Space Weather Highlights
25 March - 31 March 2024

SWPC PRF 2535
01 April 2024

Solar activity was dominated by significant flare activity from Region 3615 (S13, L=216, class/area Fkc/1140 on 26 Mar). During the period, Region 3615 produced 62 C-class flares, 11 (R1-Minor) flares, 3 (R2-Moderate) flares and 1 (R3-Strong) flare. The largest event of the period was an X1.1/3b flare at 28/2056 UTC. Numerous CMEs were detected with these flares, but none indicated an Earth-directed component. C-class activity was also detected from Regions 3621 (N17, L=254, class/area Cso/040 on 25 Mar), 3622 (N19, L=139, class/area Dao/060 on 24 Mar) and 3625 (N12, L=040, class/area Dai/040 on 31 Mar).

The greater than 10 MeV proton flux was at elevated levels from the previous period's events, but remained below event threshold.

The greater than 2 MeV electron flux at geosynchronous orbit was at normal to moderate levels.

Geomagnetic field activity was at quiet to minor storm (G1-Minor) levels on 25 Mar as the field was in the waning stages from previous CME activity. Quiet to unsettled periods dominated the period from 26-31 March. An isolated active period was observed early on 31 Mar due to a transition from a CIR into a positive polarity CH HSS.

Space Weather Outlook
01 April - 27 April 2024

Solar activity is expected to be at mostly low levels with a lingering chance for an M-class flare through 12 Apr. An increased chance for moderate to high activity will be present from 13-27 April upon the return of old Region 3615 (S13, L=216).

No proton events are expected at geosynchronous orbit until the return of old Region 3615 on 12 Apr. A chance for minor to moderate activity will be present from 13-27 Apr.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal to moderate levels through the period.

Geomagnetic field activity is expected to be at unsettled to active periods on 01-05 Apr, 09-11 Apr, 19-23 Apr and 27 Apr all due to CH HSS activity. Mostly quiet levels are expected on 06-08 Apr, 12-18 Apr and 24-26 Apr.

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
25 March	190	163	1540	C1.7	10	1	0	20	1	0	0	0
26 March	178	149	1480	C1.8	16	6	0	9	0	0	0	0
27 March	175	114	1270	C2.2	13	2	0	27	2	0	0	0
28 March	173	101	1150	C2.3	8	3	1	6	3	1	1	0
29 March	167	79	1090	C2.4	12	2	0	15	1	0	0	0
30 March	140	60	930	C1.9	8	1	0	7	0	0	0	0
31 March	134	50	110	C1.4	6	0	0	0	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
25 March	1.3e+08	1.7e+06	1.1e+06
26 March	1.9e+07	3.1e+05	2.1e+06
27 March	9.4e+06	1.4e+05	3.6e+06
28 March	8.8e+06	6.7e+04	5.5e+06
29 March	4.9e+06	3.8e+04	6.2e+06
30 March	4.3e+06	2.5e+04	1.2e+07
31 March	1.5e+06	2.0e+04	1.9e+06

