AUGUST 2001 NUMBER 684 - Part II

Solar-Geophysical Data comprehensive reports

Data for February 2001 and Miscellaneous
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SOLAR-GEOPHYSICAL DATA

Number 684

(Issued in Two Parts)

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DATA FOR **FEBRUARY 2001**

Hα SOLAR FLARES

FEBRUARY 2001

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	LEAR	01	0710	0711	0718	N28	E55	9330	02	5.6	8	SF		3	E		61		F
		01	1123		1159	No Flare Patrol													
0002	RAMY	01	1259	1259	1306	N26	E53	9330	02	5.6	7	SF		3	E		25		F
0003	HOLL	01	1558	1559	1602	N10	E88	9335	02	8.3	4	SF		3	E		31		
0004	HOLL	01	1606	1607	1610	N10	E89	9335	02	8.3	4	SF		3	E		22		F
0005		01	1710	1710	1724	N28	E51	9330	02	5.7	14	SF					80		F
	HOLL	01	1710	1710	1723	N28	E51	9330	02	5.7	13	SF		3	E		80		F
	RAMY	01	1710	1711U	1725	N27	E51	9330	02	5.7	15	SF		3	E		79		
0006	HOLL	01	1849	1849	1854	N10	E79	9334	02	7.7	5	SF		3	E		10		
0007	HOLL	01	2336	2337	2344	N10	E74	9334	02	7.5	8	SF		3	E		40		F
0008	HOLL	01	2356	2359	2402	N08	E74	9334	02	7.5	6	SF		3	E		37		F
0009	URUM	02	0915E	0915	0915D	N23	W35	9327	01	30.8	6D	1N			P		161	2.4	E
		02	2203		2220	No Flare Patrol													
		02	2233		2244	No Flare Patrol													
		02	2248		2257	No Flare Patrol													
0010		02	2357E	2404	2436	N08	E70	9334	02	8.2	39D	1F					126		F
	HOLL	02	2357E	2359U	2401D	N08	E68	9334	02	8.1	4D	SF		3	E		60		F
	LEAR	02	2359E	2404	2436	N09	E72	9334	02	8.4	37D	1F		2	E		193		F
		03	2134		2141	No Flare Patrol													
0011	LEAR	04	0020	0022	0032	N26	E20	9330	02	5.6	12	SF		4	E		15		
0012	LEAR	04	0202	0204	0214	N25	E18	9330	02	5.5	12	SF		4	E		23		F
0013	LEAR	04	0244	0251	0338	N15	E43	9334	02	7.4	54	SF		4	E		63		
0014	LEAR	04	0615	0616	0620	S17	E70	9338	02	9.6	5	SF		3	E		13		
0015		04	08361	0838	0850	N23	E13	9330	02	5.3	14	SF					73		
	KANZ	04	0836	0838	0849	N23	E13	9330	02	5.3	13	SF		2	E				
	LEAR	04	0837	0838	0850	N23	E13	9330	02	5.4	13	SF		3	E		73		
0016	LEAR	04	0926	0927	0930	S10	E83	9339	02	10.6	4	SF		3	E		32		
		04	1032		1104	No Flare Patrol													
0017	RAMY	04	1229	1231	1246	S12	E83	9339	02	10.8	17	SF		3	E		51		
0018		04	12413	12431	1252	N14	E38	9334	02	7.4	11	SF					23		F
	KANZ	04	1241	1243	1253	N15	E38	9334	02	7.4	12	SF		2	E				
	RAMY	04	1244	1244	1251	N12	E39	9334	02	7.5	7	SF		3	E		23		F
0019		04	23111	2312	2316	N10	E36	9334	02	7.7	5	SF					22		F
	HOLL	04	2311	2312	2314	N10	E36	9334	02	7.7	3	SF		3	E		30		
	LEAR	04	2312	2312	2317	N10	E35	9334	02	7.6	5	SF		3	E		15		F
0020	LEAR	05	0103	0104	0107	S09	E78	9339	02	10.9	4	SF		3	E		14		
0021	LEAR	05	0224	0225	0229	N12	E32	9334	02	7.5	5	SF		3	E		25		F
		05	1040		1049	No Flare Patrol													
0022		05	15098	15145	1548	N08	E38	9335	02	8.5	39	1F					122		F
	HOLL	05	1509	1514	1541	N09	E37	9335	02	8.4	32	1F		3	E		100		F
	RAMY	05	1517	1519	1556	N07	E38	9335	02	8.5	39	1F		3	E		143		F

FEBRUARY 2001

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
0023		05	16461	16502	1658	N22	W73	9327	01	31.1	12	1F					70		
	RAMY	05	1646	1650	1658	N23	W72	9327	01	31.1	12	1F		3	E		106		
	HOLL	05	1647	1652	1658	N21	W74	9327	01	31.0	11	SF		3	E		35		
0024	HOLL	05	2316	2319	2325	N13	E44	9335	02	9.3	9	SF		3	E		12		F
		06	0055		0109	No Flare Patrol													
		06	0636		0658	No Flare Patrol													
0025	KANZ	06	1129	1130	1135	N12	E16	9334	02	7.7	6	SF		2	E				
		06	1852		1914	No Flare Patrol													
		06	1920		1932	No Flare Patrol													
		06	2209		2213	No Flare Patrol													
		06	2239		2354	No Flare Patrol													
0026	KANZ	07	1032	1034	1041	S29	E35	9337	02	10.2	9	SF		2	E				
		07	2127		2153	No Flare Patrol													
		07	2235		2247	No Flare Patrol													
		07	2305		2400	No Flare Patrol													
		08	0000		0014	No Flare Patrol													
		08	0201		0413	No Flare Patrol													
		08	0752		0810	No Flare Patrol													
		08	0833		0838	No Flare Patrol													
0027	KANZ	08	1029	1029	1033	N11	W08	9334	02	7.8	4	SF		2	E				
		08	1933		1942	No Flare Patrol													
		08	2013		2014	No Flare Patrol													
0028	HOLL	08	2029	2029	2033	N08	E04	9335	02	9.1	4	SF		3	E		16		
		08	2049		2139	No Flare Patrol													
		08	2234		2400	No Flare Patrol													
		09	0000		0115	No Flare Patrol													
		09	0201		0334	No Flare Patrol													
		09	0755		1053	No Flare Patrol													
		09	1401		1409	No Flare Patrol													
0029		09	17191	17201	1727	S19	W01	9338	02	9.6	8	SF					16		F
	RAMY	09	1719	1721	1729	S19	W01	9338	02	9.6	10	SF		3	E		19		F
	HOLL	09	1720	1720	1725	S19	W01	9338	02	9.6	5	SF		3	E		13		F
0030	RAMY	09	1726	1727	1731	N08	W06	9335	02	9.3	5	SF		3	E		12		F
0031		09	21053	21071	2126	S19	W02	9338	02	9.7	21	SF					24		FU
	HOLL	09	2105	2107	2135	S19	W02	9338	02	9.7	30	SF		3	E		34		UF
	RAMY	09	2108	2108	2117	S19	W02	9338	02	9.7	9	SF		3	E		14		F
0032	HOLL	09	2143	2144	2213	S21	E01	9338	02	10.0	30	SF		3	E		59		F
0033	HOLL	09	2300	2302	2354	S19	W01	9338	02	9.9	54	SF		3	E		42		FU
0034	LEAR	10	0146	0152	0202	S17	W04	9338	02	9.8	16	SF		3	E		23		F
0035	LEAR	10	0251	0253	0336	S18	W06	9338	02	9.7	45	SF		3	E		50		F
		10	0523		0807	No Flare Patrol													
		10	0823		0827	No Flare Patrol													
		10	0836		0905	No Flare Patrol													
		10	0919		0949	No Flare Patrol													
		10	1006		1102	No Flare Patrol													
		10	1233		1242	No Flare Patrol													
0036		10	20102	20102	2020	S22	W12	9338	02	9.9	10	SF					30		FU
	RAMY	10	2010	2010	2024	S21	W12	9338	02	9.9	14	SF		3	E		44		F
	HOLL	10	2012	2012	2016	S22	W12	9338	02	9.9	4	SF		3	E		17		UF
		10	2245		2317	No Flare Patrol													

Hα SOLAR FLARES

FEBRUARY 2001

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
		10	2321		2329	No Flare Patrol													
0037	LEAR	11	0059	0108	0205	N24	W57	9330	02	6.6	66	1F	3	E			187		F
0038	VORO	11	0101	0116	0152	N28	W64	9340D	02	6.0	51	3F	3	C		0116	735	17.9	
0039	LEAR	11	0107	0113	0151	N16	W63	9346	02	6.3	44	SF	3	E			29		
0040		11	0906	09121	0926	S18	W22	9338	02	9.7	20	SF					47		F
	KANZ	11	0906	0913	0926	S18	W22	9338	02	9.7	20	SF	2	E					
	LEAR	11	0908E	0912	0927	S17	W23	9338	02	9.6	19D	SF	3	E			47		F
0041	KANZ	11	1141	1141	1143	S18	W23	9338	02	9.7	2	SF	2	E					
0042		11	13183	13201	1328	S18	W24	9338	02	9.7	10	SF					10		FH
	KANZ	11	1318	1320	1325D	S18	W24	9338	02	9.7	7D	SF	2	E					
	RAMY	11	1321	1321	1328	S18	W25	9338	02	9.6	7	SF	3	E			10		FH
		11	1524		1545	No Flare Patrol													
0043	VORO	12	0113	0118	0134	S18	W31	9338	02	9.7	21	SN	3	C		0118	108	1.3	
0044	KANZ	12	1005	1007	1026	S18	W28	9345	02	10.3	21	SF	2	E					
0045	KANZ	12	1240	1240	1243	S20	W38	9338	02	9.6	3	SF	2	E					
		12	1415		1505	No Flare Patrol													
		12	1635		1647	No Flare Patrol													
		12	1706		1719	No Flare Patrol													
0046	HOLL	12	2026	2027	2056	N12	W60	9334	02	8.3	30	SF	3	E			68		F
0047	LEAR	13	0538	0539	0548	N08	W23	9348	02	11.5	10	SF	3	E			27		F
0048	URUM	13	0829E	0829	0832	N15	W25	9348	02	11.5	3D	SF		P			32	0.4	D
		13	1528		1530	No Flare Patrol													
0049	RAMY	13	1630	1634	1645	N15	W33	9348	02	11.2	15	SF	3	E			36		
		13	2027		2039	No Flare Patrol													
		13	2214		2258	No Flare Patrol													
0050	LEAR	14	0601	0614	0634	N18	E41	9350	02	17.4	33	SF	4	E			41		F
0051	URUM	14	0828	0836	0844	N16	W39	9348	02	11.4	16	SF		C			113	1.6	E
0052	URUM	14	0902	0910	0922	N15	W39	9348	02	11.4	20	SF		C			96	1.4	E
		14	1517		1543	No Flare Patrol													
		14	1635		1659	No Flare Patrol													
		14	1714		1744	No Flare Patrol													
		14	1831		2025	No Flare Patrol													
		14	2201		2326	No Flare Patrol													
		15	2218		2242	No Flare Patrol													
0053	URUM	16	0435	0438	0438D	N16	W60	9348	02	11.6	3D	SN		P			32	0.7	D
		16	1615		1620	No Flare Patrol													
		16	1630		1655	No Flare Patrol													
		16	1700		1737	No Flare Patrol													
		16	2117		2259	No Flare Patrol													
		17	0034		0039	No Flare Patrol													
		17	2038		2118	No Flare Patrol													
		17	2129		2136	No Flare Patrol													
		17	2155		2220	No Flare Patrol													
		17	2233		2303	No Flare Patrol													
		18	0139		0208	No Flare Patrol													
		18	0600		0619	No Flare Patrol													
		19	0918		0951	No Flare Patrol													

FEBRUARY 2001

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	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
0054	RAMY	19	1131E	1132U	1135	S09	E00	9354	02	19.5	4D	SF		3	E		15		F
0055	RAMY	19	1312	1313	1321	S09	W01	9354	02	19.5	9	SF		3	E		13		F
0056	KANZ	20	1403E	1403	1409	S09	W16	9354	02	19.4	6D	SF		2	E				
0057		20	14501	14511	1456	S10	W16	9354	02	19.4	6	SF					41		
	HOLL	20	1450	1451	1455	S09	W15	9354	02	19.5	5	SF		3	E		41		
	KANZ	20	1451	1452	1456	S10	W16	9354	02	19.4	5	SF		2	E				
0058	HOLL	20	1540	1540	1546	S09	W15	9354	02	19.5	6	SF		3	E		14		F
0059	RAMY	20	2029	2029	2038	S09	W19	9354	02	19.4	9	SF		3	E		17		F
		21	0729		0759	No Flare Patrol													
		21	0816		0840	No Flare Patrol													
0060		21	14139	14253	1440	S08	W28	9354	02	19.5	27	SF					40		F
	KANZ	21	1413	1428	1442	S09	W27	9354	02	19.6	29	SF		2	E				
	RAMY	21	1416	1426	1447	S08	W29	9354	02	19.4	31	SF		3	E		49		F
	SVTO	21	1422	1425	1430	S09	W28	9354	02	19.5	8	SF		3	E		16		F
	HOLL	21	1423E	1423U	1440	S07	W27	9354	02	19.6	17D	SF		3	E		55		F
0061	RAMY	21	2009	2010	2031	S08	W31	9354	02	19.5	22	SF		3	E		23		F
0062	LEAR	22	0004E	0004	0009	S08	W34	9354	02	19.4	5D	SF		5	E		14		
0063	LEAR	22	0036	0036	0043	S09	W34	9354	02	19.5	7	SF		5	E		11		F
0064	LEAR	22	0157	0158	0212	S22	W53	9353	02	18.0	15	SF		5	E		80		F
0065	LEAR	22	0650E	0650U	0656	S09	W36	9354	02	19.6	6D	SF		3	E		17		F
		22	1009		1042	No Flare Patrol													
		22	1059		1118	No Flare Patrol													
		22	1229		1317	No Flare Patrol													
0066	RAMY	22	1319	1323	1326	S07	W41	9354	02	19.5	7	SF		3	E		49		
		22	2120		2133	No Flare Patrol													
		22	2154		2400	No Flare Patrol													
		23	0000		0025	No Flare Patrol													
0067	RAMY	23	1419	1421	1436	N11	E44	9359	02	26.9	17	SF		3	E		16		F
0068	RAMY	23	1625	1627	1632	S26	W27	9357	02	21.6	7	SF		3	E		16		H
		23	1932		1946	No Flare Patrol													
		23	2055		2059	No Flare Patrol													
		23	2154		2258	No Flare Patrol													
0069	LEAR	23	2300E	2327	2408	S12	E46	9359A	02	27.4	68D	SF		4	E		64		FT
		24	0139		0144	No Flare Patrol													
		24	0351		0446	No Flare Patrol													
		24	0505		0515	No Flare Patrol													
		24	0744		0804	No Flare Patrol													
		24	1124		1131	No Flare Patrol													
		24	1231		1317	No Flare Patrol													
		24	1328		1340	No Flare Patrol													
		25	0019		0052	No Flare Patrol													
		25	0156		0205	No Flare Patrol													
0070	RAMY	25	2140	2141	2144	S27	W56	9357	02	21.5	4	SF		3	E		11		
		25	2201		2254	No Flare Patrol													
0071	LEAR	26	0046	0046	0050	S04	W88	9354	02	19.4	4	SF		4	E		16		
		26	1036		1125	No Flare Patrol													

Hα SOLAR FLARES

FEBRUARY 2001

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp	Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
		26	1132		1233	No Flare Patrol														
		26	1338		1354	No Flare Patrol														
		26	2118		2240	No Flare Patrol														
0072		27	10052	10081	1012	N09	W14	9359	02	26.4	7	SF						50	0.7	DF
	URUM	27	1005	1009	1013	N05	W17	9359	02	26.1	8	SF				C		64	0.7	D
	KANZ	27	1007	1008	1011	N11	W12	9359	02	26.5	4	SF			2	E				
	LEAR	27	1007	1008	1012	N12	W12	9359	02	26.5	5	SF			3	E		35		F
0073	URUM	27	1044E	1044	1044D	N12	W12	9359	02	26.5	5D	SF				P		80	0.9	D
0074	KANZ	27	1135	1135	1137	N12	W13	9359	02	26.5	2	SF			2	E				
0075	KANZ	27	1243	1246	1250	N11	W13	9359	02	26.5	7	SF			2	E				
0076	KANZ	27	1325	1326	1327D	N12	W14	9359	02	26.5	2D	SF			2	E				
		27	1526		1547	No Flare Patrol														
		27	2057		2123	No Flare Patrol														
		27	2128		2300	No Flare Patrol														
0077	VORO	28	0135	0138	0146	S02	W79	9358	02	22.2	11	SF			3	C	0138	72	3.0	
		28	1026		1141	No Flare Patrol														
		28	1241		1321	No Flare Patrol														
		28	2144		2230	No Flare Patrol														

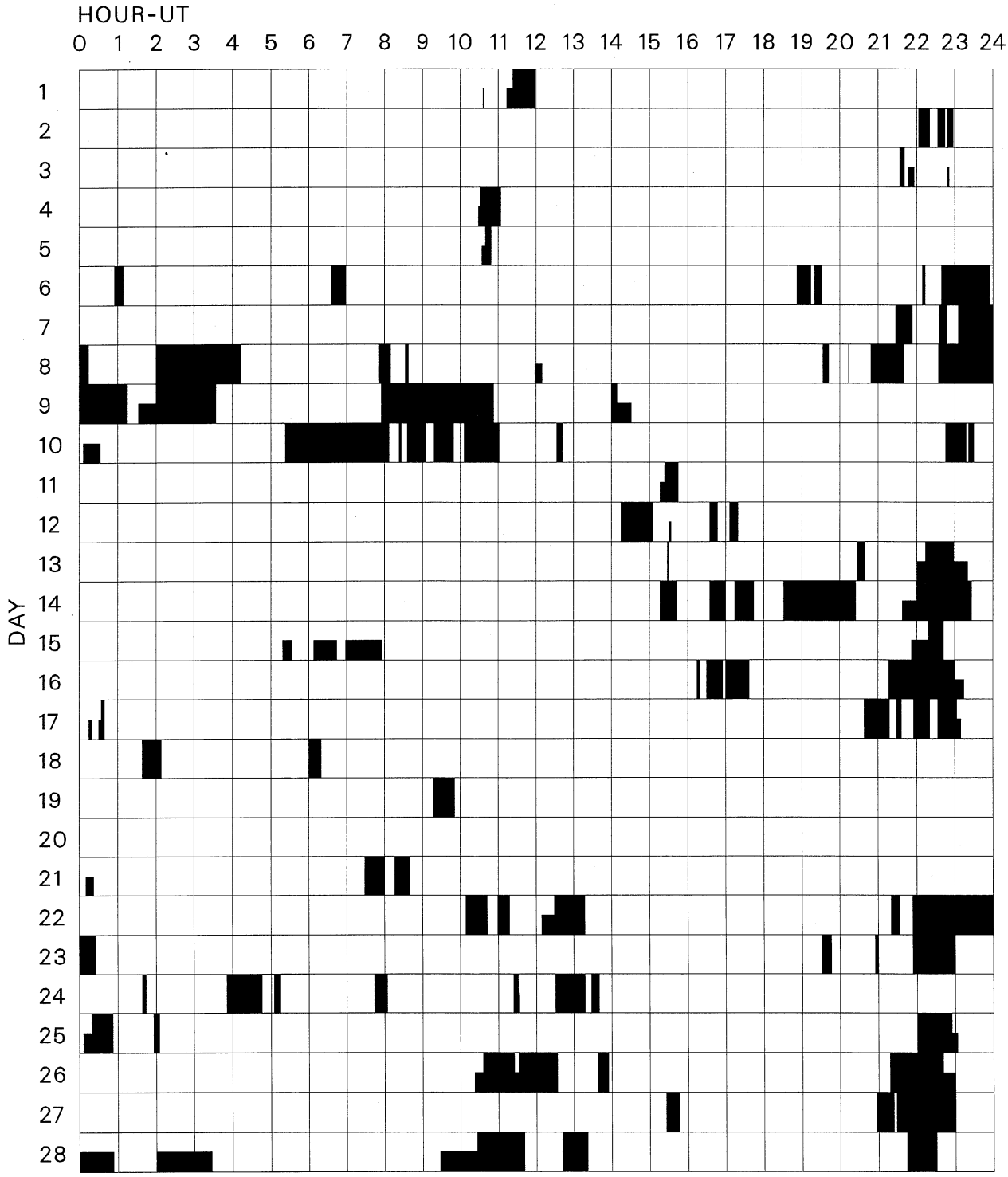
"Remarks"

