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## Solar - Geophysical Data

NO. 356

APRIL 1974

Part II (Comprehensive Reports)

DATA FOR  
OCTOBER 1973  
SEPTEMBER 1973  
& MISCELLANEA

**NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER  
BOULDER, COLORADO**

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# SOLAR - GEOPHYSICAL DATA

No. 356

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director  
Solar - Terrestrial Data Services Division

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For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

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# SOLAR FLARES Confirmed

OCTOBER 1973

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE OCT	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %		
					LAT.	MER. DIST.													
820 MITK	01	0400	0416	0409	S17	E25	.563	12542	3.0	16	1F	C	0409	3.40	4.10			E 3	
GRP49821	01	0642	0704	0648	N08	W66	.909	12532	26.3	22	-N			1.06				4 4 3 5	
TACH	01	0640	0656	0643	N06	W67	.917	12532	26.3	16	-E	C	0643	1.00			80	EZ	
MITK	01	0640E	0708	0653	N10	W66	.908	12532	26.3	280	1N	C	0653	1.55				E	
CRON	01	0643E	0705		N08	W65	.902	12532	26.4	220	-N	V		.62				D	
ISTA	01	0645	0705		N07	W67	.917	12532	26.3	20	-N								
GRP49823	01	0950	0959	0952	N11	W68	.922	12535	26.3	9	--N			.37				2 2 2 5	
MONT	01	0949	0959	0951	N12	W67	.915	12535	26.4	10	-N	C	0951	.21				D	
CANR	01	0950	0958	0953	N10	W69	.929	12535	26.2	8	-N	V	0953	.52					
GRP49825	01	1015	1028	1019	S07	E12	.313	12542	2.3	13	--N			.27				3 3 3 4	
CATA	01	1015	1025	1020	S07	E12	.313	12542	2.3	10	-N	1	1020	.29	.30		(158)		
CANR	01	1015	1030	1018	S07	E10	.292	12542	2.2	15	-N	V	1018	.41					
MONT	01	1016	1020	10190	S06	E13	.312	12542	2.4	40	-N	C	1019	.10				D	
826 HUAN	01	1306	1313	1308	N11	W68	.922	12535	26.4	7	--N	1	C	1308	.26			3	
827 HUAN	01	1425	1429	1425	S11	E17	.415	12542	2.9	4	--F	2	C	1425	.21	.22		D 3	
GRP49828	01	1426	1443	1429	S14	W06	.368	12540	1.2	17	--F			.75				3 3 3 4	
RAMY	01	1423	1438	1428	S14	W06	.368	12540	1.1	15	-F	2	C		.28			DE	
HUAN	01	1427	1435	1429	S14	W06	.368	12540	1.2	8	-N	1	C	1429	.41	.44			
CANR	01	1427E	1455		S14	W06	.368	12540	1.2	280	-F	V		1.55					
GRP49829	01	1803	1819	1807	S14	W08	.378	12540	1.2	16	--N			.51				2 2 2 2	
PALE	01	1803	1819	1807	S13	W08	.363	12540	1.2	16	-N	3	C		.55			F H	
HUAN	01	1808E	18100		S15	W07	.388	12540	1.2	20	-N	2	C	1809	.46	.50		C	
	01	1918	1936	NO FLARE PATROL															
	01	2007	2030	NO FLARE PATROL															
	01	2119	2147	NO FLARE PATROL															
GRP49830	02	0015	0046	0018	S09	W12	.337	12540	1.1	31	--F			1.27				2 1 1 2	
PALE	02	0015E	0044	0018U	S13	W12	.391	12540	1.1	290	-F	2	C	1.27				U	
CRON	02	0040	0048		S04	W12	.276	12540	1.1	8	-F	V		1.03					
831 CRON	02	0158E	0212		S04	W12	.276	12540	1.2	140	--F	V		1.13				2	
GRP49833	02	0259	0314	0303	N22	W19	.405	12537	30.7	15	--B			.54				2 2 2 5	
CRON	02	0259	0313	0302	N22	W18	.393	12537	30.8	14	-B	V		.62					
PALE	02	0304E	0315	0304U	N22	W19	.405	12537	30.7	110	-N	2	C		.45			F	
834 MITK	02	0405	0436	0421	S13	E07	.356	12542	2.7	31	--F	C	0421	.83	.90			E 3	
836 ARCE	02	0911E	09200		N23	W21	.438	12537	30.9	90	--N	C	0915	.25	.30			4	
	02	1000	1005	NO FLARE PATROL															
	02	1203	1240	NO FLARE PATROL															
GRP49837	02	1220	1242	1226	S14	E03	.357	12542	2.7	22	-B			.72				2 2 1 2	
CANR	02	1220	12300	1224U	S15	E01	.370	12542	2.6	100	1N	V	1224		2.80				
RAMY	02	1225E	12420	1228	S13	E05	.347	12542	2.9	170	-B	3	V		.72			DE	
GRP49838	02	1909	1924	1916	N22	W28	.516	12537	30.7	15	--N			.37				2 2 2 4	
PALE	02	1909	1924	1916	N22	W28	.516	12537	30.7	15	-N	2	C		.36			H	
RAMY	02	1915E	19200	1915U	N21	W28	.510	12537	30.7	50	-N	3	C		.37			DE F	
GRP49839	02	2017	2023	2019	N11	W79	.978	12535	26.9	6	--F			.32				2 2 2 2	
RAMY	02	2016E	20250	2018U	N11	W80	.981	12535	26.8	90	-N	2	C		.37			DE	
HUAN	02	2017	2021	2019	N11	W78	.974	12535	27.0	4	-F	1	C	2019	.26			D	
	02	2030	2034	NO FLARE PATROL															
	02	2153	2210	NO FLARE PATROL															
840 CRON	03	0001E	0023	0003	S14	W26	.545	12540	1.1	220	--N	V		.83				1	
841 CRON	03	0112E	0158	0146	N13	W83	.990	12535	26.8	460	-N	V		.62				1	
842 CRON	03	0358E	0416	0403	N13	W83	.990	12535	26.9	180	-N	V		.62				2	
GRP49845	03	1435	1459	1439	S13	W11	.382	12542	2.8	24	--F			1.83				2 2 2 3	
RAMY	03	1435	1459	1439	S13	W12	.390	12542	2.7	24	-F	4	C		.56			DE	
WEND	03	1438E	14520		S13	W09	.368	12542	2.9	140	1F	V		3.09					



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# SOLAR FLARES Confirmed OCTOBER 1973

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE OCT	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MC MATH FLARE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H <sub>g</sub>	MAX. INT. %		
					LAT.	MER. DIST.													
49863	05	0252	0355	0258	S15	W53	.836	12540	1.1	63	*-F							2 2 2 4	
PALE	05	0252	0355	0257	S13	W55	.848	12540	1.0	63	-F	2	C		1.18			F	
MANI	05	0255E	0319D	0259U	S16	W51	.822	12540	1.3	24D	-F	2		0259	.52	.88		F	
GRP49866	05	0944	0949	0945	S16	W31	.617	12542	3.1	5	--N				.36			4 4 4 7	
MEUD	05	0943	0949		S17	W31	.624	12542	3.1	6	-F		C	0943	.41	.50			
MCNT	05	0943	0949	0944	S15	W31	.609	12542	3.1	6	-N		C	0944	.41			D	
ARCE	05	0945E	0948D		S16	W30	.606	12542	3.2	3D	-N		P	0945	.32	.40			
CATA	05	0945	0950	0945	S16	W31	.617	12542	3.1	5	-N	3		0945	.29	.36		(166)	
GRP49868	05	1118	1125	1120	S17	W35	.667	12542	2.8	7	-N				1.45			4 4 4 7	
RAMY	05	1116	1128	1119	S16	W36	.671	12542	2.8	12	-F	3	C		.37			DE	
MONT	05	1117	1123	1120	S17	W35	.667	12542	2.8	6	-N		C	1120	1.86				
MEUD	05	1117	1123	1120	S18	W35	.674	12542	2.8	6	-N		C	1120	1.24	1.60		EL	
CATA	05	1120	1125	1120	S17	W35	.667	12542	2.8	5	1N	3		1120	2.31	3.11		(170)	
GRP49870	05	1356	1416	1401	S16	W38	.693	12542	2.7	20	--F				.40			4 4 3 5	
RAMY	05	1355	1415	1401	S16	W38	.693	12542	2.7	20	-F	2	C		.37			DE	
MEUD	05	1355	1412	1400	S16	W38	.693	12542	2.7	17	-N		C	1400	.52	.70		E	
MCMA	05	1356	1420	1401	S15	W39	.698	12542	2.7	24	-F		C	1401	.31	.40		OH	
HUAN	05	1358	1400D		S15	W38	.687	12542	2.7	20	-F	1	P	1359					
GRP49871	05	1928	1957	1940	S15	W42	.730	12542	2.7	29	--F				.70			2 2 2 2	
PALE	05	1920	1956	1935	S14	W44	.746	12542	2.5	36	-N	2	C		.99			DE	
FALE	05	1920	1956	1927	S14	W44	.746	12542	2.5	36	-N	2	C		.36			DE	
MCMA	05	1936	1958	1944	S15	W40	.709	12542	2.8	22	-F		C	1944	.41	.60		E	
GRP49872	05	1937	2039	1947	S12	W59	.879	12540	1.4	62	--F				.67			3 2 2 3	
PALE	05	1935	2052D	1946	S12	W57	.863	12540	1.5	77D	-F	2	C		1.08			F	
MCMA	05	1938	2025	1947	S12	W60	.887	12540	1.3	47	-F		C	1947	.26	.50		O	
RAMY	05	2004E	2013D	2007	S13	W59	.881	12540	1.4	90	-F	3	C		.83			DE	
873 PALE	05	2211E	2214D	2212U	N05	E36	.586	12549	8.6	3C	--F	2	V		.26			2	
GRP49874	06	0136	0210	0146	S14	W45	.756	12542	2.7	34	-N				1.16			3 3 3 4	
PALE	06	0136	0215D	0150U	S15	W45	.760	12542	2.7	39D	-N	2	C		1.44			F	
VORO	06	0136	0204	0141	S13	W46	.762	12542	2.6	28	-B		C	0148	1.02	1.50		EJ	
MANI	06	0140E	0152D	0147	S13	W43	.731	12542	2.8	12D	-N	1		0147	1.03	1.52		F	
3 STATIONS REPORTING GROUP 49875. 1 STATIONS OBSERVING AND NOT REPORTING.																			
GRP49875	06	0254	0446	0257	S15	W49	.800	12542	2.4	112	-F				1.45			2 2 2 4	
TEHR	06	0254E	0447	0254U	S16	W51	.822	12542	2.3	113D	-N	1	V		.83			F	
CRON	06	0300E	0445	0300	S14	W46	.766	12542	2.7	105D	1F		V		2.06				
	06	0255	0300	NO FLARE PATROL															
49875	06	0312	0457	0341	S17	W46	.779	12542	2.7	105	*1N				2.19			2 1 1 4	
TEHR	06	0312E	0457	0341U	S17	W46	.779	12542	2.7	105D	1N	3	C		2.19			U F	
KODA	06	0353	0436	0355	S15	W45	.760	12542	2.8	43	-E		P	0412	.99	1.02	2.08	CE	
GRP49876	06	1049	1127	1056	S16	W68	.945	12540	1.4	38	-N				.53			3 3 3 7	
RAMY	06	1046E	1126	1050	S14	W67	.937	12540	1.4	40D	-N	4	V		.66			DE	
TEHR	06	1052	1128	1102	S17	W69	.952	12540	1.3	36	-N	3	C		.36				
CATA	06	1055E	1100D	1055	S16	W68	.945	12540	1.4	5D	-N	3		1055	.58			(174)	
877 RAMY	06	1600	1609	1603	S17	W53	.842	12542	2.7	9	--F	4	V		.28			DE	
	06	1806	1823	NO FLARE PATROL															
	06	1826	1849	NO FLARE PATROL															
	06	1941	2053	NO FLARE PATROL															
	06	2107	2140	NO FLARE PATROL															
	07	1752	1812	NO FLARE PATROL															
	07	1848	1857	NO FLARE PATROL															
	07	1900	1908	NO FLARE PATROL															
	07	1909	1935	NO FLARE PATROL															
	07	1941	2006	NO FLARE PATROL															
	07	2019	2058	NO FLARE PATROL															
880 PALE	07	2058E	2108		S16	W67	.940	12542	2.8	10D	--F	1	C					F	





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# SOLAR FLARES Confirmed

OCTOBER 1973

OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS
	DATE OCT	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %	
					LAT.	MER. DIST.												
	13	2057	2100	NO FLARE	PATROL													
GRP49909	14	1503	1520	1505	N14	W32	.537	12556	12.2	17	--N						3 3 3 3	
CANR	14	1502	1520	1505	N12	W32	.532	12556	12.2	18	-F			.40				
RAMY	14	1503	1525	1504	N14	W32	.537	12556	12.2	22	-N	3	C	.37			DE H	
MCMA	14	1504E	1515	1506	N15	W32	.540	12556	12.2	110	-N		C	.41	.50		CEH	
GRP49910	14	1900	1920	1907	N15	W34	.568	12556	12.2	20	--F			.35			2 2 2 2	
RAMY	14	1900	1909	1904U	N14	W34	.565	12556	12.2	90	-F	1	C	.28			DE	
MCMA	14	1900	1920	1909	N15	W34	.568	12556	12.2	20	-N		C	.41	.50		E	
	14	1928	1929	NO FLARE	PATROL													
	14	1931	2045	NO FLARE	PATROL													
920 PALE	16	1824E	18300	1825U	N15	W57	.835	12556	12.5	60	--F	2	C	.36			F 2	
	16	1944	2000	NO FLARE	PATROL													
	16	2013	2046	NO FLARE	PATROL													
922 MANI	17	0252E	02570	0252U	N12	W63	.882	12556	12.4	50	--N	1		0252	.41	.79	F 3	
GRP49929	17	1014	1042	1019	S03	W52	.800	12571	13.5	28	--N			.28			3 3 3 8	
MONT	17	1013E	1046	1021	S02	W51	.787	12571	13.5	330	-N		C	1021	.21		0	
ATHN	17	1014E	1031	1015	S05	W53	.815	12571	13.5	170	-F	3	V	1020	.33		OE	
CATA	17	1015	1050	1020	S02	W52	.798	12571	13.5	35	-N	1		1020	.29	.47	(166)	
	17	1912	1936	NO FLARE	PATROL													
	18	2030	2045	NO FLARE	PATROL													
	19	0350	0403	NO FLARE	PATROL													
	19	0407	0415	NO FLARE	PATROL													
	19	0440	0447	NO FLARE	PATROL													
	19	1741	1805	NO FLARE	PATROL													
	19	1834	1841	NO FLARE	PATROL													
	19	1843	1859	NO FLARE	PATROL													
	19	1903	1923	NO FLARE	PATROL													
	19	1942	2053	NO FLARE	PATROL													
	19	2058	2129	NO FLARE	PATROL													
	19	2213	2303	NO FLARE	PATROL													
	19	2318	2323	NO FLARE	PATROL													
	20	1831	1848	NO FLARE	PATROL													
	20	1857	1901	NO FLARE	PATROL													
	20	1922	1923	NO FLARE	PATROL													
	20	1956	2113	NO FLARE	PATROL													
GRP49933	21	1135	1155	1145	S13	E89	1.000	12584	28.2	20	1F			.57			3 3 2 5	
KHAR	21	1133E	11400		S13	E90	1.000	12584	28.2	70	1F		P					
CATA	21	1135E	12000	1145	S14	E90	1.000	12584	28.2	250	1F	3		1145	.87		(145) T	
HUAN	21	1137	1150	1144U	S12	E88	1.000	12584	28.1	13	-F	1	C	1144	.26		T	
GRP49934	21	1437	1500	1442	S12	E88	1.000	12584	28.2	23	-F			.31			3 2 1 4	
MCMA	21	1425E	14400		S12	E90	1.000	12584	28.4	150	-N		C	1430				
HUAN	21	1435	1500	1442U	S12	E88	1.000	12584	28.2	25	-F	1	P	1442	.31			
RAMY	21	1439	1500		S12	E87	1.000	12584	28.1	21	-N	4	C				DE	
GRP49936	21	1655	1713	1659	S12	E87	1.000	12584	28.2	18	--F			.26			2 2 1 4	
HUAN	21	1653	1713	1659U	S12	E88	1.000	12584	28.3	20	-F	1	C	1659	.26		0	
RAMY	21	1656	1710D		S12	E86	.999	12584	28.2	140	-N	3	C				DE	
937 HUAN	21	1820	1827	1822	S12	E88	1.000	12584	28.4	7	--F	1	C	1822	.31		3	
938 HUAN	21	1920	1928	1923	S12	E87	1.000	12584	28.3	8	-N	1	C	1923	.26		0 3	



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OBSERVATORY	OBSERVED UT				LOCATION				DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS	
	DATE OCT	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION				CMP DAY	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hc		MAX. INT. %
					LAT.	MER. DIST.												
GRP49967	25	1124	1142	1127	S15	E30	.586	12584	27.7	18	--N						4 4 4 7	
CANR	25	1123	1144	1126	S15	E30	.586	12584	27.7	21	-N	V	1126	1.65	1.90			
RAMY	25	1124	1138	1126	S15	E29	.574	12584	27.7	14	-N	4 C		.46			DE	
MCNT	25	1125	1148	1129	S16	E30	.593	12584	27.7	23	-B	C	1129	.52				
MEUD	25	1125	1138	1126	S15	E29	.574	12584	27.7	13	-N	C	1126	.52	.60		E	
GRP49968	25	1322	1333	1325	N17	E84	.992	12590	31.9	11	--F			.52			2 2 1 6	
MEUD	25	1320	1333	1326	N16	E80	.982	12590	31.6	13	-F	C	1326	.52				
HUAN	25	1323	1332	1324	N17	E88	.998	12590	1.2	9	-F	1 C	1324					
GRP49970	25	1425	1623	1551	N15	W20	.375	12577	24.1	118	--F			.39			4 4 4 5	
MCMA	25	1425	1550	1455	N15	W21	.389	12577	24.0	850	-F	C	1455	.31	.30		EH	
RAMY	25	1542E	1615	1542U	N15	W22	.404	12577	24.0	330	-F	3 C		.23			DE	
MCMA	25	1551	1645	1600	N15	W20	.375	12577	24.2	54	-N	C	1600	.41	.40		E	
HUAN	25	1557E	1608		N14	W19	.354	12577	24.2	110	-F	2 C	1559	.52	.55		CE	
CANR	25	1559E	15590		N17	W19	.376	12577	24.2		-N	V		.41	.50			
GRP49971	25	1552	1604	1554	S16	E27	.560	12584	27.7	12	--F			.25			2 2 2 5	
RAMY	25	1552	1602	1554	S14	E27	.543	12584	27.7	10	-F	3 C		.28			DE	
MCMA	25	1552E	1605	1553	S17	E27	.568	12584	27.7	130	-N	C	1553	.21	.20		E	
GRP49972	25	1719	1756	1727	N15	W22	.404	12577	24.1	37	--N			.45			4 4 4 5	
MCMA	25	1717	1805	1732	N15	W21	.389	12577	24.1	48	-N	C	1732	.46	.50		E	
HUAN	25	1719E	1737D		N14	W21	.383	12577	24.1	180	-F	2 P	1727	.31	.34		C	
RAMY	25	1720	1758	1725	N15	W23	.418	12577	24.0	38	-N	3 V		.37			DE	
PALE	25	1721E	1745	1723U	N15	W22	.404	12577	24.1	240	-N	2 V		.67			F	
973	RAMY	25	2037E	2055	2040U	N15	W25	.446	12577	24.0	180	--F	3 V		.28			DE
974	PALE	25	2126E	2135	2128U	S15	E28	.563	12584	28.0	90	--N	3 V		.26			
975	PALE	25	2141E	2149D	2144U	S12	E27	.527	12584	27.9	80	--N	3 V		.21			F
		25	2202	2215	NO FLARE PATROL													
GRP49976	25	2336	2353	2341	S15	E25	.528	12584	27.9	17	--N			.83			1 1 1 4	
MITK	25	2336E	2353	2341	S15	E27	.551	12584	28.0	170	-N	C	2341	.83	1.00		D	
MITK	25	2336E	2341	2338	S15	E23	.506	12584	27.7	50	-N	C	2338	.62	.70		D	
GRP49979	26	0727	0750	0732	S16	E18	.462	12584	27.7	23	--N			.79			4 4 4 4	
TACH	26	0724	0742	0733	S16	E20	.462	12584	27.8	18	-B	C	0733	1.19	1.36	2.15	48	
TEHR	26	0726	0851	0731	S16	E18	.462	12584	27.7	85	-N	2 C		.45			EZ	
CRON	26	0728	0749	0733	S17	E18	.474	12584	27.7	21	-N	V		.41			DE	
BUCA	26	0730	0758		S15	E17	.440	12584	27.6	28	-N	C	0732	1.10	1.20			
CRON	26	0840	0849		S17	E18	.474	12584	27.7	9	-F	V		.31				
981	MEUD	26	1301	1310	1302	S10	E17	.384	12584	27.8	9	--F	C	1302	.31	.30		0
GRP49982	26	1737	1748	1740	S15	E16	.431	12584	27.9	11	--F			.32			2 2 2 2	
RAMY	26	1735	1750	1739	S14	E16	.419	12584	27.9	15	-F	3 C		.23			DE	
PALE	26	1739	1746	1741	S16	E15	.434	12584	27.9	7	-N	3 V		.41			F	
983	PALE	26	1754	1800	1756	S16	E15	.434	12584	27.9	6	--N	4 V		.41			DE
984	PALE	26	2116	2127D	2118	S13	E14	.386	12584	27.9	110	--N	2 V		.62			DE
985	PALE	26	2119	2133	2122	S15	E27	.550	12584	28.9	14	--N	2 C		.27			
986	PALE	26	2132E	2136D	2133U	S13	E14	.386	12584	27.9	40	--N	3 V		.52			DE
GRP49987	26	2135	2236	2151	S14	E24	.507	12584	28.7	61	-N			1.44			1 1 1 1	
PALE	26	2135E	2151D		S12	E26	.514	12584	28.8	160	-F	1 C						
PALE	26	2145E	2236	2151U	S16	E22	.504	12584	28.6	510	-N	2 V		1.44			F	
988	PALE	26	2240	2246	2243U	S16	E12	.408	12584	27.9	6	--N	2 V		.62			
989	PALE	27	0016E	0024	0018U	N17	E73	.953	12590	1.5	80	--F	2 C		.19			3
990	PALE	27	0215	0236D	0220	S16	E23	.513	12584	28.8	210	--F	2 C		.91			F
GRP49991	27	0503	0510	0506	S15	E08	.365	12584	27.8	7	--F			.43			3 3 3 4	
TEHR	27	0503	0510	0505	S15	E07	.359	12584	27.7	7	-F	2 C		.33			DE	
RAMY	27	0503	0510	0505	S15	E07	.359	12584	27.7	7	-F	4 C		.33			DE	
MANI	27	0504E	0508D	0508U	S15	E10	.378	12584	28.0	40	-N	2 C	0508	.62	.67			
992	TEHR	27	0550	0613	0559	N23	E60	.871	12590	31.7	23	--F	2 C		.25			DE



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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS.		MEASUREMENTS					REMARKS	
	DATE OCT	START	END	MAX. PHASE	APPROX.		CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY			COND.	TYPE	TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hα	MAX. INT. %		
					LAT.	MER. DIST.														
GRP50010	29	1820	1846	1834	N20	E27	.506	12590	31.8	26	--F							2 2 2 2		
RAMY	29	1820	1849	1834	N20	E26	.493	12590	31.7	29	-F	4	C					U		
PALE	29	1827E	1842	1833	N20	F27	.506	12590	31.8	150	-N	3	V	1.03				U F		
GRP50011	29	1836	1847	1840	N16	E23	.427	12590	31.5	11	--F							2 2 2 2		
RAMY	29	1836	1848	1839	N16	E21	.399	12590	31.4	12	-F	3	C							
PALE	29	1840E	1846	1841	N15	E24	.435	12590	31.6	60	-N	3	V	.20 .19 .21				DE		
	29	1932	1942	NO FLARE PATROL																
	29	1945	2222	NO FLARE PATROL																
012 VORO	30	0117	0137	0123	S13	W28	.543	12584	28.0	20	-B		C	0123	1.57	1.83		66	EJ	2
013 CRON	30	0441E	0510		N13	E15	.293	12590	31.3	290	--N		V		.83					1
GRP50018	30	1439	1518	1449	S16	W34	.635	12584	28.1	39	-N				.81					6 5 5 6
MEUD	30	1430	15210		S17	W34	.642	12584	28.1	510	-N		C	1445	.41	.50				
CATA	30	1440	15300	1450	S17	W34	.642	12584	28.1	500	-B	1		1450	.58	.75		(240)		
RAMY	30	1440E	16150	1446	S15	W33	.617	12584	28.1	950	-N	4	V		.99					DE
ATHN	30	1442E	1500	1445	S16	W33	.624	12584	28.1	180	-N	2	V		.50					DE
CANR	30	1443	14530	1453	S16	W34	.635	12584	28.1	100	-N		V	1453	1.55	1.80				
CANR	30	1443	14530	1447	S13	W34	.617	12584	28.1	100	-F		V		.83	.80				
CAPF	30	1500	1510		S13	W37	.653	12584	27.9	10	1N		P	1504	2.89	3.64				
CANR	30	1518	15190	1519	S14	W34	.623	12584	28.1	10	-N		V		.62	.60				
	30	1835	1858	NO FLARE PATROL																
	30	1901	1934	NO FLARE PATROL																
	30	1955	2229	NO FLARE PATROL																
GRP50019	30	2344	2349	2345	S15	W40	.697	12584	28.0	5	--N				.44					3 3 3 3
VORO	30	2343	2348	2344	S17	W40	.707	12584	28.0	5	-B		C	2344	.28	.38		67	E	
MITK	30	2345	2349	2346	S15	W41	.708	12584	27.9	4	-N		C	2346	.52	.70				E
CRON	30	2345E	2350		S13	W38	.664	12584	28.1	50	-F		V		.52					
GRP50020	31	0307	0352	0347	N21	E09	.320	12590	31.8	45	--F				.59					2 2 2 3
CRON	31	0307E	0353		N20	E09	.306	12590	31.8	460	-N		V		.93					
TEHR	31	0347E	0351	0347U	N22	E09	.335	12590	31.8	40	-F	2	V		.25					F

Note:

A line of explanation has been added before each flare event having more than one maxima. The total number of stations reporting some part of the event is given. The number of stations observing at the time of the principal maximum but not reporting the event is given in the second statement. Care should be exercised in utilizing the numbers in the remarks column. The first number is the number of stations reporting the individual maximum, and not the total number of stations reporting some part of the flare event. The last number is the number of stations reporting at the time of the individual maximum and not necessarily the total number of stations observing during the flare event. GRP numbers may appear several times in order to indicate secondary maxima. An asterisk beside an importance indicates a secondary maximum. The word "GRP" has also been omitted to aid in pointing to this condition.

When it is impossible to determine the time of Maximum Phase from the individual reports the time of Area Measurements is used. This time appears in parentheses. For flares reported by only one station the last 3 digits of the group number appear to the left of the station code.

In the importance column "--" signifies the subflare has been confirmed by the NOAA grouping program but is not included in the I.A.U. Quarterly Bulletin on Solar Activity. These subflares are also not included in the Flare Index below.

### DAILY FLARE INDICES

Date	Flare Index	HR OBS	Date	Flare Index	HR OBS	Date	Flare Index	HR OBS
731001	67.93	22.9	731011	0.00	21.5	731021	2.58	24.0
731002	2.76	23.0	731012	0.00	22.8	731022	7.86	22.0
731003	13.96	23.5	731013	0.00	22.9	731024	18.25	23.6
731004	41.14	24.0	731014	0.00	22.8	731025	1.07	23.8
731005	19.88	24.0	731016	0.00	23.2	731026	10.94	24.0
731006	19.68	21.5	731017	0.00	23.6	731027	73.82	22.9
731007	1.25	20.9	731018	0.00	23.8	731028	52.14	19.3
731008	13.72	21.4	731019	0.00	19.8	731029	0.00	21.0
731010	2.74	24.0	731020	0.00	22.4	731030	18.39	20.5

When no Flare Index is given, it is 0 for that day.

