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NO. 510 FEBRUARY 1987

Part II (Comprehensive Reports)

DATA FOR
AUGUST 1986

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3	Jan 58 - Dec 58	Microfilm	11	Jan 66 - Sep 66	Microfilm	19	Jul 70 - Dec 70	Microfilm
4	Jan 59 - Dec 59	Microfilm	12	Oct 66 - Dec 66	Microfilm	20	Jan 71 - Jun 71	Microfilm
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S O L A R - G E O P H Y S I C A L D A T A

NUMBER 510

(Issued in Two Parts)

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Comprehensive Reports

DATA FOR AUGUST 1986

Number 510 Part II

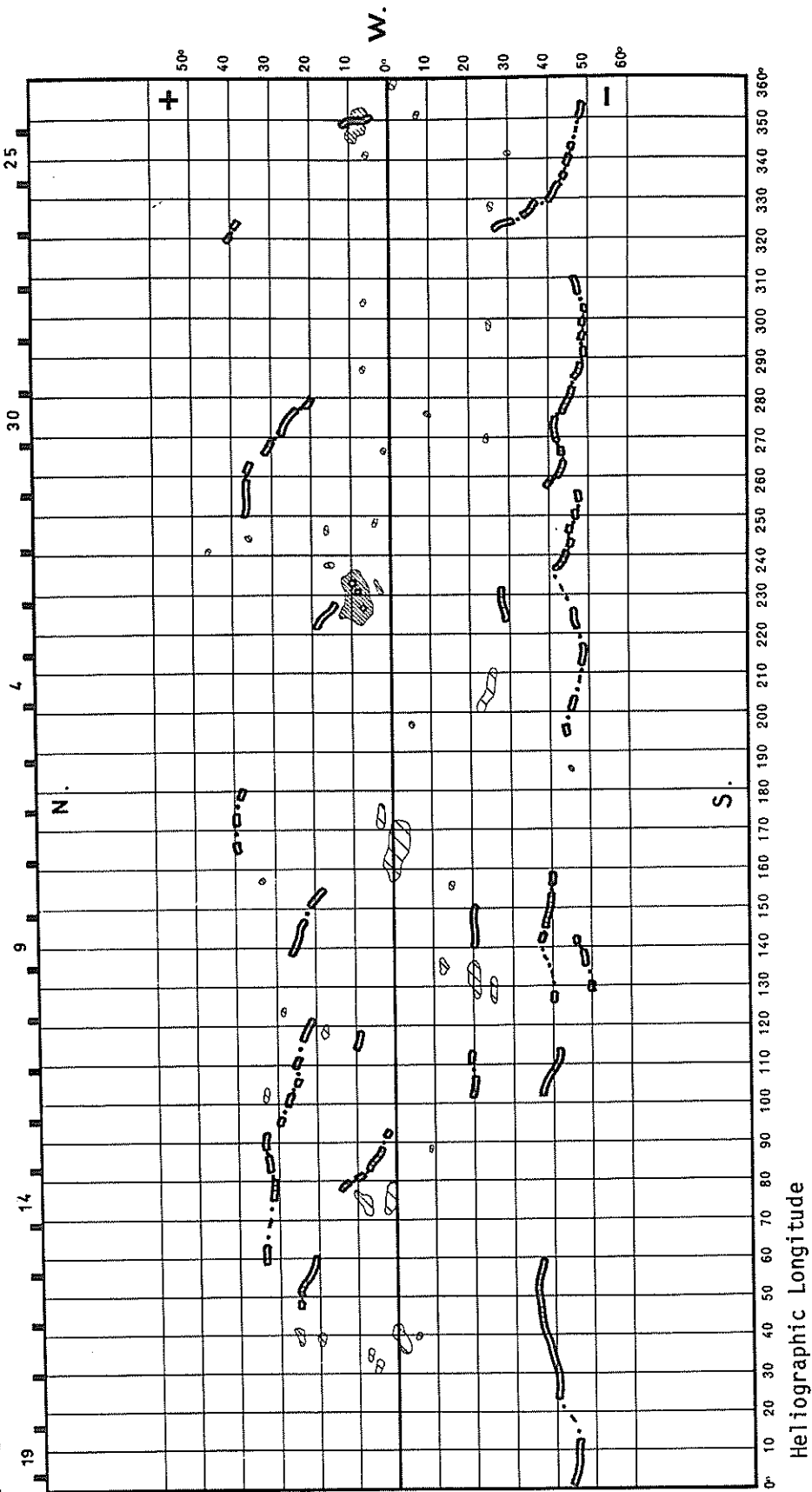
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CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1778
(24 July to 20 August 1986)

July 1986

Meudon Observatory

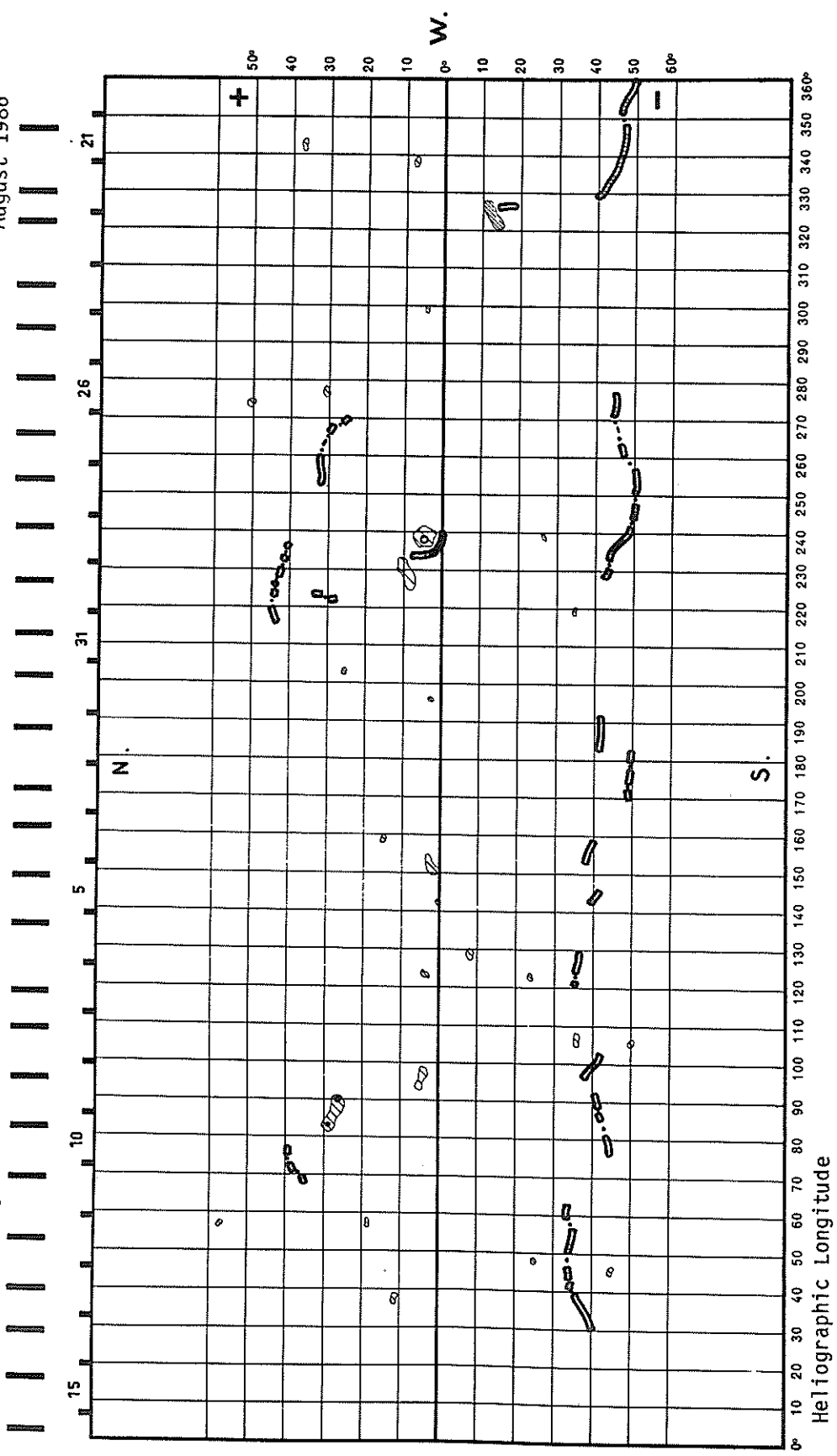


CARTE SYNOPTIQUE

CARRINGTON ROTATION NUMBER 1779
(20 August to 16 September 1986)

Meudon Observatory

August 1986



6
Aug 86

CARTE SYNOPTIQUE
ACTIVE REGIONS
CARRINGTON ROTATION 1778

(24 July to 20 August 1986)

Region No.	Coordinates Lat. Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1777	Activity at West Limb
1	08°N 349	1	+5	x		dispersed
2	16°N 238	1	-3	x		disappeared
3	09°N 230	3	>6		2	decreasing
4	20°S 132	1	+4	x		disappeared
5	26°N 40	1	+3	x		disappeared

CARRINGTON ROTATION 1779

(20 August to 16 September 1986)

Region No.	Coordinates Lat. Long.	Imp	Age at CMP (Days)	Spotless Region	Region No. in Rotation 1778	Activity at West Limb
1	12°S 324	1	+4	x		dispersed
2	5°N 238	3	>6			decreasing
3	10°N 229	1	>6	x		dispersed
4	35°N 219	1	0	x		disappeared
5	15°N 158	1	-3	x		disappeared
6	3°N 151	1	+1	x		disappeared
7	4°N 123	1	+1	x		disappeared
8	50°S 105	1	0	x		disappeared
9	5°N 95	1	0	x		dispersed
10	27°N 86	3	+3			decreasing

H - ALPHA SOLAR FLARES

AUGUST 1986

Grp #	Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks		
																Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)			
	11		2026		2104			No Flare													
	12		1349		1353			No Flare													
	13		1106		1117			No Flare													
	13		1842		1852			No Flare													
	13		2014		2019			No Flare													
	13		2056		2101			No Flare													
	14		1331		1336			No Flare													
	14		1408		1433			No Flare													
	19		1236		1245			No Flare													
	20		0144		0210			No Flare													
	20		1021		1132			No Flare													
	21		1217		1258			No Flare													
	21		2103		2109			No Flare													
	22		1819		1823			No Flare													
	22		1852		1854			No Flare													
	23		0941		0949			No Flare													
	23		1021		1029			No Flare													
	23		2132		2224			No Flare													
	23		2246		2256			No Flare													
	24		1021		1032			No Flare													
	24		1203		1208			No Flare													
	24		1221		1226			No Flare													
	24		1443		1449			No Flare													
	24		1512		1525			No Flare													
	24		1531		1639			No Flare													
	24		1904		1916			No Flare													
	24		1933		1948			No Flare													
	24		2207		2211			No Flare													
	24		2236		2307			No Flare													
	25		0931		1041			No Flare													
	25		1331		1350			No Flare													
	25		2153		2206			No Flare													
	25		2221		2238			No Flare													
	26		0927		0933			No Flare													
	26		1000		1027			No Flare													
	26		1138		1159			No Flare													
	26		1334		1709			No Flare													
	26		1724		1726			No Flare													
	26		1921		1932			No Flare													
	27		1046		1202			No Flare													
	27		1209		1214			No Flare													
	27		1314		1541			No Flare													
	27		1602		1711			No Flare													
	27		1850		1943			No Flare													
	28		0926		0934			No Flare													
	28		2049		2100			No Flare													
	28		2113		2316			No Flare													
	29		1508		1708			No Flare													
	30		1121		1241			No Flare													
	30		2039		2043			No Flare													
	30		2056		2104			No Flare													
	30		2124		2129			No Flare													

"Remarks"

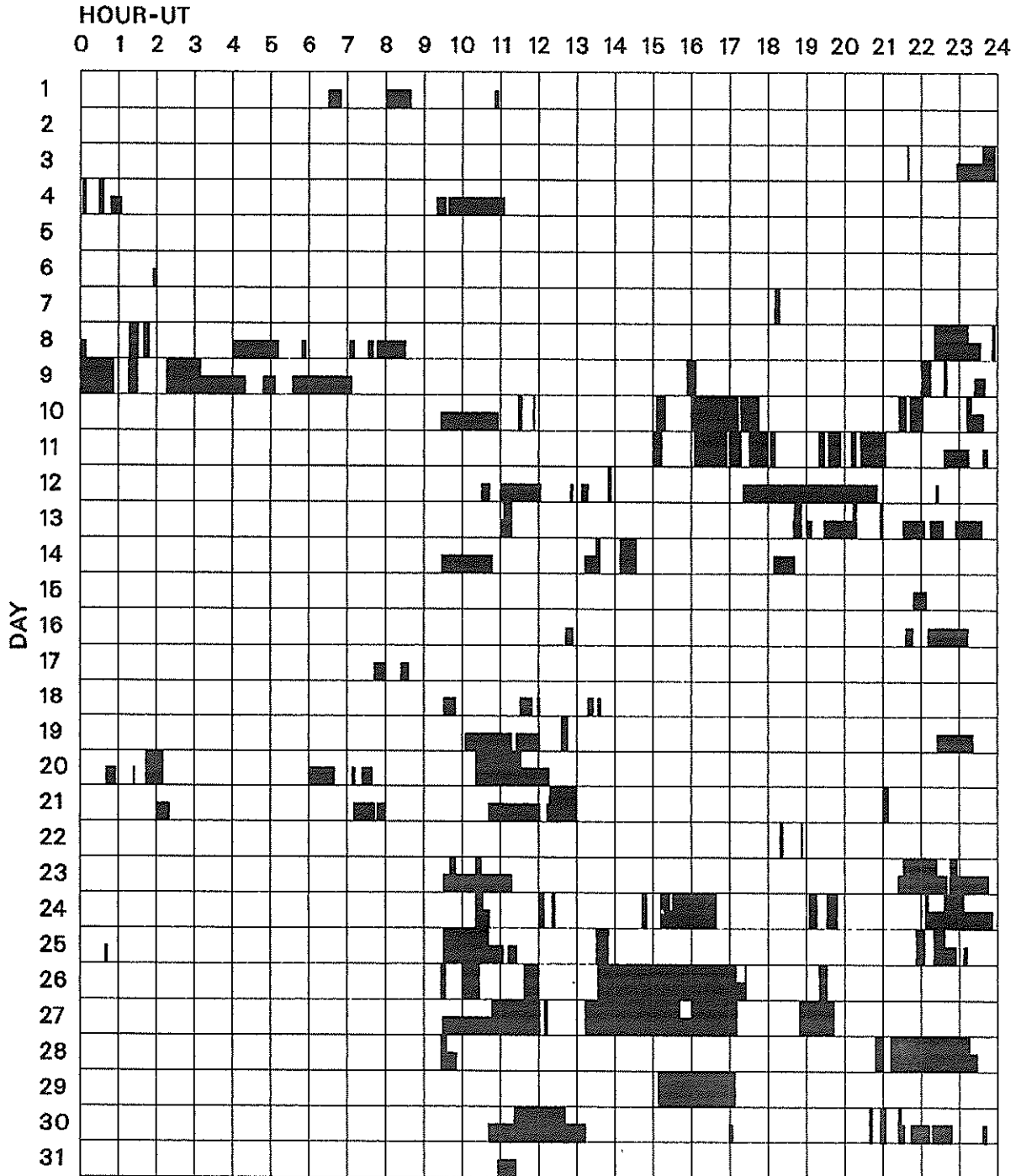
A = Eruptive prominence whose base is less than 90 degrees from central meridian.
 B = Probably the end of a more important flare.
 C = Invisible 10 minutes before.
 D = Brilliant point.
 E = Two or more brilliant points.
 F = Several eruptive centers.
 G = No visible spots in the neighborhood.
 H = 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.