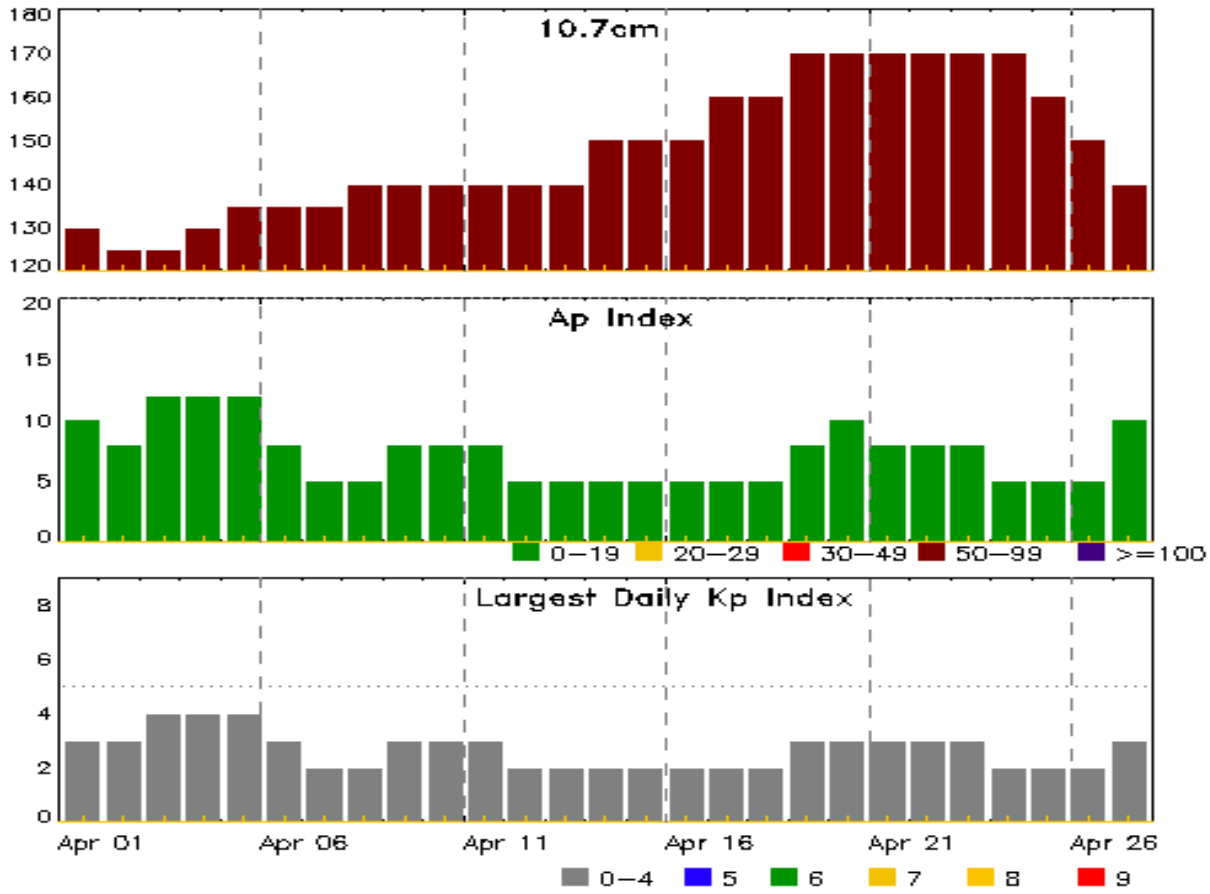
Daily Geomagnetic Data

Date	Middle Latitude Fredericksburg		High Latitude College		Estimated Planetary	
	A	K-indices	A	K-indices	A	K-indices
25 March	17	4-4-3-3-4-2-2-2	21	3-3-4-4-5-3-3-1	22	4-5-3-4-4-3-2-2
26 March	11	3-2-1-3-2-2-3-3	9	2-3-1-3-3-2-1-2	11	3-3-1-3-2-2-3-3
27 March	7	3-1-2-2-2-2-1-2	4	2-2-2-2-1-0-0-1	7	3-1-2-2-1-1-1-2
28 March	6	1-1-2-1-2-2-2-2	13	2-2-1-5-4-1-1-1	7	2-1-2-2-2-2-2-3
29 March	4	1-1-1-2-2-2-1-0	6	1-0-3-3-3-1-0-0	6	2-2-2-2-2-1-1-0
30 March	4	1-1-1-1-2-2-1-1	2	0-0-0-1-0-1-1-1	5	1-1-1-1-1-2-1-2
31 March	8	3-2-2-2-2-2-2-2	4	2-1-2-2-0-1-0-2	22	4-2-2-2-1-1-1-2

