Solar activity was high. There were a total of seven M-class flares during the period. The largest event was an M4.2/Sf flare (R1-Minor) from Region 3323 (S07, L=100, class/area = Ehi/320 on 04 June). Regions 3310 (S20, L=284, class/area = Cho/480 on 24 May), 3315 (S16, L=233, class/area = Ekc/630 on 29 May), 3319 (S19, L=199, class/area = Dhi/300 on 31 May), and 3324 (N15, L=159, class/area = Bxo/20 on 02 June) also produced M-class flaring below the M5 level. The remaining numbered active regions on the visible disk were either quiet or only produced C-class events.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit reached moderate levels each day of the highlight period.

Geomagnetic field activity ranged from quiet to active levels. Active levels were reached on 01 and 04 June, with unsettled conditions observed on 31 May as a result of recurrent CH HSS influence. Quiet levels were reported for the remainder of the period.

# Space Weather Outlook 05 June - 01 July 2023

Solar activity is likely to be at low to moderate levels (R1-R2, Minor-Moderate) throughout the outlook period, due to several complex regions currently on the visible disk and the anticipated return of several regions that have produced moderate level activity currently on the farside of the Sun.

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 05-10 and 19-24 June in response to elevated wind speeds from multiple, recurrent CH HSSs. The remainder of the outlook period is anticipated to be at moderate levels.

Geomagnetic field activity is expected to range from quiet to G1 (Minor) geomagnetic storm levels. G1 conditions are likely on 18 June; active levels are likely on 12,19-20, and 28 June; unsettled conditions are likely on 05-06, 11, 13, 21, 27 June and 01 July due to recurrent CH HSS influence. Quiet conditions are expected for the remainder of the outlook period.



#### Daily Solar Data

	Ra	dio Su	n Sunspo	Sunspot X-ray				Flares				
	Fl	ux spo	ot Area	Background		X-ra	ıy		О	ptica	al	
Date	10.7	cm No	o. (10 <sup>-6</sup> hem	ni.) Flux	C	M	X	S	1	2	3	4
29 May	154	153	1320	B9.2	4	0	0	10	0	0	0	0
30 May	162	144	990	C1.3	4	3	0	3	1	0	0	0
31 May	161	147	1590	C1.8	16	3	0	10	0	0	0	0
01 June	164	143	1160	C1.5	9	0	0	23	0	0	0	0
02 June	162	147	1070	C1.3	4	1	0	9	0	0	0	0
03 June	165	112	880	C1.4	9	0	0	7	0	0	0	0
04 June	168	110	930	C1.5	10	0	0	16	1	0	0	0

### Daily Particle Data

		on Fluence /cm <sup>2</sup> -day-sr)	Electron Fluence (electrons/cm <sup>2</sup> -day -sr)
Date	>1 MeV	>10 MeV	>2MeV
29 May	3.1e+04	2.4e+04	7.2e+06
30 May	3.4e+04	2.3e+04	1.6e+07
31 May	3.9e+04	2.3e+04	1.0e+07
01 June	3.1e+05	2.3e+04	3.7e + 06
02 June	7.1e+05	2.3e+04	4.1e+06
03 June	2.2e+05	2.2e+04	8.5e+06
04 June	1.2e+05	2.2e+04	2.8e+06

#### Daily Geomagnetic Data

		Middle Latitude		High Latitude		Estimated
		Fredericksburg		College		Planetary
Date	A	A K-indices	A	K-indices	A	K-indices
29 May	5	1-1-1-1-2-1-2-2	2	1-0-0-1-1-1-1	4	1-1-1-1-1-2
30 May	6	1-0-2-2-3-1-1-2	3	1-0-1-2-1-1-1	5	1-1-2-1-1-1-2
31 May	11	3-2-3-2-1-3-2-3	12	2-3-4-2-0-4-2-2	10	2-2-3-2-2-3-3-3
01 June	14	3-3-3-3-4-2-2-2	20	3-3-4-3-5-4-1-2	13	4-3-3-2-3-3-2-2
02 June	8	2-2-2-3-2-1-2	4	1-2-3-1-0-0-1-0	5	2-2-2-1-1-1-2
03 June	5	1-2-1-2-2-1-1-2	2	1-1-1-1-0-0-0-1	5	2-2-1-2-1-0-1-2
04 June	11	2-2-2-3-3-3-3-2	12	2-2-3-4-3-1-3-1	9	2-2-2-3-2-2-4-2

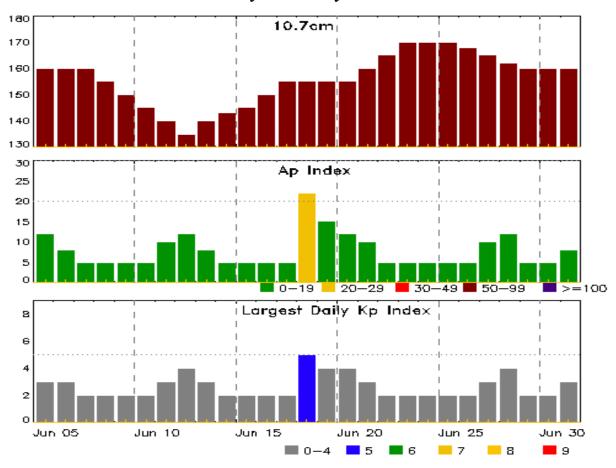


#### Alerts and Warnings Issued

Date & Time of Issue UTC		Date & Time of Event UTC
30 May 1109	SUMMARY: 10cm Radio Burst	30/1020 - 1020
30 May 2047	WATCH: Geomagnetic Storm Category G1 predicte	ed
01 Jun 0115	WARNING: Geomagnetic $K = 4$	01/0116 - 0900
01 Jun 0247	ALERT: Geomagnetic K = 4	01/0245
01 Jun 0853	EXTENDED WARNING: Geomagnetic $K = 4$	01/0116 - 1500
02 Jun 1946	WATCH: Geomagnetic Storm Category G1 predicte	ed
04 Jun 1906	WARNING: Geomagnetic $K = 4$	04/1905 - 05/0900
04 Jun 2102	ALERT: Geomagnetic $K = 4$	04/2059