INTERVALS OF NO FLARE PATROL OBSERVATION FOR PRECEDING SOLAR FLARE TABLE

9
Aug 86

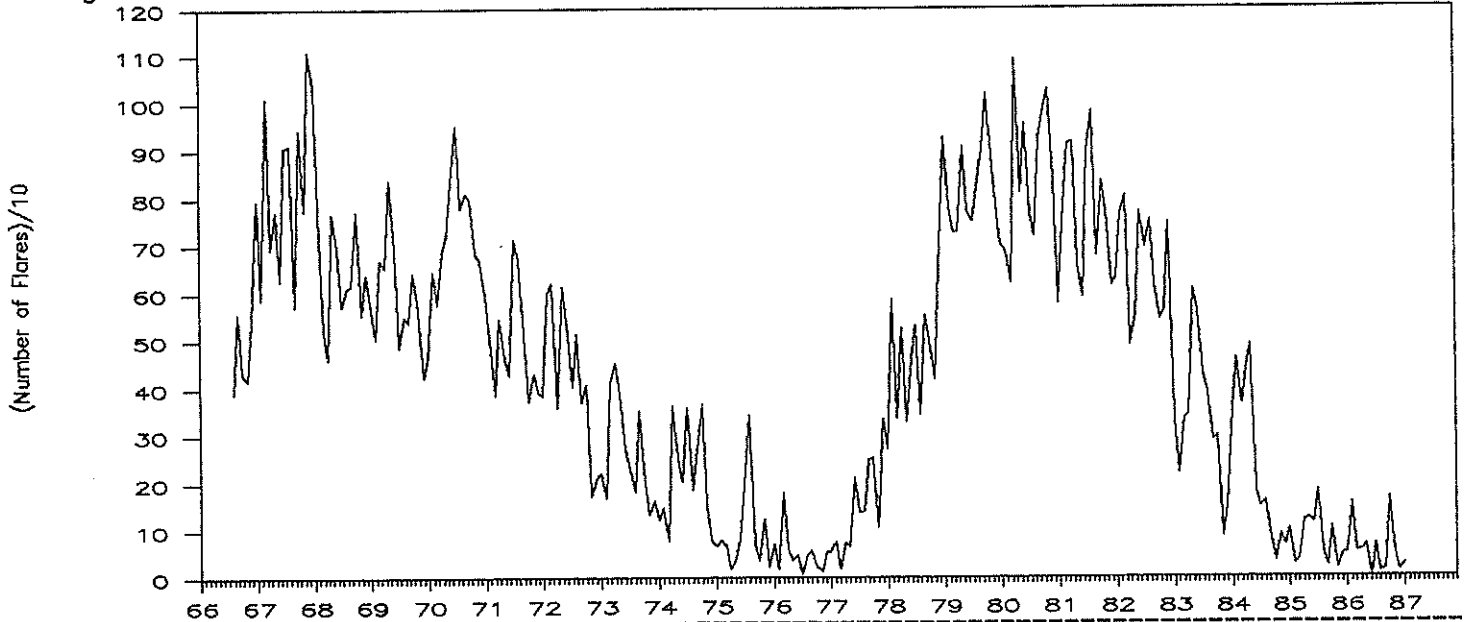
AUGUST 1986



Times of no flare patrol, shown here as shaded areas, combine reports from the observatories listed below. Portions of a panel completely shaded mark dates and times of no patrol of any kind, that is, of neither visual nor cinematographic; portions of a panel with only the bottom half shaded mark times of strictly visual patrol.

- | | | | | |
|----------------|-------------|-----------|------------|-------------|
| Abastumani | Hurbanovo | Learmonth | Palehua | Tashkent |
| Bucharest | Istanbul | Lvov | Peking | Voroshilov |
| Haute-Provence | Kanzelhoehe | Manila | Purple Mt. | Wendelstein |
| Holloman | Kharkov | Mitaka | Ramey | Urumqi |
| | | | | Yunnan |

MONTHLY COUNTS OF GROUPED SOLAR FLARES*



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1966								391	558	432	417	543	2341
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	70	10	14	167	52	12	715
1987	28												28

*Flare counts are preliminary from July 1982 to present. In particular, the monthly totals for the last 6 months may change significantly, as more sites submit their reports. The term "grouped" means that observations of the same event by different stations have been lumped together and counted as one.

S O L A R R A D I O E M I S S I O N
O U T S T A N D I N G O C C U R R E N C E S

11
Aug 86

AUGUST 1986

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Flux Density Mean (10 ⁻²² W/m ² Hz)	Int	Remarks
01	[	245	LEAR	44 NS	0033.0E	0101.0	552.0D	2.0		QL=1 ST=2 TYP=1
		260	ONDR	43 NS	0930.0U		295.0D	5.0		
		808	ONDR	46 C	0614.0	0615.0	2.5			
		808	ONDR	41 F	0801.9	0801.9	1.5			
		808	ONDR	41 F	0852.5	0854.8	9.0			
03	[	2800	OTTA	8 S	1146.0	1146.5	.8	3.9	2.0	
		2000	TYKW	20 GRF	2132.0	2134.0	40.0	2.0	1.0	
		3750	TYKW	20 GRF	2132.0	2135.0	40.0	2.0	1.0	
		2800	OTTA	20 GRF	2132.5	2135.5	30.0	2.7	1.6	
04	[	204	IZMI	8 S	0807.0	0807.1	.1	9.0	4.0	
		2800	OTTA	20 GRF	2205.0	2210.0	55.0	1.9	1.1	
		2000	TYKW	20 GRF	2205.0	2214.0	50.0	1.5	.7	
		3750	TYKW	20 GRF	2208.0	2220.0	50.0	1.5	.7	
05		536	ONDR	43 NS	1238.2	1238.2	78.0D	1.9		
		536	ONDR	8 S	1003.5	1003.5	.5	24.0		
		536	ONDR	8 S	1104.0	1104.1	.6	1.0		
		536	ONDR	8 S	1152.5	1152.5	.3	.6		
06		260	ONDR	44 NS	0550.0U		488.0D	1.6		
		536	ONDR	8 S	1025.5	1025.6	.5	1.3		
		536	ONDR	8 S	1053.0	1053.2	.3	.7		
07		260	ONDR	43 NS	0905.5	1036.0	131.0D	4.2		
		536	ONDR	8 S	1033.0	1033.1	.2	.6		
		536	ONDR	8 S	1041.8	1050.0	.5	.7		
10	[	410	LEAR	8 S	0933.0E	0934.0	1.0D	47.0		QL=5 ST=3 TYP=3
		245	LEAR	47 GB	0941.0E	0941.0	1.0D	100.0		QL=5 ST=2 TYP=5
		410	LEAR	47 GB	0941.0E	0941.0	1.0D	110.0		QL=5 ST=2 TYP=5
11		15400	LEAR	47 GB	0441.0E	0441.0	1.0D	16.0		QL=5 ST=2 TYP=5
		15400	LEAR	8 S	0448.0E	0448.0	1.0D	15.0		QL=5 ST=2 TYP=3
		260	ONDR	8 S	1207.5	1207.5	.3	.3		
12	[	410	LEAR	8 S	0643.0E	0644.0	1.0D	12.0		QL=5 ST=2 TYP=3
		245	LEAR	47 GB	0643.0E	0644.0	1.0D	55.0		QL=5 ST=2 TYP=5
15		204	IZMI	41 F	1128.0	1128.5	2.0		7.5	
16		260	ONDR	41 F	1046.5	1046.5	41.5	.8		
20	[	29	UPIC	45 C	0822.7	0823.2	1.3U			
		33	UPIC	45 C	0822.8	0822.8	2.0			
		33	UPIC	45 C	1257.0	1257.2	1.2			
		29	UPIC	45 C	1257.2	1257.3	1.8U			
21	[	3000	IZMI	5 S	0929.5	0929.6	.5	4.3	2.0	
		33	UPIC	45 C	1217.5	1217.6	1.4U			
		29	UPIC	45 C	1217.7	1217.9	1.6			
22		260	ONDR	44 NS	0553.0		492.0	.5		
		204	IZMI	5 S	0609.2	0609.3	.5	6.0	3.0	
23	[	410	SGMR	47 GB	1608.0E	1608.0	1.0D	83.0		QL=1 ST=2 TYP=5
		245	SGMR	47 GB	1608.0E	1608.0	1.0D	90.0		QL=1 ST=2 TYP=5
25	[	33	UPIC	3 S	1142.5	1142.5	.4			
		29	UPIC	5 S	1142.5	1142.7	.1U			
		260	ONDR	40 F	1247.0	1248.3	2.0	.3		
28		260	ONDR	44 NS	0600.0E		485.0D	1.6		
		204	IZMI	8 S	0858.0	0858.1	.1	9.0	4.5	
		33	UPIC	4 S/F	1042.3	1042.5	1.1			
		29	UPIC	4 S/F	1042.4	1043.0	1.1U			
30	[260	ONDR	44 NS	0736.0E		267.0D	1.2		
		33	UPIC	2 S/F	1654.1	1654.4	.4			
		29	UPIC	1 S	1654.3	1654.4	.4			

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Aug 86

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

AUGUST 1986

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m ² Hz)	Mean		
30	33 UPIC	3 S	1710.3	1710.4	.3				
	29 UPIC	1 S	1710.7	1710.7	.5U				
31	260 ONDR	43 NS	1153.8	1154.0	10.8	.5			

Reports are received routinely from the following observatories:

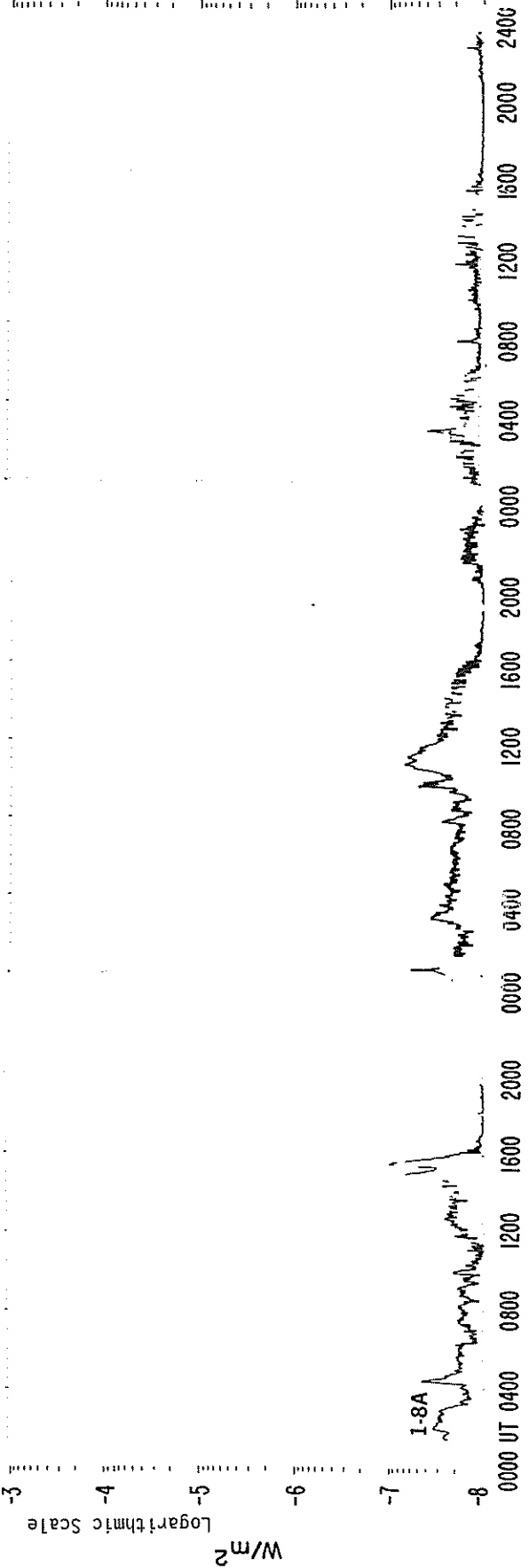
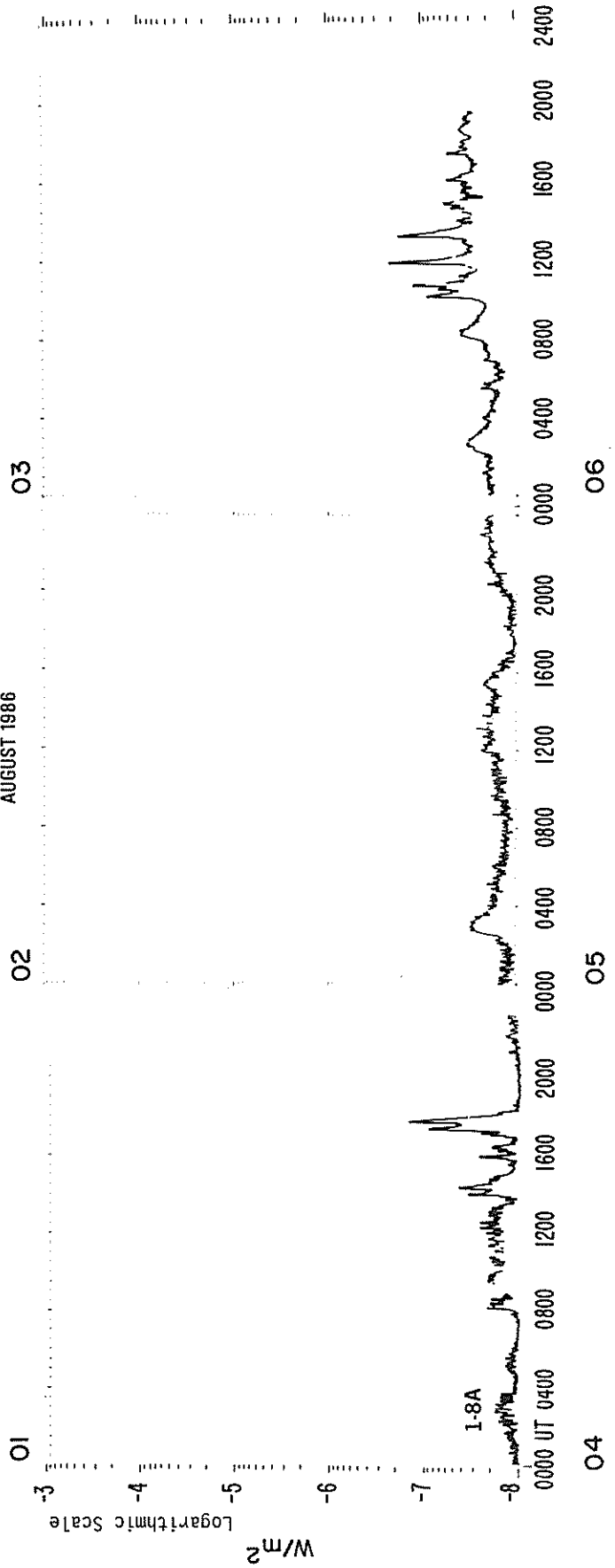
ATHN = Athens	IZMI = IZMIRAN	OTTA = Ottawa	SVTO = San Vito
BERN = Berne	KISV = Kislovodsk	PALE = Palehua	SYDN = Sydney
BORD = Bordeaux	KRAK = Krakow	PEKG = Peking	TORN = Torun
CRIM = Crimea	LEAR = Learmonth	PENT = Penticton	TYKW = Toyokawa
GORK = Gorky	MANI = Manila	POTS = Potsdam	TRST = Trieste
HIRA = Hiraiso	NOBE = Nobeyama	SAOP = Sao Paulo	UPIC = Upice
HUAN = Huancayo	ONDR = Ondrejov	SGMR = Sagamore Hill	VORO = Voroshilov

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	240 Rise only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	240F Rise only F	260 Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	24P Post Rise	26F Fall F	32A Absorption A	
			46F Complex F	

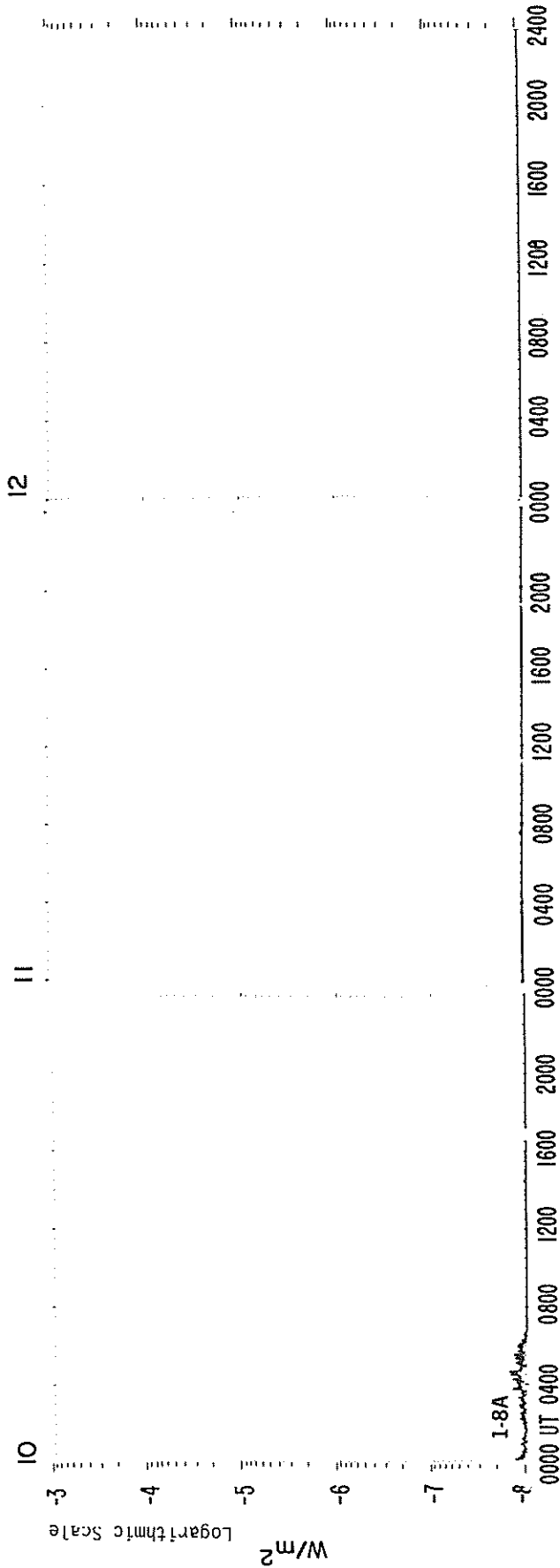
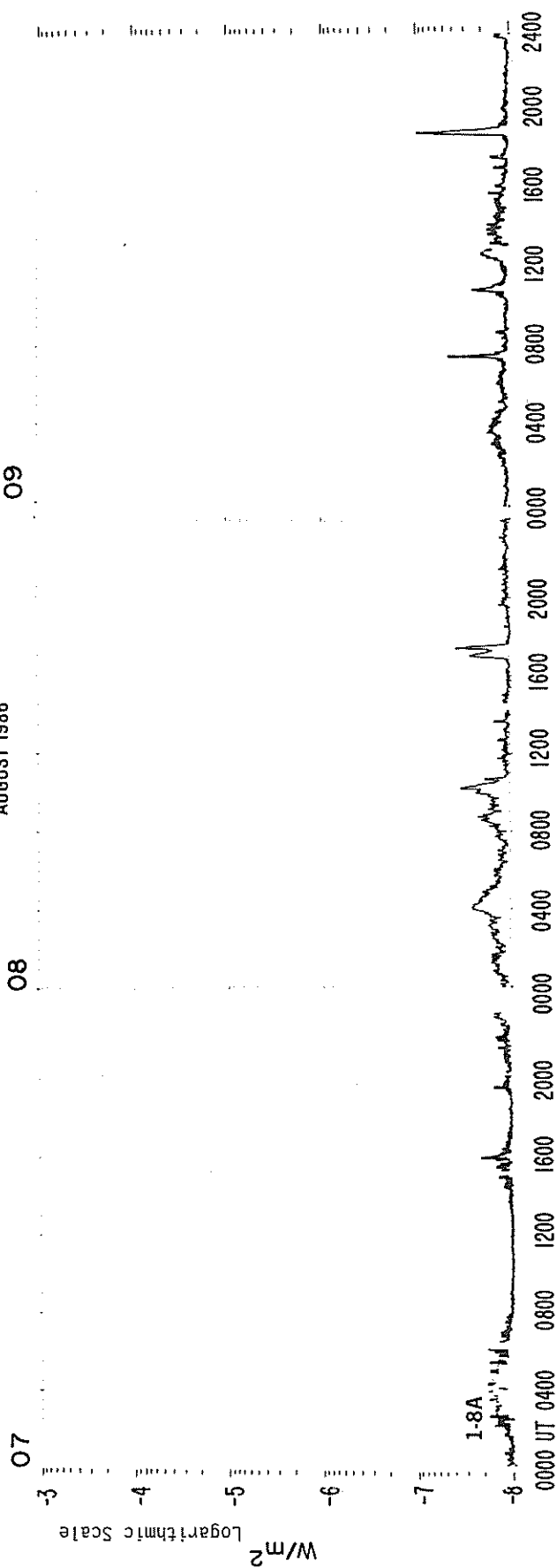
GOES 6 X-RAYS