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM- POR- TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE OCT	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH H $\alpha$	MAX. INT. %			
822	MONT	01	0809	0822	0813	N12	W67	.915	12535	26.3	13	-N	C	0813	.21				D	5
824	CANR	01	1004	1028	1007	N09	W71	.941	12532	26.1	24	-F	V	1007	.72					4
832	KODA	02	0250	0342	0330	S15	E10	.404	12542	2.9	52	-N	V	0330	1.61				CD	3
835	CRON	02	0910E	0925		N10	W82	.988	12532	26.2	150	-N	V		.41					4
843	ISTA	03	0710E	0715		S13	W31	.595	12540	1.0	50	-N							D	6
844	WEND	03	0715	0730		S12	W07	.340	12542	2.8	15	-F								6
GRP49851		04	0911	0934	0916	S15	W45	.761	12540	1.0	23	-N			.11				2 2 2	8
ARCE		04	0910E	0940D		S15	W45	.761	12540	1.0	300	-N	C	0915	.12	.20				
MCNT		04	0912	0928	0916	S14	W44	.746	12540	1.1	16	-N	C	0916	.10					
852	MONT	04	1025	1043	1027	S14	W25	.533	12542	2.6	18	-N	C	1027	.10				D	7
855	CATA	04	1445	1450	1445	S15	W21	.500	12542	3.0	5	-N	3	1445	.29	.33	(151)			4
GRP49864		05	0615	0628	0619	S16	W28	.584	12542	3.2	13	-N			.61				2 2 2	7
MANI		05	0615E	0628	0619	S17	W28	.592	12542	3.2	130	-N	2	0619	.31	.38		H		
ABST		05	0615	0628	0618	S15	W27	.564	12542	3.2	13	-N	C	0618	.90	1.10		D		
GRP49865		05	0707	0716	0711	S16	W52	.831	12540	1.4	9	-N			.40				2 2 2	8
MANI		05	0707E	0715D	0710	S16	W52	.831	12540	1.4	80	-N	2	0710	.52	.88		F		
TEHR		05	0710E	0716	0711U	S16	W52	.831	12540	1.4	60	-N	2		.28			F		
867	MONT	05	1012	1019	1014	S16	W54	.848	12540	1.4	7	-N	C	1014	.41				E	7
869	CATA	05	1350E	1350D	1350	S16	W55	.856	12540	1.5		-N	3	1350	.58	1.12	(166)			7
878	ABST	07	0635	0717	0640	N14	W55	.815	12543	3.1	42	-F	C	0640	.72	1.20		48	0	5
GRP49879		07	0715	0734	0722	N22	W83	.988	12537	1.1	19	-F			.57				2 2 2	6
ABST		07	0714	0725D	0723	N23	W86	.994	12537	30.9	110	1F	P	0723	.81			49	D	
ATHN		07	0715	0734	0720	N20	W80	.980	12537	1.3	19	-F	3		.33			DE		
885	ABST	09	0552E	0638	0556	S08	W62	.895	12545	4.6	460	-N	P	0556	.90	1.80		65	DJK	5
889	RAMY	09	1426	1442	1429	S10	W66	.925	12545	4.7	16	-F	3		.19				DE	5
890	RAMY	09	1431	1442	1434	S09	W16	.376	12549	8.4	11	-F	4		.19				DE	5
891	PALE	09	1658	1712	1703	S08	W69	.941	12545	4.5	14	-N	2		.31					3
895	MANI	09	2222E	2235D	2222U	S08	W72	.957	12545	4.5	130	-N	1	2222	.41	.94				3
897	TEHR	10	0551	0605	0556	S10	W61	.890	12545	5.7	14	-N	2		.25				DE	5
898	TEHR	10	0621	0632	0626	S10	W61	.890	12545	5.7	11	-N	2		.17				DE	6
899	TEHR	10	0718	0738	0722	S10	W61	.890	12545	5.7	20	-F	2		.17				DE	8
900	MONT	10	0842	0904	0851	S09	W79	.985	12545	4.4	22	-N	C	0851	.10				D	10
902	MONT	10	1121	1125	1123	S17	W71	.961	12545	5.1	4	-N	C	1123	.41				G	6
907	ISTA	14	0855	0908		N13	W28	.477	12556	12.3	13	-F							D	5
908	RAMY	14	1102	1132	1104	N13	W29	.491	12556	12.3	30	-F	3		.56				DE H	4
911	PALE	14	2319E	2322	2319U	S10	W36	.633	12573	12.3	30	-F	3		.27					4
912	CATA	15	1330	1345D	1340	N13	W42	.669	12556	12.4	150	-F	1	1340	.29	.39	(148)			5
913	RAMY	15	1609E	1614D	1609U	S04	W32	.551	12571	13.3	50	-F	1		.28				DE	4
914	PALE	16	0008	0011D	0009U	N15	W54	.807	12556	12.0	30	-F	2		.31					3
915	PALE	16	0050E	0057D	0051U	N14	W50	.764	12556	12.3	70	-F	2		.36					4
916	PALE	16	0308E	0312	0309	N15	W55	.816	12556	12.0	40	-F	2		.36				F	5
917	PALE	16	0316	0326D	0321	S13	E25	.517	12569	18.0	100	-F	2		.36					5
918	PALE	16	1733E	1806	1734	N13	W57	.835	12556	12.5	330	-F	3		.41				DE	3
919	PALE	16	1733E	1806	1754	N13	W57	.835	12556	12.5	330	-F	3		.41				DE	3

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# SOLAR FLARES Unconfirmed

OCTOBER 1973

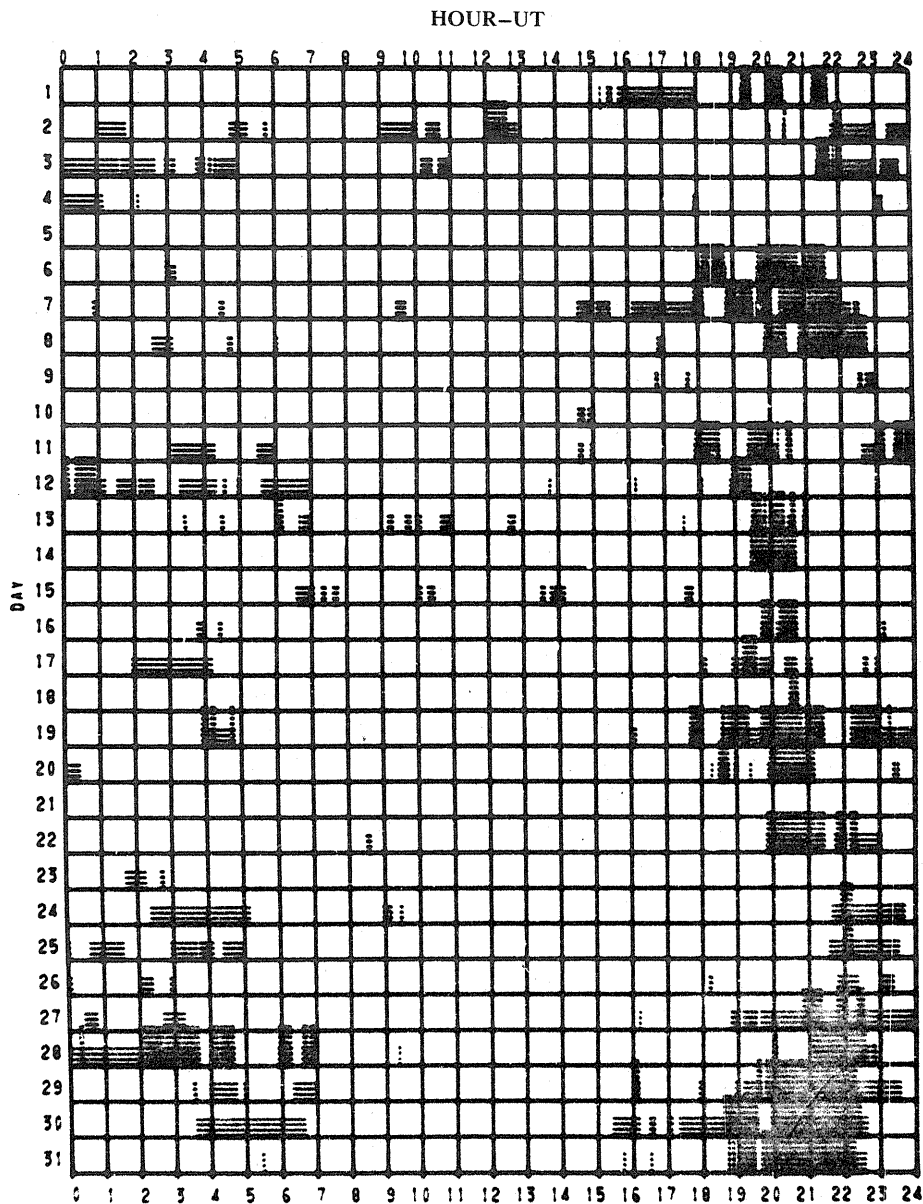
OBSERVATORY	OBSERVED UT				LOCATION					DURATION MIN.	IM-POR-TANCE	OBS. COND. TYPE	MEASUREMENTS					REMARKS		
	DATE OCT	START	END	MAX. PHASE	APPROX. LAT.	MER. DIST.	CENTRAL DISTANCE	MCMATH PLAGE REGION	CMP DAY				TIME UT	MEAS. AREA Sq. Deg.	CORR. AREA Sq. Deg.	MAX. WIDTH Hg	MAX. INT. %			
921 PALE	16	1919E	1926	1921	N13	W57	.835	12556	12.5	70	-F	3	V		.31				DE	3
923 ATHN	17	0538E	0547D	0540	N11	W65	.898	12556	12.4	90	-F	1	C		.50				DE	6
GRP49924	17	0639	0659	0641	N11	W68	.920	12556	12.2	20	-F				.50				2 2 2 7	
TEHR	17	0637E	0651	0637U	N10	W68	.920	12556	12.2	140	-F	3	V		.33				DE	
ATHN	17	0640	0706	0644	N11	W68	.920	12556	12.2	26	-N	3	C		.66				F	
925 ATHN	17	0731E	0746	0734	N11	W67	.913	12556	12.3	150	-N	3	C		.66				DE	8
926 ARCE	17	0940E	1000D		N13	W53	.789	12556	13.4	200	-B		C	1000	.32	.40				8
927 TEHR	17	1011E	1023	1011U	S06	W50	.788	12557	13.7	120	-F	3	V		.25				DE	7
929 ABST	17	1236E	1254D	1238	N12	W68	.919	12556	12.4	180	1F		P	1238	1.62	3.70			F	5
930 MCMA	17	1351E	1415		N12	W70	.932	12556	12.3	240	-N		P	1351	.41	.90			E	5
931 MITK	18	0106	0118	0107	N11	W78	.975	12556	12.2	12	-N		C	0107	.62				DH	5
932 ABST	18	1237	1254D	1241	N12	W62	.988	12556	12.4	170	1F		P	1241	.90				D	7
935 RAMY	21	1445	1456	1447	S12	E22	.469	12578	23.3	11	-F	4	C		.28				DE	4
949 MONT	23	1052	1108	1057	S14	E57	.864	12584	27.7	16	-F		C	1057	.10					5
950 MONT	23	1137	1141	1139	S13	E60	.886	12584	28.0	4	-N		C	1139	.21					4
951 ATHN	23	1208	1215	1210	S11	E55	.840	12584	27.6	7	-F	2	C		.50				DE	4
952 RAMY	23	1217E	1235D	1220U	S10	E63	.903	12584	28.2	180	-F	4	V		.83				F	4
953 MCMA	23	1430	1436	1432	S12	E56	.851	12584	27.8	6	-F		C	1432	.21	.30			D	5
956 PALE	23	1751E	1801	1752U	S15	E52	.823	12584	27.6	100	-F	3	V		.41				DE	4
957 RAMY	23	1929	1938	1932	S15	E52	.823	12584	27.7	9	-F	4	V		.50				F	3
964 MONT	25	0829	0852	0834	S10	E31	.564	12584	27.7	23	-N		C	0834	.21				D	7
965 CANR	25	0950	1002		N16	E80	.982	12590	31.4	12	-F		V	1000	.52					7
969 RAMY	25	1328E	1340D	1331	N07	W54	.806	12576	21.5	120	-F	4	V		.28					7
977 PALE	26	0016	0025	0018U	N18	E71	.942	12590	31.3	9	-F	3	V		.31					4
978 PALE	26	0217	0226D	0220	S16	E22	.504	12584	27.7	90	-F	3	V		1.24				F	4
980 MANI	26	0823E	0837D	0825U	N15	E70	.936	12590	31.6	140	-N	1		0825	.41	.88				8
994 CATA	27	0735E	0840D	0745	N21	E60	.869	12590	31.8	650	-F	3		0745	.58	1.17	(145)			8
001 ARCE	28	1029	1040	1033	S16	W10	.391	12584	27.7	11	-F		C	1033	.35	.40				6
007 MANI	29	0728	0739	0733	S16	W16	.439	12584	28.1	11	-N	2		0733	.31	.34				7
008 MONT	29	0931	0942	0935	S10	W21	.432	12584	27.8	11	-N		C	0935	.10				D	5
014 MONT	30	0844	0857	0847	N12	E02	.133	12589	30.5	13	-F		C	0847	.21					9
015 MONT	30	0920	0941	0925	N14	E12	.261	12590	31.3	21	-F		C	0925	.05					9
GRP50016	30	1107	1123	1111	N16	E11	.271	12590	31.3	16	-F				.43				2 2 2 8	
MEUD	30	1107	1123	1111	N15	E11	.259	12590	31.3	16	-F		C	1111	.72	.70			E	
TEHR	30	1110E	1113D	1111U	N16	E11	.271	12590	31.3	30	-F	2	C		.13				DE	
017 MEUD	30	1134	1136	1134	S15	W32	.606	12584	28.1	2	-F		C	1134	.31	.40				8

A = Eruptive prominence whose base is less than 90° 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 a 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 calcium II lines H and K.  
 P = Flare shows helium D<sub>3</sub> in emission.  
 Q = Flare shows the Balmer continuum in emission.  
 R = Marked assymetry in H $\alpha$  line suggests ejection of high velocity material.  
 S = Brightness follows disappearance of filament (same position).  
 T = Region active all day.  
 U = Two bright branches, parallel (||) or converging (Y).  
 V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important 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.

INTERVALS OF NO FLARE PATROL OBSERVATION  
FOR PRECEDING SOLAR FLARE TABLE

OCTOBER 1973



Observatories included in total patrol:

Abastumani	Carnarvon	Huancayo	Locarno	Monte Mario	Teheran
Arcetri	Catania	Istanbul	Manila	Palehua	Upice
Athens	Culgoora	Kharkov	McMath-Hulbert	Ramey	Voroshilov
Bucharest	Gran Canaria	Kiev	Meudon	Tachkent	Wendelstein
Capri-F (German)	Herstmonceux	Kodaikanal	Mitaka		

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and time of neither visual nor cinematographic patrol (top half of day).



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SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

OCTOBER 1973

OCT. 1973	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
1	3750 TYKW	20	0357	0359.7	40	6.0	2.0		
	260 ONDR	45	0826	0826	1	20.0			
	200 GORK	6	0926.3	0927	1	60.0	30.0		
	100 GORK	6	0943.1	0943.7	.9	40.0	20.0		
	234 POTS	45	0946.4	0946.5	.2	7000.0	1200.0		
	100 GORK	6	1012.8	1012.9	.5	55.0	25.0		
	408 TRST	45	1106.3	1106.8	1.4	54.0	8.0		
	260 ONDR	45	1106	1107	2.5	25.0			
	100 GORK	6	1144	1144.3	1.2	30.0	15.0		
	8800 SGMR	3	1305.9	1306.1	.8	24.6	7.4		
	7000 SAOP	8	1305.8	1306.1	.7	43.3			
	4995 SGMR	3	1305.8	1306.1	.9	13.0	5.0		
	8800 ATHN	3	1306.2	1306.4	1.5	20.5	6.3		
	4995 ATHN	1	1306.1	1306.4	2.2	3.3	1.1		
	408 TRST	45	1328.7	1329.1	.6				
	18 MCMA	41	1331	1334	4			1	
	18 MCMA	41	1342	1345	3			1	
	18 MCMA	6	1445	1447	2			1	
2	1415 MANI	40	0258	0300.2	8	128.0	37.6		
	4995 MANI	2	0259	0300.5	4.3	8.7	4.4		
	3750 TYKW	45	0259	0300.3	4	21.0	5.0		
	2695 MANI	40	0259.7	0300.1	2.3	26.4	9.3		
	2000 TYKW	45	0259	0259.8	3	43.0	8.0		
	1420 CRON	8	0259	0301.5	4	222.0	89.0		
	1000 TYKW	45	0259	0300.1	3	275.0	50.0		
	606 MANI	40	0259.3	0259.9	6.7	88.0	12.7		
	9400 TYKW	1	0300	0301	3	3.0	1.0		
	4995 CRON	45	0300	0300.5	2.5	12.0	4.0		
	200 HIRA	27	0323	0357	65	10.0	3.0		
	260 ONDR	45	0912.5	0913.5	2	20.0			
	536 ONDR	5	0943	0943	.5	65.0			
	960 PENN	40	1217		11.4				
	10700 PENN	40	1218.3		10.3				
	3100 CRIM	4	1218	1221	10	10.0	5.0		
	4995 SGMR	3	1219.5	1221.1	5.4	27.2	8.2		
	3000 BERL	4	1219	1220.8	55	25.0	2.1		
	2800 OTTA	27	1219.5		225	2.0	1.7		
	2800 OTTA	3	1219.5	1221	5.5	27.0	9.0		
	2700 PENN	3	1219.2	1221	2.8	36.4	16.3		
	2695 SGMR	3	1219.4	1221.3	7.3	23.1	6.9		
	9500 BERL	1	1220	1220.7	15	6.2	2.4		
	8800 SGMR	3	1220.2	1221.1	3.3	13.1	3.9		
	7000 SAOP	21	1220.4	1221.2	11.3	13.2			
	7000 SAOP	20	1220.4		11.3	5.5			
	4995 CANR	8	1220	1221	2.5	21.0	7.0		
	4995 ATHN	3	1220.9	1221.4	3.3	18.3	5.2		
	2695 CANR	8	1220	1222	9.5	18.0	6.0		
	2695 ATHN	3	1220.2	1221.7	7.8	23.8	7.1		
	1500 BERL	4	1220	1221	15	8.9	2.0		
	1420 CANR	8	1220	1221.5	4.5	7.0	2.0		
	1415 SGMR	1	1220.6	1221.5	4.6	7.0	2.1		
	1415 ATHN	1	1220.9	1221.8	3.3	6.9	2.3		
	8800 ATHN	1	1221.1	1221.6	3.1	8.1	3.2		
	7000 SAOP	8	1221	1221.2	.8	8.8			
	2700 PENN	29	1222	1222.5	48.2	11.4	4.2		
	2800 OTTA	29	1225	1225	33	4.0	2.0		
	2800 OTTA	20	1425	1455	65	1.2	0.6		
	260 ONDR	45	1437.5	1439	2.5	20.0			
	18 MCMA	6	1756	1758	2			1	
	2800 OTTA	20	1913	1917	20	1.4	0.7		
2800 OTTA	21	2123	2126.5	12	1.0	0.5			
2800 OTTA	8	2128.3	2128.5	.5	1.0	0.5			
1420 BOUL	3	2241.5	2242.5	2	3.0	1.0			
2695 CRON	45	2357.5	2359.5	4.5	21.0	4.0			
3	260 ONDR	44	0830	1043	130	35.0			
	234 POTS	6	0930.9	0930.9	.1	750.0	250.0		
	100 GORK	44	0946		200 D		5.0		
	221 ABST	6	1033.8	1034	.5	16.0			
	260 ONDR	44	1140	1248	210	90.0			
	245 SGMR	43	1154.3	1251	622.7D	75.6			
	234 POTS	45	1248.4	1248.4	.1	200.0	50.0		
	2800 OTTA	27	1300		270	3.0	2.7		
	2695 BOUL	3	1414.5	1415.5	1.5	4.0	1.0		
	2695 BOUL	3	1420	1421	2	3.0	1.0		
	1420 BOUL	45	1422.5	1424	5	2.0	1.0		
	2800 OTTA	1	1512.5	1514	4	1.6	0.8		
	2695 BOUL	3	1513.5	1515	4.5	3.0	1.0		
	7000 SAOP	1	1516.2	1519.1	8.1	9.0	5.6		
	7000 SAOP	22	1524.8		133.9	9.0			
	2800 OTTA	20	1702	1704	10	1.4	0.7		
	7000 SAOP	22	1737.8		14.9	4.5			
	2800 OTTA	20	2025	2040	65	1.4	0.7		
4	1420 CRON	8	0012.5	0014	2	8.0	3.0		
	260 ONDR	41	0700	0918.5	490	25.0			
	2695 CRON	3	0808.5	0811	6.5	3.0	1.0		
	3000 BERL	22	1104	1213.4	99	6.7			
	1500 BERL	20	1113	1140.5	87	2.5			



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## SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

OCTOBER 1973

OCT. 1973	FREQUENCY STATION	TYPE	STARTING	TIME OF	DURATION	FLUX DENSITY		INT	REMARKS
			TIME	MAXIMUM		$10^{-22} \text{ W m}^{-2} \text{ Hz}^{-1}$			
			UT	UT	MINUTES	PEAK	MEAN		
	▲ 237 TRST	42	1107	1107.9	1.5D	300.0			
	— 234 POTS	40	1107.4	1108.	1.4	100.0	10.0		
	— 210 IZMI	41	1107	1107.5	2	70.0			
	— 200 GORK	41	1107.4	1108.1	1.6	70.0D			
	— 100 GORK	41	1107.5	1107.7	1.6	50.0			
	— 100 GORK	41	1107.5	1108.2		50.0			
	— 260 ONDR	45	1138.5	1138.5	7	20.0			
	— 2800 OTTA	2	1500	1502.9	6	5.8	2.0		
	— 2700 PENN	1	1500.9	1502.8	8.2	9.1	3.0		
	— 1420 BOUL	3	1500	1502.5	5.5	3.0	1.0		
	— 4995 BOUL	3	1501	1503.5	4.5	12.0	4.0		
	— 4995 CANR	3	1501.5	1504	6.5	13.0	4.0		
	— 2695 BOUL	3	1501	1503.5	5	7.0	2.0		
	— 2695 CANR	3	1501.5	1503.5	5.5	6.0	2.0		
	— 10700 PENN	20	1502.1	1504.3	25.9	8.7	4.4		
15	29 UPIC		1411.5	1412.5	3				
16	260 ONDR	41	0700	1001.5	460	15.0			
	550 KIEV	42	0940		115	37.0	28.0		
	2695 PENT	24	1955	2230	155	2.4	1.2		
17	260 ONDR	41	0650	0932.5	480	20.0			
	29 UPIC		1343	1345.5	4				
	18 MCMA	6	2219	2221	3			1	
18	210 IZMI	6	0728.3	0728.5	.4	240.0	180.0		
	221 ABST	6	0736	0736.2	.5	43.0			
	260 ONDR	45	0823.5	0824.5	1.5	15.0			
	29 UPIC		0825	0826	5				
	260 ONDR	45	1408	1411.5	39	20.0			
	— 4995 CANR	3	1810	1812.5	4	20.0	7.0		
	— 2695 CANR	3	1810.5	1813	4	15.0	5.0		
	— 1420 CANR	3	1811	1813	4.5	13.0	5.0		
19	— 4995 CANR	3	0736.5	0740	4.5	11.0	3.0		
	— 2695 CANR	3	0737	0739.5	4	4.0	1.0		
	— 1420 CANR	3	0737	0739.5	5	3.0	1.0		
	200 GORK	41	0848.9	0849.2	.6	150.0	35.0		
20	260 ONDR	5	1211	1211	1	15.0			
21	260 ONDR	45	1030	1030	2	20.0			
	260 ONDR	45	1253	1254	1	20.0			
22	260 ONDR	41	1040	1313	170	20.0			
	18 BOUL	41	1303	1306	6			1	
	18 BOUL	41	1314	1315	4			1	
	18 BOUL	6	1418	1419	2			1	
	18 BOUL	41	1425	1438	15			3	
	245 BOUL	42	1503	1635	92			2	
	— 4995 CANR	3	1742.5	1744	4	10.0	3.0		
	— 1420 CANR	3	1742.5	1744	3.5	4.0	1.0		
	— 2695 CANR	3	1743	1744.5	3.5	6.0	2.0		
	— 1420 CANR	3	1756.5	1758	3.5	4.0	1.0		
	9400 HUAN	20	1858.1	2002.7U	85.8	11.9U	4.6		
	2800 OTTA	24	2020	2040	20	1.4	0.7		
23	260 ONDR	44	0700	1055.5	470	30.0			
	100 GORK	6	0705.4	0705.5	.3	40.0	20.0		
	315 DWIN	43	0833	1118	287	55.0	30.0		
	283 DWIN	43	0855	1107	268	100.0D	35.0		
	100 GORK	6	0857.8	0858	.6	35.0			
	100 GORK	41	1020.4	1021.4	4.3	40.0			
	100 GORK	41	1020.4	1024.2		25.0			
	100 GORK	6	1028.7	1029	.8	40.0D			
	536 ONDR	41	1050	1253.5	145	60.0			
	410 SGMR	44	1110 E	1502.2	634 D	9.8			
	245 SGMR	44	1110 E	1509.6	634 D	127.0			
	100 GORK	6	1130.8	1130.9	.9	40.0			
	100 GORK	41	1208.2	1208.6	2.3	50.0			
	100 GORK	41	1208.2	1210		50.0D			
	283 DWIN	43	1425	1425	60 D	75.0	30.0		
	245 BOUL	42	1427	1501	65				
	315 DWIN	43	1457	1514	97	40.0	25.0		
	237 TRST	42	1459	1459.7	2.7	52.0			
	237 TRST	42	1509.5	1509.7	3	360.0			
	2800 OTTA	23	1515	1535	70	1.4	0.7		
	— 10700 PENN	3	1534.4	1534.6	4	16.2	1.8		
	— 9400 HUAN	1	1534.3	1534.5	.4	20.4	7.8		
	— 8800 SGMR	3	1534.4	1534.6	.6	29.5	8.9		
	— 7000 SAOP	8	1534.5		.7	25.4			
	— 4995 SGMR	3	1534.4	1534.5	.7	15.2	4.6		
	— 2800 OTTA	1	1534	1534.5	1	9.0	3.0		
	— 2700 PENN	3	1534.2	1534.5	2.2	13.3	1.2		
	— 2695 SGMR	1	1534.4	1534.6	1.7	8.6	2.6		
	— 2695 BOUL	8	1534.5	1535	1	12.0	5.0		
	— 1415 SGMR	1	1534.4	1534.5	1.6	1.7	.5		
	— 960 PENN	1	1534.2	1534.5	1	3.6	0.8		
	— 606 SGMR	1	1534.4	1534.6	.6	6.5	1.9		

SOLAR RADIO EMISSION  
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OCTOBER 1973

OCT. 1973	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS	
			UT	UT	MINUTES	PEAK	MEAN			
24	2700 PENN	8	1917.9	1918	.5	4.8		1		
	960 PENN	8	1918	1918.2	.4	148.0				
	2700 PENN	40	1956.1		3.2					
	960 PENN	45	1956.1	1957.7	3.2	22.9	2.4			
	2800 OTTA	24	2045	2210	85	2.2	1.1			
	2700 PENN	8	2057.9	2058.1	.3	14.5				
	960 PENN	41	2057	2058.2	3.2	66.5				
	100 HIRA	45	2126	2126.6	1.5	600.0	200.0			
	245 BOUL	42	2143	2210	60					
	2695 CRON	8	2309.5	2310	2	12.0	4.0			
	100 HIRA	45	2343	2343.3	1	330.0	80.0			
	100 HIRA	45	2353.1	2353.4	1	350.0	70.0			
	2695 CRON	3	0036	0037	2	6.0	2.0			
	1420 CRON	45	0036.5	0038.5	2.5	8.0	3.0			
	500 HIRA	45	0036.5	0038.5	2.5	380.0	60.0			
	9400 TYKW	3	0037	0038	4	6.0	3.0			
	4995 MANI	2	0037.1	0038.5	2.9	4.6	1.8			
	3750 TYKW	1	0037	0038.3	3	5.0	2.0			
	2695 MANI	2	0037.1	0038.5	2	7.1	1.6			
	2000 TYKW	45	0037	0038.3	4	8.0	2.0			
	1415 MANI	2	0037.1	0038.5	1.9	6.9	1.5			
	1000 TYKW	45	0037	0038.4	3	7.0	2.0			
	606 MANI	46	0037.1	0038.4	1.9	20.9	4.1			
	100 HIRA	45	0037.7	0038.4	2	450.0	100.0			
	3750 TYKW	29	0040		60	2.0	1.0			
	260 ONDR	44	0700	1228	460	30.0				
	550 KIEV	6	0736	0737.1	2.2	57.0				
	100 GORK	44	0842.8		78 D		5.0			
	283 DWIN	43	0855	0917	60	75.0	30.0			
	221 ABST	6	0911.8	0912	.5	28.0				
	100 GORK	6	0927.6	0929.1	2.5	40.0				
	550 KIEV	6	0954.7	0955.2	3	252.0				
	536 ONDR	41	0957	1050	153	70.0				
	550 KIEV	6	1049.7	1050.1	1.1	68.0				
	2800 OTTA	20	1345	1427	90	1.6	0.8			
	2800 OTTA	27	1515		155	2.6	1.7			
	2800 OTTA	24	1815	1905	50	2.2	1.1			
	2700 PENN	8	1858.3	1858.4	.2	9.8				
	960 PENN	45	1858.3	1858.7	2.4	21.2	1.1			
	2695 PENT	40	2006.4	2007.1	1.6	6.0				
	25	260 ONDR	44	0710	1124	450	220.0			
		245 SGMR	44	1113 E	1831	629 D	25.2			
		315 DWIN	43	1315		160 D			30.0	
		283 DWIN	43	1315		160 D			35.0	
		550 KIEV	6	0722.2	0722.5	1.7	51.0			
100 GORK		41	1035.5	1035.8	2.1	50.0D				
100 GORK			1035.5	1037.1		30.0				
100 GORK		6	1041.2	1041.5	8	50.0D				
536 ONDR		45	1123	1125	4	75.0				
315 DWIN		45	1123	1124	3	400.0	70.0			
283 DWIN		45	1123		3	100.0D				
260 ONDR		45	1123.5	1124	3.5	220.0				
9500 BERL		2	1124.5	1125.2	3	10.0	3.8			
9100 GORK		1	1124.9	1125.2	1.5	13.6	6.8			
4995 CANR		8	1124	1125	3	13.0	5.0			
3000 BERL		4	1124.7	1125.4	2.8	10.0	3.7			
1500 BERL		4	1124	1125.5	3.5	18.0	4.9			
930 BORD		45	1124	1125.5	3	28.0	3.0			
808 ONDR		45	1124.5	1125.5	3	90.0				
606 SGMR		4	1124.7	1125.5	2.6	34.8	10.4			
510 POTS		45	1124 U	1125 U	3.5U	30.0	6.0			
410 SGMR		6	1124.7	1125.3	1.3	19.7	3.9			
408 TRST		45	1124.1	1125	3.1	42.0	12.0			
245 SGMR		6	1124.3	1124.5	1.9	115.0	23.0			
234 POTS		45	1124.1	1124.3	1.8	800.0	100.0			
210 IZMI		48	1124	1124.1	.8	1480.0	1000.0			
210 IZMI		48	1124.8	1124.9	1.5	1000.0	700.0			
113 POTS		45	1124.2	1124.3	3	2000.0	300.0			
29 UPIC			1124.5		5.5					
23 POTS		45	1124.1	1125.1	3.6	50000.0	8000.0			
3100 CRIM		1	1125	1126	4	9.0	3.0			
2695 CANR		8	1125	1126	2.5	17.0	6.0			
1420 CANR		8	1125	1126	3	18.0	7.0			
315 DWIN		29	1126		19		5.0			
283 DWIN		29	1126		37		5.0			
234 POTS		45	1144	1144.1	.1	175.0	20.0			
550 KIEV		6	1324	1325.2	2.2	263.0				
2800 OTTA		24	1350	1505	75	2.6	1.3			
2700 PENN		1	1551.6	1552.7	3.2	2.4	0.6			
2800 OTTA		21	1552	1617	60	1.6	0.8			
2800 OTTA		1	1552.2	1552.7	1	1.4	0.7			
1415 SGMR		1	1552.6	1552.7	.3	7.1	2.1			
960 PENN		1	1552.4	1552.7	2.4	4.6	0.8			
606 SGMR		3	1552.6	1552.7	.4	17.0	5.1			
410 SGMR		6	1552.6	1552.7	.7	19.2	5.8			
315 DWIN	45	1552	1552.5	1	200.0	20.0				
245 SGMR	48	1552.6	1552.7	.7	545.0	163.5				
606 SGMR	1	1915.5	1915.9	.8	2.8	.9				