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

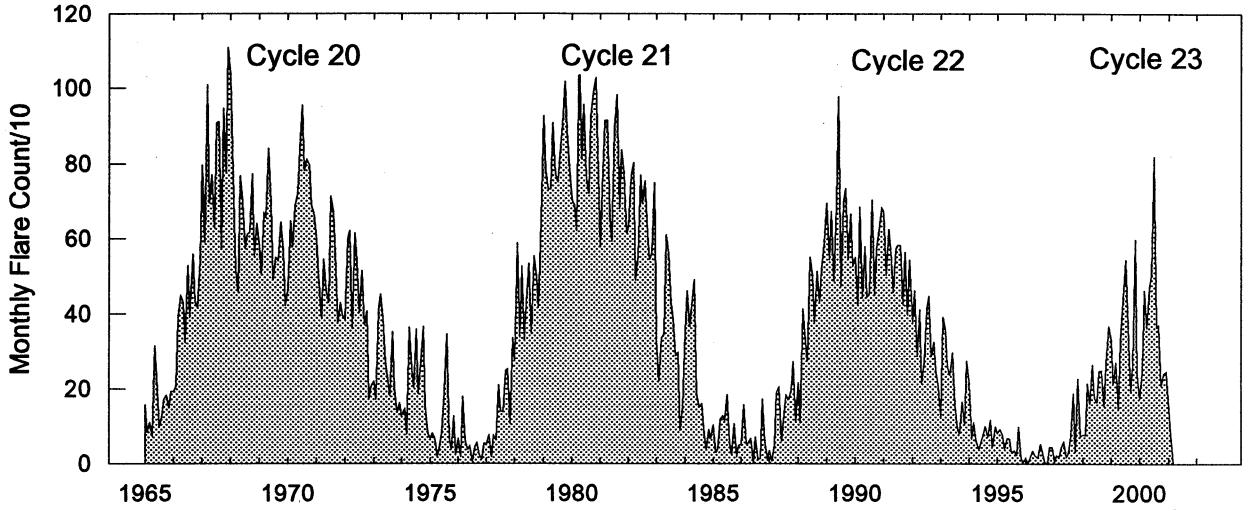
FEBRUARY 2001



Times of no flare patrol, shown here as shades 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 Urumqi Learmonth Ramey San Vito
Kanzelhoehe Mitaka Voroshilov

Monthly Counts of Grouped Solar Flares
Jan 1965 - Feb 2001



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											224

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

FEBRUARY 2001

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	280	CUBA	44	NS	1330.0E		500.0D		64.0		
	235	CUBA	44	NS	1330.0E		500.0D		16.0		
	900	GORK	42	SER	0701.7	0702.4	14.3	85.0			
	900	GORK	42	SER	0701.7	0713.7		50.0			
	2950	GORK	3	S	0709.9	0710.9	8.1	130.0			
	2800	HIRA	3	S	0710.0	0711.0	20.0	130.0			MR
	1415	LEAR	4	S/F	0710.0	0711.0	1010.0	44.0			QL=4 ST=1 TYP=3
	15400	LEAR	4	S/F	0710.0	0710.0	1010.0	32.0			QL=2 ST=1 TYP=3
	8800	LEAR	4	S/F	0710.0	0710.0	1010.0	99.0			QL=2 ST=1 TYP=3
	4995	LEAR	4	S/F	0710.0	0710.0	1010.0	160.0			QL=2 ST=1 TYP=3
	2695	LEAR	4	S/F	0710.0	0710.0	1010.0	120.0			QL=2 ST=1 TYP=3
	9100	GORK	4	S/F	0710.0	0710.9	5.0	95.0			
	3000	IZMI	45	C	0710.0	0710.9	2.3	120.0	44.0		
	204	IZMI	7	C	0923.6	0923.8	0.3	13.0			
	2800	PENT	29	PBI	1705.0	1710.0	27.0U	82.0			
	6700	CUBA	3	S	1709.5	1710.2	1.7	185.0	92.0		3L
	9500	CUBA	1	S	1709.6	1710.2	1.6	35.0	17.0		
	2800	PENT	1	S	2246.0	2249.0	6.0	6.0			
02	235	CUBA	44	NS	1320.0E		510.0D		13.0		
	280	CUBA	44	NS	1320.0E		510.0D		58.0		
	2804	VORO	4	S/F	2348.8	0000.0	19.2	60.0			
	500	HIRA	7	C	2349.0	2355.0	19.0	60.0			0
	2800	HIRA	45	C	2349.0	0000.0	17.0	100.0			0
	2695	LEAR	48	C	2354.0	2359.0	8.0	100.0			QL=2 ST=2 TYP=8
	1415	LEAR	4	S/F	2354.0	2356.0	7.0	59.0			QL=4 ST=2 TYP=3
	610	LEAR	4	S/F	2354.0	2358.0	7.0	210.0			QL=4 ST=2 TYP=3
	410	LEAR	4	S/F	2354.0	2356.0	3.0	29.0			QL=4 ST=2 TYP=3
	245	LEAR	4	S/F	2354.0	2355.0	3.0	18.0			QL=4 ST=2 TYP=3
	610	PALE	4	S/F	2354.0	2358.0	8.0	230.0			QL=4 ST=2 TYP=3
	2695	PALE	48	C	2354.0	2359.0	8.0	86.0			QL=4 ST=2 TYP=8
	200	HIRA	7	C	2354.0	0003.0	10.0	40.0			0
	15400	LEAR	4	S/F	2354.0	2359.0	23.0	42.0			QL=2 ST=2 TYP=3
	4995	LEAR	48	C	2354.0	2359.0	21.0	150.0			QL=2 ST=2 TYP=8
	8800	LEAR	4	S/F	2354.0	2359.0	20.0	77.0			QL=2 ST=2 TYP=3
	4995	PALE	48	C	2354.0	2359.0	21.0	160.0			QL=4 ST=2 TYP=8
	8800	PALE	48	C	2354.0	2359.0	21.0	110.0			QL=4 ST=2 TYP=8
	1415	PALE	4	S/F	2355.0	2356.0	6.0	80.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2355.0	2356.0	2.0	35.0			QL=4 ST=2 TYP=3
	15400	PALE	4	S/F	2357.0	2359.0	3.0	54.0			QL=4 ST=2 TYP=3
03	2804	VORO	29	PBI	0008.0	0008.0	48.6	13.4			
	204	IZMI	7	C	1116.2	1116.3	0.3	108.0			
	15400	LEAR	20	GRF	2300.0	2336.0	55.0	51.0			QL=2 ST=2 TYP=2
	1415	LEAR	8	S	2326.0	2326.0	U	45.0			QL=4 ST=2 TYP=3
04	280	CUBA	44	NS	1300.0E		530.0D		72.0		
	235	CUBA	44	NS	1330.0E		500.0D		16.0		
	2804	VORO	2	S/F	0018.3	0019.4	1.7	3.4			
	2804	VORO	3	S	0201.0	0202.5	3.2	8.3			
	900	GORK	2	S/F	0831.2	0833.2	4.5	4.0			
	2950	GORK	4	S/F	0835.8	0837.3	2.5	16.0			
	3000	IZMI	20	GRF	0835.9	0837.3	2.7	17.0	0.8		
	900	GORK	8	S	0839.6	0839.7	0.3	65.0			
	2800	PENT	1	S	2308.0	2311.0	6.0	11.0			
05	204	IZMI	43	NS	1001.0		120.0U		10.0		
	280	CUBA	44	NS	1330.0E		500.0D		90.0		
	235	CUBA	44	NS	1330.0E		500.0D		24.0		
	2804	VORO	45	C	0224.0	0224.9	1.4	13.0			
	2804	VORO	4	S/F	0442.5	0443.8	3.1	68.0			
	2695	LEAR	8	S	0443.0	0443.0	U	66.0			QL=2 ST=2 TYP=3
	900	GORK	42	SER	0923.1	0923.3	10.9	8.1			
	900	GORK	42	SER	0923.1	0932.6		14.0			
	1415	SVTO	4	S/F	1508.0	1510.0	6.0	31.0			QL=4 ST=2 TYP=3
	410	SVTO	4	S/F	1508.0	1512.0	6.0	22.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	1508.0	1512.0	6.0	46.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	1509.0	1515.0	7.0	33.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1510.0	1512.0	4.0	39.0			QL=4 ST=2 TYP=3

SOLAR RADIO EMISSION
Outstanding Occurrences

FEBRUARY 2001

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
05	245	SGMR	48	C	1510.0	1519.0	12.0	64.0			QL=4 ST=2 TYP=8
	1415	SGMR	4	S/F	1510.0	1510.0	12.0	36.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1510.0	1512.0	12.0	68.0			QL=4 ST=2 TYP=3
	4995	SGMR	46	C	1511.0	1514.0	11.0	36.0			QL=4 ST=2 TYP=8
	8800	SGMR	4	S/F	1514.0	1516.0	8.0	34.0			QL=4 ST=2 TYP=3
	410	SGMR	4	S/F	1518.0	1519.0	4.0	54.0			QL=4 ST=2 TYP=3
	610	SGMR	4	S/F	1518.0	1519.0	4.0	42.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1519.0	1519.0	1.0	55.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1519.0	1519.0	1.0	72.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1547.0	1548.0	2.0	88.0			QL=4 ST=2 TYP=3
	2800	PENT	1	S	1645.0	1647.0	4.0	12.0			
	610	SGMR	8	S	1645.0	1647.0	2.0	52.0			QL=4 ST=2 TYP=3
06	204	IZMI	44	NS	0700.0E		300.0D		15.0		
	235	CUBA	44	NS	1315.0E		515.0D		37.0		
	280	CUBA	44	NS	1315.0E		515.0D		117.0		
	410	SVTO	8	S	1147.0	1147.0	U	70.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1250.0	1250.0	1.0	66.0			QL=4 ST=3 TYP=3
	245	SGMR	8	S	1443.0	1443.0	U	68.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1443.0	1443.0	1.0	67.0			QL=2 ST=2 TYP=3
	245	SGMR	8	S	1517.0	1518.0	1.0	54.0			QL=4 ST=2 TYP=3
	245	SVTO	8	S	1517.0	1518.0	1.0	84.0			QL=2 ST=3 TYP=3
07	204	IZMI	44	NS	0700.0E		300.0D		5.0		
	127	TORN	44	NS	1120.0E		220.0D		7.0		V=0
	280	CUBA	44	NS	1300.0E		530.0D		76.0		
	235	CUBA	44	NS	1300.0E		530.0D		18.0		
	2804	VORO	2	S/F	0045.8	0046.7	3.7	8.2			
	204	IZMI	7	C	1156.8	1156.9	0.4	18.0	8.0		
08	280	CUBA	44	NS	1320.0E		510.0D		70.0		
	235	CUBA	44	NS	1320.0E		510.0D		14.0		
09	280	CUBA	44	NS	1320.0E		510.0D		69.0		
	235	CUBA	44	NS	1320.0E		510.0D		15.0		
	204	IZMI	7	C	0845.3	0845.4	0.2	14.0			
	127	TORN	45	C	1042.5	1043.9	3.3	100.0	50.0		UNCERTAIN
	410	SVTO	8	S	1211.0	1212.0	2.0	280.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1212.0	1212.0	1.0	200.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1212.0	1212.0	U	230.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1212.0	1212.0	U	87.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	1755.0	1756.0	2.0	18.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	1755.0	1756.0	2.0	15.0			QL=4 ST=2 TYP=3
	245	PALE	49	GB	1755.0	1756.0	1.0	530.0			QL=4 ST=2 TYP=6
	1415	PALE	8	S	1755.0	1756.0	2.0	45.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1755.0	1756.0	1.0	370.0			QL=4 ST=2 TYP=3
	1415	SGMR	8	S	1756.0	1756.0	U	46.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2143.0	2143.0	1.0	89.0			QL=4 ST=2 TYP=3
	1415	PALE	8	S	2143.0	2143.0	U	110.0			QL=4 ST=2 TYP=3
	6700	CUBA	1	S	2148.2	2148.7	2.6	12.0	6.0		8L
	200	HIRA	8	S	2151.0	2151.0	1.0	50.0			0
	500	HIRA	47	GB	2151.0	2151.0	1.0	515.0			0
	410	PALE	49	GB	2151.0	2151.0	U	710.0			QL=4 ST=2 TYP=6
	245	PALE	8	S	2151.0	2151.0	U	220.0			QL=4 ST=2 TYP=3
	610	PALE	8	S	2151.0	2151.0	U	340.0			QL=4 ST=2 TYP=3
	2800	PENT	8	S	2236.0	2237.0	2.0	15.0			
	200	HIRA	8	S	2237.0	2238.0	1.0	340.0			0
	245	LEAR	8	S	2237.0	2237.0	1.0	280.0			QL=2 ST=2 TYP=3
	245	PALE	8	S	2237.0	2238.0	1.0	440.0			QL=4 ST=2 TYP=3
	410	PALE	8	S	2237.0	2238.0	1.0	86.0			QL=4 ST=2 TYP=3
	2800	PENT	22	GRF	2309.0	2319.0	47.0	4.0			
	200	HIRA	8	S	2310.0	2311.0	1.0	30.0			0
10	235	CUBA	44	NS	1309.0E		521.0D		14.0		
	280	CUBA	44	NS	1309.0E		521.0D		62.0		
	200	HIRA	8	S	0308.0	0309.0	1.0	20.0			0
11	2804	VORO	22	GRF	0057.0	0128.5	88.0	17.6			
	610	SVTO	20	GRF	1026.0E	1035.0	9.0D	48.0			QL=2 ST=2 TYP=2

SOLAR RADIO EMISSION
Outstanding Occurrences

FEBRUARY 2001

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
11	610	SVTO	20	GRF	1026.0	1035.0	9.0	48.0			QL=4 ST=2 TYP=2
	610	SVTO	20	GRF	1029.0E	1030.0	1.0D	48.0			QL=2 ST=3 TYP=2
	1415	SVTO	8	S	1029.0	1029.0	1.0	41.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1029.0	1030.0	1.0	54.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1029.0	1029.0	1.0	35.0			QL=4 ST=2 TYP=3
	4995	SVTO	8	S	1029.0	1029.0	1.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1029.0	1030.0	1.0	97.0			QL=4 ST=2 TYP=3
	15400	SVTO	8	S	1029.0	1029.0	1.0	330.0			QL=4 ST=2 TYP=3
12	235	CUBA	44	NS	1315.0E		515.0D		13.0		
	2804	VORO	3	S	0115.0	0116.6	13.2	6.5			
	33	UPIC	46	C	0708.5	0710.2U	3.5				
	33	UPIC	45	C	0714.5	0715.0	1.0				
	33	UPIC	46	C	0801.0		5.0				
13	280	CUBA	44	NS	1330.0E		500.0D		75.0		
	235	CUBA	44	NS	1330.0E		500.0D		20.0		
14	280	CUBA	44	NS	1330.0E		500.0D		75.0		
	235	CUBA	44	NS	1330.0E		500.0D		17.0		
	900	GORK	46	C	0840.5	0841.3	2.0	21.0			
15	280	CUBA	44	NS	1334.0E		326.0D		72.0		
	235	CUBA	44	NS	1334.0E		326.0D		17.0		
	245	LEAR	8	S	0216.0	0217.0	1.0	94.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0220.0	0220.0	1.0	63.0			QL=4 ST=2 TYP=3
	245	LEAR	8	S	0324.0	0324.0	U	58.0			QL=4 ST=2 TYP=3
	204	IZMI	42	SER	0916.6	0920.7	36.0	47.0			
16	235	CUBA	44	NS	1320.0E		510.0D		17.0		
	280	CUBA	44	NS	1320.0E		510.0D		70.0		
	9100	GORK	4	S/F	0750.4	0750.9	0.8	42.0			
17	235	CUBA	44	NS	1300.0E		530.0D		14.0		
	280	CUBA	44	NS	1300.0E		530.0D		67.0		
18	235	CUBA	44	NS	1300.0E		470.0D		19.0		
	280	CUBA	44	NS	1300.0E		470.0D		60.0		
	200	HIRA	8	S	2232.0	2232.0	1.0	40.0			WR
19	2800	PENT	1	S	2051.0	2054.0	6.0	3.0			
	2800	PENT	1	S	2121.0	2123.0	4.0	4.0			
20	280	CUBA	44	NS	1310.0E		520.0D		66.0		
	33	UPIC	45	C	1435.0	1435.5	1.5				
	410	SGMR	8	S	1453.0	1453.0	U	150.0			QL=4 ST=2 TYP=3
	410	SVTO	8	S	1453.0	1453.0	U	380.0			QL=4 ST=2 TYP=3
	6700	CUBA	20	GRF	1529.0	1612.0	80.0	7.0	3.0		00L
	6700	CUBA	2	S/F	1723.8	1725.6	3.4	10.0	5.0		25L
	410	PALE	8	S	1725.0	1725.0	U	60.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1725.0	1725.0	1.0	60.0			QL=4 ST=2 TYP=3
	410	SGMR	8	S	1748.0	1749.0	2.0	74.0			QL=4 ST=2 TYP=3
	6700	CUBA	2	S/F	1748.0	1748.3	1.8	8.0	4.0		26L
	245	SGMR	8	S	1946.0	1946.0	1.0	73.0			QL=4 ST=2 TYP=3
	6700	CUBA	21	GRF	2005.0	2136.0	148.0D	16.0	8.0		00L SUNSET
	2800	PENT	1	S	2336.0	2340.0	7.0	5.0			
21	235	CUBA	44	NS	1314.0E		516.0D		17.0		
	280	CUBA	44	NS	1314.0E		516.0D		61.0		
	3000	IZMI	20	GRF	0808.2	0820.2	38.2	9.0	1.0		
	9500	CUBA	21	GRF	1411.0	1430.0	113.0D	14.0	7.0		
	6700	CUBA	21	GRF	1412.0	1428.0	33.0	13.0	6.0		6L
	15400	SVTO	4	S/F	1417.0	1420.0	8.0	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1418.0	1425.0	9.0	93.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1419.0	1420.0	4.0	89.0			QL=4 ST=2 TYP=3
	4995	SVTO	4	S/F	1419.0	1425.0	8.0	47.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1419.0	1420.0	1.0	150.0			QL=4 ST=2 TYP=3
	6700	CUBA	2	S/F	1419.2	1421.2	4.8	67.0	33.0		10L
	9500	CUBA	2	S/F	1419.2	1420.2	3.8	54.0	27.0		

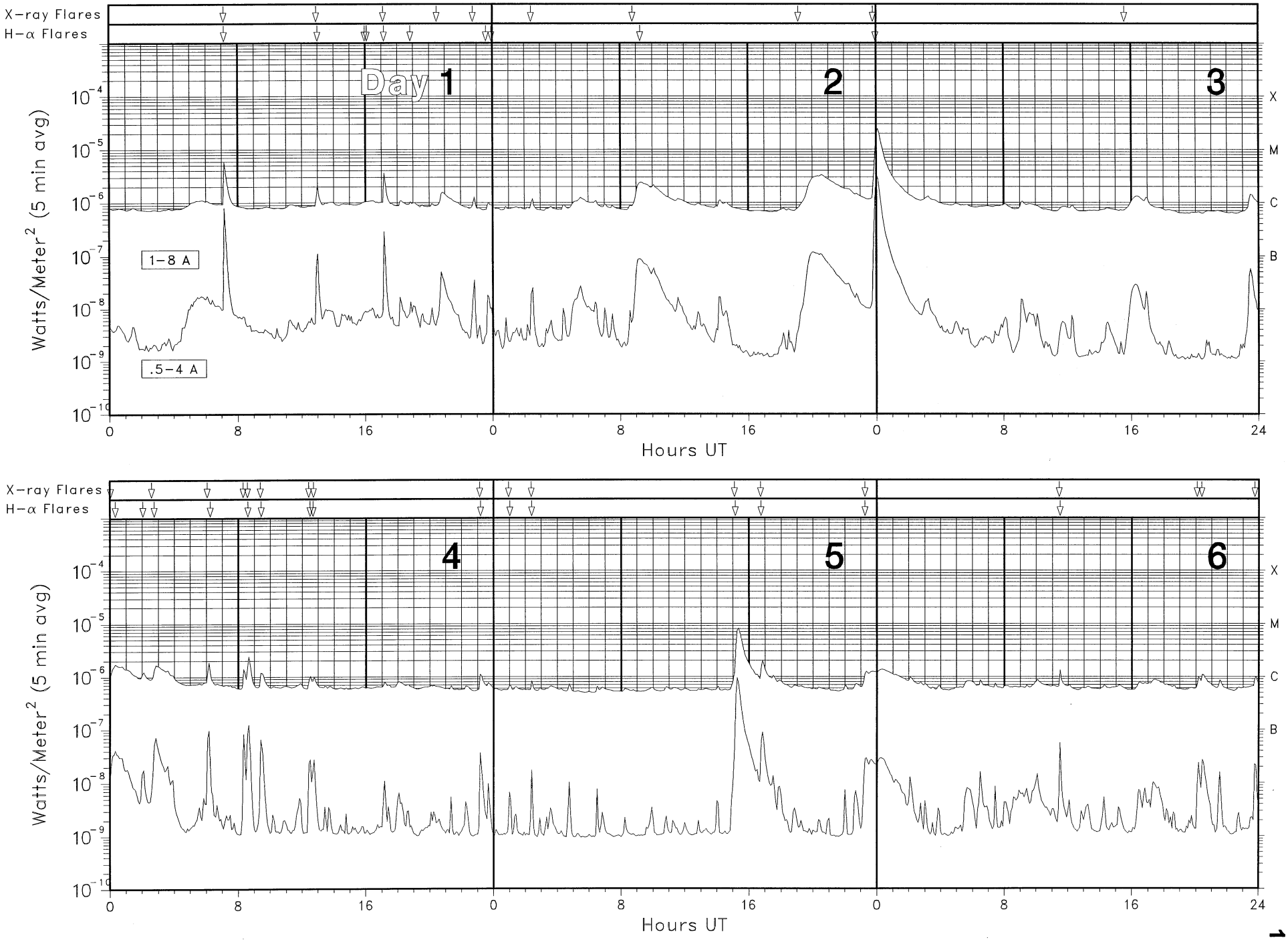
SOLAR RADIO EMISSION
Outstanding Occurrences

