MAY 2009 NUMBER 777 - Part II

Solar-Geophysical Data comprehensive reports

Data for November 2008
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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Solar-Geophysical Data comprehensive reports

Data for November 2008

International Standard Serial Number: 0038-0911
Library of Congress Catalog Number: 79-640375 //r81

NATIONAL GEOPHYSICAL DATA CENTER
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Boulder, Colorado

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

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DATA FOR **NOVEMBER**

Hà S O L A R F L A R E S
NOVEMBER 2008

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
0001	HOLL	02	1504	1505	1511	N35	W19	11007	11	1.1	7	SF	3		E		16		FH
0002	HOLL	02	2015	2016	2020	N36	W29	11007	10	31.5	5	SF	3		E		27		E
		02	2054		2104	No Flare Patrol													
		03	0130		0211	No Flare Patrol													
0003	KANZ	03	1116	1119	1122	N36	W28	11007	11	1.2	6	SF	2		E				
0004	HOLL	03	2248	2249	2302	N37	W42	11007	10	31.6	14	SF	3		E		13		EF
0005	LEAR	04	0326	0329	0332	N35	W38	11007	11	1.1	6	SF	3		E		28		
		04	1027		1158	No Flare Patrol													
		04	1212		1215	No Flare Patrol													
		04	1240		1341	No Flare Patrol													
		04	1518		1647	No Flare Patrol													
		04	2225		2236	No Flare Patrol													
		04	2259		2358	No Flare Patrol													
		05	0221		0259	No Flare Patrol													
0006	KANZ	05	1254	1254	1256	N36	W54	11007	11	1.2	2	SF	2		E				
		05	2150		2228	No Flare Patrol													
		05	2251		2305	No Flare Patrol													
		05	2317		2400	No Flare Patrol													
		06	0000		0540	No Flare Patrol													
		06	1028		1342	No Flare Patrol													
		06	1515		1602	No Flare Patrol													
		06	1720		1734	No Flare Patrol													
		06	1834		1910	No Flare Patrol													
		06	2020		2033	No Flare Patrol													
		07	1029		1342	No Flare Patrol													
		08	1122		1127	No Flare Patrol													
		08	1148		1224	No Flare Patrol													
		09	1736		1754	No Flare Patrol													
		10	1509		1640	No Flare Patrol													
		10	1657		2002	No Flare Patrol													
		10	2141		2154	No Flare Patrol													
		11	0047		0120	No Flare Patrol													
		11	1458		1534	No Flare Patrol													
		11	2047		2129	No Flare Patrol													
		11	2134		2149	No Flare Patrol													
		12	1148		1149	No Flare Patrol													
		12	1151		1152	No Flare Patrol													
		12	1246		1318	No Flare Patrol													
		12	1329		1347	No Flare Patrol													
		13	0227		0255	No Flare Patrol													
		13	1032		1522	No Flare Patrol													
		13	1527		1652	No Flare Patrol													
		14	1033		1034	No Flare Patrol													
		14	1116		1245	No Flare Patrol													
		14	1306		1535	No Flare Patrol													
		14	1540		1615	No Flare Patrol													
		15	0623		0642	No Flare Patrol													
		15	1033		1256	No Flare Patrol													
		15	1258		1350	No Flare Patrol													
		17	1055		1056	No Flare Patrol													
		17	1103		1107	No Flare Patrol													
		17	1144		1148	No Flare Patrol													
		17	1154		1157	No Flare Patrol													
		17	1159		1203	No Flare Patrol													
		17	1221		1236	No Flare Patrol													
		17	1242		1258	No Flare Patrol													
		17	1300		1310	No Flare Patrol													
		17	1312		1336	No Flare Patrol													
		17	1341		1342	No Flare Patrol													
		18	1035		1107	No Flare Patrol													
		18	1121		1207	No Flare Patrol													
		18	1211		1212	No Flare Patrol													

