

MAY 2008 NUMBER 765 - Part II

Solar-Geophysical Data comprehensive reports



Data for November 2007 and Miscellaneous
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

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NATIONAL ENVIRONMENTAL SATELLITE,
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NATIONAL GEOPHYSICAL
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BOULDER,
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Data for November 2007

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NATIONAL GEOPHYSICAL DATA CENTER

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Boulder, Colorado

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN SOLAR-GEOPHYSICAL DATA

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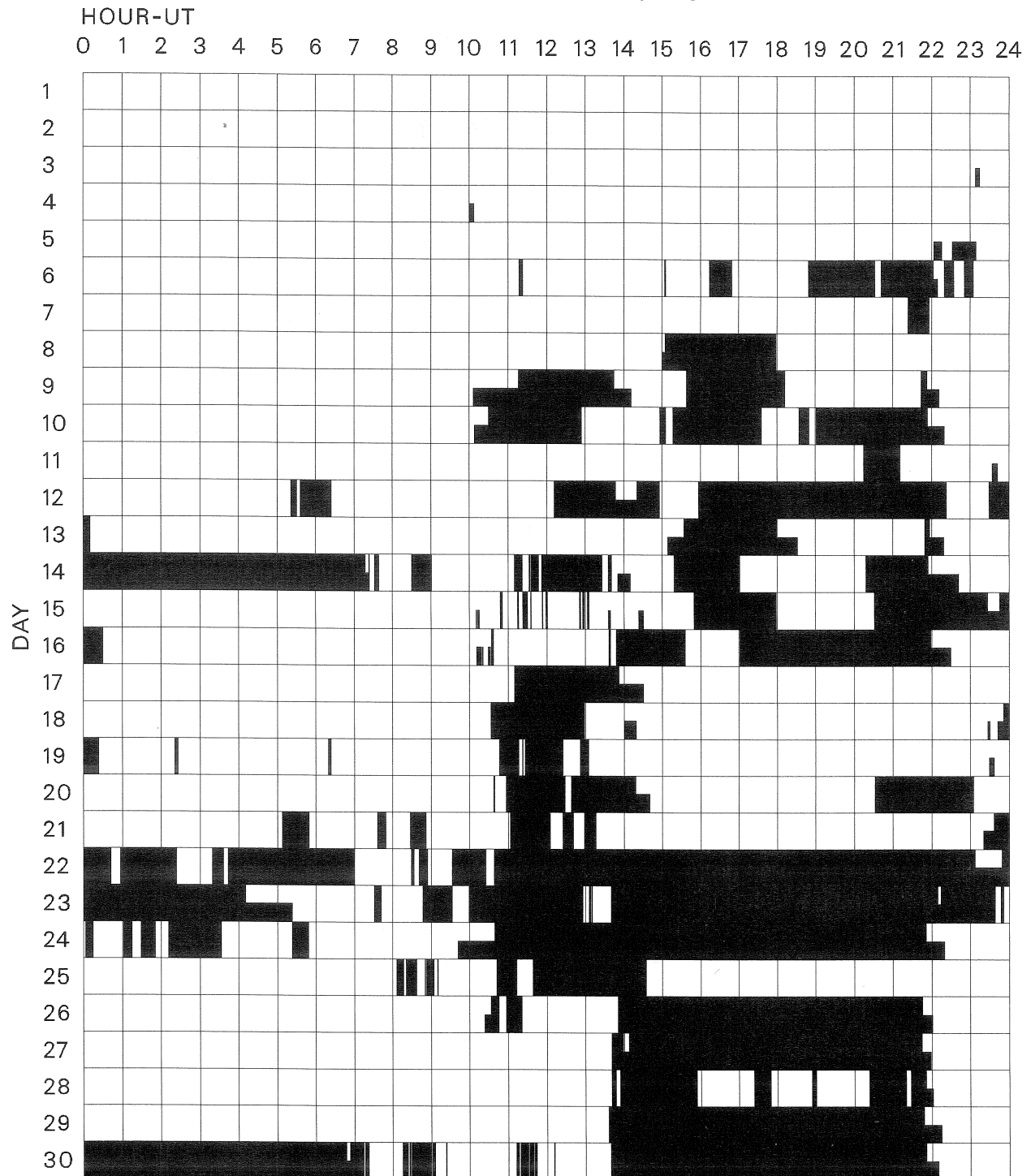
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DATA FOR NOVEMBER 2007

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NOVEMBER 2007



Times of no flare patrol, shown here as shaded areas, combine reports from the stations listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind (neither visual or cinematographic); portions of a panel with only the bottom half shaded mark times of only visual patrol.

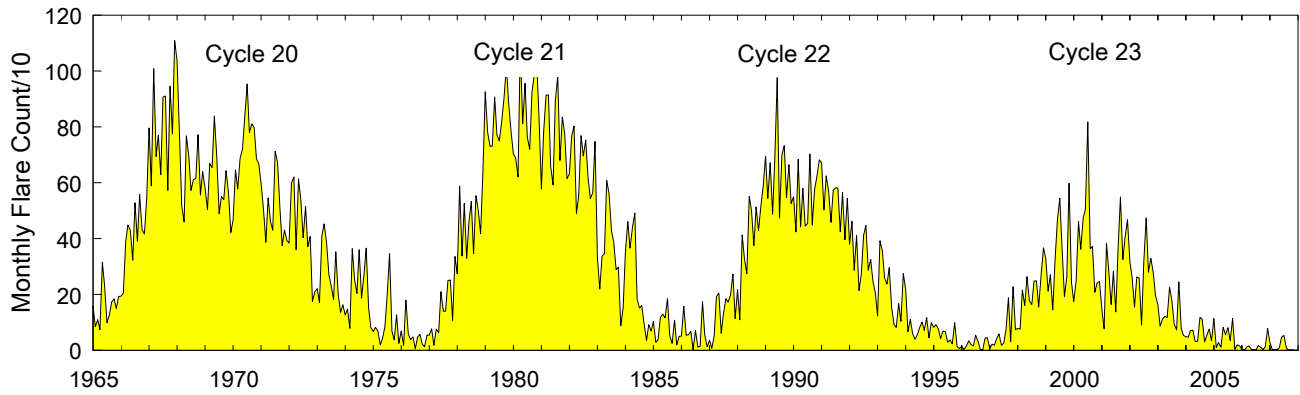
Holloman
Kanzelhoehe

Learmonth

San Vito

Monthly Counts of Grouped Solar Flares

Jan 1965 - Nov 2007



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		154

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

8
Nov 07

S O L A R R A D I O E M I S S I O N
Outstanding Occurrences
NOVEMBER 2007

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m ² Hz)	Mean		
07	4995 SGMR	8 S	1138.0	1138.0	U	48.0			QL=4 ST=2 TYP=3