FEBRUARY 2001

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
21	4995	SGMR	4	S/F	1420.0	1421.0	3.0	47.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1420.0	1420.0	3.0	56.0			QL=4 ST=2 TYP=3
	610	SGMR	8	S	1420.0	1420.0	U	160.0			QL=4 ST=2 TYP=3
	15400	SGMR	4	S/F	1425.0	1425.0	3.0	57.0			QL=4 ST=2 TYP=3
	4995	SGMR	4	S/F	1425.0	1425.0	3.0	47.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1425.0	1425.0	3.0	100.0			QL=4 ST=2 TYP=3
	245	SGMR	49	GB	1425.0	1425.0	1.0	2400.0			QL=4 ST=2 TYP=6
	15400	SVTO	8	S	1425.0	1425.0	1.0	29.0			QL=4 ST=3 TYP=3
	4995	SVTO	8	S	1425.0	1425.0	1.0	38.0			QL=4 ST=3 TYP=3
	8800	SVTO	8	S	1425.0	1425.0	1.0	79.0			QL=4 ST=3 TYP=3
	245	SVTO	49	GB	1425.0E	1425.0U	1.0D	2300.0			QL=2 ST=3 TYP=6
	9500	CUBA	45	C	1425.2	1425.8	2.1	393.0			
	6700	CUBA	45	C	1425.3	1425.9	2.5	75.0	37.0		12L
	2800	PENT	29	PBI	2251.0	2253.0	11.0	5.0			
22	235	CUBA	44	NS	1300.0E		510.0D		20.0		
	280	CUBA	44	NS	1300.0E		510.0D		72.0		
	2804	VORO	1	S	0156.8	0157.6	1.8	3.3			
	3000	IZMI	22	GRF	0944.9	0947.2	3.0	6.0	3.0		
	3000	IZMI	22	GRF	1043.5	1044.5	2.9	7.0	4.0		
23	204	IZMI	43	NS	0700.0		360.0U		5.0		
	280	CUBA	44	NS	1400.0E		470.0D		67.0		
	235	CUBA	44	NS	1400.0E		470.0D		19.0		
	200	HIRA	7	C	0624.0	0626.0	4.0	70.0			0
	245	LEAR	8	S	0624.0	0625.0	2.0	110.0			QL=2 ST=2 TYP=3
	245	SVTO	8	S	0624.0	0625.0	2.0	150.0			QL=4 ST=2 TYP=3
	245	SVTO	4	S/F	0802.0	0805.0	3.0	220.0			QL=2 ST=2 TYP=3
	245	SGMR	4	S/F	1614.0	1615.0	3.0	140.0			QL=4 ST=2 TYP=3
	245	SGMR	8	S	1800.0	1801.0	1.0	65.0			QL=4 ST=2 TYP=3
24	235	CUBA	44	NS	1345.0E		485.0D		17.0		
	280	CUBA	44	NS	1345.0E		485.0D		67.0		
	200	HIRA	8	S	0114.0	0115.0	2.0	60.0			0
	200	HIRA	8	S	0313.0	0313.0	1.0	15.0			0
	204	IZMI	7	C	1003.0	1003.1	0.2	20.0			
	610	SGMR	8	S	1356.0	1356.0	1.0	430.0			QL=4 ST=2 TYP=3
	610	SVTO	8	S	1356.0	1356.0	1.0	190.0			QL=4 ST=2 TYP=3
25	280	CUBA	44	NS	1329.0E		501.0D		67.0		
	235	CUBA	44	NS	1329.0E		501.0D		16.0		
	2804	VORO	2	S/F	0045.6	0045.9	1.2	5.0			
26	280	CUBA	44	NS	1300.0E		530.0D		64.0		
	235	CUBA	44	NS	1300.0E		530.0D		16.0		
	204	IZMI	7	C	0715.3	0715.4	0.2	13.0			
27	235	CUBA	44	NS	1300.0E		530.0D		14.0		
	280	CUBA	44	NS	1300.0E		530.0D		63.0		
	9100	GORK	4	S/F	0834.0	0834.2	0.4	135.0			
28	235	CUBA	44	NS	1300.0E		530.0D		14.0		
	280	CUBA	44	NS	1300.0E		530.0D		60.0		
	204	IZMI	41	F	0915.6	0915.9	0.5	45.0			
	204	IZMI	42	SER	1049.8	1050.0	1.2	104.0			