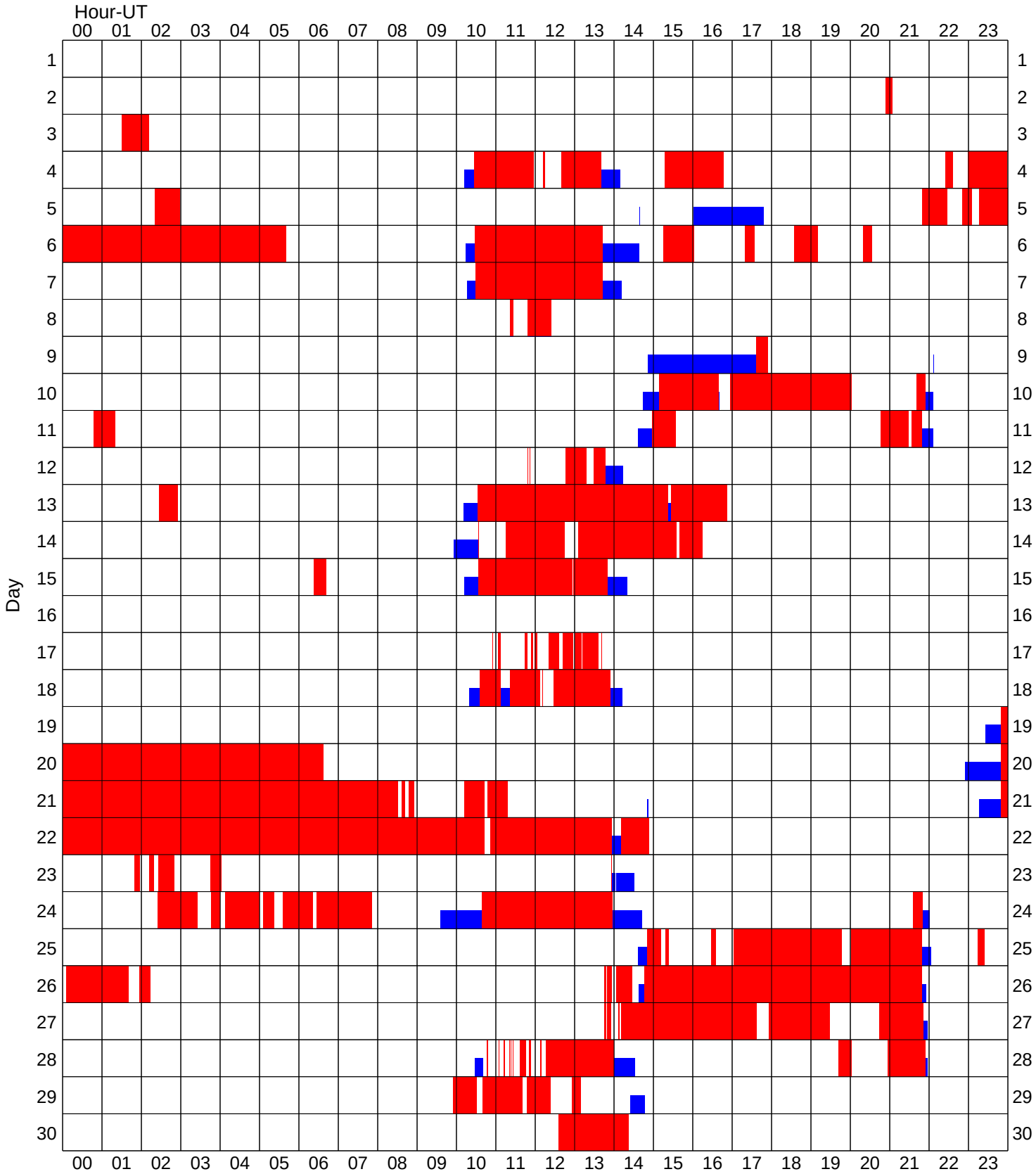
Hà S O L A R F L A R E S
NOVEMBER 2008

Grp #	Sta	Start Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		18	1228		1354	No Flare Patrol													
		19	2350		2400	No Flare Patrol													
		20	0000		0637	No Flare Patrol													
		20	2350		2400	No Flare Patrol													
		21	0000		0831	No Flare Patrol													
		21	0837		0842	No Flare Patrol													
		21	0847		0855	No Flare Patrol													
		21	1012		1043	No Flare Patrol													
		21	1048		1118	No Flare Patrol													
		21	2350		2400	No Flare Patrol													
		22	0000		1042	No Flare Patrol													
		22	1052		1357	No Flare Patrol													
		22	1411		1453	No Flare Patrol													
		23	0150		0158	No Flare Patrol													
		23	0212		0219	No Flare Patrol													
		23	0226		0250	No Flare Patrol													
		23	0345		0402	No Flare Patrol													
		23	1356		1357	No Flare Patrol													
		24	0225		0326	No Flare Patrol													
		24	0346		0359	No Flare Patrol													
		24	0408		0500	No Flare Patrol													
		24	0505		0522	No Flare Patrol													
		24	0535		0621	No Flare Patrol													
		24	0627		0751	No Flare Patrol													
		24	1039		1358	No Flare Patrol													
		24	2136		2150	No Flare Patrol													
		25	1451		1512	No Flare Patrol													
		25	1518		1523	No Flare Patrol													
		25	1628		1635	No Flare Patrol													
		25	1702		1947	No Flare Patrol													
		25	2001		2149	No Flare Patrol													
		25	2314		2324	No Flare Patrol													
		26	0006		0141	No Flare Patrol													
		26	0157		0214	No Flare Patrol													
		26	1345		1348	No Flare Patrol													
		26	1350		1357	No Flare Patrol													
		26	1404		1428	No Flare Patrol													
		26	1446		2149	No Flare Patrol													
		27	1345		1348	No Flare Patrol													
		27	1350		1356	No Flare Patrol													
		27	1407		1409	No Flare Patrol													
		27	1411		1737	No Flare Patrol													
		27	1756		1929	No Flare Patrol													
		27	2044		2151	No Flare Patrol													
		28	1046		1048	No Flare Patrol													
		28	1104		1105	No Flare Patrol													
		28	1112		1114	No Flare Patrol													
		28	1120		1121	No Flare Patrol													
		28	1123		1124	No Flare Patrol													
		28	1126		1127	No Flare Patrol													
		28	1137		1146	No Flare Patrol													
		28	1150		1153	No Flare Patrol													
		28	1208		1210	No Flare Patrol													
		28	1217		1400	No Flare Patrol													
		28	1942		2002	No Flare Patrol													
		28	2057		2154	No Flare Patrol													
		29	0955		1031	No Flare Patrol													
		29	1040		1140	No Flare Patrol													
		29	1147		1223	No Flare Patrol													
		29	1256		1309	No Flare Patrol													
		30	1235		1422	No Flare Patrol													

Intervals of No Flare Patrol Observation

for Preceding Solar Flare Table

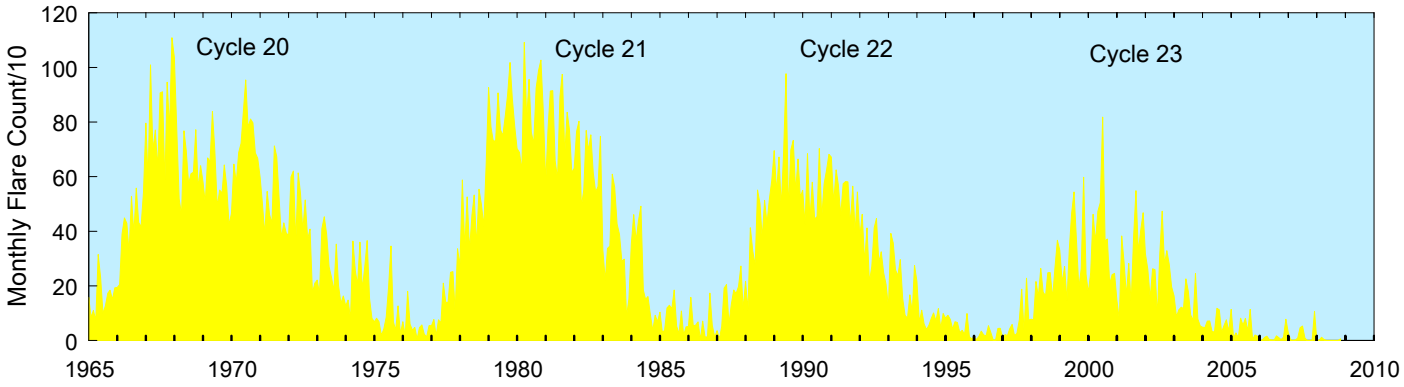
November 2008



Times of no flare patrol of any kind.
Times of no cinematographic flare patrol.

Stations participating: Holloman, Learmonth, SanVito, Kanzelhoehe.

Monthly Counts of Grouped Solar Flares
Jan 1965 - Nov 2008



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1965	158	85	110	74	315	231	99	127	173	184	150	193	1899
1966	194	205	390	449	429	323	528	391	558	432	417	543	4859
1967	796	589	1009	694	771	629	907	911	573	946	775	1109	9709
1968	1037	773	519	460	768	697	573	611	616	772	556	640	8022
1969	581	504	669	655	839	694	489	551	540	643	566	422	7153
1970	466	646	578	688	722	836	954	780	811	797	687	667	8632
1971	598	505	387	546	461	430	713	673	518	375	431	394	6031
1972	384	599	621	361	614	541	404	515	371	408	175	210	5203
1973	221	171	410	453	388	270	232	182	353	201	136	163	3180
1974	127	148	79	364	255	204	360	187	270	366	153	81	2594
1975	68	82	69	19	42	85	196	346	68	38	127	25	1165
1976	69	18	180	60	38	48	6	47	57	23	13	55	614
1977	54	77	18	76	64	210	140	140	250	252	107	336	1724
1978	274	588	338	526	330	460	533	346	554	499	418	648	5514
1979	926	781	731	731	907	772	750	821	901	1018	888	786	10012
1980	703	689	621	1092	811	956	763	720	924	988	1027	838	10132
1981	578	782	914	915	658	592	893	982	680	836	773	615	9218
1982	631	766	803	490	553	769	696	753	615	544	564	748	7932
1983	332	220	337	346	609	561	427	389	289	298	88	152	4048
1984	353	461	366	440	492	185	151	161	95	36	92	69	2901
1985	104	29	38	119	129	116	185	53	25	108	19	50	975
1986	51	158	54	56	68	3	71	12	14	174	56	13	730
1987	36	7	52	192	205	61	132	185	172	198	273	114	1627
1988	217	109	413	328	274	551	502	375	513	429	518	587	4816
1989	695	544	672	488	691	977	474	699	733	547	665	526	7711
1990	550	424	684	442	580	445	454	703	449	574	623	682	6610
1991	672	503	625	570	458	574	582	581	425	565	396	544	6495
1992	380	462	287	412	214	271	413	447	287	325	248	206	3952
1993	123	392	357	262	237	296	154	92	82	167	104	275	2541
1994	217	67	111	60	40	56	81	101	72	117	45	99	1066
1995	82	95	77	42	69	66	29	37	23	99	14	6	639
1996	14	3	15	34	21	16	54	31	3	0	44	45	280
1997	8	22	18	43	59	18	26	75	188	31	228	74	790
1998	78	76	216	161	264	177	164	248	249	155	268	367	2423
1999	330	212	271	145	330	466	544	368	192	264	598	243	3963
2000	175	248	462	362	473	505	818	364	372	208	241	246	4474
2001	147	77	383	284	164	282	137	376	549	325	405	468	3597
2002	318	261	155	263	259	91	318	474	280	329	279	196	3223
2003	164	87	112	122	117	226	181	94	73	245	78	53	1552
2004	49	47	71	72	32	33	118	112	30	54	76	34	728
2005	114	10	28	11	82	56	81	35	114	4	20	16	571
2006	4	0	11	16	4	2	1	17	11	3	12	78	159
2007	29	2	1	2	9	47	53	9	0	0	2	107	261
2008	2	0	12	4	0	0	0	0	0	0	6		24

The term 'grouped' means observations of the same event by different sites were lumped together and counted as one.

