

Solar activity ranged from low to moderate levels. Region 1476 (N10, L=180, class/area=Fkc/1050 on 09 May) was responsible for almost all x-ray flare activity during the week. It produced a total of 55 C-class flares, 6 M-class flares, and 69 optical flares. Region 1476 began the week as an Fkc type group with a beta-gamma magnetic configuration. By the 8th, it had grown in extent (17 degrees), spot count (35), and complexity (beta-gamma-delta) and produced an M1/1F flare at 1308 UTC. It reached its maximum areal coverage of 1050 millionths on the 9th when it produced an M4/1n at 1232 UTC, an M1/1b at 1408 UTC, and another M4 at 2105 UTC. The maximum extent and spot count (20 degrees, 50 spots) followed on the 10th when Region 1476 produced the largest of the flares, an M5/2b at 0418 UTC. The flare was accompanied by a three minute 10cm burst (690 sfu) at 10/0417 UTC and a Type IV emission at 10/0402 UTC, followed by a weak earth-directed Coronal Mass Ejection (CME). Later that day, Region 1476 produced an M1 at 2026 UTC, the last M-class event of the week. The region then began a slow but steady decline in areal coverage, longitudinal extent and spot count, although it sustained its beta-gamma-delta magnetic configuration.

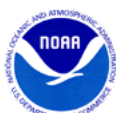
Earlier in the week, the only M-class event not produced by Region 1476 was an M1/1n flare observed from Region 1471 (S21, L=276, class/area=Eho/320 on 02 May) at 07/1431 UTC. This flare was also accompanied by a 10cm burst (230 sfu) at 10/1415 UTC and a Type IV emission at 07/1409 UTC. STEREO-Ahead imagery suggested an earth-directed CME. The following day, two more potentially earth-directed, weak CMEs were observed in STEREO-A COR2 imagery.

Region 1477 (S24, L=140, class/area Dso/150 on 09 May) was split to form new Region 1478 (S24, L=135, class/area=Hsx/090 on 10 May) on 10 May. Similarly, Region 1479 (N15, L=105, class/area Dso/130 on 12 May) was split to form new Region 1482 (N14, L=100, class/area=Dso/080 on 13 May). Both of these divisions resulted from careful analysis of magnetogram data. After the split, Region 1477 became an Hsx type group with L=144, and Region 1479 became an Hxs type group near L=109.

No proton events were observed at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit was at high levels on the 10th through the 13th, and at moderate levels for the remainder.

Geomagnetic field activity ranged from quiet to active conditions with minor to major storm periods observed at high latitudes. The week began with quiet conditions on 7th and the majority of the 8th. Around 08/0400 UTC, a solar sector boundary crossing from positive to negative was observed at the ACE spacecraft. By midday, the solar wind speed at ACE began to rise, marking the arrival of a coronal hole high speed stream (CH-HSS). Significant southward Bz began around 1730 UTC and reached a minimum of -13 nT late on the 8th before beginning a gradual return to neutral conditions late on the 10th. The geomagnetic field responded with active conditions from the last synoptic period on the 8th through the 9th. Minor to major storm levels were observed at high latitudes on the 9th. Activity subsided to mostly unsettled levels on the



10th, followed by mostly quiet conditions on the 11-12 May. The solar wind speed at ACE remained above 500 km/s until around 13/0000 UTC. Conditions were mostly unsettled on the 13th. Although there were a number of CMEs identified as potentially earth-directed, there was no definitive indication of CME arrival reflected in the ACE data suggesting the transient signatures were obliterated in the high speed stream.

Space Weather Outlook

14 May - 09 June 2012

Solar activity is expected to be at low to moderate levels throughout the period, with moderate activity most likely with the return of Old Region 1476 on 31 May.

No proton events are expected at geosynchronous orbit.

The greater than 2 MeV electron flux at geosynchronous orbit is expected to be at normal levels except on 14 May, 23-29 May, and 06-09 June. The high levels are expected in response to the presence of recurrent coronal hole high speed streams.

Geomagnetic field activity is expected to be quiet to unsettled with occasional active periods. The unsettled to active periods are associated with the geoeffective periods of recurrent CH-HSSs on 14 May, 21-23 May, and 05-08 June. Unsettled to occasionally active conditions are also expected on 14 May with the anticipated arrival of a CME from 12 May.



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 |
| 07 May | 122 | 79 | 1050 | B5.9 | 12 | 1 | 0 | 2 | 1 | 0 | 0 | 0 |
| 08 May | 123 | 90 | 1160 | B3.5 | 4 | 1 | 0 | 4 | 1 | 0 | 0 | 0 |
| 09 May | 127 | 79 | 1320 | B4.1 | 9 | 3 | 0 | 11 | 2 | 0 | 0 | 0 |
| 10 May | 131 | 93 | 1320 | B6.5 | 17 | 2 | 0 | 15 | 1 | 1 | 0 | 0 |
| 11 May | 136 | 102 | 1280 | B6.1 | 21 | 0 | 0 | 20 | 0 | 0 | 0 | 0 |
| 12 May | 130 | 85 | 1190 | B4.9 | 8 | 0 | 0 | 16 | 0 | 0 | 0 | 0 |
| 13 May | 131 | 138 | 1110 | B4.2 | 3 | 0 | 0 | 3 | 1 | 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 | >100 MeV | >0.6 MeV | >2MeV | >4 MeV |
| | 07 May | 1.6e+05 | 1.3e+04 | 3.2e+03 | | 1.7e+07 |
| 08 May | 3.6e+05 | 1.3e+04 | 3.0e+03 | | 1.4e+07 | |
| 09 May | 3.5e+05 | 1.2e+04 | 2.7e+03 | | 3.1e+06 | |
| 10 May | 1.9e+05 | 1.3e+04 | 3.0e+03 | | 4.7e+07 | |
| 11 May | 4.9e+05 | 1.2e+04 | 2.9e+03 | | 1.4e+08 | |
| 12 May | 6.8e+05 | 1.2e+04 | 3.0e+03 | | 3.7e+08 | |
| 13 May | 2.7e+05 | 1.2e+04 | 2.9e+03 | | 1.3e+08 | |

Daily Geomagnetic Data

| Date | Middle Latitude Fredericksburg | | High Latitude College | | Estimated Planetary | |
|--------|-----------------------------------|-----------------|--------------------------|-----------------|------------------------|-----------------|
| | A | K-indices | A | K-indices | A | K-indices |
| | 07 May | 4 | 0-1-0-2-2-2-2-0 | 1 | 0-1-0-1-0-1-0-0 | 4 |
| 08 May | 8 | 1-2-1-2-3-2-2-3 | 4 | 1-2-0-2-1-1-1-2 | 9 | 1-2-1-2-2-2-2-4 |
| 09 May | 19 | 3-3-4-3-3-2-4-4 | 36 | 3-4-5-6-5-4-3-4 | 24 | 4-4-3-3-4-3-4-4 |
| 10 May | 11 | 3-3-2-2-2-2-3-3 | 19 | 4-3-3-5-3-2-2-3 | 12 | 3-3-2-2-2-2-3-4 |
| 11 May | 10 | 4-3-2-2-2-2-2-1 | 16 | 4-4-4-3-2-2-2-2 | 12 | 4-3-2-2-2-2-2-2 |
| 12 May | 8 | 3-2-2-2-2-2-2-2 | 13 | 2-2-2-4-4-3-2-2 | 10 | 3-2-2-2-3-2-2-3 |
| 13 May | 10 | 2-3-3-2-2-1-3-2 | 24 | 3-3-5-5-4-4-2-2 | 12 | 3-3-3-2-2-2-3-3 |