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

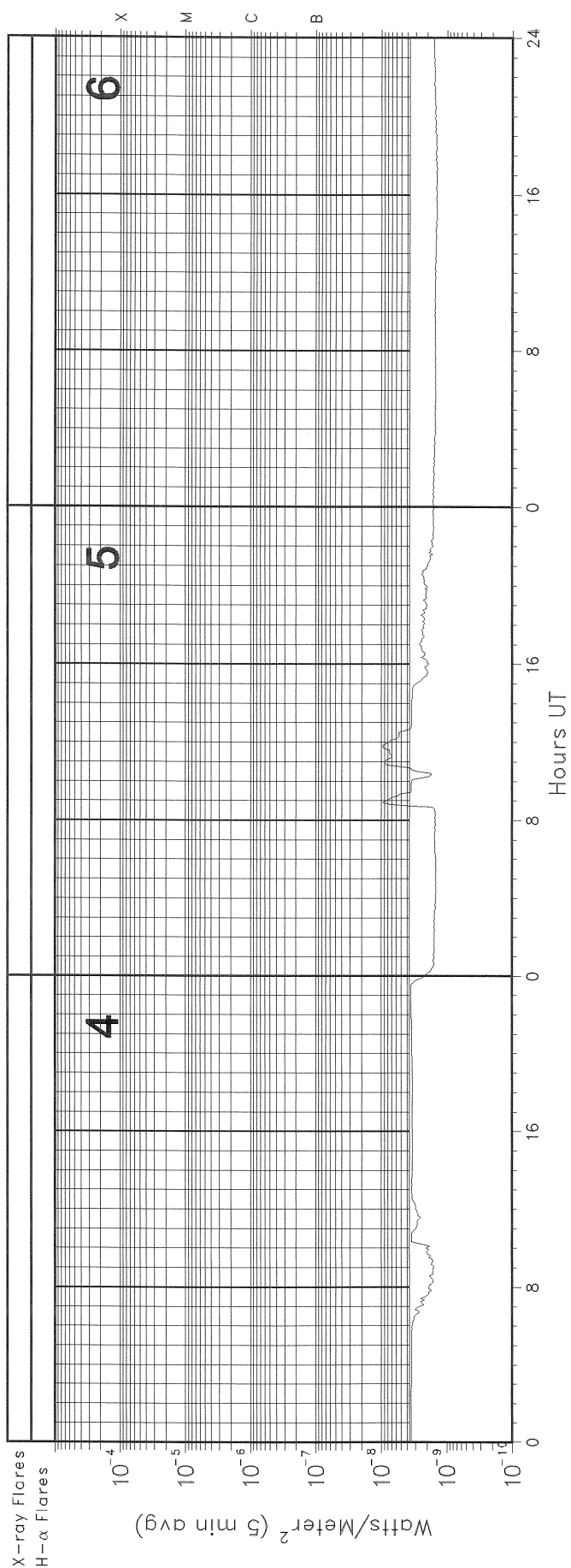
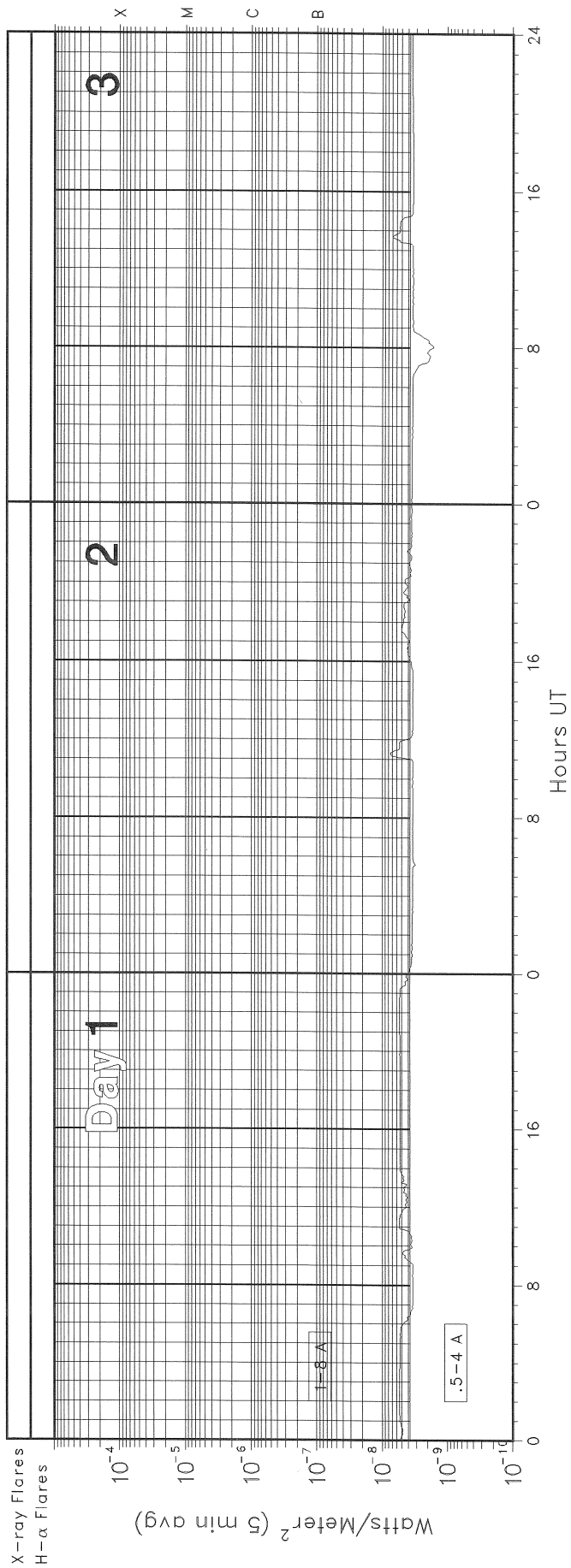
Explanation of Type Code:

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 Precursor	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	40 Rise Only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	40F Rise Only F	260 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.

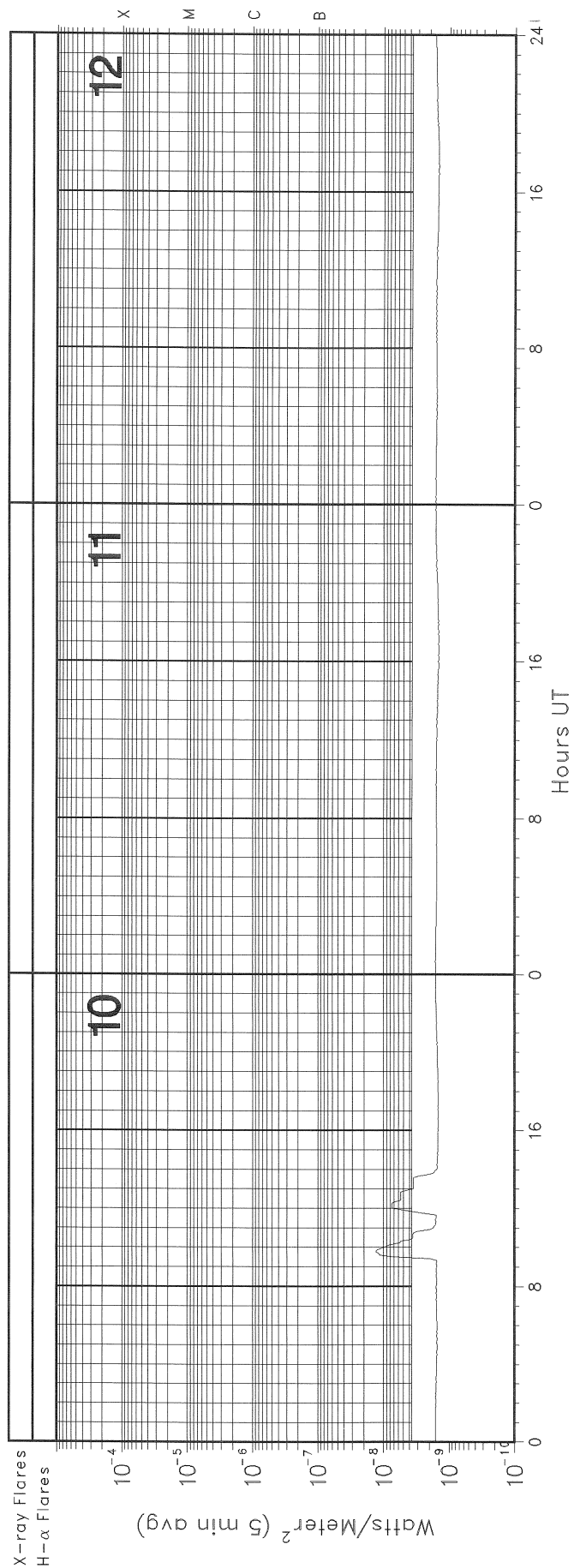
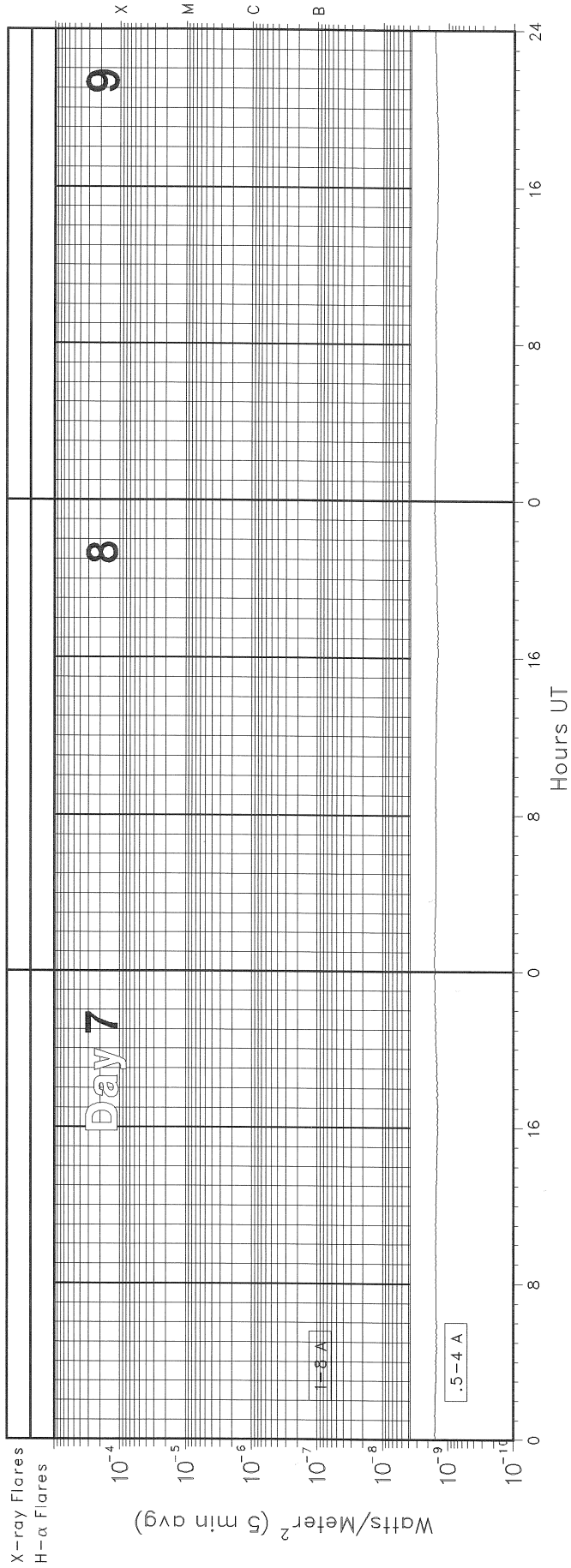
GOES X-RAY DETECTOR

