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Data for August, July 1994, and Late Data

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SOLAR-GEOPHYSICAL DATA

Number 601

(Issued in Two Parts)

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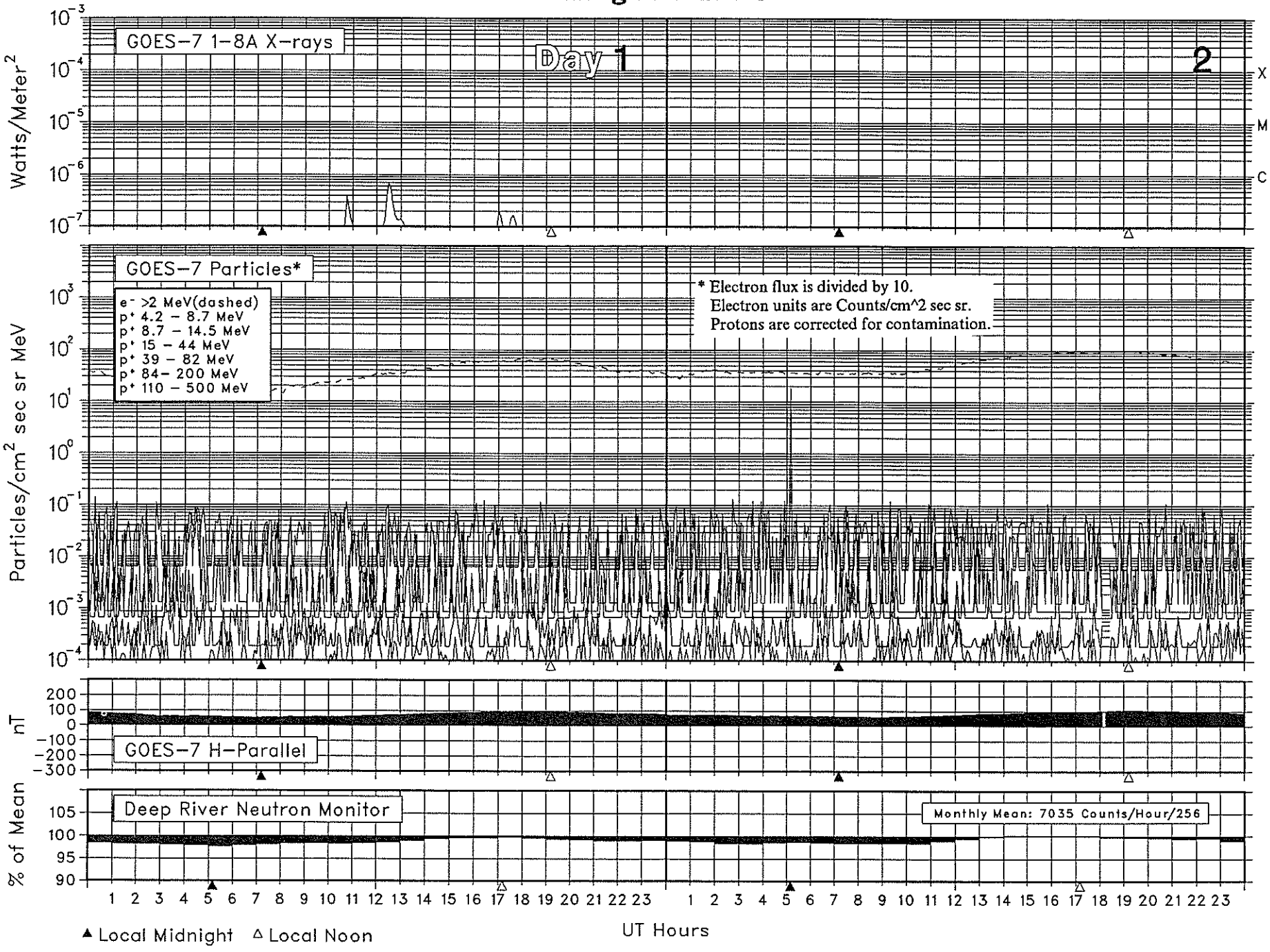

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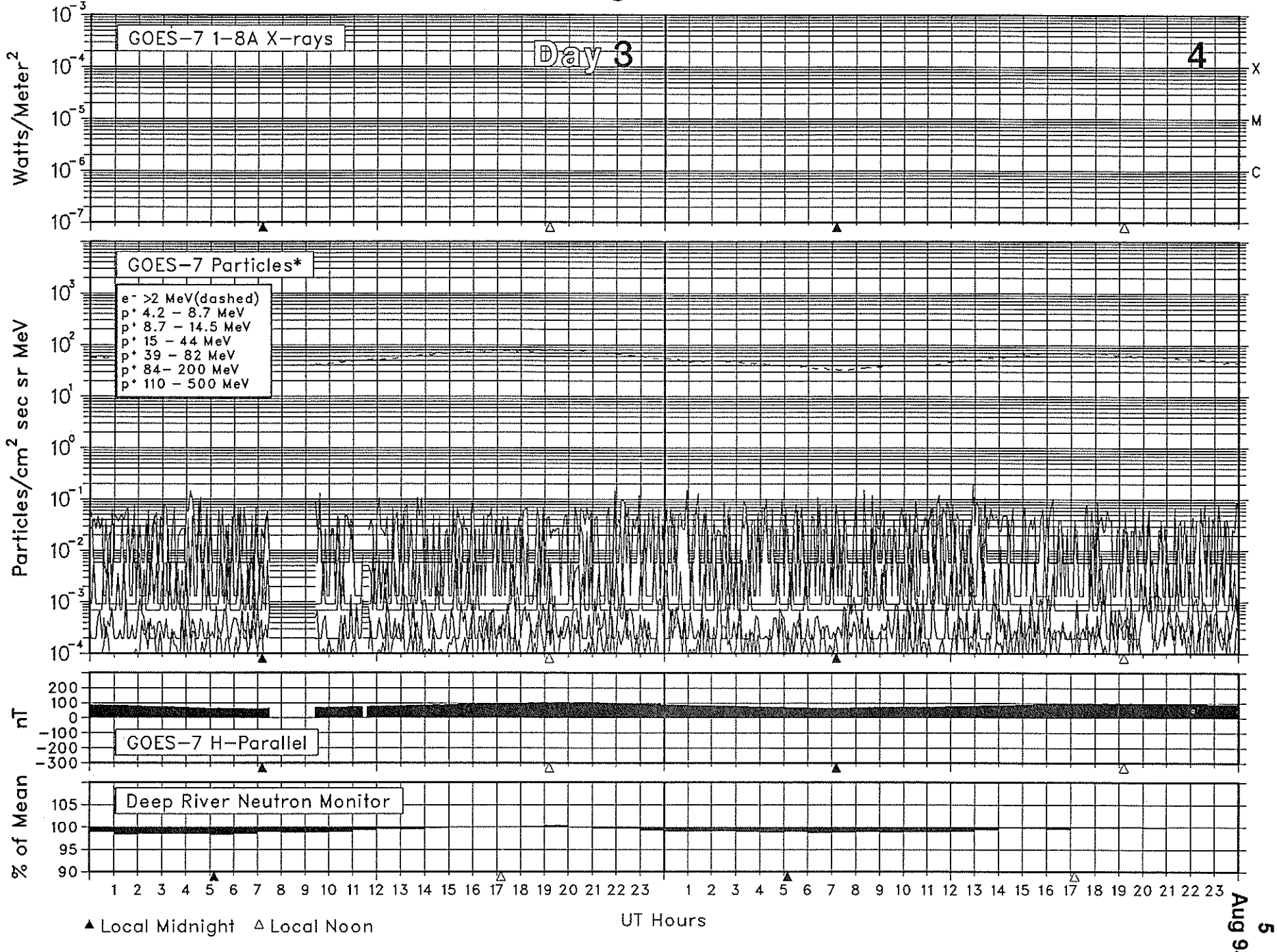