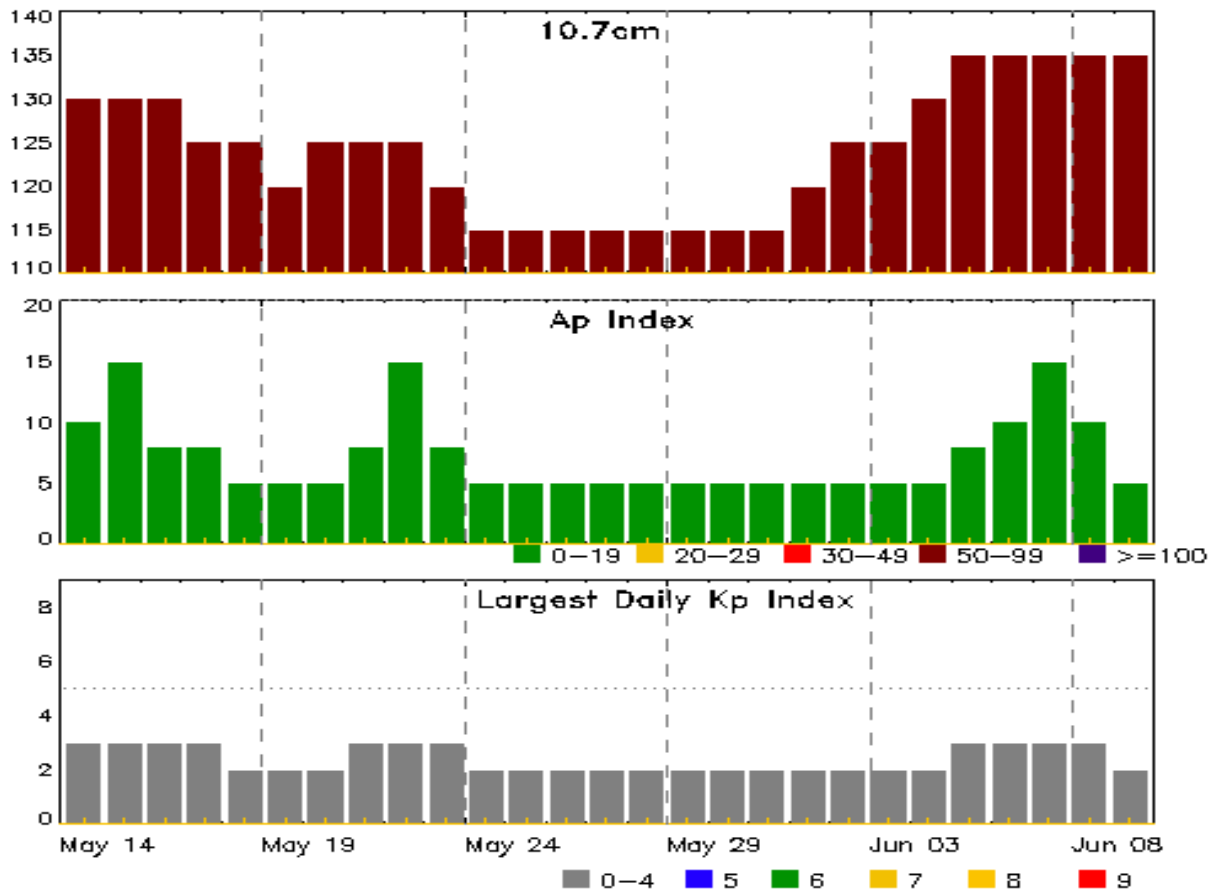


Alerts and Warnings Issued

| Date & Time of Issue UTC | Type of Alert or Warning | Date & Time of Event UTC |
|---|--|---|
| 07 May 1221 | SUMMARY: 10cm Radio Burst | 07/1106 - 1107 |
| 07 May 1445 | SUMMARY: 10cm Radio Burst | 07/1414 - 1426 |
| 07 May 1507 | ALERT: Type IV Radio Emission | 07/1409 |
| 07 May 1750 | SUMMARY: 10cm Radio Burst | 07/1723 - 1728 |
| 08 May 2208 | WARNING: Geomagnetic K = 4 | 08/2208 - 09/0600 |
| 08 May 2359 | ALERT: Geomagnetic K = 4 | 08/2357 |
| 09 May 0556 | EXTENDED WARNING: Geomagnetic K = 4 | 08/2208 - 09/1200 |
| 09 May 1156 | EXTENDED WARNING: Geomagnetic K = 4 | 08/2208 - 09/1800 |
| 09 May 1733 | EXTENDED WARNING: Geomagnetic K = 4 | 08/2208 - 09/2359 |
| 09 May 2054 | WARNING: Geomagnetic K = 5 | 09/2053 - 10/0000 |
| 09 May 2054 | ALERT: Geomagnetic K = 5 | 09/2053 |
| 09 May 2104 | CANCELLATION: Geomagnetic K = 5 | |
| 09 May 2117 | SUMMARY: 10cm Radio Burst | 09/2103 - 2104 |
| 09 May 2348 | EXTENDED WARNING: Geomagnetic K = 4 | 08/2208 - 10/0900 |
| 09 May 2355 | EXTENDED WARNING: Geomagnetic K = 5 | 09/2053 - 10/0300 |
| 10 May 0418 | ALERT: X-ray Flux exceeded M5 | 10/0417 |
| 10 May 0429 | SUMMARY: X-ray Event exceeded M5 | 10/0411 - 0423 |
| 10 May 0435 | SUMMARY: 10cm Radio Burst | 10/0415 - 0418 |
| 10 May 0516 | ALERT: Type IV Radio Emission | 10/0402 |
| 10 May 1434 | ALERT: Electron 2MeV Integral Flux \geq 1000pfu | 10/1415 |
| 10 May 2314 | WARNING: Geomagnetic K = 4 | 10/2315 - 11/0900 |
| 11 May 0000 | ALERT: Geomagnetic K = 4 | 10/2359 |
| 11 May 1018 | CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu | 10/1415 |
| 12 May 0516 | CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu | 10/1415 |
| 13 May 1106 | CONTINUED ALERT: Electron 2MeV Integral Flux \geq 1000pfu | 10/1415 |



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 |
|--------|----------------------|----------------------|---------------------|--------|----------------------|----------------------|---------------------|
| 14 May | 130 | 10 | 3 | 28 May | 115 | 5 | 2 |
| 15 | 130 | 15 | 3 | 29 | 115 | 5 | 2 |
| 16 | 130 | 8 | 3 | 30 | 115 | 5 | 2 |
| 17 | 125 | 8 | 3 | 31 | 115 | 5 | 2 |
| 18 | 125 | 5 | 2 | 01 Jun | 120 | 5 | 2 |
| 19 | 120 | 5 | 2 | 02 | 125 | 5 | 2 |
| 20 | 125 | 5 | 2 | 03 | 125 | 5 | 2 |
| 21 | 125 | 8 | 3 | 04 | 130 | 5 | 2 |
| 22 | 125 | 15 | 3 | 05 | 135 | 8 | 3 |
| 23 | 120 | 8 | 3 | 06 | 135 | 10 | 3 |
| 24 | 115 | 5 | 2 | 07 | 135 | 15 | 3 |
| 25 | 115 | 5 | 2 | 08 | 135 | 10 | 3 |
| 26 | 115 | 5 | 2 | 09 | 135 | 5 | 2 |
| 27 | 115 | 5 | 2 | | | | |



