OCTOBER 2005 NUMBER 734 - Part II

Solar-Geophysical Data comprehensive reports

Data for April 2005 and Miscellaneous
Explanation of Data Reports Issued as Number 515 (Supplement) July 1987

NEW DATA:

ACE Solar Wind, Interplanetary Magnetic Field and Particles -- Monthly Plots

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OCTOBER 2005 NUMBER 734 - Part II

Solar-Geophysical Data comprehensive reports

Data for April 2005 and Late Data

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SOLAR-GEOPHYSICAL DATA

Number 734
(Issued in Two Parts)

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DATA FOR APRIL 2005

Hα SOLAR FLARES

APRIL 2005

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
		02	0119		0158	No Flare Patrol													
		02	0436		0532	No Flare Patrol													
		03	0217		0235	No Flare Patrol													
		03	0303		0317	No Flare Patrol													
		03	0348		0445	No Flare Patrol													
		03	1524		2400	No Flare Patrol													
		04	0000		0111	No Flare Patrol													
		04	0127		0207	No Flare Patrol													
		04	0217		0449	No Flare Patrol													
		04	1849		1928	No Flare Patrol													
		04	2018		2036	No Flare Patrol													
		04	2142		2146	No Flare Patrol													
		05	0015		0526	No Flare Patrol													
		05	0532		0621	No Flare Patrol													
		05	0642		0655	No Flare Patrol													
		05	0729		0749	No Flare Patrol													
		05	1034		1045	No Flare Patrol													
		05	1114		1115	No Flare Patrol													
		05	1218		1239	No Flare Patrol													
0001	HOLL	05	2004	2004	2009	S05	W44	10747	04	2.5	5	SF		3	E		13		F
		06	0159		0346	No Flare Patrol													
0002	KANZ	06	0632	0633	0636	S06	W51	10747	04	2.4	4	SF		2	E				
		07	0203		0351	No Flare Patrol													
		07	2251		2324	No Flare Patrol													
		08	0216		0523	No Flare Patrol													
		08	1229		1243	No Flare Patrol													
		08	1313		1333	No Flare Patrol													
		08	1339		1345	No Flare Patrol													
		08	1412		1420	No Flare Patrol													
		08	1422		1423	No Flare Patrol													
		08	1519		1530	No Flare Patrol													
		08	1552		1613	No Flare Patrol													
		08	1636		1645	No Flare Patrol													
		08	1808		1842	No Flare Patrol													
		08	1859		1927	No Flare Patrol													
		08	1945		1956	No Flare Patrol													
		08	2120		2400	No Flare Patrol													
		09	0000		0139	No Flare Patrol													
		09	0332		0414	No Flare Patrol													
		09	0955		1300	No Flare Patrol													
		10	0951		1025	No Flare Patrol													
		10	1031		1049	No Flare Patrol													
		10	1108		1259	No Flare Patrol													
		10	1616		1706	No Flare Patrol													
		10	1942		1946	No Flare Patrol													
		10	2005		2035	No Flare Patrol													
		10	2050		2109	No Flare Patrol													
		10	2122		2135	No Flare Patrol													
		10	2143		2310	No Flare Patrol													
		11	0213		0235	No Flare Patrol													
		12	0123		0304	No Flare Patrol													
		12	0312		0437	No Flare Patrol													
		12	0931		1257	No Flare Patrol													
		12	1657		1716	No Flare Patrol													
0003	HOLL	12	1718	1719	1724	N00	E77	10752	04	18.5	6	SF		3	E		12		F
		12	2255		2302	No Flare Patrol													
		12	2346		2354	No Flare Patrol													
		12	2400		2400	No Flare Patrol													
		13	0000		0318	No Flare Patrol													
		13	0358		0452	No Flare Patrol													
		13	0551		0609	No Flare Patrol													
		13	0621		0624	No Flare Patrol													
		13	0637		0642	No Flare Patrol													
		13	0931		1255	No Flare Patrol													

APRIL 2005

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
		13	2254		2325	No Flare Patrol													
		14	0058		0159	No Flare Patrol													
		14	1449		1500	No Flare Patrol													
		14	1733		1803	No Flare Patrol													
		14	1910		1922	No Flare Patrol													
		15	1707		1715	No Flare Patrol													
		16	0948		1101	No Flare Patrol													
		16	1109		1144	No Flare Patrol													
		16	1620		1621	No Flare Patrol													
		16	1707		1950	No Flare Patrol													
		16	1957		2005	No Flare Patrol													
		16	2016		2112	No Flare Patrol													
0004	KANZ	17	0722	0723	0728	N01	E09	10752	04	18.0	6	SF		2	E				
		17	0949		0950	No Flare Patrol													
		17	0953		0954	No Flare Patrol													
		17	0959		1003	No Flare Patrol													
		17	1006		1045	No Flare Patrol													
		17	1053		1054	No Flare Patrol													
		17	1101		1111	No Flare Patrol													
		17	1115		1252	No Flare Patrol													
0005		17	2059	2108	2119	S13	E77	10755	04	23.7	20	SF					34		F
	HOLL	17	2059	2108	2119	S13	E77	10755	04	23.7	20	SF		3	E		34		F
	HOLL	17	2059	2108	2119	S13	E77	10755	04	23.7	20	SF		3	E		34		F
		18	0204		0355	No Flare Patrol													
0006	HOLL	18	1457	1503	1510	N02	W07	10752	04	18.1	13	SF		3	E		18		F
		19	0957		1027	No Flare Patrol													
		19	1146		1155	No Flare Patrol													
		19	1222		1246	No Flare Patrol													
		19	1822		2256	No Flare Patrol													
		20	0952		1011	No Flare Patrol													
		20	1246		1248	No Flare Patrol													
		20	1457		1659	No Flare Patrol													
		20	1716		1721	No Flare Patrol													
		20	1902		2011	No Flare Patrol													
		21	1126		1138	No Flare Patrol													
		21	1152		1245	No Flare Patrol													
		22	0230		0405	No Flare Patrol													
		22	1827		2044	No Flare Patrol													
		22	2221		2303	No Flare Patrol													
		22	2324		2331	No Flare Patrol													
		23	1907		2131	No Flare Patrol													
		24	1301		1312	No Flare Patrol													
		24	1342		1359	No Flare Patrol													
		24	1456		1624	No Flare Patrol													
		24	1656		1755	No Flare Patrol													
		24	2028		2046	No Flare Patrol													
		25	0407		0616	No Flare Patrol													
		25	0619		0622	No Flare Patrol													
		25	0624		0654	No Flare Patrol													
		25	0913		1240	No Flare Patrol													
		25	2057		2120	No Flare Patrol													
		25	2218		2230	No Flare Patrol													
		25	2241		2250	No Flare Patrol													
		25	2357		2400	No Flare Patrol													
		26	0000		0003	No Flare Patrol													
		26	0008		0024	No Flare Patrol													
		26	0038		0428	No Flare Patrol													
0007	HOLL	26	1811	1816	1821	S05	E62	10756	05	1.4	10	SF		3	E		22		F
0008	HOLL	26	2004	2008	2016	S06	E65	10756	05	1.7	12	SF		3	E		20		F
		26	2108		2118	No Flare Patrol													
		27	0032		0058	No Flare Patrol													

Hα SOLAR FLARES

APRIL 2005

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		27	0107		0131	No Flare Patrol														
		27	0143		0426	No Flare Patrol														
		28	0050		0423	No Flare Patrol														
		28	2024		2141	No Flare Patrol														
		28	2147		2248	No Flare Patrol														
		28	2324		2400	No Flare Patrol														
		29	0000		0422	No Flare Patrol														
0009	HOLL	29	2037	2037	2053	S10	E17	10756	05	1.1	16	SF			3	E		38		F
		29	2058		2106	No Flare Patrol														
		29	2122		2138	No Flare Patrol														
		29	2145		2400	No Flare Patrol														
		30	0000		0152	No Flare Patrol														
		30	0211		0226	No Flare Patrol														
		30	0233		0248	No Flare Patrol														
		30	0257		0325	No Flare Patrol														
		30	0721		0722	No Flare Patrol														
		30	0727		0728	No Flare Patrol														
		30	0737		0738	No Flare Patrol														
0010	HOLL	30	1258	1305	1307	S10	E09	10756	05	1.2	9	1F			3	E		179		E
0011	HOLL	30	1823	1827	1836	S10	E04	10756	05	1.1	13	SF			3	E		20		F
		30	2338		2349	No Flare Patrol														