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OCT. 1973	FREQUENCY STATION	TYPE	STARTING	TIME OF	DURATION	FLUX DENSITY		INT	REMARKS
			TIME	MAXIMUM		$10^{22} \text{ Wm}^{-2} \text{ Hz}^{-1}$			
			UT	UT	MINUTES	PEAK	MEAN		
26	410 SGMR	6	1915.6	1915.7	.4	2.5	.7		
	245 SGMR	6	1915.6	1915.7	.7	5.4	1.6		
	200 HIRA	45	2329.5	2331.6	4	180.0D	60.0D		
	100 HIRA	45	2330	2331.5	4	1000.0	100.0		
	100 GORK	44	0700 E		420 D		5.0		
	260 ONDR	41	0740	1232	300	70.0			
	283 DWIN	41	0723		8	100.0D			
	315 DWIN	41	0724	0726	7	100.0	5.0		
	210 IZMI	41	0725.5	0730.3	7.5	160.0			
	113 POTS	41	0725	0730.9	7.7	150.0	10.0		
	100 GORK	41	0725.4	0725.4	7.4	30.0D			
	100 GORK		0725.4	0727.3		30.0D			
	100 GORK		0725.4	0731		65.0			
	221 ABST	6	0726.8	0727	.5	56.0			
	234 POTS	41	0727.4	0730.8	5	200.0	10.0		
	200 GORK	41	0727.1	0727.5	5.4	15.0			
	200 GORK		0727.1	0731		100.0			
	200 HIRA	45	0729.5	0731 U	3.5	100.0D	40.0D		
	100 HIRA	45	0729.5	0731	3.5	100.0	20.0		
	1500 BERL	4	0730	0730.5	1	10.0	2.5		
	221 ABST	48	0730	0730.2	1	71.0	10.0		
	221 ABST	6	0731.8	0732	.5	71.0			
	100 GORK	6	0739	0744.1	7	25.0			
	113 POTS	45	0743.2	0744	1.2	280.0	30.0		
	210 IZMI	6	0744.1	0744.2	.3	26.0	15.0		
	200 GORK	6	0745	0745.4	.8	25.0			
	606 MANI	40	0814.5	0821.2	12.3	17.6	6.3		
	100 GORK	6	0831.3	0831.5	1	30.0D			
	315 DWIN	45	0836	0837	2	20.0	4.0		
	283 DWIN	45	0836	0837	2	15.0	3.0		
	210 IZMI	6	0838.3	0838.7	1.7	70.0	35.0		
	200 GORK	6	0838.2	0838.8	1.9	150.0			
	113 POTS	45	0838.3	0838.6	1.2	800.0	150.0		
	100 GORK	6	0838.4	0838.5	2.1	30.0D			
	29 UPIC		0838.5	0839.5	2				
	23 POTS	45	0838.3	0839.3	2	8000.0	1000.0		
	550 KIEV	41	0950.5	0952.4	3	56.0			
	283 DWIN	41	1227		6	100.0D			
	315 DWIN	41	1228	1232	10	60.0	3.0		
	237 TRST	42	1229.5	1229.8	5.1	43.0			
	237 TRST		1229.5	1232.2		290.0			
	237 TRST		1229.5	1233.7		81.0			
	234 POTS	41	1229.7	1232.2	4.1	250.0	5.0		
	200 GORK	41	1229.7	1230	4.4	80.0			
	200 GORK		1229.7	1233.6		250.0			
	113 POTS	40	1229.7	1232.2	4.1	280.0	7.0		
	100 GORK	41	1229.7	1230	6.9	30.0D			
	100 GORK		1229.7	1236.2		2.0			
	536 ONDR	45	1232	1233.5	6	40.0			
	410 SGMR	6	1232.2	1233.5	1.7	12.6	3.8		
245 SGMR	6	1232.2	1232.5	1.8	65.4	19.6			
930 BORD	41	1233	1233.3	1	10.0	2.0			
606 SGMR	1	1233.1	1233.5	.9	3.1	.9			
200 GORK	6	1241.1	1241.5	.8	50.0				
100 GORK	6	1241.1	1241.5	.7	10.0	5.0			
100 GORK	6	1255.1	1255.3	.8	30.0D	10.0			
245 SGMR	6	1614.2	1621.1	10.8	98.1	19.6			
2700 PENN	8	1616.7	1617.2	.8	7.3				
2800 OTTA	8	1617.2	1617.2		4.2				
18 MCMA	6	1618	1620	2				1	
18 MCMA	6	1931	1932	3				1	
245 SGMR	7	2045	2049.1	9.6	255.0	51.0			
410 SGMR	6	2048.3	2048.9	3.8	15.0	3.0			
2800 OTTA	8	2050.8	2050.8	.5	2.0	0.9			
2695 PENT	24	2135	2152	17	2.8	1.2			
245 BOUL	42	2237	2310	37				2	
27	9750 IRKU	3	0458	0503.6	12	72.0	7.5		
	4995 CRON	8	0502.5	0503.5	2	39.0	16.0		
	9400 TYKW	3	0503.5	0503.9	3	48.0	10.0		
	8800 MANI	4	0503.3	0503.8	3	66.0	14.6		
	4995 MANI	4	0503.3	0503.8	3	48.2	9.1		
	3750 TYKW	3	0503.5	0503.8	1.5	33.0	8.0		
	2695 MANI	4	0503.3	0503.7	1.4	24.3	5.7		
	2695 CRON	8	0503	0503.5	1.5	21.0	8.0		
	2000 TYKW	3	0503.5	0503.9	1.5	46.0	9.0		
	1420 CRON	8	0503.5	0504	1	8.0	3.0		
	1415 MANI	1	0503.3	0503.8	3	8.7	2.0		
	1000 TYKW	1	0503.5	0503.9	1	6.0	2.0		
	8800 ATHN	3	0504.1	0504.7	1 U	39.0	15.6U		
	4995 ATHN	3	0504.2	0504.7	1 U	28.4	10.5U		
	2695 ATHN	3	0504.2	0504.7	2 U	19.2	6.4U		
	1415 ATHN	1	0504.4	0504.6	1 U	9.9	3.1U		
	3750 TYKW	29	0505		20	2.0	1.0		
	200 GORK	6	0508.5	0508.8	1	200.0			
	260 ONDR	41	0720	1018	400	40.0			
	100 GORK	44	1100		60 D		5.0		
	930 BORD	5	1401	1401.2	1	16.0	1.0		
	2700 PENN	45	1517.8	1601.5	49.1	81.2	16.2		

SOLAR RADIO EMISSION  
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OCT. 1973	FREQUENCY STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY $10^{22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS
			UT	UT	MINUTES	PEAK	MEAN		
	2800 OTTA	21	1533	1550	450 D	6.2			
	960 PENN	28	1533.4	1556.3	33.7	60.3	9.8		
	2695 BOUL	45	1540	1601.5	142	55.0	12.0		
	2695 CANR	45	1540.5	1602	118.5	69.0	16.0		
	1420 BOUL	45	1541.5	1502	72	48.0	14.0		
	2695 SGMR	46	1544.5	1601.5	96	62.0	12.7		
	2695 SGMR	46		1617.1		63.6			
	1415 SGMR	46	1544	1559.5	60.9	71.7	17.8		
	1415 SGMR	46		1601.6		89.1			
	4995 SGMR	22	1546.5	1601.6	93.9	30.0	18.0		
	1420 CANR	45	1546.5	1601.5	55.5	66.0	17.0		
	606 SGMR	46	1546.8	1555.9	52.7	153.2	33.0		
	606 SGMR	46		1601.8		11.7			
	606 SGMR	46		1621.2		164.9			
	606 SGMR	46		1736		39.0			
	410 SGMR	6	1546	1551.5	60.3	89.3	12.8		
	410 SGMR	6		1601.8		13.0			
	10700 PENN	20	1547.7	1617.7	139	28.8	11.3		
	245 SGMR	6	1548.3	1601.8	54.5	8.0	2.5		
	245 SGMR	6		1611.7		14.3			
	8800 SGMR	22	1549	1602.3	62.8	20.2	12.1		
	930 BORD	45	1549	1624.2	46	403.0	76.0		
	9400 HUAN	20	1551.3	1623.3U	129.9	27.3U	12.8		
	4995 BOUL	45	1552	1558	58	37.0	9.0		
	7000 SAOP	22	1553 U		51 E	37.9			
	4995 CANR	45		1600.5	70	24.0	8.0		
	2800 OTTA	46	1554	1601.5	36	55.0	24.5		
	2800 OTTA		1554	1601.5	13	55.0			
	2800 OTTA		1607	1618.5	23	34.0			
	15400 SGMR	20	1555	1602.2	55.3	14.2	8.5		
	2700 PENN	29	1606.9	1606.9	323	24.2	12.1		
	2700 PENN	45	1606.9	1617.1	24.5	339.0	14.2		
	960 PENN	45	1607.1	1624.6	23.9	212.0	68.0		
	960 PENN	29	1607.1	1607.1	283	11.2	5.6		
	2800 OTTA	29	1630	1630	55	10.6	5.2		
	606 SGMR	46	1639.5	1659.2	87.7	64.8	19.5		
	960 PENN	1	1641.4	1643.6	5.8	7.1	1.5		
	960 PENN	1	1654.5	1656	3	8.7	2.2		
	1415 SGMR	20	1657.2	1703.3	50.1	2.0	1.2		
	960 PENN	45	1657.9	1700.1	8.9	60.3	16.3		
	960 PENN	3	1708.5	1710.6	4.4	10.9	3.0		
	410 SGMR	6	1717.7	1736	50.1	12.6	7.6		
	2695 BOUL	3	1814.5	1817.5	8.5	4.0	1.0		
	606 SGMR	22	1826.3	1836.8	24.4	68.3	17.0		
	1420 BOUL	3	1833.5	1835.5	4	2.0	1.0		
	410 SGMR	6	1834.3	1841.3	15.7	2.8	1.4		
	18 MCMA	41	1926	1928	5			1	
	245 BOUL	42	2221	2240	75			2	
28	100 GORK	44	0700		300 D		5.0		
	200 GORK	44	1000		120 D		5.0		
	245 SGMR	44	1117 E	1846	620 D	639.0			
	260 ONDR	44	1130	1237	150	25.0			
	245 BOUL	44	1709 E		398 D			3	
	410 SGMR	43	1711.3	1857.4	265.7D	31.7			
	200 HIRA	44	2050 E	0136	670 D	210.0	100.0		
	100 HIRA	44	2050 E	0351	670 D	700.0	140.0U		
	260 ONDR	41	0720	0819.5	228	20.0			
	200 GORK	6	0815.8	0816	.5	90.0			
	113 POTS	40	0815.6	0817.6	3	200.0	25.0		
	100 GORK	6	0816.7	0818 U	2.5	50.0D			
	4995 CANR	3	0847.5	0853	30	24.0	6.0		
	4995 CRON	3	0850	0852.5	5.5	14.0	4.0		
	3000 BERL	20	0850	0858.4	25	3.2			
	10500 BERN	8	0851.3	0853	12	20.0			
	9500 BERL	3	0851.7	0857.9	18	15.0	3.8		
	9100 GORK	1	0853.1	0853.6	1.8	18.6	9.3		
	113 POTS	40	0905.5	0906	.5	100.0	5.0		
	100 GORK	6	0905.7	0906.2	.8	50.0	20.0		
	3000 BERL	46	0946	0948.5	39	23.0			
	9500 BERL	3	0947	0948.5	21	30.0			
	1500 BERL	46	0947	0948.5	34	59.0			
	510 POTS	41	0947.7	0948.5	7.3	38.0	3.0		
	237 TRST	42	0947.7	0948.6	5.4	2500.0			
	237 TRST			0952.2		190.0			
	234 POTS	41	0947.8	0948.6	5.1	1800.0	40.0		
	210 IZMI	48	0947.7	0948	3.3	2190.0	1800.0		
	113 POTS	41	0947.8	0948	5.4	50000.0	400.0		
	10500 BERN	8	0948.1	0948.6	2	44.0			
	9100 GORK	1	0948.8	0949	1.4	39.0	19.4		
	4995 CANR	45	0948	0949	6	44.0	16.0		
	4995 CRON	45	0948	0949	5.5	56.0	16.0		
	1420 CANR	45	0948.5	0948.5	7	52.0	14.0		
	950 GORK	46	0948.5	0950.2	5.8	28.0			
	950 GORK		0948.5	0954.5		20.0			
	930 BORD	45	0948	0949.8	7	37.0	6.0		
	650 GORK	46	0948.8	0949	7.4	19.0			
	650 GORK		0948.8	0952.6		36.0			
	536 ONDR	45	0948.5	0952.5	7.5	80.0			
	408 TRST	42	0948	0948.6	9.5	200.0D			

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## SOLAR RADIO EMISSION OUTSTANDING OCCURRENCES

OCTOBER 1973

OCT. 1973	FREQUENCY STATION	TYPE	STARTING	TIME OF	DURATION	FLUX DENSITY		INT	REMARKS
			TIME	MAXIMUM		$10^{-22} \text{ Wm}^{-2}$	$\text{Hz}^{-1}$		
			UT	UT	MINUTES	PEAK	MEAN		
	408 TRST								
	260 ONDR	44	0948	0952.6		110.0			
	200 GORK	41	0948	0948.5	102	240.0D			
	200 GORK	41	0948	0948.2	5.3	300.0D			
	200 GORK		0948	0949		700.0			
	100 GORK	49	0948	0949 U	39	8000.0D			
	100 GORK	48	0948	0949 U	11.2	8000.0D			
	100 GORK		0948	0958.9		900.0			
	29 UPIC		0948		7				
	2695 CANR	45	0949	0949.5	14.5	37.0	12.0		
	1420 CRON	45	0949	0949	7.5	48.0	11.0		
	808 ONDR	45	0949	0953	8	90.0			
	210 IZMI	6	0951	0952	2.4	160.0	100.0		
	100 GORK	49	0959.1	1030.4	27.1	100.0	50.0		
	100 GORK	6	1028.2	1028.4	.4	50.0	20.0		
	237 TRST	41	1036.4	1036.6	.7	60.0			
	237 TRST	41	1046.6	1046.7	.7	52.0			
	245 SGMR	48	1829.8	1830.2	1.2	1152.0	230.0		
	2800 OTTA	20	1915	1917	15	.8	0.4		
	2695 CRON	45	2347	2348	5.5	29.0	9.0		
29	500 HIRA	5	0216.6	0217	1.5	10.0	5.0		
	4995 MANI	40	0427.1	0445.6	23.1	12.9	2.0		
	3750 TYKW	3	0444.6	0445.5	1.5	10.0	3.0		
	200 GORK	44	0500 E		480 D		10.0		
	100 GORK	44	0500 E		480 D		15.0		
	234 POTS	45	0648.9	0649	.1	130.0	35.0		
	210 IZMI	44	0700		300	70.0			
	260 ONDR	44	0710	0833.5	440	100.0			
	410 SGMR	44	1118 E	1505.1	618 D	13.3			
	245 SGMR	44	1118 E	1525.2	618 D	58.8			
	245 BOUL	44	1331 E		223 D			2	
	200 HIRA	44	2105. E	0557	660 D	95.0	20.0		
	100 GORK	6	0751.9	0752.6	1.8	1500.0	700.0		
	234 POTS	40	0832.9	0833.9	1.3	350.0	15.0		
	100 GORK	41	0933.8	0935	16.2	200.0			
	100 GORK		0933.8	0940		300.0			
	100 GORK		0933.8	0943.1		300.0			
	100 GORK		0933.8	0947.3		300.0			
	100 GORK	6	0951.4	0951.9	1	350.0	170.0		
	234 POTS	45	1031.4	1031.6	.4	120.0	20.0		
	113 POTS	40	1051.4	1051.8	.6	800.0	40.0		
	100 GORK	41	1142.5	1143.2	7.4	400.0			
	100 GORK		1142.5	1148.7		400.0			
	4995 CANR	3	1146	1146.5	2.5	7.0	3.0		
	408 TRST	41	1146.6	1146.9	.5D	30.0			
	18 MCMA	6	1335	1338	4			1	
	237 TRST	42	1513	1515.7	4.3	190.0			
	245 BOUL	41	2150	2156	15			2	
	245 BOUL	41	2253	2256	6			2	
	245 BOUL	41	2301	2302	9			2	
	245 BOUL	41	2327	2343	16 D			2	
	2695 CRON	8	2339.5	2340	2	7.0	3.0		
30	200 HIRA	45	0103	0103.3U	1.5	180.0D	100.0D		
	100 HIRA	45	0103	0103.5	1.5	220.0	70.0		
	3750 TYKW	45	0114	0118.7	15	5.0	2.0		
	1415 MANI	1	0115.3	0118.6	4.2	7.8	2.0		
	606 MANI	4	0115.3	0118.6	4.2	15.0	4.4		
	4995 MANI	1	0116.2	0118.6	5	4.9	1.9		
	4995 CRON	3	0116.5	0117.5	4	8.0	3.0		
	9400 TYKW	3	0117	0118.6	4	12.0	4.0		
	8800 MANI	1	0117.1	0118.6	4.1	9.0	3.0		
	2695 MANI	4	0117.9	0118.6	1.6	11.6	3.9		
	2000 TYKW	45	0117	0118.8	3	4.0	1.0		
	1000 TYKW	45	0117	0118.7	3	13.0	2.0		
	2695 CRON	8	0126.5	0127.5	2	12.0	4.0		
	100 HIRA	43	0220	0556	320 D	170.0D	40.0D		
	200 GORK	44	0509 E		291		20.0		
	100 GORK	44	0580 E		216		20.0		
	260 ONDR	44	0700	1133.5	460	140.0			
	100 GORK	44	0844		241 D		5.0		
	210 IZMI	44	0900		180	50.0			
	200 GORK	44	1000		180		5.0		
	410 SGMR	44	1119 E	1539.6	328.6D	151.0			
	245 SGMR	44	1119 E	1526.4	616 D	338.0			
	2000 TYKW	1	0234	0236	10.	2.0	1.0		
	2000 TYKW	45	0440	0455.3	50	3.0	1.0		
	1000 TYKW	45	0440	0455	50	3.0	1.0		
	9400 TYKW	3	0452	0455	8 D	5.0	2.0		
	3750 TYKW	45	0452	0458	10	4.0	2.0		
	9750 IRKU	1	0504.5	0504.9	.5	4.0			
	200 GORK	6	0847	0847.6	1.3	300.0	150.0		
	200 GORK	6	0902.8	0903.1	1.3	250.0	100.0		
	200 GORK	6	0957.8	0958	1.1	240.0	100.0		
	408 TRST	45	1133.5U	1134	.5D	21.0			
	237 TRST	41	1133.5	1133.5	.6D	600.0			
	234 POTS	45	1133.5	1133.5	.7	350.0	35.0		
	113 POTS	45	1133.5	1134.1	.9	140.0	4.0		
	113 POTS	45	1145.6	1145.8	.7	280.0	30.0		
	234 POTS	45	1336	1447	86 D	175.0			

SOLAR RADIO EMISSION  
OUTSTANDING OCCURRENCES

OCTOBER 1973

OCT. 1973	FREQUENCY STATION	TYPE	STARTING TIME		DURATION	FLUX DENSITY $10^{-22} \text{ Wm}^{-2} \text{ Hz}^{-1}$		INT	REMARKS	
			UT	UT		MINUTES	PEAK			MEAN
31	113 POTS	45	1336	1501	86 D	280.0		3		
	245 BOUL	43	1337		606 D					
	2800 OTTA	21	1420	1530	295	6.8	4.0			
	4995 SGMR	22	1424.7	1546.9	265.3	11.9	7.1			
	2700 PENN	20	1425.6	1700	424	3.3	0.7			
	10700 PENN	20	1426.8	1627.4	423	16.7	3.0			
	1420 CANR	40	1426	1541	116.5	16.0	2.0			
	2695 SGMR	22	1436.9	1539.8	259.1	7.6	4.6			
	930 BORD	40	1437	1516.6	94	34.0	4.0			
	606 SGMR	43	1437.9	1539.3	104.4	40.7				
	2800 OTTA	40	1440		65	2.8				
	18 MCMA	6	1440	1442	3				1	
	2695 CANR	3	1445	1447.5	5.5	3.0	1.0			
	4995 BOUL	20	1507	1620	23.5	11.0	4.0			
	1415 SGMR	40	1507.7	1540.5	79.3	19.5	7.8			
	1420 BOUL	40	1508.5	1640.5	67.5	19.0	3.0			
	2695 CANR	40	1518	1540	27	6.0	2.0			
	2695 BOUL	40	1518	1540	26	6.0	2.0			
	1420 CANR	3	1641.5	1642.5	2.5	6.0	2.0			
	1420 BOUL	3	1641.5	1642	2.5	4.0	1.0			
	1420 BOUL	8	1653.5	1654.5	1.5	15.0	6.0			
	2800 OTTA	26	1915	1915	150	4.2	2.1			
	100 HIRA	45	0435	0435.9	2	280.0	60.0			2
	200 GORK	44	0500		480		5.0			
	100 GORK	44	0503		207		5.0			
	260 ONDR	44	0720	1306.5	430	55.0				
	283 DWIN	44	0930		510		30.0			
	100 GORK	44	1048		132		5.0			
	410 SGMR	44	1120 E	1231.7	170 D		2.1			
	245 SGMR	44	1120 E	2048.2	613 D		117.5			
	245 BOUL	44	1344		124					
245 BOUL	42	1703		145						
200 GORK	41	0511	0511.1	2	200.0					
200 GORK		0511	0512.8		100.0					
200 GORK	6	0543.4	0543.6	.4	240.0	120.0				
200 GORK	41	0606.4	0607	3	250.0					
200 GORK		0606.4	0608.8		300.0					
200 GORK	41	0628.4	0629.5	9.2	300.0					
200 GORK		0628.4	0631.3		300.0					
200 GORK		0628.4	0624.3		300.0					
200 GORK	41	0659.6	0700	5	300.0					
200 GORK		0659.6	0703.6		350.0					
100 GORK	6	0659.7	0705	1.8	40.0	20.0				
200 GORK	41	0712.6	0713.7	3.4	35.0					
200 GORK		0712.6	0715		35.0					
4995 CANR	3	0744	0745	1.5	10.0	3.0				
1420 CANR	3	0744.5	0745	1.5	3.0	1.0				
2695 CANR	3	0745	0745.5	1.5	5.0	2.0				
4995 CANR	3	0753	0754	1.5	6.0	2.0				
2695 CANR	3	0753.5	0754	2.5	3.0	1.0				
1420 CANR	3	0753	0753.5	2	2.0	1.0				
100 GORK	48	0834.4	0835.4	1.4	45.0					
200 GORK	6	1034.2	1034.5	1.2	350.0					
234 POTS	41	1222.6	1226.4	4.1	175.0	2.0				
2695 CANR	1	1301	1301.5	5	2.0	1.0				
18 MCMA	6	1357	1358	2			1			
4995 CANR	3	1436.5	1440	6	8.0	3.0				
2800 OTTA	20	1437	1439	15	1.8	0.9				
2695 CANR	3	1438	1440	4.5	4.0	1.0				
234 POTS	45	1440	1440.2	.5	200.0	50.0				
2800 OTTA	21	1948	2010	122	5.4	2.6				
2800 OTTA	1	1958	2003	8.2	4.8	2.4				
2700 PENN	20	1958.2	2003	50.4	8.2	4.1				
1420 BOUL	3	1959.5	2002	10	2.0	1.0				
2695 BOUL	3	2000	2003	6.5	6.0	2.0				
245 BOUL	42	2032	2058	150						

Observatories:

ABST = Abastumani	CANR = Canary Islands	HUAN = Huancayo	ONDR = Ondrejov	SGMR = Sagamore Hill
BERL = Berlin-Adlershof	CRIM = Simferopol	IRKU = Irkutsk	OTTA = Ottawa ARO	SLOU = Slough
BERN = Berne	CRON = Carnarvon	IZMI = Moscow IZMIRAN	PENN = Penn. State Univ.	TRST = Trieste
DWIN = Dwingeloo	GORK = Gorky	KIEV = Kiev	PENT = Penticton	TYKW = Toyokawa
BOUL = Boulder	HARS = Harestua	MANI = Manila	POTS = Potsdam	
	HIRA = Hiraiso	MCMA = McMath-Hulbert	SAOP = Sao Paulo	UPIC = Upice
				VORO = Voroshilov

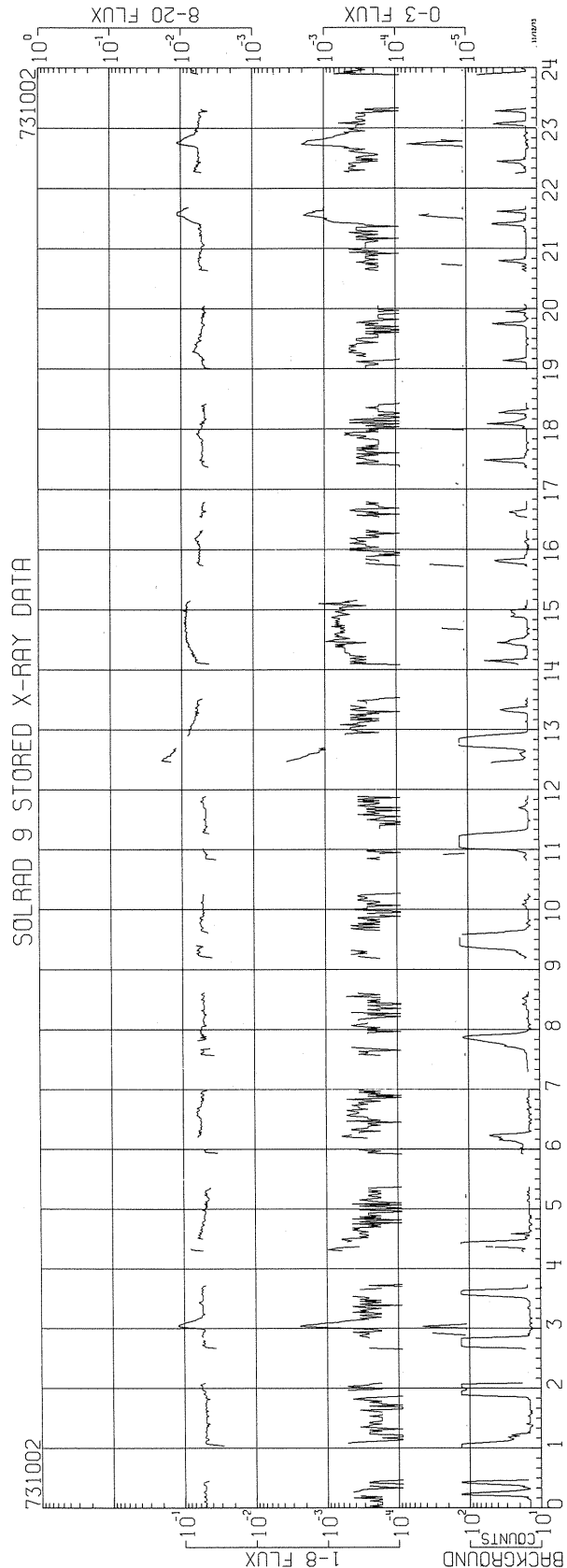
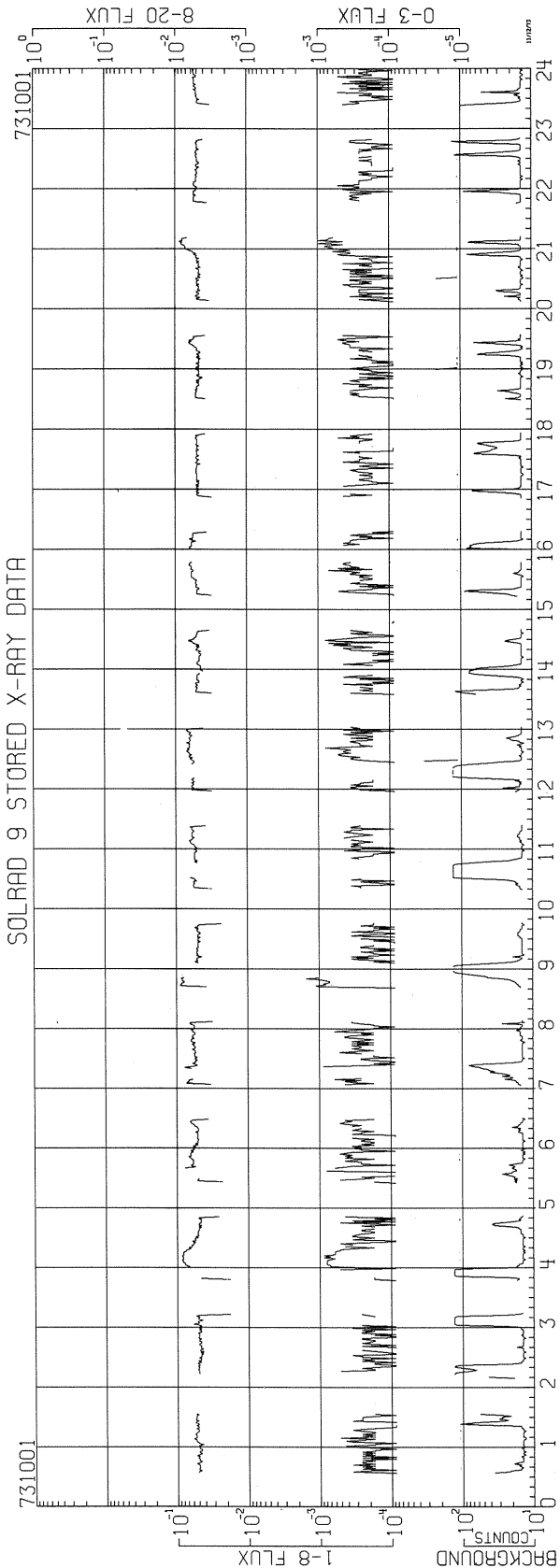
Explanation of Type Code:

1 Simple 1	6 Minor	22 Simple 3F	27 Rise and Fall	32 Absorption	44 Noise Storm in Progress
2 Simple 1F	7 Minor +	23 Simple 3AF	28 Precursor	40 Fluctuation	45 Complex
3 Simple 2	8 Spike	24 Rise	29 Post Burst Increase	41 Group of Bursts	46 Complex F
4 Simple 2F	20 Simple 3	25 Rise A	30 Post Burst Increase A	42 Series of Bursts	47 Great Burst
5 Simple	21 Simple 3A	26 Fall	31 Post Burst Decrease	43 Onset of Noise Storm	48 Major
					49 Major +