#### Twenty-seven Day Outlook



Data	Radio Flux	•	Largest	Doto	Radio Flux	•	-
Date	10.7cm	A Index	Kp Index	Date	10.7cm	A Index	Kp Index
05 Jun	160	12	3	19 Jun	155	15	4
06	160	8	3	20	155	12	4
07	160	5	2	21	160	10	3
08	155	5	2	22	165	5	2
09	150	5	2	23	170	5	2
10	145	5	2	24	170	5	2
11	140	10	3	25	170	5	2
12	135	12	4	26	168	5	2
13	140	8	3	27	165	10	3
14	143	5	2	28	162	12	4
15	145	5	2	29	160	5	2
16	150	5	2	30	160	5	2
17	155	5	2	01 Jul	160	8	3
18	155	22	5				



### Energetic Events

	T	ime		X-ray	Optical Information			Po	eak	Sweep	Freq	
	Half		f	Integ		Location	n Rgn	Radi	o Flux	Inter	ensity	
Date	Begin M	lax Ma	x Clas	s Flux	Brtns	Lat CM	D #	245	2695	II	IV	
30 May	0754	0810	0819	M1.2	0.010	SF	N00E00	3310	)			
30 May	1015	1022	1029	M1.3	0.006			3310	)	210		
30 May	1336	1338	1341	M1.4	0.003	1B	S20W41	3315	5			
31 May	0424	0438	0444	M1.3	0.009			3323	3			
31 May	1223	1226	1230	M1.0	0.002			3319	)			
31 May	2214	2252	2312	M4.2	0.100	SF	S07E81	3323	3			
02 Jun	0232	0241	0245	M1.5	0.004			3324	1			

#### Flare List

					Optical							
	-	Time		X-ray	Imp/	Location	Rgn					
Date	Begin	Max	End	Class	Brtns	Lat CMD	#					
29 May	0415	0433	0458	C1.7	SF	N24W23	3315					
29 May	0542	0552	0614		SF	N24W23						
29 May	0616	0622	0624		SF	N24W23						
29 May	0715	0729	0743	C2.3			3320					
29 May	1354	1357	1408		SF	N24W27	3318					
29 May	1434	1441	1451		SF	N24W27	3318					
29 May	1553	1559	1601		SF	N24W27	3318					
29 May	1603	1604	1613		SF	N24W27	3318					
29 May	1618	1623	A1633		SF	N25W29	3318					
29 May	1819	1819	1824	C6.5	SF	S23W85	3310					
29 May	2325	2336	2340	C2.1	SF	N26W40	3317					
30 May	0009	0020	0026	C4.5			3310					
30 May	0326	0330	0335	C2.1			3317					
30 May	0356	0401	0406	C1.8			3312					
30 May	0754	0810	0819	M1.2	SF	N00E00	3310					
30 May	1015	1022	1029	M1.3			3310					
30 May	1328	1338	1400	M1.4	1B	S20W41	3315					
30 May	1448	1449	1456		SF	S11E73	3321					
30 May	1629	1650	1659	C6.0			3319					
30 May	1644	1648	1702		SN	S18W10	3319					
31 May	0025	0102	0132	C4.3			3323					
31 May	0159	0209	0217	C7.5			3323					
31 May	0338	0347	0359	C3.8			3323					
31 May	0424	0438	0444	M1.3			3323					



Flare List

					Optical						
		Time		X-ray	Imp/	Location	Rgn				
Date	Begin	Max	End	Class	Brtns	Lat CMD	#				
31 May	B0514	0516	0526	C5.7	SF	S18W16	3319				
31 May	0601	0609	0615	C5.7			3323				
31 May	0735	0743	0752	C4.6			3323				
31 May	0816	0831	0849	C6.1			3323				
31 May	0906	0907	0909		SF	S07E84	3323				
31 May	1010	1020	1035	C2.7							
31 May	1050	1103	1122	C5.3							
31 May	1223	1226	1230	M1.0			3319				
31 May	1329	1333	1343	C2.9							
31 May	1423	1423	1430		SF	S20W50	3315				
31 May	1455	1500	1509	C2.8							
31 May	1543	1547	1551	C2.1							
31 May	1609	1620	1636	C2.5	SN	S20W52	3315				
31 May	1644	1649	1653	C3.5							
31 May	1810	1818	1827		SF	S20W53	3315				
31 May	1953	2010	2027	C9.6	SF	S07E81	3323				
31 May	2040	2044	2055	C6.8	SF	S07E81	3323				
31 May	2109	2109	2111		SF	S07E81	3323				
31 May	2159	2210	2214	M4.2	SF	S07E81	3323				
31 May	2220	2247	2332		SF	S07E79	3323				
01 Jun	0020	0041	0056	C9.1			3315				
01 Jun	0028	0039	0052		SF	N23W78	3313				
01 Jun	0030	0031	0035		SF	S17W57	3315				
01 Jun	0031	0033	0037		SF	S20W56	3315				
01 Jun	0125	0130	0135	C3.0	SF	S07E74	3323				
01 Jun	0141	0144	0149		SF	S07E74	3323				
01 Jun	0244	0246	0249		SF	S07E74	3323				
01 Jun	0357	0400	0401		SF	S07E74	3323				
01 Jun	B0512	U0535	A0649		SF	S07E73	3323				
01 Jun	0535	0535	0537		SF	S06E70	3323				
01 Jun	0545	0552	0601		SF	S17W59	3315				
01 Jun	0625	0626	0632		SF	S17W64	3315				
01 Jun	0644	0644	0645		SF	S07E72	3323				
01 Jun	0716	0719	0721		SF	S06E71	3323				
01 Jun	0808	0814	0821	C1.9	SF	N15E12					
01 Jun	0830	0831	0834		SF	S06E70	3323				
01 Jun	0909	0929	1113	C3.7	SF	S18W66	3315				
01 Jun	B1004	U1004	A1009		SF	S06E72	3323				