AUGUST 1986



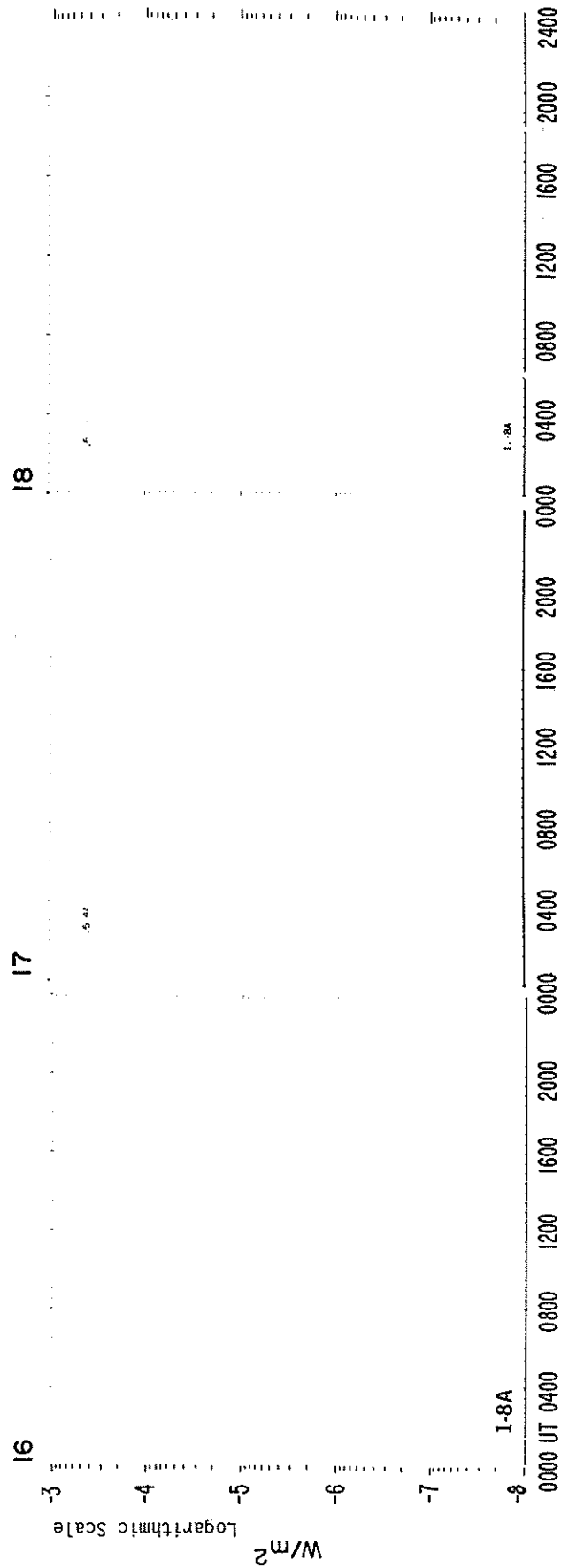
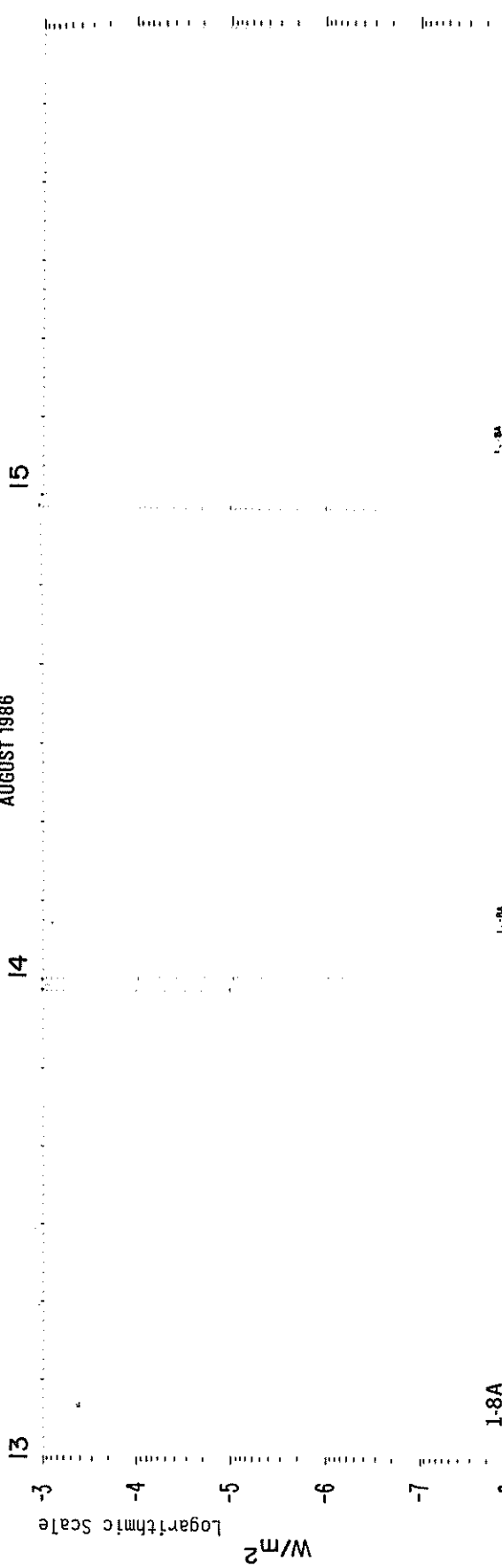
GOES 6 X-RAYS

AUGUST 1986



GOES 6 X-RAYS

AUGUST 1986



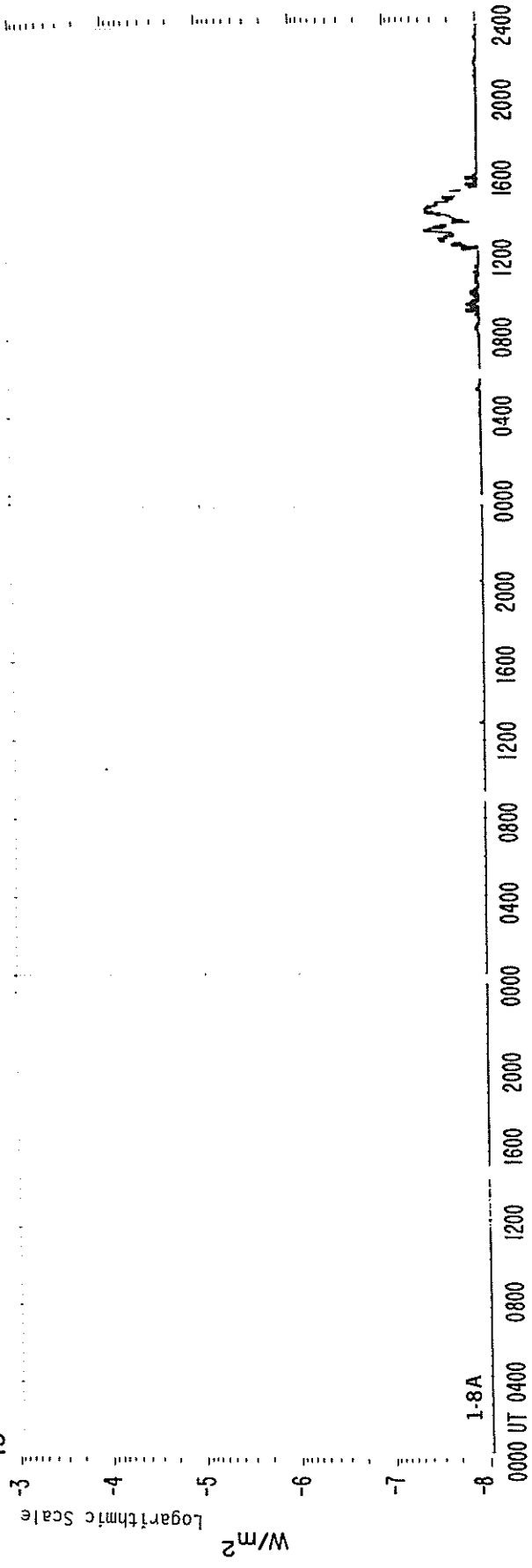
GOES 6 X-RAYS

AUGUST 1986

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20

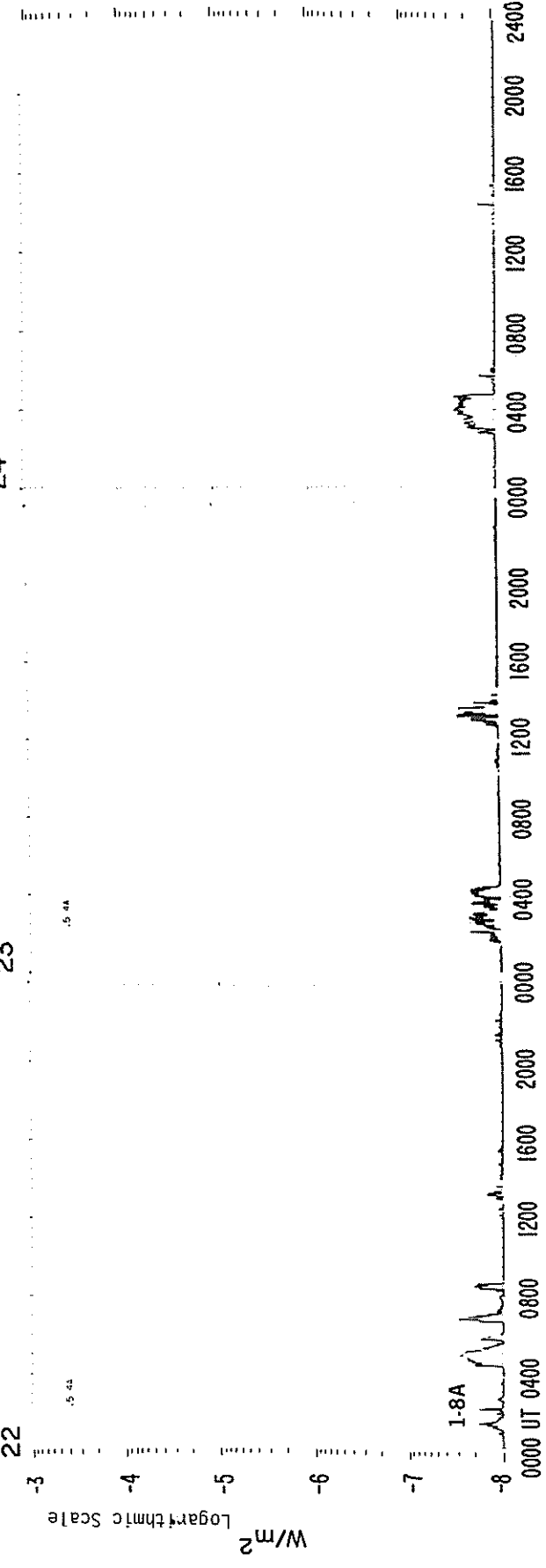
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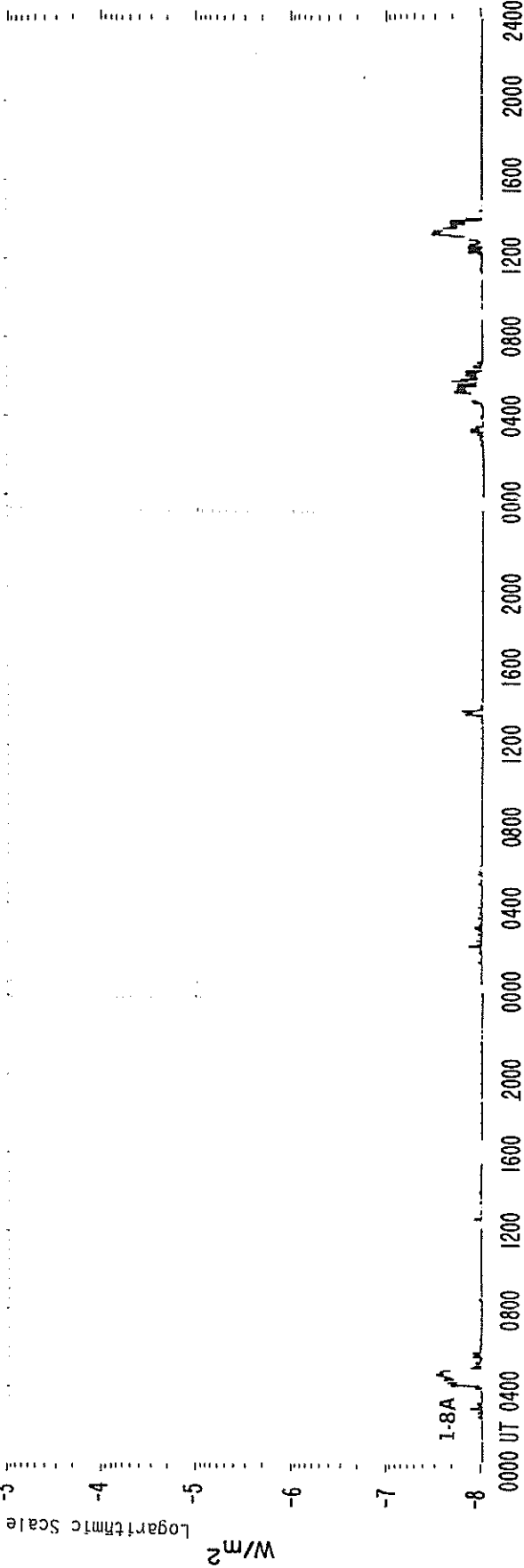
GOES 6 X-RAYS