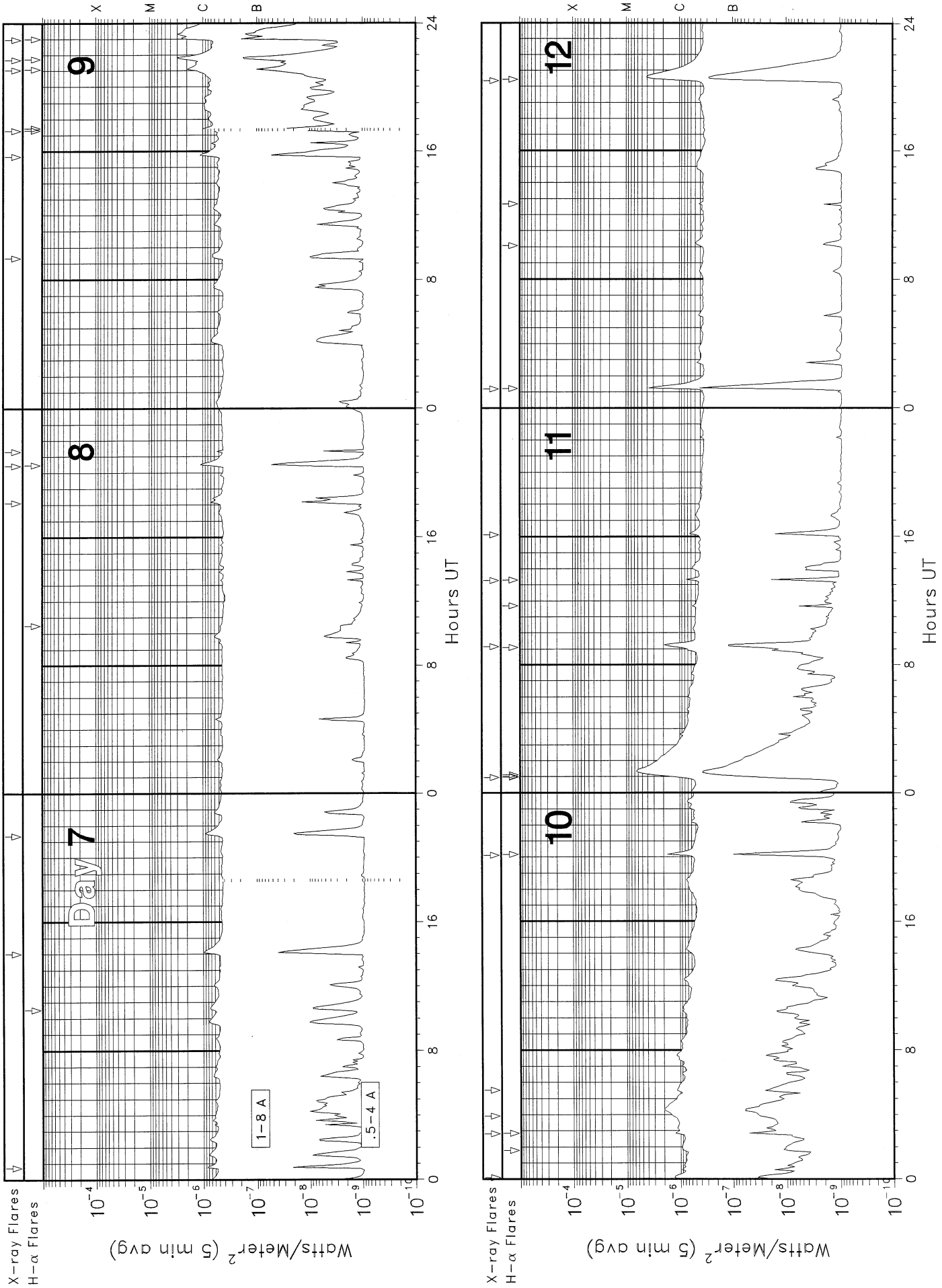
GOES X-RAY DETECTOR

February 2001



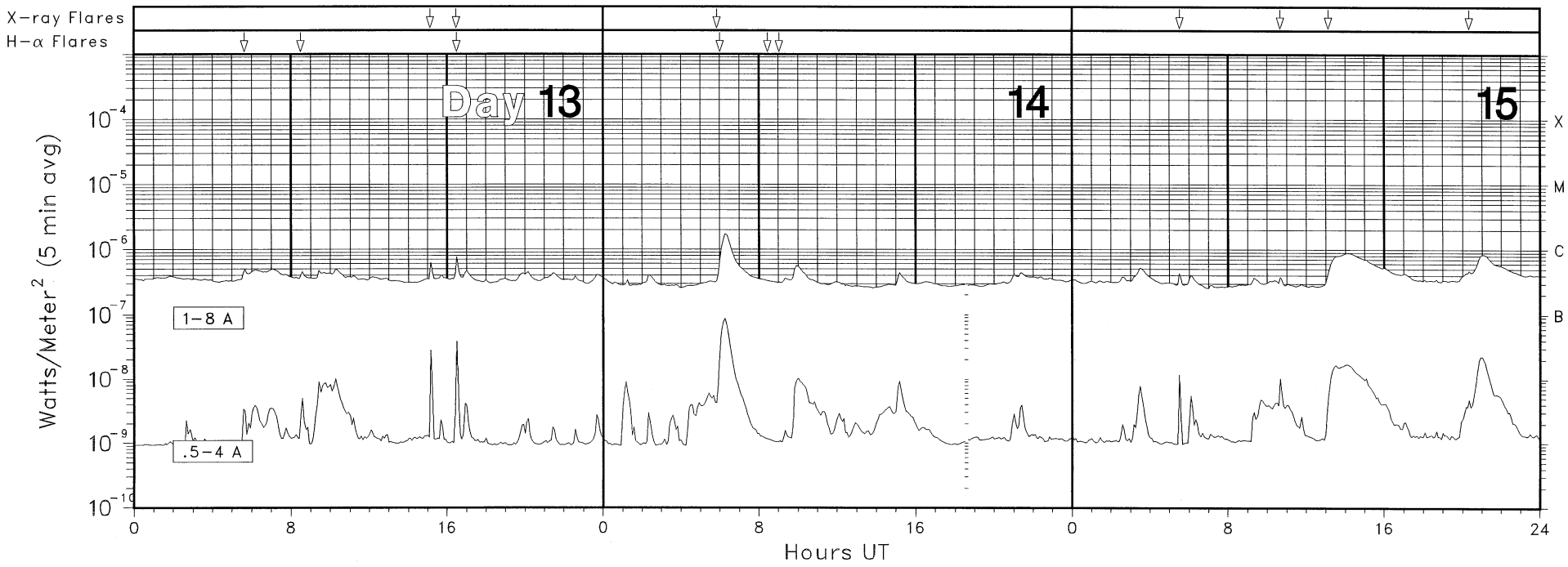
GOES X-RAY DETECTOR

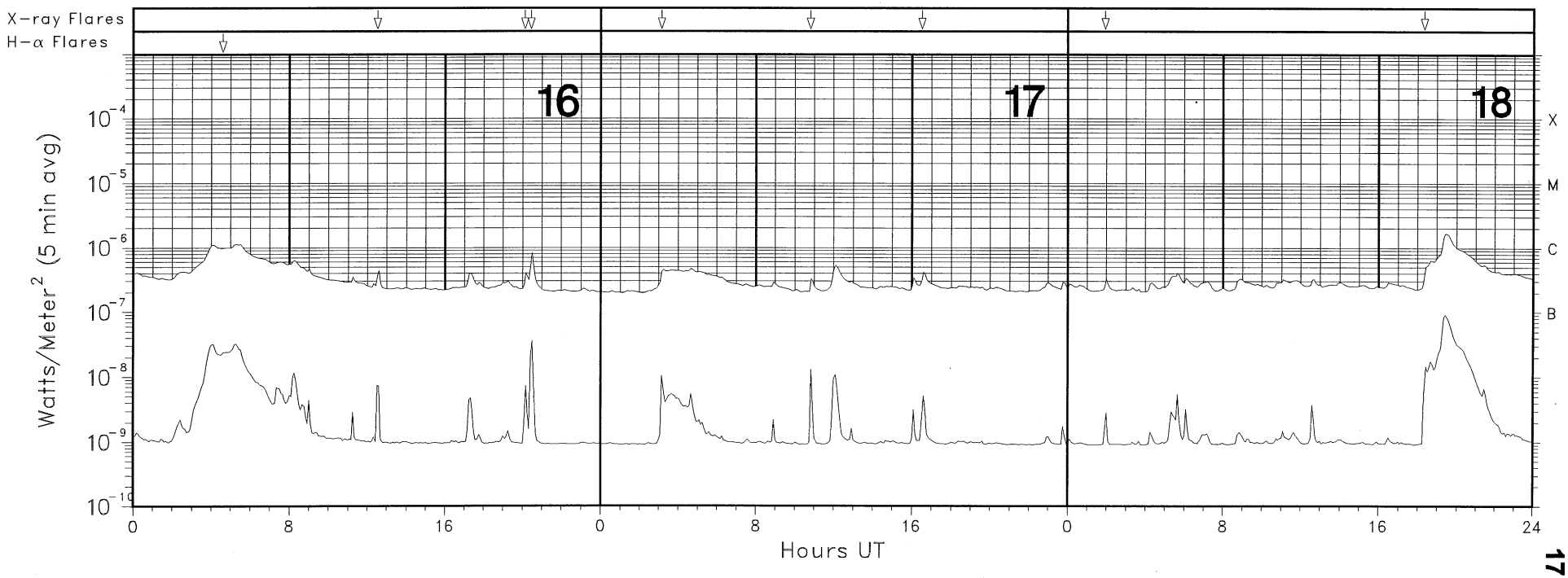
February 2001



GOES X-RAY DETECTOR

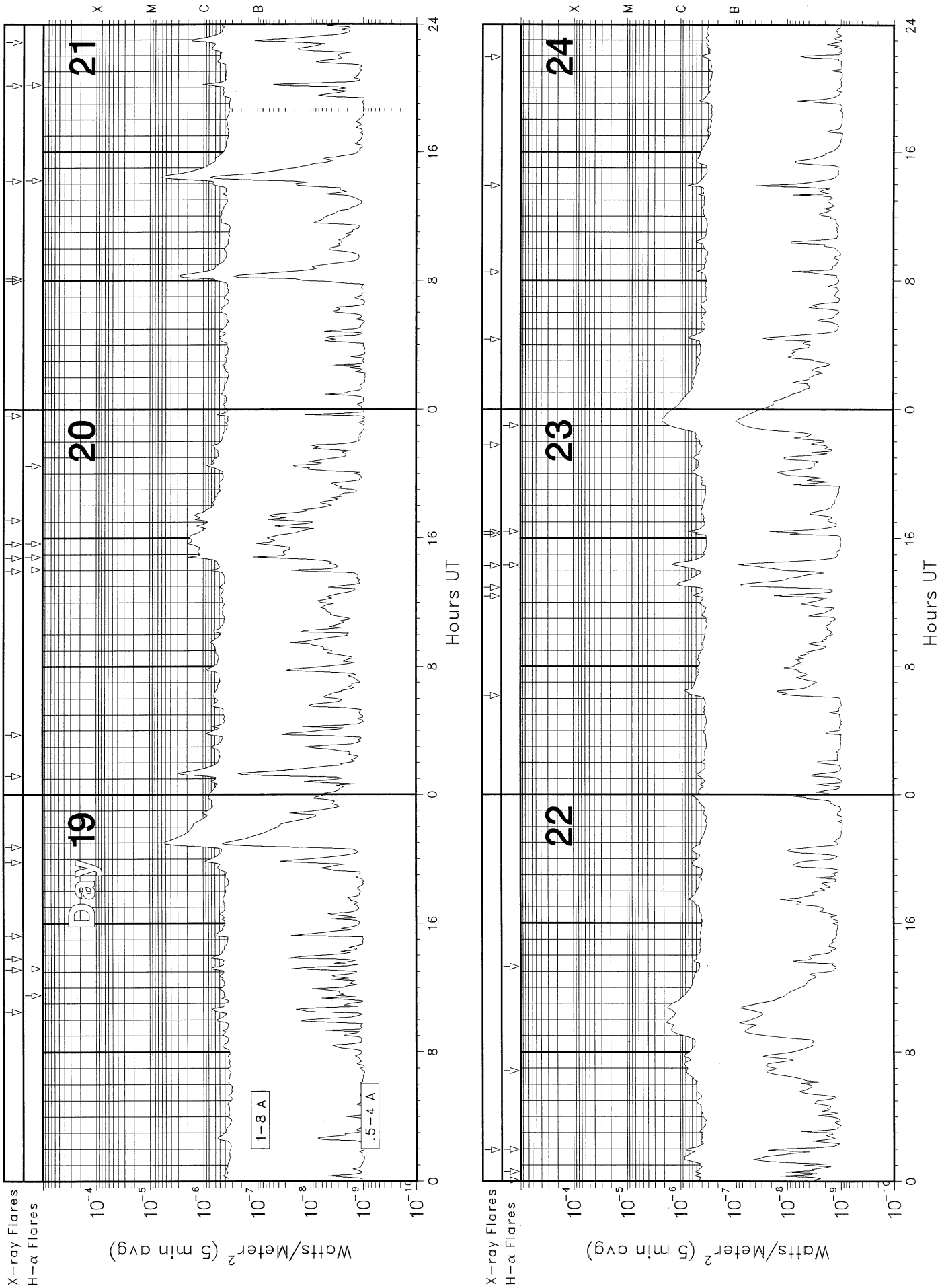
February 2001





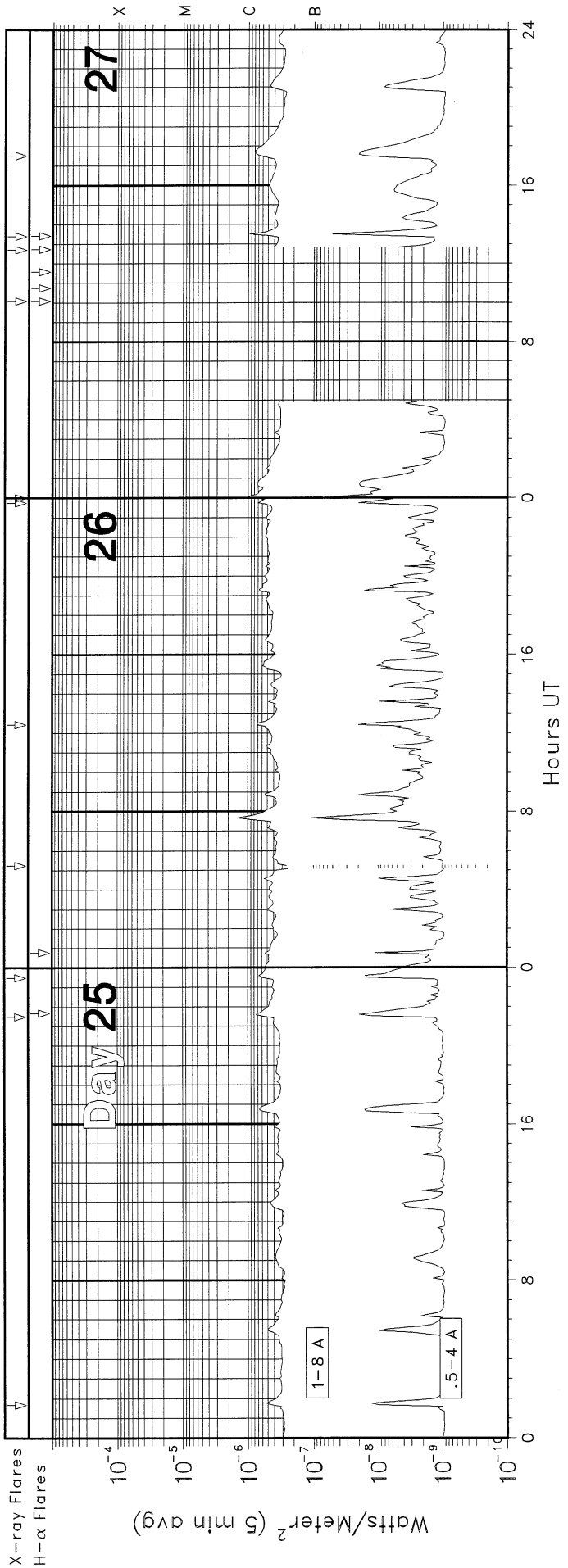
GOES X-RAY DETECTOR

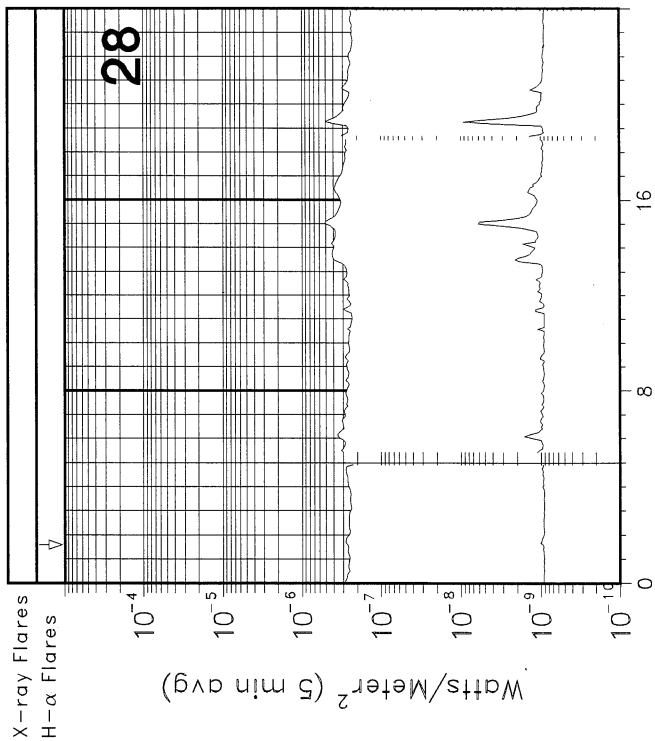
February 2001



GOES X-RAY DETECTOR

February 2001



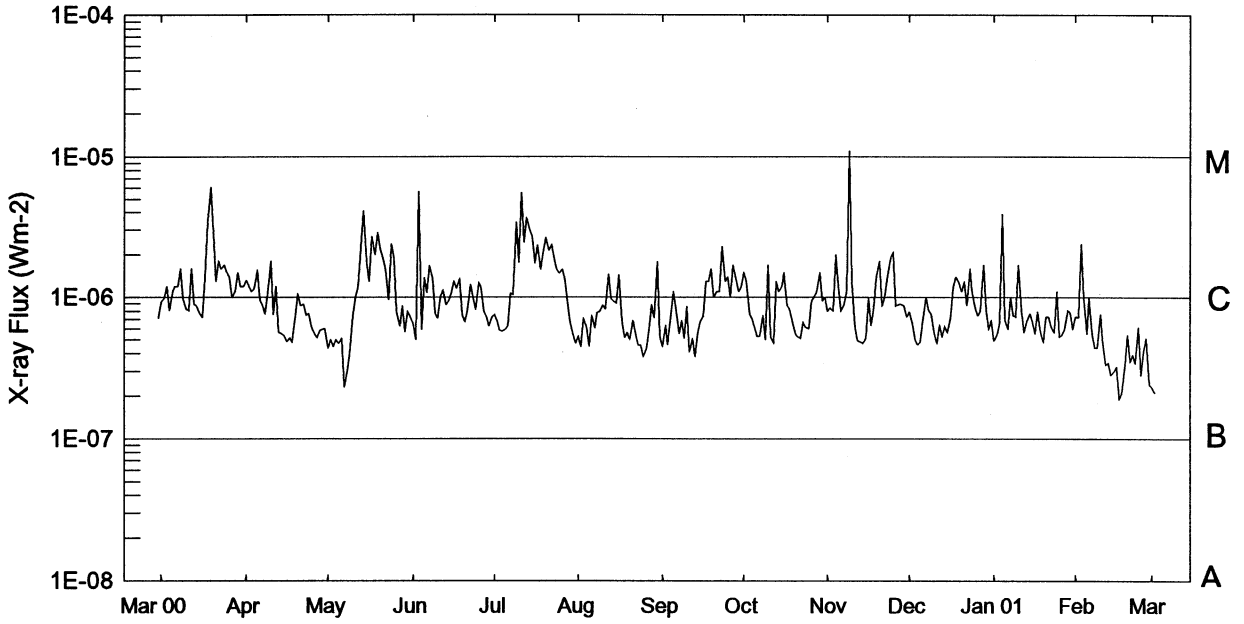


GOES S O L A R X-RAY F L A R E S
Preliminary Listing

February 2001

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	Opt	Imp	Xray	NOAA/ USAF Region	Flux
01	0707	0712	0715	N28	E55	SF	C	7.9	9330	2.1E-03
01	1255	1300	1304	N26	E53	SF	C	2.6	9330	9.6E-04
01	1707	1712	1717	N28	E51	SF	C	4.1	9330	1.7E-03
01	2030	2054	2121				C	1.5		3.9E-03
01	2246	2250	2254				C	1.3		5.5E-04
02	0226	0230	0234				C	1.3		5.4E-04
02	0847	0918	1033				C	2.3		1.2E-02
02	1909	2037	2207				C	3.3		2.5E-02
02	2348	2406	2420	N09	E72	1F	M	2.4	9334	2.9E-02
03	1536	1619	1706				C	1.3		5.9E-03
04	0002	0022	0111	N26	E20	SF	C	1.7	9330	6.2E-03
04	0235	0253	0326	N15	E43	SF	C	1.7	9334	4.3E-03
04	0604	0610	0616	S17	E70	SF	C	2.0		1.1E-03
04	0818	0823	0827				C	1.7		7.0E-04
04	0835	0841	0847	N23	E13	SF	C	2.5	9330	1.4E-03
04	0923	0928	0937	S10	E83	SF	C	1.4		9.4E-04
04	1224	1231	1238	S12	E83	SF	C	1.0		7.8E-04
04	1242	1245	1250	N12	E39	SF	C	1.0	9334	4.6E-04
04	2308	2313	2319	N10	E35	SF	C	1.3	9334	6.8E-04
05	0057	0104	0107	S09	E78	SF	B	8.0	9339	3.9E-04
05	0222	0226	0228	N12	E32	SF	B	9.5	9334	2.8E-04
05	1505	1520	1535	N07	E38	1F	C	8.2	9335	1.0E-02
05	1644	1652	1700	N21	W74	SF	C	1.9	9327	1.6E-03
05	2315	2321	2330	N13	E44	SF	C	1.2	9335	1.1E-03
06	1127	1132	1134				C	1.5		4.8E-04
06	2006	2011	2022				B	9.9		8.5E-04
06	2023	2028	2036				C	1.1		8.1E-04
06	2345	2350	2355				C	1.0		5.8E-04
07	0044	0048	0053				C	1.0		4.6E-04
07	1401	1408	1423				B	9.9		1.1E-03
07	2121	2131	2146				B	9.2		1.1E-03
08	1807	1811	1815				B	7.8		3.3E-04
08	2025	2030	2042	N08	E04	SF	C	1.1	9335	9.2E-04
08	2119	2122	2124				B	6.4		1.6E-04
09	0920	0924	0943				B	6.7		8.7E-04
09	1541	1549	1557				C	1.2		9.3E-04
09	1716	1727	1733				C	1.0	9335	8.8E-04
09	2102	2107	2115	S19	W02	SF	C	2.0	9338	1.4E-03
09	2140	2150	2155	S21	E01	SF	C	3.5	9338	2.3E-03
09	2257	2321	2345	S19	W01	SF	C	3.1	9338	6.7E-03
10	0005	0009	0011				C	1.6		5.0E-04
10	0249	0253	0256	S18	W06	SF	C	1.5	9338	5.2E-04
10	0355	0421	0434				C	2.0		4.0E-03
10	0531	0534	0537				C	1.4		4.5E-04
10	2007	2010	2017	S21	W12	SF	C	1.9	9338	8.3E-04
11	0057	0123	0146	N24	W57	1F	C	6.5	9346	1.3E-02
11	0909	0915	0920	S17	W23	SF	C	2.1	9338	1.1E-03
11	1317	1321	1326	S18	W25	SF	B	7.8	9338	3.5E-04
11	1607	1614	1620				B	6.5		4.6E-04
12	0112	0118	0121				C	5.9	9338	1.6E-03
12	2021	2037	2053	N12	W60	SF	C	4.2	9334	5.5E-03
13	1508	1512	1514				B	8.2		2.1E-04
13	1629	1633	1635	N15	W33	SF	C	1.1	9348	2.7E-04
14	0552	0618	0638	N18	E41	SF	C	1.7	9350	3.1E-03
15	0531	0533	0536				B	6.4		1.4E-04
15	1040	1043	1046				B	4.6		1.4E-04
15	1308	1416	1518				B	8.8		6.0E-03
15	2020	2106	2131				B	8.5		2.8E-03
16	1230	1235	1238				B	5.5		2.0E-04
16	2007	2012	2019				B	4.1		2.6E-04
16	2026	2030	2034				B	9.8		3.6E-04
17	0310	0314	0317				B	6.0		1.9E-04
17	1048	1053	1059				B	3.5		2.0E-04
17	1631	1639	1645				B	4.2		3.2E-04
18	0156	0201	0207				B	3.3		2.0E-04
18	1821	1929	2006				C	1.7		6.1E-03
19	1030	1043	1047				B	7.5		6.5E-04
19	1308	1314	1319	S09	W01	SF	B	7.9	9354	4.5E-04
19	1348	1351	1358				B	7.8		4.0E-04
19	1514	1518	1525				B	7.7		4.0E-04
19	1947	1952	2000				B	9.7		6.5E-04
19	2043	2100	2121				C	5.4		8.5E-03
20	0110	0122	0129				C	3.1		2.4E-03
20	0344	0349	0357				B	9.8		6.4E-04
20	1356	1400	1404				B	8.4		3.3E-04
20	1447	1451	1454	S09	W15	SF	C	2.2	9354	6.9E-04
20	1537	1541	1547	S09	W15	SF	C	2.1	9354	1.1E-03
20	1706	1711	1716				C	1.5		7.5E-04
20	2337	2341	2345				B	6.4		2.4E-04
21	0758	0802	0806				B	6.2		2.7E-04
21	0807	0820	0828				C	3.0		2.9E-03
21	1411	1427	1440	S08	W29	SF	C	6.2	9354	7.1E-03
21	2005	2010	2014	S08	W31	SF	C	1.2	9354	4.8E-04
21	2251	2259	2306				C	1.8		1.3E-03
22	0156	0159	0202	S22	W53	SF	C	1.1	9353	3.2E-04
23	0611	0631	0638				B	8.3		1.1E-03
23	1224	1228	1233				B	6.2		3.0E-04
23	1256	1309	1322				C	1.1		1.5E-03
23	1417	1423	1428	N11	E44	SF	C	1.4	9359	8.6E-04
23	1613	1617	1620				B	5.6		2.0E-04
23	1622	1626	1629	S26	W27	SF	B	8.2	9357	2.7E-04
23	2147E	2319U	2406D				C	2.2		1.0E-02
24	0420	0426	0435				B	7.3		5.8E-04
24	0832	0835	0838				B	5.4		1.7E-04
24	1354	1357	1359				C	1.1		2.2E-04
24	2155	2201	2204				B	4.5		2.2E-04
25	0140	0146	0157				B	5.2		4.9E-04
25	2129	2137	2151	S27	W56	SF	B	7.4	9357	8.5E-04
25	2329	2335	2351				B	7.1		8.0E-04
26	0514	0741	0749				C	1.6		4.2E-03
26	1225	1229	1232				B	8.4		3.2E-04
26	2345	2348	2351				B	8.1		2.6E-04
26	2359	2403	2409				C	1.1		6.0E-04
27	1004	1008	1012	N12	W12	SF	C	1.3	9359	4.8E-04
27	1242	1245	1252				B	4.8		2.7E-04
27	1324	1331	1334				C	1.1		4.3E-04
27	1731	1742	1752				B	7.9		9.4E-04

Preliminary GOES Satellite Daily X-Ray Background
Mar 2000 - Feb 2001



Day	Mar 00	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 01	Feb
1	B9.2	C1.3	B4.4	B6.4	B7.4	B5.2	B4.5	C1.5	B8.0	B8.0	B4.9	B7.3
2	B9.9	C1.2	B5.0	B5.0	B6.7	B4.4	B6.3	C1.3	B8.4	B8.4	B5.4	B7.2
3	C1.2	C1.0	B4.5	C5.6	B5.7	B7.0	B4.6	B7.7	B8.0	B8.0	B6.5	C2.4
4	B8.1	C1.1	B5.0	B5.9	B5.7	B6.0	B7.5	B7.0	C2.0	C2.0	C3.9	B9.8
5	C1.1	C1.5	B4.7	C1 3	B5.9	B4.4	C1.1	B6.1	C1.2	C1.2	B6.9	B5.5
6	C1.2	B9.6	B5.1	C1.0	B6.2	B7.4	B8.2	B5.3	B8.0	B8.0	B6.0	C1.0
7	C1.2	B8.7	B2.3	C1.6	C1.0	B6.0	B5.5	B5.3	B8.9	B8.9	C1.0	B5.5
8	C1.6	B7.6	B2.9	C1.3	C1.0	B7.7	B6.8	B7.4	C1.1	C1.1	B7.4	B4.4
9	B9.7	C1.0	B3.9	B7.7	C3.3	B7.9	B5.1	B5.0	M1.1	M1.1	B7.3	B4.4
10	B8.2	C1.8	B7.4	B7.1	C1.7	B8.7	B8.6	C1.7	C1.3	C1.3	C1.7	B7.6
11	B8.1	B7.6	C1.0	C1.0	C5.5	B8.2	B4.1	B5.3	B6.1	B6.1	B8.0	B5.0
12	C1.6	C1.1	C1.2	C1.1	C2.4	C1.4	B5.1	B4.7	B4.9	B4.9	B5.6	B3.3
13	B8.9	B5.6	C2.6	B8.8	C3.6	B9.7	B3.8	C1.3	B4.8	B4.8	B6.7	B3.4
14	B8.7	B5.4	C4.1	B9.4	C2.9	B9.3	B5.5	C1.1	B4.7	B4.7	B7.7	B2.8
15	B7.7	B5.3	C1.8	C1.0	C2.6	B9.0	B6.7	C1.2	B5.1	B5.1	B6.7	B3.0
16	B7.2	B4.8	C1.3	C1.2	C1.7	C1.4	B7.4	C1.5	B9.9	B9.9	B5.5	B3.2
17	C1.4	B5.1	C2.7	C1.1	C2.3	B6.7	C1.3	B8.8	B6.3	B6.3	B7.9	B1.9
18	C3.4	B4.7	C2.0	C1.3	C1.5	B5.1	C1.3	B8.2	B8.3	B8.3	B5.8	B2.1
19	C6.1	B7.2	C2.9	B7.4	C2.1	B5.5	C1.6	B6.8	C1.4	C1.4	B4.8	B3.3
20	C2.9	C1.0	C2.2	B6.7	C2.6	B5.0	C1.0	B5.5	C1.8	C1.8	B7.3	B5.4
21	C1.3	B8.7	C1.9	B7.9	C2.1	B6.8	C1.1	B5.3	B8.7	B8.7	B7.3	B3.5
22	C1.8	B8.9	C1.6	C1.2	C2.3	B5.5	C1.1	B5.1	C1.0	C1.0	B6.2	B3.9
23	C1.6	B7.4	B9.6	B9.9	C1.8	B4.5	C2.3	B6.6	C1.4	C1.4	B5.6	B3.4
24	C1.7	B7.6	C2.4	B8.1	C1.5	B4.5	C1.3	B6.1	C1.9	C1.9	C1.1	B6.1
25	C1.5	B6.2	C1.9	C1.2	C1.4	B3.8	C1.4	B6.0	C2.1	C2.1	B5.2	B2.8
26	C1.4	B5.5	B7.9	C1.1	C1.5	B4.3	C1.0	B9.4	B8.7	B8.7	B5.4	B4.1
27	C1.0	B5.1	B6.2	B7.9	C1.3	B5.8	C1.7	C1.0	B8.9	B8.9	B5.9	B5.1
28	C1.1	B5.7	B8.7	B7.3	B9.2	B8.8	C1.4	C1.1	B8.9	B8.9	B8.1	B2.4
29	C1.5	B5.8	B5.7	B6.2	B6.6	B7.1	C1.1	C1.5	B8.7	B8.7	B7.8	
30	C1.2	B6.0	B8.0	B8.0	B5.5	C1.7	C1.2	B9.4	B7.3	B7.3	B5.9	
31	C1.2		B7.3		B4.6	B5.2		C1.0			B7.4	

ACTIVE PROMINENCES AND FILAMENTS

FEBRUARY 2001

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
04	DSF	1326U	0634U	N24	E55	02	8.8	2	08	0	0	E	SVTO		
09	DSF	1519U	0939U	N27	E13	02	10.6		06	0	0	E	SVTO		
09	DSF	1519U	0939U	N29	W11	02	8.8		09	0	0	E	SVTO		
09	DSF	2137U	1212U	N11	E27	02	11.9		09	0	0	E	RAMY		
09	DSF	2137U	1212U	N15	W29	02	7.7		14	0	0	E	RAMY		
15	DSF	0018U	1407U	N20	E20	02	16.5		15	0	0	E	HOLL		
15	DSF	0944U	2317U	S25	E17	02	16.7		07	0	0	E	LEAR		
15	DSF	0949U	2346U	S45	E21	02	17.1	2	25	0	0	E	LEAR		
15	DSF	1954U	1444U	S27	E02	02	16.0		17	0	0	E	RAMY		
16	DSF	0944U	2317U	S25	E17	02	17.7		07	0	0	E	LEAR		
16	DSF	1539U	0627U	S27	E11	02	17.5		08	0	0	E	SVTO		
16	DSF	2113U	1138U	S50	E36	02	19.9		03	0	0	E	RAMY		
17	DSF	0947U	2311U	N38	W38	02	14.3		05	0	0	E	LEAR		
17	DSF	1928U	1444U	S25	E08	02	18.4	3	08	0	0	E	HOLL		
19	DSF	2027U	1700U	S35	W23	02	18.0		10	0	0	E	RAMY		
26	DSF	1545U	1213U	S16	W09	02	26.0		11	0	0	E	SVTO		
26	DSF	1912U	1214U	S16	W10	02	26.0		12	0	0	E	RAMY		
28	DSF	1146	1323U	S17	W05	02	28.1	1	11	0	0	E	RAMY		
28	DSF	1734U	1113U	S30	E40	03	3.9		09	0	0	E	RAMY		

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.

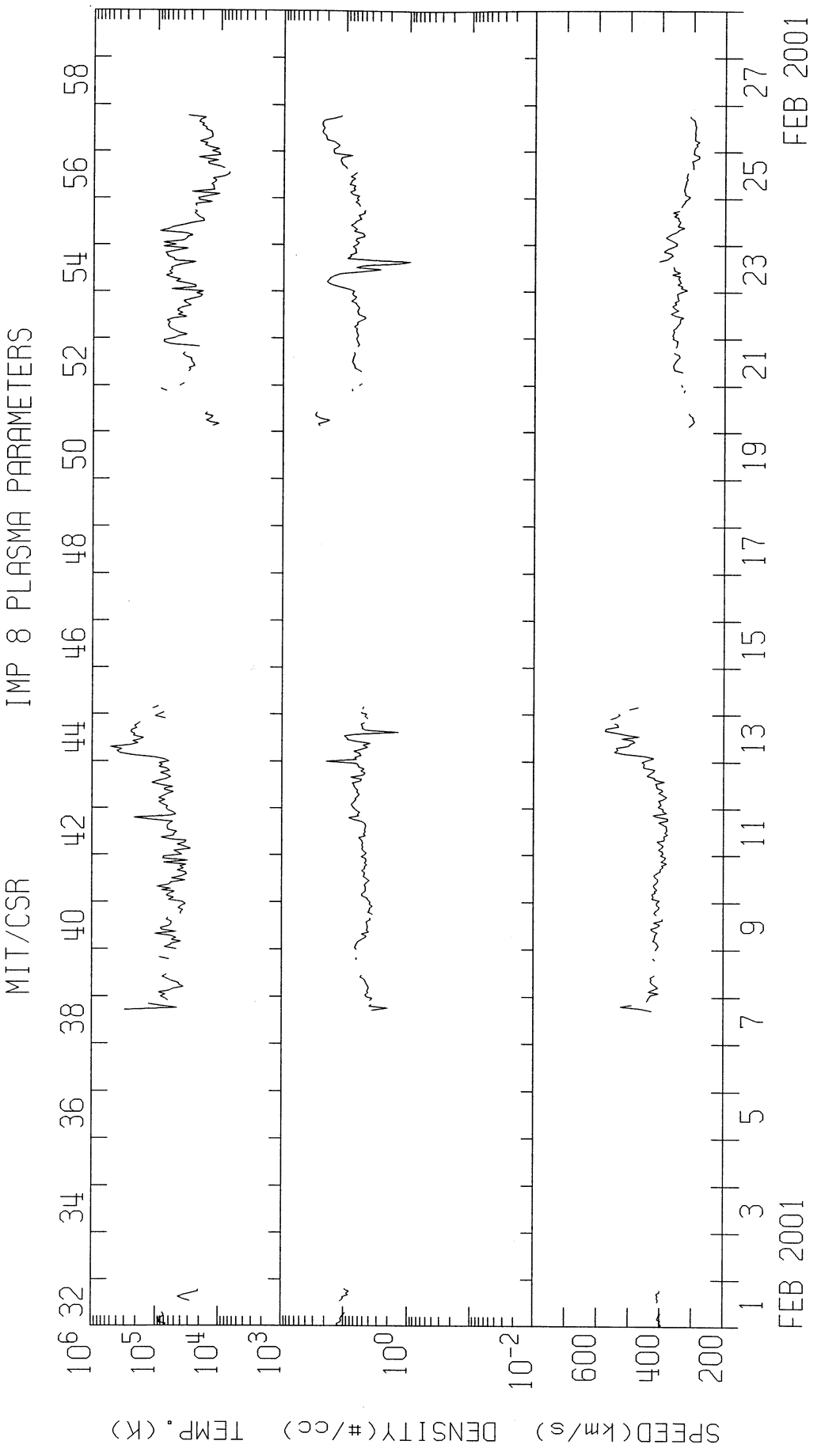
The remark "Bright Emission 1/3" indicates that bright emission was observed 1/3 of time.
The remark "Normal Emission 1/3" indicates that normal emission was observed 1/3 of time.