Flare List

Date   Begin   Max   End   Class   Brtns   Lat CMD   #					Optical								
Ol Jun			Time		X-ray		_	Rgn					
01 Jun         1113         1125         1138         C6.5         SF         S17W66         3315           01 Jun         1326         1341         1347         C2.9         SF         N14E09         3323           01 Jun         1439         1450         1501         C4.2         SF         S17E49         3321           01 Jun         1623         1624         1627         SF         S17E49         3321           01 Jun         1623         2041         2058         C6.2         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0323         0241         0245         M1.5         SF         S08E68         3323           02 Jun         0501         0502         0509         SF         S08E68         3323           02 Jun         0501         0502         0509         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0806 </th <th>Date</th> <th>Begin</th> <th>Max</th> <th>End</th> <th>Class</th> <th>Brtns</th> <th>Lat CMD</th> <th>#</th>	Date	Begin	Max	End	Class	Brtns	Lat CMD	#					
01 Jun         1326         1341         1347         C2.9         SF         N14E09         3323           01 Jun         1439         1450         1501         C4.2         SF         S17E49         3321           01 Jun         1623         1624         1627         SF         S17E49         3321           01 Jun         2023         2041         2058         C6.2         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0232         0241         0245         M1.5         324         02 Jun         0501         0502         0509         SF         S08E68         3323           02 Jun         0501         0502         0509         SF         S06E62         3323           02 Jun         0501         0502         0509         SF         S08E62         3323           02 Jun         06034         U0542         A0559         SF         S08E62         3323           02 Jun         0621         0621         0626         SF         S08E6	01 Jun	B1010	U1012	1033		SF	S17W66	3315					
01 Jun         1439         1450         1501         C4.2         3323           01 Jun         1623         1624         1627         SF         S17E49         3321           01 Jun         1848         1917         1944         C4.4         3323           01 Jun         2023         2041         2058         C6.2         SF         S08E67         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0332         0241         0245         M1.5         3324         323           02 Jun         0501         0502         0509         SF         S08E62         3323           02 Jun         B0652         U0648         8738         SF         S08E62         3323           02 Jun         0806         U0807         A0822         SF         S08E60         3323           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S08E6	01 Jun	1113	1125	1138	C6.5	SF	S17W66	3315					
01 Jun         1623         1624         1627         SF         S17E49         3321           01 Jun         1848         1917         1944         C4.4         3323           01 Jun         2023         2041         2058         C6.2         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0501         0502         0509         SF         S06E72         3323           02 Jun         B0502         U0648         0738         SF         S06E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1334         1336         1338         SF         S08E60 <td< td=""><td>01 Jun</td><td>1326</td><td>1341</td><td>1347</td><td>C2.9</td><td>SF</td><td>N14E09</td><td>3323</td></td<>	01 Jun	1326	1341	1347	C2.9	SF	N14E09	3323					
01 Jun         1848         1917         1944         C4.4         3323           01 Jun         2023         2041         2058         C6.2         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0232         0241         0245         M1.5         3324           02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         0661         0621         0626         SF         S08E62         3323           02 Jun         0806         U0806         A0822         SF         N08E62         3323           02 Jun         0806         U0807         A0823         SF         S08E66         3323           02 Jun         1332         1332         1339         SF         S08E60         3323           02 Jun         1344         1352         C3.3         SF         S07E57         3323	01 Jun	1439	1450	1501	C4.2			3323					
01 Jun         2023         2041         2058         C6.2         3323           01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0232         0241         0245         M1.5         3324           02 Jun         0501         0502         0509         SF         S08E62         3323           02 Jun         080534         U0542         A0559         SF         S08E62         3323           02 Jun         08060         U0648         0738         SF         S08E62         3323           02 Jun         0621         0626         SF         S20W81         3315           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S0w860         3323           02 Jun         1334         1336         1338         SF         S0re57         3323           02 Jun         1359         1411         1416         C3.9         3315         3223	01 Jun	1623	1624	1627		SF	S17E49	3321					
01 Jun         2155         2155         2156         SF         S08E67         3323           01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0621         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         1332         1332         1339         SF         S08E60         3323           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         SF         S09E48         3323           02 Jun         2108         2108 <td< td=""><td>01 Jun</td><td>1848</td><td>1917</td><td>1944</td><td>C4.4</td><td></td><td></td><td>3323</td></td<>	01 Jun	1848	1917	1944	C4.4			3323					
01 Jun         2216         2217         2223         SF         S08E68         3323           02 Jun         0232         0241         0245         M1.5         SF         S06E72         3324           02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0621         0626         SF         S08E62         3323           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S08E60         3323           02 Jun         1334         1336         1338         SF         S08E60         3323           02 Jun         1354         1411         1416         C3.9         3326         3224           02 Jun         2108         2108         2111 <td< td=""><td>01 Jun</td><td>2023</td><td>2041</td><td>2058</td><td>C6.2</td><td></td><td></td><td>3323</td></td<>	01 Jun	2023	2041	2058	C6.2			3323					
02 Jun         0232         0241         0245         M1.5         3324           02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0601         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         2108         2108         2111         SF         S09E48         3323           02 Jun         2108         2210         258         2042         2306         C6.3	01 Jun	2155	2155	2156		SF	S08E67	3323					
02 Jun         0501         0502         0509         SF         S06E72         3323           02 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0621         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         SF         S09E48         3323           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2252         2242         2306         C6.3         3323           03 Jun         B0000         0004         0117         SF         S07E49	01 Jun	2216	2217	2223		SF	S08E68	3323					
O2 Jun         B0534         U0542         A0559         SF         S08E62         3323           02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0621         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         1332         1332         1339         SF         S08E60         3323           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         SF         S07E57         3323           02 Jun         1514         1524         1532         C3.3         SF         S07E48         3323           02 Jun         2108         2108         C3.1         SF         S09E48         3323           02 Jun         2242         2306         C6.3         SF         S07E49         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0716	02 Jun	0232	0241	0245	M1.5			3324					