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences

NOVEMBER 2008

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
02	410	SGMR	8 S	2014.0	2015.0	1.0	160.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	2015.0	2016.0	1.0	260.0			QL=4 ST=2 TYP=3
	245	SGMR	8 S	2015.0	2015.0	U	290.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2016.0	2016.0	U	380.0			QL=4 ST=2 TYP=3
	1415	PALE	8 S	2016.0	2016.0	U	200.0			QL=4 ST=2 TYP=3
	245	PALE	8 S	2130.0	2130.0	U	130.0			QL=4 ST=2 TYP=3
	245	PALE	48 C	2140.0	2141.0	140.0	510.0			QL=4 ST=2 TYP=8
	410	PALE	48 C	2141.0	2147.0	139.0	110.0			QL=4 ST=2 TYP=8
	410	LEAR	4 S/F	2156.0	2159.0	124.0	140.0			QL=4 ST=1 TYP=3
	245	LEAR	48 C	2156.0	2159.0U	124.0	240.0			QL=4 ST=1 TYP=8
	410	LEAR	8 S	2302.0	2302.0	U	190.0			QL=4 ST=2 TYP=3
	610	LEAR	8 S	2303.0	2303.0	U	100.0			QL=4 ST=2 TYP=3
	410	PALE	8 S	2303.0	2303.0	U	220.0			QL=4 ST=2 TYP=3
	610	PALE	8 S	2304.0	2304.0	U	110.0			QL=4 ST=2 TYP=3
03	127	TORN	44 NS	0630.0E		420.0D		0.2		V=1
	410	LEAR	49 GB	0313.0	0314.0	2.0	600.0			QL=4 ST=2 TYP=6
	245	LEAR	4 S/F	0313.0	0315.0	3.0	230.0			QL=4 ST=2 TYP=3
	410	PALE	49 GB	0314.0	0314.0	2.0	650.0			QL=4 ST=2 TYP=6
	245	PALE	4 S/F	0314.0	0316.0	3.0	250.0			QL=4 ST=2 TYP=3
04	2804	VORO	46 C	0325.1	0326.3	1.7	14.1			

Reports are received routinely from the following observatories:

CUBA = Havana	LEAR = Learmonth	SGMR = Sagamore Hill
GORK = Gorky	PEKG = Peking	SVTO = San Vito
HIRA = Hiraiso	PALE = Palehua	TORN = Torun
IZMI = IZMIRAN	PENT = Penticton	UPIC = Upice

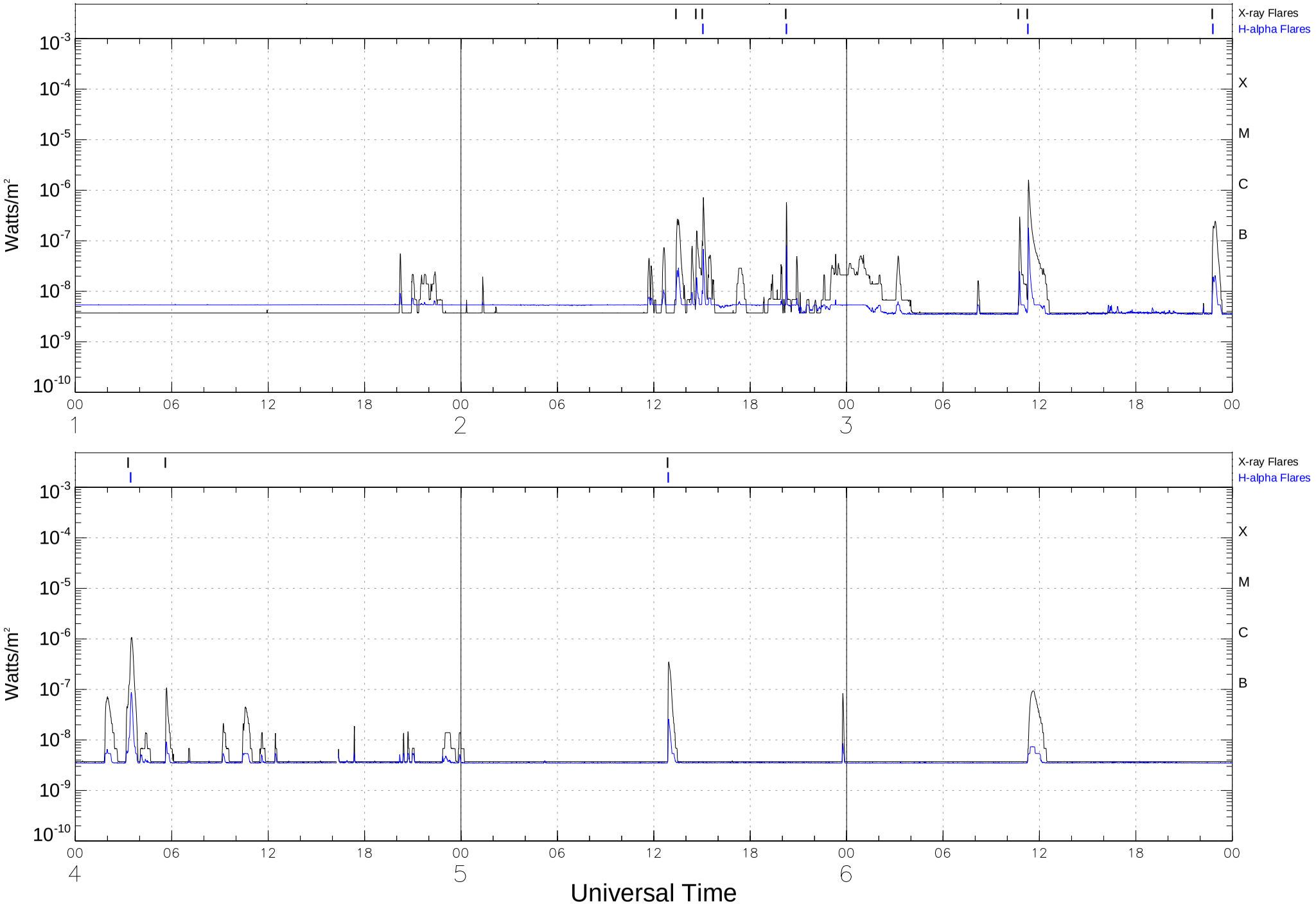
Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precusor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major

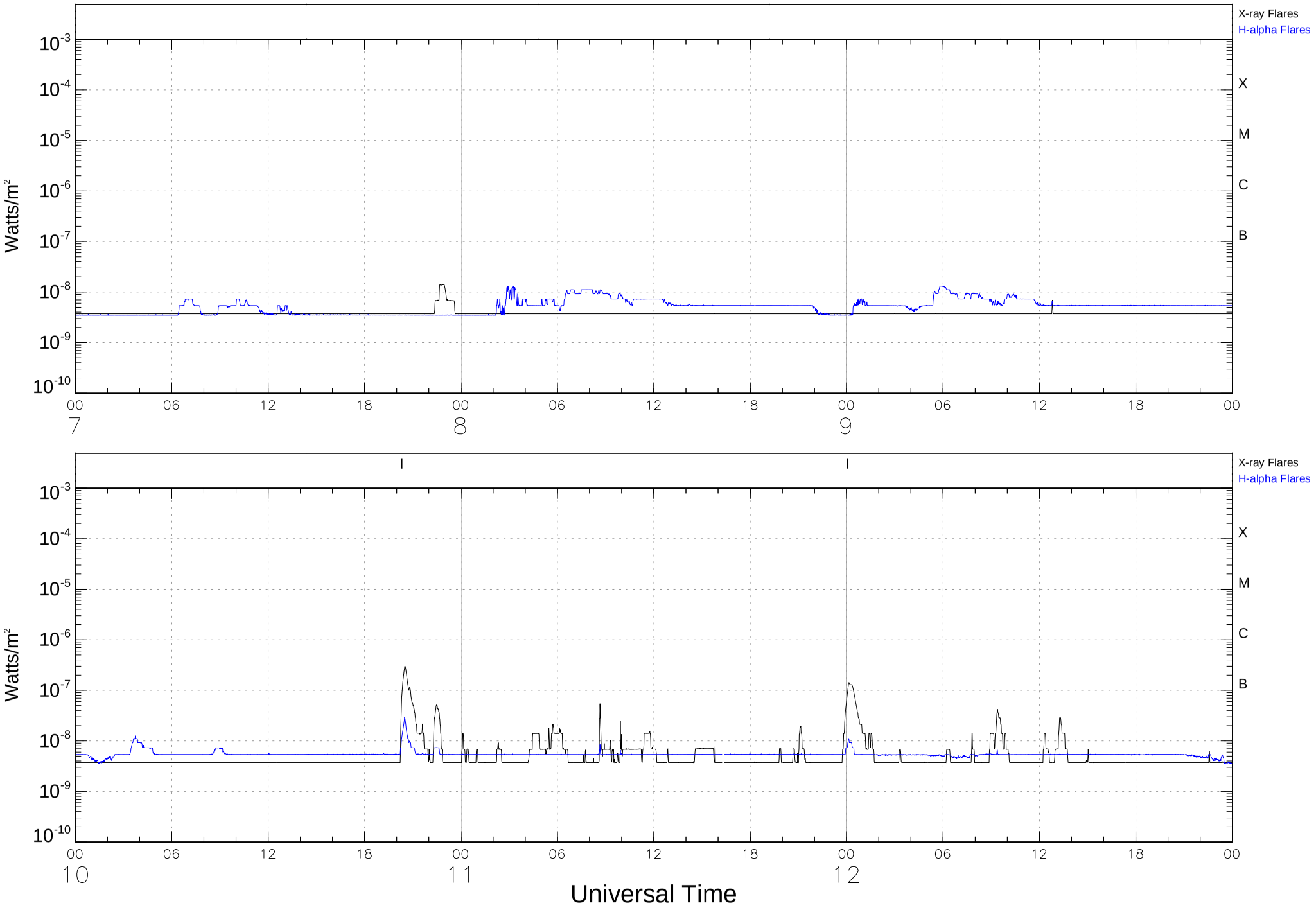
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	4O Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	4OF Rise Only F	26O Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500 and 200 MHz.