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.

IMP 8 SOLAR WIND PLASMA
FEBRUARY 2001



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CONTENTS

Comprehensive Reports Number 684 Part II

MISCELLANEOUS DATA

UARS/ACRIM2 TOTAL SOLAR IRRADIANCE OBSERVATIONS[1] COMPLETE MISSION: 10/04/91 TO 5/05/01

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Description of the experiment

The second Active Cavity Radiometer Irradiance Monitor (ACRIM) experiment (ACRIM2) provided the total solar irradiance (TSI) observations for NASA's Earth Science program since its launch on the Upper Atmospheric Research Satellite (UARS) in 1991 until failure of its power supply in May 2001 (~ 9 ½ years). The UARS orbit[2] provides about 60 minutes of sunlight of which about 35 are available for solar viewing by ACRIM2 and the two other instruments on the Solar-Stellar Pointing Platform (SSPP).

The UARS/ACRIM2 instrument consists of three, nominally identical Active Cavity Radiometers (ACR's). ACR's are electrically self-calibrated, cavity pyrheliometers with uniform sensitivity from the extreme ultraviolet to the far infrared. A servo system controls the electrical power dissipated in a heating element in intimate thermal contact with the detector in the shutter open (observation) and shutter closed (reference) phases of measurement. The design of the instrument and its operational mode strives to achieve equivalent thermodynamic conditions in the detector during reference and observation data sampling. An accurate knowledge of the effective absorptance of the detector for the TSI, the area over which the detector is illuminated and the electrical heating power facilitates accurate measurement of TSI on an absolute basis in the International System of Units.

TSI results are calculated using an equation relating the key instrument parameters:

$$H_{TSI} = K\,(P_{ref} - P_{obs}) + E$$

Where H_{TSI} is the calculated irradiance, P_{ref} and P_{obs} are the cavity electrical heating powers during the reference (shutter closed) and observation (shutter open) phases of the measurement. K is the standard detector constant of proportionality which contains the instrument parameters: (1) area of the primary aperture, (2) effective cavity absorptance for TSI, (3) cavity reflectance for solar irradiance, and (4) reflectance of solar radiation by the cavity field of view. E is an error function that summarizes numerous small radiative and conductive terms that contribute to uncertainty due to small departures from instrument equilibrium between the two measurement phases.

Nominal observations are comprised of a series of shutter operations, opening or closing every 65.536 seconds. The observational sequence is symmetrical to minimize systematic error. The settling time to 1 bit of its 16 bit A/D converter for the ACR is less than 30 seconds but the entire first

[1] Version 2: all ACRIM2 results re-processed in 2001. [2] Inclination: 57 degrees, altitude: 585 km

half of each shutter open cycle is disregarded in the computation of results. Each shutter cycle solar observation uses the average value of the electrical self-calibration during adjacent shutter closed periods to provide as a reference.

Discussion of the results

ACRIM uses a comprehensive method to calibrate degradation of its sensors by solar exposure. The primary solar detector monitors TSI at every opportunity. A second ACR is compared with the first once a month for only one orbit to minimize its degradation. The third ACR is compared with the first two for one orbit every third month and is assumed to be degradation-free. This three-channel degradation approach is the most comprehensive employed by any TSI experiment and can provide calibration of degradation to within 10 ppm/year or better.

Corrections for instrument temperature dependence, solar viewing angle, sun-satellite distance and relative velocity, and sensor degradation are applied to the calculated H_{TSI} values to obtain the total solar irradiance data at 1 Astronomical Unit. The ACRIM's Sun position sensor signals and instrument temperature data are used to correct solar pointing errors and temperature dependencies. Satellite Tool Kit algorithms are used with NORAD UARS orbital elements to compute the sun-satellite distance and relative velocity. The daily averages of the ACRIM2 total solar irradiance are calculated from about 240 daily shutter-open average values. The uncertainty of the daily average ACRIM2 total irradiance values is about 5 ppm.

The 'absolute' uncertainty of current solar monitoring instrumentation (~ +/- 0.1 %) is unable to provide the +/- 0.1 %/century knowledge of TSI variability required for climate change studies. The usefulness of the long term TSI database depends critically on the precision with which successive satellite solar monitors' results can be related. This requires careful execution an 'overlap strategy' in which successive satellite experiments are directly compared, transferring their operational precision to the database.[3]

The long-term TSI database

The UARS/ACRIM2 experiment began two years after the end of SMM/ACRIM1 because of the delays caused by the Challenger accident. Although originally planned, an overlap strategy could not be implemented directly by ACRIM's alone. The next best option was derivation of the relationship between their results based on mutual comparisons with another TSI experiment that overlapped both ACRIM's. Two are available: the NOAA Nimbus7/ERB (operations from late 1978 to early 1993) and the NASA ERBS (operations from early 1984 to the present). The Nimbus7/ERB data was chosen because it has the most comparative observations with ACRIM1 and 2 and was the best calibrated of the two[4].

The results reported in the tabulation for ACRIM2 are based on the scale defined by the metrology of its own sensors (specifically those of sensor C, the least exposed cavity). The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with Nimbus7/ERB, is 1.002609 with a 1 sigma computational standard error of < 20 ppm. Some additional uncertainty has undoubtedly been

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[3] This is strictly true only for 'ambient temperature' sensors. Calibration of TSI monitors by cryogenic pyrheliometers near the temperature of liquid He would be able to provide +/- 0.01 % SI accuracy, thereby removing the requirement of an overlap strategy.

[4] The uncertainties of the Nimbus7/ERB and ERBS TSI results are larger than the ACRIMs', primarily because of limitations imposed by their satellite platforms. Both ERB and ERBS were able to conduct electrical self-calibrations only once every two weeks, compared to once per minute for ACRIM's. The ERB TSI experiment observed the sun for a few minutes every orbit on 3 of every 4 days. The ERBS TSI experiment is limited to a few minutes' observations once every 14 days. Neither ERB nor ERBS has the degradation self-calibration capability of the ACRIM experiments although their lower duty cycles decrease their expected rates of degradation.

introduced by un-calibrated degradation of Nimbus7/ERB during its many years of operation but it is believed to be small compared to the ratio derived above.

The ACRIM composite TSI database

Construction of the long-term composite database required for climate change studies requires the combined results of many individual experiments. Since each experiment reports observations based on the performance of their sensors (their so-called 'native scale') they must be related to each other by normalizing to the same 'scale' using comparisons of overlapping results.

Degradation of the sensors in the space flight environment is a significant factor in understanding the quality of each data set. The experiments with the most effective self-calibration approaches will provide the best results. The composite database shown in **the figure** has been constructed using these principles which dictated the use of the following TSI data sets: Nimbus7/ERB, ACRIM1, ACRIM2 and ACRIM3.

Components of ACRIM Composite TSI database

Experiment	Operational Span	Data Used
Nimbus7/ERB	1978–1993	1978–80, 1989-1991
SMM/ACRIM1	1980-1989	1980-1989
UARS/ACRIM2	1991-2001	1991-2000
ACRIMSAT/ACRIM3	2000 →	2000 →

Several features of the 22+ year TSI record stand out clearly. On the timescale of a sunspot cycle (~ 10 - 11 years) there is the characteristic ~ 0.1 % peak-to-peak variation in solar luminosity between solar maximum and minimum periods. The higher variation of TSI during solar activity maxima is caused by the sunspot and facular components of active regions. The quieter solar minima reflect the solar luminosity 'background' level for TSI.

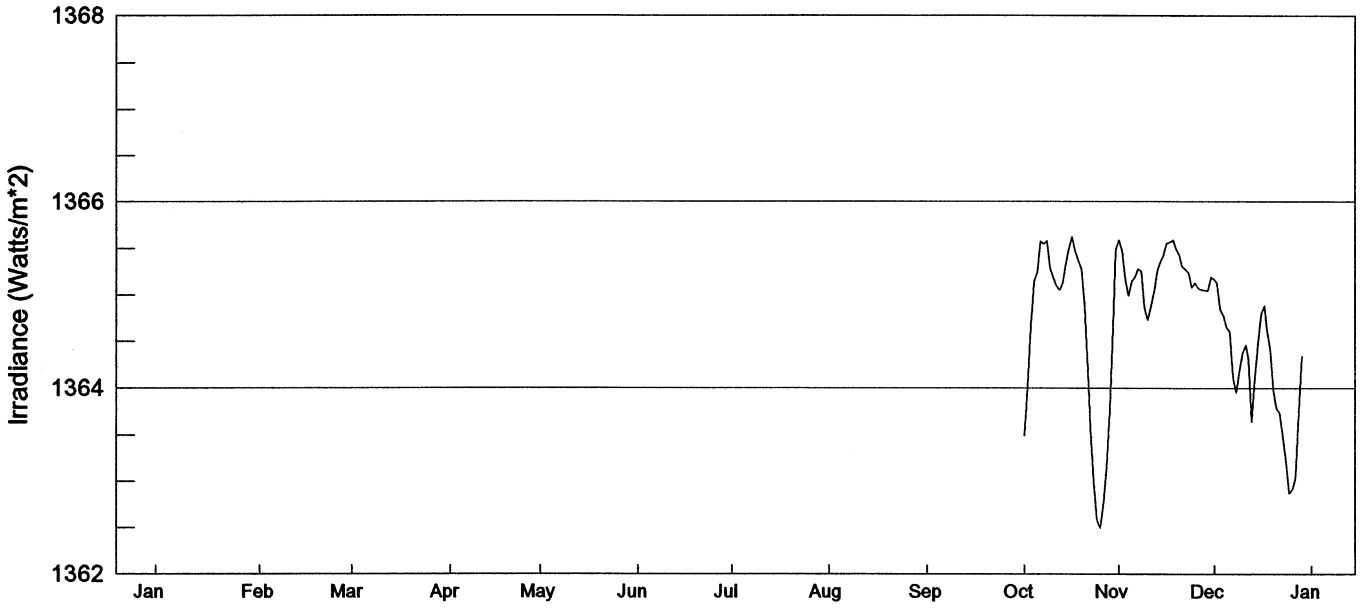
TSI trend

The composite record now allows comparison of two solar cycle minima. TSI has been integrated over 6 month periods centered on the reckoned minima at 1986.75 and 1996.5 years. An upward trend, visually obvious in figure 3, was found to have a value of 0.037 %/decade.

The Data

The ASCII file contains the daily average UARS/ACRIM2 total solar irradiance in units of W/m^2 at 1 A.U. A diskette of the data is available from NGDC. The data are also available on-line at the ACRIM Science Team website (acrim.com). They are also available on the NGDC ftp web site at ftp://ftp.ngdc.noaa.gov/STP/SOLAR_DATA/SOLAR_IRRADIANCE. If these data are used in publication please acknowledge as follows: UARS/ACRIM2 total solar irradiance used here are produced by the ACRIM Science Team of Columbia University under a contract with the National Aeronautics and Space Administration.

1991 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

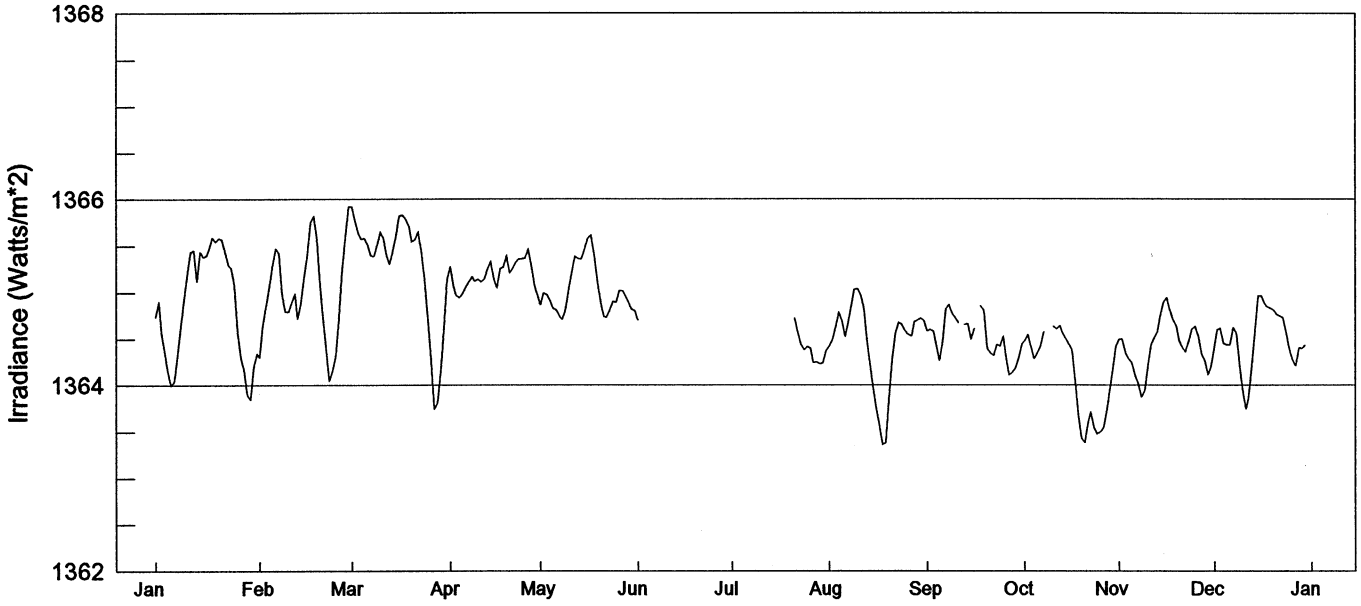


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1											1364.649	1365.048
2											1365.481	1365.191
3											1365.587	1365.165
4										1363.489	1365.474	1365.129
5										1364.022	1365.160	1364.844
6										1364.659	1364.995	1364.778
7										1365.151	1365.146	1364.653
8										1365.241	1365.190	1364.613
9										1365.571	1365.279	1364.119
10										1365.547	1365.249	1363.957
11										1365.581	1364.852	1364.185
12										1365.284	1364.730	1364.380
13										1365.185	1364.881	1364.457
14										1365.096	1365.042	1364.325
15										1365.053	1365.266	1363.643
16										1365.132	1365.348	1364.110
17										1365.313	1365.421	1364.481
18										1365.489	1365.553	1364.799
19										1365.618	1365.564	1364.883
20										1365.473	1365.584	1364.631
21										1365.365	1365.482	1364.425
22										1365.278	1365.438	1363.982
23										1364.882	1365.304	1363.783
24										1364.183	1365.272	1363.734
25										1363.567	1365.235	1363.484
26										1362.993	1365.081	1363.200
27										1362.579	1365.127	1362.867
28										1362.502	1365.077	1362.906
29										1362.744	1365.055	1363.048
30										1363.142	1365.053	1363.741
31										1363.760		1364.352

NOTE: -- indicates data not available. Mission started 4 October, 1991.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1992 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

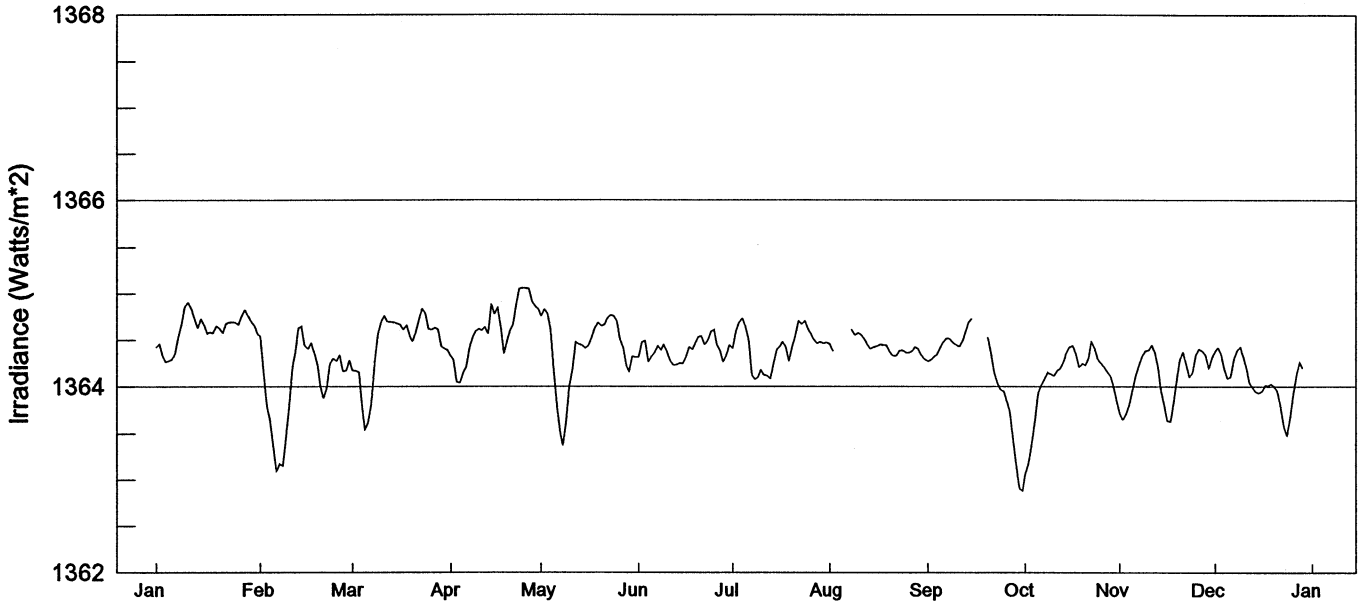


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.740	1364.204	1365.589	1364.603	1364.966	1364.808	—	1364.378	1364.699	1364.298	1364.418	1364.216
2	1364.906	1364.346	1365.918	1365.136	1364.869	1364.700	—	1364.416	1364.588	1364.449	1364.497	1364.422
3	1364.571	1364.302	1365.919	1365.280	1364.992	—	—	1364.493	1364.603	1364.477	1364.503	1364.601
4	1364.367	1364.660	1365.765	1365.111	1364.976	—	—	1364.620	1364.581	1364.551	1364.359	1364.617
5	1364.147	1364.859	1365.635	1364.969	1364.918	—	—	1364.784	1364.436	1364.421	1364.292	1364.452
6	1363.993	1365.051	1365.572	1364.946	1364.825	—	—	1364.698	1364.268	1364.291	1364.249	1364.436
7	1364.042	1365.291	1365.580	1364.986	1364.814	—	—	1364.530	1364.469	1364.352	1364.113	1364.436
8	1364.332	1365.471	1365.518	1365.061	1364.742	—	—	1364.655	1364.826	1364.423	1364.017	1364.625
9	1364.635	1365.424	1365.392	1365.113	1364.714	—	—	1364.844	1364.869	1364.583	1363.874	1364.567
10	1364.925	1364.972	1365.391	1365.166	1364.806	—	—	1365.030	1364.776	—	1363.931	1364.218
11	1365.200	1364.793	1365.514	1365.120	1365.025	—	—	1365.042	1364.728	—	1364.210	1363.936
12	1365.439	1364.794	1365.645	1365.143	1365.214	—	—	1364.978	1364.673	1364.639	1364.437	1363.742
13	1365.452	1364.898	1365.577	1365.118	1365.389	—	—	1364.844	—	1364.611	1364.517	1363.864
14	1365.124	1364.983	1365.411	1365.139	1365.358	—	—	1364.472	1364.655	1364.642	1364.588	1364.213
15	1365.439	1364.720	1365.309	1365.248	1365.363	—	—	1364.264	1364.664	1364.557	1364.748	1364.591
16	1365.383	1364.874	1365.442	1365.334	1365.461	—	—	1363.997	1364.498	1364.509	1364.895	1364.963
17	1365.395	1365.159	1365.597	1365.149	1365.580	—	—	1363.753	1364.616	1364.446	1364.945	1364.961
18	1365.471	1365.392	1365.823	1365.051	1365.614	—	—	1363.578	—	1364.385	1364.814	1364.883
19	1365.583	1365.741	1365.834	1365.256	1365.405	—	—	1363.359	1364.852	1364.042	1364.706	1364.845
20	1365.546	1365.821	1365.786	1365.273	1365.124	—	—	1363.379	1364.804	1363.666	1364.642	1364.837
21	1365.580	1365.580	1365.703	1365.392	1364.903	—	—	1363.844	1364.399	1363.419	1364.491	1364.817
22	1365.568	1365.158	1365.544	1365.209	1364.738	—	1364.724	1364.283	1364.352	1363.383	1364.411	1364.767
23	1365.432	1364.752	1365.563	1365.251	1364.731	—	1364.565	1364.571	1364.323	1363.596	1364.365	1364.747
24	1365.289	1364.403	1365.649	1365.318	1364.808	—	1364.435	1364.678	1364.440	1363.710	1364.481	1364.731
25	1365.267	1364.050	1365.439	1365.359	1364.905	—	1364.383	1364.655	1364.423	1363.554	1364.611	1364.571
26	1365.080	1364.156	1365.140	1365.360	1364.898	—	1364.420	1364.591	1364.525	1363.474	1364.634	1364.393
27	1364.572	1364.319	1364.716	1365.366	1365.017	—	1364.395	1364.549	1364.323	1363.494	1364.535	1364.273
28	1364.300	1364.722	1364.278	1365.464	1365.018	—	1364.246	1364.532	1364.109	1363.536	1364.344	1364.216
29	1364.162	1365.250	1363.745	1365.289	1364.958	—	1364.257	1364.686	1364.138	1363.713	1364.277	1364.407
30	1363.890		1363.804	1365.071	1364.902	—	1364.233	1364.704	1364.188	1363.958	1364.118	1364.395
31	1363.846		1364.141		1364.820		1364.242	1364.725		1364.201		1364.436