Alerts and Warnings Issued

Date & Time of Issue UTC	Type of Alert or Warning	Date & Time of Event UTC
25 Mar 0524	ALERT: Geomagnetic K = 5	
25 Mar 0701	SUMMARY: Proton Event 10MeV Integral Flux >= 100pfu	23/1405 - 24/1945
25 Mar 0720	SUMMARY: 10cm Radio Burst	25/0643 - 0645
25 Mar 0856	EXTENDED WARNING: Geomagnetic K = 4	23/0415 - 25/2100
25 Mar 0856	EXTENDED WARNING: Geomagnetic K = 5	23/2036 - 25/1800
25 Mar 0856	EXTENDED WARNING: Geomagnetic K = 6	24/1435 - 25/1500
25 Mar 1153	EXTENDED WARNING: Proton 10MeV Integral Flux > 10pfu	23/0617 - 25/2359
25 Mar 1912	EXTENDED WARNING: Geomagnetic K = 4	23/0415 - 26/0300
26 Mar 0130	SUMMARY: Proton Event 10MeV Integral Flux >= 10pfu	23/0815 - 25/1515
26 Mar 0251	EXTENDED WARNING: Geomagnetic K = 4	23/0415 - 26/0900
28 Mar 0629	ALERT: X-ray Flux exceeded M5	28/0627
28 Mar 0645	SUMMARY: X-ray Event exceeded M5	28/0616 - 0636
28 Mar 1600	ALERT: X-ray Flux exceeded M5	28/1556
28 Mar 1633	SUMMARY: X-ray Event exceeded M5	28/1540 - 1603
28 Mar 2045	ALERT: X-ray Flux exceeded M5	28/2041
28 Mar 2112	SUMMARY: X-ray Event exceeded M5	28/2029 - 2101
28 Mar 2112	SUMMARY: X-ray Event exceeded M5	28/2029 - 2101
30 Mar 2116	ALERT: X-ray Flux exceeded M5	30/2114
30 Mar 2224	SUMMARY: X-ray Event exceeded M5	30/2101 - 2215
31 Mar 0148	WARNING: Geomagnetic K = 4	31/0147 - 1800
31 Mar 0200	ALERT: Geomagnetic K = 4	

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
01 Apr	130	10	3	15 Apr	150	5	2
02	125	8	3	16	150	5	2
03	125	12	4	17	160	5	2
04	130	12	4	18	160	5	2
05	135	12	4	19	170	8	3
06	135	8	3	20	170	10	3
07	135	5	2	21	170	8	3
08	140	5	2	22	170	8	3
09	140	8	3	23	170	8	3
10	140	8	3	24	170	5	2
11	140	8	3	25	160	5	2
12	140	5	2	26	150	5	2
13	140	5	2	27	140	10	3
14	150	5	2				

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
25 Mar	0637	0644	0648	M4.4	0.008	SB	S13W02		3615	6500	310	
26 Mar	0028	0036	0040	M1.8	0.001	SN	S13W36		3615	26000	100	
26 Mar	1011	1017	1024	M1.0	0.005				3615			
26 Mar	1036	1043	1052	M1.3	0.009				3615			
26 Mar	1255	1330	1341	M1.9	0.038				3615			
26 Mar	1341	1346	1350	M1.7	0.009				3615			
26 Mar	2143	2158	2207	M1.6	0.014				3615			
27 Mar	0137	0144	0152	M1.1	0.001	1F	S13W37		3615			
27 Mar	0633	0641	0650	M1.1	0.001	1N	S11W48		3615			
28 Mar	0616	0629	0636	M7.1	0.037	1N	S16W55		3615			
28 Mar	1540	1556	1603	M6.1	0.032	1N	S13W58		3615			
28 Mar	1921	1931	1938	M1.1	0.010	1F	S13W59		3615	490		
28 Mar	2029	2056	2101	X1.1	0.130	3B	S14W61		3615			
29 Mar	0217	0230	0242	M3.2	0.034	SF	S15W63		3615	750		
29 Mar	1919	1934	1956	M1.2	0.023	SF	S12W78		3615			
30 Mar	2101	2116	2215	M9.4	0.270				3515			

Flare List

	Time			Optical			
Date	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
25 Mar	0509	0516	0522	C3.4			3615
25 Mar	0637	0644	0648	M4.4	SB	S13W02	3615
25 Mar	0701	0701	0704		SF	S15W11	3615
25 Mar	0729	0735	0758		SF	N16E10	3619
25 Mar	0758	0758	0759		SF	S13W23	3615
25 Mar	0804	0805	0809		SF	N16E09	3619
25 Mar	0925	0927	0927		SF	S12W22	3615
25 Mar	0938	0939	0940		SF	S15W19	3615
25 Mar	0957	0958	1001		SF	S13W22	3615
25 Mar	1025	1025	1028		SF	S15W13	3615
25 Mar	1200	1210	1215	C5.0	SF	N17W61	3621
25 Mar	1227	1232	1239	C3.9	SF	N18W25	3614
25 Mar	1425	1440	1524	C7.8	SF	N17E55	3622
25 Mar	1526	1534	1550		SF	N17E55	3622
25 Mar	1559	1603	1626		SF	S09W23	3615