Energetic Events

| Date | Time | | | X-ray | | Optical Information | | | Peak | | Sweep Freq | |
|--------|-------|------|------|-------|---------------|---------------------|---------------------|----------|------------|------|------------|----|
| | Begin | Max | Half | Class | Integ Flux | Imp/ Brtns | Location Lat CMD | Rgn # | Radio Flux | | Intensity | |
| | | | Max | | | | | | 245 | 2695 | II | IV |
| 07 May | 1403 | 1431 | 1452 | M1.9 | 0.035 | 1N | S19W46 | 1471 | 55 | 230 | | 1 |
| 08 May | 1302 | 1308 | 1312 | M1.4 | 0.005 | 1F | N13E44 | 1476 | | 69 | | |
| 09 May | 1221 | 1232 | 1236 | M4.7 | 0.019 | 1N | N13E31 | 1476 | | 110 | | |
| 09 May | 1402 | 1408 | 1414 | M1.8 | 0.007 | 1B | N06E22 | 1476 | | 68 | | |
| 09 May | 2101 | 2105 | 2109 | M4.1 | 0.012 | | | 1476 | | 240 | | |
| 10 May | 0411 | 0418 | 0423 | M5.7 | 0.021 | 2B | N13E22 | 1476 | | 690 | | |
| 10 May | 2020 | 2026 | 2030 | M1.7 | 0.006 | | | 1476 | | 100 | | |

Flare List

| Date | Time | | | X-ray Class | Imp/ Brtns | Location Lat CMD | Rgn # |
|--------|-------|-------|-------|----------------|---------------|---------------------|----------|
| | Begin | Max | End | | | | |
| 07 May | 0033 | 0036 | 0039 | C1.3 | | | 1476 |
| 07 May | 0237 | 0250 | 0259 | C7.1 | | | 1476 |
| 07 May | 0320 | 0325 | 0329 | C2.7 | | | 1476 |
| 07 May | 0339 | 0342 | 0345 | C1.2 | | | 1476 |
| 07 May | 0349 | 0352 | 0354 | C1.2 | | | 1476 |
| 07 May | 0609 | 0620 | 0625 | C1.3 | | | |
| 07 May | 0645 | 0703 | 0708 | C4.0 | | | 1476 |
| 07 May | 0826 | 0830 | 0833 | C1.4 | | | |
| 07 May | 1028 | 1033 | 1037 | C1.1 | | | 1471 |
| 07 May | 1102 | 1108 | 1111 | C7.9 | | | 1476 |
| 07 May | 1237 | 1241 | 1245 | C1.1 | | | |
| 07 May | 1403 | 1431 | 1452 | M1.9 | 1N | S19W46 | 1471 |
| 07 May | B1500 | U1506 | A1524 | | SF | N11E55 | 1476 |
| 07 May | 1720 | 1726 | 1730 | C7.4 | SN | N13E56 | 1476 |
| 07 May | 2133 | 2136 | 2141 | B7.4 | | | |
| 08 May | 0800 | 0804 | 0807 | B7.3 | | | 1474 |
| 08 May | 0823 | 0836 | 0840 | C1.9 | | | 1476 |
| 08 May | 0921 | 0928 | 0931 | C1.7 | SF | N08E40 | 1476 |
| 08 May | B0944 | U0948 | A1020 | | SF | N16W01 | 1474 |
| 08 May | 1036 | 1039 | 1042 | C1.8 | | | 1476 |
| 08 May | 1302 | 1308 | 1312 | M1.4 | 1F | N13E44 | 1476 |
| 08 May | 1322 | 1322 | 1327 | | SF | S18E63 | |
| 08 May | 1354 | 1354 | 1358 | | SF | S14E56 | |
| 08 May | 1932 | 1939 | 1944 | C1.5 | | | |



Flare List

| Date | Time | | | X-ray Class | Optical | | Rgn # |
|--------|-------|-------|------|----------------|---------------|---------------------|----------|
| | Begin | Max | End | | Imp/ Brtns | Location Lat CMD | |
| 08 May | 2137 | 2141 | 2143 | B5.4 | | | |
| 09 May | 0000 | 0002 | 0006 | | SF | N06E15 | 1476 |
| 09 May | 0027 | 0030 | 0032 | B4.7 | SF | N08E31 | 1476 |
| 09 May | 0053 | 0056 | 0103 | | SF | N12E33 | 1476 |
| 09 May | 0220 | 0223 | 0226 | B5.3 | | | 1476 |
| 09 May | 0410 | 0415 | 0420 | B7.4 | | | 1476 |
| 09 May | 0433 | 0433 | 0436 | | SF | S16E50 | 1477 |
| 09 May | 0602 | 0608 | 0615 | B5.6 | | | 1476 |
| 09 May | 0716 | 0720 | 0722 | B8.7 | | | 1476 |
| 09 May | 0735 | 0739 | 0742 | B9.3 | | | |
| 09 May | 0837 | 0841 | 0843 | C1.3 | | | |
| 09 May | B0845 | U0847 | 0850 | | SF | N11E28 | 1476 |
| 09 May | 0947 | 0950 | 0952 | C1.3 | | | 1476 |
| 09 May | 1024 | 1027 | 1031 | B6.8 | | | |
| 09 May | 1119 | 1119 | 1125 | | SF | N11E28 | 1476 |
| 09 May | 1132 | 1139 | 1145 | B9.4 | | | 1476 |
| 09 May | 1221 | 1232 | 1236 | M4.7 | | | 1476 |
| 09 May | 1223 | 1229 | 1233 | | SF | S13E43 | 1477 |
| 09 May | 1224 | 1232 | 1317 | | 1N | N13E31 | 1476 |
| 09 May | 1402 | 1408 | 1414 | M1.8 | 1B | N06E22 | 1476 |
| 09 May | 1503 | 1528 | 1541 | | SF | N13E30 | 1476 |
| 09 May | 1559 | 1601 | 1604 | | SF | N07E20 | 1476 |
| 09 May | 1626 | 1642 | 1645 | C2.1 | SF | N06E21 | 1476 |
| 09 May | 1710 | 1714 | 1717 | B7.7 | | | |
| 09 May | 1809 | 1813 | 1816 | C1.4 | | | |
| 09 May | 1931 | 1933 | 1939 | | SF | N10E23 | 1476 |
| 09 May | 1951 | 1955 | 1958 | C1.5 | | | |
| 09 May | 2045 | 2052 | 2055 | C9.1 | | | 1476 |
| 09 May | 2101 | 2105 | 2109 | M4.1 | | | 1476 |
| 09 May | 2228 | 2232 | 2236 | C1.2 | | | |
| 09 May | 2243 | 2246 | 2249 | C1.4 | | | |
| 09 May | 2258 | 2301 | 2304 | C1.0 | | | 1476 |
| 09 May | 2357 | 0001 | 0004 | B7.7 | | | 1476 |
| 10 May | 0010 | 0014 | 0016 | C1.4 | SF | N07E14 | 1476 |
| 10 May | 0048 | 0051 | 0053 | B8.5 | | | 1474 |
| 10 May | 0144 | 0148 | 0152 | C2.4 | SF | N12E19 | 1476 |
| 10 May | 0157 | 0200 | 0204 | C1.9 | | | |
| 10 May | 0209 | 0213 | 0216 | C1.2 | SF | N14E29 | 1476 |