NOTE: – indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1993 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

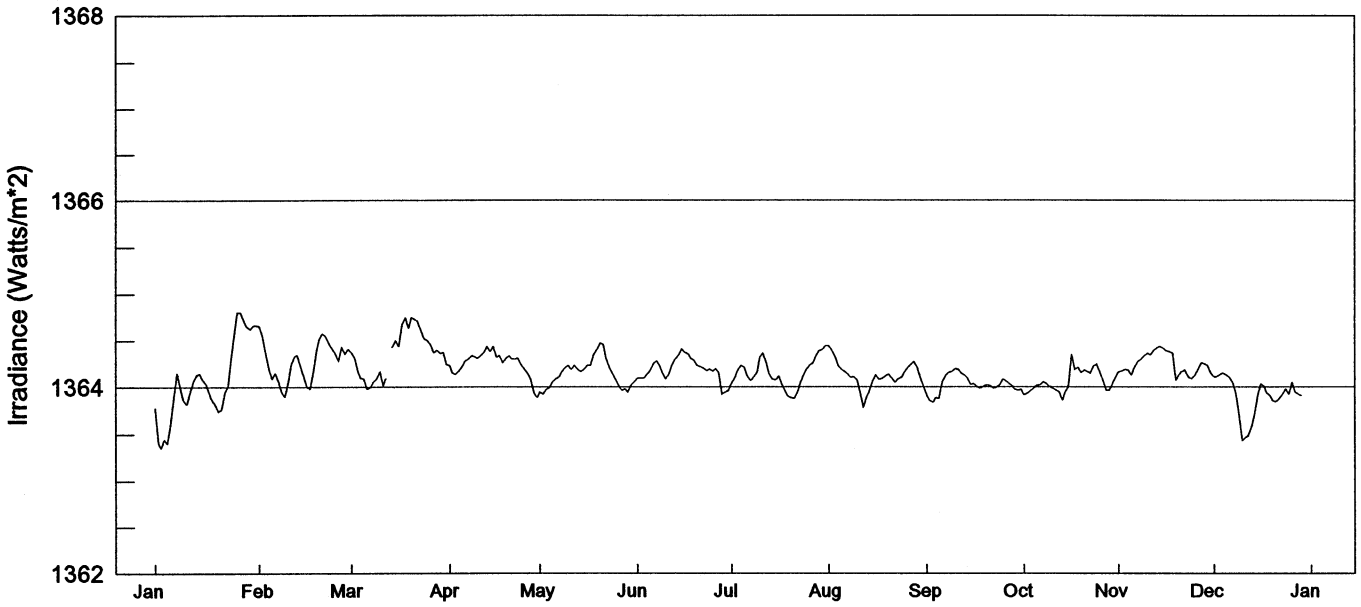


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.428	1364.652	1364.167	1364.434	1364.862	1364.321	1364.337	1364.465	1364.335	1363.158	1363.996	1364.199
2	1364.460	1364.560	1364.171	1364.402	1364.830	1364.318	1364.449	1364.475	1364.298	1362.902	1363.856	1364.306
3	1364.346	1364.541	1364.282	1364.388	1364.761	1364.314	1364.412	1364.457	1364.271	1362.876	1363.714	1364.383
4	1364.268	1364.169	1364.170	1364.320	1364.828	1364.477	1364.588	1364.379	1364.289	1363.062	1363.644	1364.420
5	1364.273	1363.801	1364.172	1364.289	1364.784	1364.493	1364.689	—	1364.320	1363.166	1363.708	1364.357
6	1364.297	1363.646	1364.151	1364.052	1364.604	1364.267	1364.734	—	1364.341	1363.372	1363.813	1364.193
7	1364.348	1363.368	1363.841	1364.044	1364.161	1364.323	1364.641	—	1364.417	1363.616	1363.965	1364.092
8	1364.533	1363.085	1363.536	1364.146	1363.780	1364.362	1364.509	—	1364.480	1363.924	1364.122	1364.106
9	1364.668	1363.169	1363.616	1364.217	1363.503	1364.441	1364.122	—	1364.522	1364.013	1364.233	1364.295
10	1364.864	1363.149	1363.830	1364.419	1363.366	1364.393	1364.078	1364.610	1364.511	1364.084	1364.327	1364.390
11	1364.904	1363.454	1364.252	1364.535	1363.610	1364.454	1364.103	1364.554	1364.472	1364.149	1364.381	1364.422
12	1364.843	1363.801	1364.564	1364.587	1364.004	1364.379	1364.181	1364.577	1364.449	1364.134	1364.390	1364.316
13	1364.733	1364.205	1364.697	1364.616	1364.179	1364.283	1364.123	1364.553	1364.429	1364.117	1364.446	1364.191
14	1364.627	1364.392	1364.758	1364.601	1364.476	1364.233	1364.120	1364.509	1364.491	1364.171	1364.361	1364.043
15	1364.722	1364.623	1364.697	1364.634	1364.453	1364.235	1364.084	1364.447	1364.585	1364.202	1364.201	1363.995
16	1364.667	1364.645	1364.688	1364.568	1364.445	1364.253	1364.250	1364.408	1364.689	1364.275	1363.967	1363.946
17	1364.571	1364.436	1364.691	1364.880	1364.411	1364.246	1364.396	1364.425	1364.733	1364.365	1363.813	1363.932
18	1364.581	1364.407	1364.675	1364.780	1364.436	1364.321	1364.434	1364.433	—	1364.425	1363.630	1363.953
19	1364.577	1364.463	1364.661	1364.845	1364.529	1364.427	1364.476	1364.453	—	1364.439	1363.624	1364.018
20	1364.650	1364.353	1364.609	1364.643	1364.628	1364.401	1364.430	1364.446	—	1364.347	1363.844	1364.010
21	1364.623	1364.230	1364.659	1364.357	1364.687	1364.459	1364.277	1364.443	—	1364.213	1364.098	1364.025
22	1364.574	1364.007	1364.543	1364.494	1364.648	1364.535	1364.423	1364.369	1364.530	1364.250	1364.289	1364.000
23	1364.674	1363.881	1364.486	1364.610	1364.666	1364.539	1364.540	1364.331	1364.347	1364.233	1364.368	1363.956
24	1364.691	1363.978	1364.577	1364.659	1364.736	1364.453	1364.705	1364.330	1364.145	1364.313	1364.249	1363.788
25	1364.695	1364.249	1364.716	1364.877	1364.769	1364.494	1364.672	1364.387	1364.039	1364.483	1364.105	1363.579
26	1364.692	1364.305	1364.836	1365.050	1364.760	1364.590	1364.706	1364.389	1363.966	1364.417	1364.152	1363.478
27	1364.667	1364.272	1364.789	1365.057	1364.704	1364.606	1364.617	1364.362	1363.951	1364.294	1364.343	1363.663
28	1364.756	1364.336	1364.619	1365.058	1364.504	1364.460	1364.564	1364.363	1363.848	1364.255	1364.402	1363.912
29	1364.823		1364.608	1365.052	1364.418	1364.388	1364.509	1364.381	1363.742	1364.213	1364.387	1364.122
30	1364.759		1364.627	1364.910	1364.228	1364.268	1364.465	1364.423	1363.449	1364.157	1364.342	1364.267
31	1364.701		1364.609		1364.161		1364.476	1364.404		1364.112		1364.202

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1994 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

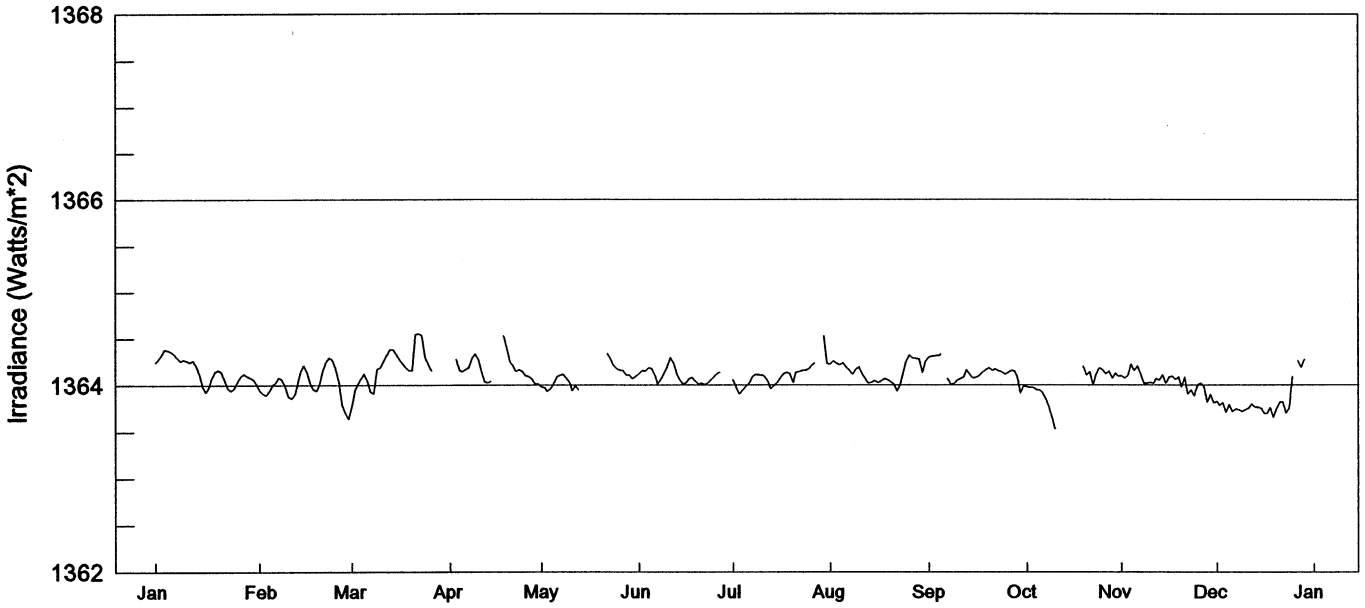


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1363.778	1364.662	1364.432	1364.365	1363.932	1364.022	1363.947	1364.405	1364.102	1363.973	1364.040	1364.230
2	1363.405	1364.664	1364.357	1364.372	1363.891	1364.054	1363.958	1364.449	1364.009	1363.968	1364.101	1364.151
3	1363.355	1364.657	1364.413	1364.244	1363.946	1364.095	1364.045	1364.444	1363.918	1363.975	1364.165	1364.114
4	1363.443	1364.555	1364.373	1364.237	1363.926	1364.096	1364.100	1364.400	1363.853	1363.922	1364.171	1364.110
5	1363.401	1364.373	1364.315	1364.151	1363.974	1364.095	1364.186	1364.327	1363.836	1363.936	1364.189	1364.141
6	1363.615	1364.209	1364.170	1364.140	1363.994	1364.137	1364.235	1364.226	1363.885	1363.961	1364.185	1364.151
7	1363.890	1364.090	1364.097	1364.175	1364.057	1364.180	1364.216	1364.194	1363.882	1363.986	1364.130	1364.132
8	1364.151	1364.151	1364.089	1364.220	1364.091	1364.255	1364.113	1364.169	1364.048	1364.021	1364.219	1364.104
9	1363.995	1364.061	1363.979	1364.285	1364.111	1364.282	1364.066	1364.146	1364.127	1364.022	1364.273	1364.050
10	1363.858	1363.945	1363.997	1364.301	1364.164	1364.228	1364.109	1364.106	1364.162	1364.054	1364.299	1363.930
11	1363.817	1363.897	1364.055	1364.335	1364.210	1364.152	1364.158	1364.107	1364.169	1364.038	1364.335	1363.700
12	1363.942	1364.047	1364.092	1364.329	1364.231	1364.088	1364.320	1364.080	1364.199	1364.002	1364.367	1363.428
13	1364.057	1364.245	1364.165	1364.306	1364.190	1364.135	1364.361	1363.946	1364.195	1363.992	1364.352	1363.463
14	1364.129	1364.333	1364.014	1364.338	1364.235	1364.241	1364.270	1363.784	1364.146	1363.965	1364.400	1363.479
15	1364.145	1364.346	1364.094	1364.373	1364.193	1364.304	1364.140	1363.895	1364.131	1363.945	1364.422	1363.568
16	1364.075	1364.231	---	1364.435	1364.165	1364.340	1364.087	1363.953	1364.097	1363.859	1364.442	1363.705
17	1364.039	1364.126	1364.432	1364.382	1364.191	1364.410	1364.079	1364.055	1364.029	1363.943	1364.427	1363.911
18	1363.956	1364.011	1364.500	1364.440	1364.230	1364.374	1364.117	1364.131	1364.035	1363.999	1364.392	1364.037
19	1363.866	1363.978	1364.436	1364.323	1364.237	1364.356	1364.046	1364.081	1364.001	1364.348	1364.385	1364.009
20	1363.814	1364.155	1364.679	1364.337	1364.349	1364.301	1363.971	1364.092	1363.992	1364.197	1364.362	1363.942
21	1363.740	1364.381	1364.747	1364.258	1364.406	1364.289	1363.904	1364.119	1364.009	1364.216	1364.077	1363.911
22	1363.764	1364.513	1364.638	1364.309	1364.470	1364.234	1363.887	1364.137	1364.023	1364.157	1364.130	1363.854
23	1363.937	1364.574	1364.743	1364.339	1364.457	1364.223	1363.880	1364.095	1364.014	1364.184	1364.175	1363.844
24	1364.017	1364.545	1364.736	1364.302	1364.311	1364.208	1363.938	1364.052	1363.991	1364.164	1364.186	1363.876
25	1364.261	1364.472	1364.706	1364.304	1364.223	1364.179	1364.052	1364.091	1363.996	1364.154	1364.115	1363.924
26	1364.540	1364.416	1364.613	1364.307	1364.150	1364.192	1364.138	1364.105	1364.021	1364.226	1364.092	1363.981
27	1364.802	1364.367	1364.523	1364.241	1364.081	1364.175	1364.198	1364.165	1364.083	1364.245	1364.127	1363.924
28	1364.803	1364.281	1364.503	1364.194	1364.009	1364.201	1364.238	1364.215	1364.073	1364.163	1364.192	1364.052
29	1364.717		1364.459	1364.149	1363.966	1364.158	1364.252	1364.247	1364.043	1364.066	1364.261	1363.949
30	1364.653		1364.373	1364.075	1363.982	1363.927	1364.334	1364.274	1364.012	1363.967	1364.254	1363.926
31	1364.623		1364.396		1363.945		1364.391	1364.217		1363.965		1363.903

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1995 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

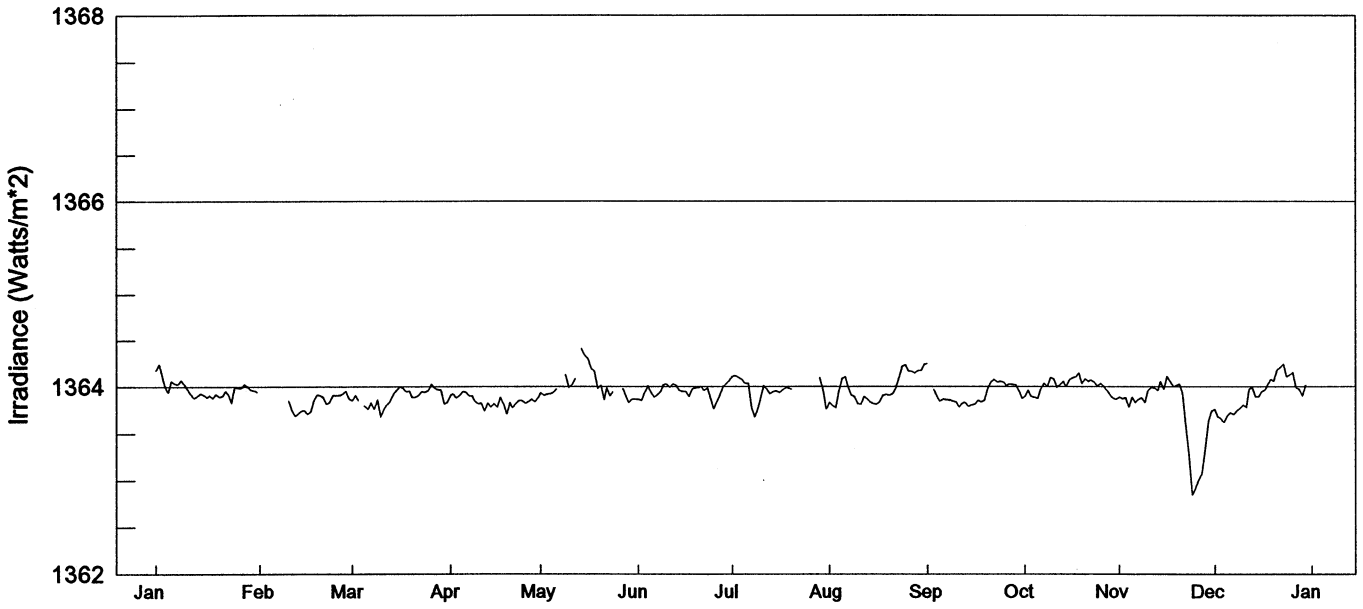


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.246	1364.063	1363.789	—	1364.018	1364.068	—	1364.531	1364.137	1364.092	1364.131	1363.900
2	1364.274	1364.011	1363.699	—	1364.014	1364.098	—	1364.231	1364.258	1363.915	1364.099	1363.812
3	1364.323	1363.943	1363.641	—	1363.979	1364.123	1364.059	1364.226	1364.299	1363.993	1364.103	1363.821
4	1364.385	1363.915	1363.771	—	1363.971	1364.161	1363.977	1364.258	1364.306	1363.981	1364.076	1363.786
5	1364.377	1363.893	1363.943	—	1363.934	1364.149	1363.906	1364.234	1364.312	1363.973	1364.106	1363.813
6	1364.362	1363.936	1364.022	1364.271	1363.963	1364.185	1363.947	1364.222	1364.313	1363.972	1364.225	1363.708
7	1364.335	1364.001	1364.066	1364.162	1364.014	1364.181	1363.991	1364.243	1364.330	1363.948	1364.162	1363.789
8	1364.293	1364.028	1364.125	1364.142	1364.091	1364.112	1364.021	1364.197	—	1363.946	1364.206	1363.716
9	1364.258	1364.086	1364.049	1364.171	1364.110	1364.017	1364.088	1364.162	1364.071	1363.912	1364.123	1363.746
10	1364.274	1364.063	1363.924	1364.183	1364.118	1364.062	1364.121	1364.119	1364.008	1363.858	1364.020	1363.733
11	1364.267	1363.986	1363.916	1364.289	1364.075	1364.126	1364.115	1364.174	1364.016	1363.766	1364.021	1363.716
12	1364.250	1363.882	1364.173	1364.339	1364.027	1364.202	1364.108	1364.192	1364.053	1363.653	1364.029	1363.732
13	1364.270	1363.857	1364.191	1364.283	1363.940	1364.296	1364.095	1364.121	1364.067	1363.523	1364.021	1363.750
14	1364.211	1363.900	1364.263	1364.150	1363.998	1364.241	1364.048	1364.075	1364.091	—	1364.068	1363.798
15	1364.124	1364.007	1364.326	1364.038	1363.951	1364.127	1363.961	1364.019	1364.164	—	1364.058	1363.761
16	1363.998	1364.154	1364.386	1364.027	—	1364.053	1363.993	1364.032	1364.118	—	1364.111	1363.762
17	1363.927	1364.214	1364.381	1364.043	—	1364.018	1364.029	1364.047	1364.075	—	1364.021	1363.749
18	1363.980	1364.144	1364.329	—	—	1364.022	1364.079	1364.028	1364.085	—	1364.092	1363.696
19	1364.077	1364.020	1364.278	—	—	1364.070	1364.126	1364.041	1364.105	1364.197	1364.094	1363.696
20	1364.144	1363.954	1364.226	—	—	1364.087	1364.135	1364.069	1364.137	—	1364.064	1363.758
21	1364.168	1363.937	1364.186	1364.530	—	1364.044	1364.128	1364.063	1364.167	—	1364.089	1363.652
22	1364.142	1364.033	1364.158	1364.400	—	1364.006	1364.028	1364.036	1364.188	1364.201	1363.979	1363.750
23	1364.065	1364.156	1364.158	1364.249	—	1364.019	1364.139	1364.008	1364.159	1364.112	1364.085	1363.820
24	1363.968	1364.246	1364.551	1364.222	1364.336	1363.999	1364.147	1363.934	1364.173	1364.146	1363.908	1363.815
25	1363.939	1364.294	1364.555	1364.154	1364.285	1364.027	1364.161	1364.013	1364.151	1364.005	1363.949	1363.705
26	1363.966	1364.276	1364.536	1364.168	1364.216	1364.063	1364.157	1364.159	1364.146	1364.127	1363.886	1363.758
27	1364.040	1364.185	1364.304	1364.153	1364.182	1364.090	1364.175	1364.259	1364.117	1364.187	1363.999	1364.097
28	1364.100	1364.050	1364.225	1364.105	1364.158	1364.125	1364.215	1364.326	1364.141	1364.166	1364.021	—
29	1364.128		1364.155	1364.098	1364.161	1364.142	1364.242	1364.292	1364.159	1364.128	1363.987	1364.262
30	1364.099		—	1364.068	1364.112	—	—	1364.288	1364.148	1364.155	1363.815	1364.191
31	1364.087		—		1364.107		—	1364.284		1364.078		1364.282