November 2007



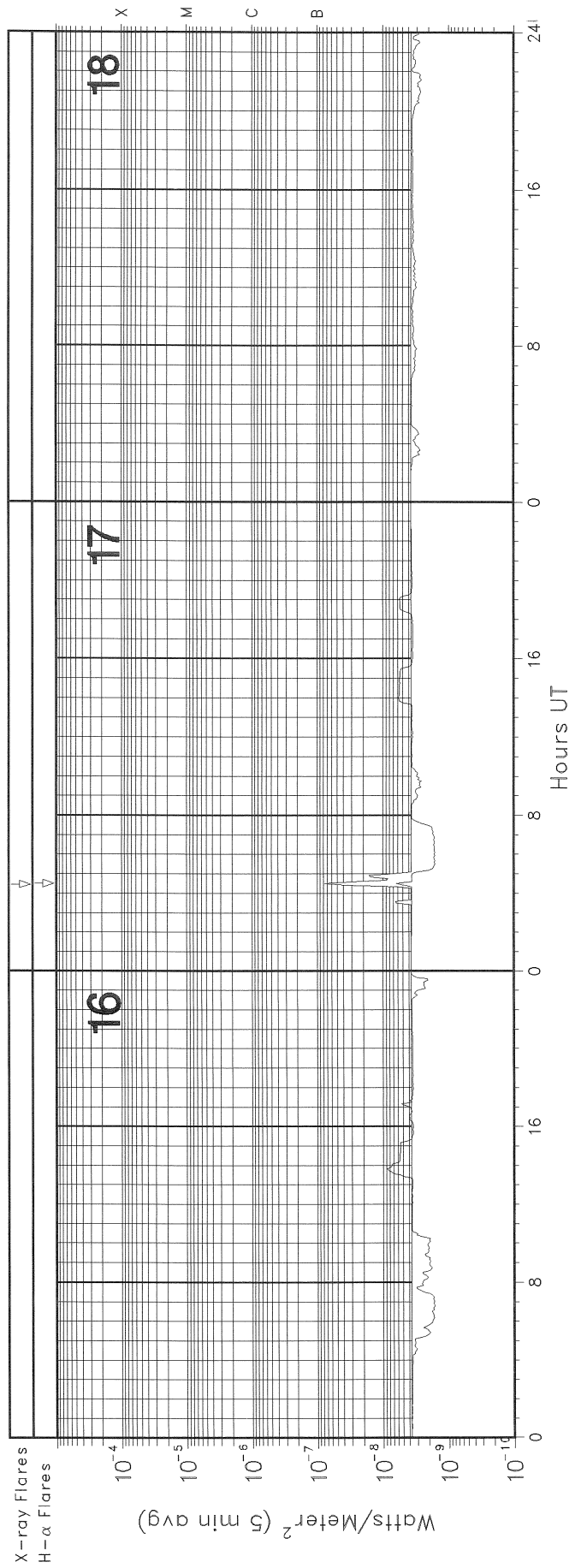
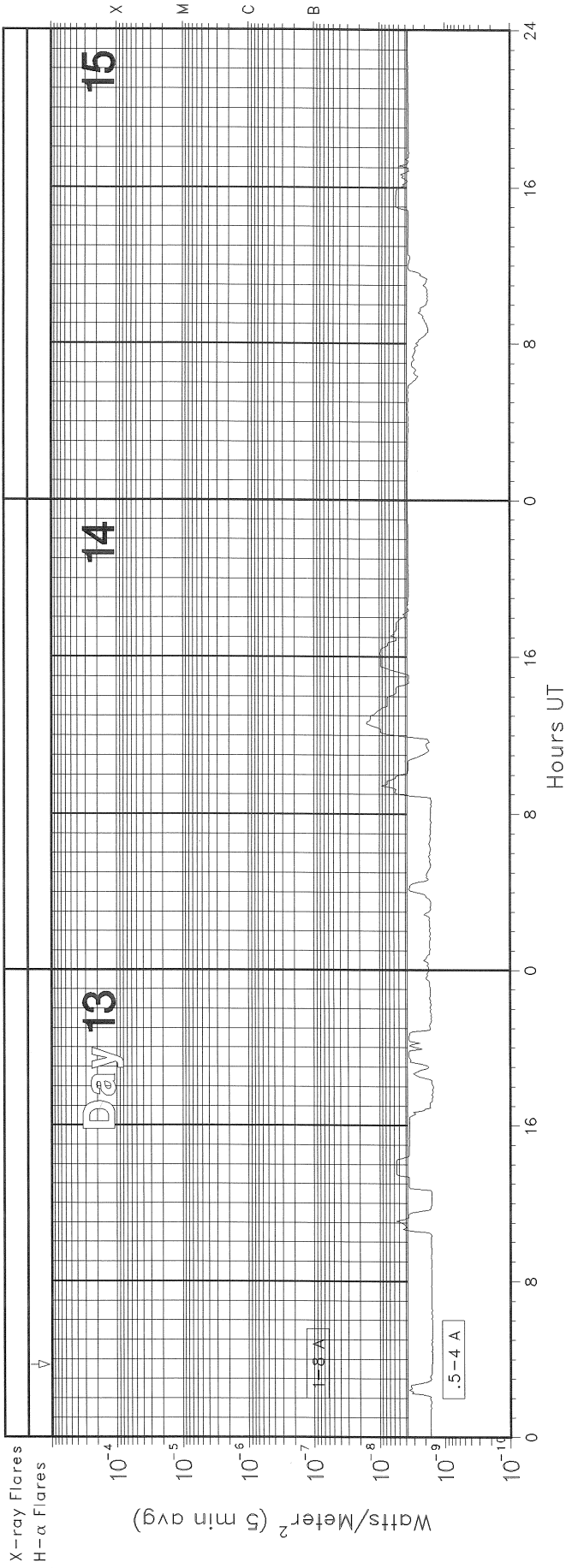
GOES X-RAY DETECTOR

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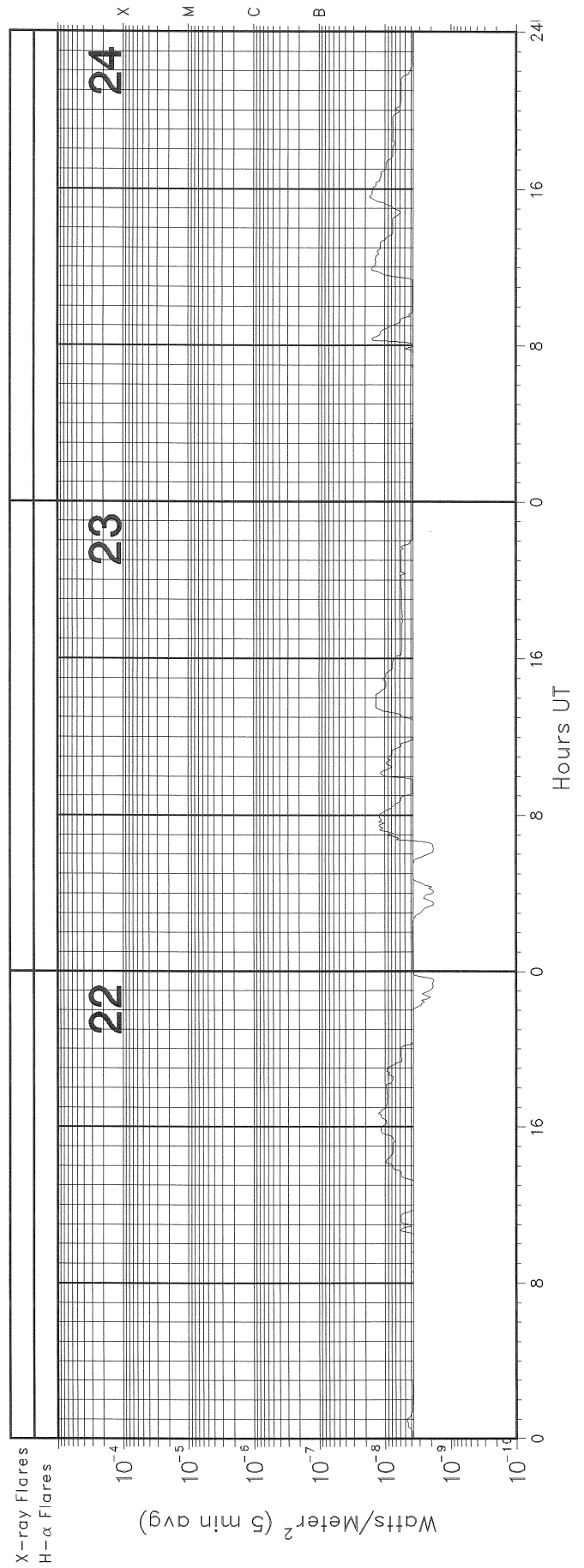
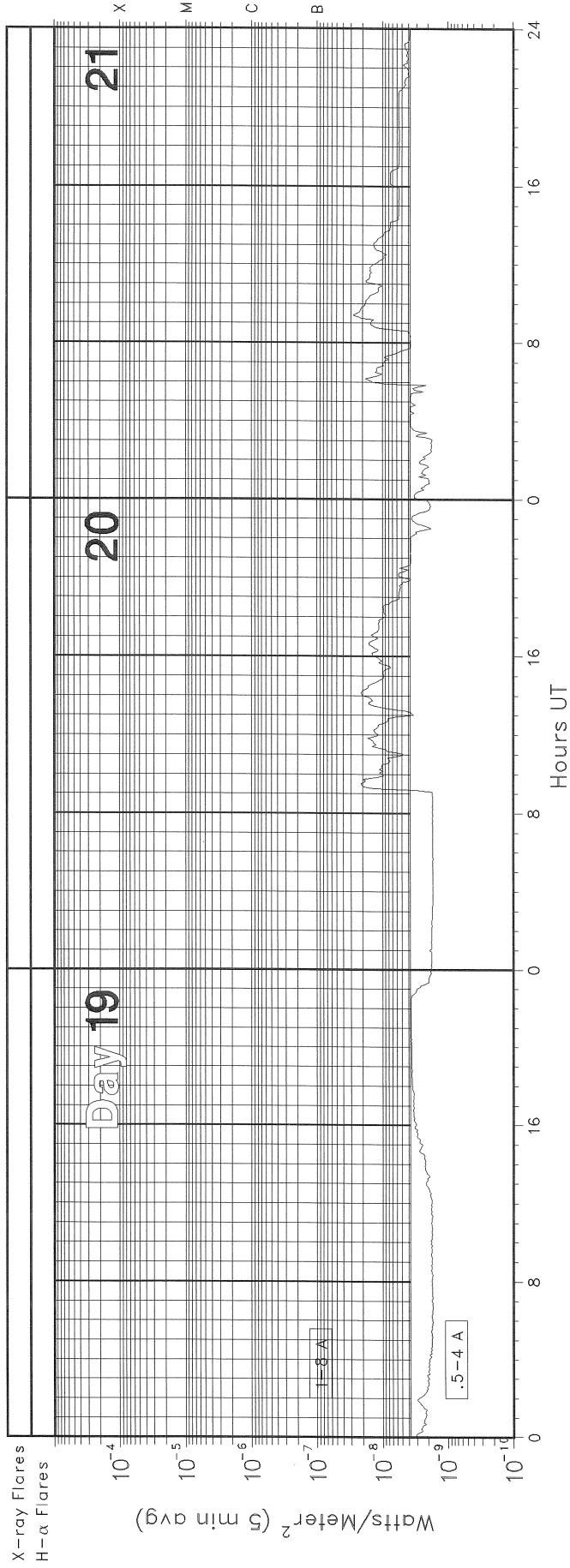
GOES X-RAY DETECTOR