Flare List

| Date | Time | | | X-ray Class | Imp/ Brtns | Optical | | Rgn # |
|--------|-------|------|------|----------------|---------------|---------------------|--|----------|
| | Begin | Max | End | | | Location Lat CMD | | |
| 10 May | 0411 | 0418 | 0423 | M5.7 | 2B | N13E22 | | 1476 |
| 10 May | 0504 | 0510 | 0516 | C7.9 | 1N | N10E17 | | 1476 |
| 10 May | 0517 | 0522 | 0525 | C8.3 | | | | 1476 |
| 10 May | 0555 | 0601 | 0606 | C3.1 | SF | N12E17 | | 1476 |
| 10 May | 0619 | 0622 | 0629 | C3.6 | | | | 1476 |
| 10 May | 0732 | 0735 | 0738 | C1.4 | SF | N11E15 | | 1476 |
| 10 May | 0808 | 0811 | 0814 | B8.9 | SF | N11E15 | | 1476 |
| 10 May | 1022 | 1035 | 1039 | C1.0 | SF | N11E16 | | 1476 |
| 10 May | 1134 | 1201 | 1206 | | SF | N11E15 | | 1476 |
| 10 May | 1210 | 1215 | 1221 | C1.1 | SF | N07E11 | | 1476 |
| 10 May | 1234 | 1237 | 1242 | C2.2 | SF | N09E12 | | 1476 |
| 10 May | 1310 | 1347 | 1523 | C1.9 | SF | N07E09 | | 1476 |
| 10 May | 1334 | 1340 | 1344 | C4.7 | | | | 1476 |
| 10 May | 1352 | 1357 | 1401 | C4.2 | | | | 1476 |
| 10 May | 1525 | 1527 | 1534 | | SF | N07E09 | | 1476 |
| 10 May | 1555 | 1557 | 1607 | | SF | N06E08 | | 1476 |
| 10 May | 1608 | 1657 | 1710 | C3.3 | SF | N11E11 | | 1476 |
| 10 May | 1910 | 1918 | 1928 | C1.4 | | | | |
| 10 May | 2020 | 2026 | 2030 | M1.7 | | | | 1476 |
| 10 May | 2352 | 0001 | 0003 | | SF | N06E04 | | 1476 |
| 11 May | 0211 | 0217 | 0224 | | SF | N07E04 | | 1476 |
| 11 May | 0225 | 0228 | 0237 | | SF | N07E04 | | 1476 |
| 11 May | 0335 | 0342 | 0346 | C3.1 | SF | N15E11 | | 1476 |
| 11 May | 0418 | 0421 | 0427 | C1.0 | | | | |
| 11 May | 0428 | 0435 | 0439 | C1.9 | SF | N07E03 | | 1476 |
| 11 May | 0524 | 0527 | 0530 | C1.1 | SF | N07E02 | | 1476 |
| 11 May | 0533 | 0537 | 0541 | C1.3 | | | | |
| 11 May | 0554 | 0555 | 0611 | | SF | N10E06 | | 1476 |
| 11 May | 0623 | 0625 | 0627 | | SF | N07E01 | | 1476 |
| 11 May | 0700 | 0705 | 0718 | C1.2 | SF | N13W02 | | 1476 |
| 11 May | 0739 | 0743 | 0745 | C1.2 | SF | N10E03 | | 1476 |
| 11 May | 0809 | 0816 | 0820 | C1.7 | SF | N07W02 | | 1476 |
| 11 May | 0829 | 0835 | 0851 | C2.8 | SF | N14E03 | | 1476 |
| 11 May | 0908 | 0912 | 0922 | | SF | N07W03 | | 1476 |
| 11 May | 0937 | 0946 | 0952 | C2.3 | SF | N06W03 | | 1476 |
| 11 May | 1013 | 1016 | 1019 | C1.3 | | | | |
| 11 May | 1035 | 1040 | 1042 | B9.6 | | | | |
| 11 May | 1102 | 1122 | 1133 | C1.2 | | | | |



Flare List

| Date | Time | | | X-ray Class | Optical | | |
|--------|-------|------|------|----------------|---------------|---------------------|----------|
| | Begin | Max | End | | Imp/ Brtns | Location Lat CMD | Rgn # |
| 11 May | 1200 | 1203 | 1205 | C1.3 | | | |
| 11 May | 1210 | 1216 | 1225 | C1.5 | SF | N07W04 | 1476 |
| 11 May | 1258 | 1310 | 1314 | C4.3 | SF | N07W04 | 1476 |
| 11 May | 1418 | 1423 | 1425 | C3.5 | SN | N14E06 | 1476 |
| 11 May | 1457 | 1525 | 1556 | | SF | N07W03 | 1476 |
| 11 May | 1708 | 1716 | 1720 | C2.1 | | | 1476 |
| 11 May | 1731 | 1738 | 1746 | C6.1 | | | 1476 |
| 11 May | 1852 | 1856 | 1900 | C1.6 | | | 1476 |
| 11 May | 1954 | 2016 | 2038 | C4.1 | | | 1476 |
| 11 May | 2147 | 2150 | 2155 | | SF | N14E82 | |
| 11 May | 2302 | 2344 | 0033 | C3.2 | | | 1476 |
| 11 May | 2341 | 2341 | 0001 | | SF | S17E14 | |
| 11 May | 2343 | 2346 | 0018 | | SF | N05W10 | 1476 |
| 12 May | 0053 | 0054 | 0058 | | SF | N11W13 | 1476 |
| 12 May | 0235 | 0235 | 0240 | | SF | N06W14 | 1476 |
| 12 May | 0317 | 0321 | 0326 | C1.2 | | | |
| 12 May | 0436 | 0439 | 0443 | C1.3 | SF | N12W05 | 1476 |
| 12 May | 0507 | 0517 | 0523 | C1.9 | SF | N06W16 | 1476 |
| 12 May | 0649 | 0655 | 0700 | C1.7 | SF | N06W16 | 1476 |
| 12 May | 0711 | 0715 | 0719 | C1.5 | | | |
| 12 May | 0830 | 0921 | 1001 | | SF | N06W18 | 1476 |
| 12 May | 0833 | 0854 | 0912 | | SF | N06W14 | 1476 |
| 12 May | 0918 | 0924 | 0930 | C1.4 | | | 1476 |
| 12 May | 1002 | 1003 | 1010 | | SF | N06W19 | 1476 |
| 12 May | 1104 | 1104 | 1114 | | SF | N08W15 | 1476 |
| 12 May | 1232 | 1247 | 1303 | C1.4 | SF | N08W14 | 1476 |
| 12 May | 1319 | 1325 | 1337 | C2.5 | SF | N08W17 | 1476 |
| 12 May | 1401 | 1407 | 1415 | | SF | N06W20 | 1476 |
| 12 May | 1435 | 1436 | 1450 | | SF | N09W16 | 1476 |
| 12 May | 1504 | 1505 | 1536 | | SF | N08W17 | 1476 |
| 12 May | 1608 | 1610 | 1616 | | SF | N08W18 | 1476 |
| 12 May | 1709 | 1712 | 1717 | | SF | N10W21 | 1476 |
| 13 May | 0155 | 0202 | 0209 | C1.1 | SF | N07W24 | 1476 |
| 13 May | 0251 | 0257 | 0302 | B8.7 | | | |
| 13 May | 0401 | 0408 | 0415 | C4.4 | SF | N07W24 | 1476 |
| 13 May | 0721 | 0814 | 0820 | C7.0 | 1F | N08W27 | 1476 |
| 13 May | 1401 | 1402 | 1404 | | SF | N10W35 | 1476 |
| 13 May | 2226 | 2232 | 2243 | B9.9 | | | 1476 |