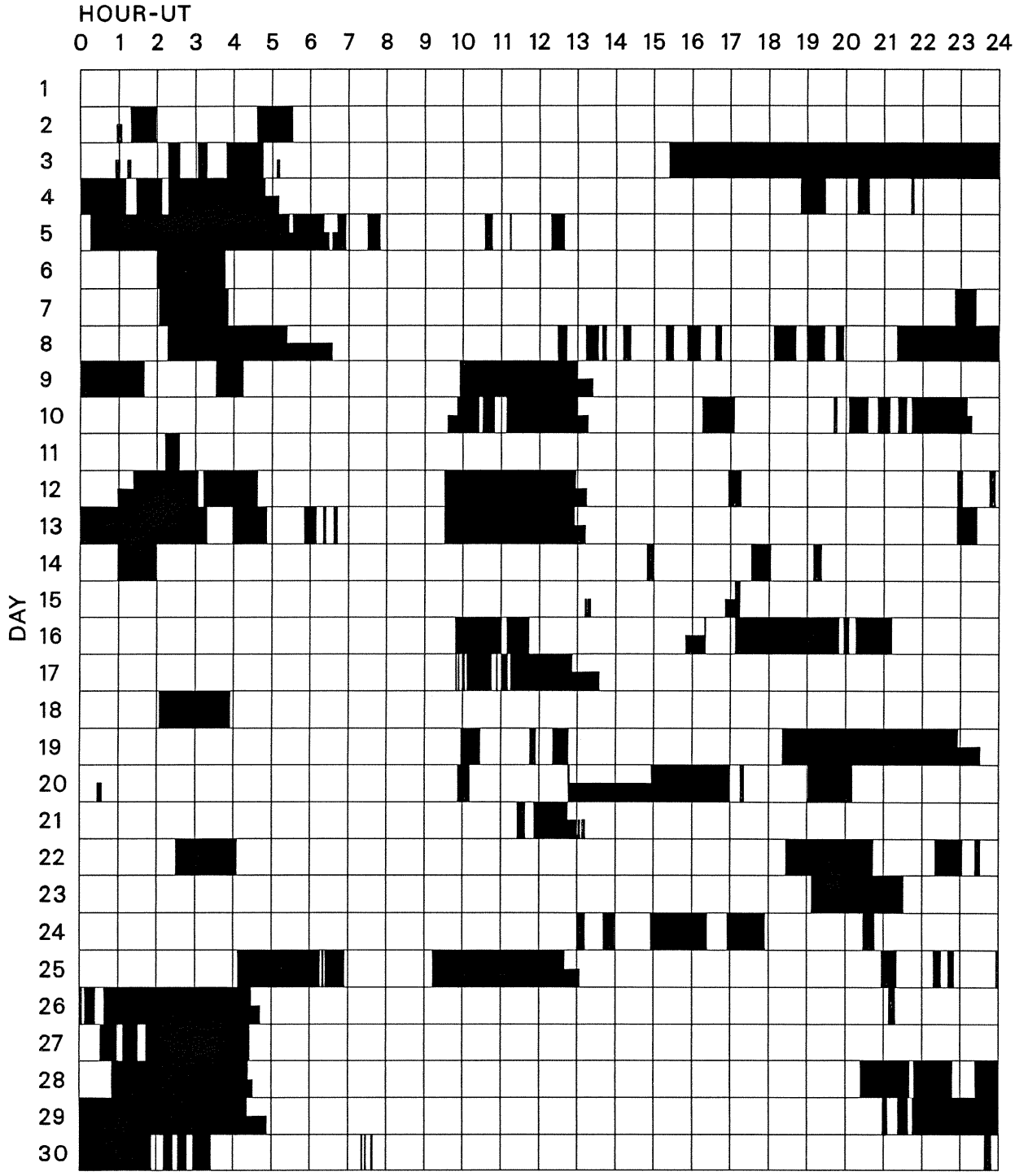
"Remarks"

A = Eruptive prominence whose base is less than 90 degrees from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by high-speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the H and K lines of Ca II.
P = Flare shows Helium D3 in emission.
Q = Flare shows Balmer continuum in emission.
R = Marked asymmetry in H-alpha line suggests ejection of high-velocity material.
S = Brightness follows disappearance of filament in same position.
T = Region active all day.
U = Two bright branches, parallel or converging.
V = Occurrence of an explosive phase; important, expansion within roughly 1 minute that often includes a significant intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide H-alpha line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

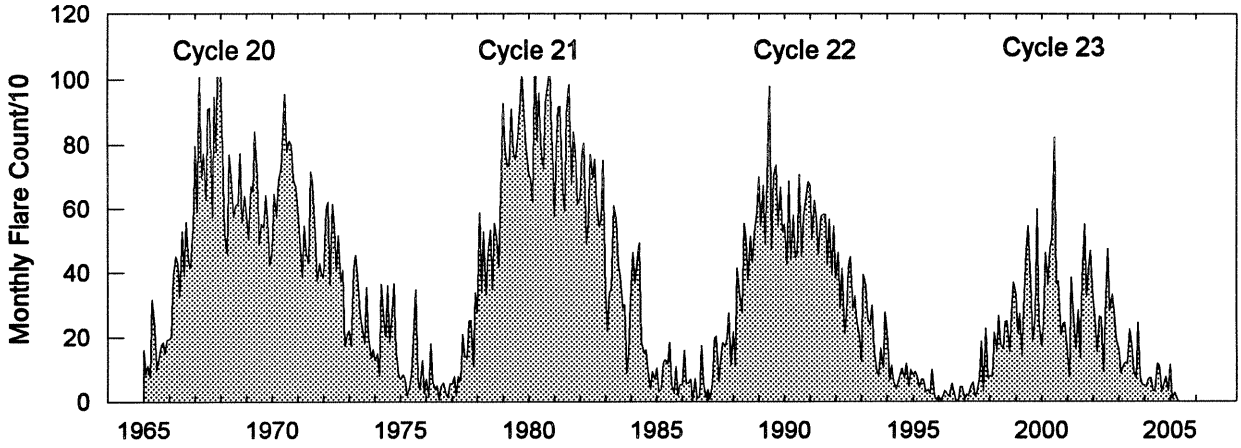
APRIL 2005



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 Learmonth San Vito
Kanzelhoehe

Monthly Counts of Grouped Solar Flares
Jan 1965 - Apr 2005



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									163

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

SOLAR RADIO EMISSION
Outstanding Occurrences

APRIL 2005

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
01	245	SGMR	8	S	2134.0	2134.0	U	55.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	2151.0	2155.0	5.0	56.0			QL=4 ST=2 TYP=3
04	127	TORN	43	NS	0720.0		380.0		3.0		V=1
05	245	PALE	8	S	0041.0	0041.0	1.0	110.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	0041.0	0041.0	U	58.0			QL=4 ST=2 TYP=3
06	4995	LEAR	8	S	0618.0	0618.0	U	58.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0624.0	0624.0	U	53.0			QL=4 ST=2 TYP=3
	33	UPIC	3	S	1150.0	1150.2	1.0				UNCERTN
08	127	TORN	43	NS	1145.0		145.0		7.0		V=1
11	127	TORN	43	NS	0920.0		260.0		5.0		V=0
	2840	PEKG	1	S	0115.0	0117.3	4.0	9.4			
	2804	VORO	2	S/F	0116.9	0117.2	1.2	5.7			
	2840	PEKG	5	S	0130.0	0132.7	8.0	11.4			
	2804	VORO	1	S	0132.3	0132.7	1.0	7.7			
	2840	PEKG	1	S	0200.0	0203.6	5.0	6.3			
	2804	VORO	4	S/F	0203.1	0203.7	1.3	10.9			
	2800	HIRA	8	S	0204.0	0204.0	1.0	10.0			0
	2804	VORO	8	S	0232.7	0232.8	0.5	3.9			
	2840	PEKG	1	S	0249.0	0250.2	4.0	5.4			
	2804	VORO	2	S/F	0250.3	0250.6	1.0	5.7			
	2840	PEKG	1	S	0824.0	0827.3	7.0	5.3			
	900	GORK	41	F	0825.2	0826.0	2.4	35.0			
	900	GORK	41	F	0825.2	0827.3		156.0			
	2950	GORK	41	F	0826.7	0827.1	3.1	5.1			
	2950	GORK	41	F	0826.7	0829.1		2.6			
	245	PALE	8	S	1737.0	1737.0	U	190.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1737.0	1737.0	U	150.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1821.0	1821.0	U	68.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1821.0	1821.0	U	70.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2058.0	2058.0	U	280.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	2058.0	2058.0	U	230.0			QL=4 ST=2 TYP=3
12	127	TORN	43	NS	1000.0		250.0		5.0		V=0
	245	LEAR	8	S	0345.0	0345.0	U	81.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0348.0	0349.0	1.0	310.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	0349.0	0349.0	1.0	280.0			QL=4 ST=2 TYP=3
13	127	TORN	44	NS	1117.0E		33.0D		5.0		V=1
14	127	TORN	43	NS	0943.0		317.0		4.0		V=0
15	245	LEAR	8	S	0505.0	0505.0	U	83.0			QL=4 ST=2 TYP=3
16	127	TORN	43	NS	0938.0		322.0		5.0		V=0
	235	CUBA	44	NS	1930.0E		360.0D		19.0		
17	127	TORN	43	NS	0712.0		468.0		11.0		V=2
	2840	PEKG	45	C	0134.0	0139.1	11.0	16.2			
	2800	HIRA	7	C	0138.0	0139.0	3.0	15.0			
	245	LEAR	49	GB	0138.0	0138.0	1.0	640.0			QL=4 ST=2 TYP=6
	410	LEAR	49	GB	0138.0	0138.0	1.0	660.0			QL=4 ST=2 TYP=6
	610	LEAR	49	GB	0138.0	0139.0	1.0	550.0			QL=4 ST=2 TYP=6
	245	PALE	49	GB	0138.0	0139.0	1.0	600.0			QL=4 ST=2 TYP=6
	410	PALE	49	GB	0138.0	0139.0	2.0	740.0			QL=4 ST=2 TYP=6
	610	PALE	49	GB	0138.0	0139.0	1.0	650.0			QL=4 ST=2 TYP=6
	2840	PEKG	1	S	0247.0	0249.4	5.0	5.8			
	33	UPIC	46	C	1222.5	1224.0	3.5				
	245	SGMR	8	S	1223.0	1223.0	U	98.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1223.0	1223.0	U	97.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1223.0	1223.0	U	43.0			QL=4 ST=2 TYP=3
	2800	PENT	3	S	2059.0	2103.0	19.1	58.0			
	2695	SGMR	8	S	2103.0	2103.0	1.0	51.0			QL=4 ST=2 TYP=3
	4995	SGMR	8	S	2103.0	2104.0	2.0	75.0			QL=4 ST=2 TYP=3
	9500	CUBA	1	S	2103.5	2104.1	4.8	33.0	16.0		