AUGUST 1986

27

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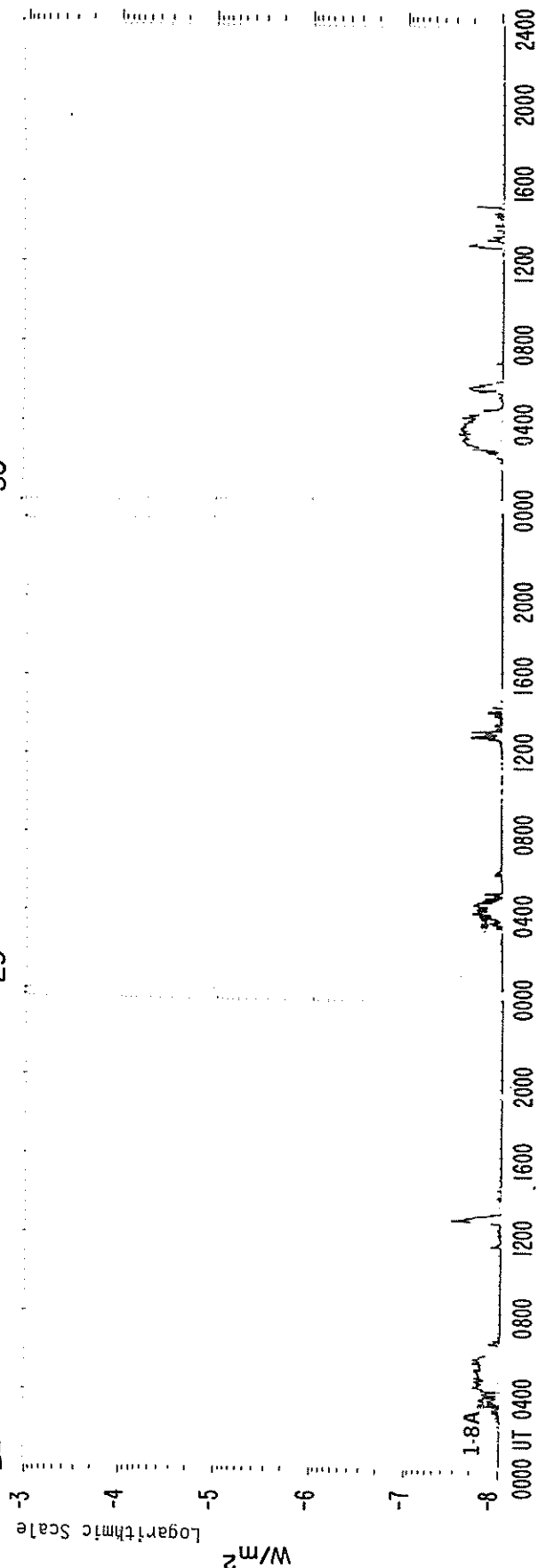
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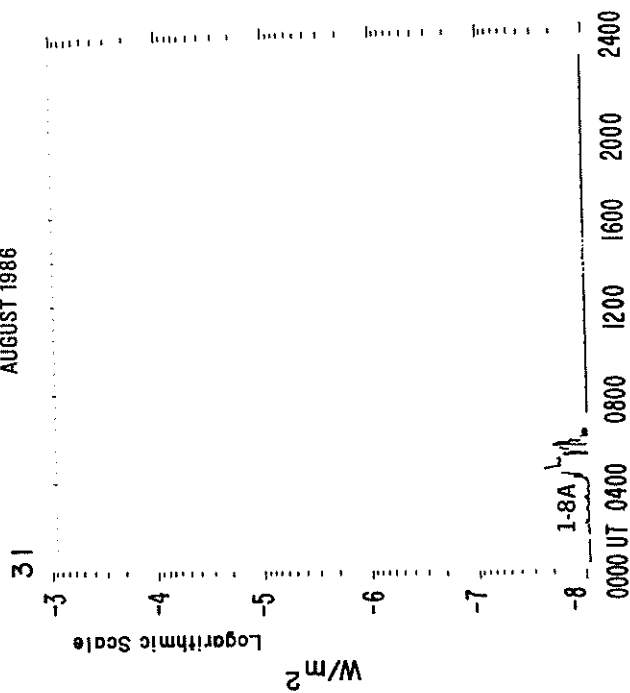
29

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GOES 6 X-RAYS

AUGUST 1986



GOES SOLAR X-RAY FLARES
 Preliminary Listing

19
 Aug 86

August 1986

Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	Imp Opt	Xray
01	1737	1739	1748	N09	E15	4741	SF	B1.5
03	1020	1040	1045					B1.2
03	1141	1149	1153					B2.2
03	1305	1307	1315	N07	W11	4741	SN	B1.6
03	1436	1440	1443					B1.1
03	2131	2137	2158	N08	W15	4741	SN	B5.8
03	2326	2329	2331					B1.2
04	0044	0047	0049					B2.6
04	1522	1532	1534	N09	W25	4741	SF	B1.0

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Aug 86

Preliminary GOES Satellite Data
Daily Average X-ray Background

September 1985 - August 1986

Day	1985 Sep	Oct	Nov	Dec	1986 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	B0.1	B0.0	B0.0	B0.1	B0.0	B0.2	B2.0	<B0.1	B0.5	B0.2	<B0.1	<B0.1
2	B0.1	B0.0	B0.0	B0.1	B0.0	B0.3	B1.5	<B0.1	B1.0	<B0.1	<B0.1	<B0.1
3	B0.1	B0.0	B0.1	B0.0	B0.0	**	B1.9	<B0.1	B1.4	<B0.1	<B0.1	B0.3
4	B0.1	B0.0	B0.1	B0.0	B0.0	**	B1.4	<B0.1	B0.5	<B0.1	<B0.1	B0.2
5	B0.2	B0.0	B0.0	B0.0	B0.0	**	B1.6	<B0.1	B0.2	<B0.1	B0.2	<B0.1
6	B0.2	B0.0	B0.1	B0.1	B0.0	**	B1.5	<B0.1	<B0.1	<B0.1	B0.4	<B0.1
7	B0.1	B0.1	B0.2	B0.2	B0.0	B7.2	B1.0	B0.2	<B0.1	<B0.1	B0.6	<B0.1
8	B0.1	B0.0	B0.6	B0.5	B0.0	B2.5	B0.8	<B0.1	<B0.1	<B0.1	<B0.1	B0.4
9	B0.0	B0.0	B0.5	B0.2	B0.0	B2.0	B0.9	<B0.1	<B0.1	<B0.1	B0.2	B0.4
10	B0.0	B0.0	B0.4	B0.5	B0.0	B2.5	B0.9	<B0.1	<B0.1	<B0.1	B0.9	<B0.1
11	B0.0	B0.0	B0.5	B1.0	B0.0	B9.8	B0.8	<B0.1	<B0.1	<B0.1	B0.5	<B0.1
12	B0.1	B0.0	B0.4	B1.0	B0.0	B5.7	B0.7	B0.2	<B0.1	<B0.1	B0.4	<B0.1
13	B0.5	B0.0	B0.5	B0.6	B0.3	B6.1	B0.5	<B0.1	<B0.1	<B0.1	B0.7	<B0.1
14	B0.2	B0.3	B0.6	B0.4	B0.4	B0.1	B0.3	<B0.1	<B0.1	<B0.1	B1.0	<B0.1
15	B0.1	B1.2	B1.3	B0.5	B0.4	B5.7	B0.0	B0.4	<B0.1	<B0.1	B0.5	<B0.1
16	B0.1	B0.9	B0.7	B0.6	B0.5	B2.1	B0.0	B0.3	B0.2	<B0.1	B0.3	<B0.1
17	B0.0	B1.0	B0.5	B0.5	B1.0	B2.3	B0.0	B0.3	B0.3	<B0.1	B0.3	<B0.1
18	B0.0	B0.5	B0.4	B0.5	B0.7	B0.0	B0.0	B0.2	B0.8	<B0.1	B0.3	<B0.1
19	B0.1	B0.6	B0.4	B0.3	B0.6	B0.0	B0.0	B0.2	B0.6	<B0.1	B0.2	<B0.1
20	B0.1	B0.7	B0.3	B0.3	B4.7	B0.0	B0.0	B0.2	B0.6	<B0.1	B0.2	<B0.1
21	B0.3	B0.9	B0.3	B0.2	B9.5	B0.0	B1.9	B0.2	B0.6	<B0.1	B0.1	<B0.1
22	B0.0	B2.4	B0.2	B0.3	B2.9	B0.0	B0.0	B0.2	B0.5	<B0.1	B0.1	<B0.1
23	B0.0	B1.8	B0.2	B0.2	B2.7	B0.0	B0.1	B1.2	B0.4	<B0.1	B0.1	<B0.1
24	B0.0	B3.5	B0.2	B0.2	B1.3	B0.0	B0.1	B2.8	B0.5	<B0.1	B0.1	<B0.1
25	B0.0	B3.4	B0.2	B0.2	B0.8	B0.1	B0.0	B0.9	B0.8	<B0.1	B0.2	<B0.1
26	B0.1	B2.3	B0.1	B0.2	B0.6	B0.8	B0.1	B1.1	B0.5	<B0.1	B0.2	<B0.1
27	B0.0	B1.4	B0.1	B0.2	B0.2	B1.0	B0.1	B1.5	B0.3	<B0.1	B0.1	<B0.1
28	B0.0	B0.8	B0.0	B0.2	B0.0	B1.3	B0.1	B1.0	B0.3	<B0.1	B0.2	<B0.1
29	B0.1	B0.7	B0.0	B0.2	B0.0		B0.1	B0.5	B0.2	<B0.1	B0.3	<B0.1
30	B0.0	B0.1	B0.0	B0.1	B0.0		B0.1	B0.6	B0.2	B0.7	<B0.1	<B0.1
31		B0.0		B0.2	B0.0		<B0.1		B0.2		<B0.1	<B0.1

MASS EJECTIONS FROM THE SUN

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Aug 86

AUGUST 1986

Sta	Day	Observed UT			Location		Freq or Wavelength	Kind of Event
		Start	Max	End	RA ⁰	R/R ₀		
KHAR	Aug 06	1013 E		1110 D	076	1.00	H-alpha	S
KHAR	Aug 08	0913 E		0927 D	077	0.95	H-alpha	S
KHAR	Aug 08	1107 E		1126 D	224	1.00	H-alpha	S
KHAR	Aug 09	0750 E	0753 U	0800 D	096	0.76	H-alpha	S
KHAR	Aug 09	0816 E		0829 D	255	0.97	H-alpha	S
KHAR	Aug 09	0825 E	0835 U	0848 D	258	1.00	H-alpha	S
KHAR	Aug 09	1002 E		1025 D	258	1.00	H-alpha	S
KHAR	Aug 09	1015 E		1103 D	286	1.00	H-alpha	SP
KHAR	Aug 10	0840 E		0850 D	079	0.76	H-alpha	S
KHAR	Aug 10	0802 E	0806 U	0905 D	286	1.00	H-alpha	S
KHAR	Aug 10	0828 E		0840 D	094	0.60	H-alpha	S
KHAR	Aug 10	1015 E		1032 D	079	0.76	H-alpha	S
KHAR	Aug 10	1028 E		1055 D	098	0.65	H-alpha	S
KHAR	Aug 12	0933 E		1004 D	082	0.37	H-alpha	S
KHAR	Aug 16	0707 E		0718 D	139	1.00	H-alpha	S
KHAR	Aug 16	0905 E		0950 D	054	1.00	H-alpha	S
KHAR	Aug 28	1010 E		1018 D	150	1.00	H-alpha	S
KHAR	Aug 29	0930 E	0931 U	0947 D	057	1.00	H-alpha	S

QUALIFIERS ON START, MAX AND END TIMES

D = event ended after tabulated time
E = event began before the tabulated time
U = uncertain time

REPORTING STATIONS

KHAR = Kharkov

TYPE OF EVENT

A = eruptive active region prominence
CB = coronal cloud bubble
D = coronal depletions
E = coronal enhancement
EL = coronal expanding loop
II = Type II radio burst
IVm = moving Type IV radio burst
Q = eruptive quiescent prominence
R = coronal ray or streamer
S = flare-surge if there is a known flare association
SP = flare-spray if there is a known flare association
* = movement may be caused by ionospheric refraction

22
Aug 86

ACTIVE PROMINENCES AND FILAMENTS

AUGUST 1986

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
01	ADF	1357E	2126D	N10	E19	08	3.0	1	02	9	9	E	RAMY	4741	
01	ADF	1357E	2126D	N11	E18	08	2.9	1	03	9	9	E	RAMY	4741	
01	AFS	1740E	0201D	N10	E15	08	2.9	1	02	8	8	E	PALE	4741	
01	ADF	1740E	0209D	N09	E16	08	2.9	2	08	9	9	E	PALE	4741	
01	SDF	2341E	2341D	N08	E12	08	2.9		07	0	0	E	HOLL	4741	
02	SDF	0218E	0218D	N13	E17	08	3.4		06	0	0	E	PALE	4741	
02	AFS	0413E	0705D	N10	E07	08	2.7		02	9	9	E	LEAR	4741	
02	ADF	1150E	2203D	N07	E03	08	2.7	1	03	9	9	E	RAMY	4741	
02	AFS	1150E	2203D	N10	E06	08	2.9		02	9	9	E	RAMY	4741	
02	ADF	1314E	1444D	N07	E02	08	2.7		04	9	9	E	HOLL	4741	
02	ADF	1314E	1444D	N12	E02	08	2.7		05	9	9	E	HOLL	4741	
02	DSD	1830E	2350D	N08	W02	08	2.6		01	9	9	E	PALE	4741	
03	DSD	0659E	0825D	N11	W08	08	2.7		02	9	9	E	ATHN	4741	
03	ADF	0820E	1100D	N09	W07	08	2.8	1	03	9	9	E	ATHN	4741	
03	ADF	1642E	0120D	N08	W13	08	2.7	2	03	9	9	E	HOLL	4741	
03	ADF	1753E	0453D	N09	W14	08	2.7	1	02	9	9	E	PALE	4741	
03	DSD	1753E	0453D	N10	W13	08	2.8		02	9	9	E	PALE	4741	
03	DSD	2041E	2157D	N09	W12	08	3.0	2	06	5	6	E	RAMY	4741	
04	DSD	0021E	0120D	N10	W17	08	2.7		05	9	9	E	HOLL	4741	
04	ADF	0530E	0915D	N14	W12	08	3.3	1	09	8	8	E	LEAR	4741	
04	AFS	0531E	0809D	N09	W21	08	2.6		02	9	9	E	LEAR	4741	
04	ADF	0531E	0915D	N10	W20	08	2.7	2	05	9	9	E	LEAR	4741	
04	ADF	0605E	1100D	N09	W20	08	2.7	2	06	6	8	E	ATHN	4741	
04	ADF	0605E	1100D	N12	W21	08	2.7	2	04	7	8	E	ATHN	4741	
04	ADF	1114E	1847D	N09	W20	08	3.0	2	03	9	9	E	RAMY	4741	
04	ADF	1114E	1847D	N11	W21	08	2.9	2	04	9	9	E	RAMY	4741	
04	DSD	1435E	1650D	N07	W24	08	2.8	2	02	9	9	E	RAMY	4741	
04	ADF	1445E	0036D	N09	W23	08	2.9	1	05	9	9	E	HOLL	4741	
04	DSD	1445E	1553D	N07	W25	08	2.7		02	9	9	E	HOLL	4741	
04	ADF	1816E	0453D	N09	W26	08	2.8	1	05	9	7	E	PALE	4741	
04	DSD	1923E	1937D	N10	W29	08	2.6		03	7	9	E	HOLL	4741	
04	DSD	1925E	2056D	N09	W30	08	2.5		02	8	8	E	PALE	4741	
05	ADF	0010E	0915D	N14	W28	08	2.9	2	03	9	9	E	LEAR	4741	
05	AFS	0230E	0453D	N16	W37	08	2.3		01	8	8	E	PALE		
05	ADF	0659E	1200D	N09	W34	08	2.7	1	04	5	7	E	ATHN	4741	
05	DSD	0658E	0745D	N07	W34	08	2.7		02	9	9	E	ATHN	4741	
05	ADF	1308E	1718D	N07	W37	08	2.8	2	03	9	9	E	RAMY	4741	
05	ADF	1502E	1918D	N13	W42	08	2.4	2	02	9	7	E	RAMY	4741	
06	ADF	0432E	0921D	N09	W48	08	2.6	1	03	9	9	E	LEAR	4741	
06	APR	0507	0706	S45	W90	07	29.8	1				C	ABST		
06	ADF	0740E	1200D	N07	W46	08	2.9		04	9	9	E	ATHN	4741	
06	DSD	1121E	1915D	N06	W49	08	2.8	2	02	9	9	E	RAMY	4741	
06	DSD	1453E	1649D	N05	W51	08	2.8		02	6	6	E	HOLL	4741	
06	DSD	2043E	2310D	N07	W55	08	2.7		02	9	9	E	PALE	4741	
06	DSD	2108E	0016D	N05	W57	08	2.6		04	9	9	E	HOLL	4741	
07	ADF	0235E	0913D	N11	W58	08	2.7	1	05	9	6	E	LEAR	4741	
07	ADF	0301E	0304D	N11	W56	08	2.9	1	04	9	7	E	PALE	4741	
07	BSL	0601	0705	S05	W90	07	31.5	1				C	ABST		
07	BSL	0601	0705	S41	W90	07	31.0	1				C	ABST		
07	ADF	0645E	1100D	N58	W11	08	6.3	1	04	9	7	E	ATHN	4741	
07	APR	0938E	1105D	S45	W90	07	31.0	1				V	KHAR		
07	ASR	1131E	1200D	S60	W80	07	31.4	2				E	RAMY		
07	ADF	1131E	1758D	N61	W12	08	6.4	1	04	9	8	E	RAMY	4741	
07	DSD	1745E	2038D	N08	W69	08	2.6		02	9	5	E	PALE	4741	
07	ADF	1747E	0451D	N09	W66	08	2.8	1	05	8	8	E	PALE	4741	
07	DSD	1801E	2155D	N08	W70	08	2.5		02	9	9	E	HOLL	4741	
08	DSD	0149E	0451D	N08	W73	08	2.6		02	9	5	E	PALE	4741	
09	APR	0537E	0716D	S33	E90	08	16.4	1		8	7	E	LEAR		
09	ASR	0813E	0917D	N06	W90	08	2.6			8	9	E	LEAR	4741	
09	ASR	0815E	0913D	N07	W90	08	2.6			9	9	E	ATHN	4741	
10	AFS	0000E	0200D	S45	W49	08	5.9		01	7	7	E	LEAR		
10	ASR	0132E	0207D	N15	E90	08	16.9			8	9	E	PALE		