Region Summary

| Date | Location | | Sunspot Characteristics | | | | Flares | | | | | | | | | |
|--------------------|----------|-----------|----------------------------|----------------|------------|------------|-----------|-------|---|---|---------|---|---|---|---|--|
| | Lat CMD | Helio Lon | Area 10 ⁶ hemi. | Extent (helio) | Spot Class | Spot Count | Mag Class | X-ray | | | Optical | | | | | |
| | | | | | | | | C | M | X | S | 1 | 2 | 3 | 4 | |
| Region 1469 | | | | | | | | | | | | | | | | |
| 24 Apr | S21E68 | 334 | 30 | 2 | Cao | 10 | B | 3 | | | 3 | | | | | |
| 25 Apr | S18E55 | 334 | 10 | 5 | Bxo | 6 | B | | | | 1 | | | | | |
| 26 Apr | S24E41 | 333 | 20 | 4 | Cso | 3 | B | | | | | | | | | |
| 27 Apr | S24E28 | 335 | 50 | 10 | Dso | 6 | B | 1 | | | 1 | | | | | |
| 28 Apr | S19E14 | 335 | 90 | 7 | Dsi | 13 | B | 1 | | | 2 | | | | | |
| 29 Apr | S19W01 | 338 | 90 | 9 | Dso | 10 | B | 1 | | | 1 | | | | | |
| 30 Apr | S20W14 | 336 | 110 | 13 | Eso | 18 | B | | | | | | | | | |
| 01 May | S21W22 | 337 | 90 | 10 | Dao | 10 | B | | | | 2 | | | | | |
| 02 May | S23W39 | 335 | 140 | 15 | Eso | 12 | BG | 3 | | | 5 | | | | | |
| 03 May | S26W51 | 335 | 100 | 10 | Cao | 10 | B | 1 | | | 6 | | | | | |
| 04 May | S25W62 | 332 | 80 | 5 | Dao | 5 | B | 2 | | | 4 | | | | | |
| 05 May | S26W77 | 333 | 60 | 4 | Cso | 2 | B | | | | | | | | | |
| 06 May | S26W90 | 333 | 40 | 3 | Cso | 2 | B | 1 | | | | | | | | |
| | | | | | | | | 13 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | |

Crossed West Limb.
 Absolute heliographic longitude: 338

| | | | | | | | | | | | | | | | | |
|--------------------|--------|-----|-------|---|-----|----|---|---|---|---|---|---|---|---|---|--|
| Region 1470 | | | | | | | | | | | | | | | | |
| 27 Apr | S17E75 | 288 | plage | | | | | 1 | | | | | | | | |
| 28 Apr | S17E61 | 288 | 40 | 3 | Cso | 3 | B | | | | 1 | | | | | |
| 29 Apr | S16E47 | 290 | 40 | 4 | Cso | 3 | B | | | | | | | | | |
| 30 Apr | S15E32 | 289 | 10 | 2 | Bxo | 2 | B | | | | | | | | | |
| 01 May | S15E21 | 289 | plage | | | | | 1 | | | 1 | | | | | |
| 02 May | S15E07 | 289 | plage | | | | | | | | | | | | | |
| 03 May | S15W07 | 290 | 10 | 5 | Bxo | 10 | B | | | | | | | | | |
| 04 May | S15W20 | 290 | 20 | 5 | Cro | 7 | B | 1 | | | | | | | | |
| 05 May | S15W31 | 287 | 10 | 2 | Bxo | 2 | B | 1 | | | 2 | | | | | |
| 06 May | S15W43 | 286 | 30 | 6 | Cro | 5 | B | 1 | | | | | | | | |
| 07 May | S15W57 | 287 | 30 | 6 | Cro | 5 | B | | | | | | | | | |
| 08 May | S19W68 | 284 | 30 | 2 | Cro | 2 | B | | | | | | | | | |
| 09 May | S19W82 | 286 | plage | | | | | | | | | | | | | |
| | | | | | | | | 5 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | |

Crossed West Limb.
 Absolute heliographic longitude: 289



Region Summary - continued

| Date | Location | | Sunspot Characteristics | | | | Flares | | | | | | | | | | | |
|--------------------|----------|-----------|----------------------------|----------------|------------|------------|-----------|-------|---|---|---------|---|---|---|---|---|--|--|
| | Lat CMD | Helio Lon | Area 10 ⁶ hemi. | Extent (helio) | Spot Class | Spot Count | Mag Class | X-ray | | | Optical | | | | | | | |
| | | | | | | | | C | M | X | S | 1 | 2 | 3 | 4 | | | |
| Region 1471 | | | | | | | | | | | | | | | | | | |
| 28 Apr | S23E70 | 279 | 120 | 4 | Hsx | 2 | A | | | | | | 1 | | | | | |
| 29 Apr | S23E57 | 280 | 260 | 10 | Cho | 5 | B | 1 | | | | | 1 | | | | | |
| 30 Apr | S22E45 | 277 | 320 | 11 | Eho | 4 | B | 4 | | | | | 7 | | | | | |
| 01 May | S21E34 | 274 | 310 | 11 | Eho | 9 | B | | | | | | 2 | | | | | |
| 02 May | S21E19 | 276 | 320 | 13 | Eho | 8 | B | | | | | | | | | | | |
| 03 May | S19E02 | 276 | 300 | 10 | Cko | 7 | B | | | | | | 3 | | | | | |
| 04 May | S19W10 | 277 | 300 | 4 | Hhx | 7 | A | 1 | | | | | 1 | | | | | |
| 05 May | S19W24 | 280 | 150 | 6 | Dao | 8 | B | 1 | | | | | | | | | | |
| 06 May | S19W36 | 279 | 210 | 5 | Dao | 8 | B | | | | | | | | | | | |
| 07 May | S19W50 | 280 | 210 | 5 | Dso | 8 | B | 1 | 1 | | | | 1 | | | | | |
| 08 May | S22W60 | 277 | 120 | 5 | Cso | 3 | B | | | | | | | | | | | |
| 09 May | S21W78 | 281 | 110 | 3 | Hsx | 1 | A | | | | | | | | | | | |
| 10 May | S22W91 | 281 | 90 | 6 | Hsx | 1 | A | | | | | | | | | | | |
| | | | | | | | | 8 | 1 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | | |

Crossed West Limb.
 Absolute heliographic longitude: 276

| | | | | | | | | | | | | | | | | | | |
|--------------------|--------|-----|-------|----|-----|----|---|---|---|---|---|---|---|---|---|---|--|--|
| Region 1472 | | | | | | | | | | | | | | | | | | |
| 29 Apr | S29E40 | 297 | 10 | 3 | Bxo | 3 | B | | | | | | | | | | | |
| 30 Apr | S28E27 | 295 | 70 | 7 | Dao | 14 | B | | | | | | 1 | | | | | |
| 01 May | S28E14 | 295 | 60 | 8 | Dao | 7 | B | | | | | | | | | | | |
| 02 May | S28E01 | 295 | 50 | 11 | Eso | 7 | B | | | | | | | | | | | |
| 03 May | S28W12 | 295 | 10 | 12 | Bxo | 3 | B | | | | | | | | | | | |
| 04 May | S28W24 | 294 | 10 | 7 | Bxo | 2 | B | | | | | | | | | | | |
| 05 May | S28W38 | 295 | plage | | | | | | | | | | | | | | | |
| 06 May | S28W52 | 296 | plage | | | | | | | | | | | | | | | |
| 07 May | S28W66 | 296 | plage | | | | | | | | | | | | | | | |
| 08 May | S28W80 | 297 | plage | | | | | | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | | |