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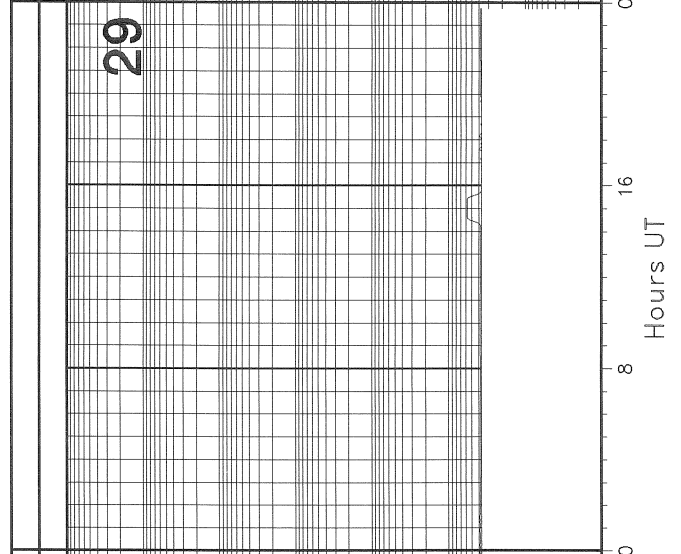
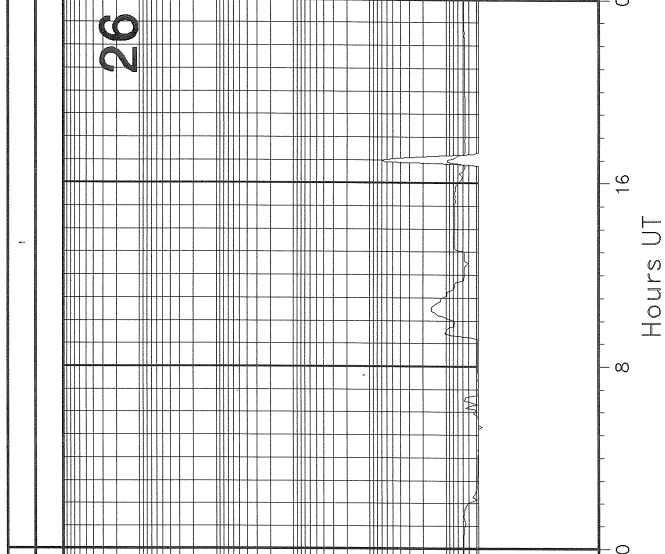
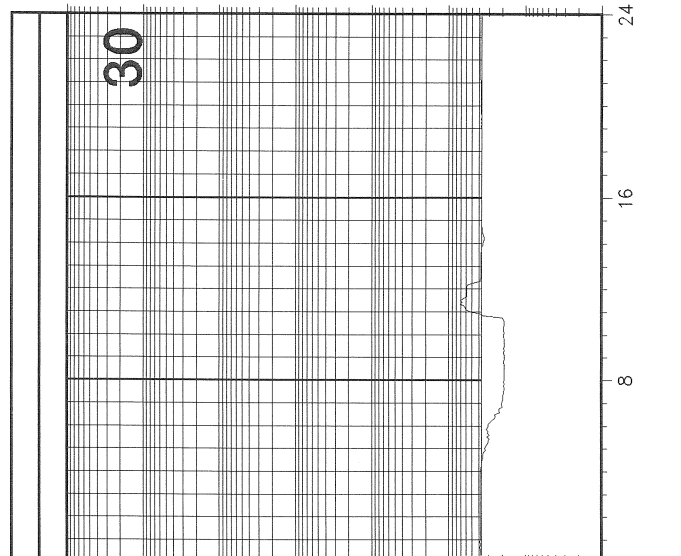
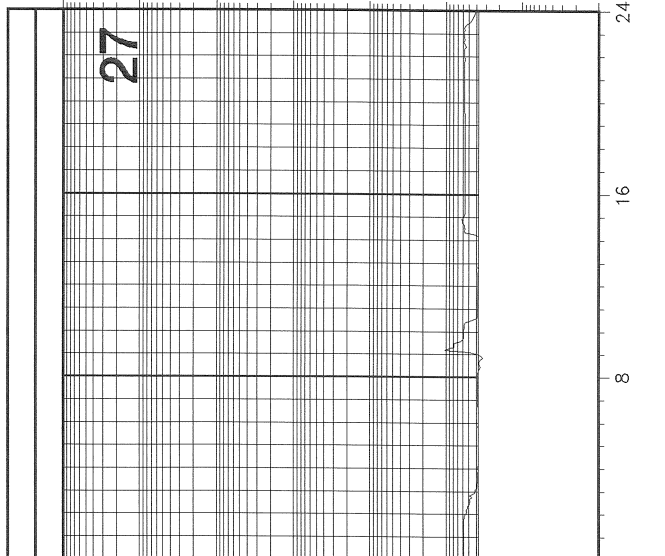
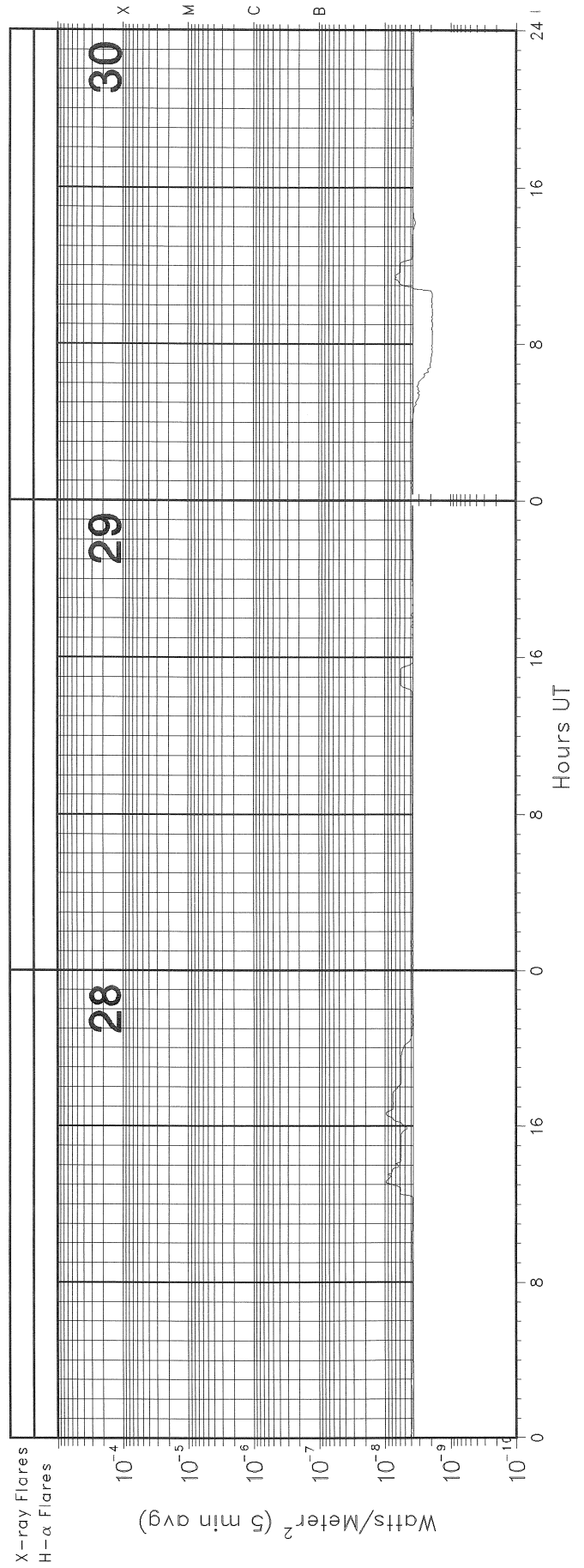
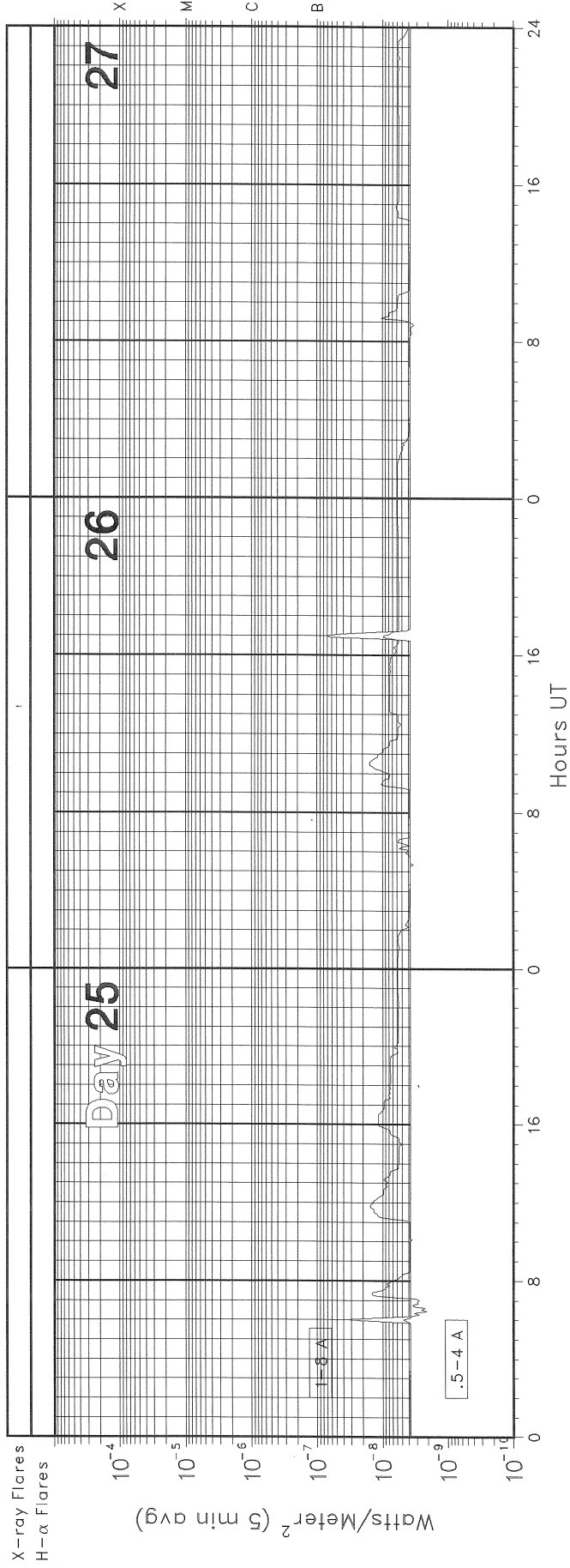
GOES X-RAY DETECTOR