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1996 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

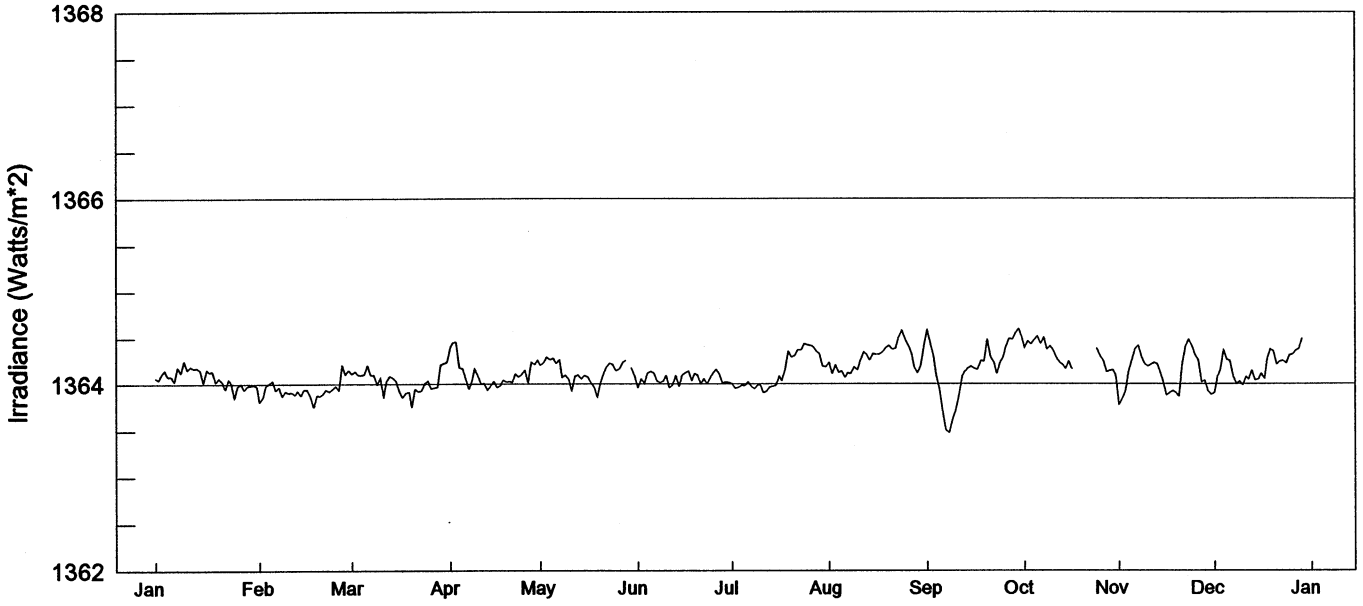


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.181	1363.962	1363.956	1363.814	1363.881	1363.865	1364.063	1363.763	1364.239	1363.956	1363.867	1363.742
2	1364.244	1363.945	1363.872	1363.832	1363.933	1363.868	1364.112	1363.833	1364.247	1363.872	1363.887	1363.753
3	1364.145	---	1363.853	1363.910	1363.906	1363.854	1364.119	1363.795	---	1363.894	1363.872	1363.679
4	1364.009	---	1363.908	1363.923	1363.923	1363.938	1364.100	1363.778	1363.965	1363.962	1363.877	1363.664
5	1363.937	---	1363.852	1363.880	1363.922	1364.007	1364.077	1363.969	1363.902	1363.889	1363.783	1363.616
6	1364.060	---	---	1363.908	1363.942	1363.935	1364.039	1364.088	1363.843	1363.886	1363.884	1363.685
7	1364.038	---	1363.798	1363.943	1363.980	1363.886	1364.034	1364.104	1363.868	1363.871	1363.829	1363.720
8	1364.033	---	1363.763	1363.940	---	1363.916	1363.778	1363.996	1363.857	1363.982	1363.869	1363.705
9	1364.072	---	1363.830	1363.899	---	1363.950	1363.676	1363.910	1363.857	1364.035	1363.879	1363.744
10	1364.028	---	1363.763	1363.900	1364.127	1364.021	1363.768	1363.894	1363.844	1364.001	1363.830	1363.772
11	1363.972	---	1363.855	1363.844	1363.994	1364.027	1363.868	1363.816	1363.840	1364.095	1363.958	1363.802
12	1363.923	1363.847	1363.681	1363.819	1364.023	1363.997	1364.007	1363.812	1363.784	1364.082	1363.994	1363.780
13	1363.877	1363.745	1363.760	1363.823	1364.088	1364.033	1363.975	1363.893	1363.823	1363.996	1363.986	1363.976
14	1363.900	1363.689	1363.802	1363.741	---	1364.014	1363.919	1363.865	1363.831	1364.023	1363.959	1363.997
15	1363.924	1363.707	1363.836	1363.821	1364.406	1363.959	1363.950	1363.837	1363.789	1364.055	1364.055	1363.889
16	1363.916	1363.743	1363.916	1363.780	1364.336	1363.946	1363.954	1363.818	1363.801	1364.000	1363.973	1363.894
17	1363.888	1363.748	1363.958	1363.816	1364.299	1363.948	1363.935	1363.811	1363.807	1364.072	1364.113	1363.947
18	1363.910	1363.711	1364.000	1363.780	1364.196	1363.894	1363.960	1363.836	1363.851	1364.094	1364.054	1363.966
19	1363.880	1363.733	1363.990	1363.883	1364.169	1363.971	1363.990	1363.904	1363.836	1364.104	1364.000	1364.020
20	1363.923	1363.856	1363.950	1363.814	1363.979	1363.990	1363.991	1363.912	1363.850	1364.146	1364.016	1364.077
21	1363.895	1363.912	1363.956	1363.708	1364.013	1363.990	1363.968	1363.904	1363.972	1364.038	1364.027	1364.061
22	1363.897	1363.907	1363.883	1363.829	1363.855	1364.001	---	1363.919	1364.052	1364.087	1363.927	1364.178
23	1363.955	1363.892	1363.885	1363.774	1363.986	1363.960	---	1363.981	1364.076	1364.058	1363.586	1364.204
24	1363.908	1363.816	1363.908	1363.820	1363.898	1363.990	---	1364.099	1364.052	1364.071	1363.264	1364.244
25	1363.834	1363.831	1363.948	1363.850	1363.947	1363.872	---	1364.217	1364.059	1364.050	1362.847	1364.112
26	1364.004	1363.907	1363.937	1363.850	---	1363.761	---	1364.233	1364.047	1364.011	1362.917	1364.122
27	1363.985	1363.910	1363.962	1363.828	---	1363.829	---	1364.166	1364.017	1364.039	1363.012	1364.154
28	1363.989	1363.904	1364.030	1363.839	1363.983	1363.897	---	1364.166	1364.026	1364.003	1363.073	1363.991
29	1364.031	1363.919	1363.987	1363.862	1363.894	1363.998	---	1364.145	1364.021	1363.961	1363.329	1363.975
30	1364.000		1363.970	1363.835	1363.829	1364.025	1364.097	1364.175	1364.020	1363.910	1363.630	1363.901
31	1363.969		1363.968		1363.869		1363.961	1364.173		1363.871		1364.022

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1997 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

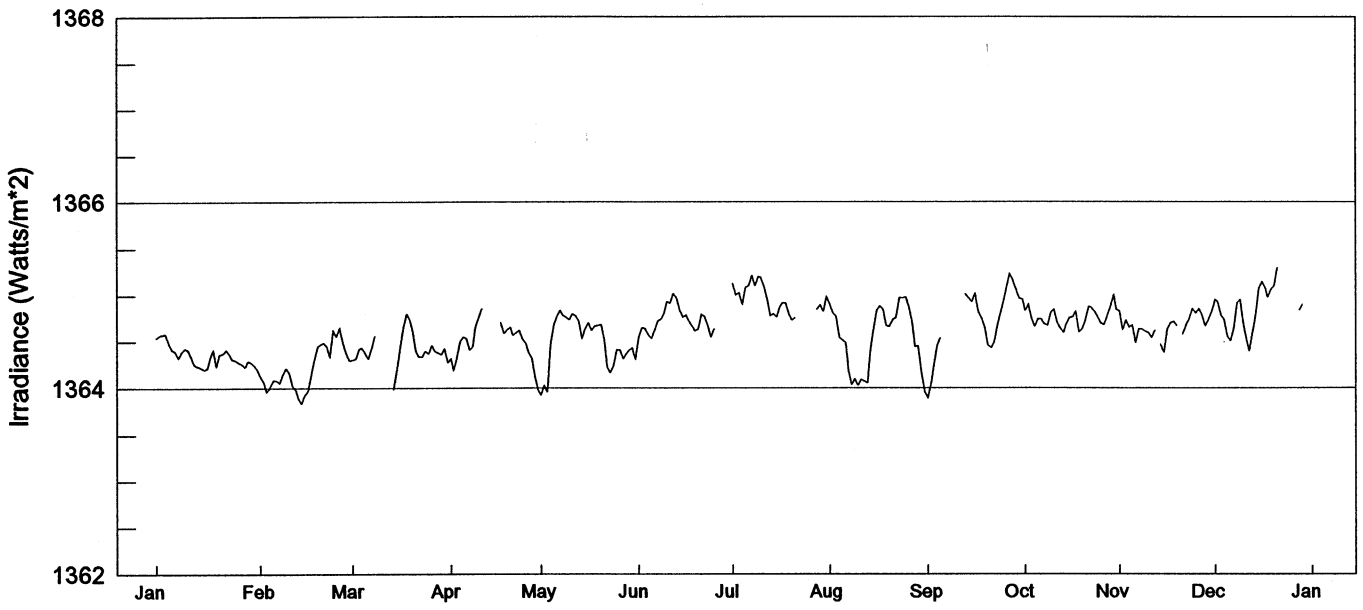


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.181	1363.962	1363.956	1363.814	1363.881	1363.865	1364.063	1363.763	1364.239	1363.956	1363.867	1363.742
2	1364.244	1363.945	1363.872	1363.832	1363.933	1363.868	1364.112	1363.833	1364.247	1363.872	1363.887	1363.753
3	1364.145	—	1363.853	1363.910	1363.906	1363.854	1364.119	1363.795	—	1363.894	1363.872	1363.679
4	1364.009	—	1363.908	1363.923	1363.923	1363.938	1364.100	1363.778	1363.965	1363.962	1363.877	1363.664
5	1363.937	—	1363.852	1363.880	1363.922	1364.007	1364.077	1363.969	1363.902	1363.889	1363.783	1363.616
6	1364.060	—	—	1363.908	1363.942	1363.935	1364.039	1364.088	1363.843	1363.886	1363.884	1363.685
7	1364.038	—	1363.798	1363.943	1363.980	1363.886	1364.034	1364.104	1363.868	1363.871	1363.829	1363.720
8	1364.033	—	1363.763	1363.940	—	1363.916	1363.778	1363.996	1363.857	1363.982	1363.869	1363.705
9	1364.072	—	1363.830	1363.899	—	1363.950	1363.676	1363.910	1363.857	1364.035	1363.879	1363.744
10	1364.028	—	1363.763	1363.900	1364.127	1364.021	1363.768	1363.894	1363.844	1364.001	1363.830	1363.772
11	1363.972	—	1363.855	1363.844	1363.994	1364.027	1363.868	1363.816	1363.840	1364.095	1363.958	1363.802
12	1363.923	1363.847	1363.681	1363.819	1364.023	1363.997	1364.007	1363.812	1363.784	1364.082	1363.994	1363.780
13	1363.877	1363.745	1363.760	1363.823	1364.088	1364.033	1363.975	1363.893	1363.823	1363.996	1363.986	1363.976
14	1363.900	1363.689	1363.802	1363.741	—	1364.014	1363.919	1363.865	1363.831	1364.023	1363.959	1363.997
15	1363.924	1363.707	1363.836	1363.821	1364.406	1363.959	1363.950	1363.837	1363.789	1364.055	1364.055	1363.889
16	1363.916	1363.743	1363.916	1363.780	1364.336	1363.946	1363.954	1363.818	1363.801	1364.000	1363.973	1363.894
17	1363.888	1363.748	1363.958	1363.816	1364.299	1363.948	1363.935	1363.811	1363.807	1364.072	1364.113	1363.947
18	1363.910	1363.711	1364.000	1363.780	1364.196	1363.894	1363.960	1363.836	1363.851	1364.094	1364.054	1363.966
19	1363.880	1363.733	1363.990	1363.883	1364.169	1363.971	1363.990	1363.904	1363.836	1364.104	1364.000	1364.020
20	1363.923	1363.856	1363.950	1363.814	1363.979	1363.990	1363.991	1363.912	1363.850	1364.146	1364.016	1364.077
21	1363.895	1363.912	1363.956	1363.708	1364.013	1363.990	1363.968	1363.904	1363.972	1364.038	1364.027	1364.061
22	1363.897	1363.907	1363.883	1363.829	1363.855	1364.001	—	1363.919	1364.052	1364.087	1363.927	1364.178
23	1363.955	1363.892	1363.885	1363.774	1363.986	1363.960	—	1363.981	1364.076	1364.058	1363.586	1364.204
24	1363.908	1363.816	1363.908	1363.820	1363.898	1363.990	—	1364.099	1364.052	1364.071	1363.264	1364.244
25	1363.834	1363.831	1363.948	1363.850	1363.947	1363.872	—	1364.217	1364.059	1364.050	1362.847	1364.112
26	1364.004	1363.907	1363.937	1363.850	—	1363.761	—	1364.233	1364.047	1364.011	1362.917	1364.122
27	1363.985	1363.910	1363.962	1363.828	—	1363.829	—	1364.166	1364.017	1364.039	1363.012	1364.154
28	1363.989	1363.904	1364.030	1363.839	1363.983	1363.897	—	1364.166	1364.026	1364.003	1363.073	1363.991
29	1364.031	1363.919	1363.987	1363.862	1363.894	1363.998	—	1364.145	1364.021	1363.961	1363.329	1363.975
30	1364.000		1363.970	1363.835	1363.829	1364.025	1364.097	1364.175	1364.020	1363.910	1363.630	1363.901
31	1363.969		1363.968		1363.869		1363.961	1364.173		1363.871		1364.022

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1998 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

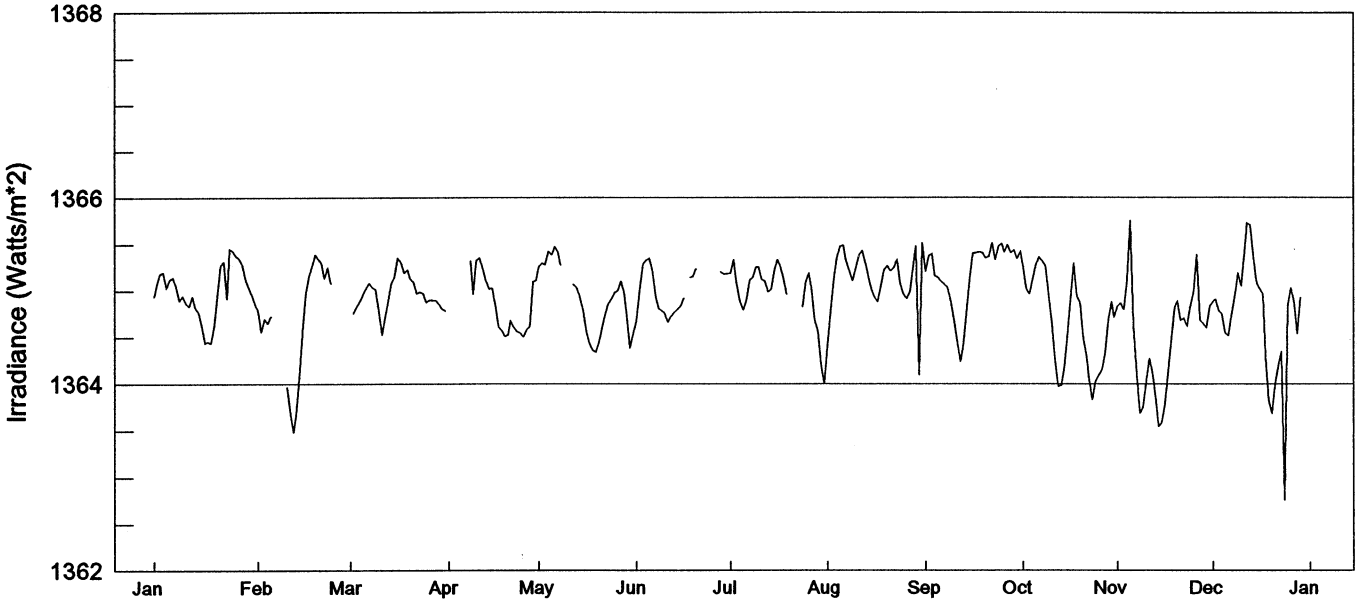


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.544	1364.244	1364.487	1364.364	1364.109	1364.432	—	1364.826	1364.182	1365.062	1365.003	1364.749
2	1364.565	1364.194	1364.375	1364.426	1363.977	1364.308	—	1364.987	1363.965	1364.963	1364.848	1364.828
3	1364.576	1364.128	1364.295	1364.277	1363.925	1364.549	1365.123	1364.906	1363.893	1364.959	1364.831	1364.953
4	1364.584	1364.066	1364.300	1364.315	1364.025	1364.649	1365.007	1364.809	1364.040	1364.836	1364.631	1364.928
5	1364.486	1363.959	1364.313	1364.197	1363.959	1364.645	1365.026	1364.772	1364.268	1364.902	1364.735	1364.789
6	1364.410	1364.007	1364.417	1364.314	1364.476	1364.572	1364.904	1364.540	1364.445	1364.751	1364.656	1364.741
7	1364.397	1364.085	1364.432	1364.500	1364.682	1364.535	1365.082	1364.512	1364.544	1364.667	1364.678	1364.553
8	1364.324	1364.087	1364.382	1364.545	1364.781	1364.620	1365.102	1364.486	—	1364.746	1364.488	1364.506
9	1364.391	1364.055	1364.315	1364.532	1364.844	1364.723	1365.208	1364.189	—	1364.746	1364.635	1364.634
10	1364.422	1364.148	1364.427	1364.412	1364.784	1364.748	1365.098	1364.036	—	1364.692	1364.638	1364.919
11	1364.411	1364.216	1364.564	1364.446	1364.768	1364.793	1365.194	1364.096	—	1364.674	1364.607	1364.952
12	1364.328	1364.163	—	1364.655	1364.742	1364.928	1365.190	1364.030	—	1364.810	1364.596	1364.689
13	1364.248	1364.022	—	1364.756	1364.799	1364.917	1365.094	1364.091	—	1364.848	1364.538	1364.513
14	1364.231	1363.988	—	1364.860	1364.781	1365.017	1364.963	1364.069	—	1364.713	1364.626	1364.398
15	1364.219	1363.889	—	—	1364.723	1364.968	1364.779	1364.056	1365.014	1364.641	—	1364.590
16	1364.200	1363.838	—	—	1364.534	1364.844	1364.798	1364.393	1364.970	1364.597	1364.465	1364.778
17	1364.216	1363.927	1363.987	—	1364.646	1364.769	1364.766	1364.631	1364.930	1364.688	1364.386	1365.072
18	1364.324	1363.968	1364.183	—	1364.706	1364.787	1364.874	1364.837	1365.018	1364.761	1364.628	1365.139
19	1364.411	1364.137	1364.427	—	1364.622	1364.718	1364.914	1364.881	1364.829	1364.768	1364.705	1365.079
20	1364.232	1364.307	1364.648	1364.707	1364.668	1364.663	1364.916	1364.847	1364.757	1364.829	1364.716	1364.982
21	1364.366	1364.444	1364.799	1364.587	1364.678	1364.616	1364.803	1364.670	1364.660	1364.605	1364.673	1365.062
22	1364.370	1364.468	1364.741	1364.629	1364.687	1364.639	1364.733	1364.665	1364.458	1364.636	—	1365.093
23	1364.409	1364.486	1364.631	1364.659	1364.510	1364.795	1364.761	1364.738	1364.434	1364.734	1364.584	1365.299
24	1364.372	1364.455	1364.396	1364.572	1364.233	1364.776	—	1364.758	1364.502	1364.877	1364.680	—
25	1364.308	1364.334	1364.337	1364.594	1364.165	1364.676	—	1364.973	1364.675	1364.872	1364.751	—
26	1364.301	1364.626	1364.338	1364.626	1364.243	1364.545	—	1364.973	1364.824	1364.827	1364.851	—
27	1364.276	1364.555	1364.394	1364.524	1364.413	1364.640	—	1364.977	1364.952	1364.776	1364.808	—
28	1364.264	1364.652	1364.368	1364.486	1364.410	—	—	1364.872	1365.079	1364.701	1364.853	—
29	1364.224		1364.461	1364.379	1364.313	—	—	1364.705	1365.228	1364.686	1364.781	—
30	1364.291		1364.394	1364.319	1364.372	—	1364.845	1364.449	1365.159	1364.779	1364.673	1364.838
31	1364.274		1364.380		1364.406		1364.895	1364.450		1364.885		1364.905