SOLAR RADIO EMISSION
Outstanding Occurrences

APRIL 2005

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
17	2695	PALE	8	S	2104.0	2104.0	1.0	63.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	2104.0	2104.0	1.0	74.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	2312.0	2312.0	U	63.0			QL=4 ST=2 TYP=3
18	127	TORN	44	NS	0630.0E		510.0D		13.0		V=2
	2950	GORK	2	S/F	0622.2	0623.2	1.4	2.0			
	245	LEAR	8	S	0635.0	0635.0	U	63.0			QL=4 ST=2 TYP=3
19	127	TORN	43	NS	0936.0		240.0		5.0		V=0
	900	GORK	42	SER	0741.0	0815.0		120.0			
	900	GORK	42	SER	0741.0	0752.4	67.0	49.0			
	2950	GORK	22	GRF	0809.0	0814.7		2.9			
	2950	GORK	22	GRF	0809.0	0809.8	9.4	2.9			
	2950	GORK	1	S	0821.0	0821.3	1.1	2.9			
	2950	GORK	1	S	0822.7	0823.1	0.7	2.9			
	2950	GORK	5	S	0824.1	0827.4	3.8	3.9			
	2950	GORK	1	S	0828.5	0829.0	1.1	2.0			
	9100	GORK	40	F	0859.6	0900.3	1.5	16.0			
	9100	GORK	46	C	0919.0	0920.7		18.0			
	9100	GORK	46	C	0919.0	0919.9	2.5	23.0			
	9100	GORK	46	C	0950.8	0953.2		50.0			
	9100	GORK	46	C	0950.8	0952.3	2.7	16.0			
20	127	TORN	43	NS	0935.0		325.0		5.0		V=1
	245	LEAR	8	S	0655.0	0655.0	U	59.0			QL=4 ST=2 TYP=3
	9100	GORK	4	S/F	0729.7	0730.0	1.1	56.0			
	127	TORN	49	GB	0838.7	0845.8	18.2	540.0	360.0		
23	127	TORN	43	NS	1110.0		95.0		4.0		V=0
24	9100	GORK	4	S/F	0647.2	0647.7	0.8	75.0			
25	9100	GORK	2	S/F	0703.6	0704.4	2.5	18.0			
	2950	GORK	2	S/F	0704.0	0704.3	1.6	2.2			
26	127	TORN	43	NS	0845.0		375.0		5.0		V=1
27	127	TORN	43	NS	0905.0		355.0		7.0		V=1,DISTURBED
28	127	TORN	44	NS	1252.0E		78.0D		7.0		V=1
	33	UPIC	45	C	0830.5	0831.0	1.0				
	33	UPIC	40	F	1431.0	1434.0U	4.0				
	245	PALE	8	S	1927.0	1927.0	U	69.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1927.0	1927.0	U	75.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2007.0	2007.0	U	57.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	2039.0	2039.0	U	57.0			QL=4 ST=2 TYP=3
29	127	TORN	43	NS	0930.0		180.0D		5.0		V=1
	2840	PEKG	5	S	0015.0	0018.9	6.0	12.7			
	2800	PENT	1	S	0016.0	0019.0	6.2	10.0			
	2950	GORK	1	S	0644.5	0645.2	1.6	4.7			
	2695	SGMR	8	S	1124.0	1124.0	U	58.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1124.0	1124.0	U	78.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1928.0	1928.0	U	58.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1929.0	1929.0	U	83.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1931.0	1931.0	U	70.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1934.0	1934.0	U	59.0			QL=4 ST=2 TYP=3
	245	PALE	8	S	1938.0	1938.0	U	52.0			QL=4 ST=2 TYP=3
	2800	PENT	20	GRF	2019.0	2037.0	71.5	26.0			
	4995	SGMR	4	S/F	2035.0	2037.0	7.0	80.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	2036.0	2037.0	2.0	30.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2036.0	2037.0	2.0	37.0			QL=4 ST=2 TYP=3
	4995	PALE	8	S	2037.0	2037.0	U	52.0			QL=4 ST=2 TYP=3
30	127	TORN	43	NS	0807.0		293.0		7.0		V=1
	8800	LEAR	8	S	0254.0	0254.0	1.0	65.0			QL=4 ST=2 TYP=3
	15400	LEAR	8	S	0254.0	0254.0	U	52.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0255.0	0255.0	U	51.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0339.0	0339.0	U	54.0			QL=4 ST=2 TYP=3

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

APRIL 2005

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
30	33	UPIC	45 C	1213.0	1214.0	1.5				
	┌15400	SGMR	8 S	1851.0E	1852.0	1.0D	47.0			QL=2 ST=2 TYP=3
	└15400	PALE	8 S	1852.0	1852.0	U	82.0			QL=4 ST=2 TYP=3
	410	PALE	49 GB	2319.0	2319.0	U	2300.0			QL=4 ST=2 TYP=6

Reports are received routinely from the following observatories:

BERN = Berne	HUMN = Humain	ONDR = Ondrejov	SVTO = San Vito
CRIM = Crimea	IZMI = IZMIRAN	PEKG = Peking	TORN = Torun
CUBA = Havana	KISV = Kislovodsk	PALE = Palehua	TRST = Trieste
GORK = Gorky	KRAK = Krakow	PENT = Penticton	TYKW = Toyokawa
HIRA = Hiraiso	LEAR = Learmonth	POTS = Potsdam	UPIC = Upice
HUAN = Huancayo	NOBE = Nobeyama	SGMR = Sagamore Hill	