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
25 Mar	1653	1700	1709	C3.1	SF	N16E07	3619
25 Mar	1741	1744	1751		SF	S13W20	3615
25 Mar	1919	1920	1940	C3.0	SF	S12W21	3615
25 Mar	2009	2013	2017	C3.5	SF	S10W31	3615
25 Mar	2107	2117	2126	C3.1	1F	S10W27	3615
25 Mar	2225	2231	2235	C4.7			3615
25 Mar	2257	2310	2326	C2.7			3621
25 Mar	2350	2351	2354		SF	S12W29	3615
25 Mar	2355	2355	2357		SF	S13W30	3615
26 Mar	0000	0000	0002		SF	S13W29	3615
26 Mar	0028	0036	0040	M1.8	SN	S13W36	3615
26 Mar	0107	0115	0124	C5.3	SF	S13W33	3615
26 Mar	0222	0226	0230	C5.1			3615
26 Mar	0258	0303	0307	C3.0	SF	S13W37	3615
26 Mar	0347	0354	0358	C3.5	SF	S13W37	3615
26 Mar	0431	0437	0441	C2.4			3615
26 Mar	0529	0536	0542	C2.4			3615
26 Mar	0616	0622	0630	C3.0	SF	S13W37	3615
26 Mar	0805	0811	0821	C2.4			3615
26 Mar	0821	0832	0847	C3.7	SF	S13W37	3615
26 Mar	0849	0903	0910	C4.5			
26 Mar	0948	0948	A0950		SF	S13W37	3615
26 Mar	1011	1017	1024	M1.0			3615
26 Mar	1036	1043	1052	M1.3			3615
26 Mar	1127	1134	1141	C3.2			3615
26 Mar	1204	1215	1220	C4.2			3615
26 Mar	1220	1223	1243	C4.3			3615
26 Mar	1243	1249	1255	C6.4			3615
26 Mar	1255	1330	1341	M1.9			3615
26 Mar	1341	1346	1350	M1.7			3615
26 Mar	1705	1716	1727	C3.7			
26 Mar	1945	1952	2000	C6.8			3615
26 Mar	2143	2158	2207	M1.6			3615
26 Mar	B2259	2325	2329		SF	S13W37	3615
26 Mar	2343	0001	0027	C8.5	SF	S13W37	3615
27 Mar	0051	0054	0058		SF	S13W37	3615
27 Mar	0123	0130	0136	C2.9			3615
27 Mar	0137	0144	0152	M1.1	1F	S13W37	3615

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
27 Mar	0236	0246	0252	C4.8	SF	S13W37	3615
27 Mar	0305	0311	0330	C2.9	SF	S13W37	3615
27 Mar	0346	0353	0401	C4.0			3615
27 Mar	0525	0528	0530		SF	S11W48	3615
27 Mar	0540	0541	0542		SF	S11W48	3615
27 Mar	0616	0616	0617		SF	S11W48	3615
27 Mar	0633	0641	0650	M1.1	1N	S11W48	3615
27 Mar	0711	0713	0718		SF	S15W39	3615
27 Mar	0720	0723	0724		SF	S15W38	3615
27 Mar	0725	0726	0727		SF	S15W42	3615
27 Mar	0730	0730	0731		SF	S15W42	3615
27 Mar	0749	0755	0804		SF	S15W42	3615
27 Mar	0838	0844	0901	C4.1	SF	S15W39	3615
27 Mar	0848	0854	0900		SF	S15W42	3615
27 Mar	0940	0941	0944		SF	S15W42	3615
27 Mar	0948	0948	0951		SF	S14W44	3615
27 Mar	1151	1157	1201	C5.1			3615
27 Mar	1216	1224	1230	C6.6			3615
27 Mar	1303	1315	1325	C5.5			3615
27 Mar	1454	1503	1507	C6.0			3615
27 Mar	1710	1712	1725		SF	S13W42	3615
27 Mar	1907	1912	1916	C3.3			
27 Mar	1918	1922	1925		SF	S13W45	3615
27 Mar	1933	1933	1935		SF	S09W53	3615
27 Mar	2000	2003	2007	C4.4			
27 Mar	2008	2008	2012		SF	S13W41	3615
27 Mar	2020	2027	2037	C8.1	SN	S13W45	3615
27 Mar	2106	2110	2113		SF	S13W47	3615
27 Mar	2137	2138	2141		SF	S13W46	3615
27 Mar	2155	2155	2201		SF	S09W55	3615
27 Mar	2211	2217	2223	C4.1	SF	S12W48	3615
27 Mar	2341	2343	2347		SF	S14W44	3615
27 Mar	2343	2345	2350		SF	S15W17	3617
28 Mar	0205	0210	0215	C2.6			3615
28 Mar	0258	0304	0308	C3.9			3615
28 Mar	0417	0427	0434	C7.5	SF	S15W53	3615
28 Mar	0526	U0627	A1550		2B	S14W60	3615
28 Mar	0616	0629	0636	M7.1	1N	S16W55	3615