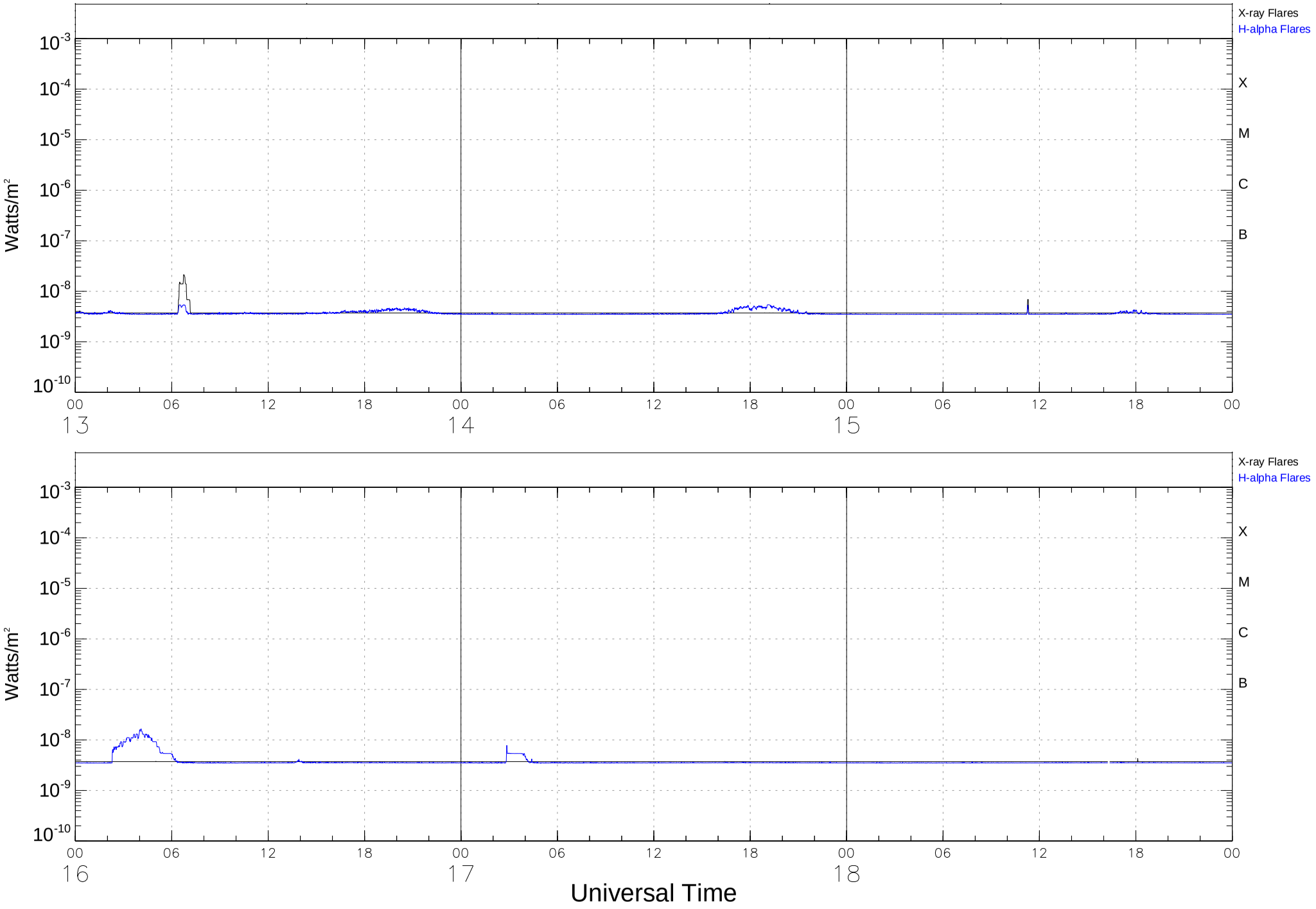
GOES-10 Solar X-Rays (1-Minute Averages)
November 2008



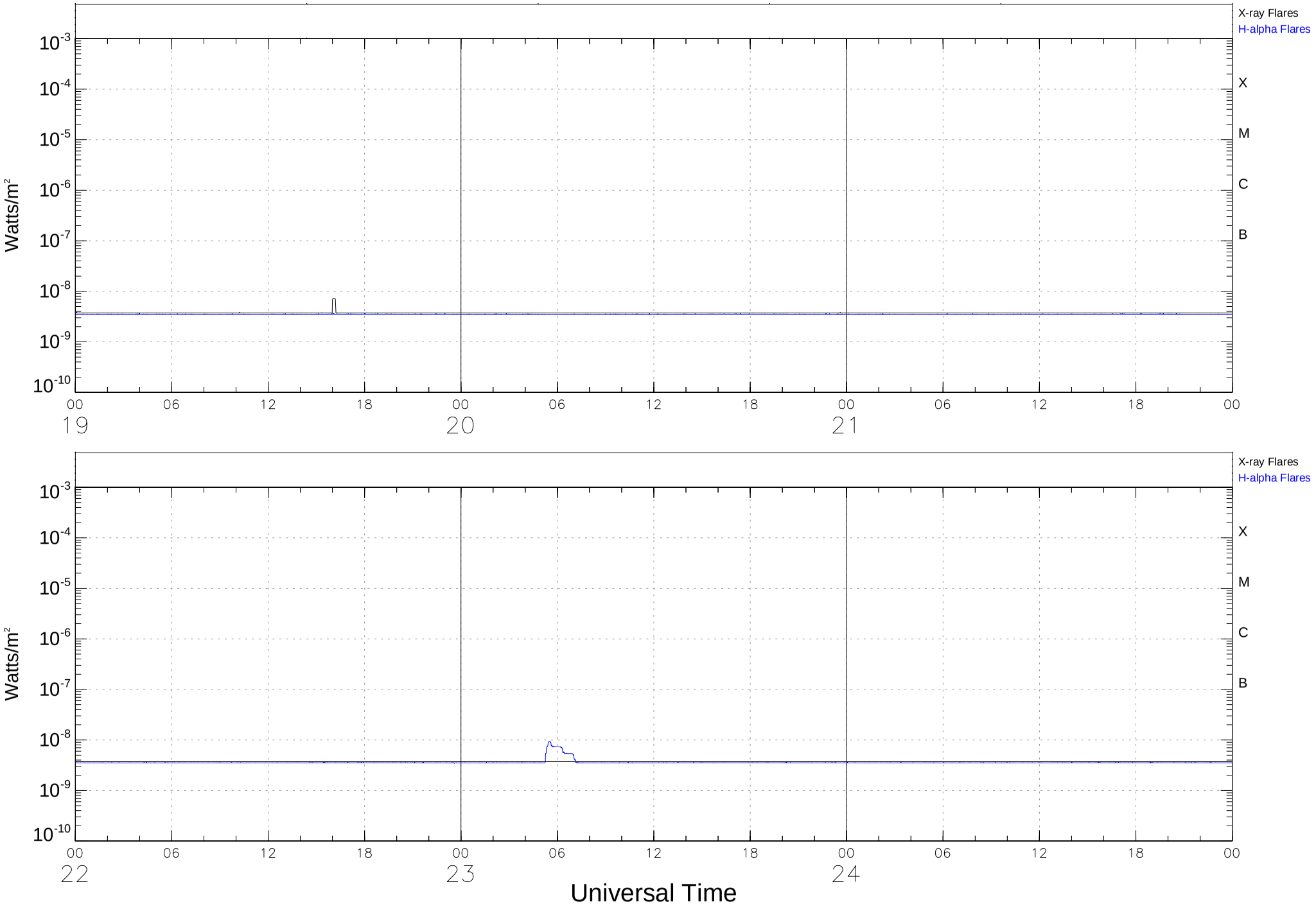
GOES-10 Solar X-Rays (1-Minute Averages)
November 2008