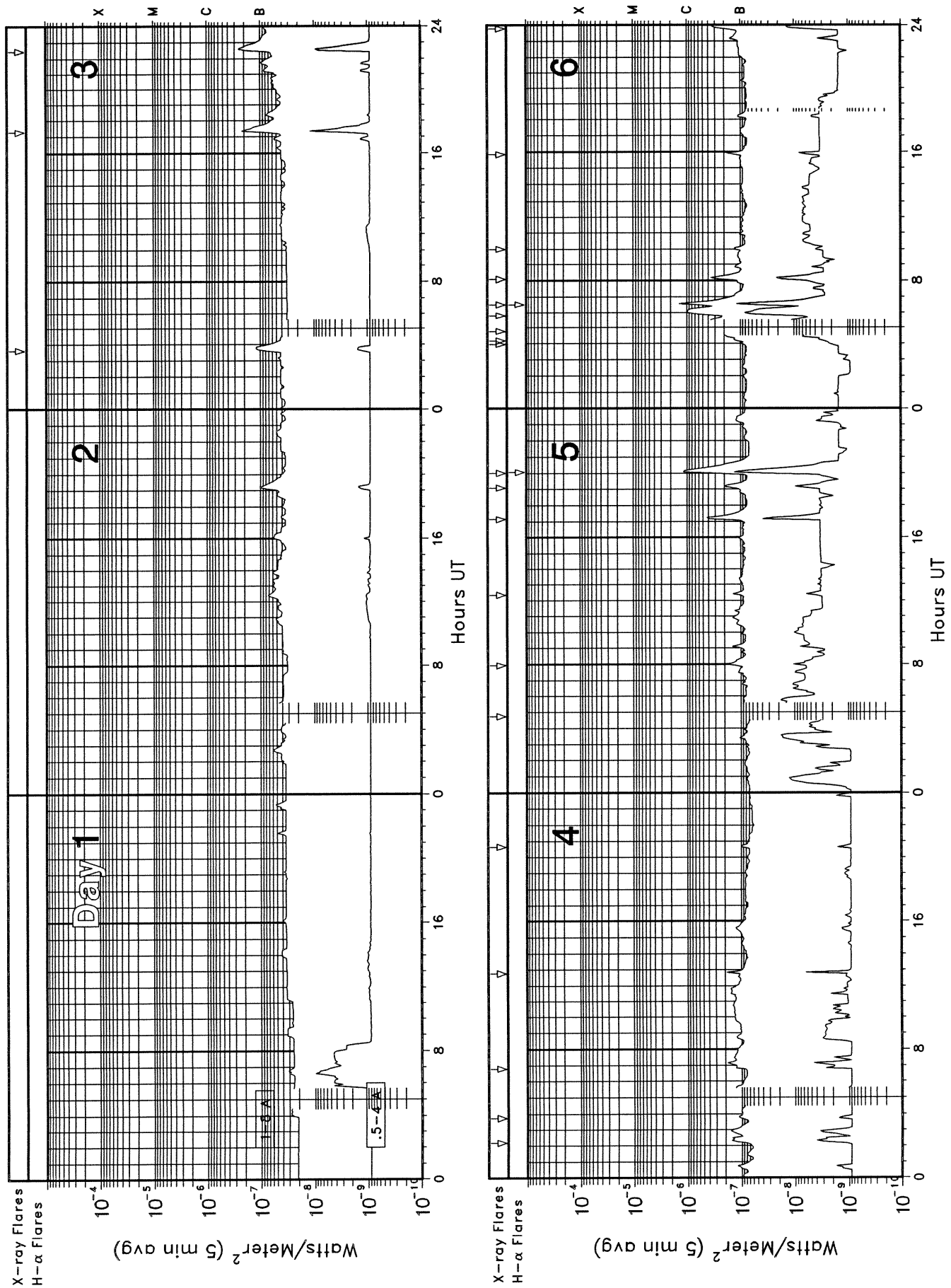
Explanation of Type Code:

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	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

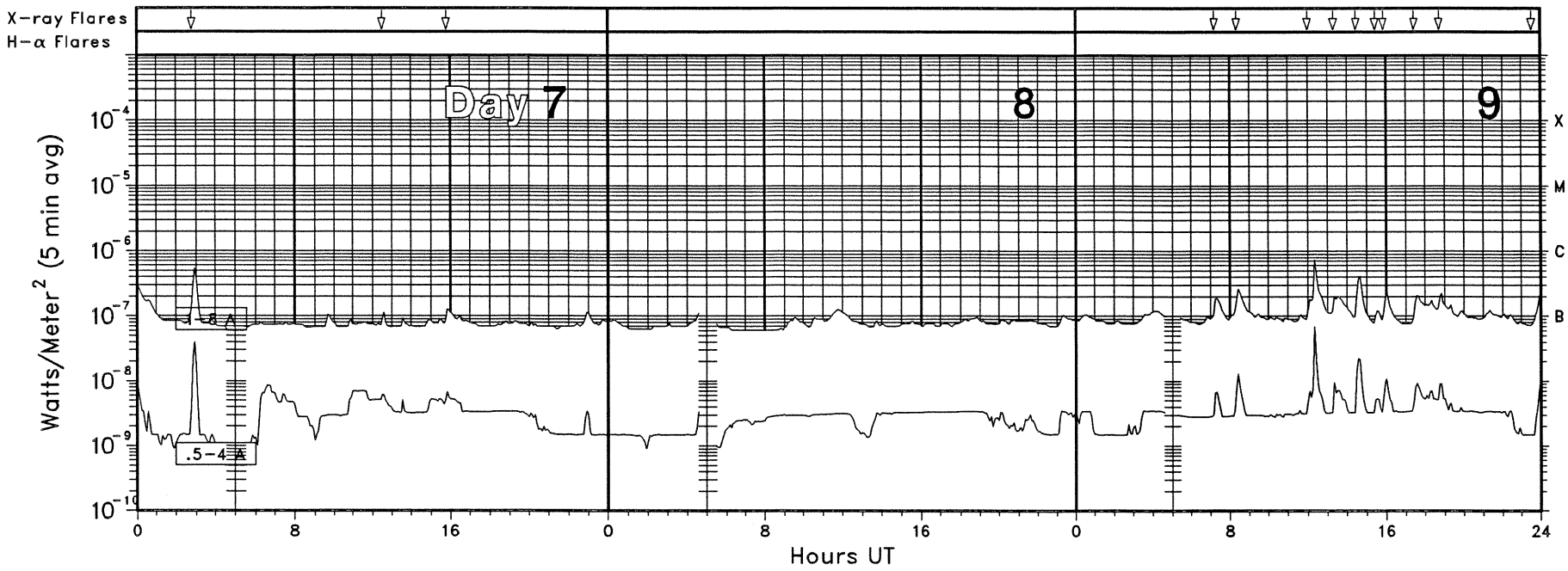
RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; and Hiraiso, Japan 500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