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
28 Mar	0933	0943	0948	C8.4	SF	S14W73	3615
28 Mar	B1345	1557	1653		1N	S13W58	3615
28 Mar	1354	1403	1416	C7.9			3615
28 Mar	1416	1423	1427	C7.8			3615
28 Mar	1540	1556	1603	M6.1			3615
28 Mar	1656	1659	1701	C8.4	SF	S13W55	3615
28 Mar	1725	1725	1731		SF	S12W60	3615
28 Mar	1810	1818	1825	C4.3			3615
28 Mar	1840	1853	1959	M1.1	1F	S13W59	3615
28 Mar	2008	2049	2223	X1.1	3B	S14W61	3615
28 Mar	2226	2233	2244		SF	S13W62	3615
28 Mar	2249	2249	2251		SF	S13W62	3615
29 Mar	0047	0054	0102	C4.6			3615
29 Mar	0148	0206	0217	C9.4			3615
29 Mar	0217	0230	0242	M3.2	SF	S15W63	3615
29 Mar	0437	0446	0454	C3.1			3615
29 Mar	0556	0556	0601		SF	S15W62	3615
29 Mar	0607	U0630	A0703		SF	S15W62	3615
29 Mar	0725	0731	0737	C3.4	SF	S14W64	3615
29 Mar	0755	0758	0801		SF	S12W69	3615
29 Mar	0811	U0811	A0820		SF	S15W63	3615
29 Mar	0902	U0907	A0918		SF	S13W69	3615
29 Mar	0959	1007	1009	C5.4			3615
29 Mar	1009	1022	1031	C8.7			3615
29 Mar	1031	1044	1054	C9.0			3615
29 Mar	B1145	U1157	1157		SF	S13W71	3615
29 Mar	1158	1203	1204		SF	S13W71	3615
29 Mar	1206	1210	1215		SF	S13W71	3615
29 Mar	1215	1225	1231		SF	S13W71	3615
29 Mar	1238	1239	1241		SF	S13W71	3615
29 Mar	1244	1302	1326		1F	S13W71	3615
29 Mar	1526	1531	1538		SF	S14W68	3615
29 Mar	1541	1601	1618	C7.8			3615
29 Mar	1618	1628	1631	C9.3			3615
29 Mar	1631	1636	1640	C9.4			3615
29 Mar	1822	1838	1857	C9.9			3615
29 Mar	B1911	2032	2050	M1.2	SF	S12W78	3615
29 Mar	2156	2204	2211	C4.0			3615

Flare List

Date	Time			Optical			
	Begin	Max	End	X-ray Class	Imp/ Brtns	Location Lat CMD	Rgn #
29 Mar	2322	2322	2324		SF	S12W76	3615
30 Mar	0033	0035	0036		SF	N18W53	3619
30 Mar	0055	0105	0118	C3.5			3615
30 Mar	0202	0212	0220	C8.3			
30 Mar	0624	0625	0627		SF	S11W88	3615
30 Mar	0639	0639	0647		SF	S15W76	3615
30 Mar	0649	0649	0651		SF	S15W77	3615
30 Mar	0719	0720	0727		SF	S15W77	3615
30 Mar	0802	0810	0813		SF	S15W77	3615
30 Mar	0958	1004	1010	C4.2			3615
30 Mar	1033	1046	1051	C8.0			3615
30 Mar	1206	1219	1227	C4.6	SF	S12W89	3615
30 Mar	1359	1408	1420	C3.7			3615
30 Mar	1420	1430	1438	C4.1			3615
30 Mar	1637	1649	1712	C4.3			3615
30 Mar	2101	2116	2215	M9.4			3515
31 Mar	0253	0300	0304	C3.2			3615
31 Mar	0910	0930	1000	C3.4			3615
31 Mar	1007	1018	1029	C4.3			3615
31 Mar	1330	1345	1400	C3.9			3615
31 Mar	1400	1410	1423	C4.8			3615
31 Mar	2041	2052	2112	C3.0			3625