02 Jun         B0602         U0648         0738         SF         S08E62         3323           02 Jun         0621         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315         3326           02 Jun         1514         1524         1532         C3.3         SF         S09E48         3323           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0709         0716         0723         C2.0         3	02 Jun	0501	0502	0509		SF	S06E72	3323					
02 Jun         0621         0621         0626         SF         S20W81         3315           02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         1011         1011	02 Jun	B0534	U0542	A0559		SF	S08E62	3323					
02 Jun         0806         U0806         A0822         SF         N17E00         3324           02 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103	02 Jun	B0602	U0648	0738		SF	S08E62	3323					
O2 Jun         0806         U0807         A0823         SF         S08E60         3323           02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146 </td <td>02 Jun</td> <td>0621</td> <td>0621</td> <td>0626</td> <td></td> <td>SF</td> <td>S20W81</td> <td>3315</td>	02 Jun	0621	0621	0626		SF	S20W81	3315					
02 Jun         1332         1332         1339         SF         S20W48         3319           02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109 <td>02 Jun</td> <td>0806</td> <td>U0806</td> <td>A0822</td> <td></td> <td>SF</td> <td>N17E00</td> <td>3324</td>	02 Jun	0806	U0806	A0822		SF	N17E00	3324					
02 Jun         1334         1336         1338         SF         S07E57         3323           02 Jun         1359         1411         1416         C3.9         3315           02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF	02 Jun	0806	U0807	A0823		SF	S08E60	3323					
02 Jun       1359       1411       1416       C3.9       3315         02 Jun       1514       1524       1532       C3.3       3326         02 Jun       2108       2108       2111       SF       S09E48       3323         02 Jun       2226       2242       2306       C6.3       3323         02 Jun       2354       0007       0016       C4.0       3323         03 Jun       B0000       0004       0117       SF       S07E49       3323         03 Jun       0016       0022       0028       C4.1       3323       3323         03 Jun       0709       0716       0723       C2.0       3323       3323         03 Jun       1011       1011       1026       SF       S07E45       3323         03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       SF       S18W64       3319	02 Jun	1332	1332	1339		SF	S20W48	3319					
02 Jun         1514         1524         1532         C3.3         3326           02 Jun         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323         3323           03 Jun         0709         0716         0723         C2.0         3323         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF         S10E43         3323           03 Jun         1313         1314         1321         SF         S08E43         3323           03 Jun         1401 <td>02 Jun</td> <td>1334</td> <td>1336</td> <td>1338</td> <td></td> <td>SF</td> <td>S07E57</td> <td>3323</td>	02 Jun	1334	1336	1338		SF	S07E57	3323					
02 Jun         2108         2108         2111         SF         S09E48         3323           02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF         S10E43         3323           03 Jun         1313         1314         1321         SF         S08E43         3323           03 Jun         1401         1409         1414         C2.2         3319           03 Jun         1833         1843 <td>02 Jun</td> <td>1359</td> <td>1411</td> <td>1416</td> <td>C3.9</td> <td></td> <td></td> <td>3315</td>	02 Jun	1359	1411	1416	C3.9			3315					
02 Jun         2226         2242         2306         C6.3         3323           02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF         S10E43         3323           03 Jun         1313         1314         1321         SF         S08E43         3323           03 Jun         1401         1409         1414         C2.2         3319           03 Jun         1833         1843         1851         C3.4           03 Jun         2048         2056         2102         C3.2 <td>02 Jun</td> <td>1514</td> <td>1524</td> <td>1532</td> <td>C3.3</td> <td></td> <td></td> <td>3326</td>	02 Jun	1514	1524	1532	C3.3			3326					
02 Jun         2354         0007         0016         C4.0         3323           03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF         S10E43         3323           03 Jun         1144         1149         1154         C2.9         3320           03 Jun         1313         1314         1321         SF         S08E43         3323           03 Jun         1401         1409         1414         C2.2         3319           03 Jun         1833         1843         1851         C3.4           03 Jun         2048         2056         2102         C3.2 <td>02 Jun</td> <td>2108</td> <td>2108</td> <td>2111</td> <td></td> <td>SF</td> <td>S09E48</td> <td>3323</td>	02 Jun	2108	2108	2111		SF	S09E48	3323					
03 Jun         B0000         0004         0117         SF         S07E49         3323           03 Jun         0016         0022         0028         C4.1         3323           03 Jun         0709         0716         0723         C2.0         3323           03 Jun         0753         0801         0811         C1.7         3323           03 Jun         1011         1011         1026         SF         S07E45         3323           03 Jun         1048         1103         1146         SF         N09E21         3320           03 Jun         1105         1107         1109         SF         S10E43         3323           03 Jun         1144         1149         1154         C2.9         3320           03 Jun         1313         1314         1321         SF         S08E43         3323           03 Jun         1401         1409         1414         C2.2         3319           03 Jun         1833         1843         1851         C3.4           03 Jun         2048         2056         2102         C3.2           03 Jun         2140         2147         2209         C2.8         SF	02 Jun	2226	2242	2306	C6.3			3323					
03 Jun       0016       0022       0028       C4.1       3323         03 Jun       0709       0716       0723       C2.0       3323         03 Jun       0753       0801       0811       C1.7       3323         03 Jun       1011       1011       1026       SF       S07E45       3323         03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	02 Jun	2354	0007	0016	C4.0			3323					
03 Jun       0709       0716       0723       C2.0       3323         03 Jun       0753       0801       0811       C1.7       3323         03 Jun       1011       1011       1026       SF       S07E45       3323         03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	B0000	0004	0117		SF	S07E49	3323					
03 Jun       0753       0801       0811       C1.7       3323         03 Jun       1011       1011       1026       SF       S07E45       3323         03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	0016	0022	0028	C4.1			3323					
03 Jun       1011       1011       1026       SF       S07E45       3323         03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	0709	0716	0723	C2.0			3323					
03 Jun       1048       1103       1146       SF       N09E21       3320         03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	0753	0801	0811	C1.7			3323					
03 Jun       1105       1107       1109       SF       S10E43       3323         03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1011	1011	1026		SF	S07E45	3323					
03 Jun       1144       1149       1154       C2.9       3320         03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1048	1103	1146		SF	N09E21	3320					
03 Jun       1313       1314       1321       SF       S08E43       3323         03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1105	1107	1109		SF	S10E43	3323					
03 Jun       1401       1409       1414       C2.2       3319         03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1144	1149	1154	C2.9			3320					
03 Jun       1533       1534       1537       SF       S18W64       3319         03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1313	1314	1321		SF	S08E43	3323					
03 Jun       1833       1843       1851       C3.4         03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1401	1409	1414	C2.2			3319					
03 Jun       2048       2056       2102       C3.2         03 Jun       2140       2147       2209       C2.8       SF       S18W66       3319	03 Jun	1533	1534	1537		SF	S18W64	3319					
03 Jun 2140 2147 2209 C2.8 SF S18W66 3319	03 Jun	1833	1843	1851	C3.4								
	03 Jun	2048	2056	2102	C3.2								
03 Jun 2302 2310 2322 C2.8 3327	03 Jun	2140	2147	2209	C2.8	SF	S18W66	3319					
	03 Jun	2302	2310	2322	C2.8			3327					