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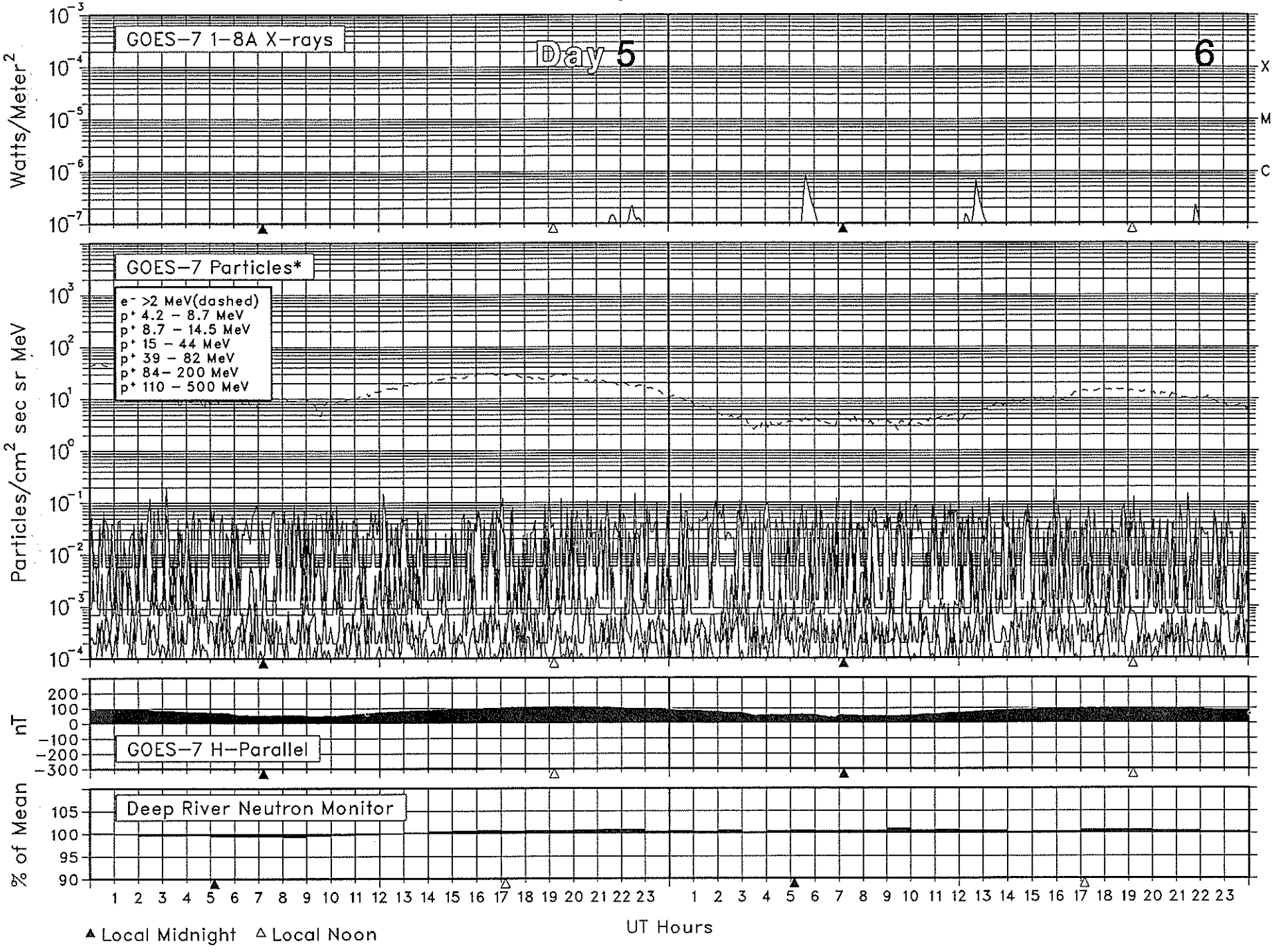

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