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 3610													
13 Mar	S16E68	278	10	1	Hax	1	A								
14 Mar	S16E55	278	20	1	Hrx	2	A								
15 Mar	S16E42	278	10	1	Axx	1	A								
16 Mar	S16E28	279	plage												
17 Mar	S16E14	279	plage												
18 Mar	S16W00	280	plage												
19 Mar	S16W14	281	plage												
20 Mar	S16W28	282	plage												
21 Mar	S16W42	283	plage												
22 Mar	S16W57	284	plage												
23 Mar	S16W71	285	plage												
24 Mar	S16W85	286	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 280

		Region 3611													
14 Mar	N26E59	274	30	1	Hsx	1	A								
15 Mar	N28E48	272	20	1	Hrx	1	A								
16 Mar	N28E35	271	30	1	Hrx	1	A								
17 Mar	N28E21	272	20	1	Hrx	1	A								
18 Mar	N28E09	271	10	1	Hrx	1	A								
19 Mar	N28W03	270	10	1	Hrx	1	A								
20 Mar	N28W17	271	plage												
21 Mar	N28W31	272	plage												
22 Mar	N28W46	273	plage												
23 Mar	N28W60	274	plage												
24 Mar	N28W74	275	plage												
25 Mar	N28W88	276	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 270

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 3614												
17 Mar	N16E70	223	80	2	Hax	1	A	3							
18 Mar	N16E56	224	170	4	Dai	9	B	1	1						
19 Mar	N16E43	224	200	5	Dao	6	BD								
20 Mar	N17E32	222	200	3	Dao	4	BD								
21 Mar	N17E18	223	180	8	Dso	4	B	1			1				
22 Mar	N17E03	224	210	5	Dso	4	B	4			3	1			
23 Mar	N17W07	221	170	6	Dso	5	B			1	1		1		
24 Mar	N17W21	222	150	5	Dso	3	B								
25 Mar	N16W34	222	110	6	Cso	2	B	1			1				
26 Mar	N18W48	223	80	3	Hsx	1	A								
27 Mar	N16W62	224	90	3	Hsx	1	A								
28 Mar	N18W75	223	60	2	Hsx	1	A								
29 Mar	N17W88	223	50	2	Hsx	1	A								
								10	1	1	6	1	1	0	0

Crossed West Limb.
Absolute heliographic longitude: 224

			Region 3615												
17 Mar	S12E78	216	plage					1							
18 Mar	S12E62	218	180	11	Eao	13	BG	6	1		1				
19 Mar	S12E53	214	240	11	Eac	14	BG	12	2		8	1			
20 Mar	S12E39	215	300	13	Ekc	20	BGD	7	2		8	1		1	
21 Mar	S12E25	216	310	13	Ekc	24	BGD	2			3				
22 Mar	S13E10	217	370	15	Ekc	52	BGD	8	2		12		1		
23 Mar	S13W01	215	730	16	Fkc	53	BGD	5	12		5	3	2		
24 Mar	S13W14	215	810	16	Fkc	54	BGD	12	9		12	5	2		
25 Mar	S13W27	215	1120	19	Fkc	63	BGD	5	1		13	1			
26 Mar	S13W41	216	1140	17	Fkc	53	BGD	14	6		9				
27 Mar	S13W55	217	960	16	Fkc	41	BGD	11	2		26	2			
28 Mar	S13W69	217	990	17	Fkc	40	BGD	8	3	1	6	3	1	1	
29 Mar	S13W81	216	960	19	Fkc	34	BGD	12	2		15	1			
30 Mar	S13W94	216	850	21	Fkc	15	BGD	7			6				
								110	42	1	124	17	6	2	0