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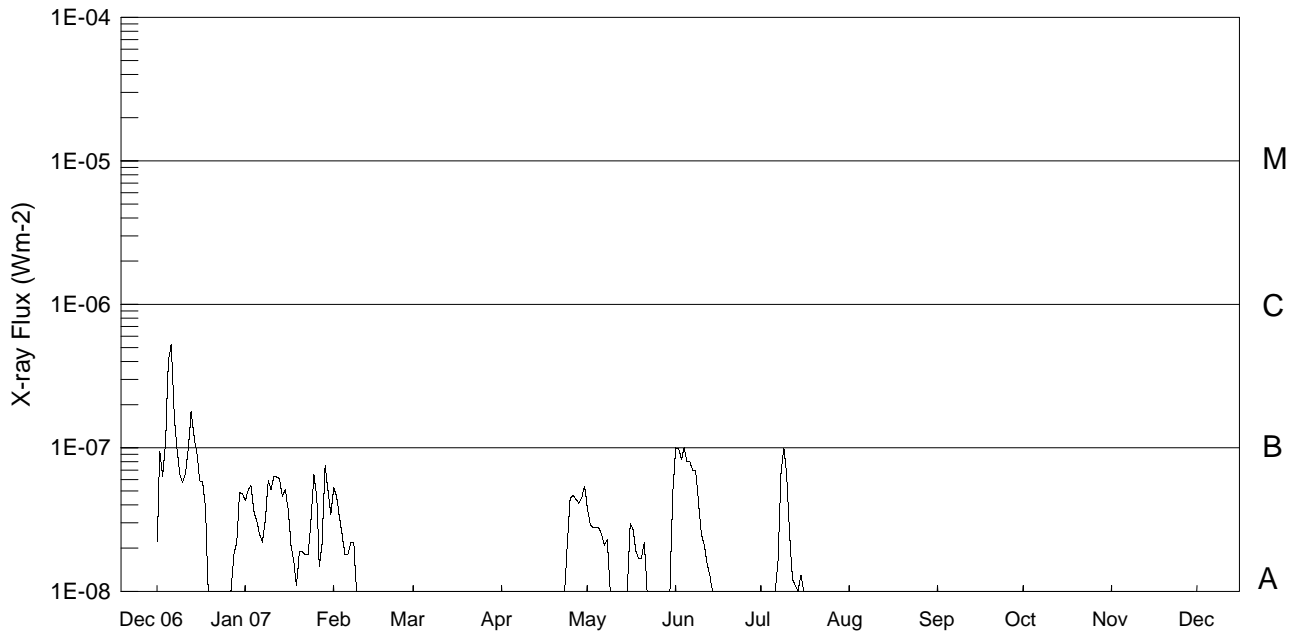


GOES X-RAY DETECTOR

November 2007



Preliminary GOES Satellite Daily X-Ray Background Dec 2006 - Nov 2007



Day	Dec 06	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	A2.2	A4.3	A5.3	<A1.0	<A1.0	A3.8	B1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
2	A9.5	A5.1	A4.6	<A1.0	<A1.0	A2.9	A9.9	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
3	A6.3	A5.5	A3.3	<A1.0	<A1.0	A2.8	A8.3	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
4	B1.1	A3.6	A2.5	<A1.0	<A1.0	A2.8	B1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
5	B4.1	A3.1	A1.8	<A1.0	<A1.0	A2.8	A8.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
6	B5.3	A2.5	A1.8	<A1.0	<A1.0	A2.5	A8.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
7	B1.7	A2.2	A2.2	<A1.0	<A1.0	A2.1	A7.0	A1.7	<A1.0	<A1.0	<A1.0	<A1.0
8	A9.7	A3.2	A2.2	<A1.0	<A1.0	A2.3	A7.0	A6.9	<A1.0	<A1.0	<A1.0	<A1.0
9	A6.5	A5.9	<A1.0	<A1.0	<A1.0	<A1.0	A4.2	B1.0	<A1.0	<A1.0	<A1.0	<A1.0
10	A5.7	A5.1	<A1.0	<A1.0	<A1.0	<A1.0	A2.5	A6.3	<A1.0	<A1.0	<A1.0	<A1.0
11	A6.6	A6.3	<A1.0	<A1.0	<A1.0	<A1.0	A2.1	A2.4	<A1.0	<A1.0	<A1.0	<A1.0
12	A9.8	A6.3	<A1.0	<A1.0	<A1.0	<A1.0	A1.6	A1.2	<A1.0	<A1.0	<A1.0	<A1.0
13	B1.8	A6.1	<A1.0	<A1.0	<A1.0	<A1.0	A1.3	A1.1	<A1.0	<A1.0	<A1.0	<A1.0
14	B1.2	A4.6	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
15	A9.2	A5.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	A1.3	<A1.0	<A1.0	<A1.0	<A1.0
16	A5.9	A3.8	<A1.0	<A1.0	<A1.0	A3.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
17	A5.8	A2.1	<A1.0	<A1.0	<A1.0	A2.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
18	A3.9	A1.6	<A1.0	<A1.0	<A1.0	A1.9	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
19	<A1.0	A1.1	<A1.0	<A1.0	<A1.0	A1.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
20	<A1.0	A1.9	<A1.0	<A1.0	<A1.0	A1.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
21	<A1.0	A1.9	<A1.0	<A1.0	<A1.0	A2.2	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
22	<A1.0	A1.8	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
23	<A1.0	A1.8	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
24	<A1.0	A3.1	<A1.0	<A1.0	A2.2	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
25	<A1.0	A6.5	<A1.0	<A1.0	A4.4	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
26	<A1.0	A4.6	<A1.0	<A1.0	A4.7	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
27	<A1.0	A1.5	<A1.0	<A1.0	A4.4	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
28	A1.8	A2.2	<A1.0	<A1.0	A4.1	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
29	A2.2	A7.5		<A1.0	A4.5	<A1.0	A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
30	A4.9	A5.1		<A1.0	A5.4	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0	<A1.0
31	A4.8	A3.4		<A1.0		A5.1		<A1.0	<A1.0		<A1.0	

Levels below B1.0 are unreliable.