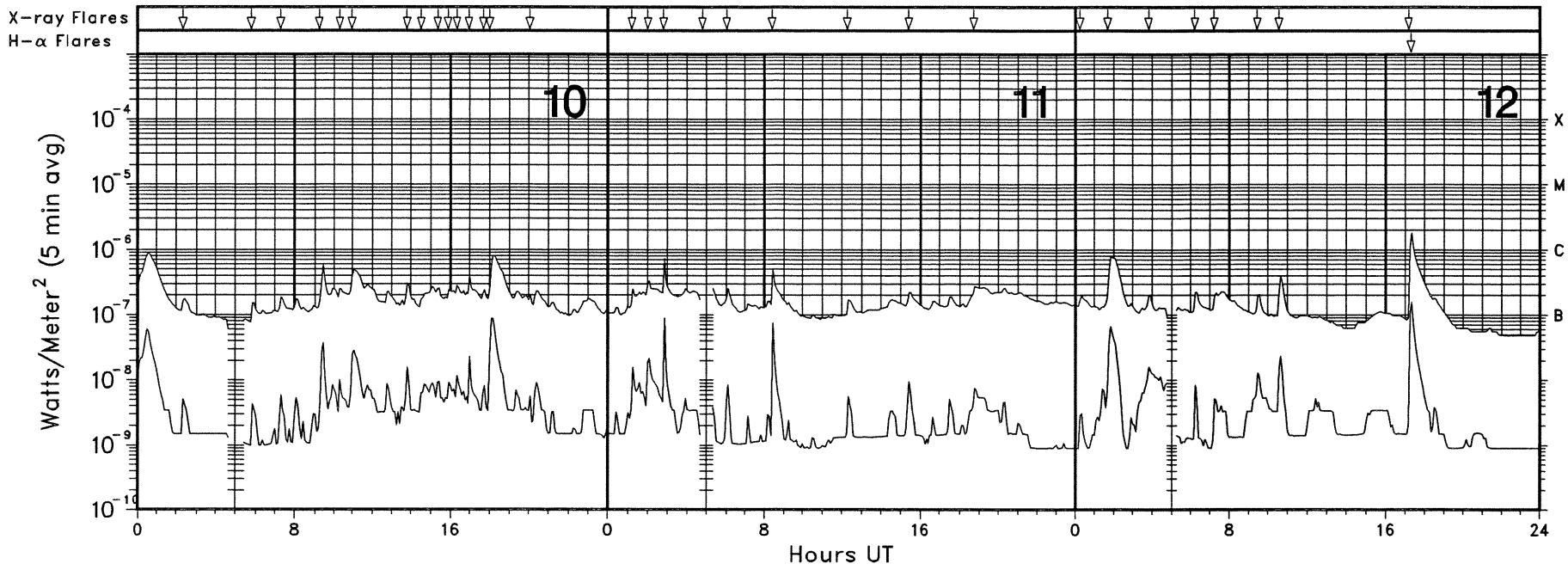
12
Apr 05

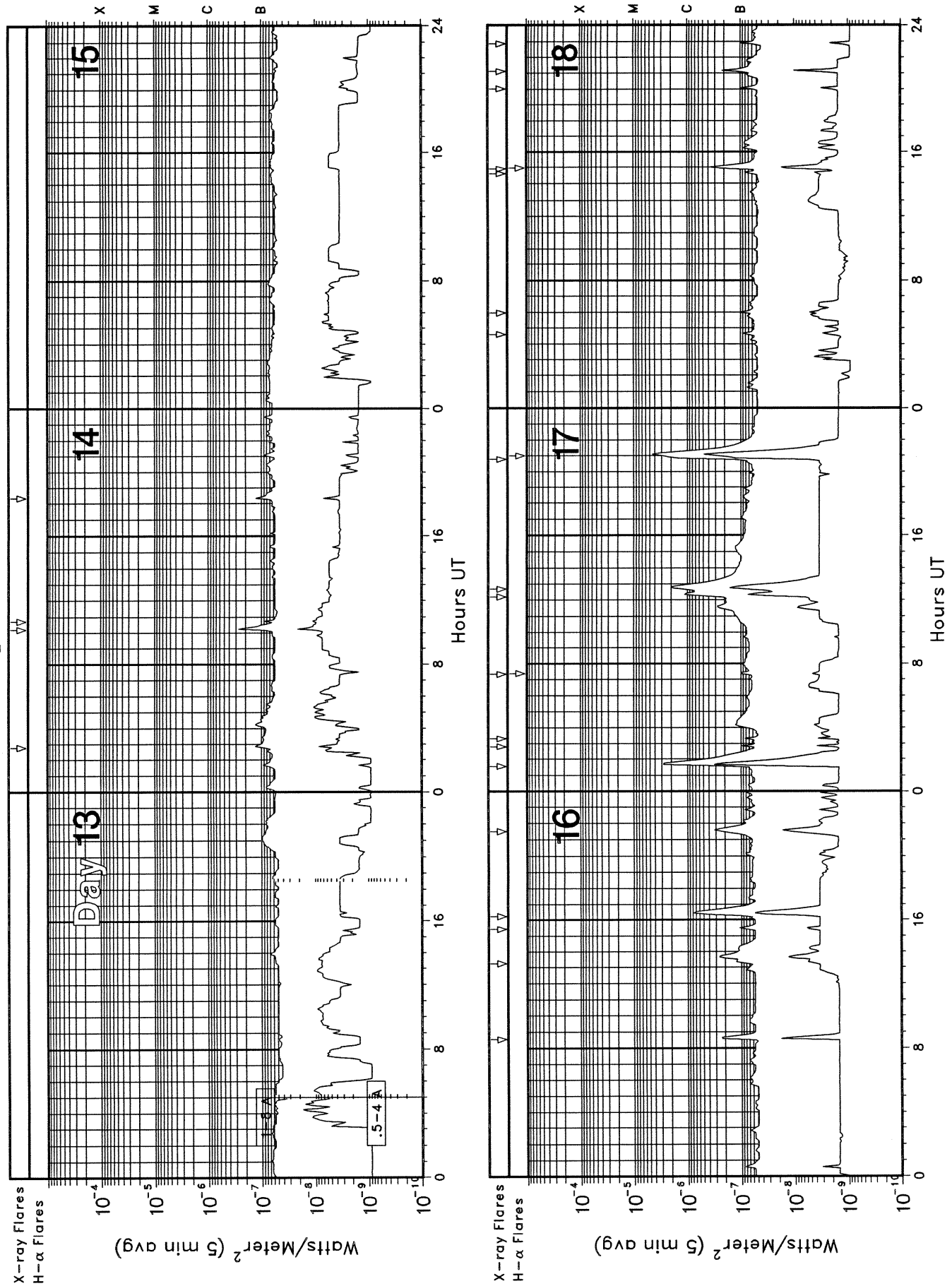

GOES X-RAY DETECTOR
April 2005
Day 1
1
2
3
4
5
6
X
M
C
B
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
1-8 Å
.5-4 Å