Flare List

				Optical						
		Time		X-ray	Imp/	Location	Rgn			
Date	Begin	Max	End	Class	Brtns	Lat CMD	#			
04 Jun	0008	0015	0019	C3.2			3319			
04 Jun	0108	0118	0126	C2.8			3327			
04 Jun	0154	0201	0214	C3.0			3327			
04 Jun	0332	0345	0359	C8.8			3323			
04 Jun	0419	0423	0427	C4.0			3323			
04 Jun	0729	0730	0733		SF	S08E33	3323			
04 Jun	0849	0859	0909	C3.5	SF	S10E33	3323			
04 Jun	0854	U0855	0916		SF	N29E08	3323			
04 Jun	0940	0949	0956	C3.4			3327			
04 Jun	1120	1121	1126		SF	N10W23	3325			
04 Jun	1156	1206	1214	C4.5	SF	S10E30	3323			
04 Jun	1331	1331	1337		SF	S17E75	3327			
04 Jun	1425	1430	1446	C5.7	1N	S17E75	3327			
04 Jun	1519	1521	1526		SF	S15E79	3327			
04 Jun	1655	1702	1708	C3.6			3323			
04 Jun	1727	1737	1737		SF	S15E79	3327			
04 Jun	1738	1752	1749		SF	S15E79	3327			
04 Jun	1813	1817	1818		SF	S15E79	3327			
04 Jun	1821	1822	1829		SF	S15E79	3327			
04 Jun	1835	1848	1840		SF	S08E26	3323			
04 Jun	1925	1927	1933		SF	S07E28	3323			
04 Jun	1934	1935	1942		SF	S07E28	3323			
04 Jun	1945	1945	1948		SF	N30E01				
04 Jun	2009	2010	2013		SF	N30E01				



#### Region Summary

	Location			ınspot C	haracte	eristics		Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray			O	ptica	1	
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Rogi	on 3310												
16 Mar.	COOFOO	_							1						
16 May		285	plage	5	Dho	2	D	2	1						
17 May		285	250	5	Dho	3 5	В	3			2				
18 May	S20E59	286	250	5	Dho Cko	8	B B	1			2				
19 May	S20E48 S20E34	284 285	320 310	7 5	Cko	8 6	В	1			1				
20 May					Cko		В								
21 May		286	300	6		4 5	В								
22 May 23 May		283 284	360 350	6 7	Cho Cho	9	В				1				
-		284		7	Cho	11					1				
24 May		284	480 300	7	Dhi	13	B B	2			3				
25 May 26 May		285	270	5	Cho	4	В	1			3				
20 May 27 May	S20W43 S20W58	284	260	4	Hhx	1	A	1							
27 May 28 May	S20W38 S20W71	284	260	4	Hhx	2	A								
29 May		281	210	3	Hax	1	A	1			1				
2) Way	520 11 62	201	210	3	Пах	1	11	8	1	0	9	0	0	0	0
Crossad	West Lim	h						O	1	U		U	U	U	U
	e heliograp		ngitude: 2	84											
	8 7		8												
		Regi	on 3311												
18 May	N18E76	269	110	10	Dao	6	В	3	7						
19 May	N17E60	272	330	13	Ekc	12	BD	12	5		20	3			
20 May	N18E47	272	410	14	Ekc	18	BGD	11	7		2	2			
21 May	N18E35	271	420	14	Ekc	31	BGD	4	2		11	2	1		
22 May	N18E20	272	310	14	Eac	28	BGD	5	1		11	2			
23 May	N18E05	274	250	18	Fai	43	BGD	10	1		16	1			
24 May	N18W08	274	470	14	Eai	39	BG	3	2		10	1			
25 May	N19W20	273	340	13	Eki	22	BG	5			3	1			
26 May	N18W32	272	320	13	Eai	18	BG								
•	N18W46	272	180	11	Eao	8	BG	2			1				
28 May	N18W59	272	200	13	Eao	9	BG								
29 May	N18W69	268	100	12	Cao	6	В								
30 May	N21W80	266	50	2	Hsx	1	A								
									~ =	^	- 4				