ACTIVE PROMINENCES AND FILAMENTS

15
Nov 07

NOVEMBER 2007

Day	Type	Event 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
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NO REPORTS

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

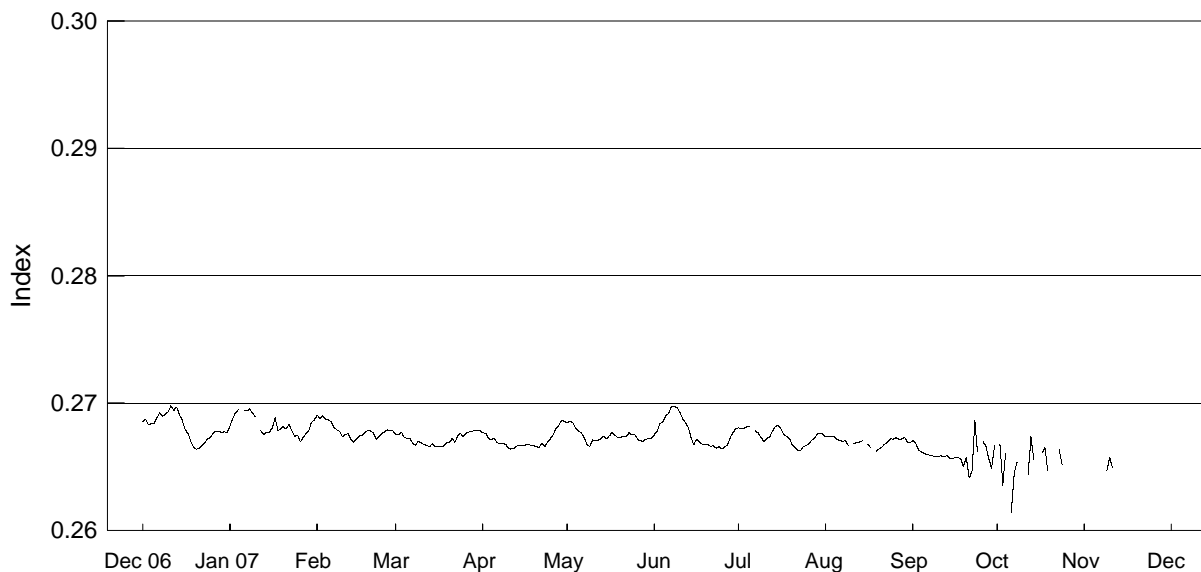
ABST = Abastumani	HOLL = Holloman	RAMY = Ramey
ATHN = Athens	KHAR = Kharkov	SVTO = San Vito
BUCA = Bucharest	LEAR = Learmonth	VORO = Voroshilov
CATA = Catania	PALE = Palehua	VALA = Valasske Mezirici
		WROC = Wroclaw

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 2006 - Nov 2007

Version 9.1

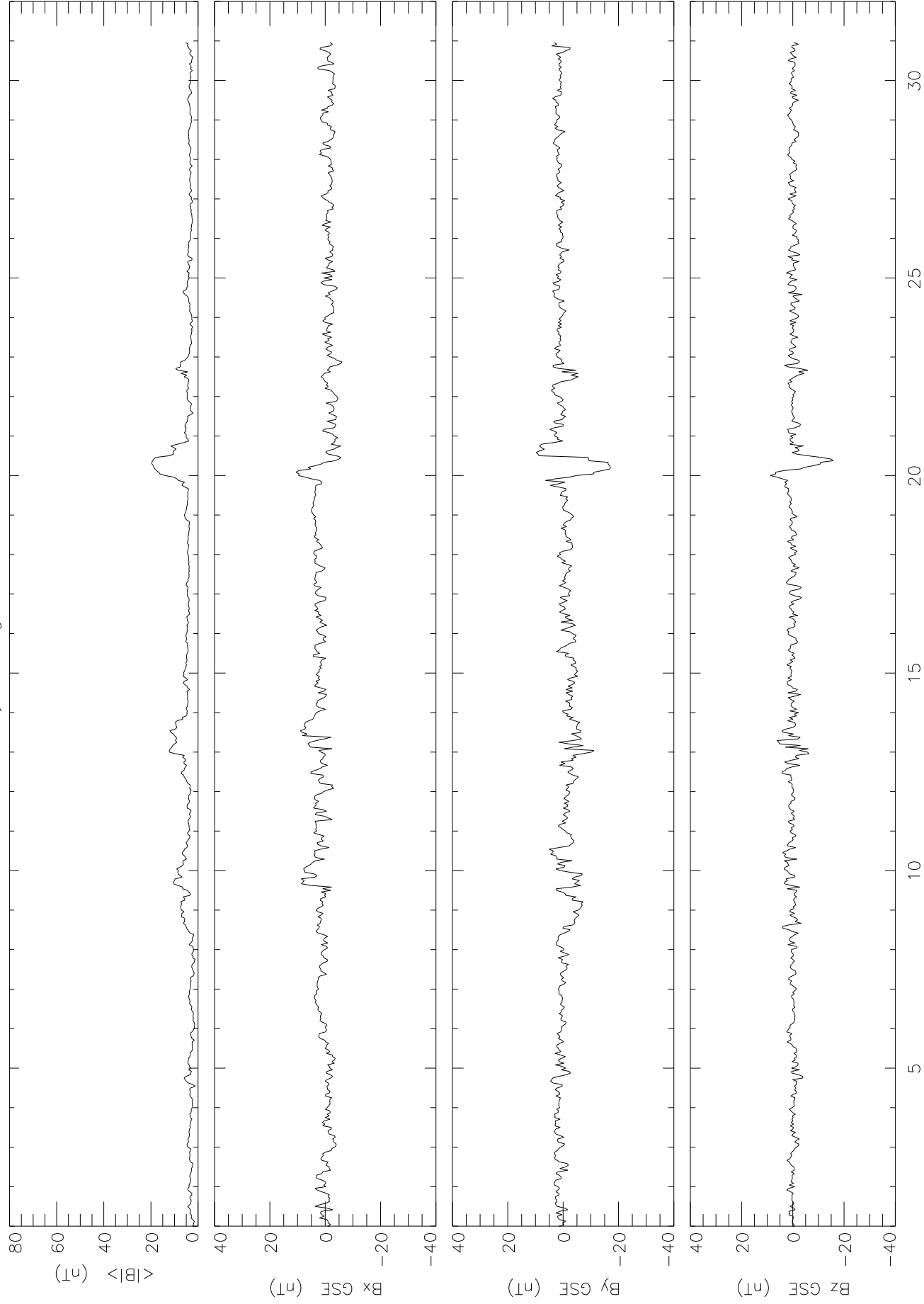


Day	Dec 06	Jan 07	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	0.2685	0.2682	0.2691	0.2675	0.2677	0.2685	0.2676	0.2681	0.2674	0.2671	---	---
2	0.2687	0.2689	0.2688	0.2675	0.2676	0.2686	0.2678	0.2680	0.2674	0.2669	0.2668	---
3	0.2683	0.2692	0.2690	0.2677	0.2672	0.2685	0.2684	0.2681	0.2674	0.2663	0.2635	---
4	0.2684	0.2695	0.2687	0.2673	0.2671	0.2680	0.2685	0.2682	0.2674	0.2662	0.2661	---
5	0.2684	---	0.2687	0.2673	0.2673	0.2679	0.2690	0.2682	0.2672	0.2661	---	---
6	0.2689	0.2695	0.2685	0.2672	0.2669	0.2677	0.2692	---	0.2671	0.2660	0.2615	---
7	0.2693	0.2694	0.2681	0.2669	0.2669	0.2673	0.2697	0.2678	0.2670	0.2659	0.2645	0.2644
8	0.2690	0.2696	0.2679	0.2667	0.2668	0.2667	0.2698	0.2677	0.2671	0.2659	0.2654	---
9	0.2691	0.2692	0.2678	0.2670	0.2668	0.2666	0.2697	0.2673	0.2667	0.2658	---	0.2647
10	0.2693	0.2689	0.2674	0.2669	0.2665	0.2671	0.2693	0.2670	---	0.2659	---	0.2658
11	0.2698	---	0.2675	0.2668	0.2664	0.2671	0.2688	0.2673	0.2668	0.2659	---	0.2650
12	0.2694	0.2678	0.2676	0.2667	0.2665	0.2671	0.2685	0.2674	0.2669	0.2658	0.2644	---
13	0.2697	0.2676	0.2672	0.2666	0.2666	0.2672	0.2682	0.2678	0.2670	0.2659	0.2674	---
14	0.2691	0.2677	0.2670	0.2668	0.2667	0.2674	0.2674	0.2681	0.2671	0.2657	0.2655	---
15	0.2686	0.2677	0.2672	0.2666	0.2667	0.2672	0.2667	0.2683	---	0.2656	---	---
16	0.2679	0.2681	0.2674	0.2666	0.2667	0.2675	0.2672	0.2680	0.2668	0.2657	---	---
17	0.2676	0.2689	0.2675	0.2666	0.2668	0.2677	0.2670	0.2676	0.2665	0.2657	0.2661	---
18	0.2671	0.2678	0.2677	0.2666	0.2667	0.2675	0.2668	0.2674	---	0.2656	0.2665	---
19	0.2666	0.2680	0.2679	0.2669	0.2667	0.2673	0.2668	0.2672	0.2662	0.2650	0.2647	---
20	0.2664	0.2682	0.2679	0.2669	0.2666	0.2673	0.2668	0.2667	0.2664	0.2657	---	---
21	0.2664	0.2680	0.2677	0.2672	0.2666	0.2674	0.2666	0.2665	0.2666	0.2641	---	---
22	0.2667	0.2683	0.2672	0.2669	0.2668	0.2674	0.2667	0.2663	0.2668	0.2647	---	---
23	0.2669	0.2678	0.2674	0.2675	0.2666	0.2677	0.2665	0.2663	0.2670	0.2687	0.2664	---
24	0.2672	0.2674	0.2676	0.2676	0.2670	0.2675	0.2666	0.2666	0.2672	0.2662	0.2652	---
25	0.2673	0.2675	0.2678	0.2674	0.2672	0.2676	0.2664	0.2667	0.2672	---	---	---
26	0.2676	0.2670	0.2679	0.2677	0.2675	0.2672	0.2666	0.2668	0.2673	0.2670	---	---
27	0.2678	0.2673	0.2678	0.2677	0.2680	0.2671	0.2667	0.2671	0.2672	0.2666	---	---
28	0.2678	0.2676	0.2678	0.2678	0.2683	0.2670	0.2673	0.2673	0.2672	0.2656	---	---
29	0.2677	0.2679	---	0.2678	0.2687	0.2672	0.2677	0.2676	0.2673	0.2649	0.2658	---
30	0.2678	0.2685	---	0.2679	0.2686	0.2672	0.2680	0.2676	0.2669	0.2667	---	---
31	0.2677	0.2687	---	0.2679	---	0.2673	---	0.2676	0.2669	---	---	---
Mean	0.2681	0.2683	0.2679	0.2672	0.2671	0.2674	0.2677	0.2674	0.2670	0.2660	0.2653	0.2650