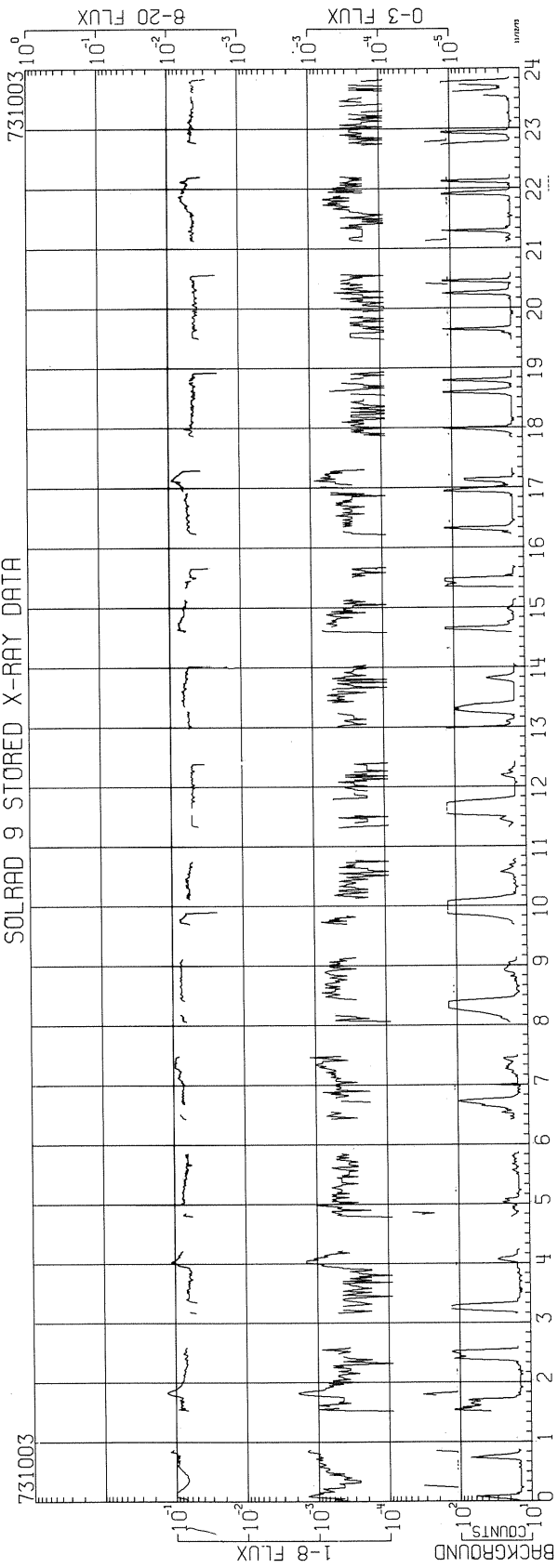


# SOLAR X-RAYS MEASURED BY SATELLITE SOLRAD 9 - EXPLORER 37

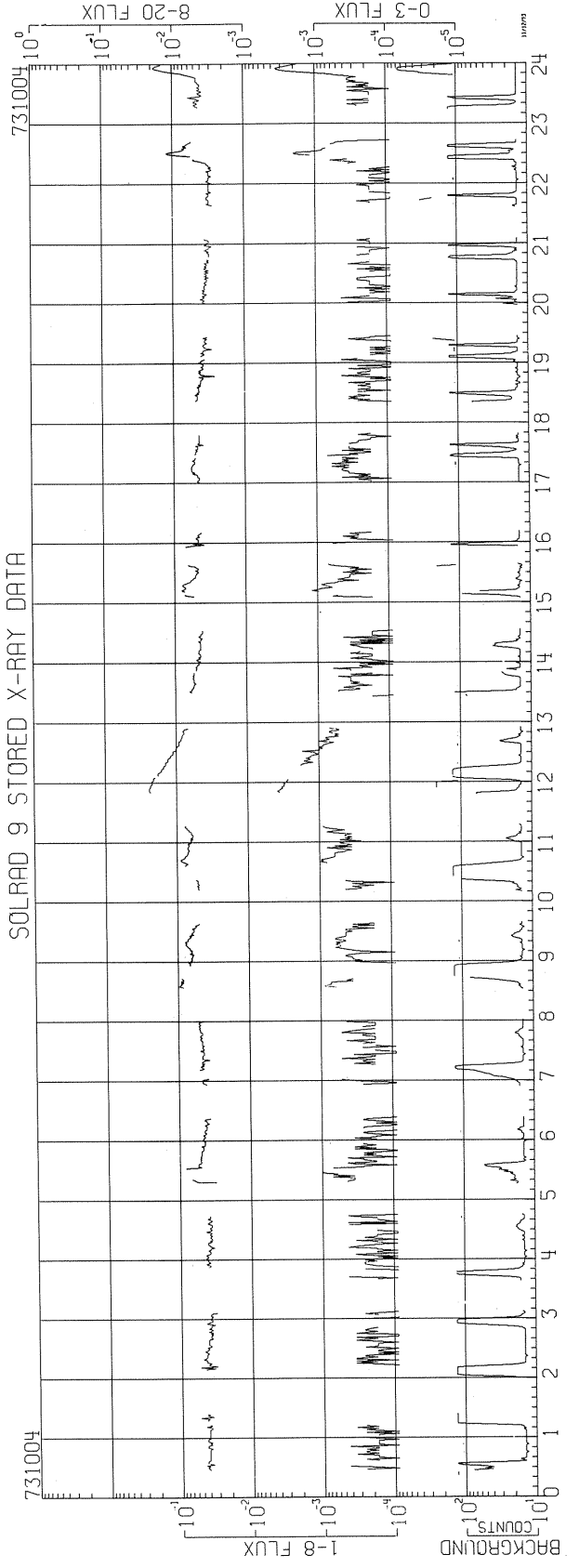
OCTOBER 1973



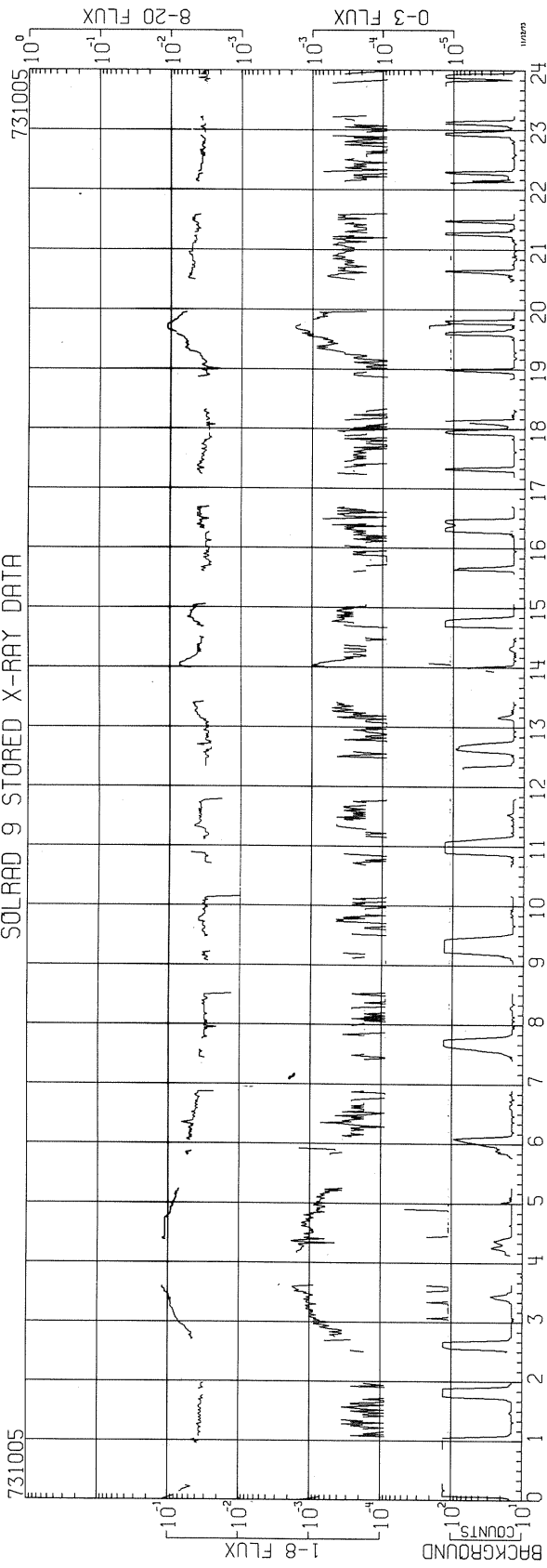
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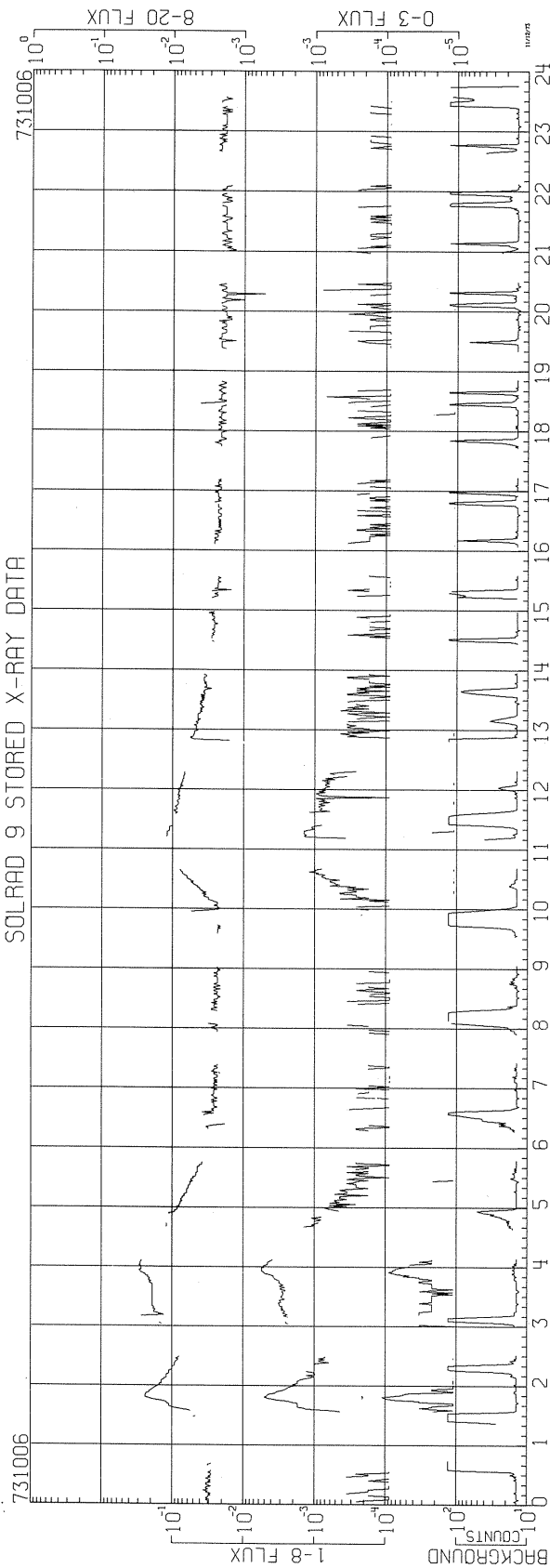
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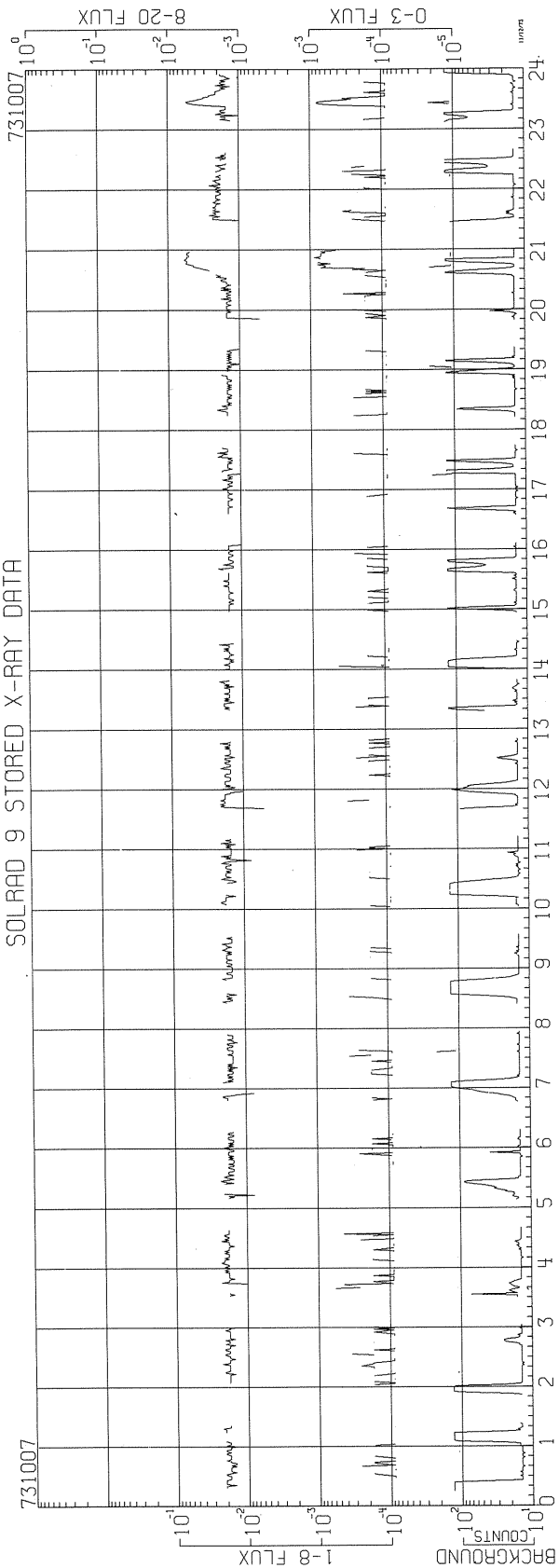
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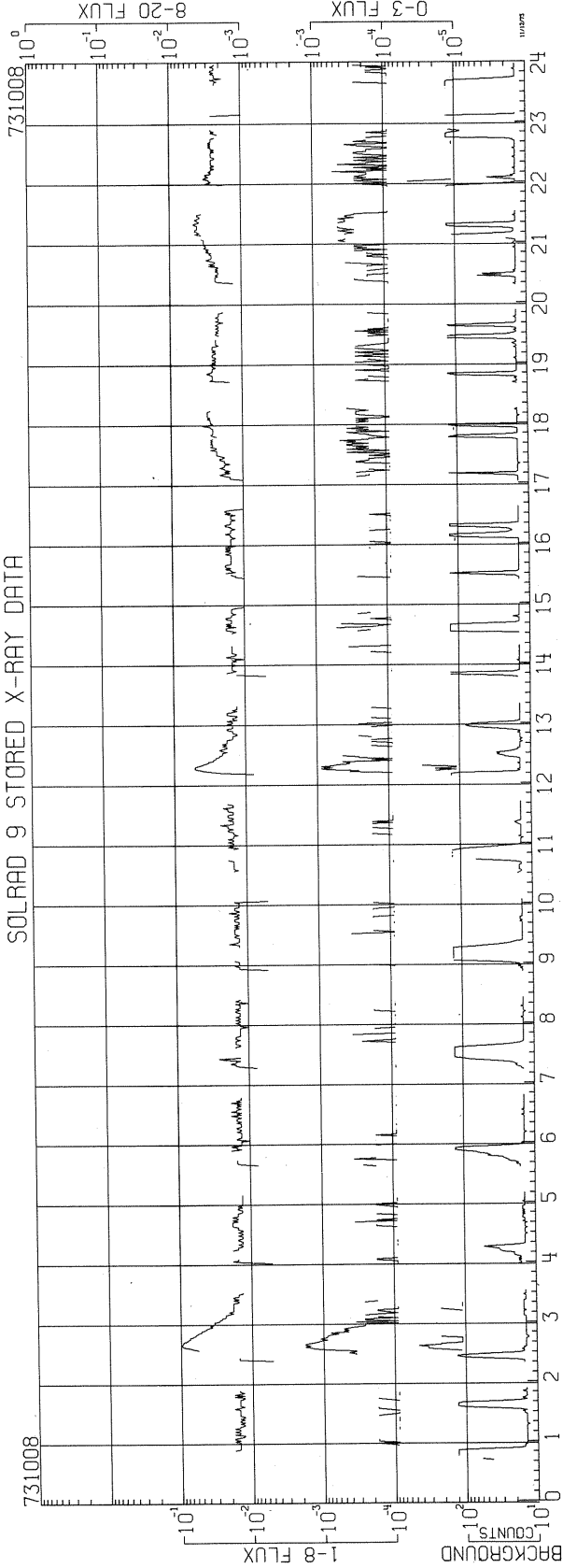
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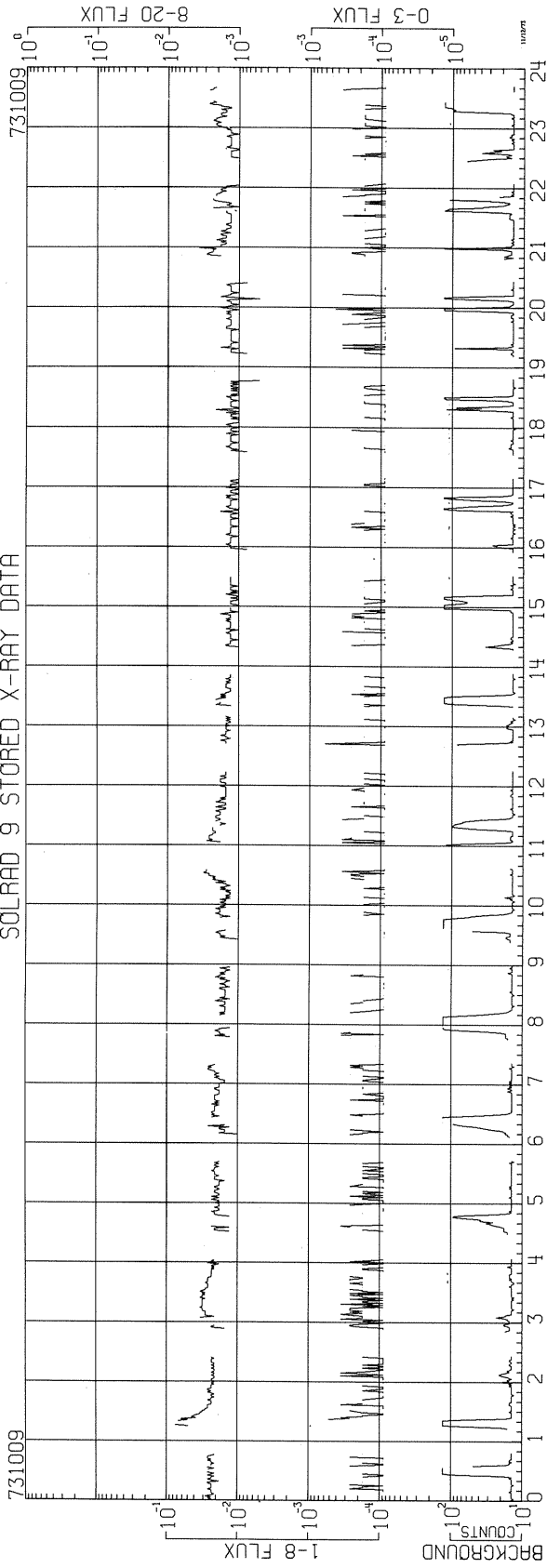
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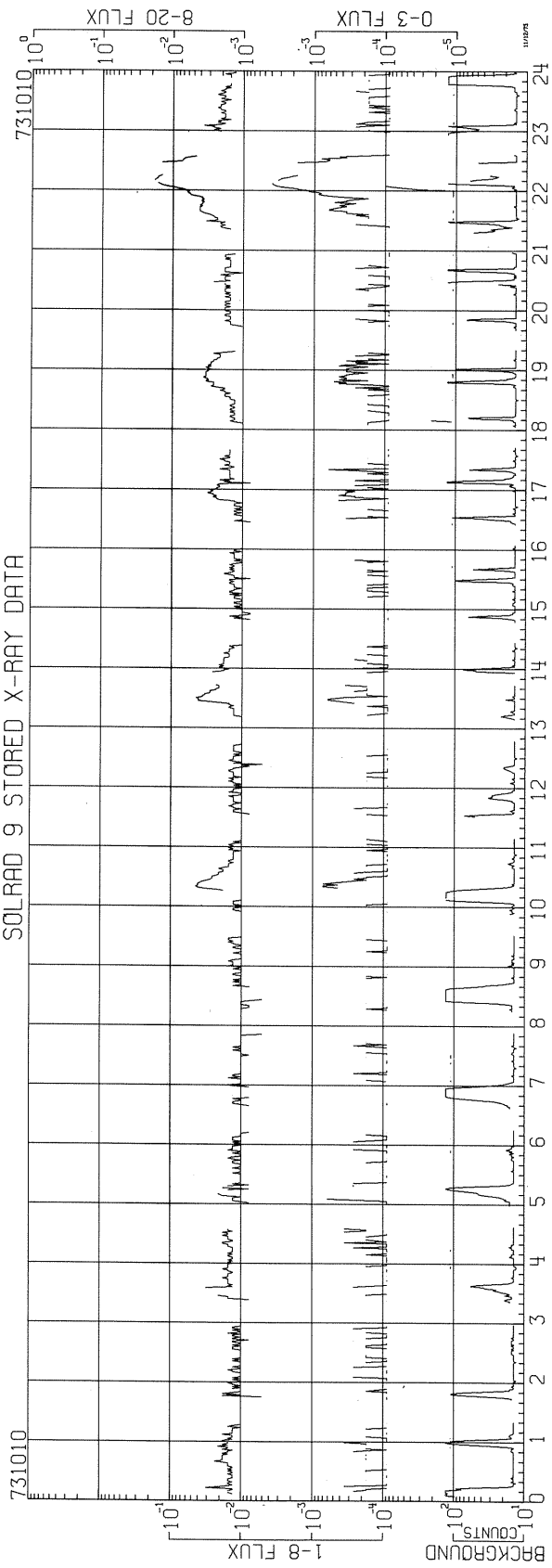
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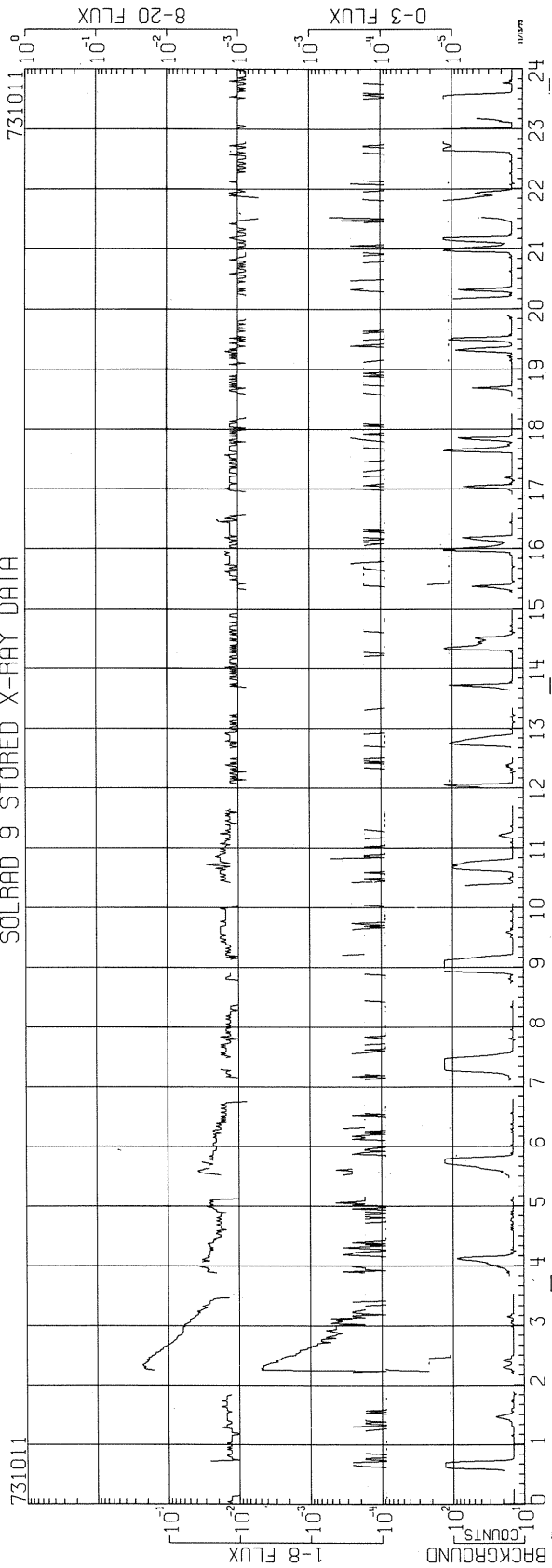
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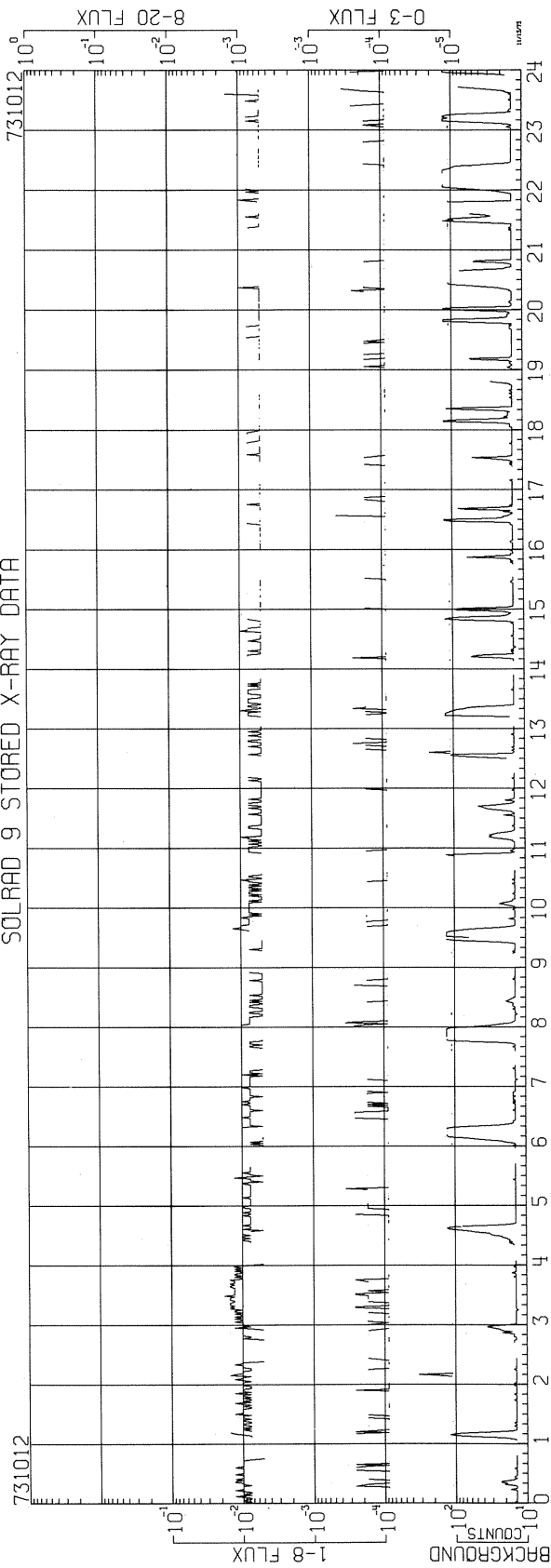
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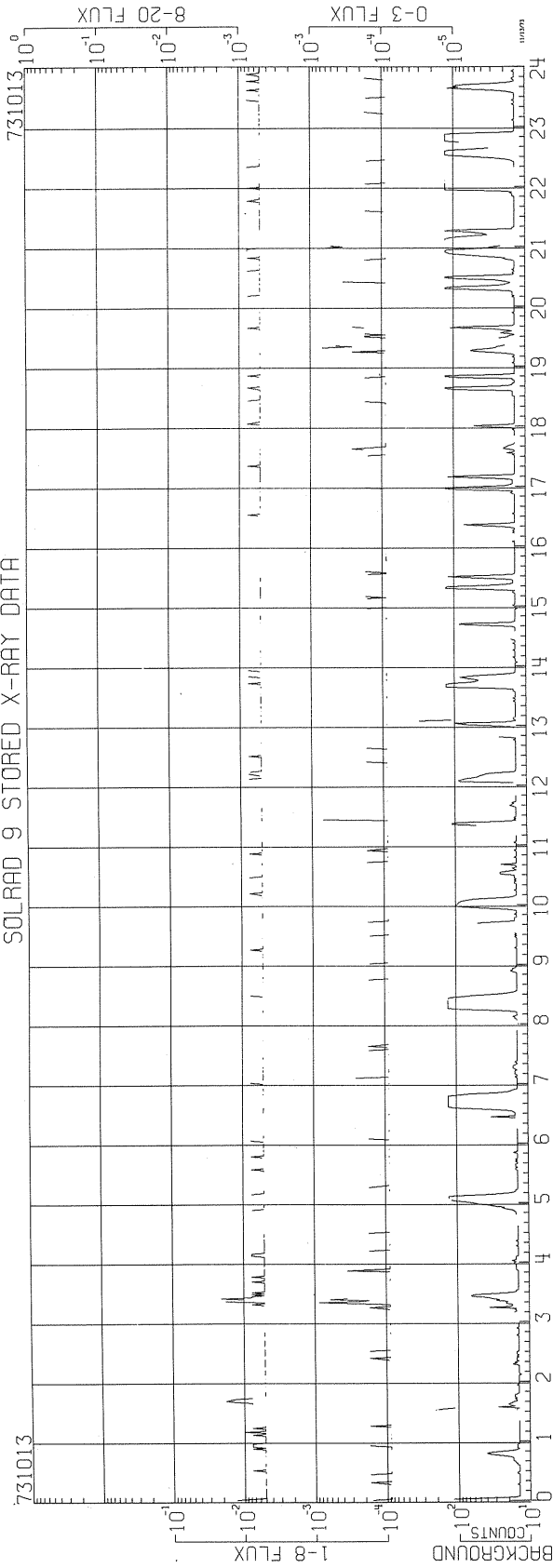
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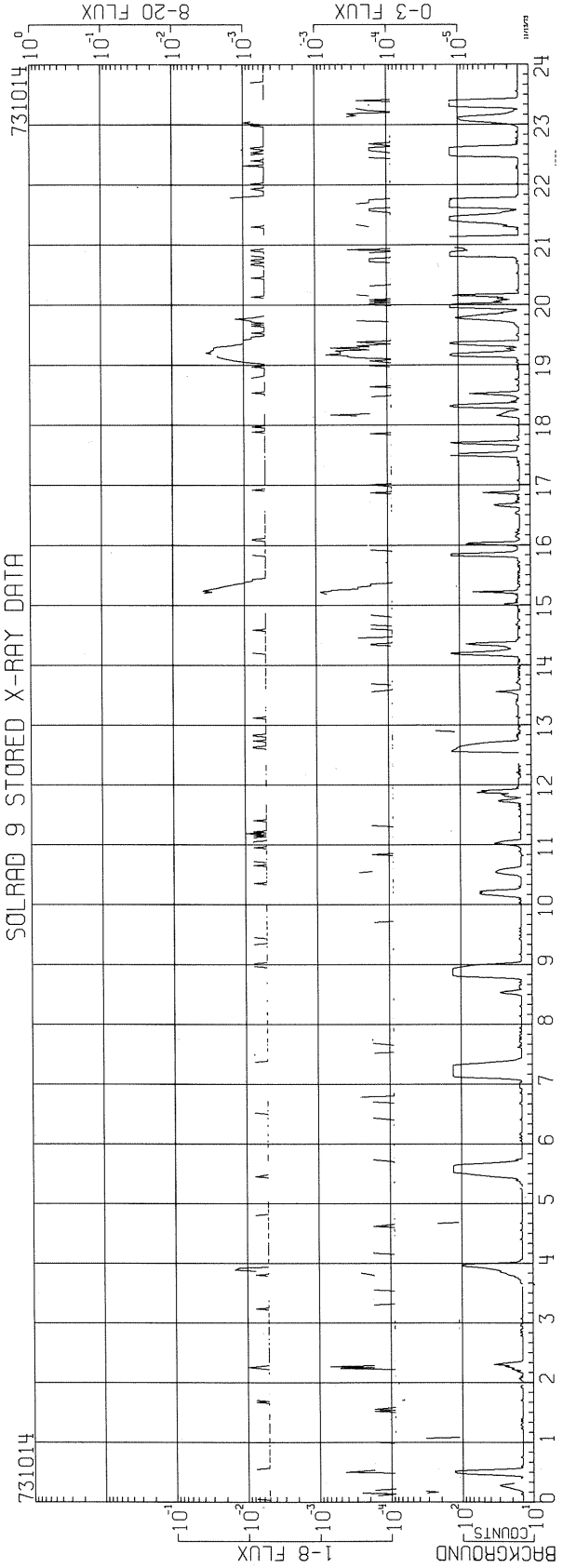
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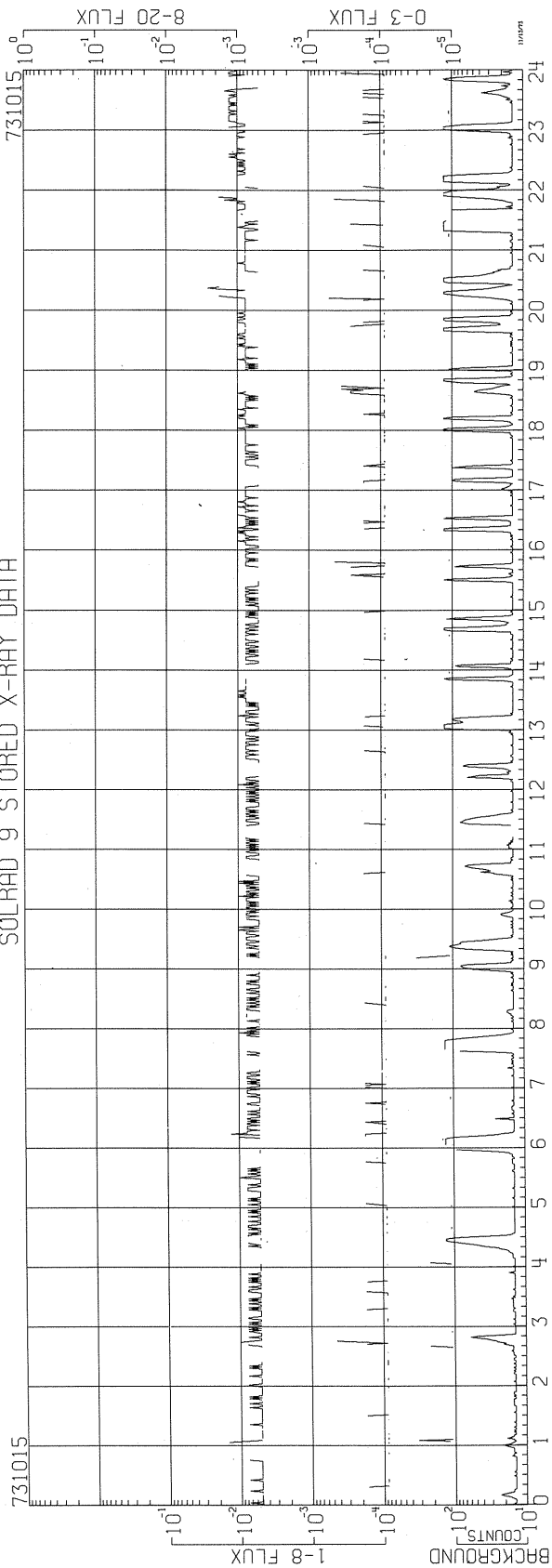
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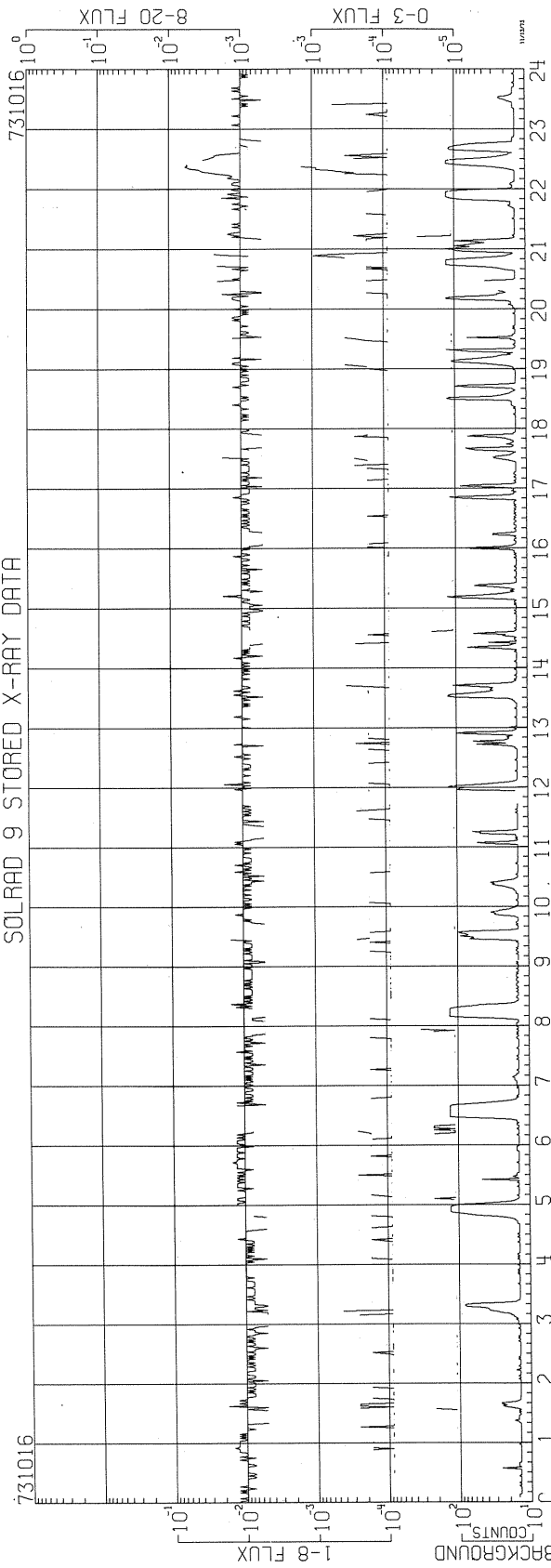
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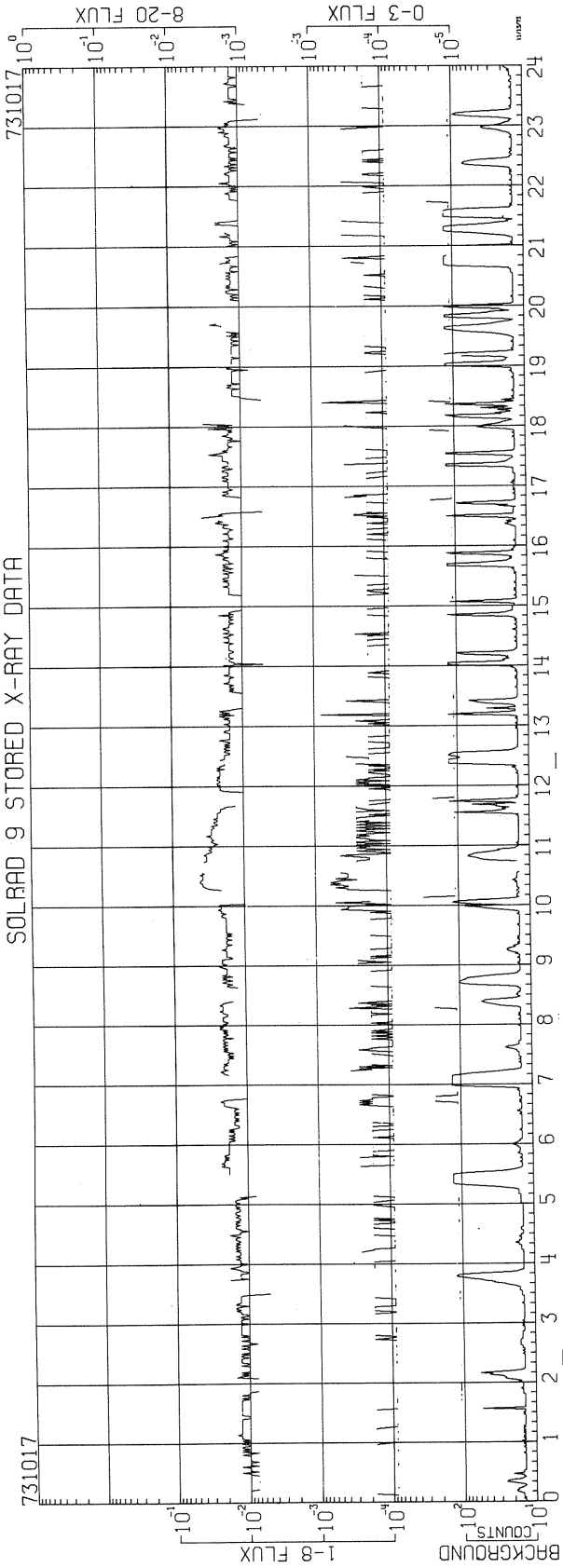