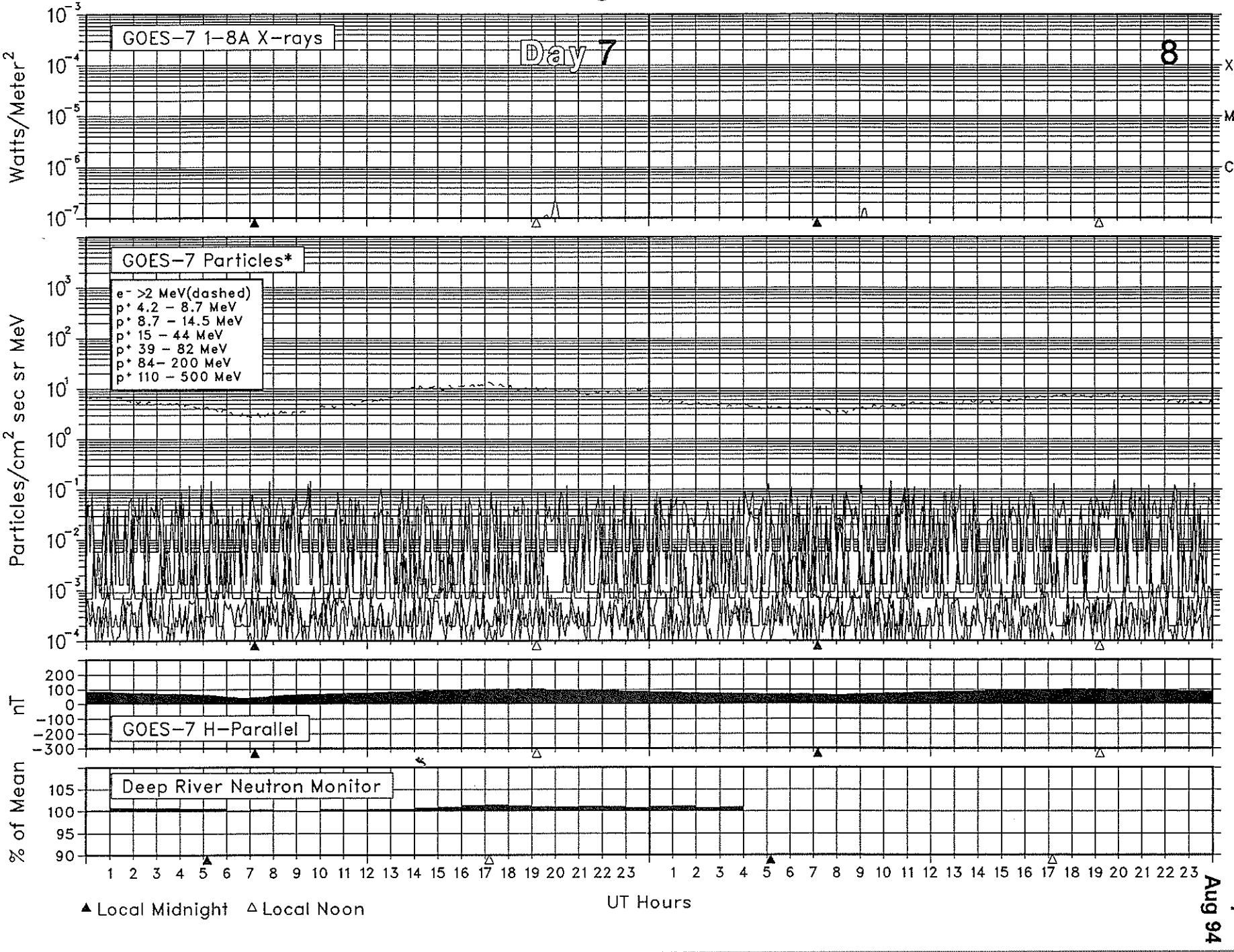

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