Crossed West Limb.
 Absolute heliographic longitude: 295



Region Summary - continued

| Date | Location | | Sunspot Characteristics | | | | | Flares | | | | | | | | | |
|--------------------|----------|-----|-------------------------|-----------------------|---------|-------|-------|--------|-------|---|---|---------|---|---|---|---|---|
| | Lat | CMD | Helio | Area | Extent | Spot | Spot | Mag | X-ray | | | Optical | | | | | |
| | | | Lon | 10 ⁶ hemi. | (helio) | Class | Count | Class | C | M | X | S | 1 | 2 | 3 | 4 | |
| Region 1474 | | | | | | | | | | | | | | | | | |
| 02 May | N14E71 | | 230 | 10 | 1 | Hsx | 1 | A | | | | | | | | | |
| 03 May | N16E52 | | 230 | 20 | 1 | Hrx | 1 | A | | | | | | | | | |
| 04 May | N14E40 | | 229 | 20 | 1 | Hrx | 1 | A | 1 | | | | 1 | | | | |
| 05 May | N13E30 | | 226 | 10 | 1 | Axx | 1 | A | 1 | | | | | 1 | | | |
| 06 May | N13E17 | | 226 | 10 | 1 | Hrx | 3 | A | | | | | | | | | |
| 07 May | N13E03 | | 227 | 0 | 1 | Axx | 1 | A | | | | | | | | | |
| 08 May | N14W13 | | 229 | 10 | | Axx | 1 | A | | | | | 1 | | | | |
| 09 May | N16W23 | | 232 | 10 | 1 | Axx | 1 | A | | | | | | | | | |
| 10 May | N16W38 | | 230 | plage | | | | | | | | | | | | | |
| 11 May | N16W52 | | 229 | plage | | | | | | | | | | | | | |
| 12 May | N16W66 | | 230 | plage | | | | | | | | | | | | | |
| 13 May | N16W80 | | 231 | plage | | | | | | | | | | | | | |
| | | | | | | | | | 2 | 0 | 0 | | 2 | 1 | 0 | 0 | 0 |

Still on Disk.

Absolute heliographic longitude: 227

| | | | | | | | | | | | | | | | | | |
|--------------------|--------|--|-----|-------|---|-----|---|---|---|---|---|--|---|---|---|---|---|
| Region 1475 | | | | | | | | | | | | | | | | | |
| 03 May | N05E61 | | 221 | 40 | | Hsx | 1 | A | 2 | | | | 2 | | | | |
| 04 May | N06E49 | | 220 | 20 | 1 | Cao | 2 | B | | | | | | | | | |
| 05 May | N04E39 | | 217 | 10 | | Axx | 1 | A | | | | | | | | | |
| 06 May | N05E25 | | 217 | 5 | 1 | Axx | 1 | A | | | | | | | | | |
| 07 May | N05E10 | | 220 | plage | | | | | | | | | | | | | |
| 08 May | N05W05 | | 222 | plage | | | | | | | | | | | | | |
| 09 May | N05W20 | | 224 | plage | | | | | | | | | | | | | |
| 10 May | N05W34 | | 225 | plage | | | | | | | | | | | | | |
| 11 May | N05W49 | | 226 | plage | | | | | | | | | | | | | |
| 12 May | N05W64 | | 228 | plage | | | | | | | | | | | | | |
| 13 May | N05W79 | | 230 | plage | | | | | | | | | | | | | |
| | | | | | | | | | 2 | 0 | 0 | | 2 | 0 | 0 | 0 | 0 |

Still on Disk.

Absolute heliographic longitude: 222



Region Summary - continued

| Date | Location | | Sunspot Characteristics | | | | | Flares | | | | | | | | | | | | | | | |
|--------------------|----------|-----------|----------------------------|----------------|------------|------------|-----------|--------|----|---|---------|---|---|---|---|--|--|--|--|--|--|--|--|
| | Lat CMD | Helio Lon | Area 10 ⁶ hemi. | Extent (helio) | Spot Class | Spot Count | Mag Class | X-ray | | | Optical | | | | | | | | | | | | |
| | | | | | | | | C | M | X | S | 1 | 2 | 3 | 4 | | | | | | | | |
| Region 1476 | | | | | | | | | | | | | | | | | | | | | | | |
| 05 May | N09E67 | 188 | 360 | 7 | Dko | 3 | B | 8 | 2 | | 6 | | | | | | | | | | | | |
| 06 May | N10E63 | 188 | 760 | 16 | Fhi | 25 | BG | 11 | 2 | | 9 | 1 | | | | | | | | | | | |
| 07 May | N10E48 | 182 | 810 | 16 | Fkc | 25 | BG | 8 | | | 2 | | | | | | | | | | | | |
| 08 May | N11E35 | 181 | 940 | 17 | Fkc | 33 | BGD | 3 | 1 | | 1 | 1 | | | | | | | | | | | |
| 09 May | N10E22 | 180 | 1050 | 19 | Fkc | 35 | BGD | 4 | 3 | | 9 | 2 | | | | | | | | | | | |
| 10 May | N12E08 | 180 | 1040 | 20 | Fkc | 50 | BGD | 15 | 2 | | 15 | 1 | 1 | | | | | | | | | | |
| 11 May | N11W05 | 182 | 1040 | 20 | Fkc | 47 | BGD | 16 | | | 18 | | | | | | | | | | | | |
| 12 May | N11W18 | 181 | 960 | 20 | Fkc | 40 | BGD | 6 | | | 16 | | | | | | | | | | | | |
| 13 May | N09W33 | 183 | 810 | 19 | Fki | 44 | BGD | 3 | | | 3 | 1 | | | | | | | | | | | |
| | | | | | | | | 74 | 10 | 0 | 79 | 6 | 1 | 0 | 0 | | | | | | | | |

Still on Disk.

Absolute heliographic longitude: 182

Region 1477

| | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|-----|-----|----|-----|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| 08 May | S22E73 | 144 | 60 | 3 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 09 May | S24E62 | 140 | 150 | 11 | Dso | 2 | B | | | | 2 | | | | | | | | | | |
| 10 May | S22E47 | 144 | 100 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 11 May | S22E31 | 145 | 80 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 12 May | S21E19 | 143 | 40 | 1 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 13 May | S23E07 | 142 | 50 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | | | | | |

Still on Disk.

Absolute heliographic longitude: 142

Region 1478

| | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|-----|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| 10 May | S24E55 | 135 | 90 | 3 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 11 May | S24E42 | 135 | 60 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 12 May | S24E30 | 133 | 60 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 13 May | S24E16 | 134 | 60 | 2 | Hsx | 1 | A | | | | | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |

Still on Disk.

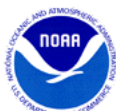
Absolute heliographic longitude: 134

Region 1479

| | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|-----|-----|----|-----|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|
| 11 May | N15E65 | 111 | 90 | 4 | Hsx | 1 | A | | | | | | | | | | | | | | |
| 12 May | N15E57 | 105 | 130 | 10 | Dso | 3 | B | | | | | | | | | | | | | | |
| 13 May | N15E40 | 109 | 40 | 3 | Hsx | 1 | A | | | | | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |

Still on Disk.