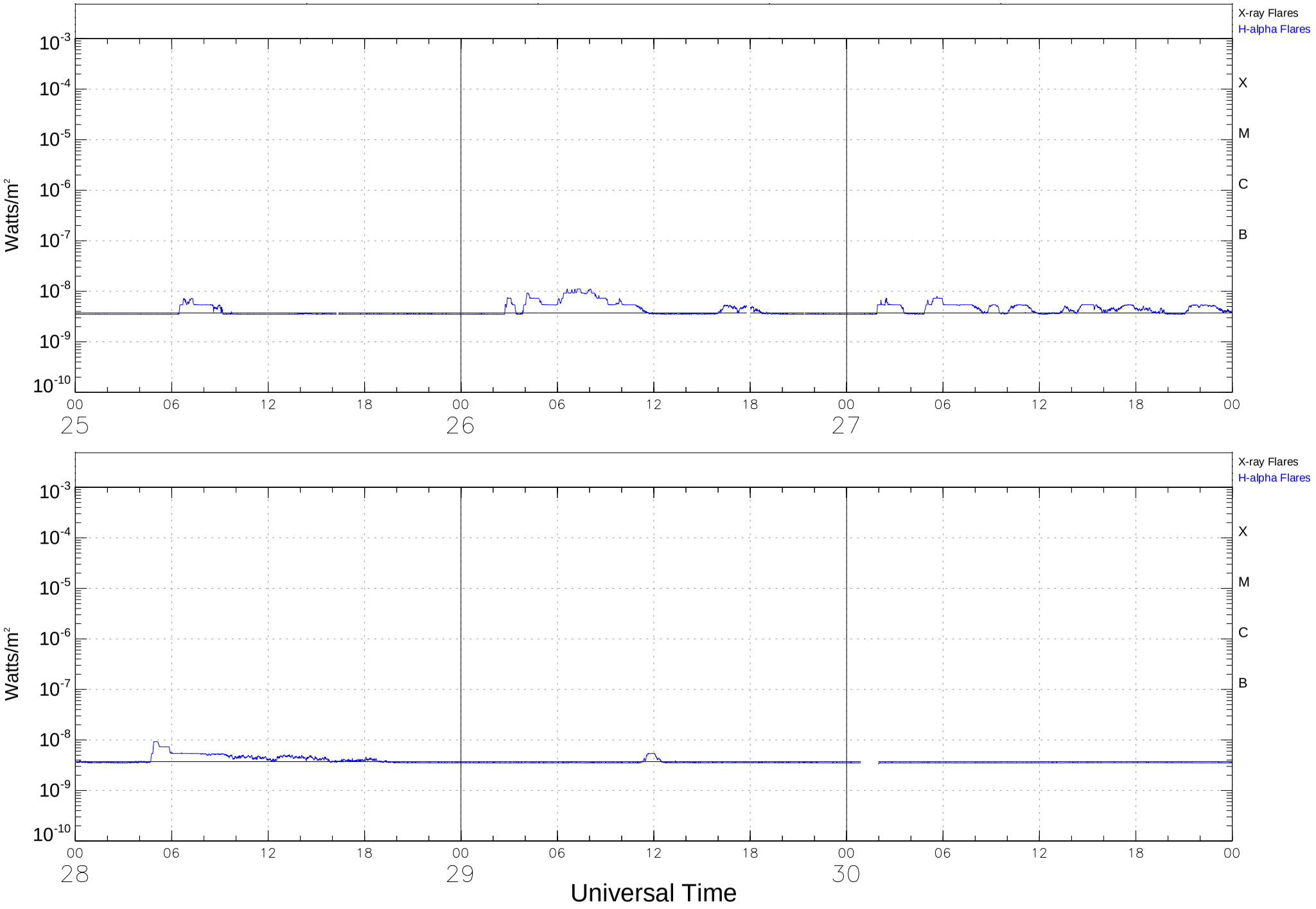
GOES-10 Solar X-Rays (1-Minute Averages)
November 2008



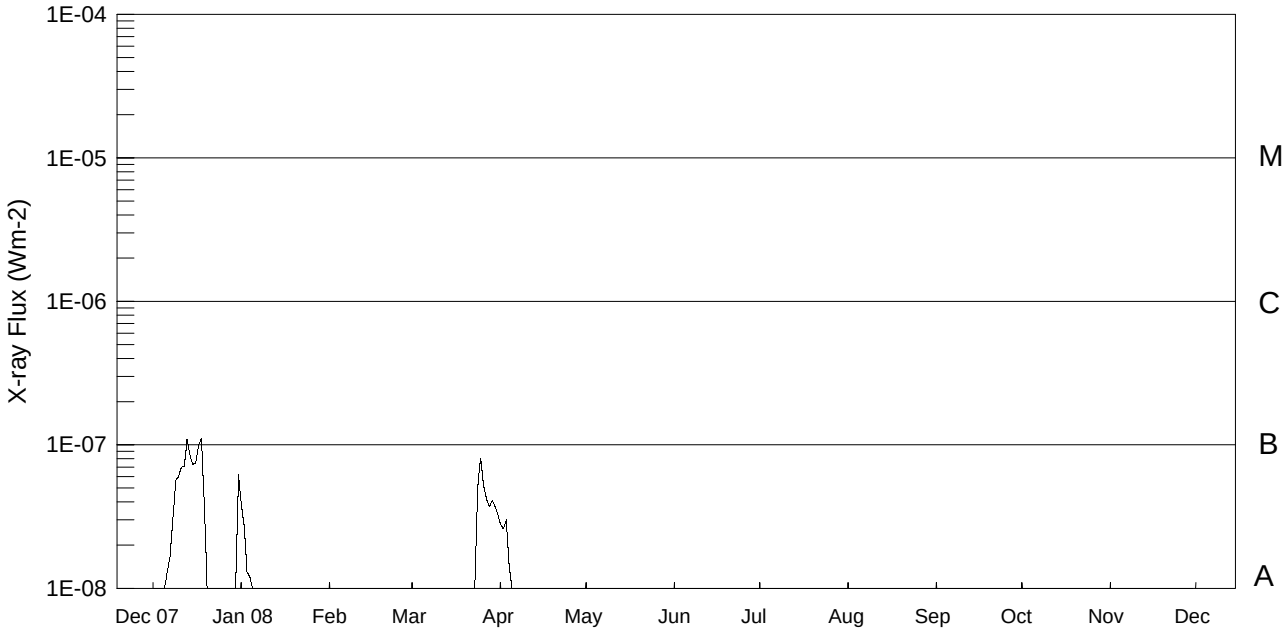
GOES-10 Solar X-Rays (1-Minute Averages)
November 2008



GOES-10 Solar X-Rays (1-Minute Averages)
November 2008



Preliminary GOES Satellite Daily X-Ray Background
Dec 2007 - Nov 2008



Day	Dec 07	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	<A1.0	A3.8	<A1.0	<A1.0	A2.8	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
2	<A1.0	A2.7	<A1.0	<A1.0	A2.6	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
3	<A1.0	A1.3	<A1.0	<A1.0	A3.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
4	<A1.0	A1.2	<A1.0	<A1.0	A1.4	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
5	<A1.0	A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
6	A1.3	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
7	A1.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
8	A3.2	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
9	A5.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
10	A6.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
11	A7.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
12	A7.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
13	B1.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
14	A8.4	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
15	A7.3	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
16	A7.5	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
17	B1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
18	B1.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
19	A4.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
20	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
21	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
22	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
23	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
24	<A1.0	<A1.0	<A1.0	A5.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
25	<A1.0	<A1.0	<A1.0	A8.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
26	<A1.0	<A1.0	<A1.0	A5.2	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
27	<A1.0	<A1.0	<A1.0	A4.2	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
28	<A1.0	<A1.0	<A1.0	A3.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
29	<A1.0	<A1.0	<A1.0	A4.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
30	<A1.0	<A1.0		A3.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
31	A6.2	<A1.0		A3.3		<A1.0		<A1.0	<A1.0		<A1.0	

Levels below B1.0 are unreliable.

NOVEMBER 2008

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks

No Reports

ADF = Active Dark Filament
AFS = Arch Filament System
APR = Active Prominence
ASR = Active Surge Region
BSD = Bright Surge on Disk
BSL = Bright Surge on Limb
CAP = CAP Prominence (Tandberg-Hanssen)
CRN = Coronal Rain
DSD = Dark Surge on Disk
DSF = Disappearing Solar Filament
EPL = Eruptive Prominence on Limb
LPS = Loops
MDP = Mound Prominence
SDF/DSF = Sudden Disappearing Filament
SPY = Spray
SSB = Solar Sector Boundary

For SOLAR SECTOR BOUNDARY REPORTS, the latitude field contains the Carrington longitude of the point where a neutral line crosses the solar equator. The comments field may contain the Carrington longitude and central meridian distance of two more intersection points.

The EXTENT field for limb events is the radial extent above the limb in hundredths of solar radius. For disk events this field contains the heliographic extent in whole degrees.