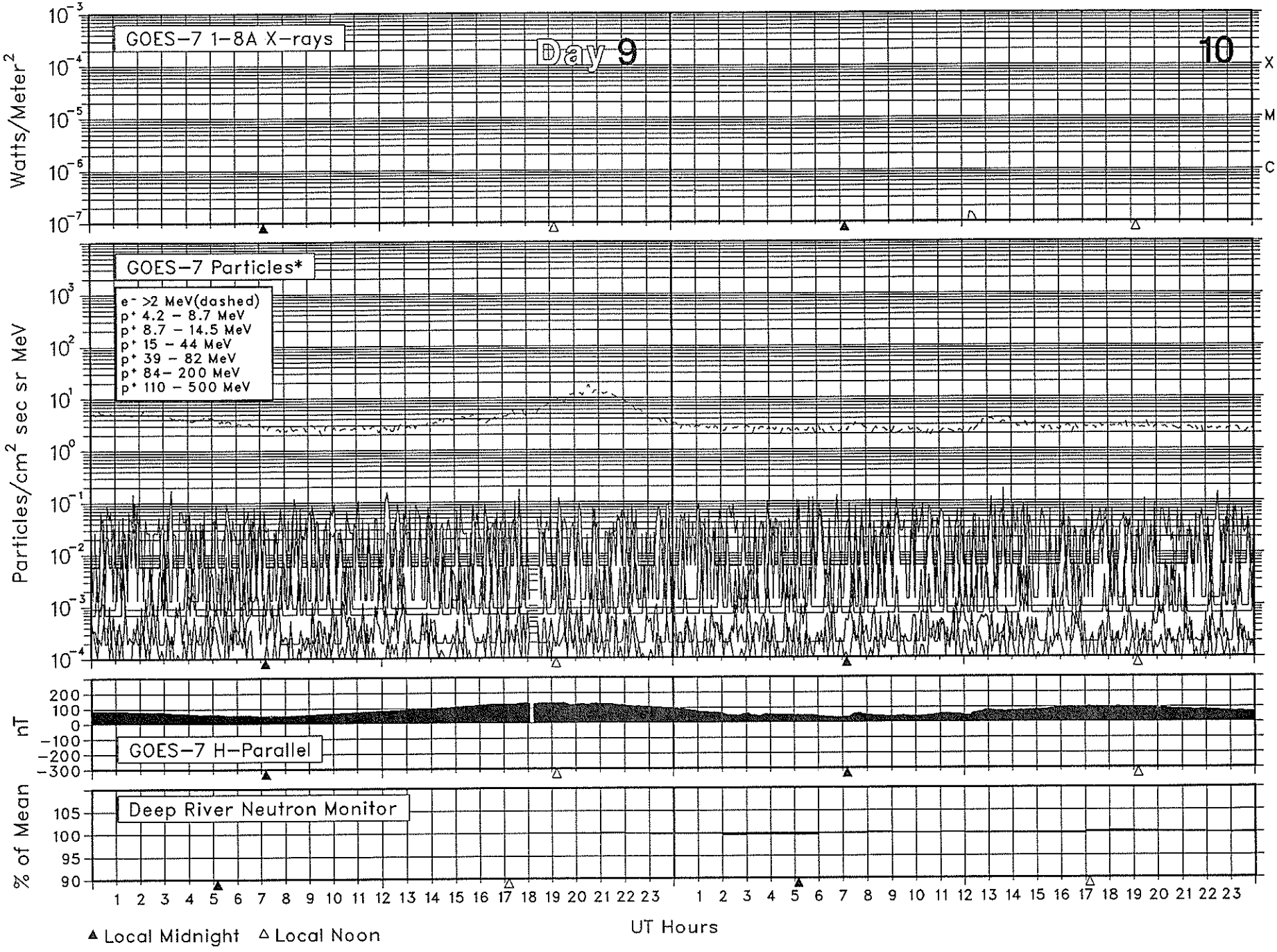

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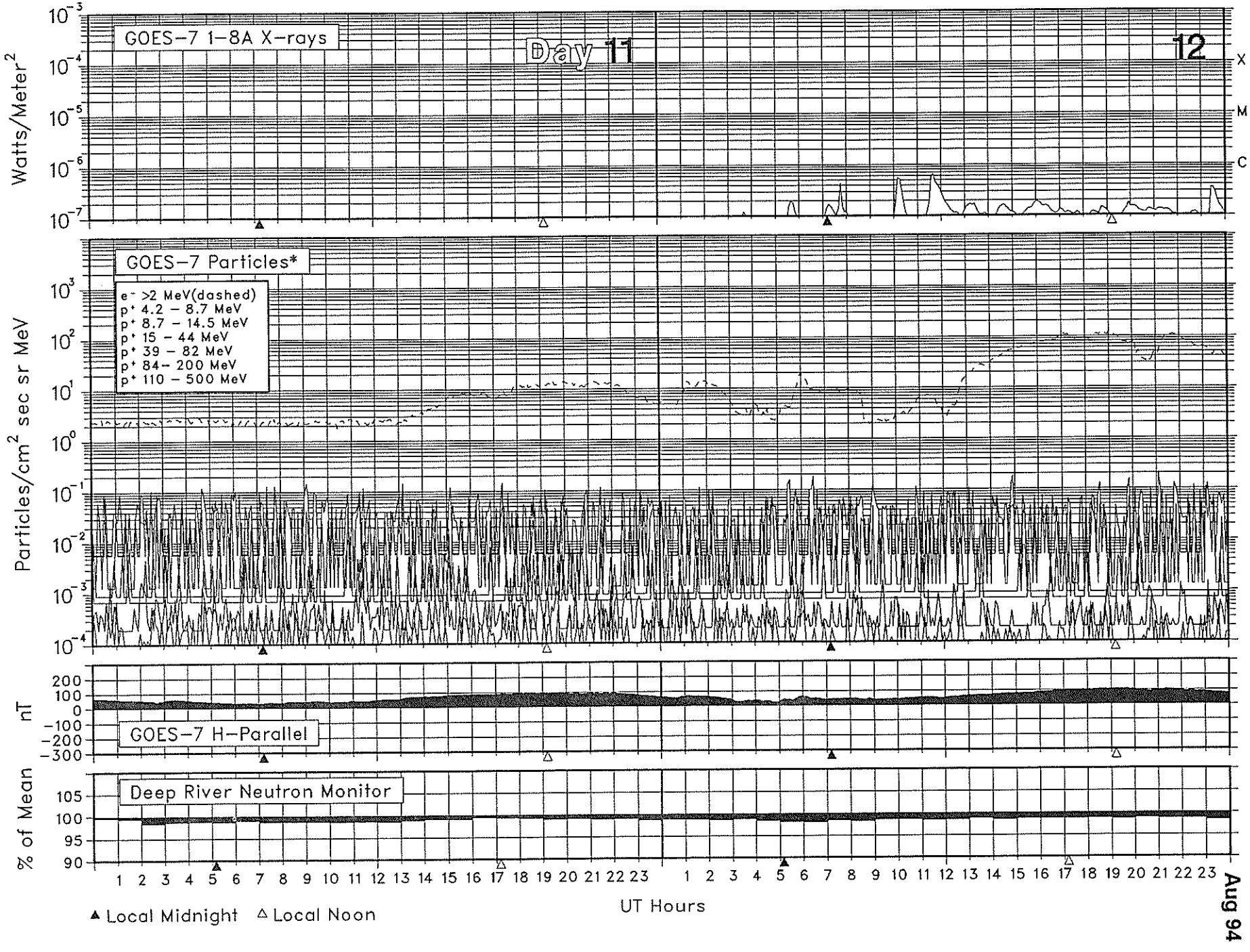