Crossed West Limb. Absolute heliographic longitude: 274



55 25 0 74 12 1 0 0

	Location	on	Sunspot Characteristics						Flares							
		Helio	Area	Extent	Spot	Spot	Mag	>	K-ray			0	ptica	1		
Date	Lat CMD	Lon 1	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4	
		Dogio	on 3312													
		_		_			_									
•	S25E70	262	40	5	Cro	6	В	1								
20 May		262	30	4	Cai	6	В	4	1							
•	S25E44	262	30	5	Cro	9	В									
-	S23E30	262	70	5	Cri	10	В	1			1	1				
-	S23E16	263	30	7	Cro	12	В	1			2					
-	S25E02	264	50	6	Cro	15	В	3			6					
25 May		262	30	9	Cro	7	В	1	1		1	1				
-	S25W23	263	20	6	Bxo	5	В									
27 May		262	10	5	Bxo	6	В	1			5					
28 May		259	10	1	Axx	2	Α									
29 May		260	plage													
30 May	S25W74	261	plage					1								
31 May	S25W88	261	plage													
		_						13	2	0	15	2	0	0	0	
	West Lim		aituda. 1	61												
Ausorui	te heliograp	onic ton	gitude. 2	04												
		Regio	on 3313													
19 May	N22E75	257	30	2	Hsx	1	A									
-	N22E63	256	50	1	Hsx	1	A				1					
•	N22E50	256	60	2	Hsx	1	A									
-	N23E35	257	90	2	Hsx	1	A									
	N23E21	258	120	4	Hsx	2	A									
-	N22E06	260	100	2	Hsx	2	A									
•	N23W03	256	100	2	Hsx	1	A									
•	N23W16	256	100	2	Hsx	1	A									
•	N23W28	254	100	2	Hsx	1	A									
-	N23W42	255	80	2	Hsx	1	A									
•	N23W54	253	60	2	Hsx	1	A									
30 May		252	20	2	Hsx	1	A									
31 May	N21W79	251	30	_	Hsx	1	A									
01 Jun	N21W93	253	30		Hsx	1	A				1					
01 0011	1,21,17,0	200	50		110/1			0	0	0	2	0	0	0	0	

Crossed West Limb. Absolute heliographic longitude: 256



	Location	on	Sunspot Characteristics						Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X	X-ray			O	ptica	ıl		
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4	
		Regi	ion 3314													
20 May	N15E36	283	20	3	Bxo	3	В									
21 May	N15E25	281	20	1	Hrx	1	A									
22 May	N15E10	282	plage				A				1					
23 May	N15W04	283	plage													
24 May	N12W17	283	130	6	Cso	15	В									
25 May	N16W31	284	120	3	Cao	7	В	5			7					
•	N15W45	285	110	3	Cso	6	В	1			4					
27 May	N15W58	284	120	3	Dao	4	BD	1			2					
28 May	N15W72	285	160	3	Dao	4	BD	1			1					
29 May	N14W84	283	90	2	Hax	1	A	8	0	0	15	0	0			
	West Lim e heliograp	hic lor		83												
		Regi	ion 3315													
23 May	S15E45	234	20	3	Bxo	3	В									
24 May	S17E32	234	130	5	Dai	11	В		1		8					
25 May	S16E19	234	230	8	Dai	11	В	3			5					
26 May	S17E05	235	360	10	Dki	18	В	9			9					
27 May	S17W08	234	620	11	Ekc	28	BGD	4			13					
28 May	S17W22	235	800	12	Ekc	26	BGD	4	1		4	1				
29 May	S16W34	233	630	11	Ekc	22	BG	1								
30 May	S17W48	234	540	11	Eko	14	BGD		1			1				
31 May	S17W58	231	510	9	Dko	13	BD	1			3					
01 Jun	S17W74	233	350	10	Dhi	10	В	3			7					
02 Jun	S17W88	235	160	8	Dao	5	В	1	_		1	_				
								26	3	0	50	2	0	0	0	

Crossed West Limb. Absolute heliographic longitude: 235



	Location	on	Sunspot Characteristics						Flares						
		Helio		Extent	•	-	Mag	X	K-ray			O	ptica	1	
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4
		Regi	on 3316												
26 May	N09E36	204	20	4	Cro	5	В								
20 May 27 May	N09E22	204	30	5	Cro	7	В				1				
28 May		205	30	6	Dro	5	В	1			•				
29 May	N09W04	203	30	5	Bxo	4	В	-							
30 May	N08W20	206	0	1	Axx	2	A								
31 May	N07W34	206	10		Axx	1	A								
01 Jun	N09W45	204	10	1	Axx	1	A								
02 Jun	N09W59	206	plage												
03 Jun	N09W73	207	plage												
04 Jun	N09W87	207	plage												
								1	0	0	1	0	0	0	0
Still on															
Absolut	e heliograp	hic lon	igitude: 2	03											
		Regi	on 3317												
29 May	N26W41	240	40	3	Dao	5	В	1			1				
30 May	N27W54	240	30	5	Dro	3	В	1							
31 May	N27W65	238	30	3	Cro	2	В								
01 Jun	N27W80	239	10		Axx	1	A								
								2	0	0	1	0	0	0	0
Crossed	West Lim	b.													
Absolut	e heliograp	hic lon	igitude: 2	40											
		Region 3318													
20 Mess	N25W22		120	4	Doc	7	D				5				
29 May 30 May	N25W33 N25W46	232 232	120	4 5	Dao Dso	7 3	B B				3				
30 May	N23W40 N24W58	232	120	6	Dso	2	В								
01 Jun	N25W72	231	90	6	Hax	2	A								
02 Jun	N24W84	231	90	2	Hsx	1	A								
02 Jun	11271107	<i>_J</i> 1	70	2	110/	1	11	0	0	0	5	0	0	0	0
Crossed	West Lim	h						J	Ü	J	-				