Data at: <http://www.sec.noaa.gov/ftpmenu/sbu.html>

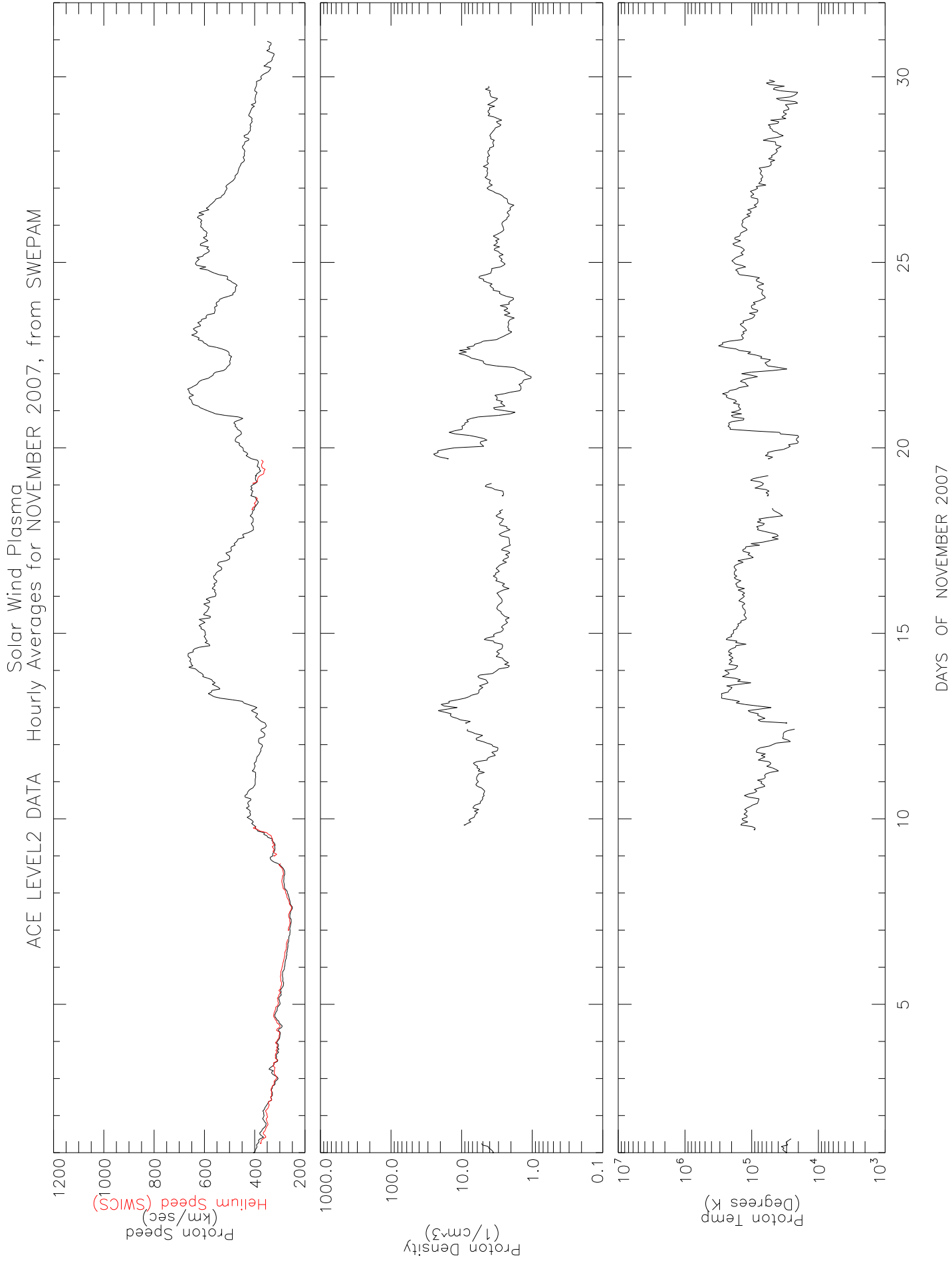
Interplanetary Magnetic Field
Hourly Averages for NOVEMBER 2007, from MAG