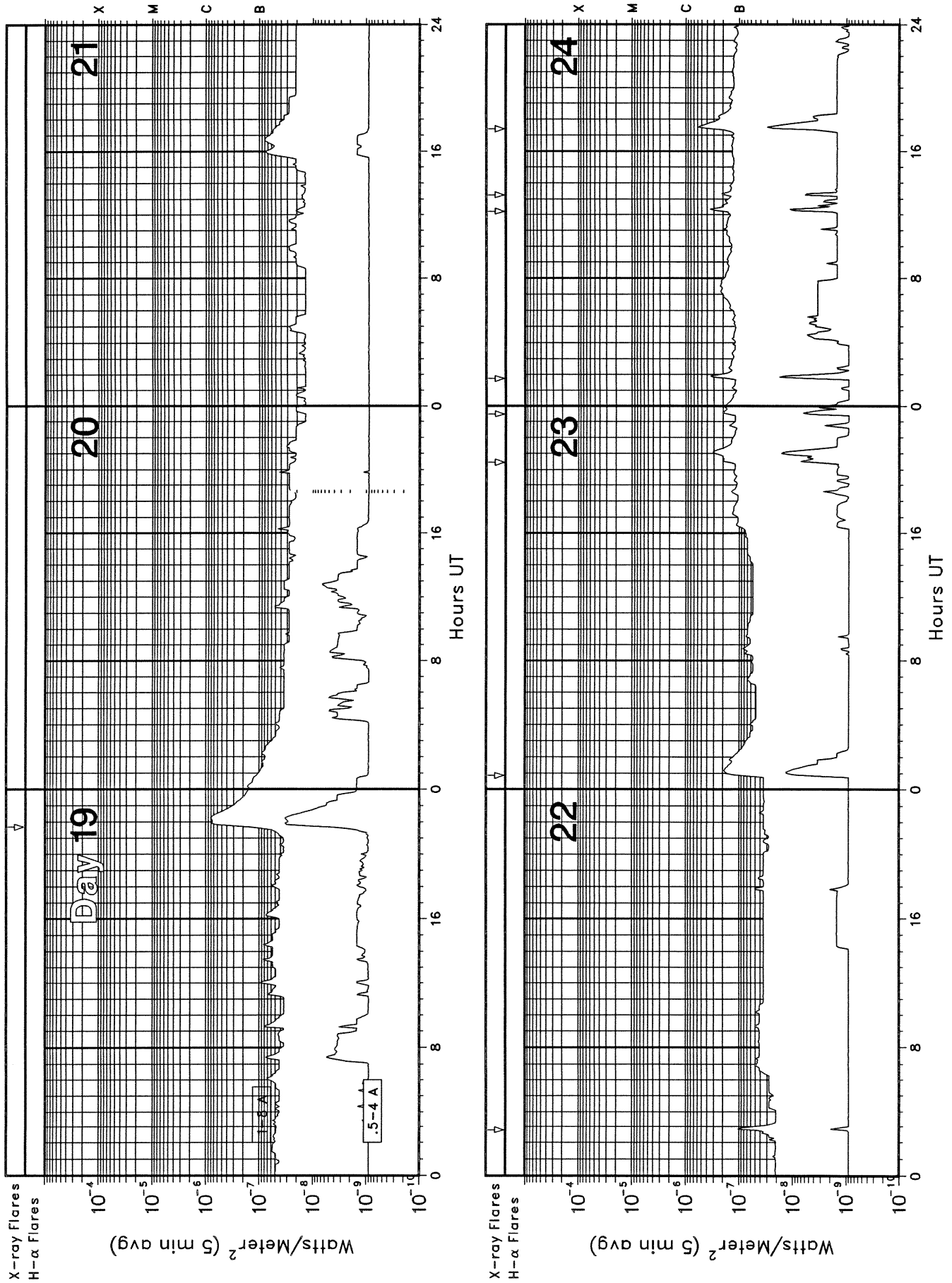
GOES X-RAY DETECTOR

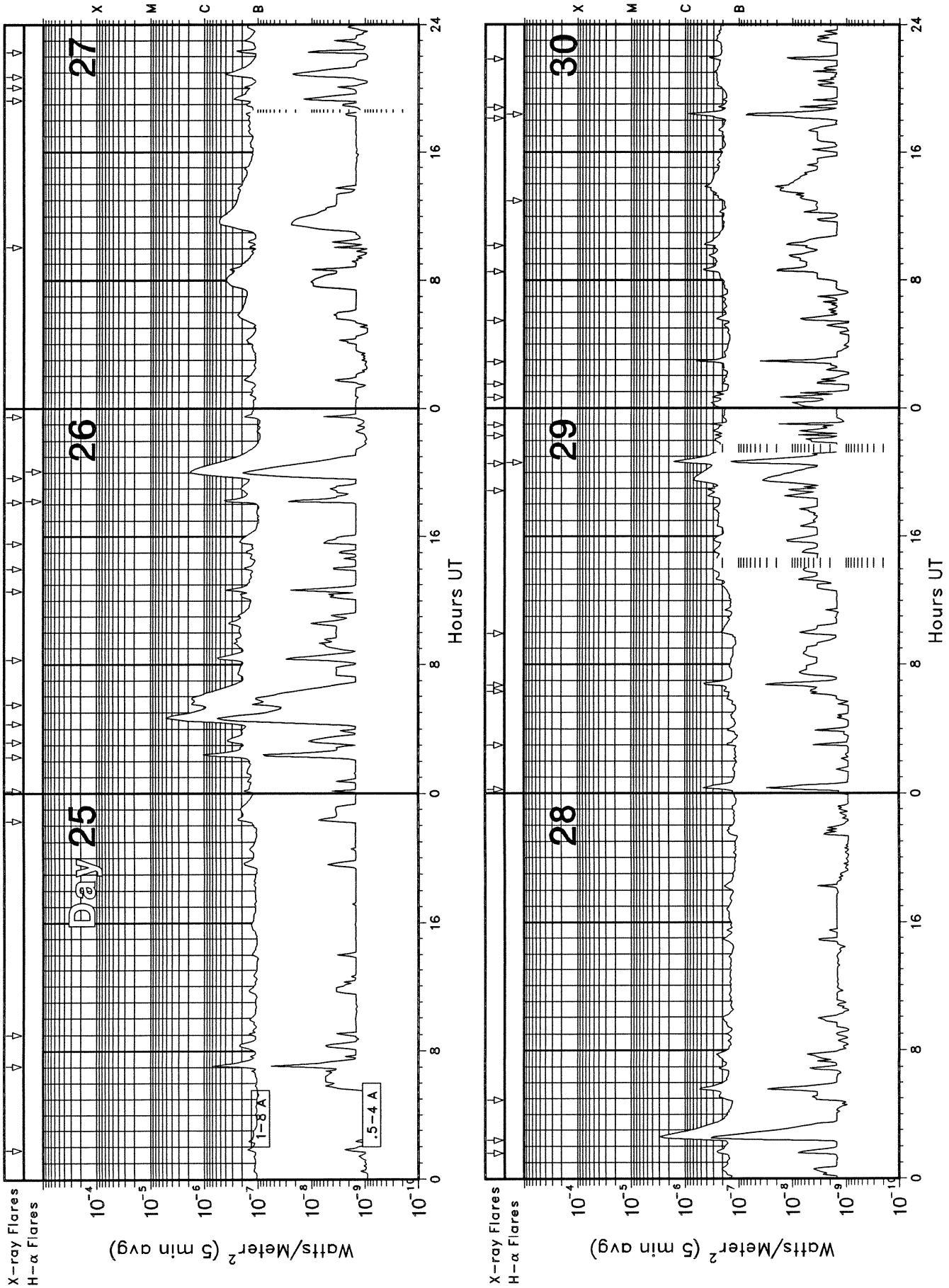
April 2005



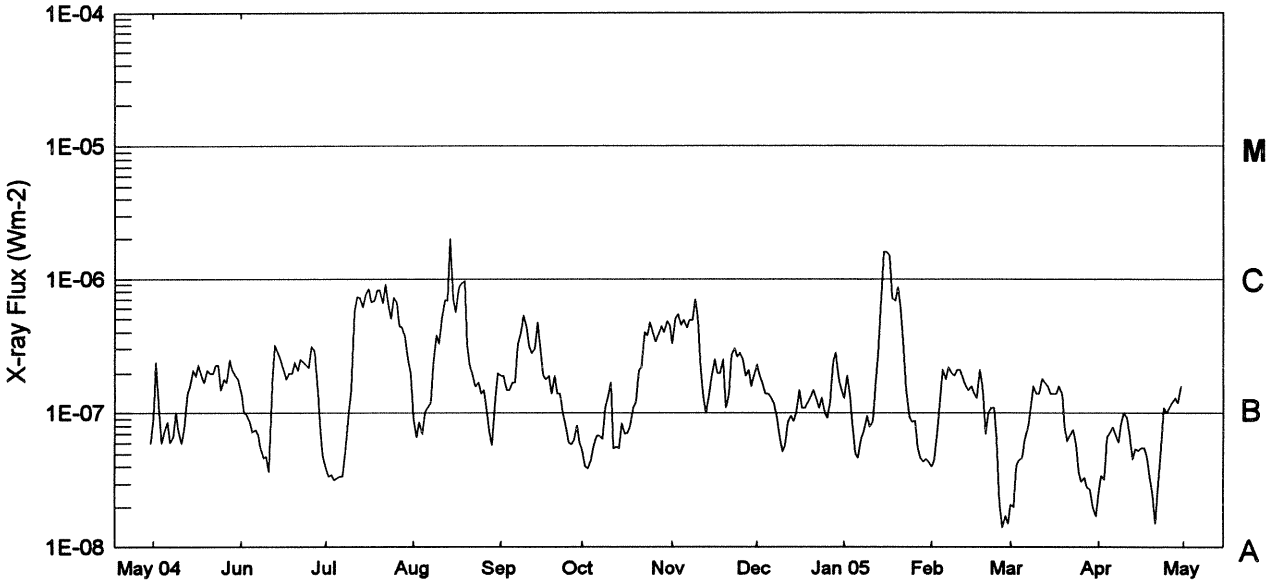



GOES X-RAY DETECTOR
April 2005
Day 13
13
14
15
16
17
18
X
M
C
B
1-8 A
.5-4 A
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
0
8
16
24
10⁻⁴
10⁻⁵
10⁻⁶
10⁻⁷
10⁻⁸
10⁻⁹
10⁻¹⁰


GOES X-RAY DETECTOR
April 2005
Day 19
20
21
22
23
24
X
M
C
B
1-8 A
.5-4 A
X-ray Flares
H-α Flares
Watts/Meter² (5 min avg)
Hours UT
0
8
16
24
10⁻⁴
10⁻⁵
10⁻⁶
10⁻⁷
10⁻⁸
10⁻⁹
10⁻¹⁰


GOES X-RAY DETECTOR
April 2005
Day
25
26
27
28
29
30
X-ray Flares
H-α Flares
X
M
C
B
1-8 A
.5-4 A
Watts/Meter² (5 min avg)
Hours UT
0
8
16
24

Preliminary GOES Satellite Daily X-Ray Background
May 2004 - Apr 2005



Day	May 04	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 05	Feb	Mar	Apr
1	A9.1	B1.4	A3.9	A9.1	B1.9	A4.0	B3.3	B2.3	B1.3	A4.0	A2.1	A2.5
2	B2.4	B1.0	A3.4	A6.6	B1.9	A3.9	B5.1	B1.9	B1.9	A4.5	A2.0	A3.4
3	B1.0	A9.7	A3.5	A8.5	B1.5	A4.5	B5.4	B1.7	B1.4	A7.6	A4.1	A3.2
4	A6.0	A8.5	A3.2	A7.0	B1.5	A5.7	B4.5	B1.4	A8.3	B1.3	A4.5	A6.6
5	A7.5	A7.2	A3.3	B1.0	B1.7	A6.8	B4.9	B1.4	A5.0	B2.1	A4.7	A7.1
6	A8.5	A7.5	A3.4	B1.1	B1.7	A6.8	B4.3	B1.3	A4.7	B1.8	A6.4	A7.8
7	A6.1	A6.9	A3.4	B1.2	B3.2	A6.4	B4.9	B1.2	A6.5	B2.2	A7.8	A6.9
8	A6.6	A5.5	A5.9	B2.3	B4.0	B1.1	B4.9	A9.2	A7.3	B2.0	B1.1	A6.1
9	B1.0	A4.7	B1.0	B3.8	B5.3	B1.3	B7.0	A6.8	A9.5	B1.9	B1.6	A8.5
10	A7.3	A4.8	B1.5	B3.3	B4.3	B1.7	B5.2	A5.2	A7.9	B2.1	B1.4	B1.0
11	A6.0	A3.7	B5.7	B4.9	B3.1	A5.5	B2.1	A5.8	A8.6	B2.1	B1.4	A9.2
12	A7.6	B1.7	B7.3	B6.9	B2.8	A5.6	B1.3	A8.5	B1.6	B1.8	B1.8	A6.9
13	B1.4	B3.2	B7.2	B6.8	B3.0	A5.5	B1.0	A9.5	B2.6	B1.6	B1.7	A4.6
14	B1.6	B2.8	B6.1	C2.0	B4.7	A8.3	B1.4	A8.7	B7.3	B1.5	B1.6	A5.4
15	B2.1	B2.5	B7.5	B7.0	B3.2	A7.0	B1.9	B1.0	C1.6	B1.6	B1.4	A5.3
16	B1.9	B2.1	B8.4	B5.6	B1.9	A7.1	B2.5	B1.5	C1.6	B1.4	B1.4	A5.5
17	B2.3	B1.8	B6.7	B8.7	B1.8	A7.9	B2.0	B1.1	C1.5	B1.3	B1.4	A5.5
18	B1.9	B2.0	B6.8	B9.2	B1.9	B1.1	B2.0	B1.1	B7.1	B2.1	B1.6	A4.8
19	B1.7	B2.0	B8.2	B9.7	B1.4	B1.2	B2.5	B1.2	B6.8	B1.6	B1.4	A3.5
20	B2.1	B2.4	B8.2	B3.2	B1.9	B2.1	B1.1	B1.3	B8.7	A7.0	A7.7	A2.5
21	B2.0	B2.1	B6.5	B2.3	B1.4	B2.2	B1.4	B1.5	B6.2	A9.9	A6.2	A1.5
22	B2.0	B2.5	B9.1	B1.9	B1.4	B4.0	B2.7	B1.3	B3.0	B1.1	A6.9	A2.6
23	B2.3	B2.4	B6.2	B1.6	A9.8	B3.8	B3.0	B1.1	B1.5	B1.1	A7.5	A5.5
24	B2.3	B2.3	B5.0	B1.7	A8.1	B4.7	B2.6	B1.3	A9.3	A6.4	A5.8	B1.1
25	B1.5	B2.2	B7.2	B1.4	A6.1	B3.9	B2.8	B1.0	A8.6	A2.1	A3.7	B1.0
26	B1.8	B3.1	B6.6	B1.5	A5.9	B3.4	B2.5	A9.2	A8.7	A1.4	A3.1	B1.1
27	B1.7	B2.9	B4.4	B1.0	A6.2	B3.9	B1.9	B1.2	A5.6	A1.7	A3.3	B1.2
28	B2.5	B1.7	B4.3	A7.1	A8.1	B4.4	B2.1	B2.4	A4.7	A1.5	A2.8	B1.3
29	B2.1	A7.3	B3.7	A5.8	A6.1	B4.0	B1.6	B2.8	A4.4		A2.7	B1.2
30	B1.9	A4.8	B2.6	B1.3	A5.4	B4.8	B1.9	B1.8	A4.6		A2.0	B1.6
31	B1.8		B2.0	B2.0		B4.5		B1.5	A4.4		A1.7	

Levels below B1.0 are unreliable.