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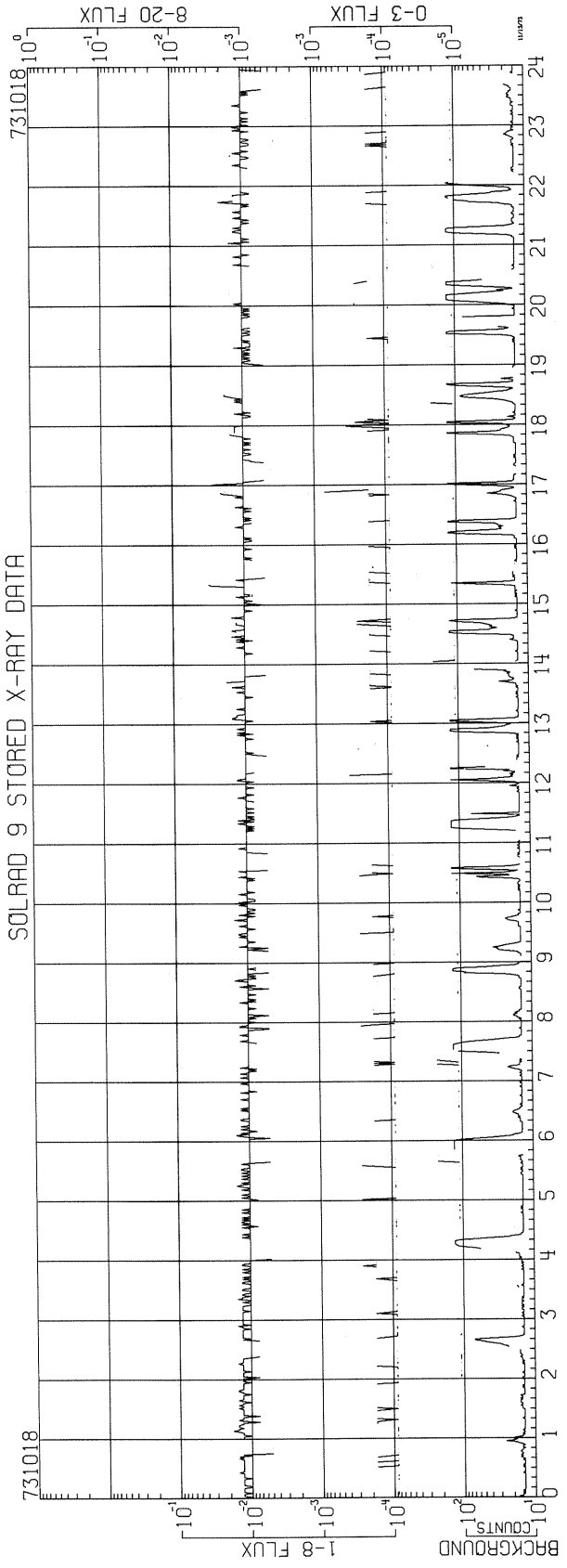




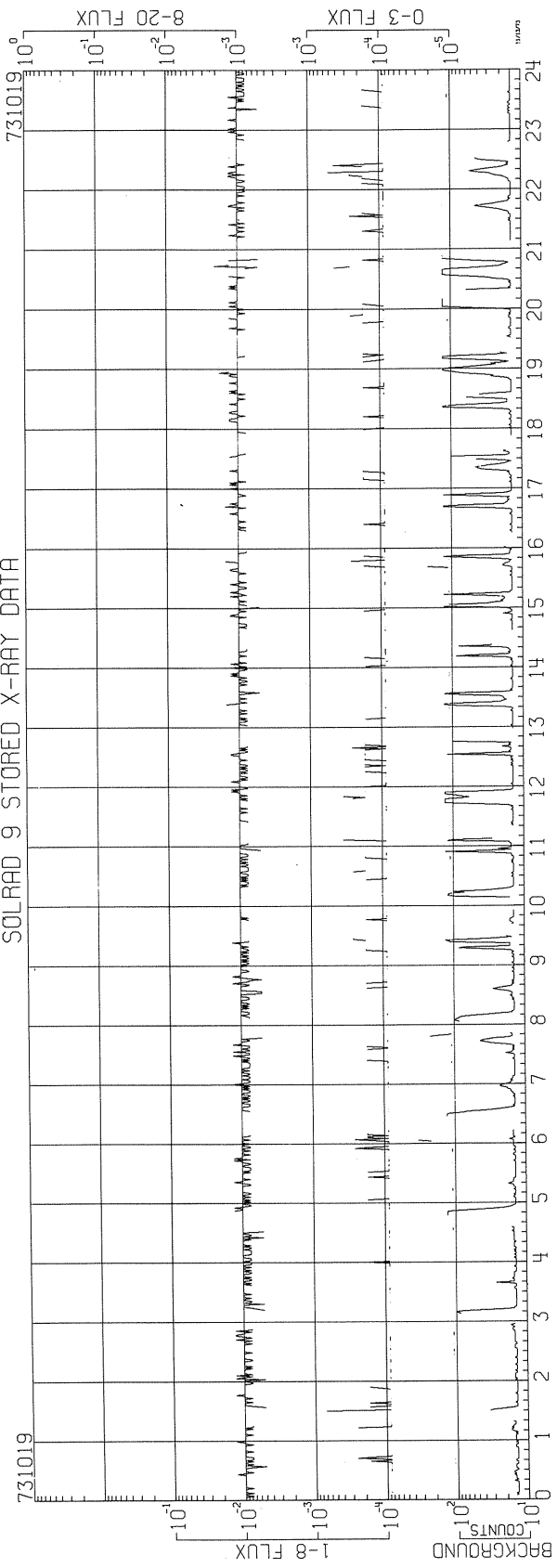
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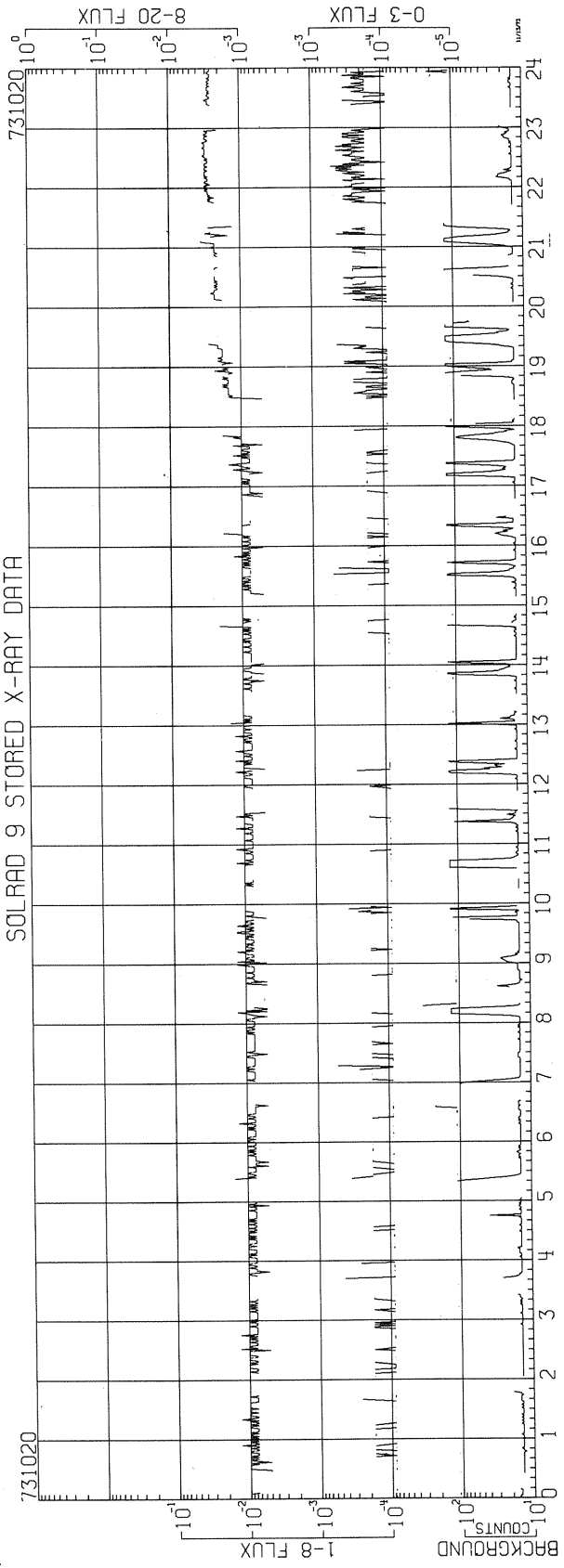
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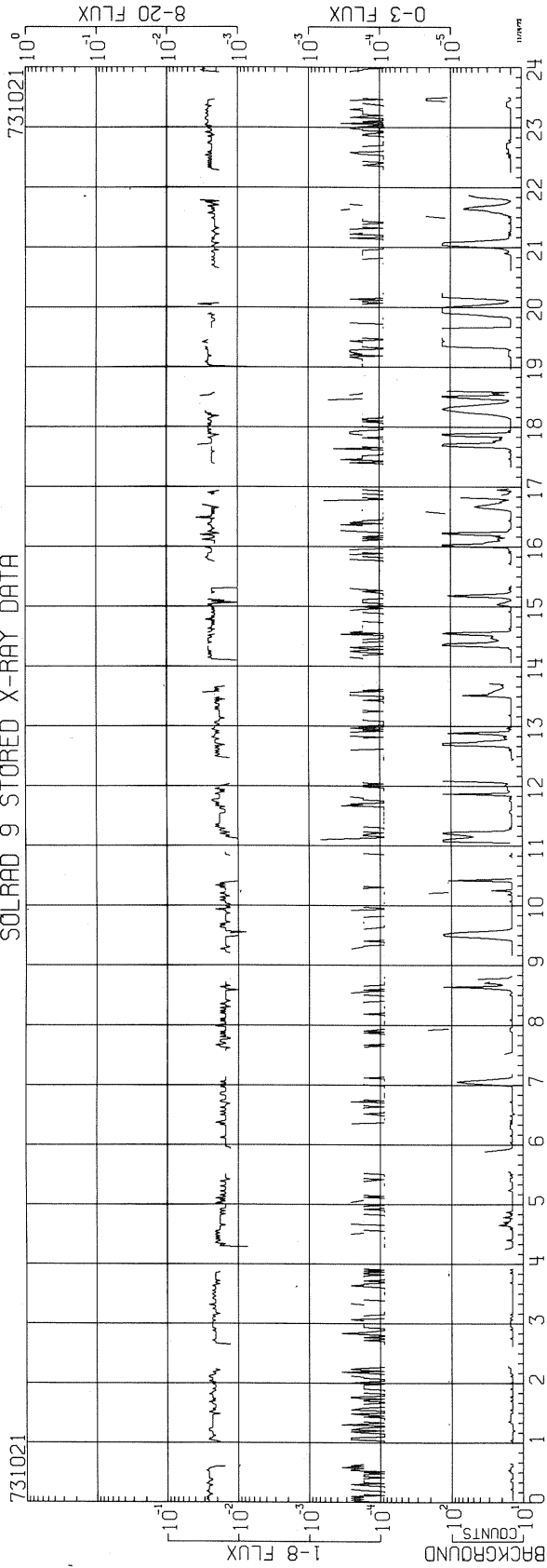
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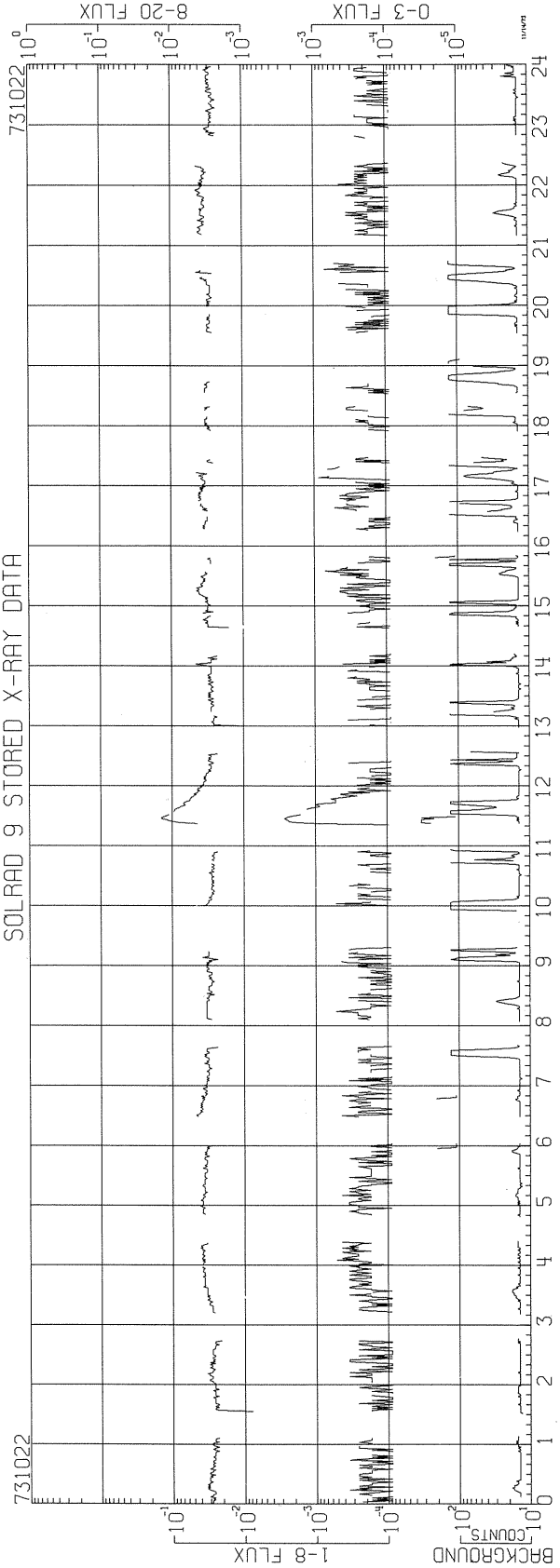
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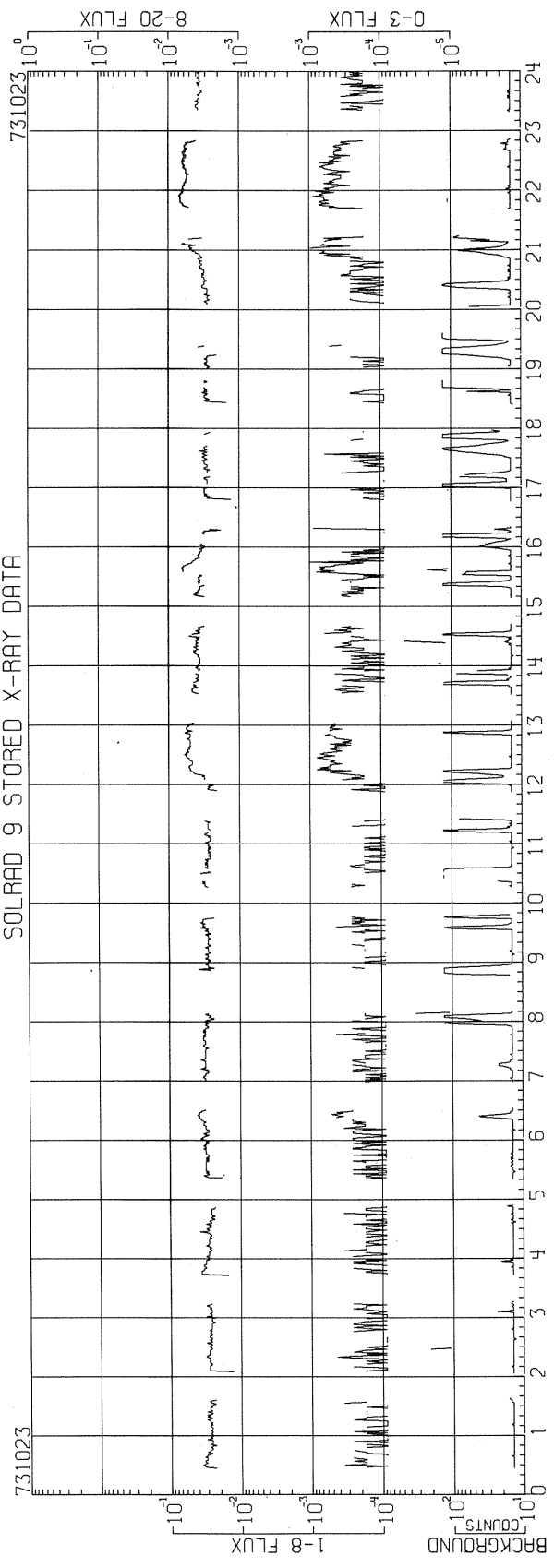
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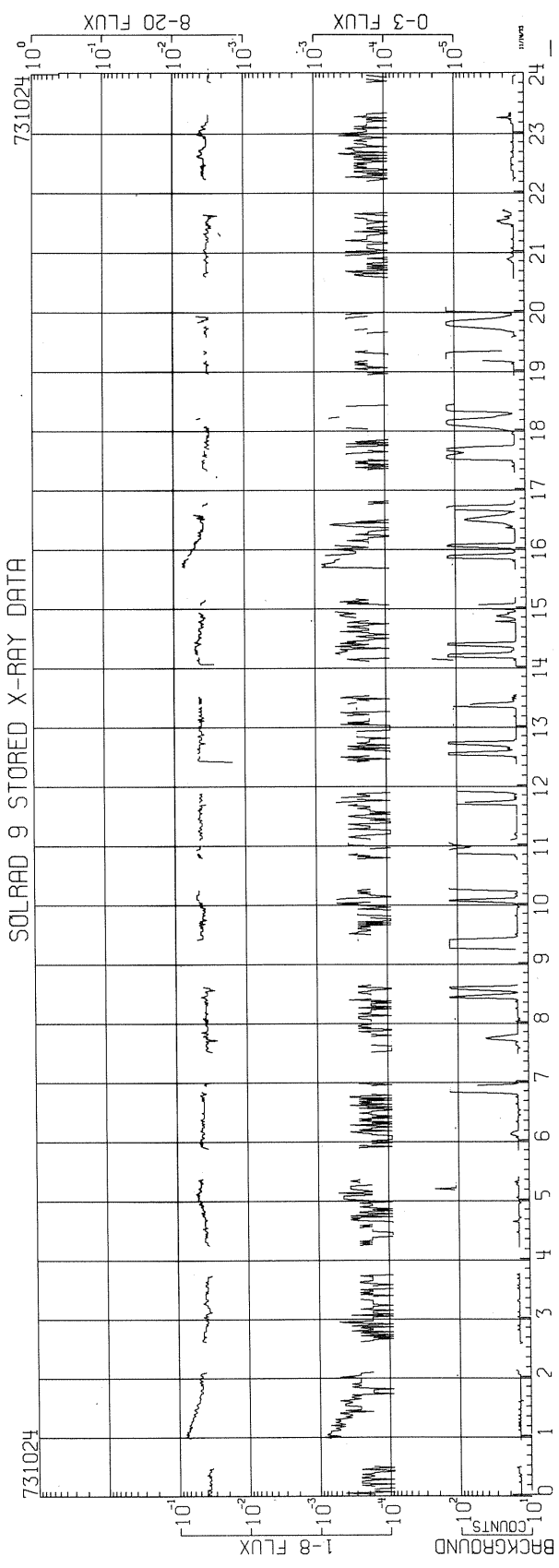
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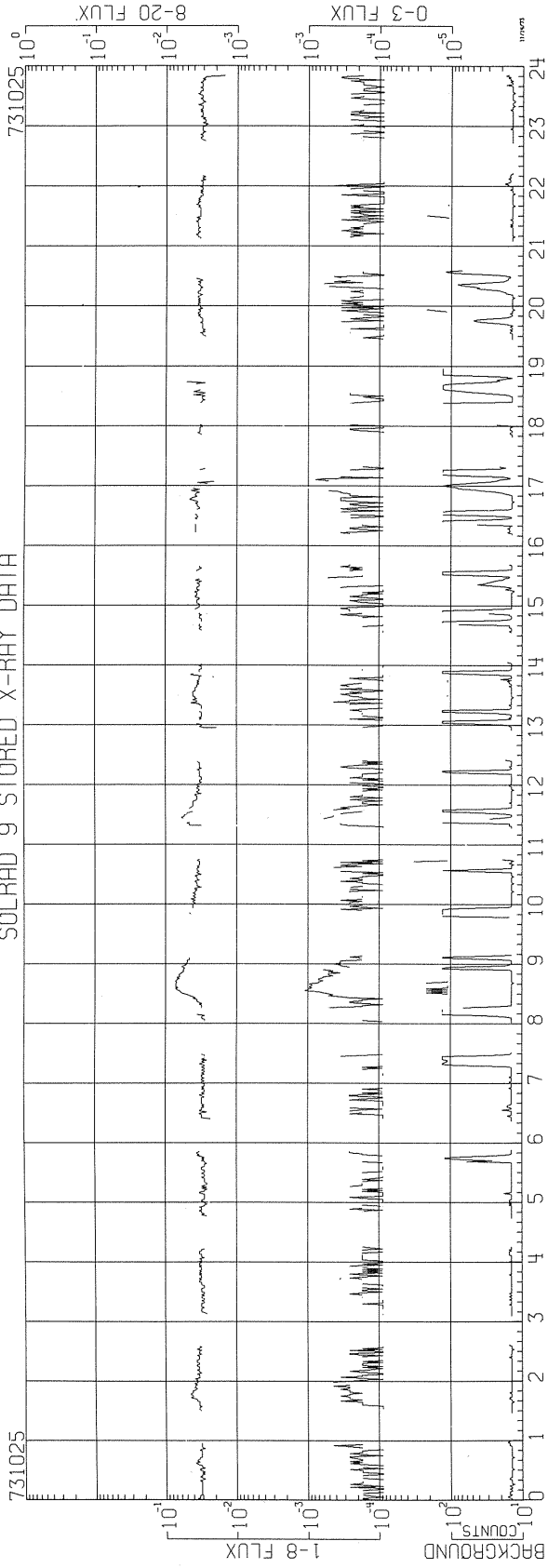
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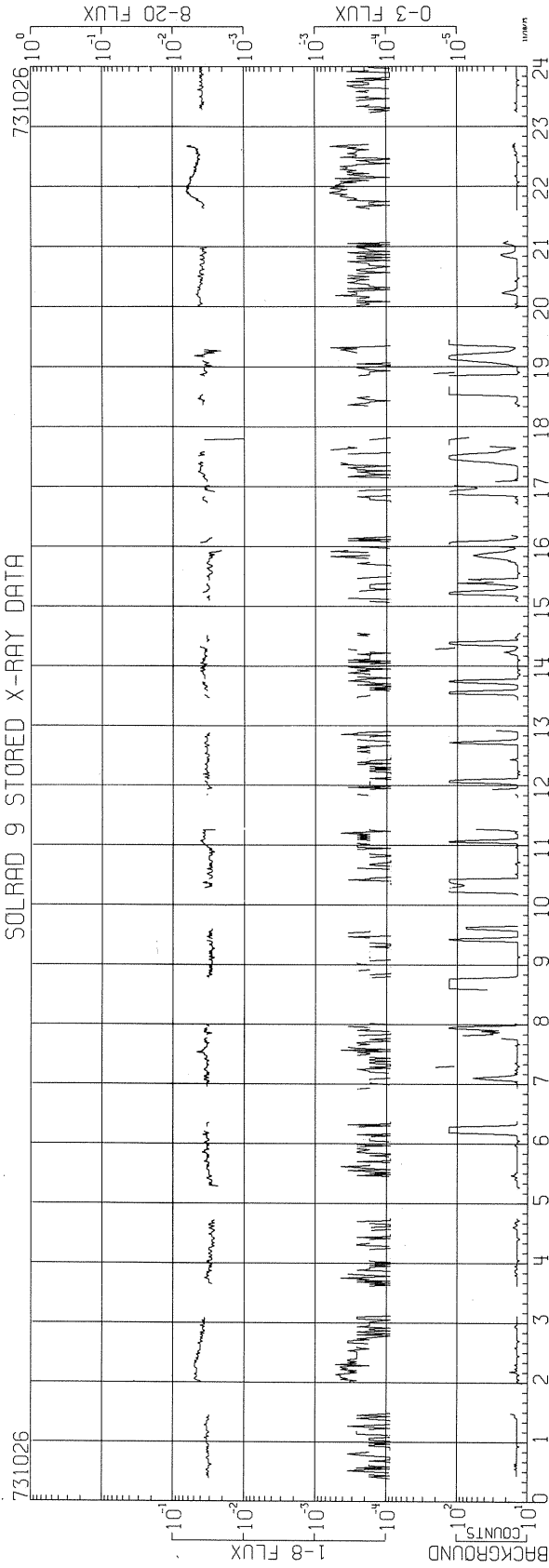
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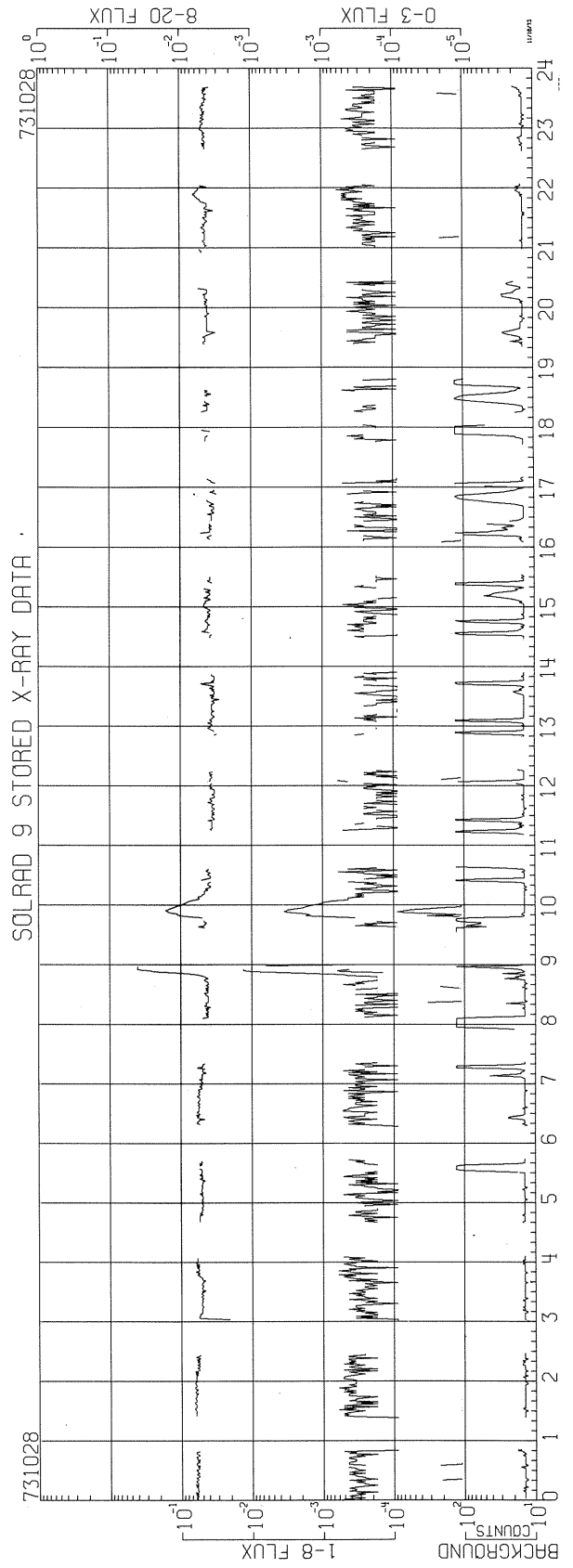
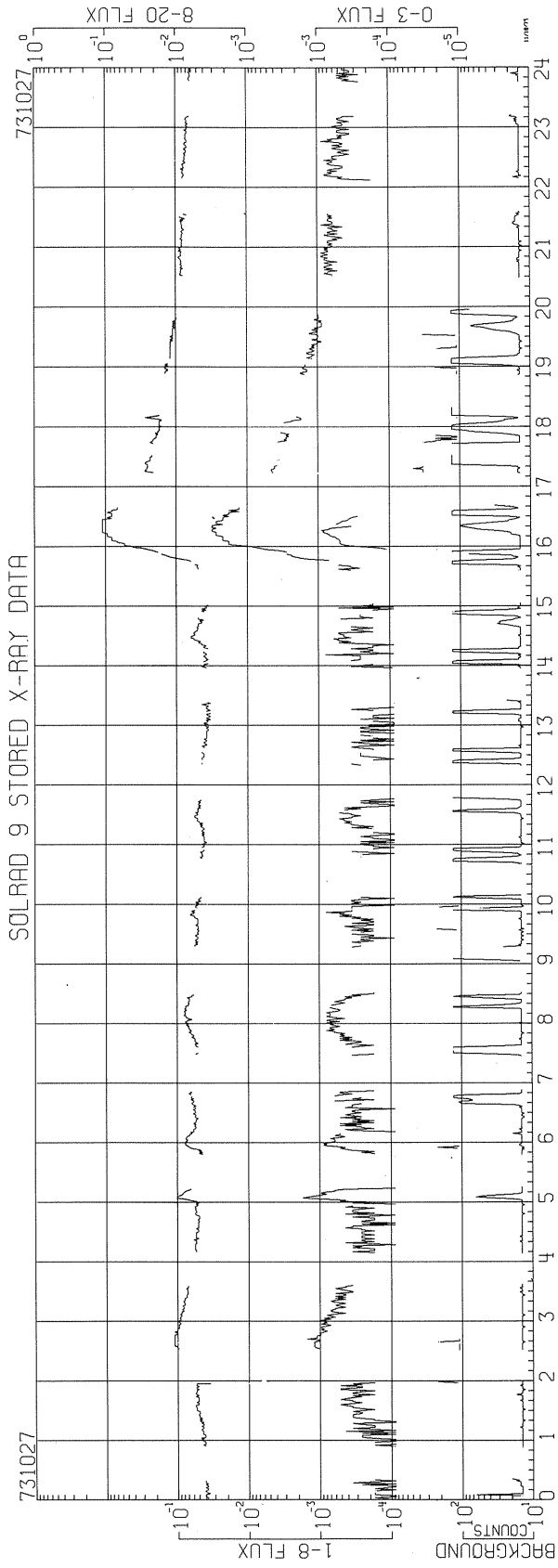