ACTIVE PROMINENCES AND FILAMENTS

AUGUST 1986

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
10	ASR	0200E	0926D	N16	E90	08	16.9			9	7	E	LEAR		
10	AFS	0503E	0840D	S20	E02	08	10.4		02	9	9	E	LEAR		
12	ASR	0720E	0732	N07	E90	08	19.0			9	9	E	ATHN		
12	AFS	1600E	1640D	S13	W33	08	10.2		01	5	4	E	HOLL		
15	AFS	0100E	0103D	N15	E21	08	16.6	1	01	8	8	E	PALE		
15	AFS	0632E	0753D	S02	E28	08	17.4		01	9	9	E	LEAR		
15	SDF	0930E	2330D	S43	E70	08	21.2		54	0	0	E	LEAR		
15	SDF	1635E	1635D	S45	E77	08	22.1		63	0	0	E	HOLL		
15	SDF	1935E	1750D	S44	E80	08	22.4		58	0	0	E	PALE		
15	AFS	2054E	0446D	N01	E17	08	17.1		02	9	9	E	PALE		
15	AFS	2113E	0145D	N02	E14	08	16.9		02	9	9	E	HOLL		
16	AFS	0020E	0919D	N02	E14	08	17.0		01	9	9	E	LEAR		
16	AFS	0442E	0919D	N28	E14	08	17.3		02	9	9	E	LEAR		
16	SDF	0524E	0613D	N08	W36	08	13.5		06	6	6	E	LEAR		
16	ADF	0610E	0756D	N09	W33	08	13.8	1	03	7	7	E	LEAR		
16	AFS	0750E	1100D	N02	E11	08	17.1		01	9	9	E	ATHN		
16	AFS	1640E	2210D	N02	E06	08	17.1	1	02	9	9	E	PALE	4742	
16	AFS	1720E	1937	N07	W54	08	12.7		01	8	8	E	PALE		
17	ADF	0026E	0250D	N02	E00	08	17.0	2	02	9	9	E	LEAR	4742	
18	AFS	2340E	0015	N08	W26	08	17.0		02	9	9	E	LEAR	4742	
20	AFS	0430E	0515D	N18	W25	08	18.3		02	9	9	E	LEAR		
20	AFS	1240E	2105D	S10	E35	08	23.1		02	9	9	E	RAMY		
20	AFS	1310E	1544D	S10	E34	08	23.1		02	9	9	E	HOLL	4743	
20	SDF	1406E	1406D	N27	W52	08	16.5		10	0	0	E	HOLL		
20	SDF	1445E	1445D	N25	W59	08	16.0		10	0	0	E	RAMY		
20	AFS	1631E	0139D	S11	E32	08	23.1		01	9	9	E	HOLL	4743	
20	AFS	1825E	0347D	S11	E32	08	23.2		02	9	9	E	PALE	4743	
21	BSL	0557	0707	N20	E90	08	28.1	1				C	ABST		
21	AFS	0700E	1040D	S10	E22	08	22.9		02	7	9	E	ATHN	4743	
21	AFS	0700E	1040D	S10	E22	08	22.9		02	9	9	E	ATHN	4743	
21	AFS	0800E	0923D	S12	E23	08	23.1		02	9	7	E	LEAR	4743	
21	AFS	1337E	0136D	S11	E20	08	23.1		02	8	8	E	HOLL	4743	
21	AFS	1424E	2102D	S10	E19	08	23.0		01	9	9	E	RAMY	4743	
21	AFS	1939E	0418D	S11	E17	08	23.1		02	6	7	E	PALE	4743	
21	AFS	2343E	0927D	S12	E14	08	23.0		03	7	4	E	LEAR	4743	
22	AFS	0615E	0705D	S11	E07	08	22.8		02	7	9	E	ATHN	4743	
22	AFS	1325E	2115D	S11	E05	08	22.9		01	7	8	E	RAMY	4743	
22	ADF	1748E	0243D	S09	E05	08	23.1	1	03	9	9	E	PALE	4743	
22	AFS	1910E	0029D	S11	E03	08	23.0		04	4	5	E	HOLL	4743	
23	AFS	0116E	0344D	S10	W01	08	23.0		02	7	7	E	LEAR	4742	
23	ADF	0118E	0926D	S39	W08	08	22.4	1	15	8	9	E	LEAR		
23	ADF	0740E	0825D	S14	W06	08	22.9	1				V	KHAR		
24	AFS	0002E	0245D	S10	W13	08	23.0		01	6	7	E	LEAR	4743	
24	BSL	0542	0803	S30	E90	08	31.3	1				C	ABST		
24	BSL	0542	0803	S45	E90	08	31.7	1				C	ABST		
24	AFS	1419E	2133D	N05	E03	08	24.8		02	9	8	E	RAMY		
24	ADF	1423E	2133D	N07	E62	08	29.2	2	02	9	9	E	RAMY	4744	
25	AFS	0540E	0930D	S11	W30	08	23.0		01	8	6	E	LEAR	4743	
26	AFS	0934E	1334D	N13	E20	08	27.9		02	9	9	E	SVI		
28	ADF	0003E	0925D	N01	E22	08	29.6	2	05	9	9	E	LEAR	4744	
28	AFS	0102E	0329D	S11	W17	08	26.8		02	9	9	E	LEAR		
28	ADF	0340E	0540D	N02	E17	08	29.4	1	05	9	9	E	LEAR	4744	
28	BSL	1010E	1018	S56	E90	09	5.2	1				V	KHAR		
29	ADF	0012E	0920D	N07	E11	08	29.8	1	06	9	9	E	LEAR	4744	
29	APR	0140E	0420D	S17	W90	08	22.2	1		7	7	E	LEAR	4743	
29	BSL	0513	0700	N50	E90	09	5.8	1				C	ABST		
29	BSL	0637	0700	S40	W90	08	21.9	1				C	ABST		

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ACTIVE PROMINENCES AND FILAMENTS

AUGUST 1986

Day	Event Type	Start (UT)	End (UT)	Lat	CMD	CMP Mo	Day	Imp	Extent	Blue Shift (.1 A)	Red Shift (.1 A)	Obs Type	Sta	NOAA/USAF Reg#	Remarks
29	BSL	0931E	0947D	N33	E90	09	5.5	1				V	KHAR		
29	ADF	0940E	1654D	N04	E07	08	29.9	1	05	7	9	E	SVI	4744	
30	ADF	0130E	0911D	N07	W03	08	29.8	1	04	4	4	E	LEAR	4744	
30	ADF	0618E	1702D	N10	W07	08	29.7		11	8	9	E	SVI	4744	
30	BSL	0640	0800	S34	W90	08	23.1	1				C	ABST		
30	ADF	0730E	0805D	N07	W13	08	29.3	1				V	KHAR		
30	ADF	1445E	2115D	N02	W14	08	29.6	2	02	6	6	E	RAMY	4744	
31	AFS	1119E	1612D	S34	W07	08	30.9		02	9	9	E	SVI		
31	AFS	1153E	1855D	S33	W09	08	30.8		02	9	9	E	RAMY		
31	SDF	1803E	1945D	S36	W26	08	29.7		12	3	3	E	HOLL		

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

C O N T E N T S

Comprehensive Reports

MISCELLANEOUS DATA

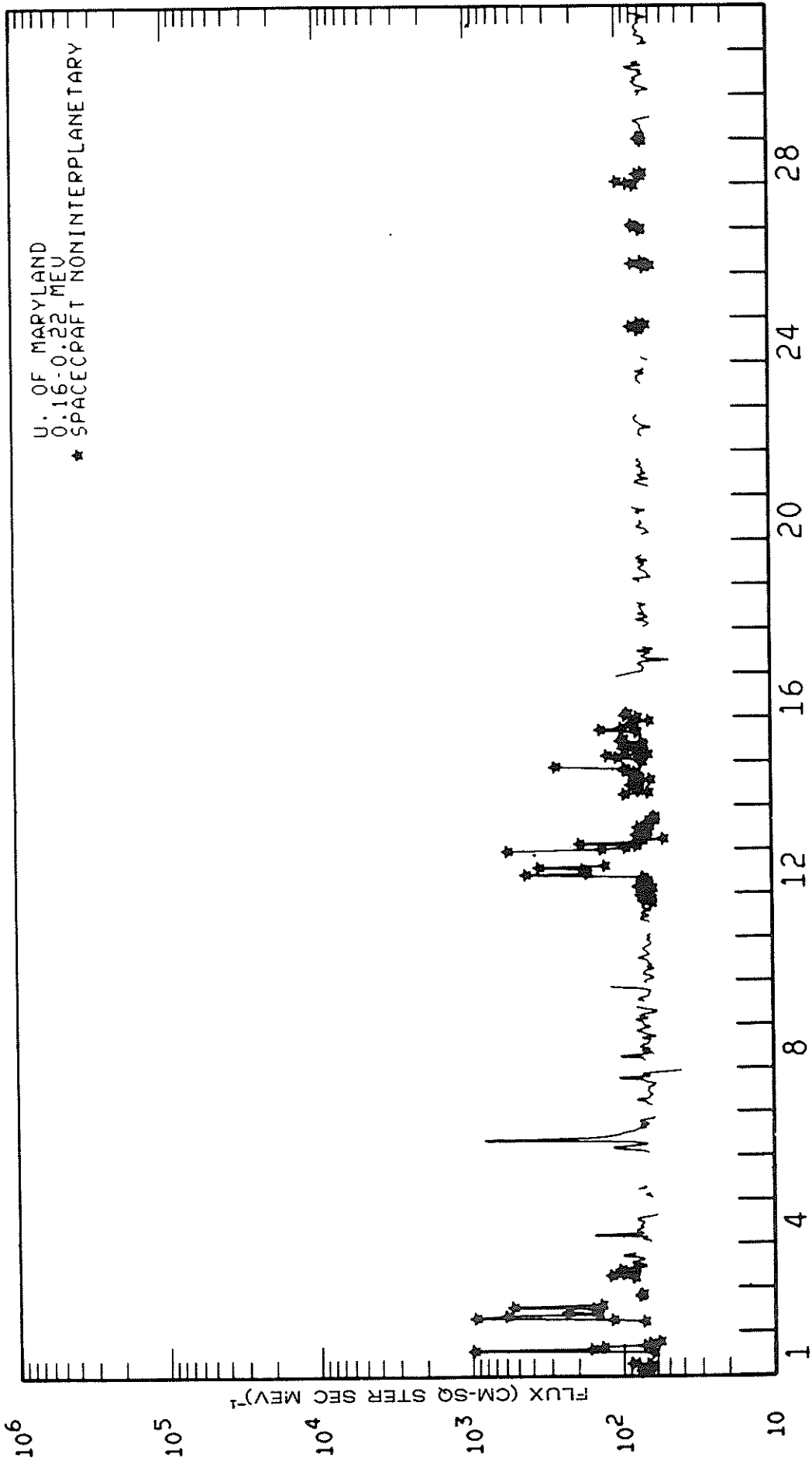
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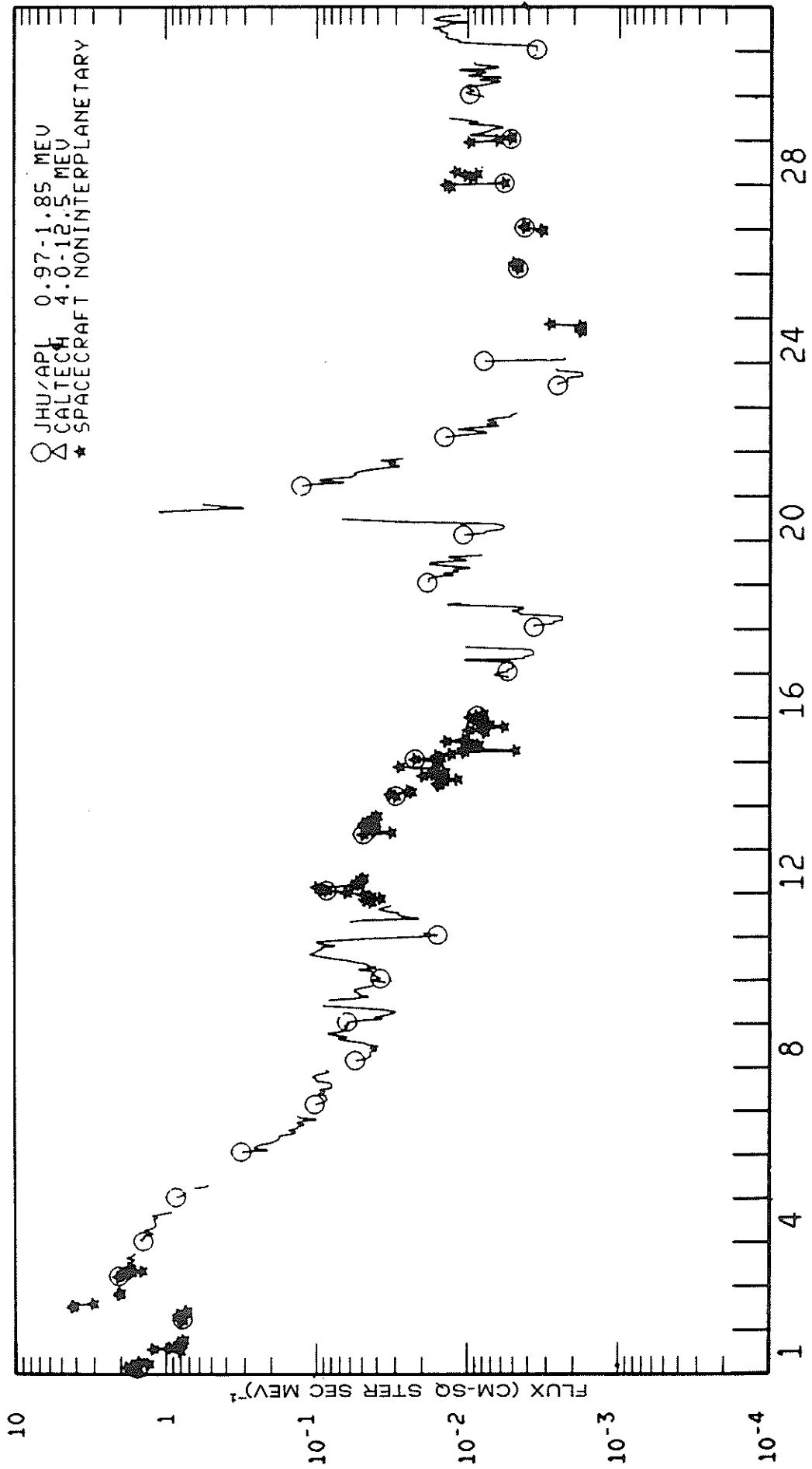
INTERPLANETARY SOLAR PLASMA