ACTIVE PROMINENCES AND FILAMENTS

APRIL 2005

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	CMP Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/ USAF Reg#	Remarks
07	EPL	0046	0018	S45	E90	04	14.5	1		7	9	E	HOLL		
07	BSL	0114E	0140	S46	E90	04	14.5	3		9	9	E	LEAR		
07	DSF	1614U	0639U	N00	E19	04	9.1		09	0	0	E	SVTO	0749	
11	SPY	2043	0000	N01	W90	04	5.1	3		7	4	E	HOLL	0751	
11	BSL	2052	0000	S02	W90	04	5.1	3		9	9	E	HOLL	0751	
13	DSF	1438U	0658U	S11	E69	04	18.8		11	0	0	E	SVTO		
14	DSF	0056U	1340U	N06	W16	04	12.8		06	0	0	E	HOLL		
14	DSF	0056U	1340U	S11	E67	04	19.1		13	0	0	E	HOLL		
14	DSF	1605U	0517U	S24	E52	04	18.7		16	0	0	E	SVTO		
17	BSL	2107	2228	S15	E76	04	23.6	3		9	9	E	HOLL	0755	
20	APR	2335E	0520	N20	W90	04	14.1	1		7	7	E	LEAR		
28	DSF	0047U	1241U	S08	E24	04	29.8		07	0	0	E	HOLL		
30	DSF	0108U	1316U	S15	E55	05	4.2		13	0	0	E	HOLL		

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.

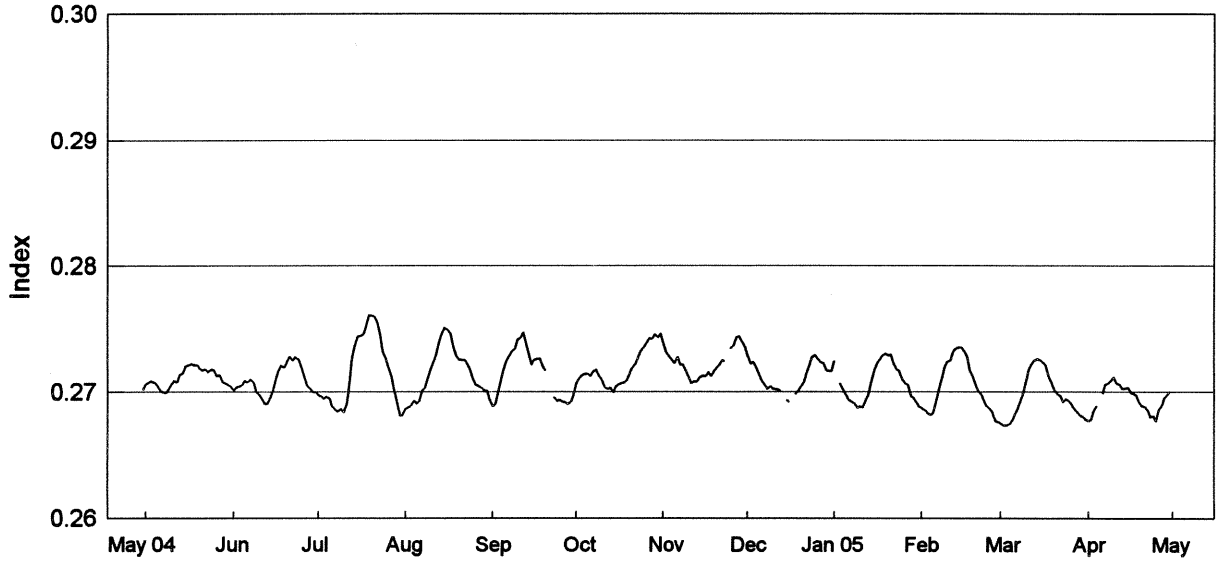
The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

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
May 2004 - Apr 2005
Version 9.1



Day	May 04	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 05	Feb	Mar	Apr
1	0.2706	0.2701	0.2697	0.2686	0.2689	0.2707	0.2739	0.2729	0.2724	0.2687	0.2675	0.2677
2	0.2708	0.2704	0.2697	0.2688	0.2690	0.2711	0.2731	0.2723	—	0.2685	0.2673	0.2678
3	0.2709	0.2705	0.2695	0.2689	0.2701	0.2713	0.2729	0.2724	0.2707	0.2683	0.2673	0.2685
4	0.2707	0.2706	0.2696	0.2693	0.2709	0.2715	0.2725	0.2720	0.2702	0.2682	0.2674	0.2689
5	0.2705	0.2709	0.2695	0.2691	0.2717	0.2714	0.2722	0.2714	0.2697	0.2683	0.2677	—
6	0.2701	0.2708	0.2689	0.2692	0.2724	0.2712	0.2728	0.2709	0.2694	0.2691	0.2681	0.2699
7	0.2700	0.2710	0.2686	0.2701	0.2728	0.2717	0.2721	0.2705	0.2693	0.2701	0.2687	0.2706
8	0.2700	0.2707	0.2684	0.2703	0.2732	0.2718	0.2721	0.2702	0.2691	0.2709	0.2693	0.2706
9	0.2702	0.2700	0.2686	0.2711	0.2735	0.2713	0.2717	0.2704	0.2687	0.2719	0.2698	0.2709
10	0.2706	0.2698	0.2683	0.2718	0.2742	0.2709	0.2712	0.2702	0.2689	0.2724	0.2708	0.2712
11	0.2709	0.2695	0.2690	0.2724	0.2743	0.2704	0.2707	0.2702	0.2687	0.2725	0.2718	0.2708
12	0.2708	0.2691	0.2706	0.2730	0.2748	0.2702	0.2708	0.2702	0.2692	0.2732	0.2722	0.2706
13	0.2714	0.2691	0.2726	0.2739	0.2737	0.2703	0.2708	0.2701	0.2698	0.2734	0.2725	0.2703
14	0.2715	0.2696	0.2736	0.2746	0.2729	0.2700	0.2712	—	0.2707	0.2736	0.2726	0.2703
15	0.2720	0.2701	0.2745	0.2752	0.2721	0.2705	0.2713	0.2693	0.2716	0.2736	0.2725	0.2703
16	0.2721	0.2711	0.2745	0.2750	0.2725	0.2706	0.2712	0.2692	0.2722	0.2732	0.2723	0.2700
17	0.2723	0.2718	0.2746	0.2747	0.2727	0.2707	0.2715	—	0.2726	0.2728	0.2721	0.2699
18	0.2722	0.2721	0.2752	0.2737	0.2726	0.2708	0.2712	0.2698	0.2728	0.2717	0.2712	0.2697
19	0.2722	0.2720	0.2761	0.2728	0.2719	0.2709	0.2716	0.2700	0.2731	0.2712	0.2708	0.2692
20	0.2719	0.2724	0.2761	0.2726	0.2717	0.2715	0.2719	0.2704	0.2729	0.2706	0.2701	0.2689
21	0.2717	0.2728	0.2760	0.2726	—	0.2719	0.2721	0.2707	0.2729	0.2701	0.2699	0.2689
22	0.2718	0.2725	0.2756	0.2726	—	0.2722	0.2725	0.2714	0.2723	0.2698	0.2697	0.2685
23	0.2716	0.2728	0.2747	0.2722	0.2695	0.2727	0.2724	0.2720	0.2718	0.2693	0.2692	0.2680
24	0.2718	0.2726	0.2733	0.2717	0.2693	0.2732	—	0.2727	0.2716	0.2689	0.2694	0.2681
25	0.2718	0.2720	0.2727	0.2710	0.2694	0.2736	0.2735	0.2729	0.2710	0.2686	0.2693	0.2677
26	0.2713	0.2714	0.2719	0.2706	0.2692	0.2739	0.2737	0.2726	0.2707	0.2684	0.2690	0.2685
27	0.2713	0.2705	0.2712	0.2705	0.2692	0.2743	0.2744	0.2724	0.2705	0.2677	0.2687	0.2689
28	0.2708	0.2703	0.2701	0.2704	0.2690	0.2743	0.2745	0.2723	0.2697	0.2676	0.2684	0.2695
29	0.2707	0.2700	0.2692	0.2702	0.2693	0.2746	0.2741	0.2717	0.2695		0.2682	0.2697
30	0.2706	0.2700	0.2681	0.2701	0.2699	0.2744	0.2736	0.2716	0.2691		0.2680	0.2700
31	0.2705		0.2681	0.2694		0.2747		0.2716	0.2689		0.2678	
Mean	0.2711	0.2709	0.2716	0.2715	0.2715	0.2719	0.2723	0.2723	0.2707	0.2707	0.2697	0.2694