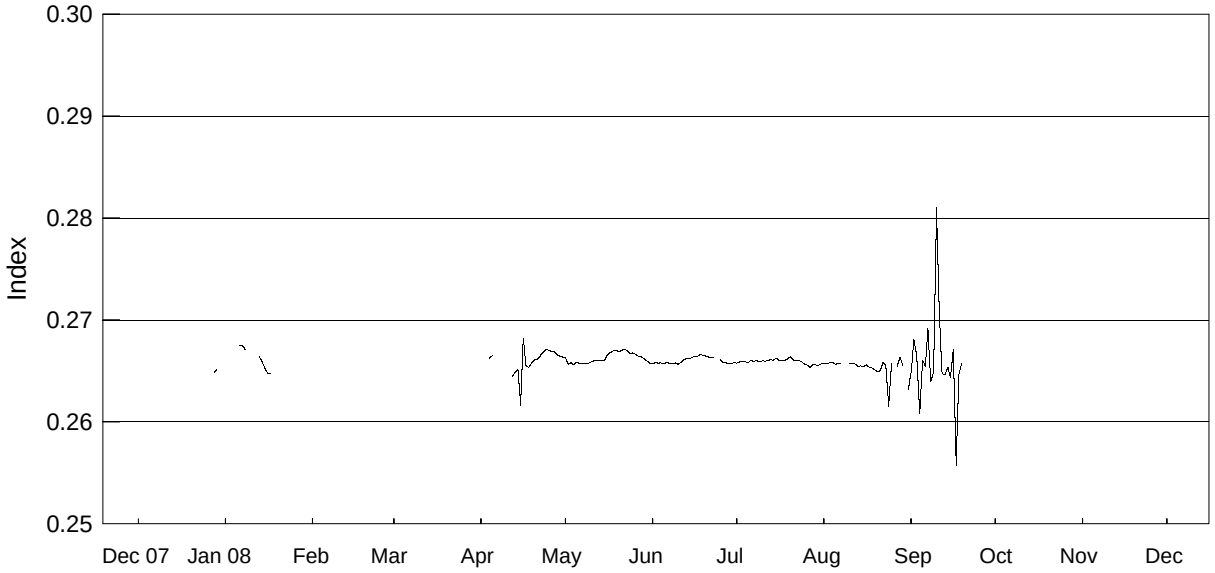
The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

Observation Type: C= Cinematographic, E= Electronic, P= Photographic, V= Visual.

ABST = Abastumani
ATHN = Athens
BUCA = Bucharest
CATA = Catania
HOLL = Holloman
KHAR = Kharkov
LEAR = Learmonth
PALE = Palehua
RAMY = Ramey
SVTO = San Vito
VORO = Voroshilov
VALA = Valasske Mezirici
WROC = Wroclaw

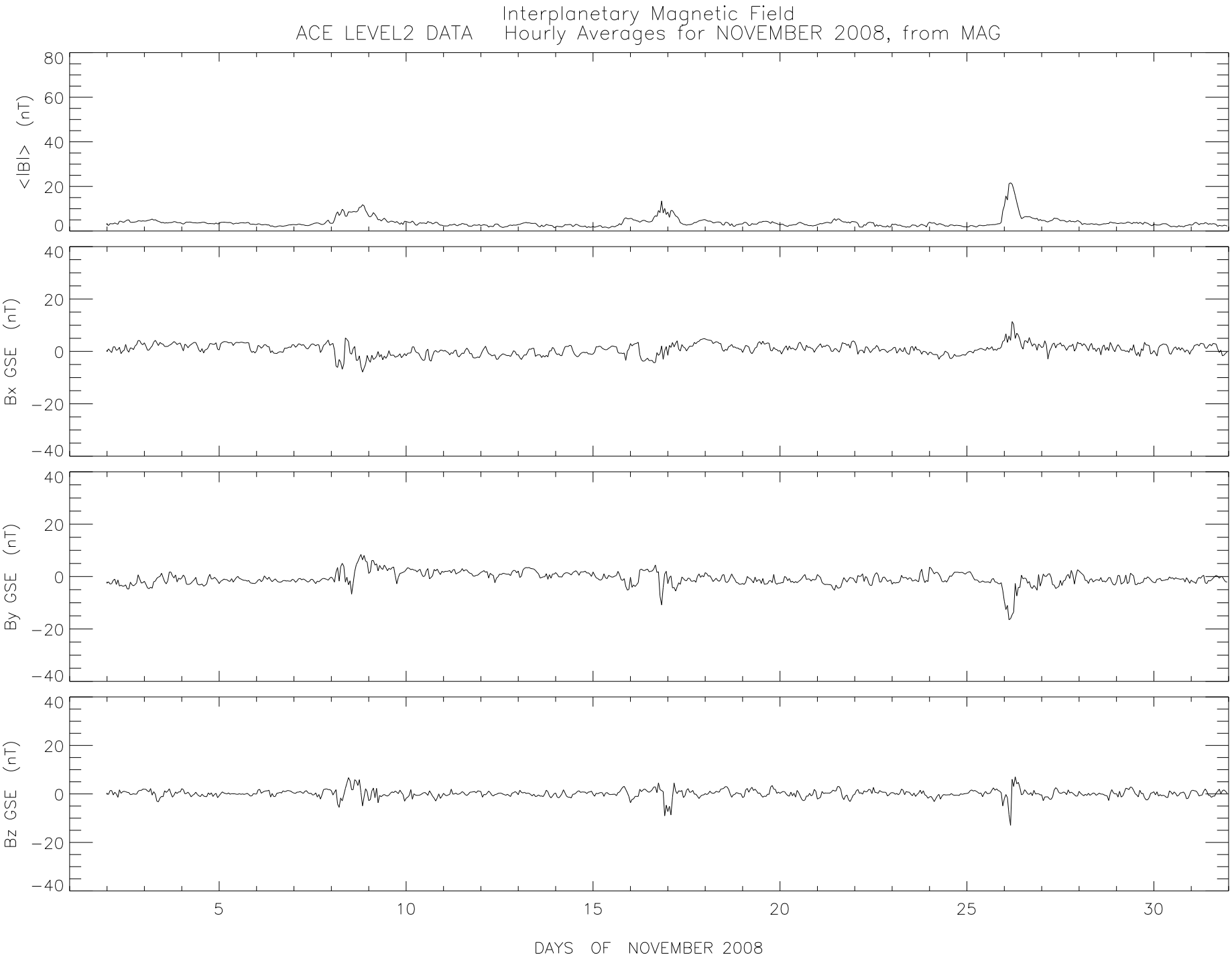
NOTE: The U.S. Air Force solar observing sites (HOLL, LEAR, RAMY, AND SVTO) have changed operational requirements and will only report the following: BSL, EPL, LPS, SPY, and DSF's.

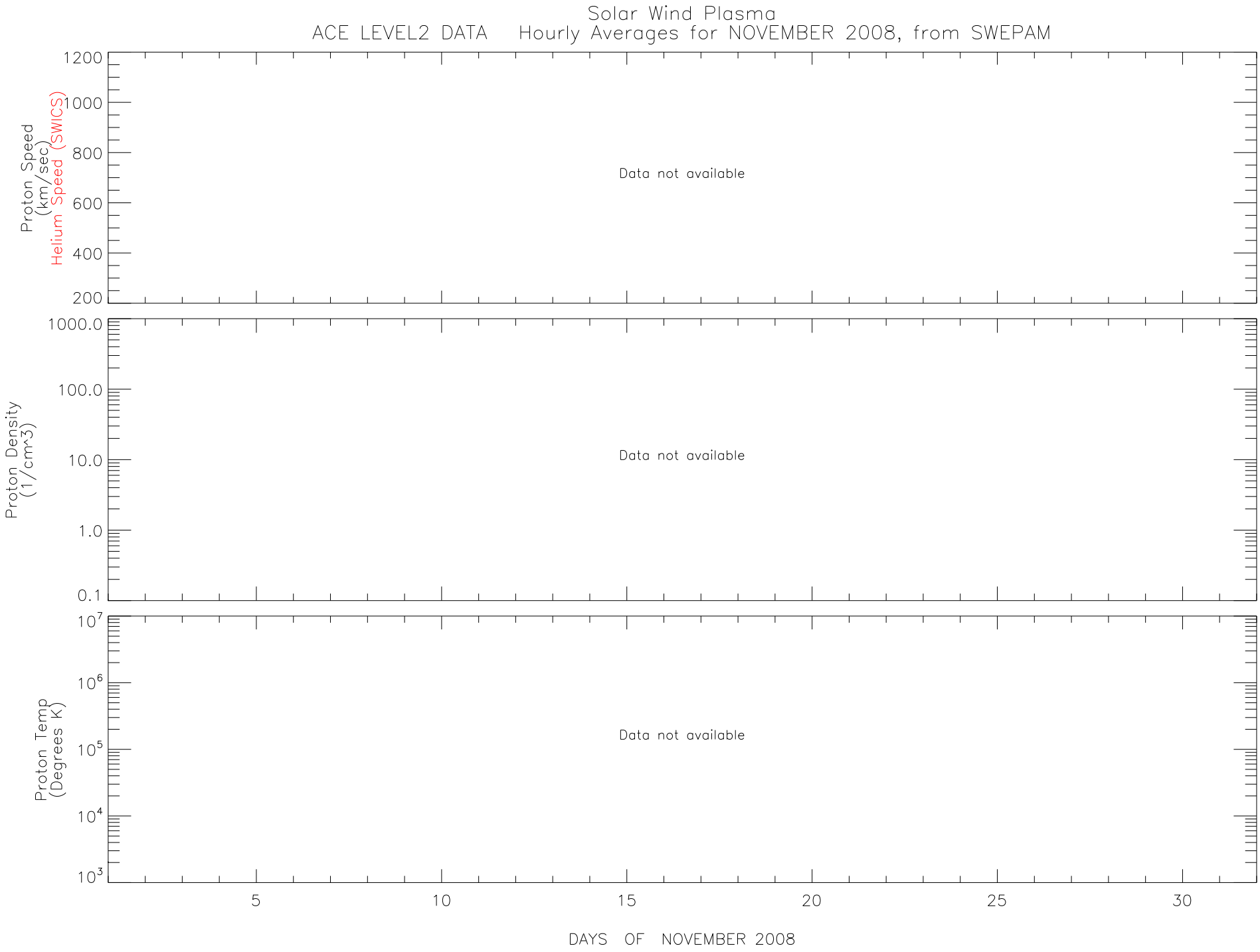
NOAA Solar Ultraviolet (UV) MgII Core-to-Wing Index
Dec 2007 - Nov 2008
Version 9.1