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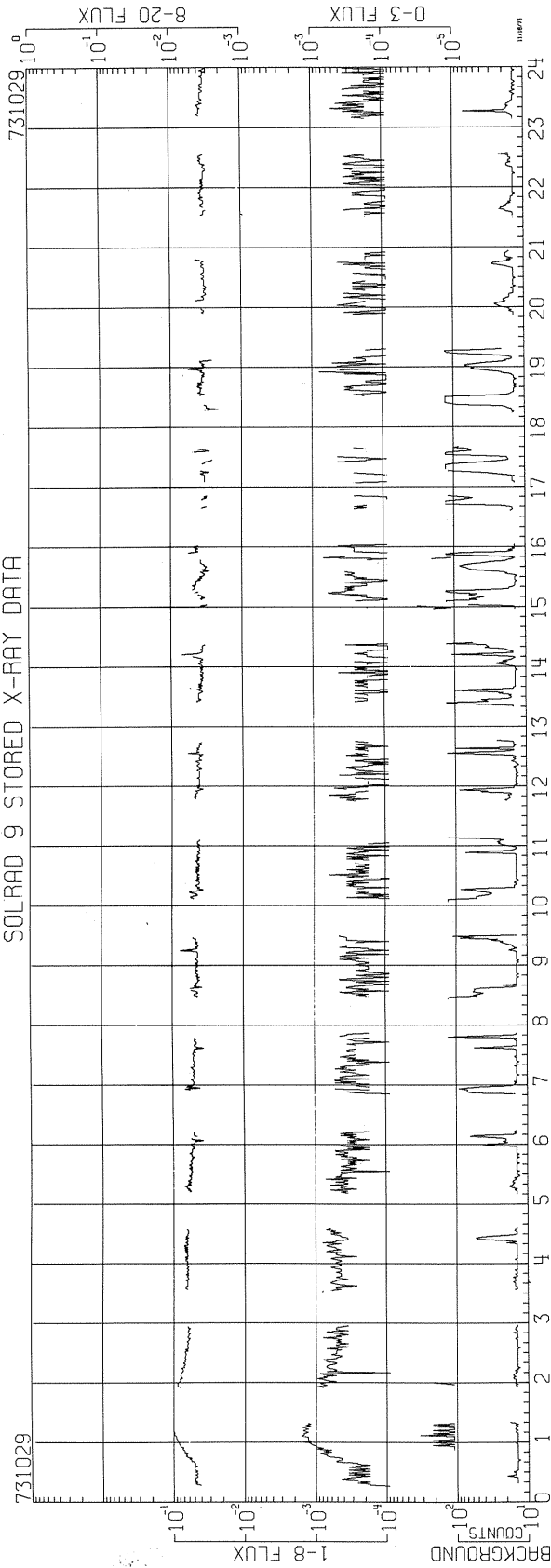


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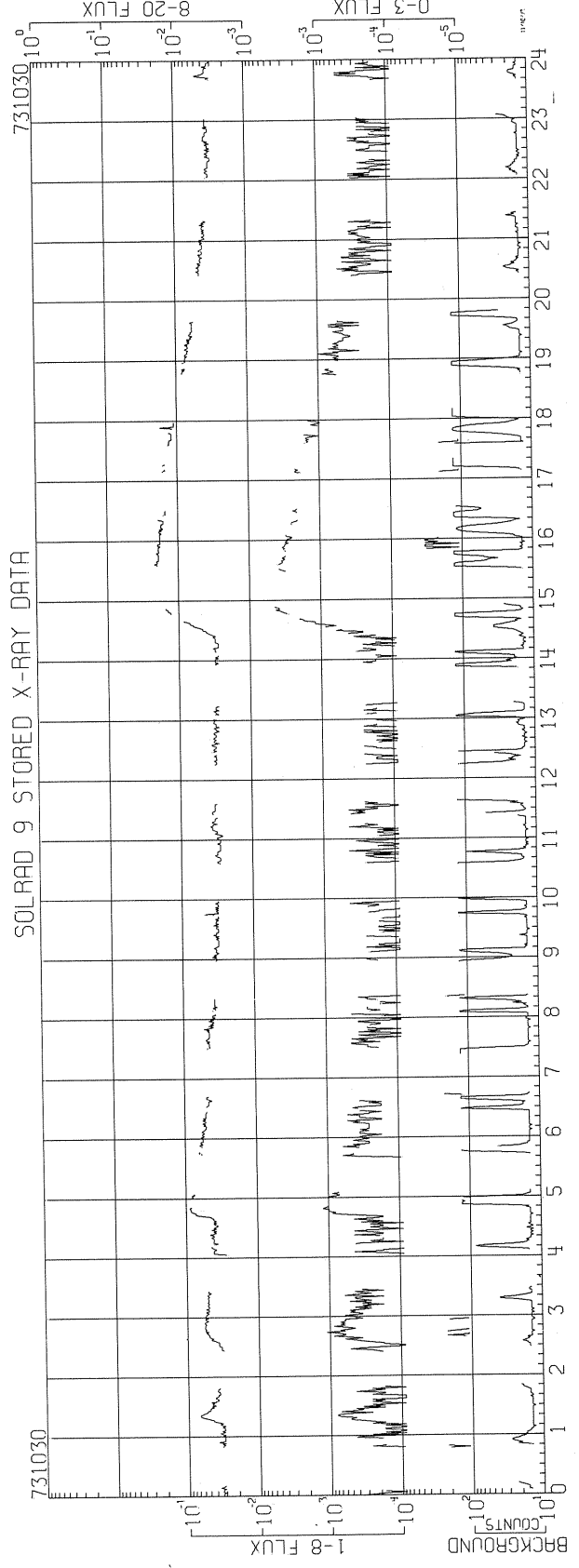




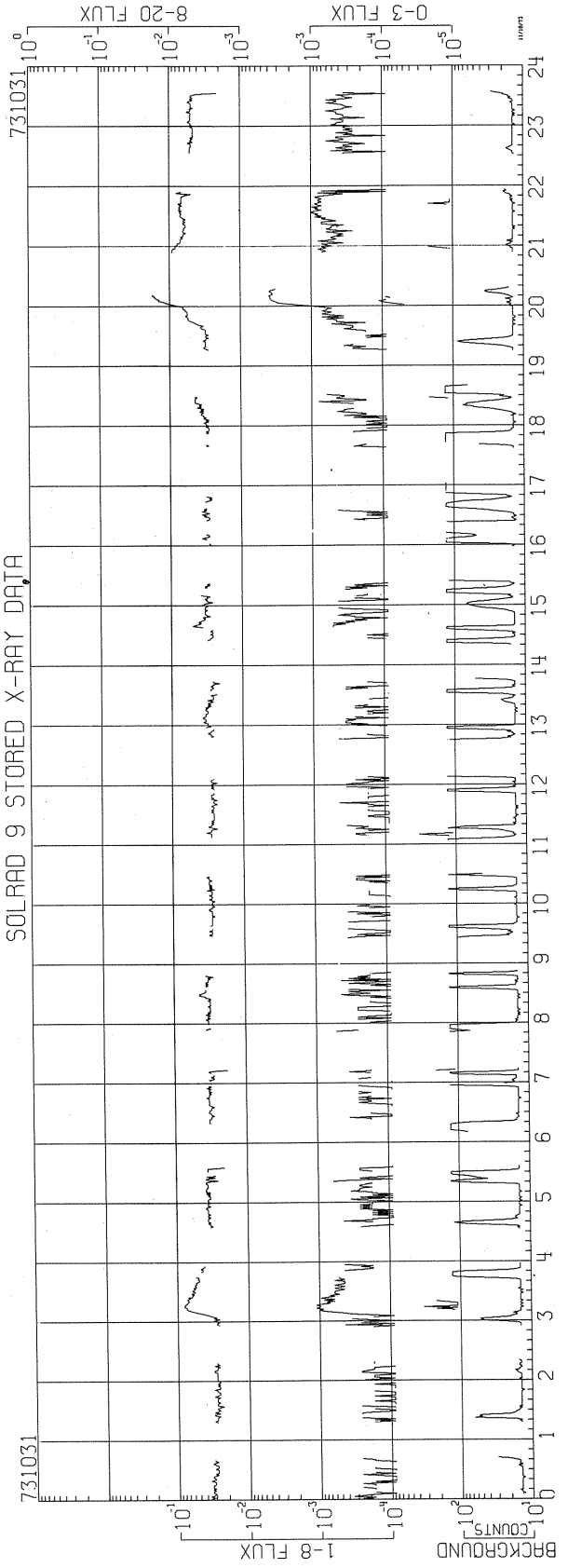
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SOLRAD 9 STORED X-RAY DATA



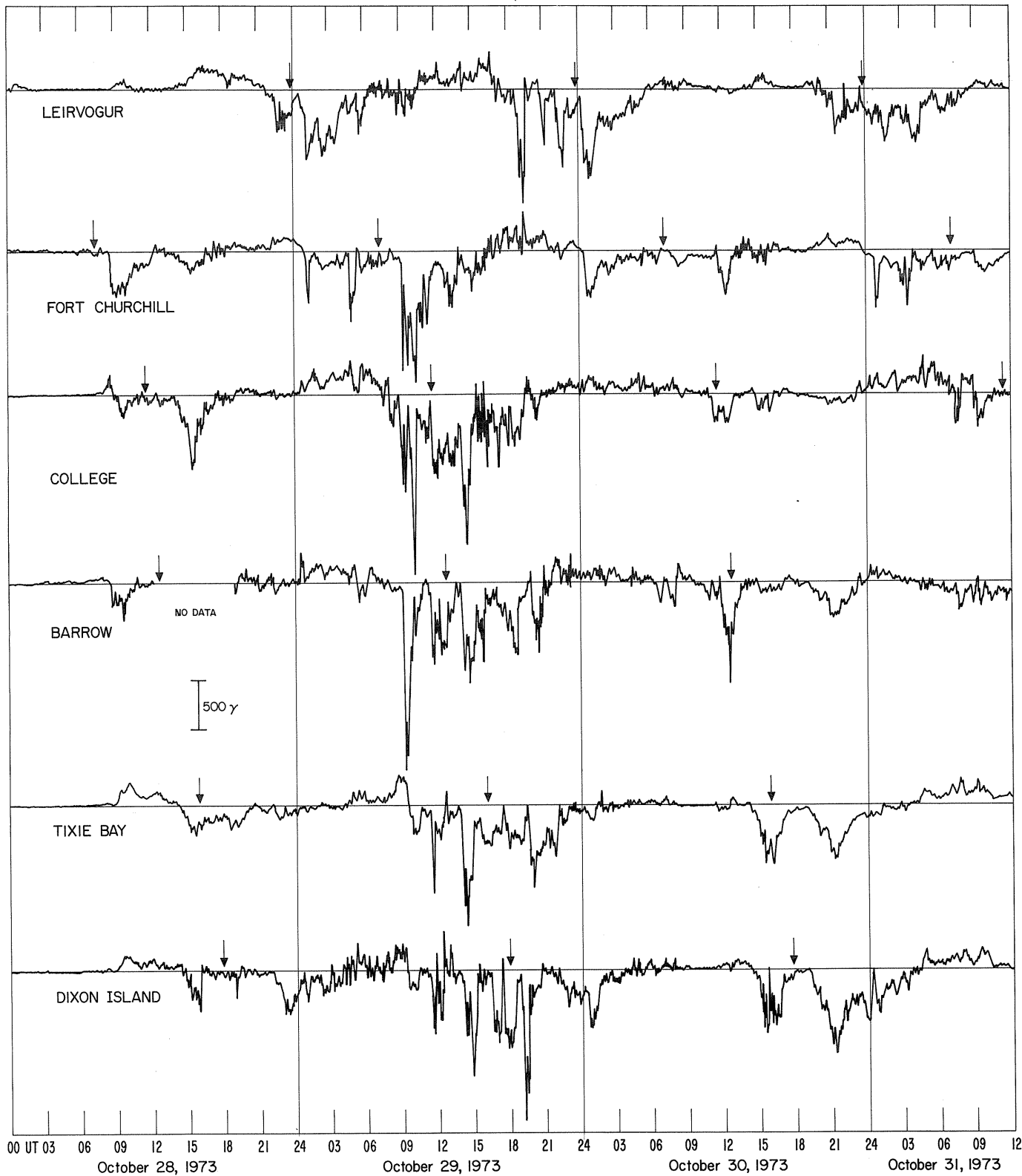
SOLRAD 9 STORED X-RAY DATA





### MAGNETOGRAMS OF GEOMAGNETIC STORMS

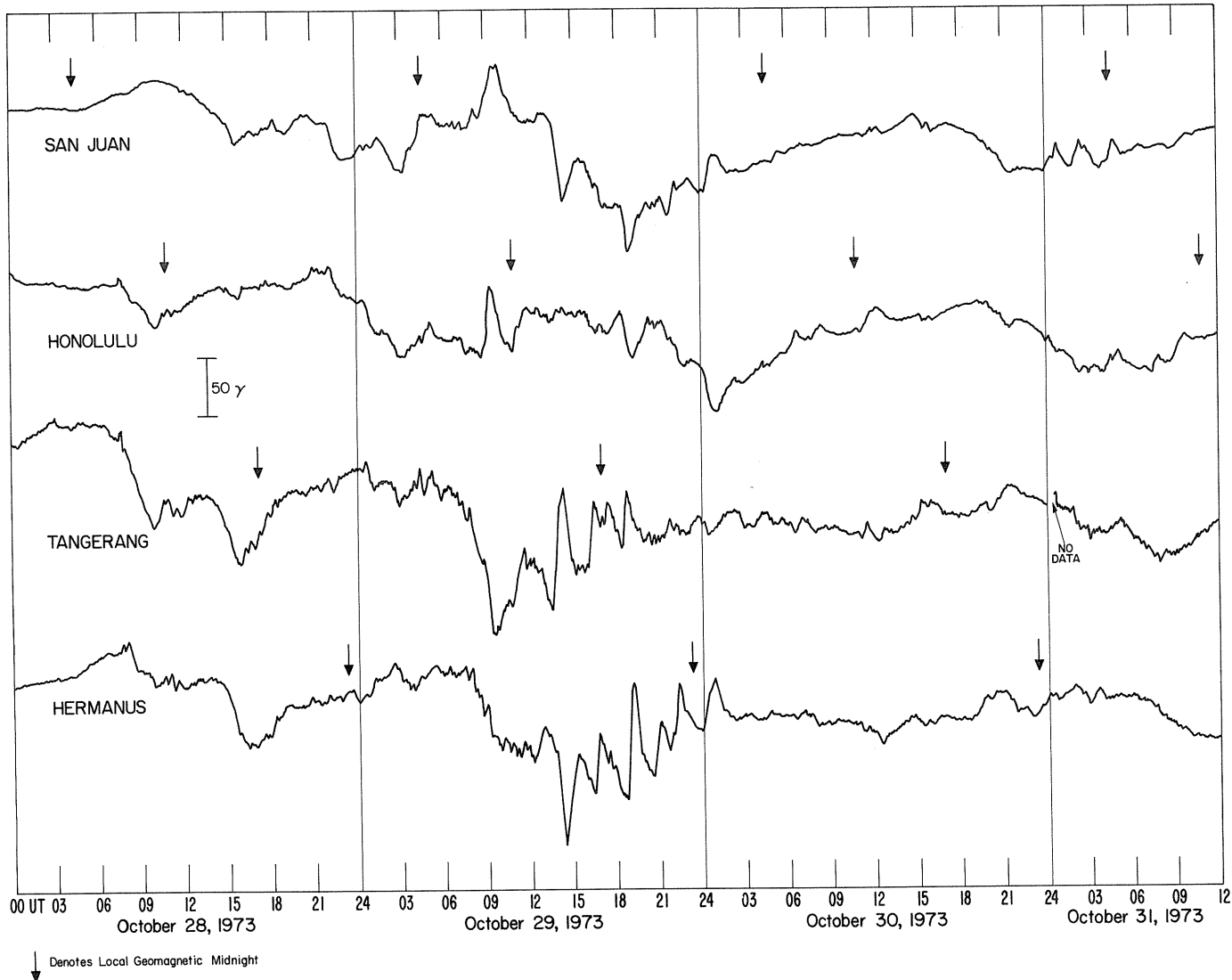
OCTOBER 28-31, 1973



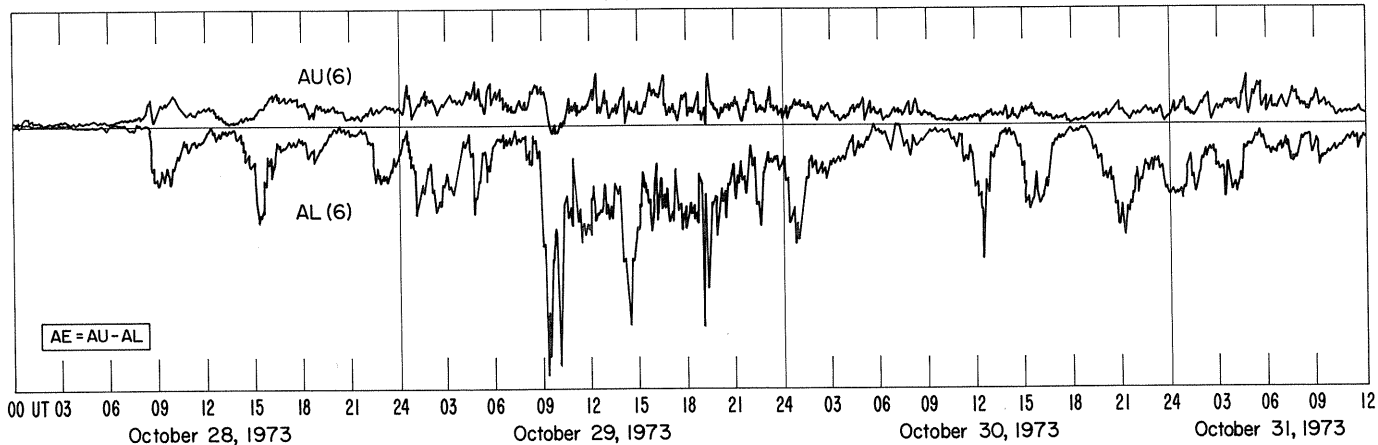
↓ Denotes Local Geomagnetic Midnight

MAGNETOGRAMS OF GEOMAGNETIC STORMS

OCTOBER 28 - 31, 1973



PRELIMINARY AU(6) AND AL(6) 2.5-MIN. INDICES





SEPTEMBER 1973 DATA

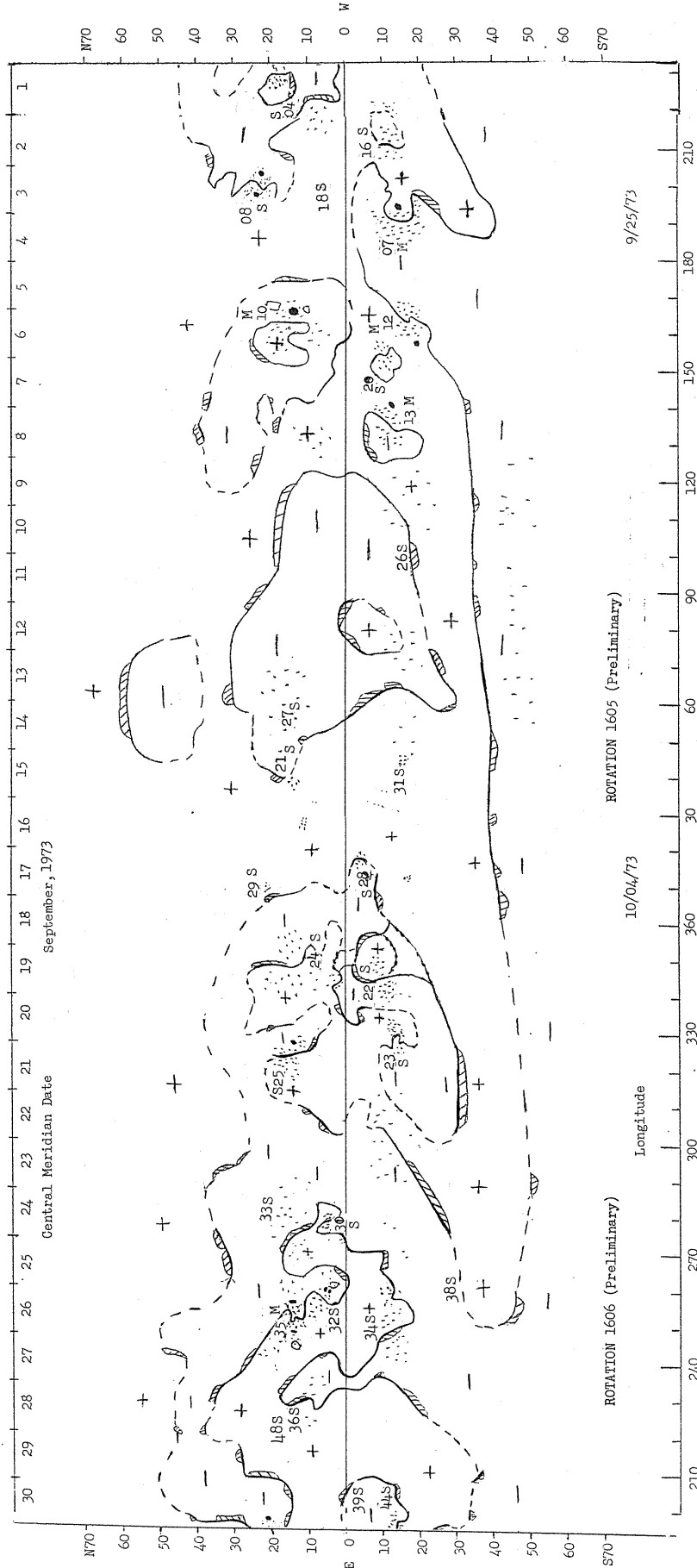
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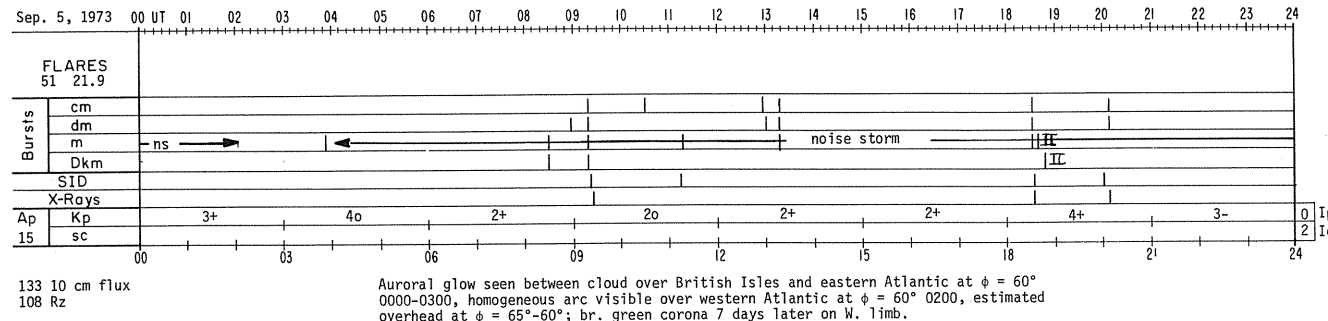
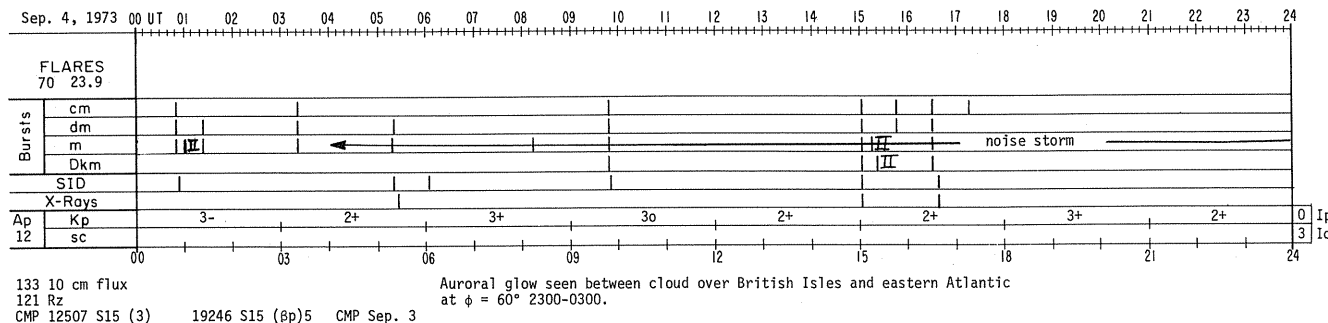
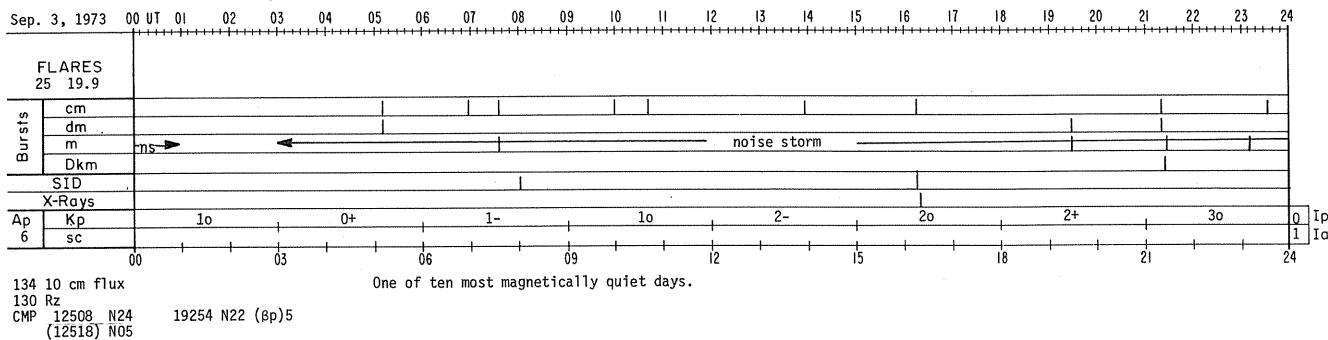
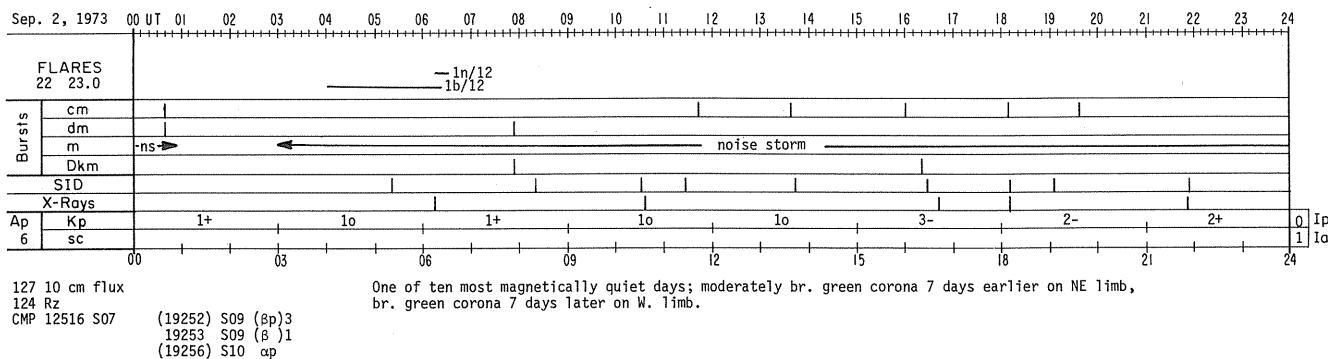
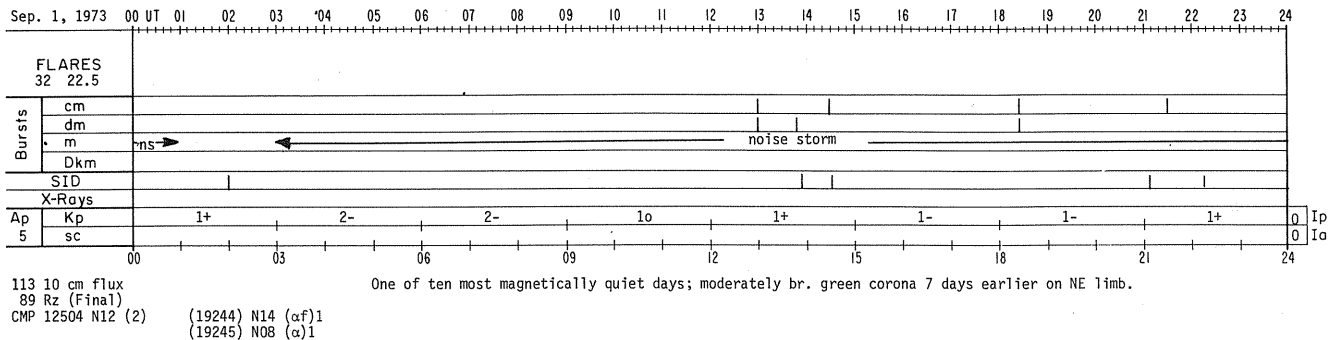
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For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