Crossed West Limb. Absolute heliographic longitude: 232



Region 3319   29 May   S19W01   200   10   5   8x0   5   8   30 May   S18W15   201   70   8   Dai   13   8   1   1   1   1   1   1   1   1   1		Location	on	Su	Sunspot Characteristics						Flares							
Region 3319   Sample   Region 3319   Sample   Region 3319   Sample   Samp			Helio	Area	Extent	Spot	Spot	Mag	>	K-ray			0	ptica	ıl			
29 May \$19W01 200 10 5 Bxo 5 B 30 May \$18W15 201 70 8 Dai 13 B 1 1 1 31 May \$19W27 199 300 10 Dhi 19 BGD 1 1 1 1 01 Jun \$19W41 200 240 11 Eai 13 BG 02 Jun \$19W56 203 240 13 Eai 13 BG 03 Jun \$19W70 204 200 13 Eai 13 BG 2 2 04 Jun \$19W82 202 220 11 Eac 7 BG 1  Still on Disk.  **Absolute heliographic longitude: 200**  **Region 3320**  **Region 3320**  **Region 3320**  29 May \$11E72 127 30 1 Hrx 1 A 1 31 May \$10B46 126 120 4 Cso 2 B 01 Jun \$10B01 127 30 9 Cso 2 B 02 Jun \$10E02 127 20 9 Cso 3 B 03 Jun \$10E07 127 30 8 Cso 4 B 1 1 04 Jun \$10W04 124 30 9 Cso 5 B  **Still on Disk.**  **Region 3321**  **Still on Disk.**  **Region 3321**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1 1 A 1 1	Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4		
29 May \$19W01 200 10 5 Bxo 5 B 30 May \$18W15 201 70 8 Dai 13 B 1 1 1 31 May \$19W27 199 300 10 Dhi 19 BGD 1 1 1 1 01 Jun \$19W41 200 240 11 Eai 13 BG 02 Jun \$19W56 203 240 13 Eai 13 BG 03 Jun \$19W70 204 200 13 Eai 13 BG 2 2 04 Jun \$19W82 202 220 11 Eac 7 BG 1  Still on Disk.  **Absolute heliographic longitude: 200**  **Region 3320**  **Region 3320**  **Region 3320**  29 May \$11E72 127 30 1 Hrx 1 A 1 31 May \$10B46 126 120 4 Cso 2 B 01 Jun \$10B01 127 30 9 Cso 2 B 02 Jun \$10E02 127 20 9 Cso 3 B 03 Jun \$10E07 127 30 8 Cso 4 B 1 1 04 Jun \$10W04 124 30 9 Cso 5 B  **Still on Disk.**  **Region 3321**  **Still on Disk.**  **Region 3321**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  **Still on Disk.**  **Absolute heliographic longitude: 124**  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1 1 A 1 1			Rogi	on 3310														
30 May S18W15	20.14	C1033101	_		_	ъ	~	ъ										
31 May S19W27 199 300 10 Dhi 19 BGD 1 1 1 1 1 01 01 Jun S19W41 200 240 11 Eai 13 BG 02 Jun S19W56 203 240 13 Eai 13 BG 1 03 Jun S19W70 204 200 13 Eai 13 BG 2 2 2 2 04 Jun S19W82 202 220 11 Eac 7 BG 1 5 1 0 5 0 0 0 0 Still on Disk.  **Region 3320**  **Region 3320**  29 May S11E72 127 30 1 Hrx 1 A 1 A 1 30 May N09E58 127 40 2 Hsx 1 A 31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 01 Jun N10E31 127 30 9 Cso 3 B 02 Jun N10E07 127 30 8 Cso 4 B 1 1 1 1 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-								1			1						
01 Jun	-									1								
02 Jun	-								1	1		1						
03 Jun S19W70 204 200 13 Eai 13 BG 2 2 2 04 Jun S19W82 202 220 11 Eac 7 BG 1 Still on Disk. Absolute heliographic longitude: 200  Region 3320  29 May S11E72 127 30 1 Hrx 1 A 1 30 May N09E58 127 40 2 Hsx 1 A 31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A												1						
04 Jun									2									
Still on Disk. Absolute heliographic longitude: 200  **Region 3320**  29 May \$11E72 127 30 1 Hrx 1 A 1 A 1 30												2						
Still on Disk. Absolute heliographic longitude: 200    Region 3320	O <del>T</del> Juli	517 W 02	202	220	11	Lac	,	ЪО		1	0	5	0	0	0	0		
Absolute heliographic longitude: 200    Region 3320	Still on	Disk								•	Ü	J	O	Ü		Ü		
Region 3320  29 May S11E72 127 30 1 Hrx 1 A 1 30 May N09E58 127 40 2 Hsx 1 A 31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A			hic lon	igitude: 2	00													
29 May S11E72 127 30 1 Hrx 1 A 1 30 May N09E58 127 40 2 Hsx 1 A 31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 1 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A		8 1		8														
30 May N09E58 127 40 2 Hsx 1 A 31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk.  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A		Region 3320																
31 May N10E46 126 120 4 Cso 2 B 01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 1 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	29 May	S11E72	127	30	1	Hrx	1	A	1									
01 Jun N10E31 127 30 9 Cso 2 B 02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 1 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 1 02 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	30 May	N09E58	127	40	2	Hsx	1	A										
02 Jun N10E20 127 20 9 Cso 3 B 03 Jun N10E07 127 30 8 Cso 4 B 1 1 04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  Region 3321  30 May S16E66 119 120 2 Hsx 1 A 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	31 May	N10E46	126	120	4	Cso	2	В										
03 Jun N10E07 127 30 8 Cso 4 B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	01 Jun	N10E31	127	30	9	Cso	2	В										
04 Jun N10W04 124 30 9 Cso 5 B  Still on Disk. Absolute heliographic longitude: 124  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1 1	02 Jun	N10E20	127		9	Cso	3	В										
Still on Disk. Absolute heliographic longitude: 124  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1 1	03 Jun		127			Cso			1			1						
Still on Disk. Absolute heliographic longitude: 124  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1    31 May \$15E52 120 260 5 Hhx 3 A    01 Jun \$15E41 118 210 4 Hax 2 A    02 Jun \$15E27 120 180 3 Hax 2 A    03 Jun \$15E13 121 180 5 Hax 1 A     **Handard Control of Table 1    **The property of Table 2     **The property of Table 2	04 Jun	N10W04	124	30	9	Cso	5	В										
Absolute heliographic longitude: 124  **Region 3321**  30 May \$16E66 119 120 2 Hsx 1 A 1   31 May \$15E52 120 260 5 Hhx 3 A   01 Jun \$15E41 118 210 4 Hax 2 A   02 Jun \$15E27 120 180 3 Hax 2 A   03 Jun \$15E13 121 180 5 Hax 1 A									2	0	0	1	0	0	0	0		
Region 3321         30 May S16E66       119       120       2       Hsx       1       A       1         31 May S15E52       120       260       5       Hhx       3       A         01 Jun S15E41       118       210       4       Hax       2       A       1         02 Jun S15E27       120       180       3       Hax       2       A         03 Jun S15E13       121       180       5       Hax       1       A					• •													
30 May S16E66 119 120 2 Hsx 1 A 1 31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 1 02 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	Absolut	e heliograp	ohic lon	igitude: 1	24													
31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 02 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A			Regi	on 3321														
31 May S15E52 120 260 5 Hhx 3 A 01 Jun S15E41 118 210 4 Hax 2 A 02 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	30 Mav	S16E66	119	120	2	Hsx	1	A				1						
01 Jun       S15E41       118       210       4       Hax       2       A       1         02 Jun       S15E27       120       180       3       Hax       2       A         03 Jun       S15E13       121       180       5       Hax       1       A	-																	
02 Jun S15E27 120 180 3 Hax 2 A 03 Jun S15E13 121 180 5 Hax 1 A	-											1						
03 Jun S15E13 121 180 5 Hax 1 A																		
	04 Jun	S15E01	119	170	3	Hsx	1	A										
$\begin{array}{cccccccccccccccccccccccccccccccccccc$									0	0	0	2	0	0	0	0		