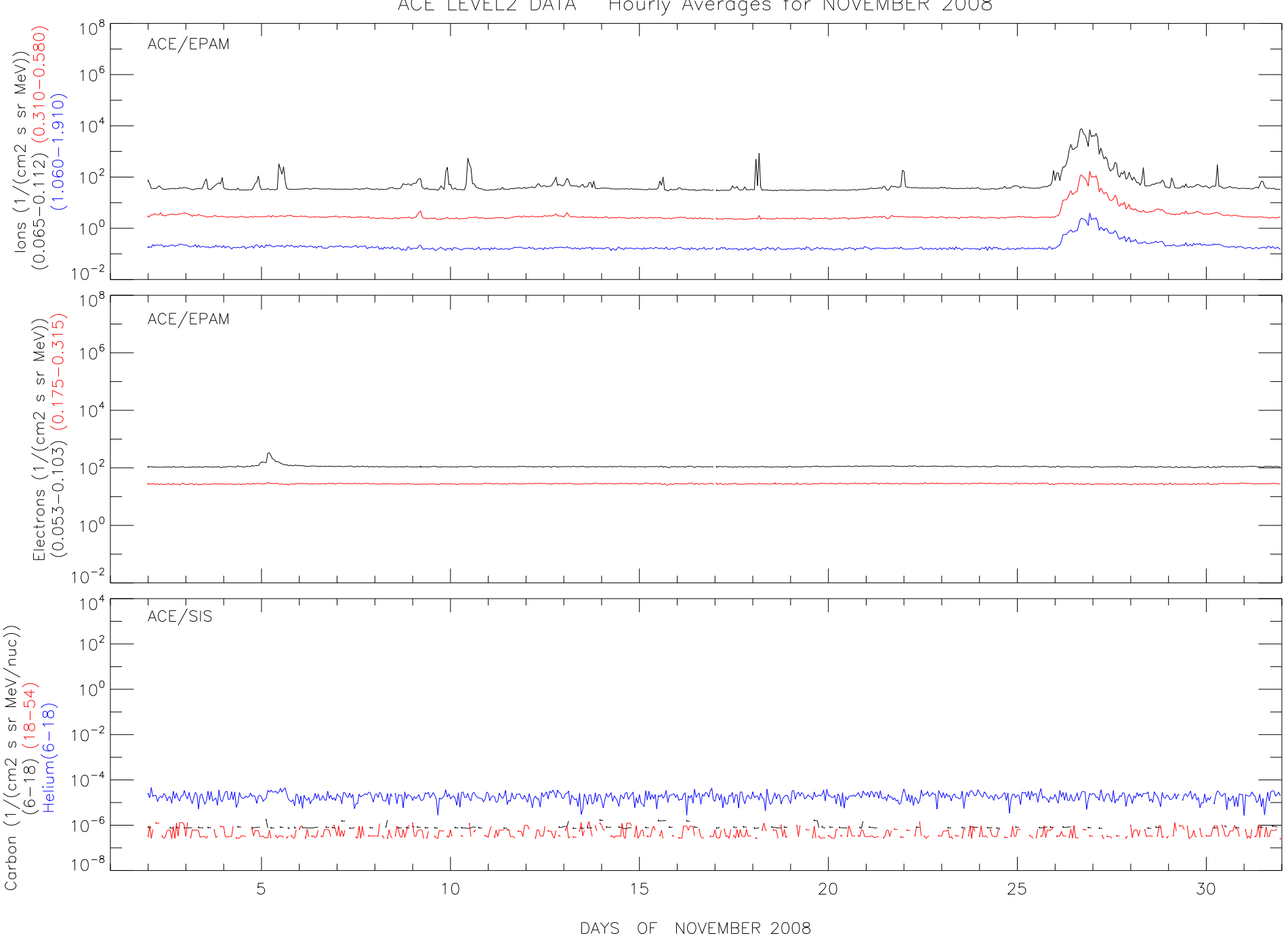


Day	Dec 07	Jan 08	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	---	---	---	---	---	0.2663	0.2657	0.2658	0.2657	0.2650	---	---
2	---	0.2658	---	---	---	0.2657	0.2658	0.2659	0.2657	0.2681	---	---
3	---	---	---	---	---	0.2658	0.2658	0.2660	0.2658	0.2664	---	---
4	---	---	---	---	0.2663	0.2656	0.2658	0.2659	0.2658	0.2608	---	---
5	---	---	---	---	0.2665	0.2659	0.2657	0.2658	0.2657	0.2661	---	---
6	---	0.2675	---	---	---	0.2657	0.2659	0.2661	0.2657	0.2655	---	---
7	---	0.2675	---	---	---	0.2657	0.2658	0.2659	0.2657	0.2692	---	---
8	---	0.2671	---	---	---	0.2657	0.2658	0.2660	---	0.2640	---	---
9	---	---	---	---	---	0.2658	0.2658	0.2659	---	0.2649	---	---
10	---	---	---	---	---	0.2659	0.2657	0.2660	0.2658	0.2810	---	---
11	---	0.2527	---	---	---	0.2660	0.2658	0.2660	0.2657	0.2704	---	---
12	---	---	---	---	0.2644	0.2660	0.2661	0.2660	0.2657	0.2648	---	---
13	---	0.2664	---	---	0.2649	0.2660	0.2663	0.2661	0.2654	0.2646	---	---
14	---	0.2659	---	---	0.2651	0.2660	0.2662	0.2661	0.2655	0.2654	---	---
15	---	0.2653	---	---	0.2617	0.2661	0.2663	0.2663	0.2654	0.2644	---	---
16	---	0.2648	---	---	0.2682	0.2667	0.2665	0.2660	0.2656	0.2671	---	---
17	---	0.2647	---	---	0.2655	0.2668	0.2665	0.2660	0.2654	0.2557	---	---
18	---	---	---	---	0.2654	0.2670	0.2667	0.2660	0.2653	0.2647	---	---
19	---	---	---	---	0.2658	0.2670	0.2665	0.2662	0.2651	0.2658	---	---
20	---	---	---	---	0.2661	0.2669	0.2665	0.2664	0.2649	---	---	---
21	---	---	---	---	0.2662	0.2670	0.2664	0.2661	0.2650	---	---	---
22	---	---	---	---	0.2665	0.2672	0.2664	0.2660	0.2659	0.2637	---	---
23	---	---	---	---	0.2669	0.2670	0.2664	0.2660	0.2656	---	---	---
24	0.2665	---	---	---	0.2671	0.2667	---	0.2659	0.2615	---	---	---
25	---	---	---	---	0.2670	0.2668	0.2661	0.2657	0.2657	0.2561	---	---
26	---	---	---	---	0.2669	0.2666	0.2659	0.2656	---	---	---	---
27	---	---	---	---	0.2669	0.2664	0.2659	0.2654	0.2654	---	---	---
28	0.2649	---	---	---	0.2666	0.2664	0.2657	0.2656	0.2664	---	---	---
29	0.2652	---	---	---	0.2664	0.2662	0.2657	0.2656	0.2655	---	---	---
30	---	---		---	0.2664	0.2662	0.2658	0.2656	---	---	---	---
31	---	---		---		0.2660		0.2656	0.2632		---	
Mean	0.2655	0.2661	---	---	0.2660	0.2663	0.2660	0.2659	0.2651	0.2654		