IMP 8 Solar Protons and Alpha Particles May-August 1985. 26-41

IMP 8 LOW ENERGY PROTONS
MAY 1985

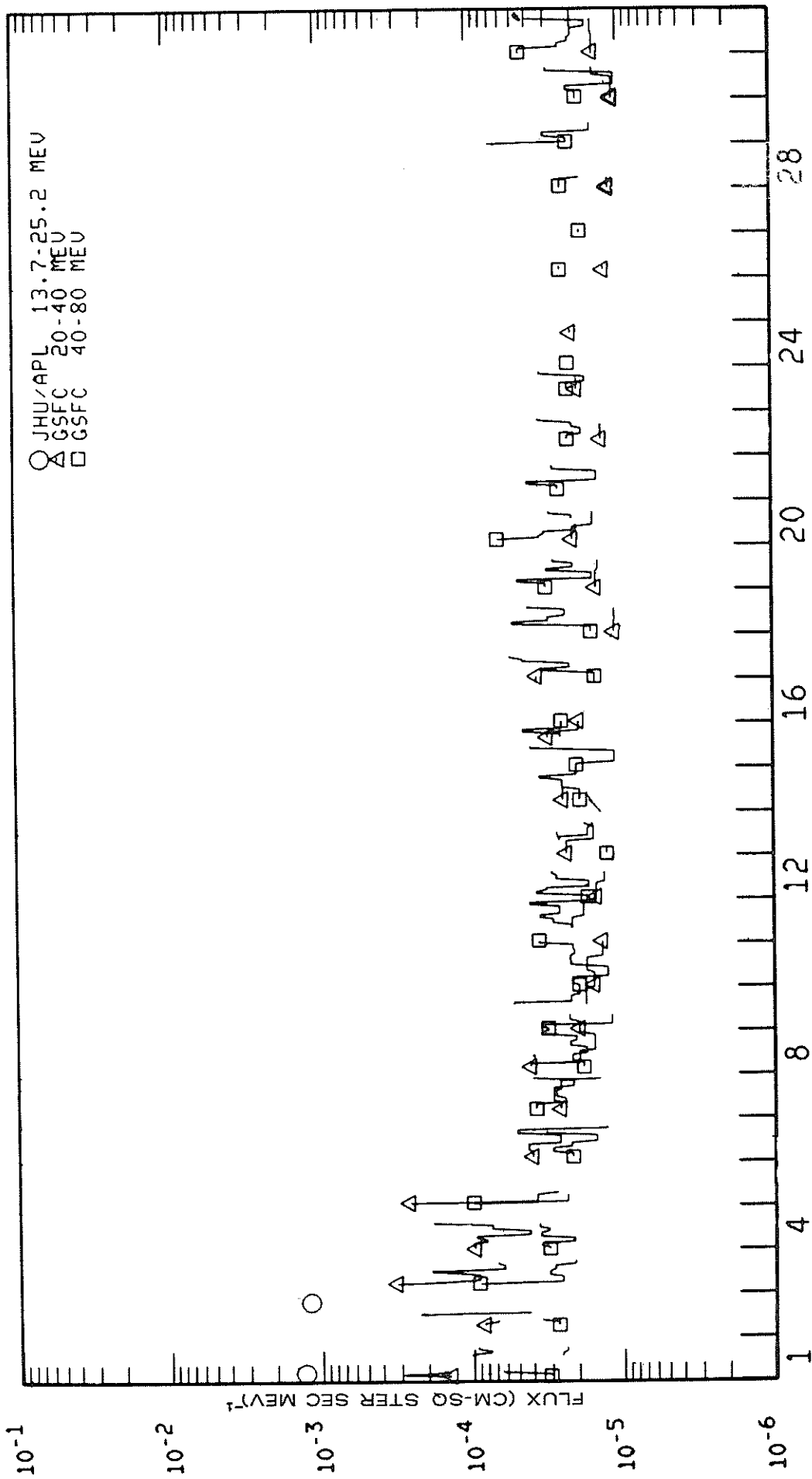


IMP 8 INTERMEDIATE ENERGY PROTONS
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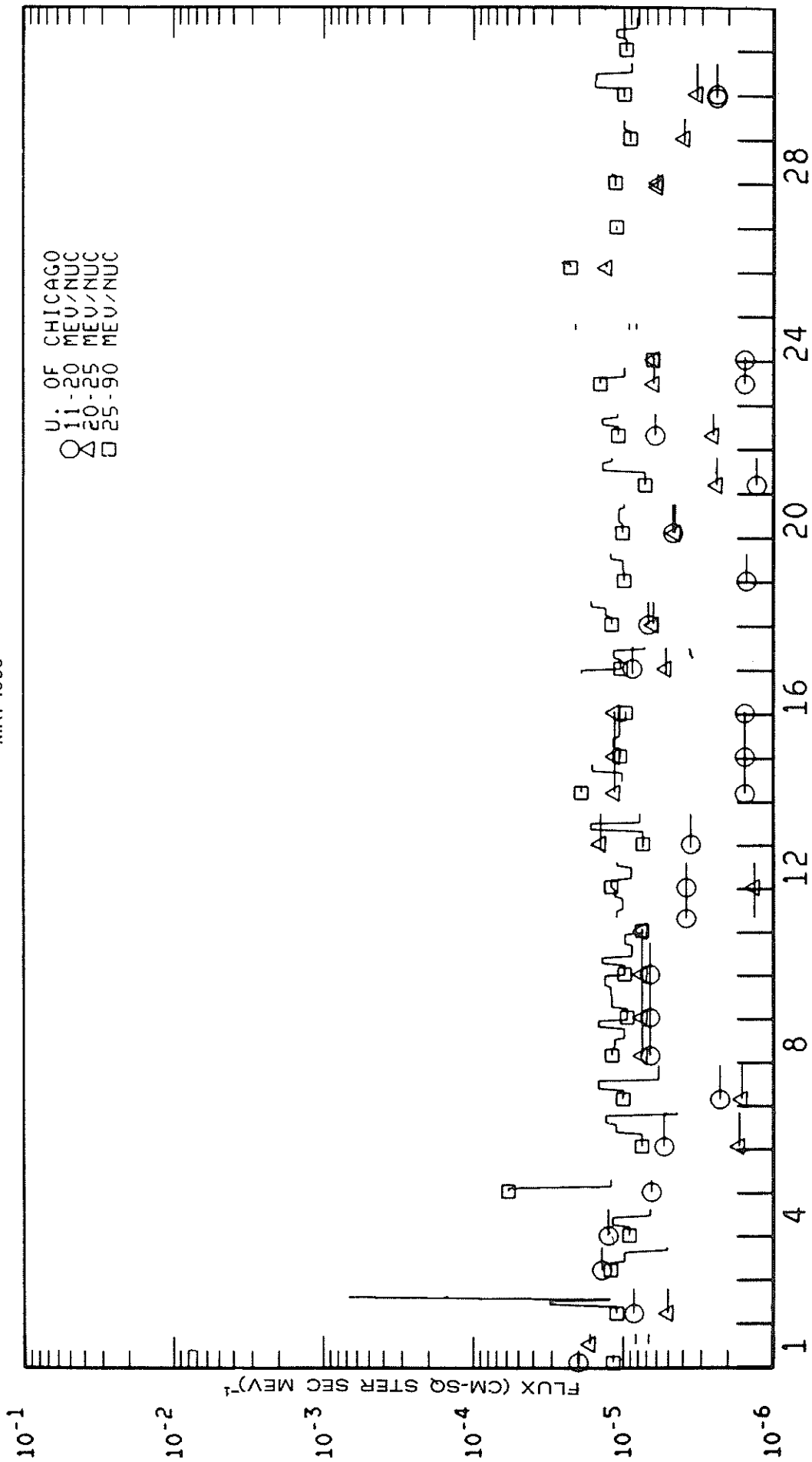


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Late
May 85

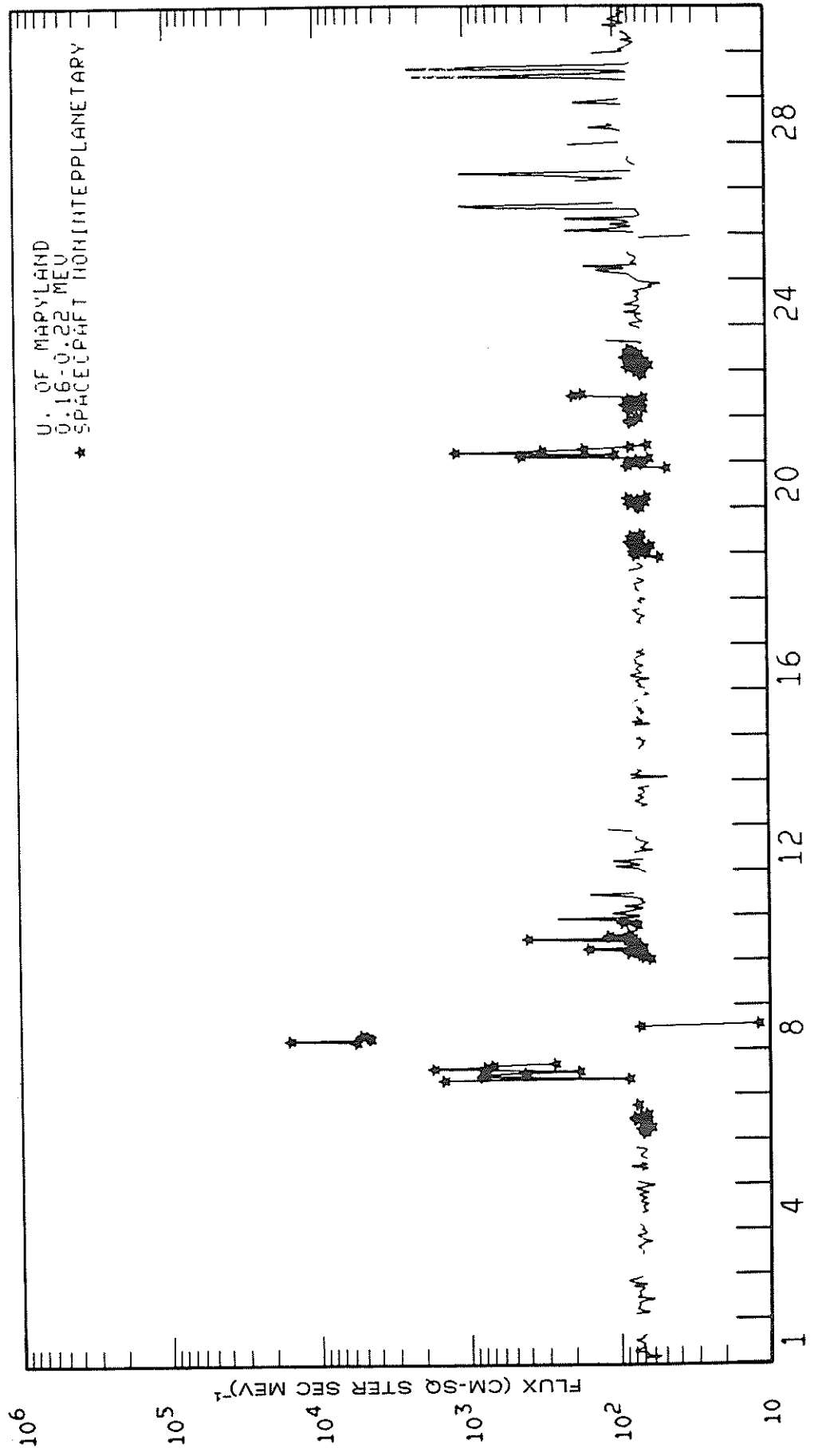
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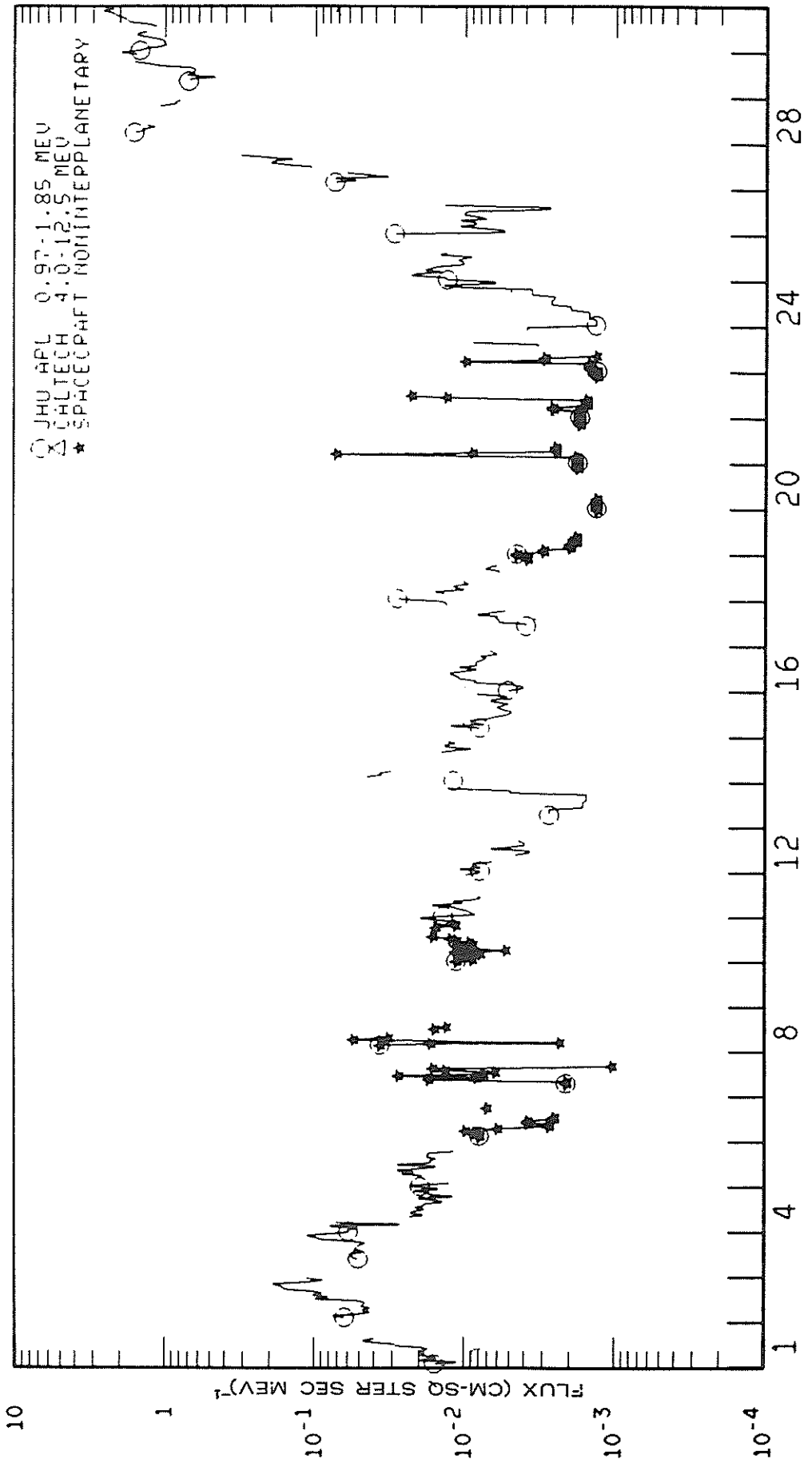
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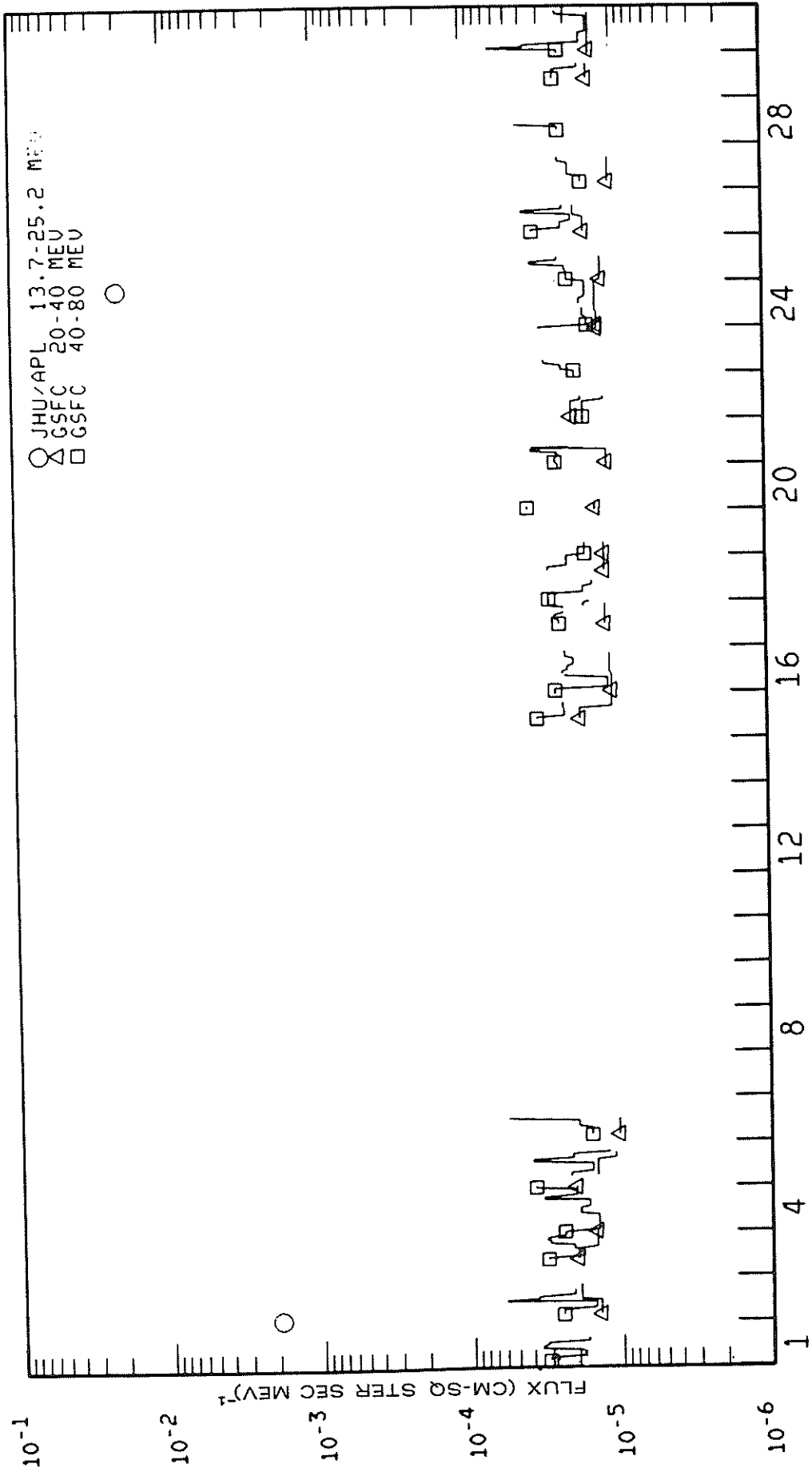
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JUNE 1985