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

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

APRIL 2005

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	
2005/04/01	07:50:05	252	20	454	----	----	----	------	256	Only C2
2005/04/01	15:50:05	31	10	336	----	----	----	------	34	Only C2
2005/04/02	00:26:05	345	13	351	----	----	----	------	342	Only C2
2005/04/02	00:50:06	251	10	476	402	551	824	21.5	252	
2005/04/02	11:50:06	204	56	431	413	450	444	1.1	214	
2005/04/04	11:06:06	154	127	421	426	417	419	-0.2	180	Partial Halo
2005/04/04	19:27:17	318	80	383	353	414	407	1.9	325	
2005/04/05	06:50:07	272	26	247	----	----	----	------	272	Only C2
2005/04/05	10:26:05	324	68	301	169	433	426	6.8	309	
2005/04/05	12:50:05	104	76	335	268	411	406	3.9	116	
2005/04/06	04:50:05	303	27	254	----	----	----	------	297	
2005/04/06	12:50:05	103	14	378	----	----	----	------	109	Only C2
2005/04/06	16:26:05	113	35	490	511	470	374	-5.0	111	
2005/04/06	18:26:05	13	56	231	176	290	286	2.2	360	
2005/04/06	22:26:05	255	38	226	193	259	274	1.6	250	
2005/04/07	03:50:05	121	45	314	361	266	0	-9.3	113	
2005/04/07	11:50:05	26	14	487	701	267	0	-49.3	31	
2005/04/07	13:27:17	75	41	405	394	416	433	1.5	82	
2005/04/07	18:26:05	123	41	133	112	152	282	2.8	121	Only C2
2005/04/08	00:50:05	47	28	184	151	217	265	2.1	44	
2005/04/08	11:06:05	75	27	167	----	----	----	------	76	Only C2
2005/04/08	12:26:05	251	51	287	251	326	361	2.8	246	
2005/04/08	15:50:06	349	10	413	503	327	0	-20.9	345	
2005/04/09	00:50:05	77	33	249	----	----	----	------	78	3 points/Only C2
2005/04/09	02:50:05	267	96	191	198	183	150	-0.7	268	
2005/04/09	08:26:05	269	130	329	358	300	270	-2.4	261	Partial Halo
2005/04/09	10:26:09	91	30	737	697	775	845	9.7	87	
2005/04/09	12:06:06	126	21	456	499	408	256	-7.7	126	
2005/04/09	13:50:05	260	171	514	542	486	498	-1.9	253	Partial Halo
2005/04/09	20:06:05	108	27	626	685	568	337	-15.1	109	
2005/04/10	21:26:09	191	105	268	134	424	395	5.7	214	
2005/04/11	16:26:05	244	21	364	327	405	399	2.2	245	
2005/04/12	07:27:20	261	67	233	155	320	299	2.9	255	
2005/04/12	20:50:07	94	15	477	488	465	432	-2.2	97	
2005/04/13	08:06:05	118	24	253	195	311	492	8.7	122	
2005/04/13	21:50:05	89	38	458	479	436	427	-2.0	89	
2005/04/14	03:06:05	77	40	409	----	----	----	------	80	Only C2
2005/04/14	12:26:06	234	43	253	239	267	312	1.7	226	
2005/04/15	05:06:06	114	45	482	407	558	668	11.9	110	
2005/04/15	15:26:06	96	53	302	383	221	0	-26.1	96	Only C2
2005/04/16	02:06:05	94	50	292	306	278	231	-1.7	109	
2005/04/16	08:06:05	315	14	276	308	242	0	-7.3	309	

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

APRIL 2005

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	
2005/04/16	09:06:05	93	42	349	290	410	580	10.4	99	
2005/04/16	16:50:05	95	44	398	389	409	411	0.7	100	
2005/04/16	22:06:06	102	70	291	76	479	1185	58.2	114	Only C2
2005/04/17	02:06:06	100	61	354	358	350	350	-0.2	99	
2005/04/17	10:26:09	199	8	698	----	----	----	------	203	3 points/Only C2
2005/04/17	11:50:18	99	66	205	89	303	798	26.5	98	Only C2
2005/04/17	13:27:19	97	50	610	618	601	606	-0.7	110	
2005/04/17	18:50:05	304	19	327	296	358	420	3.8	298	
2005/04/17	21:26:08	108	89	721	756	684	701	-3.3	113	
2005/04/18	00:26:05	41	39	435	443	427	429	-0.6	45	
2005/04/18	10:06:05	22	37	309	190	438	404	5.6	24	
2005/04/18	13:27:17	272	14	216	----	----	----	------	265	
2005/04/18	19:27:17	99	47	261	----	----	----	------	97	
2005/04/19	12:26:05	286	39	666	509	838	757	13.3	283	
2005/04/19	17:50:05	252	73	175	----	----	----	------	236	Only C2
2005/04/19	22:06:05	Halo	360	824	888	757	791	-6.8	121	
2005/04/20	04:06:06	86	43	296	----	----	----	------	92	
2005/04/21	01:27:16	277	48	684	557	833	752	12.6	282	
2005/04/22	06:26:05	100	123	363	362	364	365	0.1	128	Partial Halo
2005/04/22	07:27:18	319	12	895	----	----	----	------	312	3 points/Only C2
2005/04/23	01:27:15	104	64	240	248	232	101	-2.1	126	Only C2
2005/04/23	05:26:05	306	35	236	118	366	500	10.0	299	
2005/04/24	04:06:05	318	31	328	182	465	653	16.6	312	
2005/04/24	08:50:05	69	34	161	----	----	----	------	71	3 points/Only C2
2005/04/24	16:18:06	27	55	732	780	682	735	-8.2	40	Only C3
2005/04/24	18:26:05	99	51	280	103	462	508	11.8	101	
2005/04/24	18:50:05	63	69	125	0	267	294	3.7	70	
2005/04/25	13:50:05	240	24	465	563	362	156	-12.2	242	
2005/04/25	19:50:05	239	27	538	538	539	539	0.1	233	
2005/04/25	23:06:05	200	209	351	345	357	357	0.3	165	Partial Halo
2005/04/26	11:06:05	180	98	169	148	191	218	1.1	188	
2005/04/26	20:26:05	236	30	813	720	918	881	11.1	235	
2005/04/27	00:50:05	217	120	365	150	599	540	11.5	234	
2005/04/27	03:26:05	144	60	167	161	174	227	1.1	137	Only C2
2005/04/27	05:50:05	144	112	421	402	442	460	2.1	138	
2005/04/27	09:06:05	263	101	159	127	191	242	1.8	262	
2005/04/27	16:04:12	120	52	494	448	545	541	3.9	116	
2005/04/28	00:06:05	134	101	189	99	280	253	2.2	131	
2005/04/28	02:26:05	208	78	477	488	466	472	-0.6	221	
2005/04/29	06:26:05	114	54	317	341	294	253	-2.2	119	
2005/04/29	07:27:18	85	43	321	308	333	349	1.1	91	
2005/04/29	10:50:07	109	137	400	424	375	389	-1.2	89	Partial Halo
2005/04/29	20:26:05	106	70	286	226	343	657	16.1	123	Only C2

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APRIL 2005

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	
2005/04/30	03:34:12	99	33	380	337	424	410	2.3	108	
2005/04/30	08:26:05	41	17	353	413	293	0	-15.0	41	
2005/04/30	09:06:05	92	23	224	----	----	----	------	98	
2005/04/30	10:26:09	92	22	299	292	306	322	0.8	96	
2005/04/30	14:26:05	Halo	360	323	296	350	364	1.9	312	

If you use data from this catalog, please acknowledge as follows:
"This CME catalog is generated and maintained by the Center for Solar Physics and Space Weather, The Catholic University of America in cooperation with the Naval Research Laboratory and NASA. SOHO is a project of international cooperation between ESA and NASA."

CME heights are measured at the fastest segment of the leading edge
PA= Postion Angle measured from Solar North in degrees (Counter clockwise)
ONLINE -- Click on date to view java script movies
ONLINE -- Click on time to see height-time digital files
ONLINE -- Click on speed to view height-time plot
Numbers in 2nd order fit columns correspond to the speed at the last height of measurement and at a distance of 20 solar radii.