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

1999 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

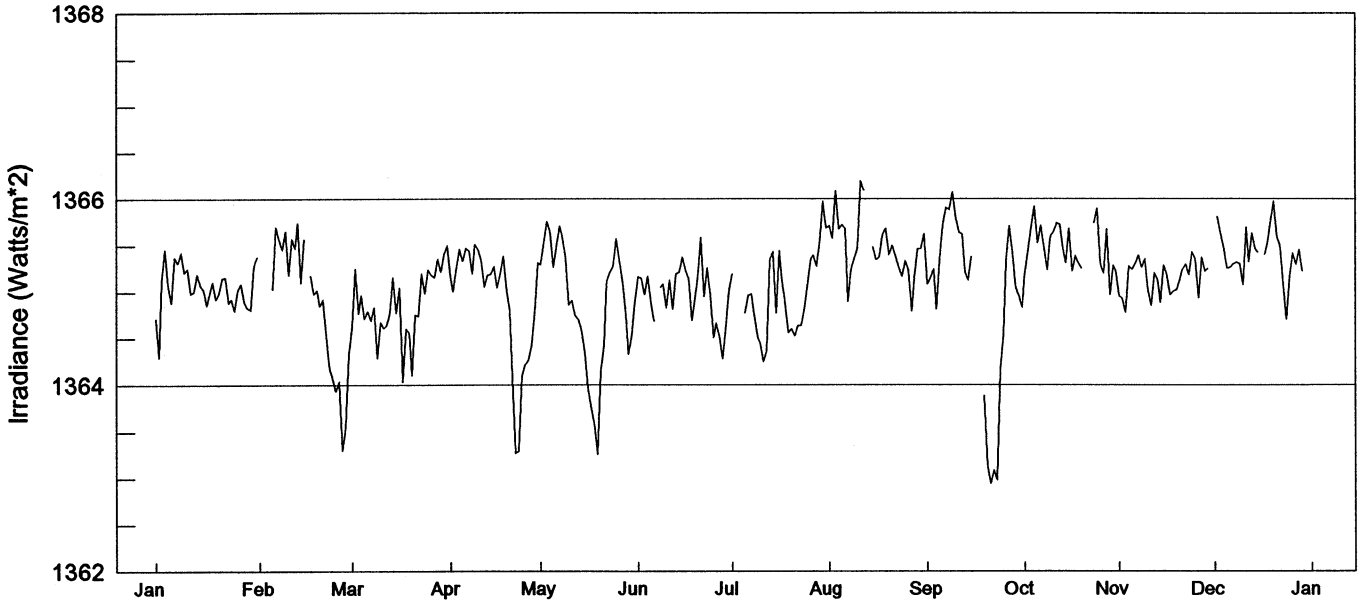


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.940	1364.942	—	1364.856	1365.091	1364.383	1365.174	1364.190	1364.094	1365.433	1364.882	1364.601
2	1365.096	1364.849	—	1364.798	1365.116	1364.544	1365.183	1364.002	1365.511	1365.348	1364.717	1364.836
3	1365.180	1364.789	—	1364.788	1365.257	1364.676	1365.184	1364.421	1365.206	1365.421	1364.836	1364.885
4	1365.197	1364.560	—	—	1365.292	1364.997	1365.336	1364.781	1365.371	1365.265	1364.872	1364.912
5	1365.031	1364.700	1364.762	—	1365.277	1365.277	1365.060	1365.131	1365.398	1365.020	1364.799	1364.784
6	1365.119	1364.650	1364.837	—	1365.421	1365.326	1364.879	1365.365	1365.161	1364.963	1365.113	1364.750
7	1365.138	1364.736	1364.877	—	1365.387	1365.346	1364.792	1365.476	1365.145	1365.120	1365.748	1364.550
8	1365.048	—	1364.949	—	1365.471	1365.214	1364.897	1365.486	1365.103	1365.277	1364.623	1364.522
9	1364.892	—	1365.028	—	1365.414	1364.939	1365.117	1365.317	1365.070	1365.360	1364.110	1364.748
10	1364.945	—	1365.078	—	1365.274	1364.806	1365.138	1365.207	1365.031	1365.317	1363.687	1364.946
11	1364.866	—	1365.032	1365.319	—	1364.787	1365.251	1365.107	1364.893	1365.265	1363.756	1365.193
12	1364.837	1363.967	1365.013	1364.965	—	1364.761	1365.254	1365.242	1364.689	1364.951	1364.034	1365.053
13	1364.941	1363.699	1364.782	1365.323	—	1364.662	1365.123	1365.381	1364.450	1364.655	1364.277	1365.409
14	1364.810	1363.481	1364.525	1365.357	1365.068	1364.726	1365.103	1365.431	1364.241	1364.239	1364.107	1365.723
15	1364.763	1363.672	1364.684	1365.240	1365.030	1364.764	1364.983	1365.301	1364.396	1363.975	1363.828	1365.703
16	1364.617	1364.068	1364.873	1365.105	1364.937	1364.801	1365.010	1365.171	1364.756	1363.988	1363.544	1365.367
17	1364.436	1364.548	1365.079	1365.022	1364.799	1364.834	1365.215	1365.020	1365.117	1364.168	1363.588	1365.081
18	1364.450	1364.961	1365.152	1365.025	1364.574	1364.925	1365.331	1364.930	1365.403	1364.509	1363.800	1365.022
19	1364.441	1365.154	1365.352	1364.850	1364.435	—	1365.261	1364.879	1365.409	1364.902	1364.142	1364.965
20	1364.608	1365.261	1365.304	1364.607	1364.361	1365.140	1365.143	1365.043	1365.412	1365.292	1364.500	1364.305
21	1364.954	1365.386	1365.188	1364.573	1364.341	1365.151	1364.955	1365.222	1365.408	1364.936	1364.837	1363.818
22	1365.275	1365.347	1365.224	1364.513	1364.447	1365.240	—	1365.266	1365.351	1364.874	1364.889	1363.690
23	1365.316	1365.305	1365.125	1364.527	1364.608	—	—	1365.209	1365.366	1364.493	1364.682	1363.996
24	1364.914	1365.134	1365.092	1364.677	1364.731	—	—	1365.246	1365.512	1364.308	1364.703	1364.198
25	1365.451	1365.242	1364.971	1364.609	1364.858	—	—	1365.332	1365.331	1364.059	1364.626	1364.352
26	1365.429	1365.073	1364.988	1364.558	1364.908	—	1364.829	1365.069	1365.474	1363.834	1364.841	1362.762
27	1365.376	—	1364.972	1364.547	1364.982	—	1365.092	1364.959	1365.501	1364.032	1364.977	1364.846
28	1365.350	—	1364.873	1364.506	1365.000	—	1365.186	1364.916	1365.413	1364.098	1365.387	1365.027
29	1365.270		1364.901	1364.580	1365.101	—	1365.023	1364.994	1365.490	1364.156	1364.687	1364.880
30	1365.116		1364.892	1364.619	1364.982	1365.200	1364.685	1365.215	1365.407	1364.327	1364.648	1364.540
31	1365.027		1364.895		1364.730		1364.568	1365.478		1364.692		1364.929

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

2000 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission

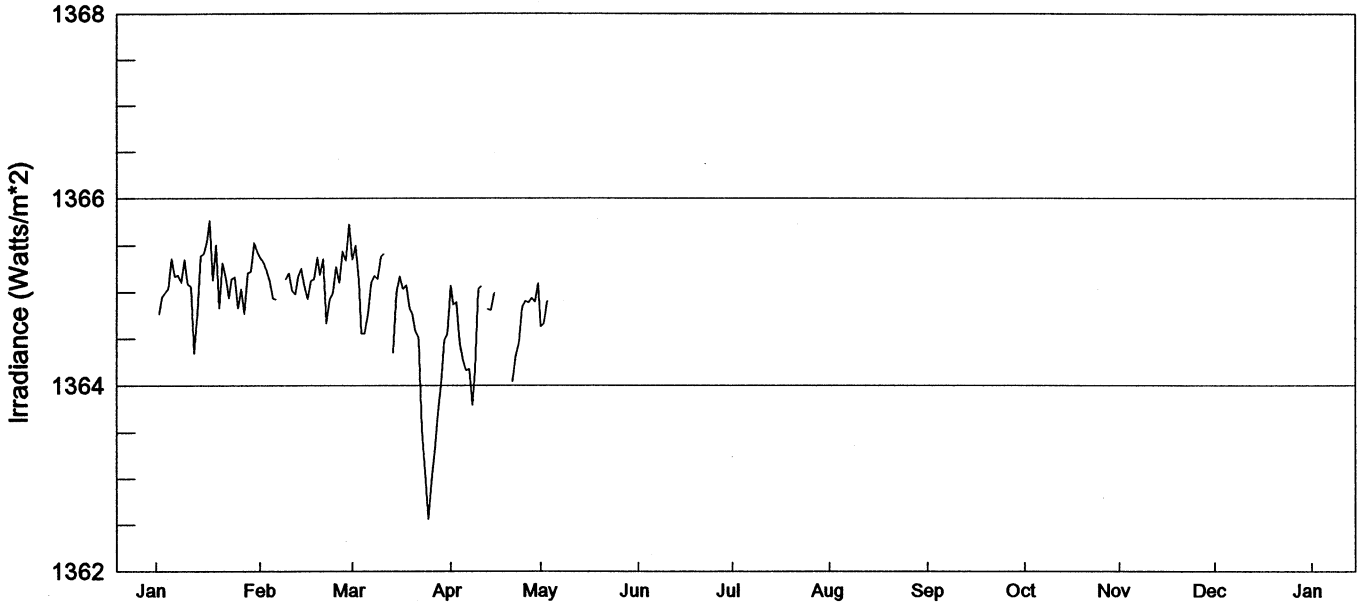


Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	1364.711	1365.276	1363.552	1365.405	1365.316	1364.899	1365.012	1365.691	1365.628	1364.956	1365.229	---
2	1364.298	1365.382	1364.329	1365.496	1365.290	1365.163	1365.198	1365.708	1365.084	1364.835	1364.957	---
3	1365.130	---	1364.620	1365.165	1365.515	1365.151	---	1365.577	1365.154	1365.194	1364.928	1365.811
4	1365.454	---	1365.249	1365.003	1365.756	1364.970	---	1366.089	1365.244	1365.440	1364.781	1365.637
5	1365.073	---	1364.767	1365.246	1365.650	1365.172	---	1365.676	1364.812	1365.696	1365.277	1365.476
6	1364.884	---	1364.966	1365.453	1365.261	1364.887	1364.776	1365.721	1365.350	1365.923	1365.243	1365.256
7	1365.376	1365.030	1364.711	1365.330	1365.497	1364.678	1364.966	1365.683	1365.721	1365.525	1365.308	1365.261
8	1365.316	1365.703	1364.793	1365.469	1365.709	---	1364.981	1364.894	1365.905	1365.719	1365.396	1365.309
9	1365.421	1365.567	1364.689	1365.443	1365.591	1365.054	1364.729	1365.243	1365.890	1365.474	1365.267	1365.317
10	1365.213	1365.456	1364.835	1365.198	1365.374	1365.087	1364.507	1365.363	1366.077	1365.239	1365.352	1365.306
11	1365.251	1365.656	1364.291	1365.510	1364.865	1364.829	1364.448	1365.473	1365.796	1365.603	1365.020	1365.083
12	1364.987	1365.180	1364.671	1365.457	1364.912	1365.127	1364.252	1366.196	1365.642	1365.648	1364.851	1365.695
13	1365.005	1365.571	1364.609	1365.338	1364.745	1364.812	1364.367	1366.089	1365.618	1365.743	1365.202	1365.326
14	1365.193	1365.470	1364.636	1365.056	1364.706	1365.196	1365.349	---	1365.214	1365.722	1365.134	1365.635
15	1365.076	1365.741	1364.758	1365.180	1364.589	1365.207	1365.432	---	1365.128	1365.452	1364.890	1365.462
16	1365.029	1365.097	1365.154	1365.188	1364.354	1365.372	1364.775	1365.474	1365.384	1365.316	1365.284	1365.421
17	1364.858	1365.575	1364.774	1365.272	1363.968	1365.233	1365.440	1365.348	---	1365.685	1365.191	---
18	1364.980	---	1365.048	1365.047	1363.753	1365.139	1365.136	1365.372	---	1365.221	1364.972	1365.410
19	1365.105	1365.174	1364.039	1365.195	1363.575	1364.693	1364.881	1365.620	---	1365.390	1365.012	1365.508
20	1364.921	1364.974	1364.604	1365.390	1363.258	1364.899	1364.559	1365.679	1363.884	1365.309	1365.028	1365.759
21	1364.994	1365.020	1364.553	1365.017	1364.149	1365.154	1364.601	1365.403	1363.134	1365.248	1365.115	1365.977
22	1365.146	1364.846	1364.105	1364.801	1364.421	1365.588	1364.525	1365.497	1362.942	---	1365.243	1365.597
23	1365.159	1364.917	1364.750	1364.084	1365.106	1364.949	1364.635	1365.388	1363.090	---	1365.297	1365.498
24	1364.883	1364.540	1364.737	1363.274	1365.211	1365.259	1364.639	1365.266	1362.982	---	1365.187	1365.089
25	1364.926	1364.185	1365.194	1363.295	1365.270	1364.966	1364.818	1365.170	1364.168	1365.743	1365.430	1364.703
26	1364.798	1364.071	1364.988	1364.100	1365.572	1364.509	1365.081	1365.330	1364.539	1365.903	1365.354	1365.165
27	1365.028	1363.933	1365.241	1364.220	1365.335	1364.664	1365.351	1365.231	1365.335	1365.300	1364.941	1365.413
28	1365.086	1364.039	1365.183	1364.264	1365.110	1364.529	1365.397	1364.791	1365.711	1365.203	1365.371	1365.299
29	1364.897	1363.298	1365.158	1364.417	1364.752	1364.283	1365.281	1365.159	1365.424	1365.671	1365.223	1365.454
30	1364.830		1365.355	1364.779	1364.333	1364.611	1365.532	1365.465	1365.046	1364.970	1365.257	1365.216
31	1364.808		1365.217		1364.522		1365.976	1365.462		1365.283		---

NOTE: -- indicates data not available.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.

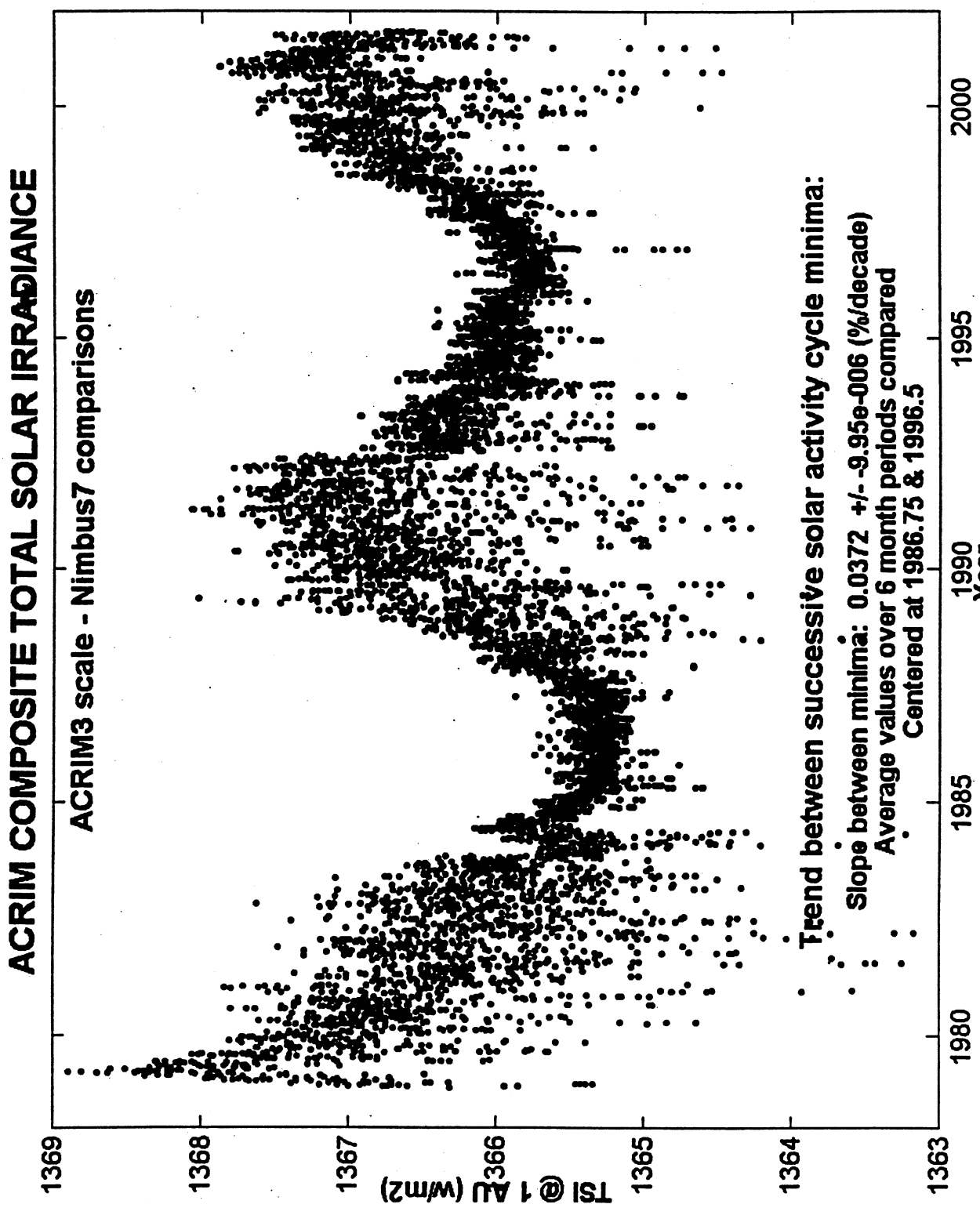
2001 Daily Mean Solar Irradiance
UARS (ACRIM2) Completed Mission



Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	---	1365.526	1365.433	1364.017	1364.898							
2	1364.768	1365.437	1365.338	1364.483	1365.093							
3	1364.952	1365.376	1365.725	1364.547	1364.629							
4	1364.991	1365.329	1365.343	1365.066	1364.661							
5	1365.038	1365.238	1365.495	1364.867	1364.910							
6	1365.359	1365.123	1365.135	1364.886								
7	1365.171	1364.940	1364.552	1364.457								
8	1365.182	1364.918	1364.554	1364.278								
9	1365.106	---	1364.764	1364.169								
10	1365.349	---	1365.101	1364.178								
11	1365.090	1365.145	1365.177	1363.793								
12	1365.057	1365.205	1365.138	1364.159								
13	1364.342	1365.013	1365.379	1365.032								
14	1364.768	1364.981	1365.417	1365.065								
15	1365.385	1365.161	---	---								
16	1365.418	1365.254	---	1364.810								
17	1365.555	1365.065	1364.348	1364.808								
18	1365.764	1364.927	1364.998	1364.995								
19	1365.127	1365.121	1365.172	---								
20	1365.501	1365.142	1365.032	---								
21	1364.830	1365.376	1365.073	---								
22	1365.312	1365.179	1364.822	---								
23	1365.164	1365.355	1364.775	---								
24	1364.935	1364.667	1364.576	1364.040								
25	1365.138	1364.919	1364.511	1364.324								
26	1365.163	1364.990	1363.538	1364.451								
27	1364.831	1365.272	1363.073	1364.842								
28	1365.033	1365.102	1362.564	1364.903								
29	1364.767		1362.972	1364.887								
30	1365.206		1363.289	1364.937								
31	1365.220		1363.697									

NOTE: -- indicates data not available. Mission ended 5 May, 2001.

NOTE: The ratio of ACRIM1 to ACRIM2, defined by mutual comparisons with NIMUS7/ERB, is 1.002609.


ACRIM COMPOSITE TOTAL SOLAR IRRADIANCE
ACRIM3 scale - Nimbus7 comparisons
TSI @ 1 AU (w/m2)
1369
1368
1367
1366
1365
1364
1363
1980
1985
1990
1995
2000
Year
Trend between successive solar activity cycle minima:
Slope between minima: 0.0372 +/- -9.95e-006 (%/decade)
Average values over 6 month periods compared
Centered at 1986.75 & 1996.5