Data at: http://www.swpc.noaa.gov/ftpmenu/sbuv.html


Interplanetary Magnetic Field
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2008, from MAG
<|B|> (nT)
Bx GSE (nT)
By GSE (nT)
Bz GSE (nT)
80
60
40
20
0
40
20
0
−20
−40
5
10
15
20
25
30
DAYS OF NOVEMBER 2008


Solar Wind Plasma
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2008, from SWEPAM
Proton Speed (km/sec)
Helium Speed (SWICS)
1200
1000
800
600
400
200
Data not available
Proton Density (1/cm^3)
1000.0
100.0
10.0
1.0
0.1
Data not available
Proton Temp (Degrees K)
10^7
10^6
10^5
10^4
10^3
Data not available
5
10
15
20
25
30
DAYS OF NOVEMBER 2008


Solar Energetic Particles
ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2008
ACE/EPAM
Ions (1/(cm2 s sr MeV))
(0.065–0.112) (0.310–0.580)
(1.060–1.910)
ACE/EPAM
Electrons (1/(cm2 s sr MeV))
(0.053–0.103) (0.175–0.315)
ACE/SIS
Carbon (1/(cm2 s sr MeV/nuc))
(6–18) (18–54)
Helium(6–18)
DAYS OF NOVEMBER 2008

SOLAR CORONAL MASS EJECTIONS (CMEs)
FROM SOHO/LASCO

http://cdaw.gsfc.nasa.gov/

Center for Solar Physics and Space Weather (CSPSW) – The Catholic University of America/NRL/NASA

NOVEMBER 2008

First C2 Appearance		Central Position	Width Angular	Linear Fit	----2nd order speed-----			Accel	Measurement Position	Remarks
Date	Time UT	Angle degree	Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	Angle degree	
2008/11/01	01:31:39	102	37	57	49	65	101	0.3*	101	Poor Event
2008/11/01	17:30:04	94	9	136	134	138	158	0.3*	90	Very Poor Event; Only C2
2008/11/02	02:30:04	268	83	156	154	158	159	0.1*	288	Poor Event
2008/11/02	09:06:04	302	5	120	105	136	347	4.5*	296	Very Poor Event; Only C2
2008/11/02	22:06:04	12	5	244	287	200	0	-16.1*	18	Very Poor Event; Only C2
2008/11/03	00:54:04	288	149	220	194	247	247	1.0*	272	Poor Event; Partial Halo
2008/11/03	05:54:04	188	7	433	620	263	0	-165.6*	194	Very Poor; 3 pts; Only C2
2008/11/03	12:30:04	277	12	185	200	170	0	-3.7*	274	Very Poor Event; Only C2
2008/11/03	16:54:04	277	17	213	191	238	283	1.8*	274	Poor Event
2008/11/03	18:54:04	74	25	273	340	207	0	-7.0*	88	Poor Event
2008/11/03	21:54:04	17	7	178	149	206	500	9.3*	21	Very Poor Event; Only C2
2008/11/03	23:30:04	288	46	370	442	298	0	-9.4	293	
2008/11/04	02:54:04	16	4	233	487	3	0	-223.8*	20	Very Poor; 3 pts; Only C2
2008/11/04	02:54:04	77	11	135	146	123	0	-2.1*	81	Very Poor Event; Only C2
2008/11/04	03:54:04	275	66	732	837	615	634	-12.7	299	
2008/11/04	11:06:04	300	13	384	415	353	316	-3.0	292	
2008/11/04	19:31:39	175	5	211	237	186	0	-14.9*	176	Very Poor Event; Only C2
2008/11/04	20:30:04	301	5	241	190	292	617	14.1*	296	Poor Event; Only C2
2008/11/05	13:54:04	271	30	150	147	153	214	1.0*	274	Very Poor Event; Only C2
2008/11/06	00:30:04	269	44	178	132	222	493	9.3*	275	Only C2
2008/11/06	12:06:04	296	26	487	531	443	434	-3.9	292	
2008/11/06	18:30:04	93	50	92	100	84	0	-0.9*	88	Very Poor Event; Only C2
2008/11/07	02:30:05	183	3	602	271	967	2766	322.0*	186	Very Poor; 3 pts; Only C2
2008/11/07	10:54:04	184	6	311	408	224	0	-85.0*	185	Very Poor; 3 pts; Only C2
2008/11/07	13:31:39	181	9	412	353	471	956	34.0*	185	Poor Event; Only C2
2008/11/07	16:32:21	285	40	339	262	429	419	4.6*	283	
2008/11/08	00:26:05	96	30	161	0	288	303	4.2*	96	Poor Event
2008/11/08	16:26:06	299	8	380	372	389	392	0.6*	291	
2008/11/09	01:06:05	289	11	231	171	288	425	6.2*	291	Very Poor Event
2008/11/09	01:50:04	253	6	270	263	276	352	2.3*	255	Very Poor Event; Only C2
2008/11/09	15:26:04	291	5	212	144	286	357	4.6*	289	Very Poor Event
2008/11/12	14:26:04	261	29	112	100	123	175	1.0*	263	Very Poor Event
2008/11/15	01:36:04	296	3	340	283	398	1181	53.7*	295	Very Poor Event; Only C2
2008/11/15	21:12:07	270	9	346	269	424	946	34.7*	272	Very Poor Event; Only C2
2008/11/16	01:00:04	277	24	166	184	147	0	-3.9*	272	Very Poor Event; Only C2
2008/11/21	08:30:04	294	12	395	485	305	0	-35.5*	292	Poor Event; Only C2
2008/11/21	16:54:04	257	31	203	186	221	348	3.6*	261	Poor Event; Only C2
2008/11/23	00:30:27	63	7	175	146	209	268	2.5*	67	Very Poor Event
2008/11/23	17:06:04	262	58	108	2	203	196	1.6*	265	Poor Event
2008/11/23	19:54:04	199	6	255	211	302	767	23.5*	204	Very Poor; 3 pts; Only C2
2008/11/23	22:30:04	70	17	118	96	141	200	1.4*	70	Very Poor Event
2008/11/24	10:30:22	220	7	213	340	78	0	-49.7*	225	Very Poor Event; Only C2

SOLAR CORONAL MASS EJECTIONS (CMEs)
FROM SOHO/LASCO

http://cdaw.gsfc.nasa.gov/

Center for Solar Physics and Space Weather (CSPSW) – The Catholic University of America/NRL/NASA

NOVEMBER 2008

First C2 Appearance		Central Position	Width	Linear Fit	----2nd order speed-----			Accel	Measurement Position	Remarks
Date	Time UT	Angle degree	Angular Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	m/s^2	Angle degree	
2008/11/25	00:30:27	274	14	233	152	321	303	2.9*	276	
2008/11/25	10:30:21	192	6	543	673	414	0	-73.2*	197	Very Poor Event; Only C2
2008/11/25	10:54:04	168	6	175	225	126	0	-26.9*	164	Very Poor Event; Only C2
2008/11/26	05:30:04	92	8	269	297	241	0	-15.7*	88	Very Poor Event; Only C2
2008/11/26	06:54:04	60	9	150	86	217	861	30.1*	67	Very Poor Event; Only C2
2008/11/26	19:30:04	248	13	207	80	340	411	6.8*	244	Poor Event
2008/11/26	22:30:04	291	7	156	94	216	531	11.4*	289	Very Poor Event; Only C2
2008/11/27	19:54:04	62	11	182	189	174	96	-1.2*	68	Very Poor Event
2008/11/27	21:54:05	244	10	228	205	249	424	6.5*	244	Very Poor Event
2008/11/28	18:54:06	345	8	307	152	473	1341	73.4*	345	Very Poor Event; Only C2
2008/11/28	21:30:04	252	20	345	307	381	636	12.8*	255	Poor Event; Only C2
2008/11/29	00:30:04	146	5	260	217	303	675	17.0*	140	Very Poor Event; Only C2
2008/11/29	10:34:03	280	24	266	233	301	339	2.5*	276	
2008/11/29	11:54:04	83	72	130	0	250	273	3.1*	78	Poor Event
2008/11/30	04:06:04	24	6	200	149	251	627	15.3*	27	Very Poor Event; Only C2

* Acceleration is uncertain due to either poor height measurement or a small number of height-time measurements.