Absolute heliographic longitude: 109



Region Summary - continued

| Date | Location | | Sunspot Characteristics | | | | Flares | | | | | | | | |
|------|----------|-----|-------------------------|-------|---------|-------|--------|-------|-------|---|---|---------|---|---|---|
| | Lat CMD | Lon | Helio | Area | Extent | Spot | Spot | Mag | X-ray | | | Optical | | | |
| | | | 10 ⁶ | hemi. | (helio) | Class | Count | Class | C | M | X | S | 1 | 2 | 3 |

Region 1480

| | | | | | | | | | | | | | | | | | |
|--------|--------|-----|-------|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 May | S16W10 | 187 | 10 | 2 | Axx | 2 | A | | | | | | | | | | |
| 12 May | S16W24 | 188 | plage | | | | | | | | | | | | | | |
| 13 May | S16W38 | 189 | plage | | | | | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Still on Disk.
Absolute heliographic longitude: 187

Region 1481

| | | | | | | | | | | | | | | | | | |
|--------|--------|----|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 May | S10E61 | 88 | 40 | 2 | Hsx | 1 | A | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Still on Disk.
Absolute heliographic longitude: 88

Region 1482

| | | | | | | | | | | | | | | | | | |
|--------|--------|-----|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 May | N14E51 | 100 | 80 | 5 | Dso | 2 | B | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Still on Disk.
Absolute heliographic longitude: 100

Region 1483

| | | | | | | | | | | | | | | | | | |
|--------|--------|-----|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 May | S27E51 | 100 | 10 | 1 | Bxo | 7 | B | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Still on Disk.
Absolute heliographic longitude: 100

Region 1484

| | | | | | | | | | | | | | | | | | |
|--------|--------|----|----|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 May | N10E75 | 75 | 20 | 1 | Hsx | 1 | A | | | | | | | | | | |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Still on Disk.
Absolute heliographic longitude: 75

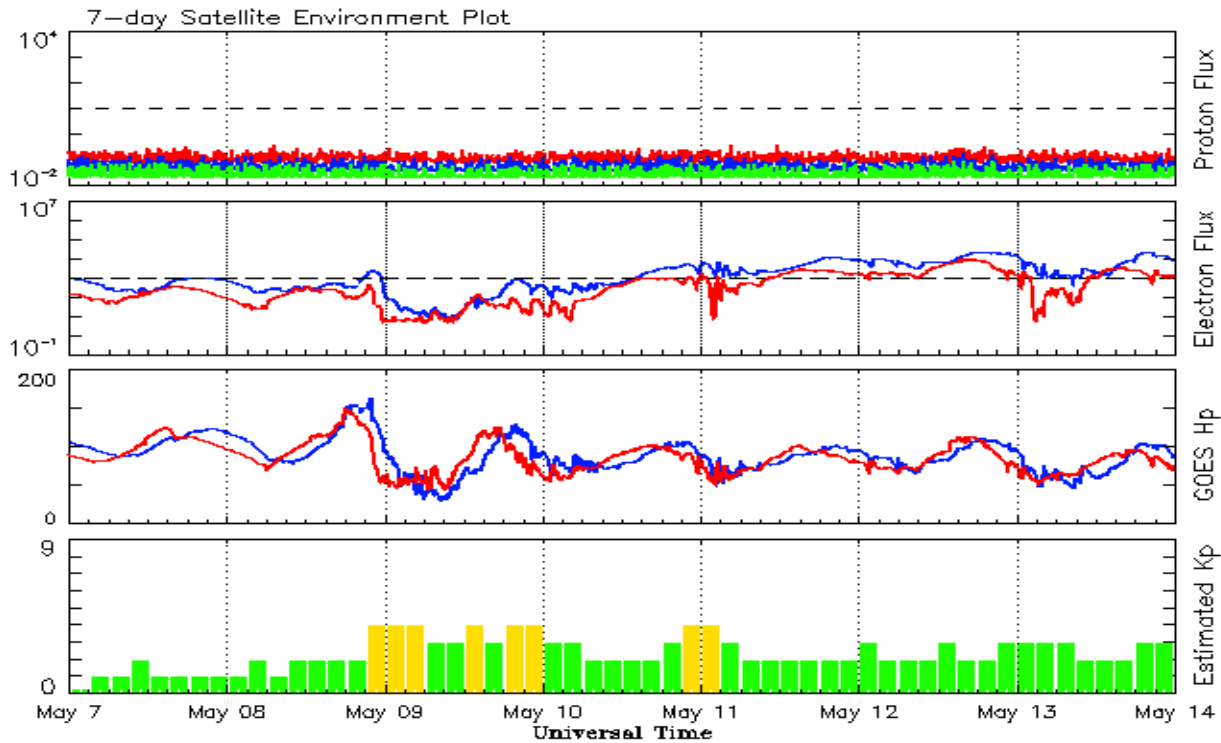


Recent Solar Indices (preliminary)
Observed monthly mean values

| Month | Sunspot Numbers | | | | | Radio Flux | | Geomagnetic | |
|-------------|-----------------|------|--------|---------------|------|------------|--------|-------------|--------|
| | Observed values | | Ratio | Smooth values | | Penticton | Smooth | Planetary | Smooth |
| | SEC | RI | RI/SEC | SEC | RI | 10.7 cm | Value | Ap | Value |
| 2010 | | | | | | | | | |
| May | 19.9 | 8.7 | 0.44 | 23.8 | 15.5 | 73.8 | 79.0 | 8 | 5.7 |
| June | 17.9 | 13.6 | 0.75 | 25.2 | 16.4 | 72.6 | 79.7 | 7 | 5.8 |
| July | 23.1 | 16.1 | 0.70 | 25.9 | 16.7 | 79.9 | 80.1 | 5 | 6.0 |
| August | 28.2 | 19.6 | 0.70 | 27.3 | 17.4 | 79.7 | 80.7 | 8 | 6.2 |
| September | 35.6 | 25.2 | 0.71 | 30.6 | 19.6 | 81.1 | 82.4 | 5 | 6.3 |
| October | 35.0 | 23.5 | 0.67 | 35.9 | 23.2 | 81.6 | 85.3 | 6 | 6.4 |
| November | 36.1 | 21.5 | 0.60 | 40.5 | 26.5 | 82.5 | 87.7 | 5 | 6.4 |
| December | 22.0 | 14.4 | 0.66 | 43.8 | 28.8 | 84.3 | 89.6 | 4 | 6.5 |
| 2011 | | | | | | | | | |
| January | 32.1 | 18.8 | 0.59 | 47.2 | 30.9 | 83.7 | 91.2 | 6 | 6.7 |
| February | 53.2 | 29.6 | 0.55 | 50.6 | 33.4 | 94.5 | 92.7 | 6 | 6.8 |
| March | 81.0 | 55.8 | 0.69 | 55.2 | 36.9 | 115.3 | 95.8 | 7 | 7.2 |
| April | 81.7 | 54.4 | 0.67 | 61.5 | 41.8 | 112.6 | 100.4 | 9 | 7.5 |
| May | 61.4 | 41.5 | 0.68 | 69.0 | 47.6 | 95.9 | 105.6 | 9 | 7.5 |
| June | 55.5 | 37.0 | 0.67 | 76.5 | 53.2 | 95.8 | 110.9 | 8 | 7.4 |
| July | 67.0 | 43.8 | 0.66 | 82.5 | 57.2 | 94.2 | 115.4 | 9 | 7.3 |
| August | 66.1 | 50.6 | 0.77 | 84.9 | 59.0 | 101.7 | 117.9 | 8 | 7.4 |
| September | 106.4 | 78.0 | 0.73 | 84.6 | 59.5 | 134.5 | 118.4 | 13 | 7.7 |
| October | 116.8 | 88.0 | 0.75 | 84.6 | 59.9 | 137.2 | 118.4 | 7 | 8.0 |
| November | 133.1 | 96.7 | 0.73 | | | 153.1 | | 3 | |
| December | 106.3 | 73.0 | 0.69 | | | 141.2 | | 3 | |
| 2012 | | | | | | | | | |
| January | 91.3 | 58.3 | 0.64 | | | 133.1 | | 6 | |
| February | 50.1 | 33.1 | 0.66 | | | 106.7 | | 7 | |
| March | 77.9 | 64.2 | 0.82 | | | 115.1 | | 14 | |
| April | 84.4 | 55.2 | 0.65 | | | 113.1 | | 9 | |

Note: Values are final except for the most recent 6 months which are considered preliminary.
Cycle 24 started in Dec 2008 with an RI=1.7.