Crossed West Limb.
Absolute heliographic longitude: 215

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 3617													
20 Mar	S15E70	184	60	4	Hax	3	A								
21 Mar	S15E56	185	150	6	Cao	2	B								
22 Mar	S14E41	186	100	6	Cao	6	B	2			2				
23 Mar	S14E29	185	90	4	Cao	4	B				1				
24 Mar	S13E17	184	60	3	Cao	5	B					1			
25 Mar	S13E04	184	60	2	Cao	2	B								
26 Mar	S14W10	185	50	5	Hsx	1	A								
27 Mar	S14W24	186	30	1	Hsx	1	A				1				
28 Mar	S14W38	186	30	1	Cso	3	B								
29 Mar	S13W51	186	30	5	Cso	2	B								
30 Mar	S13W63	185	20	1	Cro	2	B								
31 Mar	S13W76	185	10	1	Axx	1	A								
								2	0	0	4	1	0	0	0

Still on Disk.
Absolute heliographic longitude: 184

		Region 3619													
21 Mar	N17E61	179	130	4	Cao	5	B								
22 Mar	N20E46	181	100	6	Cao	5	B								
23 Mar	N19E31	183	120	3	Cao	3	B								
24 Mar	N19E16	185	100	2	Cso	3	B								
25 Mar	N19E04	184	130	7	Cso	3	B	1			3				
26 Mar	N19W10	185	140	8	Cso	7	B								
27 Mar	N18W24	186	140	8	Dso	6	B								
28 Mar	N19W39	187	60	6	Hax	5	A								
29 Mar	N17W52	187	50	3	Hsx	2	A								
30 Mar	N18W66	188	50	2	Hsx	1	A				1				
31 Mar	N18W79	188	50	2	Hsx	1	A								
								1	0	0	4	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 184

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 3620												
22 Mar	S10E74	153	30	2	Cro	3	B								
23 Mar	S10E61	153	30	2	Hrx	3	A								
24 Mar	S10E46	155	30	2	Hax	2	A								
25 Mar	S09E32	156	30	3	Hsx	2	A								
26 Mar	S08E19	156	20	1	Hrx	1	A								
27 Mar	S09E05	157	20	1	Hrx	2	A								
28 Mar	S08W10	158	10	1	Axx	2	A								
29 Mar	S08W24	159	plage												
30 Mar	S08W38	160	plage												
31 Mar	S08W52	161	plage												
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 157

			Region 3621												
23 Mar	N17W38	252	20	4	Cro	4	B								
24 Mar	N17W52	253	20	3	Cso	3	B								
25 Mar	N17W66	254	40	6	Cso	5	B	2			1				
26 Mar	N15W80	255	30	4	Cso	3	B								
27 Mar	N15W94	256	30	4	Cso	3	B								
								2	0	0	1	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 252

			Region 3622												
24 Mar	N19E61	139	60	3	Dao	5	B								
25 Mar	N20E46	142	40	5	Cso	4	B	1			2				
26 Mar	N19E32	143	10	4	Bxo	2	B								
27 Mar	N11E18	144	plage												
28 Mar	N11E03	145	plage												
29 Mar	N11W11	146	plage												
30 Mar	N11W25	147	plage												
31 Mar	N11W39	148	plage												
								1	0	0	2	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 145

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 3623												
25 Mar	S19W35	222	10	3	Bxo	2	B								
26 Mar	S19W47	222	10	1	Axx	1	A								
27 Mar	S19W61	223	plage												
28 Mar	S19W76	224	plage												
29 Mar	S19W90	225	plage												
								0	0	0	0	0	0	0	0

Crossed West Limb.
Absolute heliographic longitude: 222

			Region 3624												
30 Mar	N16E50	72	10	3	Bxo	2	B								
31 Mar	N16E39	70	10	4	Hrx	1	A								
								0	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 70

			Region 3625												
31 Mar	N12W65	173	40	5	Dai	7	B	1							
								1	0	0	0	0	0	0	0

Still on Disk.
Absolute heliographic longitude: 173

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.

https://www.swpc.noaa.gov/products/weekly-highlights-and-27-day-forecast -- Current
ftp://ftp.swpc.noaa.gov/pub/warehouse -- Online archive from 1997
https://www.ngdc.noaa.gov/stp/satellite/goes-r.html -- NCEI GOES data textarchive
https://www.swpc.noaa.gov/products/solar-cycle-progression -- Solar Cycle Progression web site
https://www.swpc.noaa.gov/content/contact-us -- Contact and Copyright information
https://www.swpc.noaa.gov/sites/default/files/images/u2/Usr_guide.pdf -- User Guide