								
26 Jun	N09W23	212	10	1	Hrx	1	A								
27 Jun	N09W37	213	10	1	Hrx	1	A								
28 Jun	N09W50	213	20	1	Hrx	1	A								
29 Jun	N09W64	214	10	1	Axx	1	A								
30 Jun	N06W78	214	10	1	Hrx	1	A								
								0	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 212

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 3346												
21 Jun	N08E22	232	20	4	Cao	5	B								
22 Jun	N08E08	234	20	4	Bxo	4	B								
23 Jun	N08W06	235	plage												
24 Jun	N10W20	235	20	2	Bxo	2	B								
25 Jun	N08W33	235	10	4	Bxo	2	B								
26 Jun	N08W47	236	plage												
27 Jun	N08W61	237	plage												
28 Jun	N08W75	238	plage												
29 Jun	N08W89	239	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 235

			Region 3347												
23 Jun	S17W26	255	30	6	Cro	5	B								
24 Jun	S18W38	254	10	3	Bxo	3	B								
25 Jun	S18W50	252	10	1	Axx	2	A								
26 Jun	S19W64	253	10	1	Axx	1	A								
27 Jun	S19W78	254	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 255

			Region 3348												
23 Jun	S31E46	183	20	5	Bxo	3	B								
24 Jun	S31E34	182	20	7	Bxo	2	B								
25 Jun	S31E20	182	plage												
26 Jun	S33E07	182	10	4	Bxo	2	B								
27 Jun	S33W06	182	10	5	Bxo	5	B								
28 Jun	S33W19	182	10	6	Bxo	3	B	1			1				
29 Jun	S33W33	183	plage					1			1				
30 Jun	S33W47	183	plage												
01 Jul	S33W61	184	plage												
02 Jul	S33W75	185	plage												
								2	0	0	2	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 182

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Region 3349													
23 Jun	N09E38	191	20	3	Bxo	3	B								
24 Jun	N09E24	192	20	5	Bxo	2	B								
25 Jun	N08E11	191	10	6	Bxo	2	B								
26 Jun	N08W03	192	plage												
27 Jun	N08W17	193	plage												
28 Jun	N08W31	194	plage												
29 Jun	N08W45	195	plage												
30 Jun	N08W59	195	plage												
01 Jul	N08W73	196	plage												
02 Jul	N08W87	197	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 192

		Region 3350													
23 Jun	S11E39	190	10	1	Axx	1	A				1				
24 Jun	S11E25	191	plage												
25 Jun	S11E11	191	plage												
26 Jun	S11W03	192	plage												
27 Jun	S11W17	193	plage												
28 Jun	S11W31	194	plage												
29 Jun	S11W45	195	plage												
30 Jun	S11W59	195	plage												
01 Jul	S11W73	196	plage												
02 Jul	S11W87	197	plage												
								0	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 192

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 3351												
23 Jun	N22E59	170	20	2	Hsx	1	A								
24 Jun	N22E46	170	30	1	Hsx	1	A								
25 Jun	N22E32	170	20	2	Hrx	3	A								
26 Jun	N20E18	171	30	3	Cro	5	B	1			1				
27 Jun	N20E05	171	10	4	Bxo	2	B	1			1				
28 Jun	N21W08	171	10	2	Bxo	2	B								
29 Jun	N21W22	172	plage												
30 Jun	N21W36	172	plage												
01 Jul	N21W50	173	plage								1				
02 Jul	N21W64	174	plage								1				
								2	0	0	4	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 171

			Region 3352												
24 Jun	N08W59	275	20	3	Cro	3	B								
25 Jun	N09W73	275	10	5	Bxo	3	B				1				
26 Jun	N09W87	276	plage												
								0	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 275

			Region 3353												
24 Jun	S18W12	228	10	3	Bxo	3	B								
25 Jun	S18W26	228	10	1	Axx	1	A								
26 Jun	S18W40	229	plage												
27 Jun	S18W54	230	plage												
28 Jun	S18W68	231	plage												
29 Jun	S18W82	232	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 228

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 3354												
26 Jun	N15E24	164	20	3	Cso	5	B								
27 Jun	N15E11	165	450	9	Dki	19	BG	6			6				
28 Jun	N14W03	166	800	11	Ekc	38	BGD	4			12				
29 Jun	N15W16	166	890	13	Ekc	40	BGD	4	1		4		1		
30 Jun	N13W30	166	880	16	Fkc	30	BGD	6			4	1			
01 Jul	N13W44	167	1100	17	Fkc	26	BGD	3			4				
02 Jul	N16W58	168	1150	18	Fkc	22	BGD	4		1	9				
								27	1	1	39	1	1	0	0

Still on Disk.
Absolute heliographic longitude: 166

			Region 3355												
27 Jun	S16E56	120	40	1	Hax	1	A								
28 Jun	S16E42	121	30	1	Hsx	1	A								
29 Jun	S16E28	122	30	1	Hax	1	A								
30 Jun	S16E14	122	20	2	Hsx	3	A								
01 Jul	S16E03	119	10	2	Hrx	2	A								
02 Jul	S16W06	116	10	2	Axx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 119

			Region 3356												
30 Jun	S08E38	98	10	1	Bxo	2	B								
01 Jul	S08E24	99	30	3	Cro	5	B								
02 Jul	S07E09	101	10	3	Bxo	3	B								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 101

			Region 3357												
01 Jul	S07E32	91	20	2	Dro	5	B	1			2				
02 Jul	S07E18	92	30	3	Dao	6	B								
								1	0	0	2	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 92

Region Summary - continued

	Location		Sunspot Characteristics					Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X-ray			Optical				
Date	Lat CMD	Lon	10^{-6} hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
			Region 3358												
01 Jul	S12E57	66	90	3	Dai	3	B	2			1				
02 Jul	S12E43	66	70	6	Dai	15	B				1				
								2	0	0	2	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 66

			Region 3359												
01 Jul	S20E61	61	30	5	Dri	7	B	1	1		1				
02 Jul	S22E41	68	60	7	Dai	7	B	2	1		6				
								3	2	0	7	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 68

			Region 3360												
02 Jul	N23E44	66	20	2	Hsx	2	A								
								2	0	0	1	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 66

Preliminary Report and Forecast of Solar Geophysical Data (The Weekly)

Published every Monday by the Space Weather Prediction Center.

U.S. Department of Commerce
NOAA / National Weather Service
Space Weather Prediction Center
325 Broadway, Boulder CO 80305

Notice: The 27-day Outlook, Satellite Environment, X-ray and Proton plots have been redesigned. Comments and suggestions are welcome SWPC.Webmaster@noaa.gov

The Weekly has been published continuously since 1951 and is available online since 1997.

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