*Weekly Geosynchronous Satellite Environment Summary
Week Beginning 07 May 2012*

The proton flux plot contains the five-minute averaged integral proton flux (protons/cm²-sec -sr) as measured by the SWPC Primary GOES satellite, near West 75, for each of three energy thresholds: greater than 10, 50, and 100 MeV.

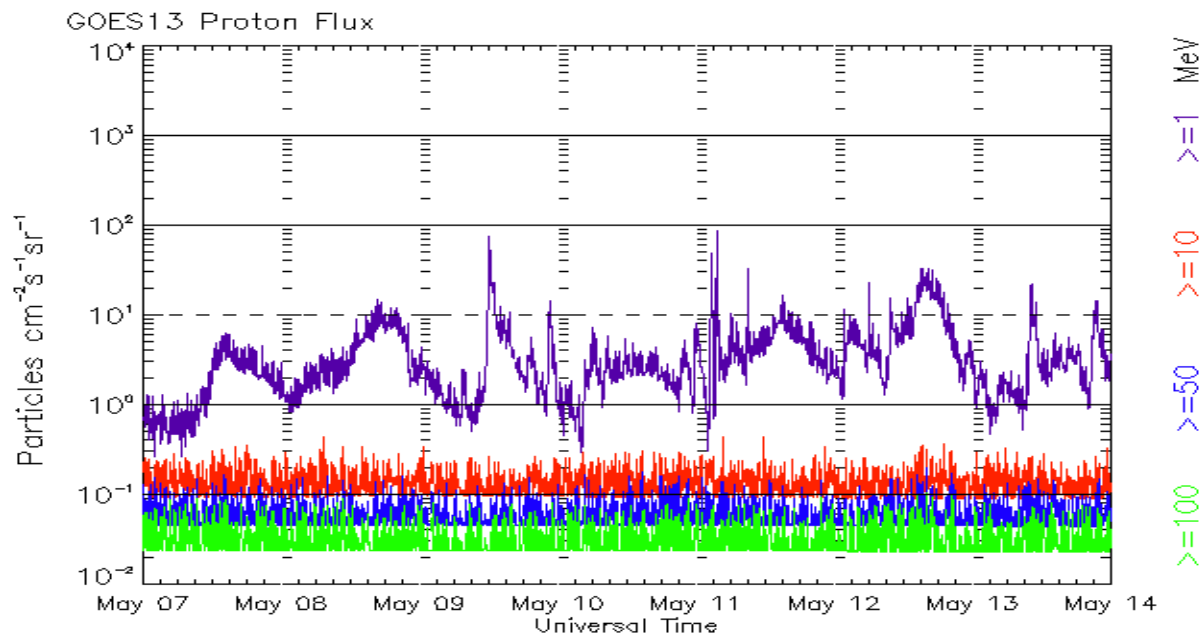
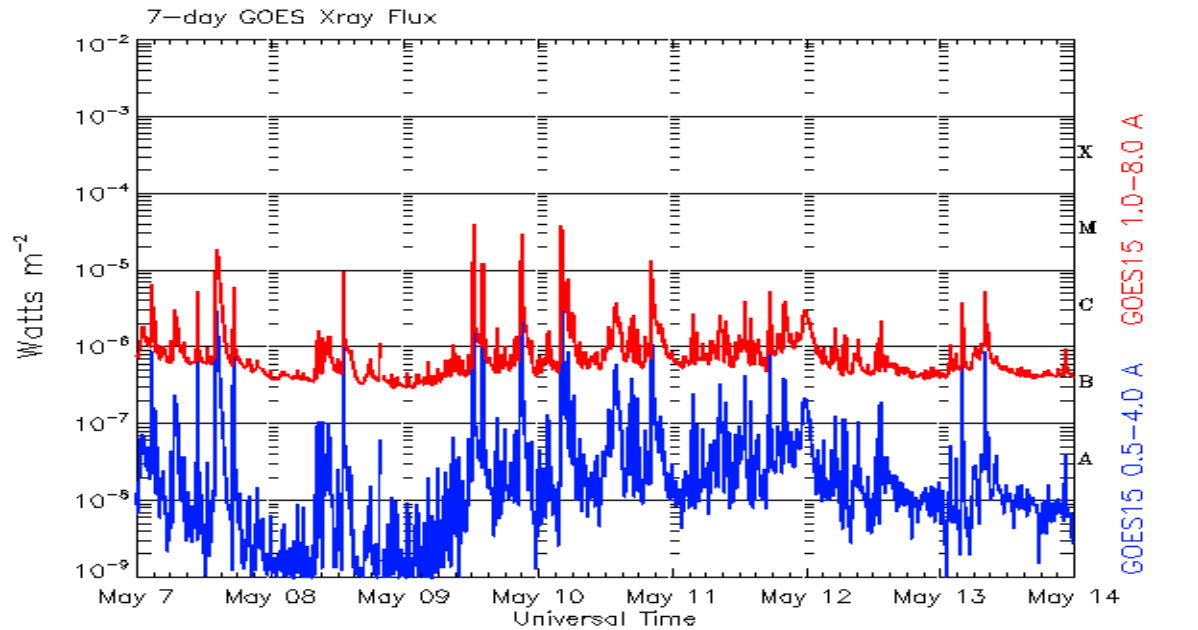
The electron flux plot contains the five-minute averaged integral electron flux (electrons/cm²-sec -sr) with energies greater than 2 MeV by the SWPC Primary GOES satellite.

The Hp plot contains the five minute averaged Hp magnetic field component in nanoteslas (nT) as by the SWPC Primary GOES satellite. The Hp component is parallel to the spin axis of the satellite, which is nearly parallel to the Earth's rotation axis.

The Estimated 3-hour Planetary Kp-index is derived at the NOAA Space Weather Prediction Center using data from the following ground-based magnetometers: Boulder, Colorado; Chambon la Foret, France; Fredericksburg, Virginia; Fresno, California; Hartland, UK; Newport, Washington; Sitka, Alaska. These data are made available thanks to the cooperative efforts between SWPC and data providers around the world, which currently includes the U.S. Geological Survey, the British Geological Survey, and the Institut de Physique du Globe de Paris.

The data included here are those now available in real time at the SWPC and are incomplete in that they do not include the full set of parameters and energy ranges known to cause satellite operating anomalies. The proton and electron fluxes and Kp are 'global' parameters that are applicable to a first order approximation over large areas. H parallel is subject to more localized phenomena and the measurements generally are applicable to within a few degrees of longitude of the measuring satellite.





*Weekly GOES Satellite X-ray and Proton Plots
Week Beginning 07 May 2012*

The x-ray plots contains five-minute averages x-ray flux (Watt/m²) as measure by the SWPC primary GOES X-ray satellite, usually at West 105 longitude, in two wavelength bands, 0.05 - 0.4 and 0.1 - 0.8 nm. The letters A, B, C, M and X refer to x-ray event levels for the 0.1 - 0.8 nm band.

The proton plot contains the five-minute averaged intergral flux units (pfu = protons/cm² -sec -sr) as measured by the primary SWPC GOES Proton satellite for each of the energy thresholds: >1, >10, >30, and >100 MeV. The P10 event threshold is 10 pfu at greater than 10 MeV.



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.

<http://spaceweather.gov/weekly/> -- Current and previous year

<http://spaceweather.gov/ftpmenu/warehouse.html> -- Online archive from 1997

<http://spaceweather.gov/ftpmenu/> -- Some content as ascii text

<http://spaceweather.gov/SolarCycle/> -- Solar Cycle Progression web site

<http://spaceweather.gov/contacts.html> -- Contact and Copyright information

http://spaceweather.gov/weekly/Usr_guide.pdf -- User Guide