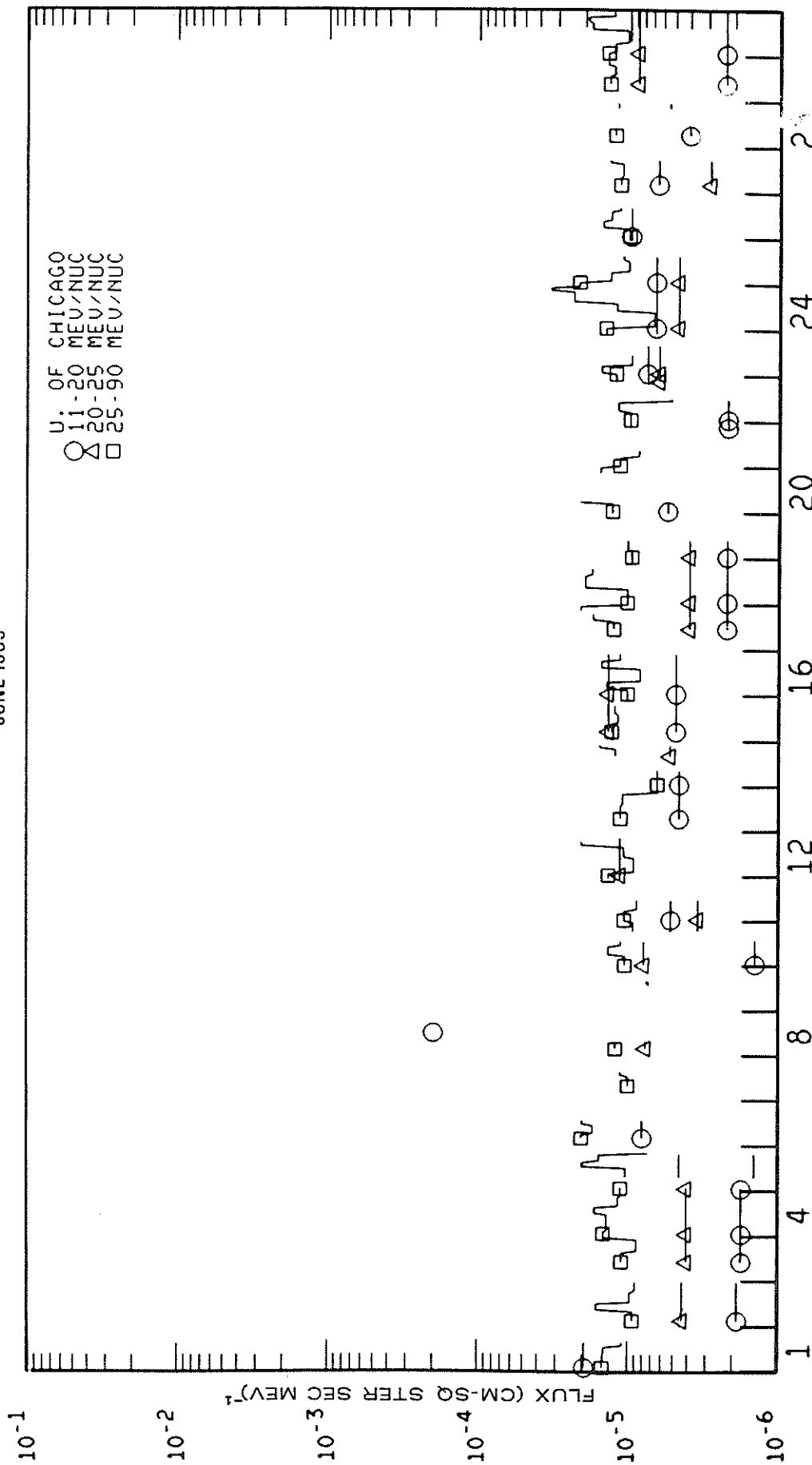
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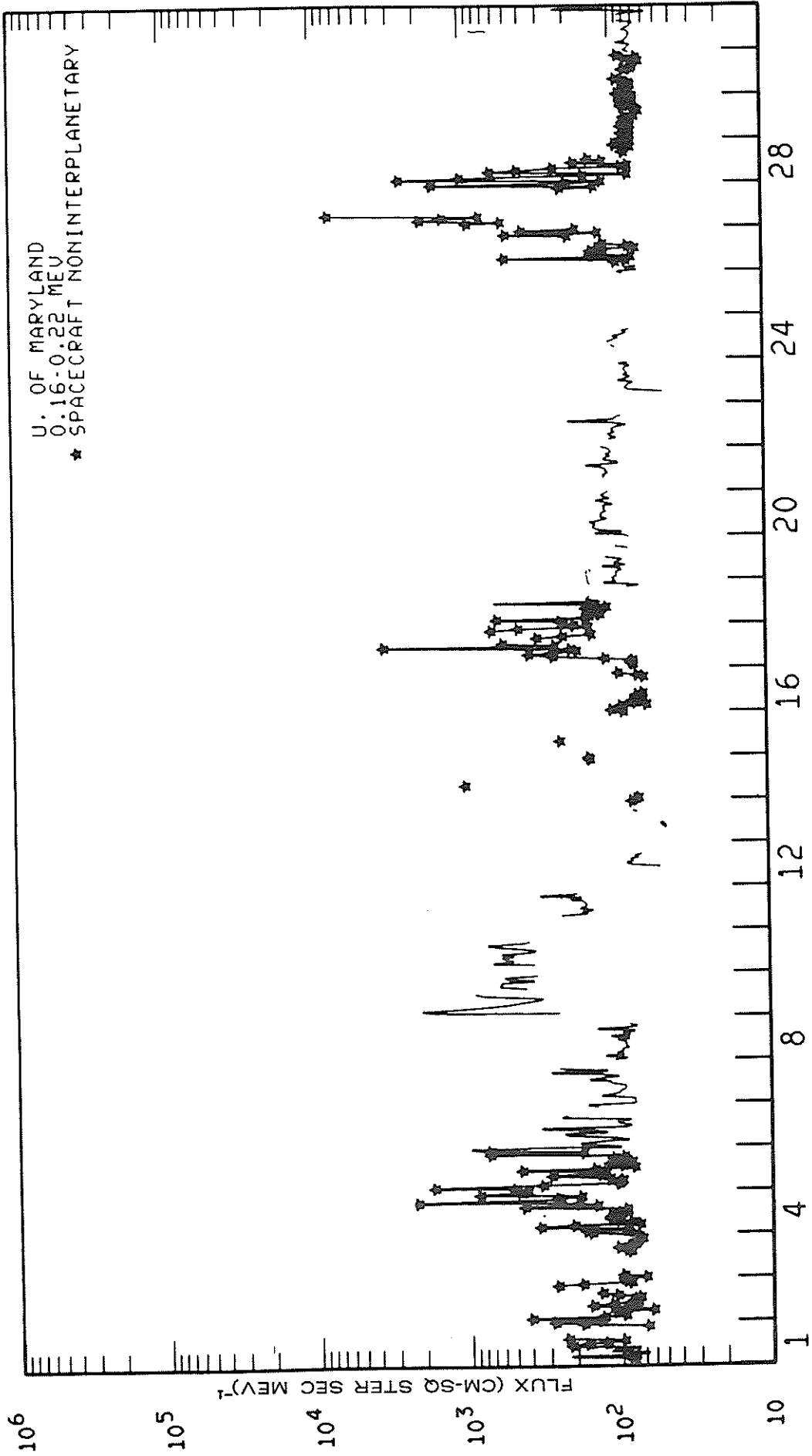
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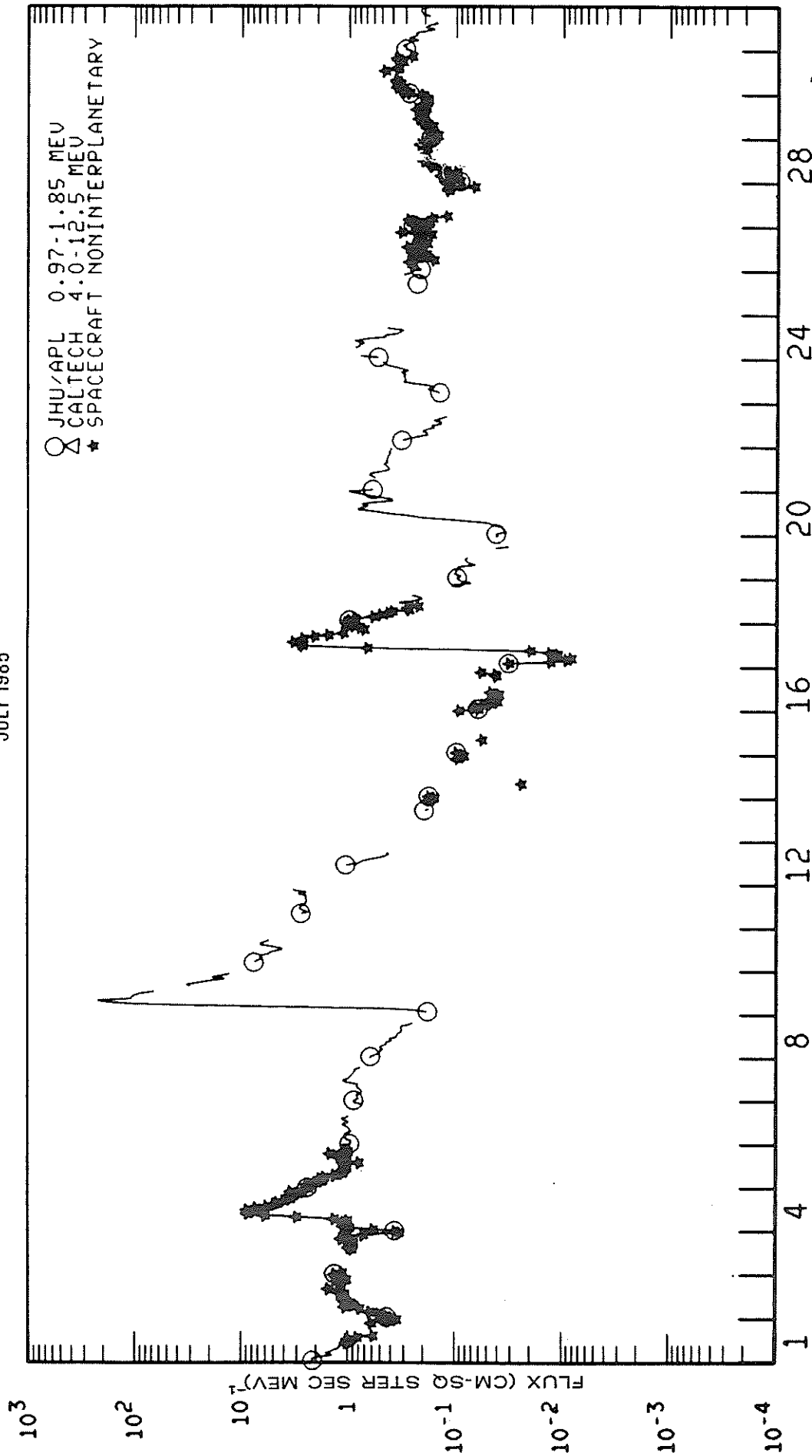


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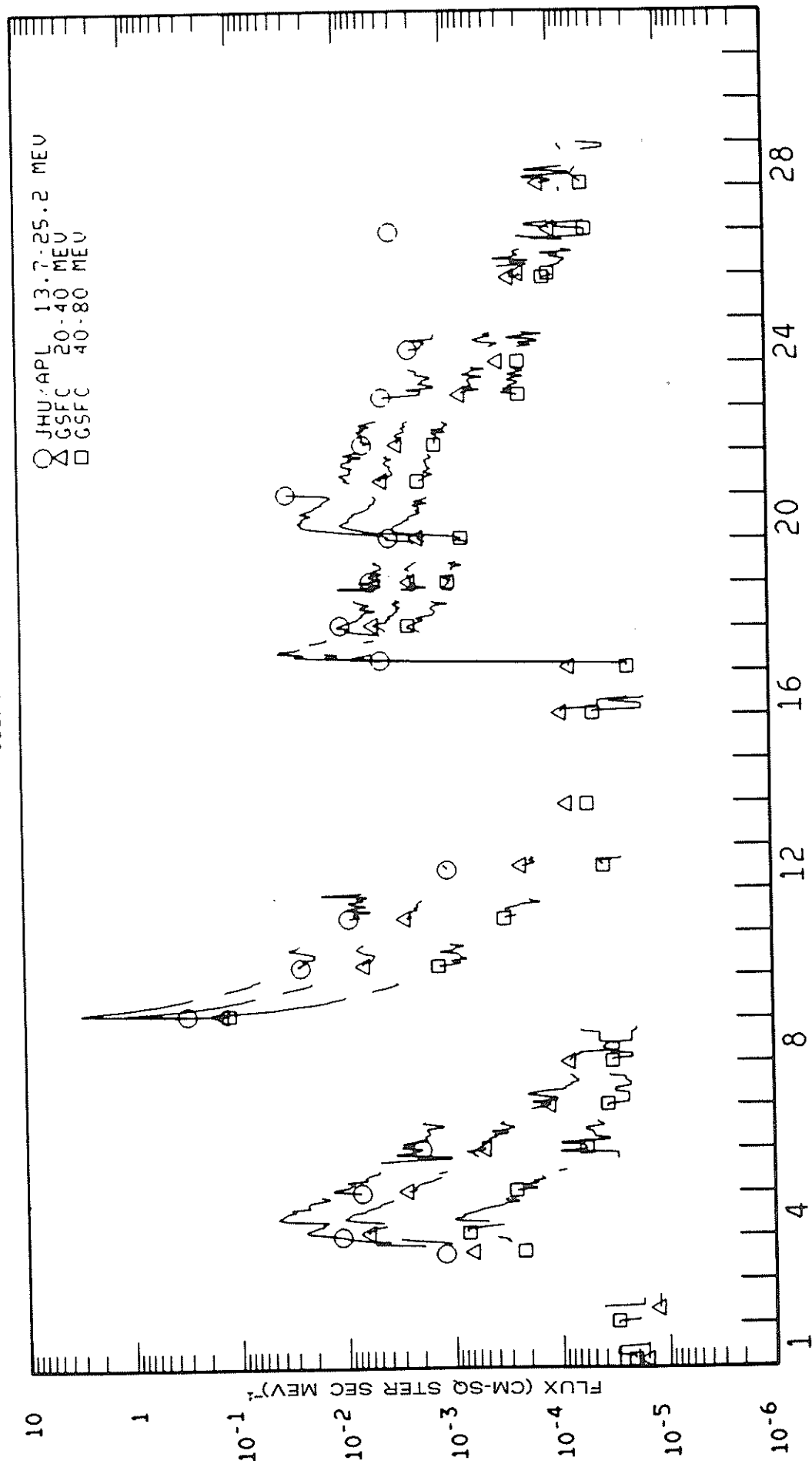