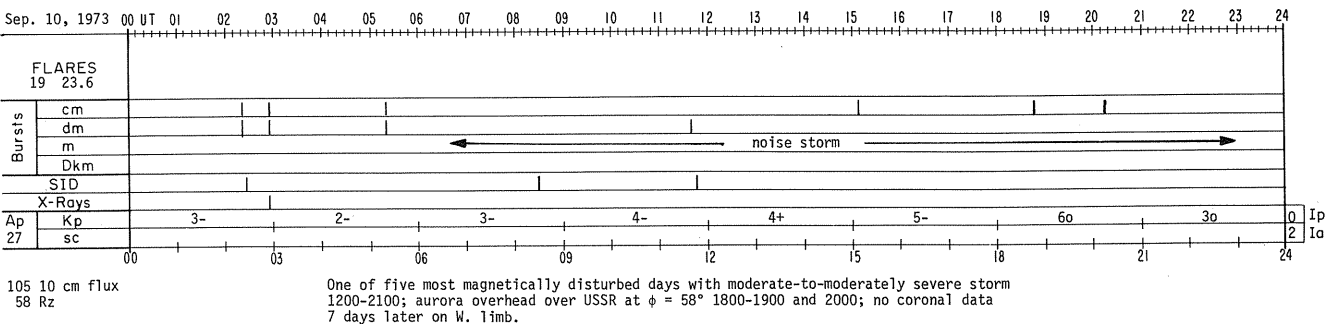
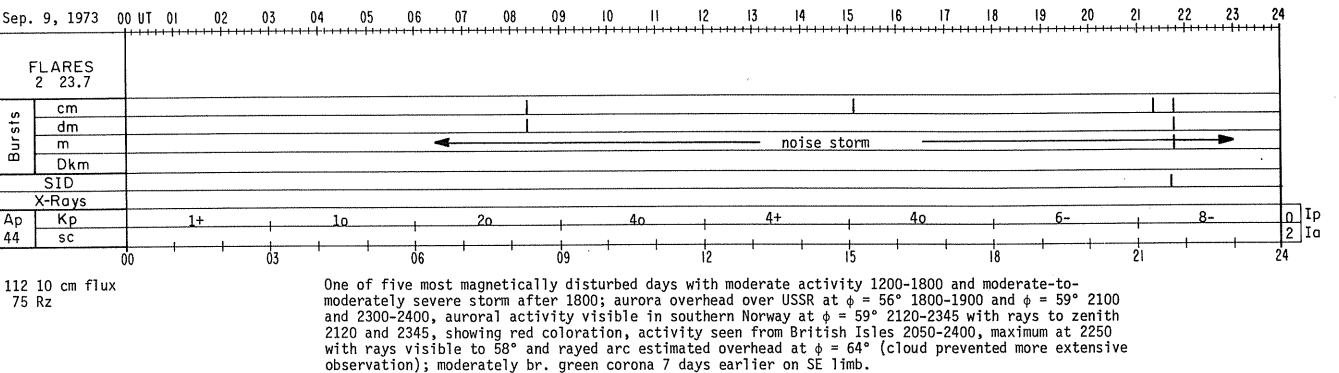
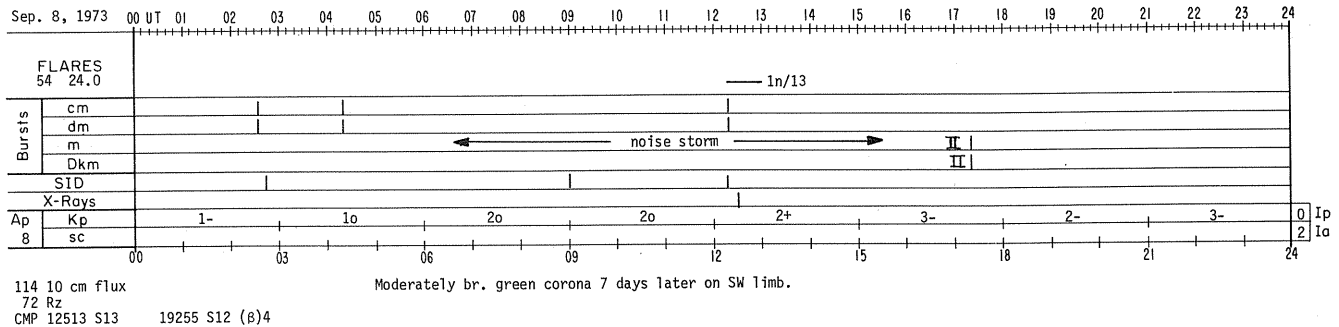
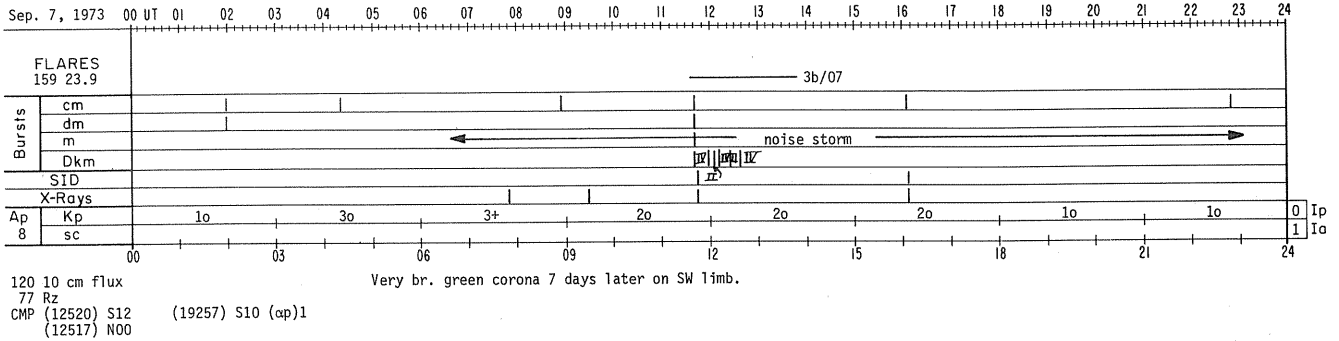
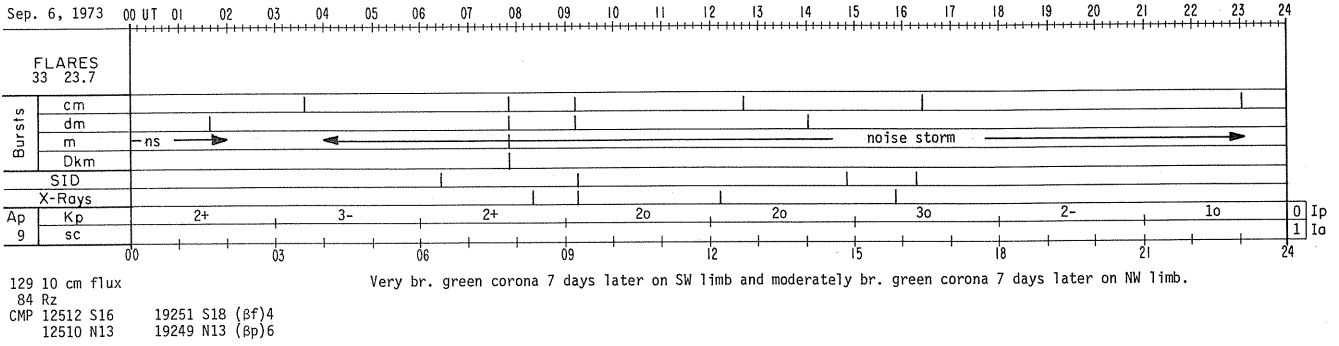
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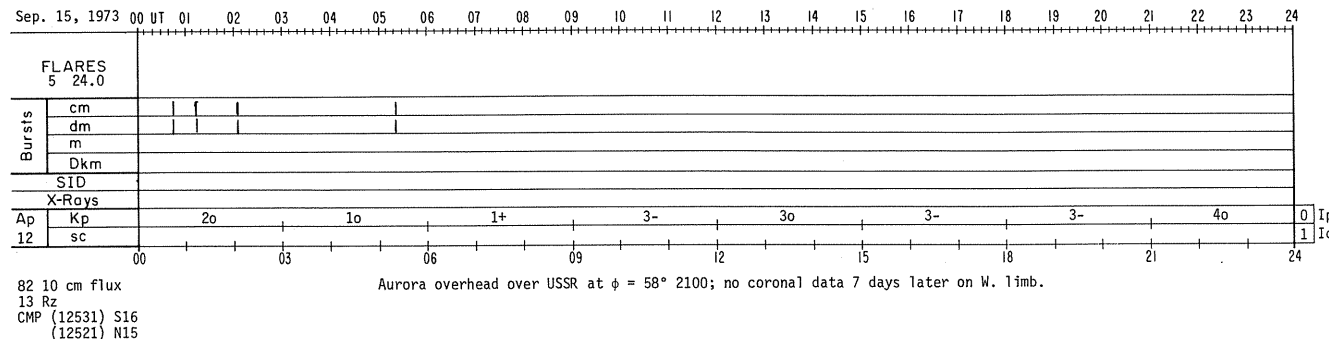
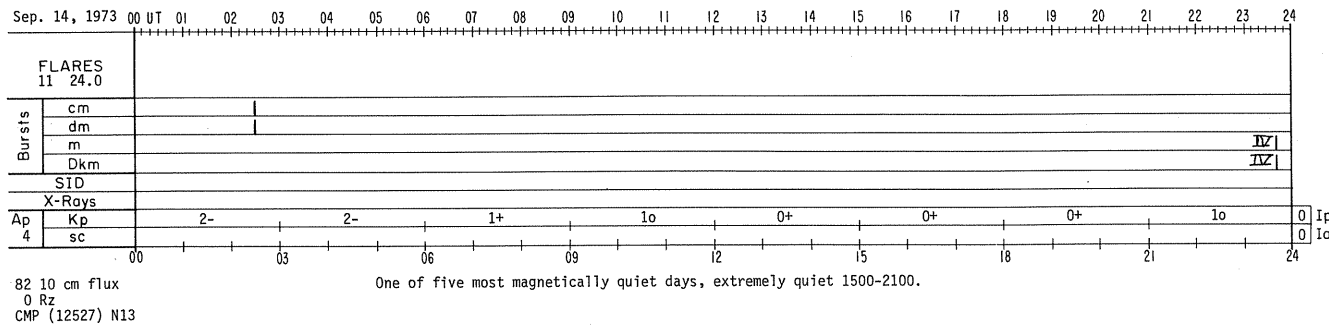
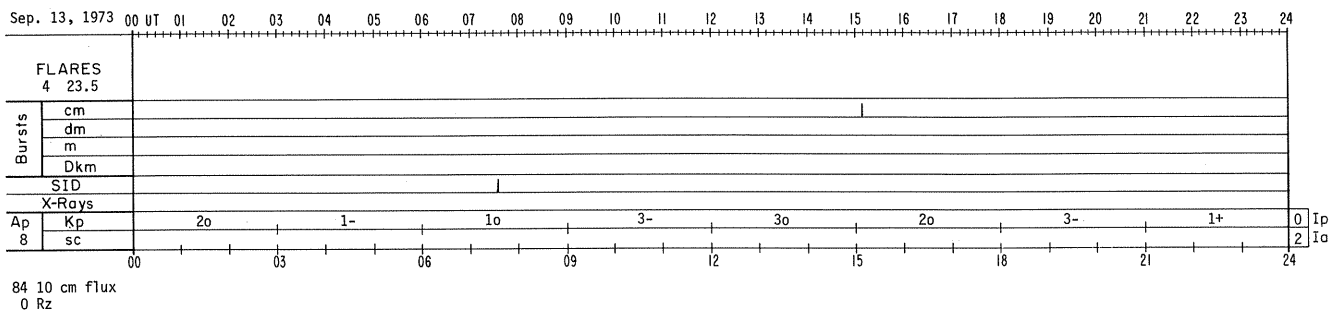
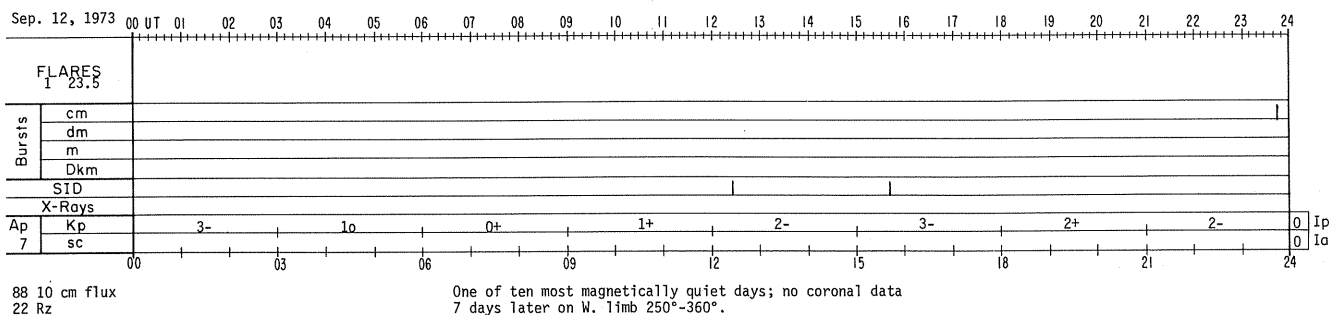
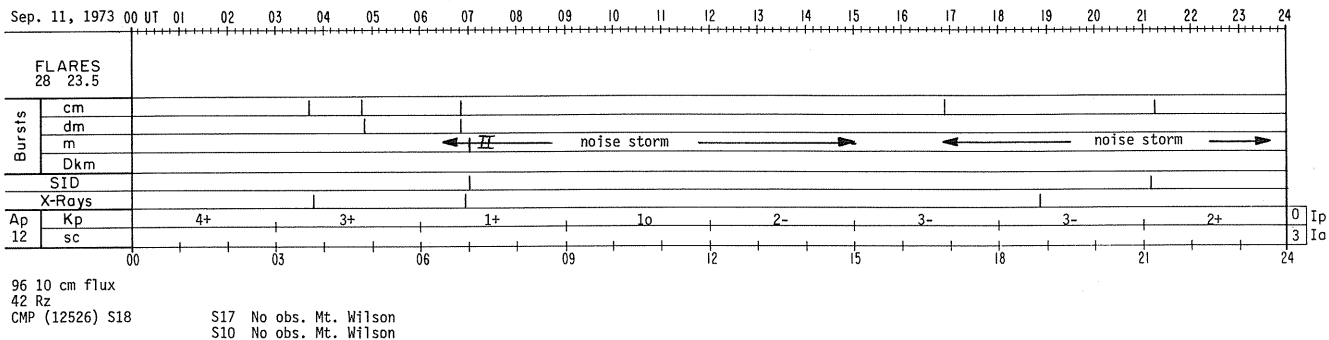
SEPTEMBER 1973





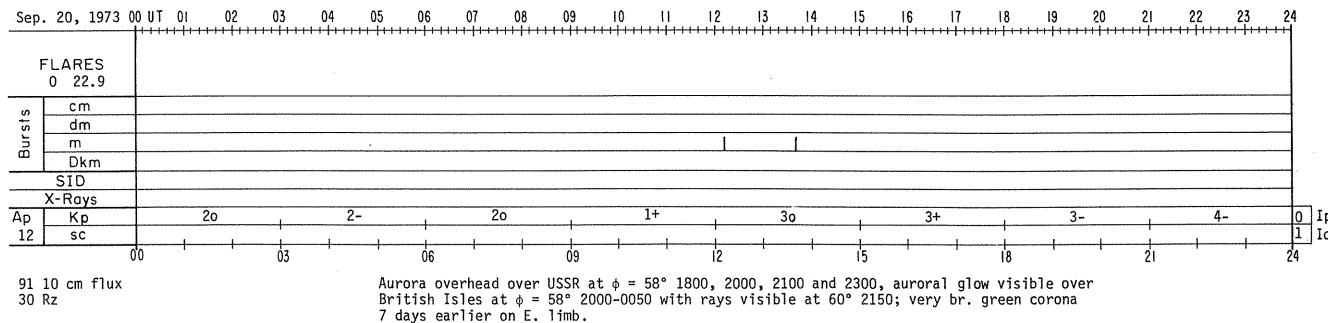
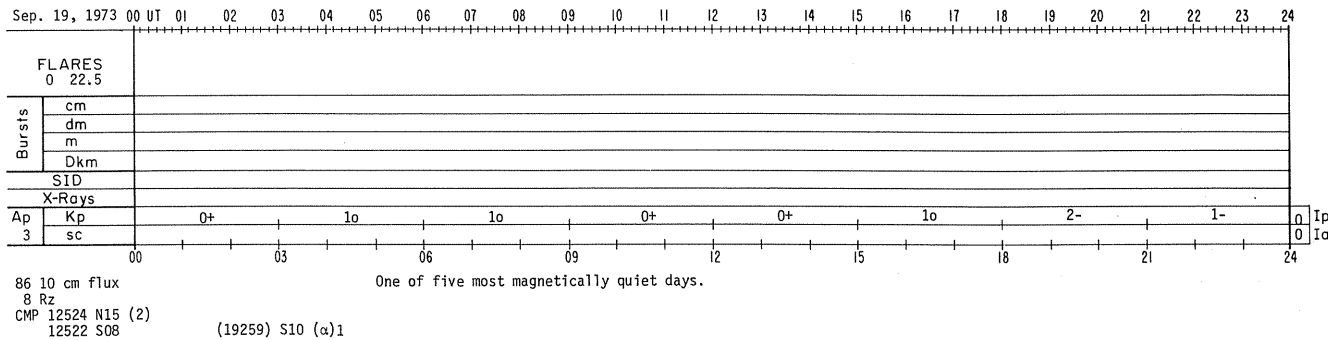
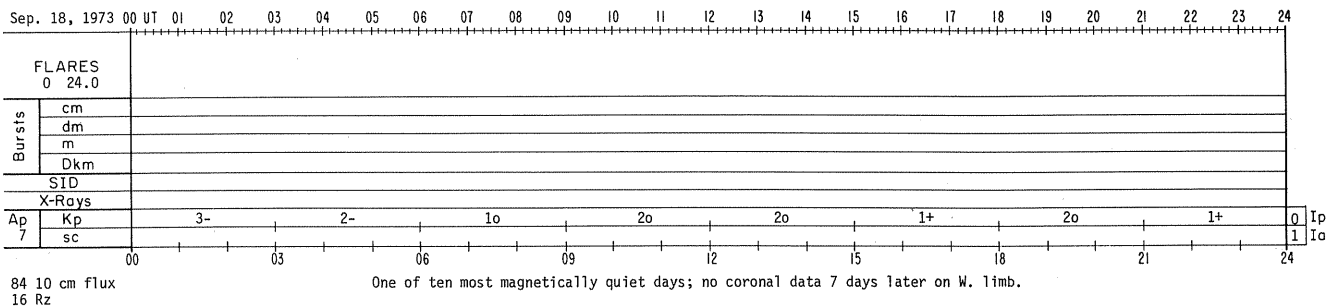
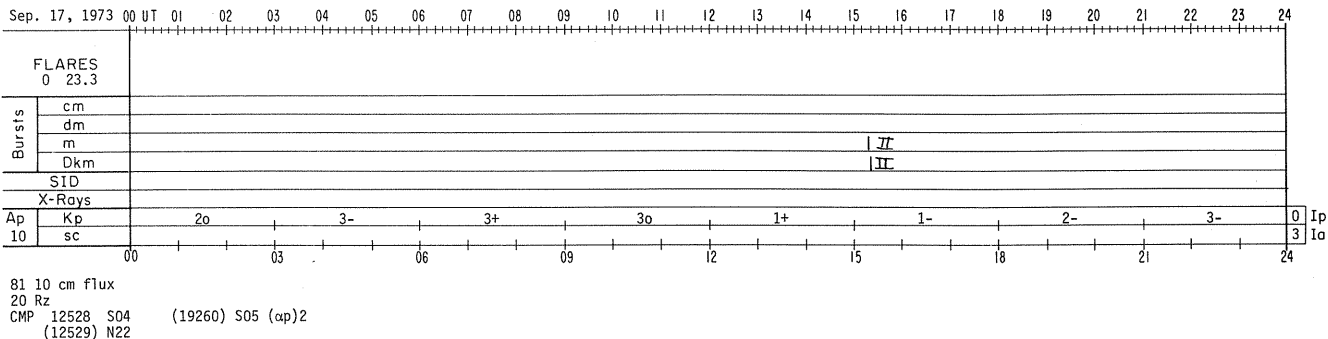
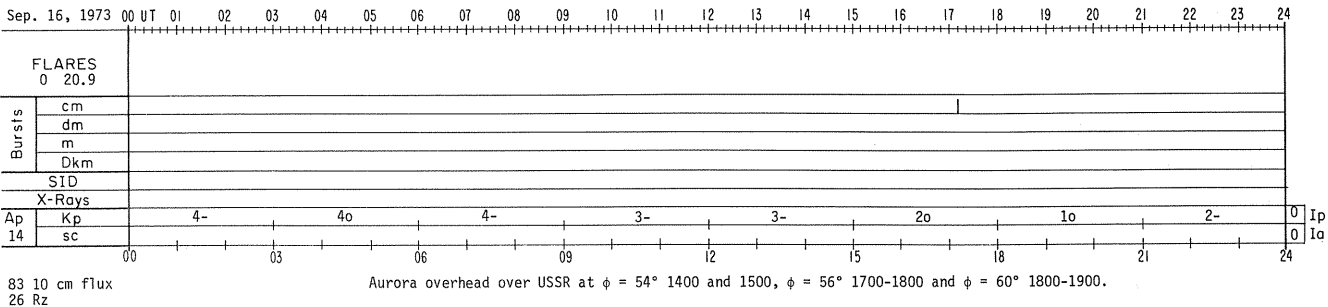
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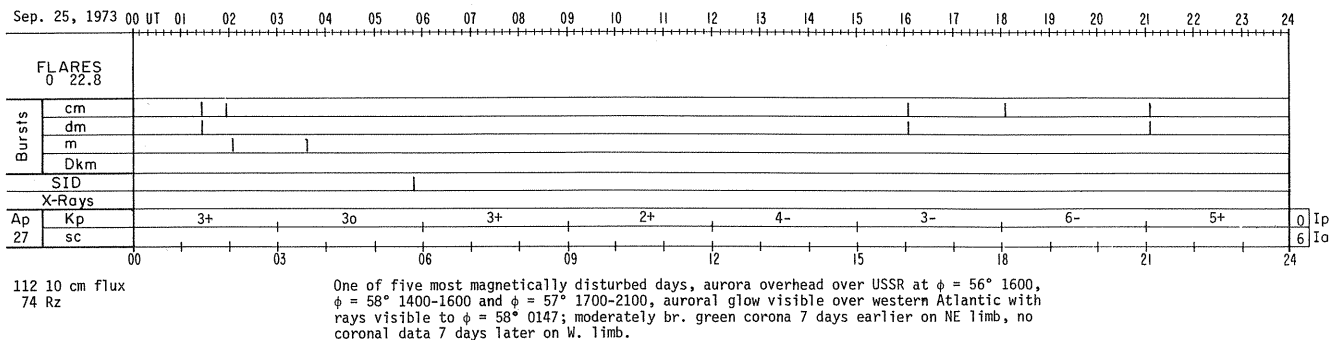
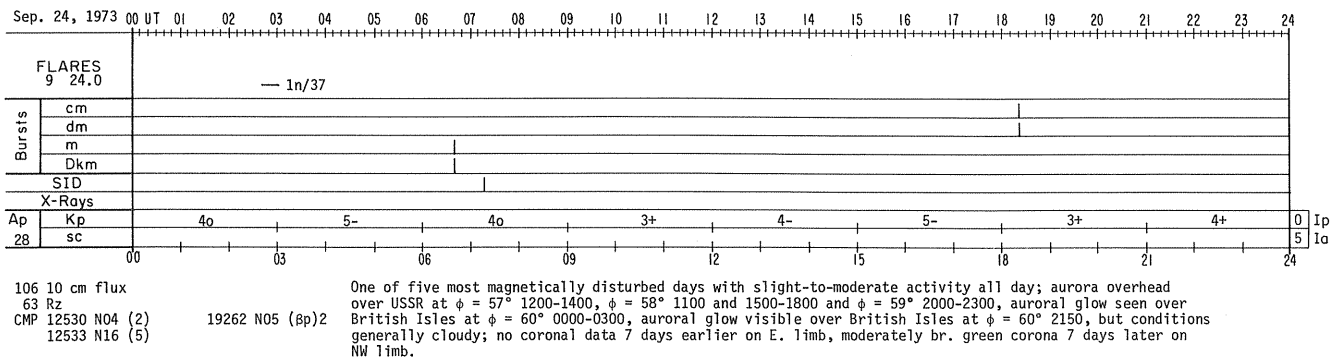
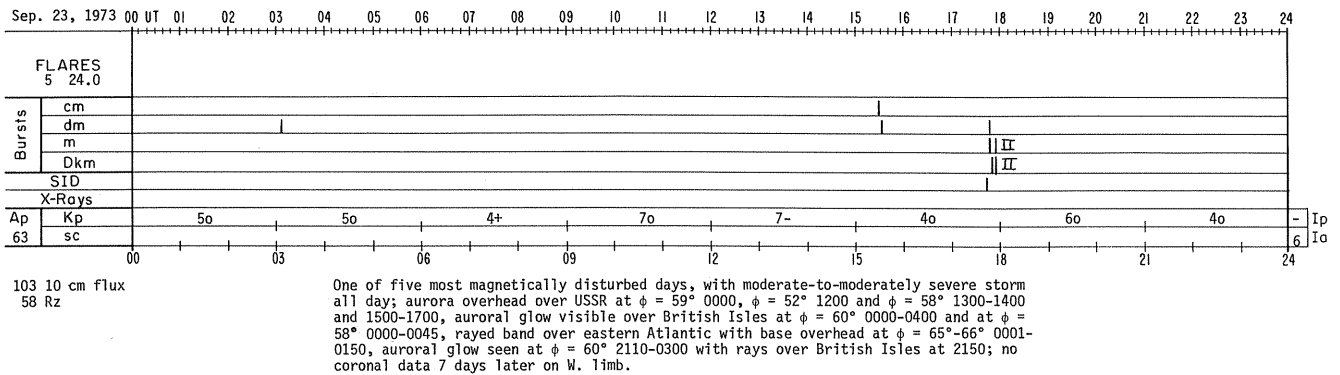
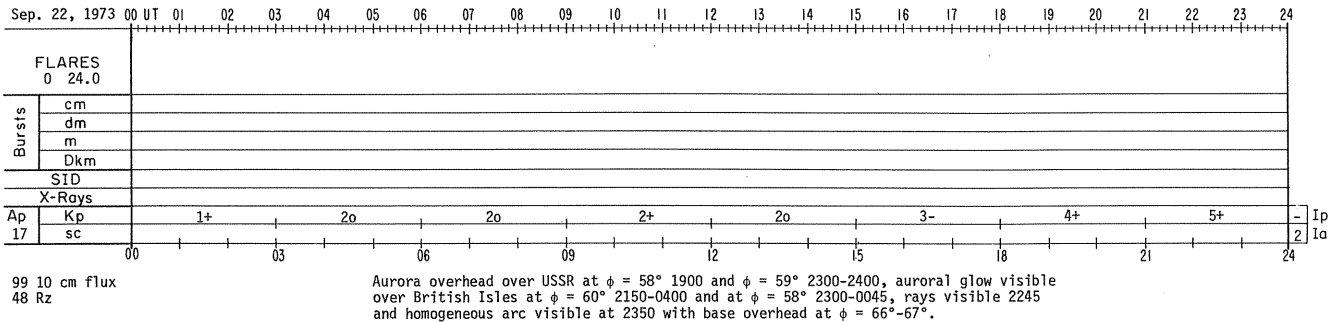
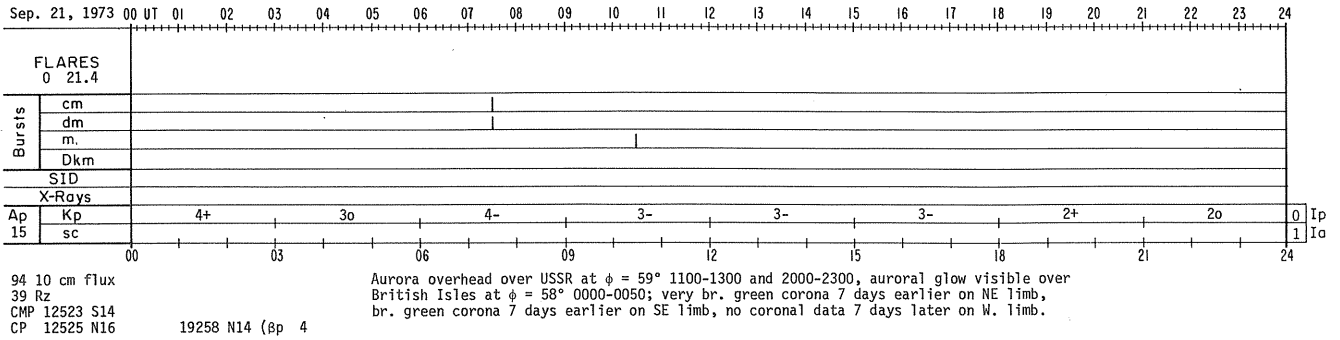