ACE LEVEL2 DATA

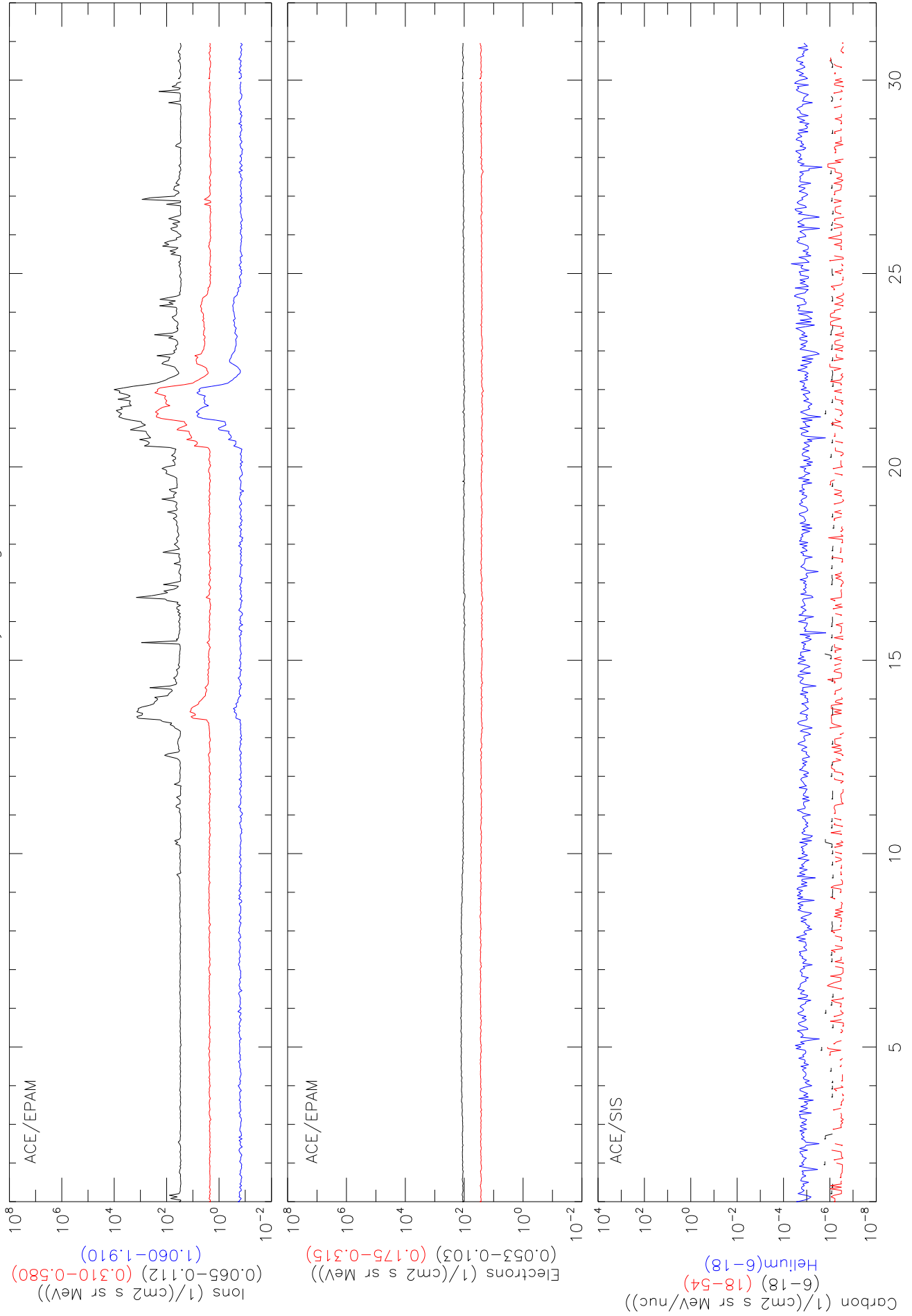


DAYS OF NOVEMBER 2007

ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2007, from SWEPM



Solar Energetic Particles ACE LEVEL2 DATA Hourly Averages for NOVEMBER 2007



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 2007

First C2 Appearance		Central Width			Linear Fit			Measurement		Remarks
Date	Time UT	Position Angle degree	Angular Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	Accel m/s ²	Position Angle degree	
2007/11/01	09:50:05	342	5	160	188	133	0	-14.9*	338	Very Poor; Only C2
2007/11/01	23:50:04	294	6	318	262	383	397	4.1*	291	Poor Event
2007/11/02	00:50:04	224	8	253	128	385	1177	56.3*	229	Very Poor; Only C2
2007/11/02	00:50:04	59	21	159	97	224	838	28.4*	61	Very Poor; Only C2
2007/11/02	01:42:04	289	11	385	308	461	472	6.6*	291	Very Poor; Only C3
2007/11/02	12:26:05	106	14	273	93	438	811	27.8*	107	Very Poor Event
2007/11/02	18:26:04	292	10	181	152	212	457	8.6*	290	Very Poor Event
2007/11/02	21:26:07	334	7	314	240	393	1230	64.0*	327	Poor Event; 3pts; Only C2
2007/11/02	21:26:07	231	8	425	379	471	859	26.1*	238	Poor Event; Only C2
2007/11/02	21:26:07	110	12	312	268	362	372	3.0*	106	Poor Event
2007/11/03	01:27:14	280	38	202	175	229	451	7.2*	280	Very Poor; Only C2
2007/11/03	05:26:04	199	6	303	281	326	596	12.7*	204	Poor Event; Only C2
2007/11/03	10:06:04	113	7	295	263	328	711	18.4*	111	Very Poor; Only C2
2007/11/03	16:50:04	185	5	371	330	411	1011	37.6*	186	Very Poor; 3pts; Only C2
2007/11/04	08:26:04	78	84	179	0	355	307	4.0*	72	Poor Event
2007/11/05	02:06:04	290	8	233	208	260	315	2.6*	291	Very Poor Event
2007/11/05	09:50:04	83	8	288	252	325	409	4.3*	82	Very Poor Event
2007/11/06	00:50:04	166	5	233	218	250	514	8.9*	164	Very Poor; 3pts; Only C2
2007/11/06	10:26:04	60	11	262	244	281	365	3.1*	65	Very Poor Event
2007/11/06	19:42:04	119	14	266	307	226	203	-3.1*	119	Very Poor; Only C3
2007/11/07	03:26:08	237	11	155	141	171	190	0.7*	239	Very Poor Event
2007/11/07	19:50:04	173	9	290	316	264	0	-24.2*	172	Very Poor; 3pts; Only C2
2007/11/08	01:27:16	173	6	533	138	951	2851	349.2*	172	Very Poor; 3pts; Only C2
2007/11/08	15:50:04	278	33	365	205	525	1306	70.0*	289	Poor Event; Only C2
2007/11/08	18:50:04	45	11	187	284	84	0	-55.5*	46	Very Poor; 3pts; Only C2
2007/11/08	23:26:04	272	56	181	120	237	577	13.0*	271	Poor Event; Only C2
2007/11/09	03:50:04	326	4	283	334	233	0	-47.0*	316	Very Poor; 3pts; Only C2
2007/11/09	11:50:04	61	11	314	237	396	772	22.3*	62	Poor Event; Only C2
2007/11/09	11:50:04	279	39	274	221	327	641	14.9*	266	Poor Event; Only C2
2007/11/09	12:06:04	331	4	209	167	250	886	31.4*	328	Very Poor; 3pts; Only C2
2007/11/10	00:50:05	313	11	410	400	419	471	2.8*	303	Poor Event
2007/11/10	03:34:11	61	20	159	164	153	132	-0.4*	65	Poor Event
2007/11/10	05:26:04	15	9	417	389	446	825	23.8*	20	Very Poor; 3pts; Only C2
2007/11/10	06:50:05	53	10	182	220	145	0	-4.5*	56	Poor Event
2007/11/10	07:27:15	241	6	267	211	328	351	3.7*	248	Very Poor Event
2007/11/11	09:26:09	112	12	168	194	143	0	-6.3*	113	Poor Event
2007/11/11	10:26:08	175	4	438	296	594	1446	83.0*	177	Very Poor; 3pts; Only C2
2007/11/12	03:50:04	78	37	363	386	337	327	-1.7	80	
2007/11/12	10:26:04	78	13	249	236	263	290	1.4*	75	Very Poor Event
2007/11/13	11:06:04	257	15	174	226	125	0	-6.9*	258	Very Poor Event
2007/11/13	12:50:04	246	54	112	105	119	146	0.4*	255	Very Poor Event
2007/11/14	07:27:15	133	8	134	61	208	1005	41.9*	132	Very Poor; Only C2
2007/11/14	09:50:04	234	49	176	0	423	366	5.7*	242	
2007/11/14	13:27:11	118	6	460	582	337	0	-69.4*	115	Very Poor; Only C2

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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 2007

First C2 Appearance		Central Width			Linear Fit			Measurement		Remarks
Date	Time UT	Position Angle degree	Angular Width degree	Speed km/s	Initial km/s	Final km/s	20R km/s	Accel m/s ²	Position Angle degree	
2007/11/15	01:27:14	101	7	268	233	305	895	30.9*	97	Very Poor; 3pts; Only C2
2007/11/15	09:26:07	251	5	331	229	436	499	8.3*	255	Poor Event
2007/11/15	13:50:04	246	7	368	375	360	361	-0.4*	255	Poor Event
2007/11/15	18:50:04	279	199	125	96	158	204	1.3*	329	Very Poor; Partial Halo
2007/11/15	19:27:12	248	10	250	245	256	263	0.4*	253	Very Poor Event
2007/11/15	23:50:04	252	8	244	205	289	316	2.4*	255	Very Poor Event
2007/11/16	09:26:08	262	78	326	218	437	405	4.9	259	
2007/11/17	17:50:04	6	7	551	558	544	460	-4.3*	8	Poor Event; 3pts
2007/11/17	20:59:06	321	6	663	937	383	0	-180.9*	317	Very Poor; 3pts; Only C2
2007/11/18	00:26:04	234	5	279	281	277	274	-0.2*	238	Very Poor Event
2007/11/18	09:26:09	122	11	203	307	104	0	-33.7*	121	Very Poor; Only C2
2007/11/18	11:50:04	65	18	219	172	267	547	11.5*	65	Very Poor; Only C2
2007/11/18	15:26:09	62	21	306	266	350	368	2.9*	68	Poor Event
2007/11/18	18:06:04	72	10	256	205	309	388	4.8*	75	Very Poor Event
2007/11/19	00:50:04	84	4	233	247	219	188	-1.2*	86	Very Poor Event
2007/11/21	23:12:04	53	11	241	183	299	1308	80.3*	60	Very Poor; 3pts; Only C2
2007/11/23	01:00:04	293	5	212	198	227	242	1.0*	295	Very Poor Event
2007/11/24	12:48:04	245	6	249	284	212	0	-4.1*	239	Very Poor Event
2007/11/24	18:00:05	288	10	379	405	349	317	-2.7*	288	Poor Event
2007/11/24	18:36:04	225	6	362	332	393	1044	41.7*	228	Very Poor; 3pts; Only C2
2007/11/24	19:48:04	235	8	243	335	149	0	-31.8*	238	Very Poor; Only C2
2007/11/24	22:06:04	234	6	267	251	283	462	6.4*	238	Very Poor; Only C2
2007/11/25	03:06:04	324	5	478	405	552	1106	43.2*	320	Poor Event; Only C2
2007/11/25	11:06:05	283	11	239	221	257	442	6.0*	279	Very Poor; Only C2
2007/11/25	21:26:09	82	50	185	66	311	299	3.5*	85	Poor Event
2007/11/25	22:06:05	359	4	169	229	116	0	-23.4*	358	Very Poor; 3pts; Only C2
2007/11/26	19:26:04	184	5	485	75	921	2918	352.0*	183	Very Poor; 3pts; Only C2
2007/11/29	22:30:04	241	6	211	246	176	0	-9.9*	248	Very Poor; Only C2
2007/11/30	00:54:27	359	5	157	104	212	703	20.1*	1	Very Poor; Only C2
2007/11/30	11:54:04	275	47	106	34	178	284	3.3*	278	Very Poor Event
2007/11/30	12:30:04	246	6	306	362	248	0	-19.3*	254	Poor Event; Only C2
2007/11/30	20:30:04	186	7	162	117	206	639	17.0*	186	Very Poor; Only C2
2007/11/30	23:54:05	183	4	212	299	133	0	-76.5*	182	Very Poor; 3pts; Only C2

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

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