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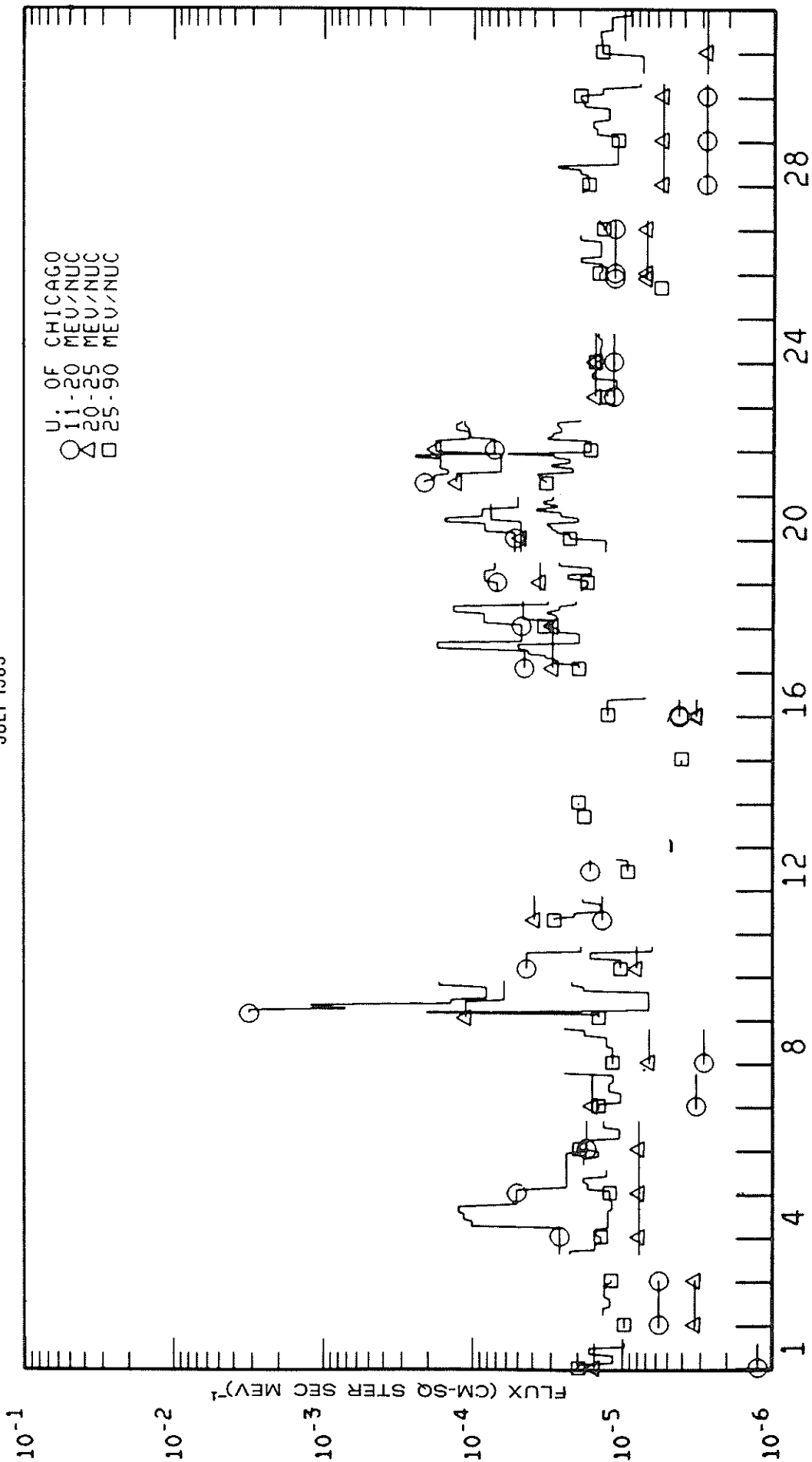
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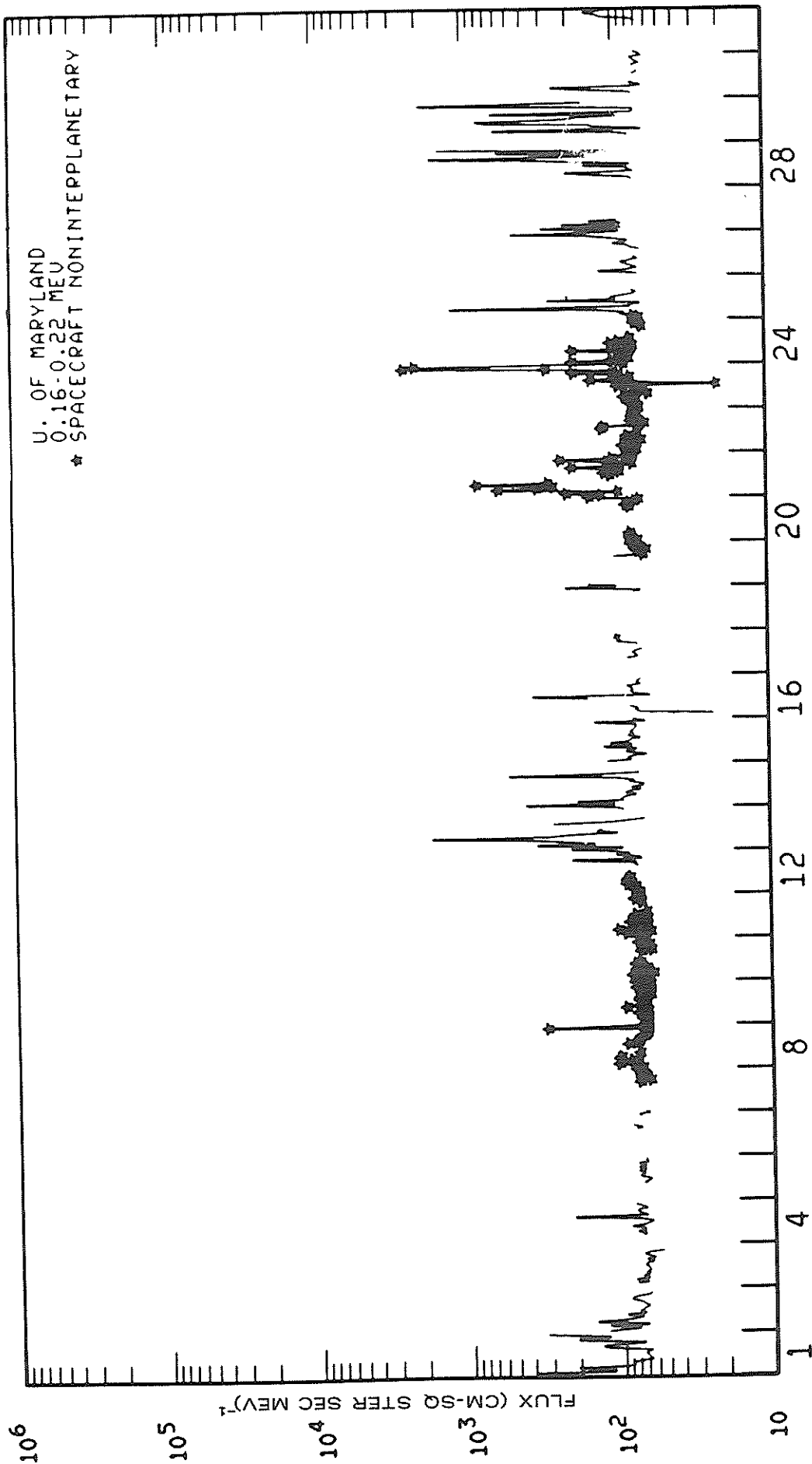
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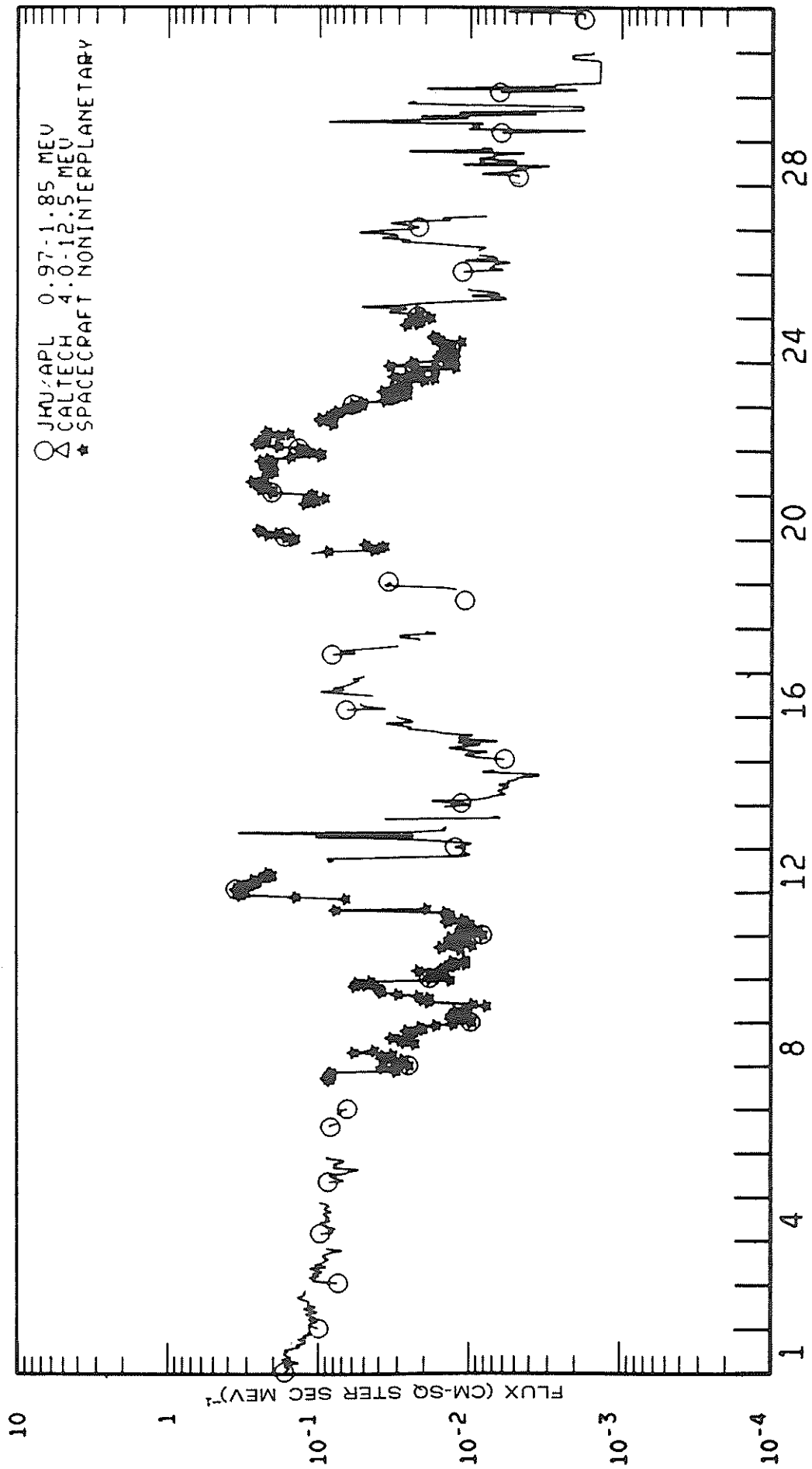
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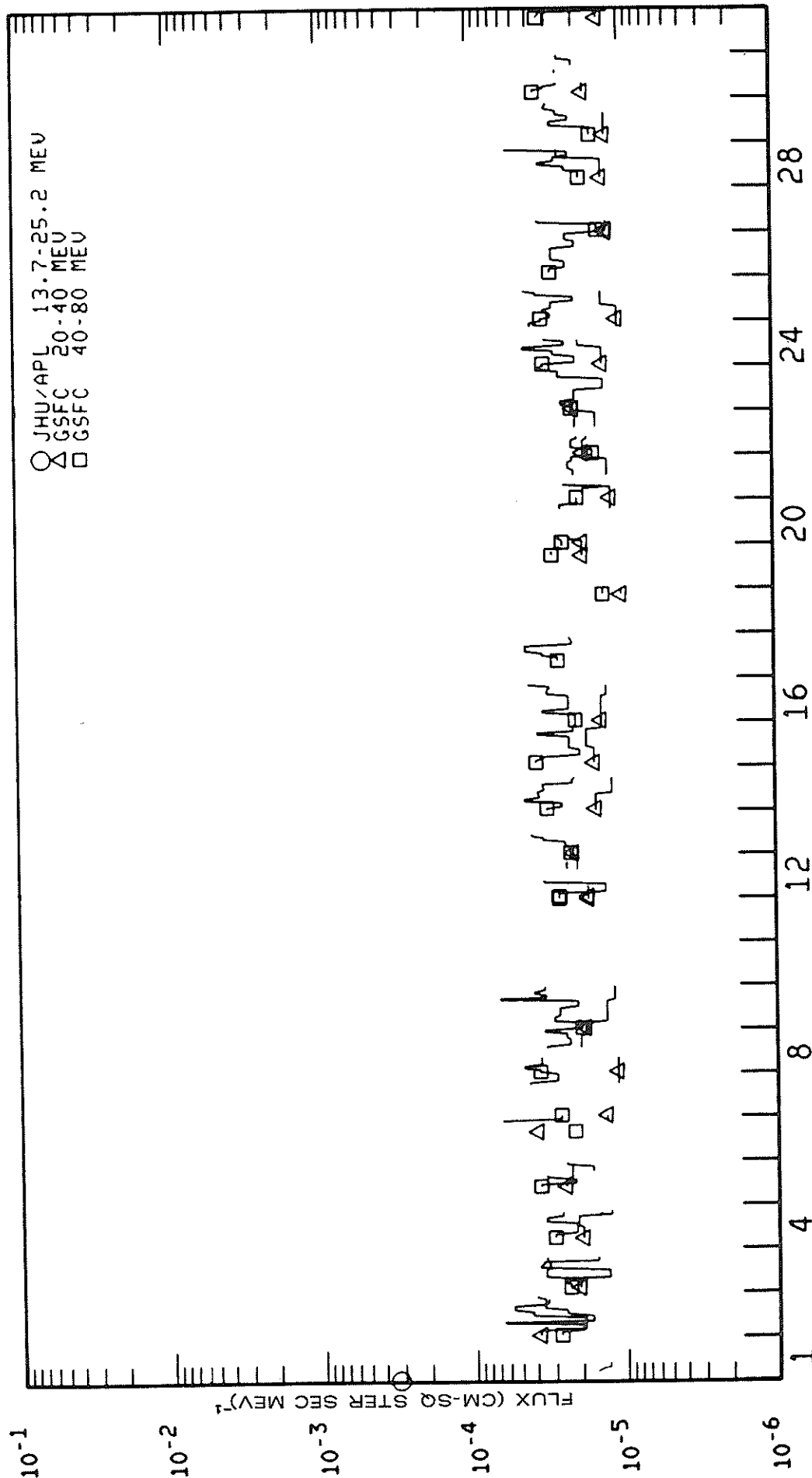
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AUGUST 1985



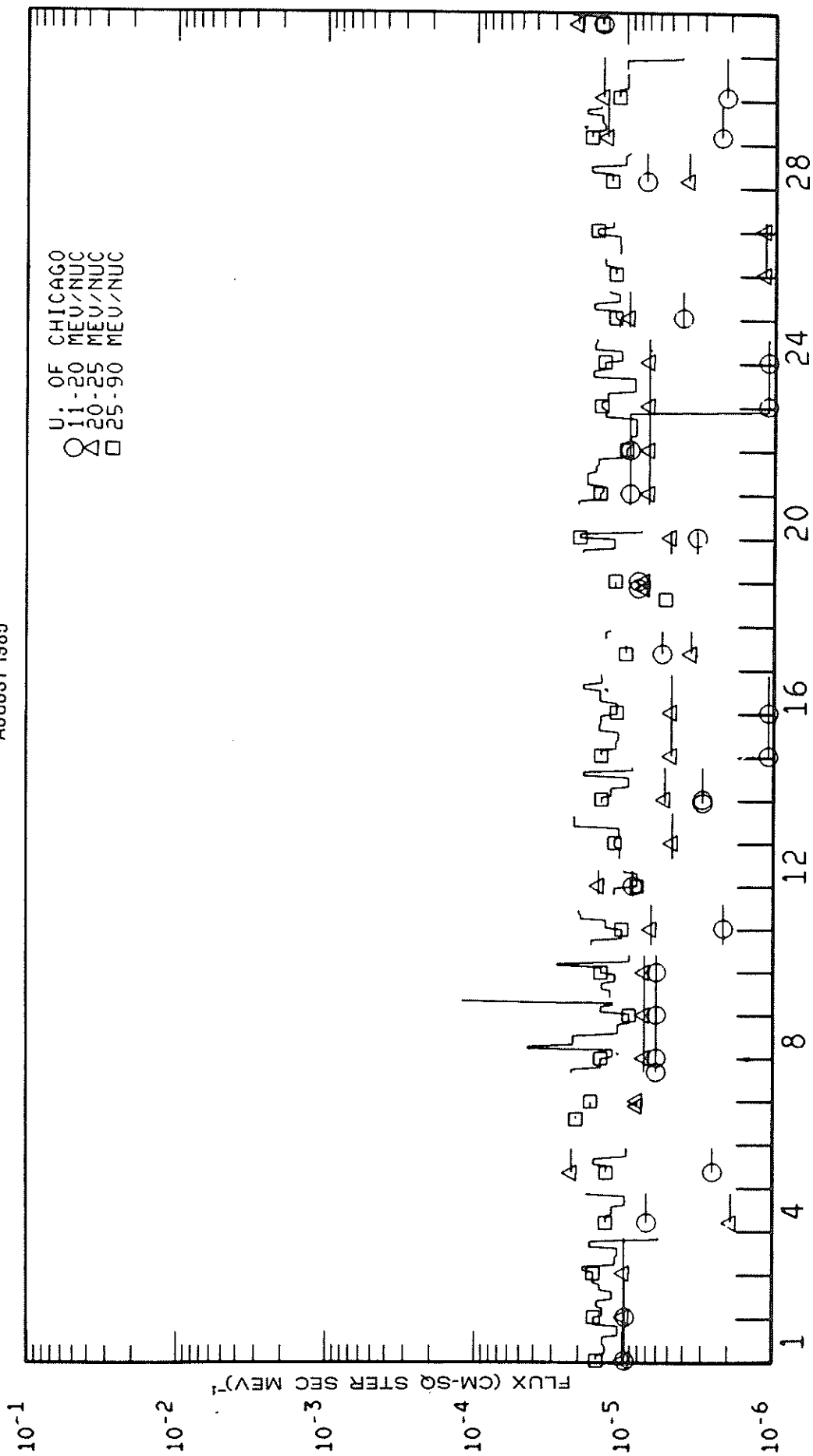
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AUGUST 1985



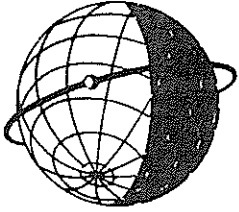
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AUGUST 1985



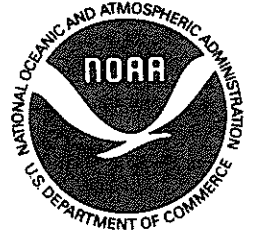
IMP 8 ALPHA PARTICLES
AUGUST 1985



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Late
Aug 85



WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS



The ICSU Panel on WDCs has recommended that it would be appropriate courtesy to acknowledge in publications that data were obtained from the originating station or investigator through the intermediary of the WDCs. The following statement is suggested:

"Data used in this study were provided by WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder Colorado 80303, USA."