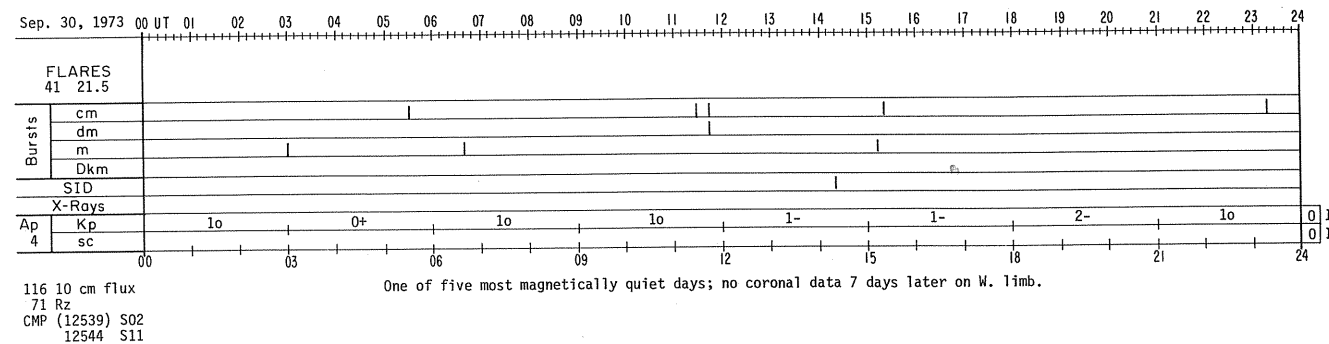
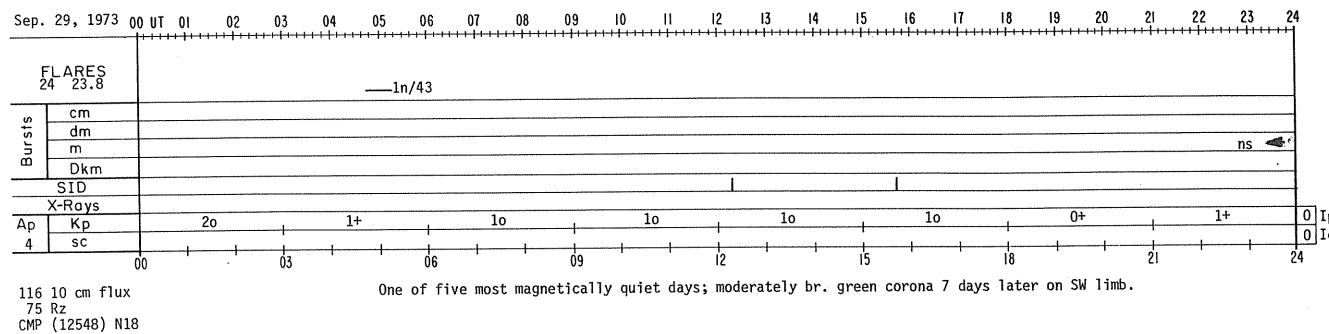
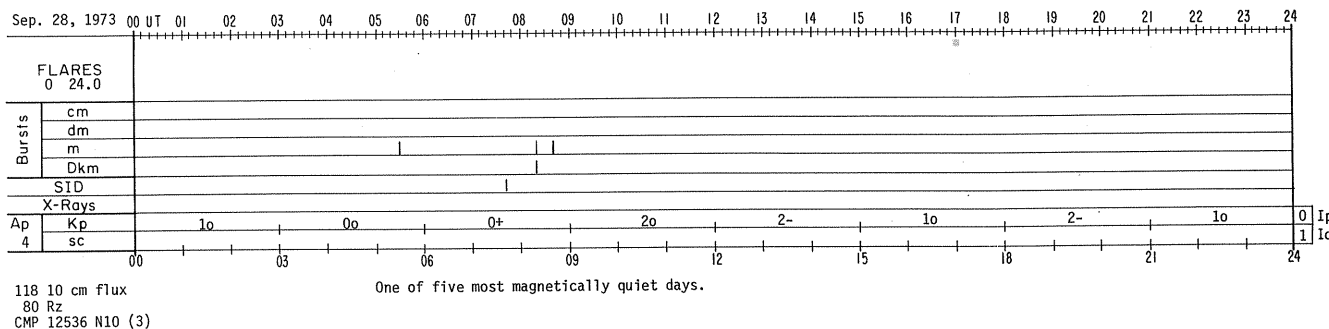
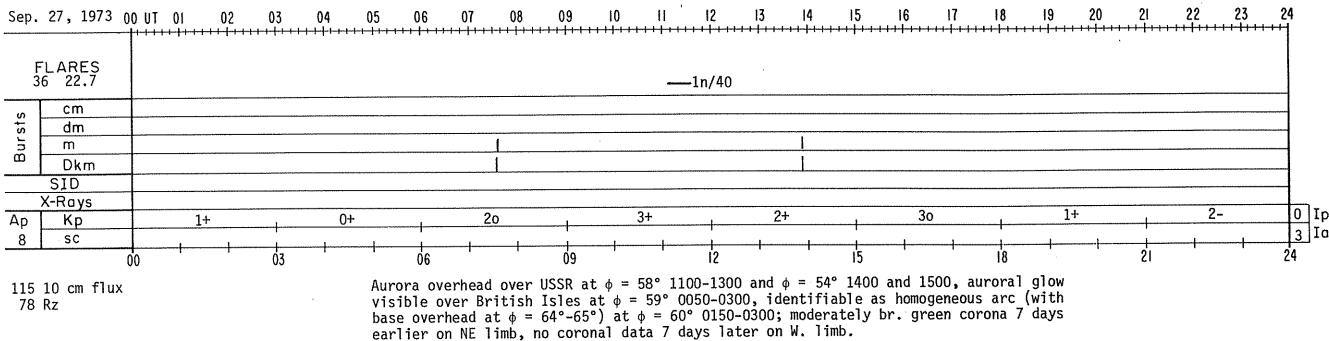
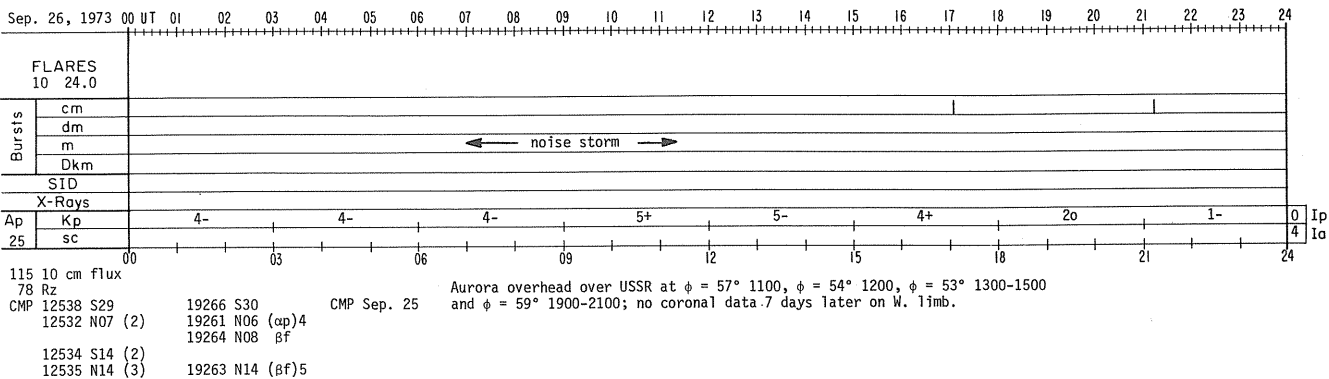


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Sep 73





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Sep 73



## REGIONAL FLARE INDEX

SEPTEMBER 1973

MC MATH PLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
12504	N13	73/09/01.5	73/09/01	73/09/01	7.52	7.52	2
12508	N24	73/09/03.5	73/09/03	73/09/09	18.52	2.65	3
12507	S14	73/09/04.0	73/08/30	73/09/10	249.75	20.81	15
12510	N15	73/09/06.4	73/08/31	73/09/06	87.64	12.52	12
12512	S16	73/09/06.4	73/09/01	73/09/10	39.22	3.92	13
12520	S11	73/09/07.3	73/09/10	73/09/12	36.06	12.02	4
12513	S13	73/09/08.2	73/09/04	73/09/14	74.85	6.80	9
12522	S 8	73/09/19.7	73/09/15	73/09/15	5.07	5.07	1
12530	N 5	73/09/24.5	73/09/24	73/09/26	10.55	3.52	2
12532	N 7	73/09/26.2	73/10/01	73/10/01	5.96	5.96	1
12534	S14	73/09/26.7	73/09/23	73/09/23	5.38	5.38	1
12535	N14	73/09/26.8	73/09/26	73/10/03	46.22	5.78	7
12537	N22	73/09/30.9	73/09/24	73/09/24	3.21	3.21	1

## Note:

The Regional Flare Index and count of flares in each region has in previous months included each maximum of a multi-maximum event. This has caused some regions to appear to be more flare producing than is probably warranted. Beginning with April 1972 only the principal maximum of a multi-maximum event will be used in the calculation. Also note that only the Confirmed Events as selected for the "I.A.U. Quarterly Bulletin on Solar Activity" are included in the calculation.

Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no confirmed flares during its disk passage.



## MISCELLANEOUS DATA

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<u>Daily Solar Activity Centers</u>	
8.6 mm Spectroheliograms -- January 1974	56-58

For explanations of the data contained herein see *Descriptive Text* published as supplement to February 1974 *Solar-Geophysical Data* (Number 354).

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Jan 74

COSMIC RAY INDICES

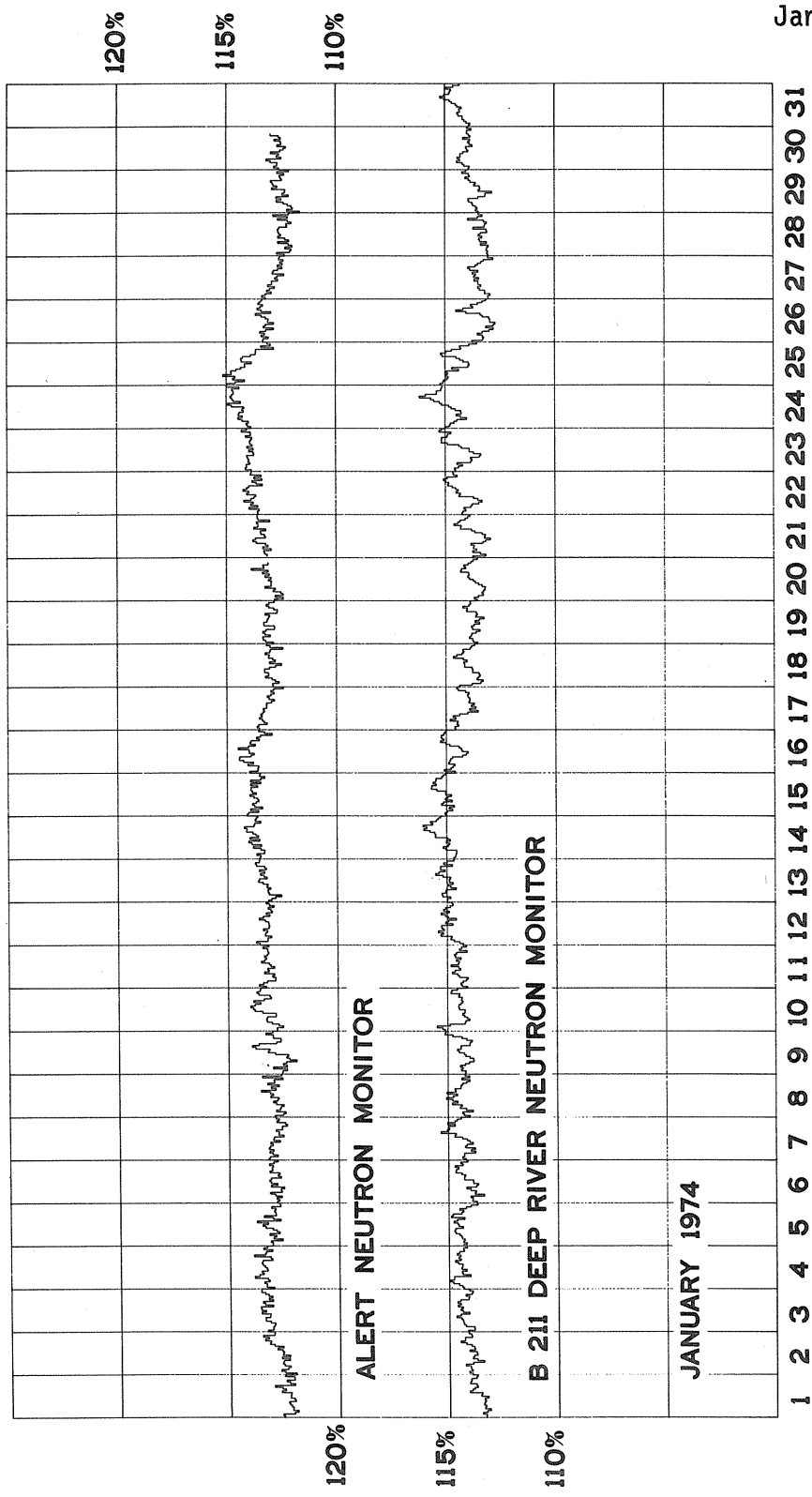
(Pressure Corrected Hourly Totals)

JANUARY 1974

DATE	ALERT	DEEP RIVER
1	7501.3	6989.6
2	7528.9	7014.5
3	7565.9	7032.0
4	7572.8	7044.3
5	7548.3	7041.7
6	7539.4	7020.8
7	7536.8	7041.5
8	7537.7	7041.0
9	7532.9	7032.5
10	7566.8	7045.6
11	7559.3	7040.8
12	7561.8	7072.5
13	7566.0	7076.8
14	7594.6	7090.4
15	7595.0	7084.8
16	7601.9	7061.3
17	7559.3	7026.1
18	7544.5	7010.2
19	7551.5	6998.5
20	7546.6 (21)	6996.8
21	7573.3 (23)	6998.0
22	7598.3	7034.2
23	7610.8	7040.3
24	7644.1	7073.5
25	7621.3	7050.2
26	7565.0	6975.1
27	7532.4	6977.8
28	7503.6	6970.2
29	7508.6	6993.2
30	7524.3 (20)	7017.7
31	0.0	7045.1

**COSMIC RAY INDICES**  
(Pressure Corrected Hourly Totals)

JANUARY 1974



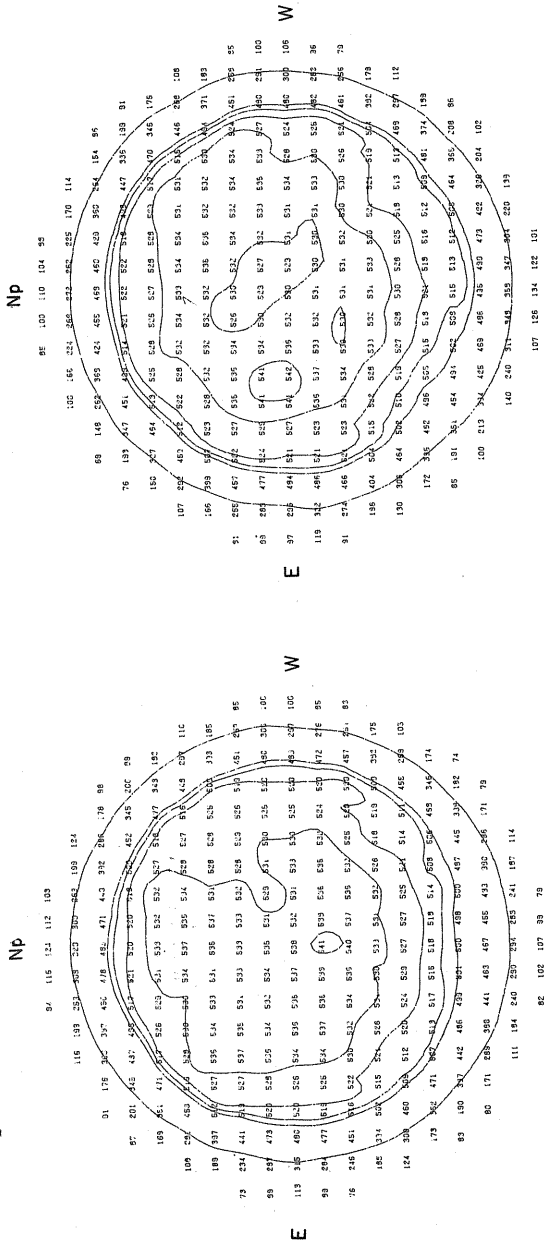


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Misc  
Jan 74

# 8.6 mm SPECTROHELIOGRAMS

JANUARY 1974

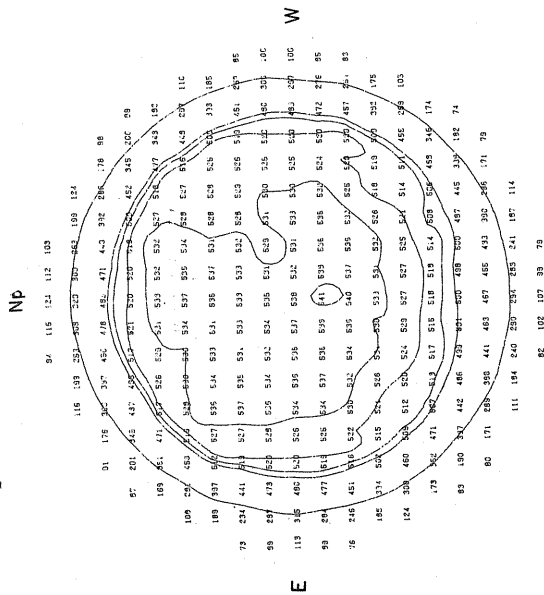
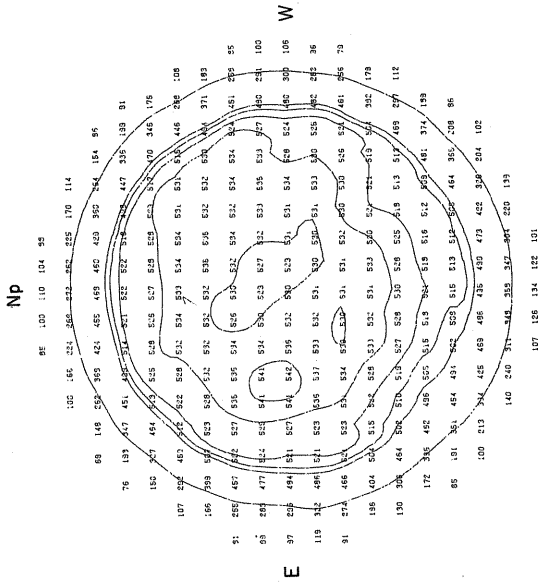
## Prospect Hill



2/17/01 UT

7/14/53 UT

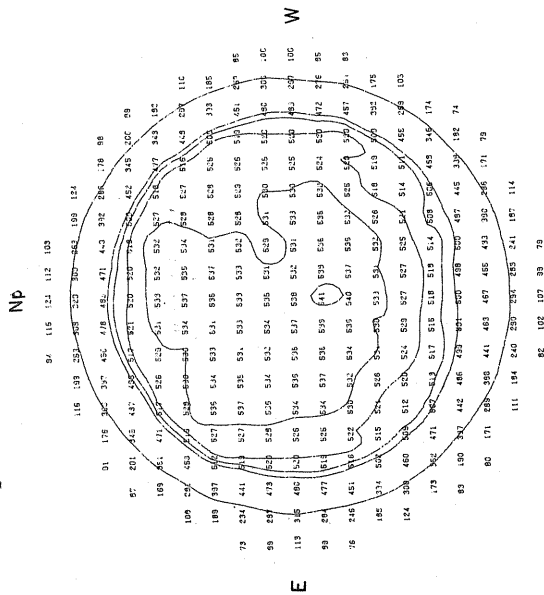
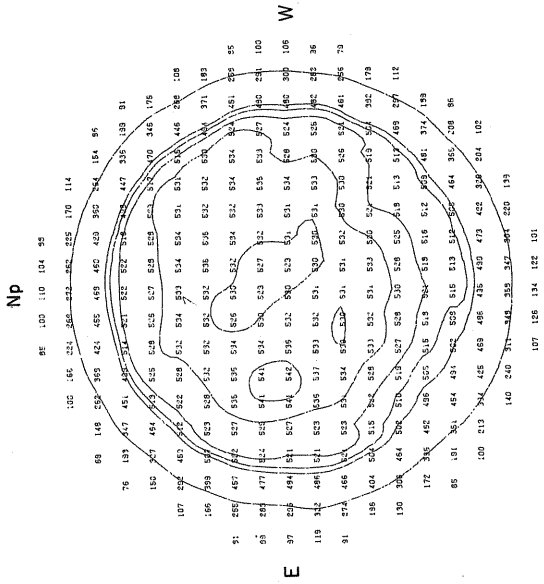
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12/16/16 UT

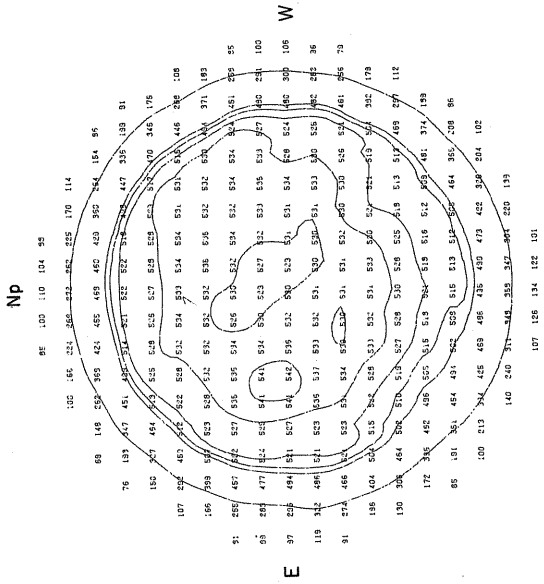
13/16/23 UT

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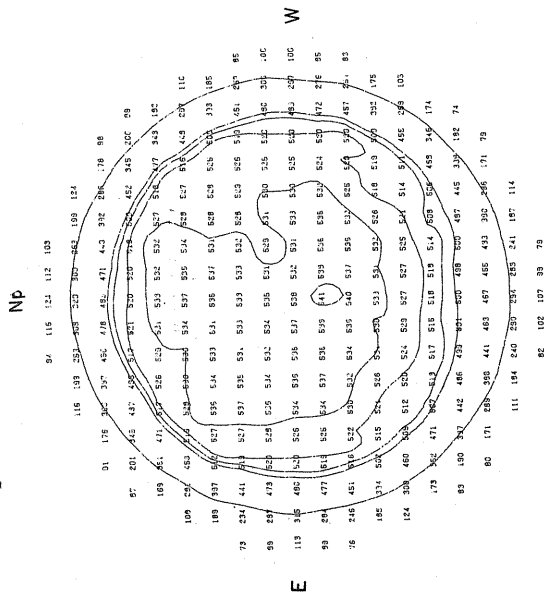
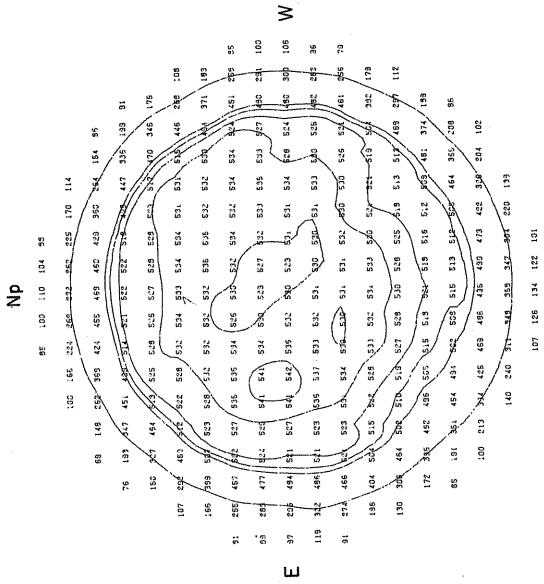
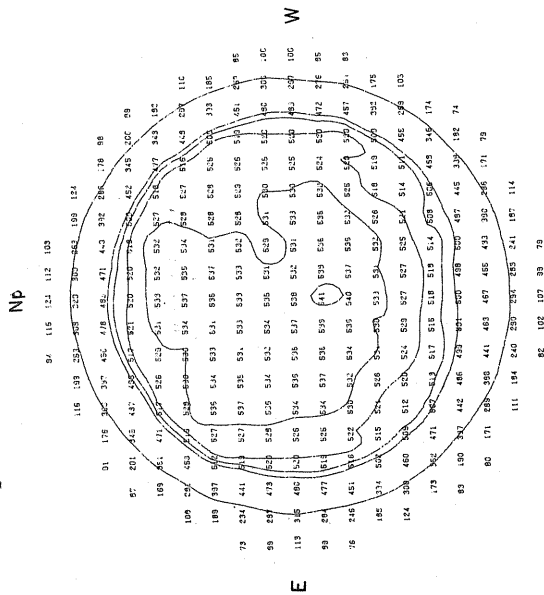
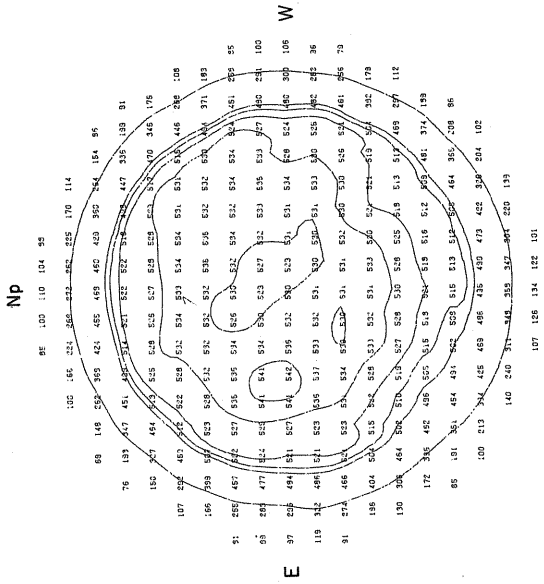
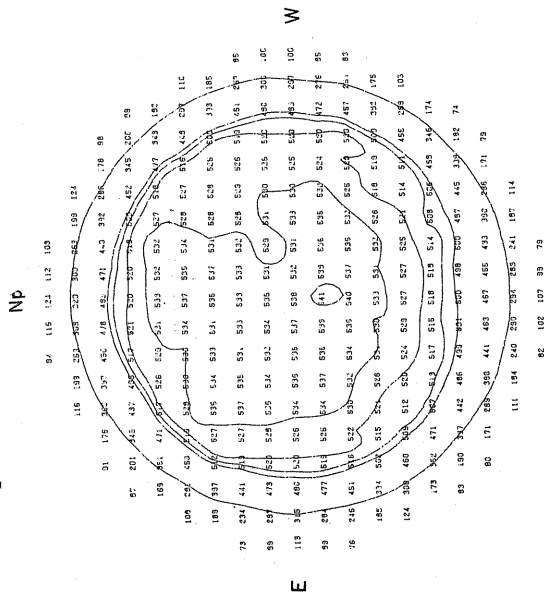
8/15/05 UT

Sp



14/15/17 UT

Sp



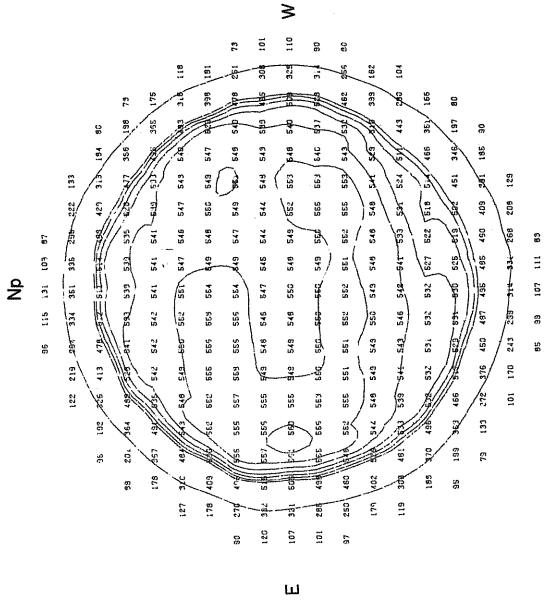
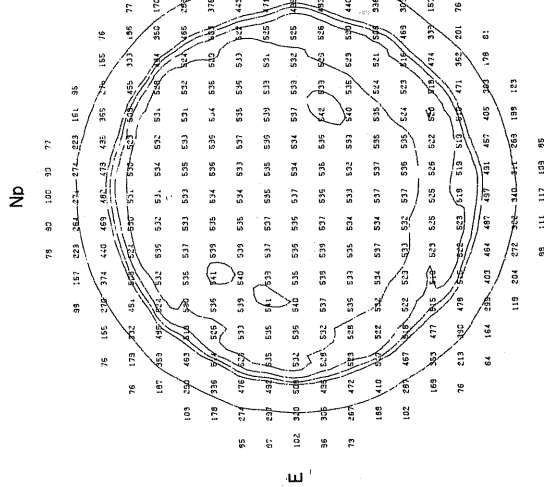
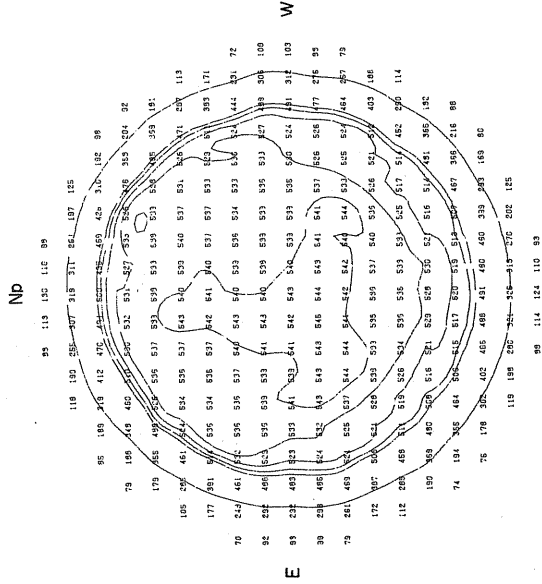


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Misc  
Jan 74

# 8.6 mm SPECTROHELIOGRAMS

JANUARY 1974

## Prospect Hill



28/1557 UT

30/1604 UT

31/1908 UT

Sp

Sp

Sp

Sp

Sp

Sp

Sp

Sp

Sp

## UAG Series of Reports

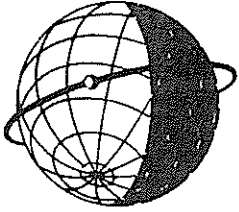
Prepared by World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado, U.S.A.

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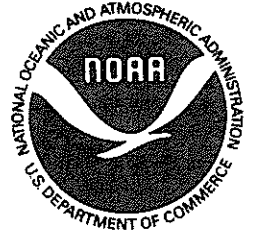
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- UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970", Parts 1, 2 and 3, compiled by J. Virginia Lincoln and Dale B. Bucknam, World Data Center A, Upper Atmosphere Geophysics, NOAA, April 1971, 466 pages, price (includes Parts 1-3) \$3.00.
- UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969", compiled by Dale B. Bucknam and J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, NOAA, May 1971, 76 pages, microfiche only, price 90 cents.
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- UAG-17 "Ionospheric Drift Velocity Measurements at Jicamarca, Peru (July 1967-March 1970)", by Ben B. Balsley, Aeronomy Laboratory, National Oceanic and Atmospheric Administration, Boulder, Colorado, and Ronald F. Woodman, Jicamarca Radar Observatory, Instituto Geofisico del Perú, Lima, Peru, October 1971, 45 pages, microfiche only, price 45 cents.
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**WORLD DATA CENTER A**  
**FOR**  
**SOLAR-TERRESTRIAL PHYSICS**



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