Still on Disk. Absolute heliographic longitude: 119



	Location	on	Sunspot Characteristics					Flares								
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray		Optica					
Date	Lat CMD	Lon	10 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4	
		Regi	ion 3322													
30 May	N16W38	224	10	3	Bxo	5	В									
31 May	N17W52	225	10	2	Bxo	1	В									
01 Jun	N17W66	225	20	3	Cro	3	В									
02 Jun	N16W79	226	0		Axx	1	A	0	0	0	0	0	0	0	0	
	West Limbe heliograp		ngitude: 2	24				Ü	Ü	Ü	Ü	Ü	Ü	Ü	Ü	
		Regi	ion 3323													
31 May	S05E68	104	200	2	Dao	3	В	8	2		6					
01 Jun	S08E57	101	170	10	Dac	8	BG	5	-		12					
02 Jun	S07E45	102	230	14	Esi	13	BG	2			6					
03 Jun	S07E32	102	310	13	Ekc	13	BG	3			4					
04 Jun	S07E20	100	320	14	Ehi	18	BG	5	2	0	7	0	0	0	0	
Still on Absolut	Disk. e heliograp	hic lor	ngitude: 1	00				23	2	0	35	0	0	0	0	
		Regi	ion 3324													
02 Jun	N15W12	159	20	5	Bxo	6	В		1		1					
03 Jun	N15W25	159	10	5	Bxo	6	В									
04 Jun	N11W38	158	plage					0	1	0	1	0	0	0	0	
Still on Absolut	Disk. e heliograp	hic lo	ngitude: 1	59				0	1	0	1	0	0	0	0	
	Region 3325															
02 Jun	N11W02	149	10	3	Bxo	2	В									
02 Jun 03 Jun	N11W02 N11W16	150	30	3	Cao	2 4	В									
04 Jun	N11W30	150	20	2	Hrx	1	A				1					
C4:11	D:-1-							0	0	0	1	0	0	0	0	
Still on Absolut	Disk. e heliograp	hic lo	ngitude: 1	49												



	Location	on	Sunspot Characteristics						Flares							
		Helio	Area	Extent	Spot	Spot	Mag	X	K-ray		Optical					
Date	Lat CMD	Lon 1	0 <sup>-6</sup> hemi.	(helio)	Class	Count	Class	C	M	X	S	1	2	3	4	
Region 3326																
02 Jun	N25E73	74	120	1	Hsx	1	A	1								
03 Jun	N25E59	75	120	1	Hsx	1	A									
04 Jun	N29E46	74	70	2	Hsx	1	A									
								1	0	0	0	0	0	0	0	
Still on Absolut	Disk. te heliograp	hic long	gitude: 7	4												
		D	2227													
		Kegio	n 3327													
03 Jun	S14E81	53	plage					1								
04 Jun	S14E67	53	100	4	Dao	7	В	4			6	1				
								5	0	0	6	1	0	0	0	
Still on Absolut	Disk. te heliograp	hic long	gitude: 5	3												



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

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

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