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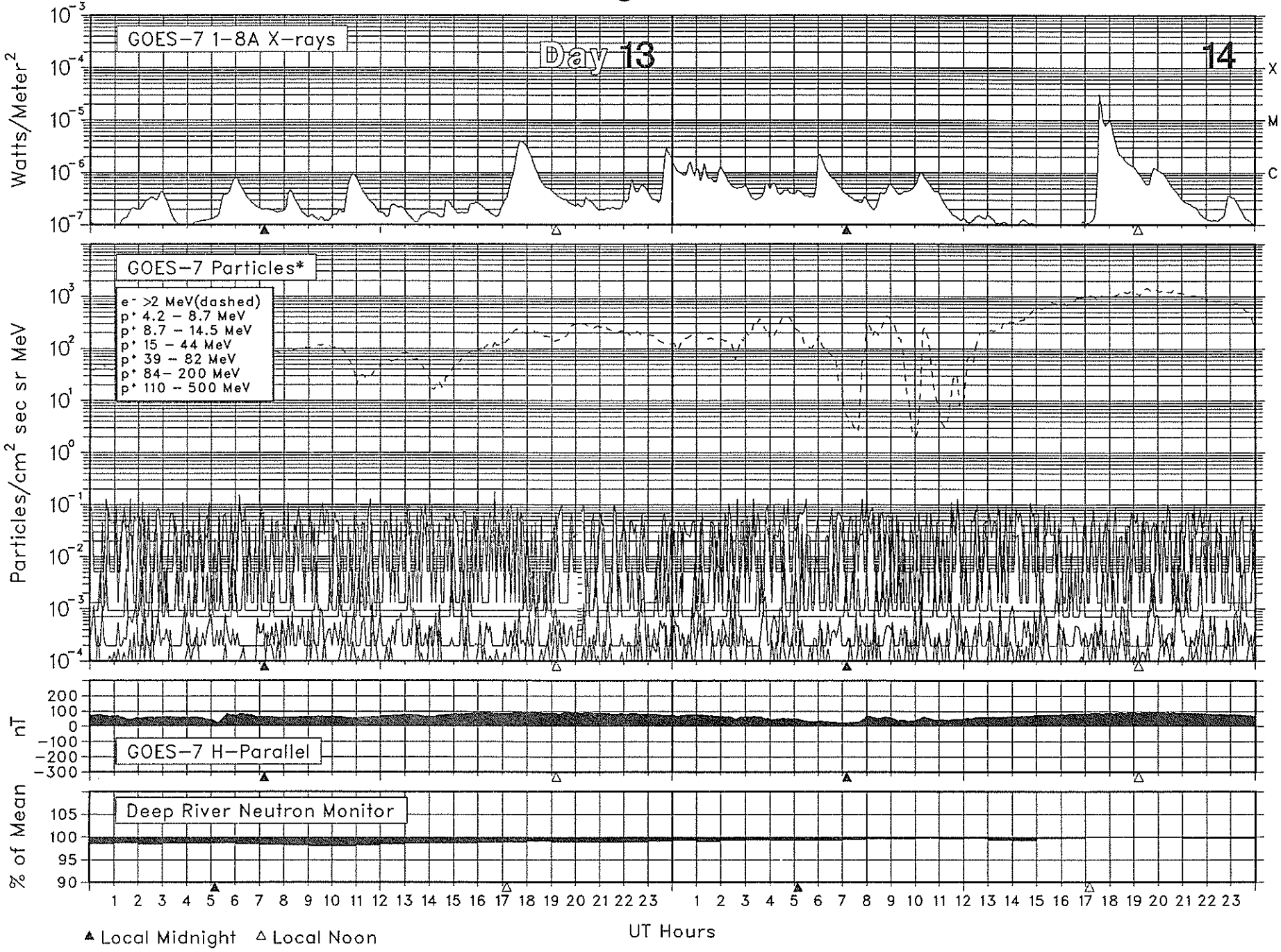

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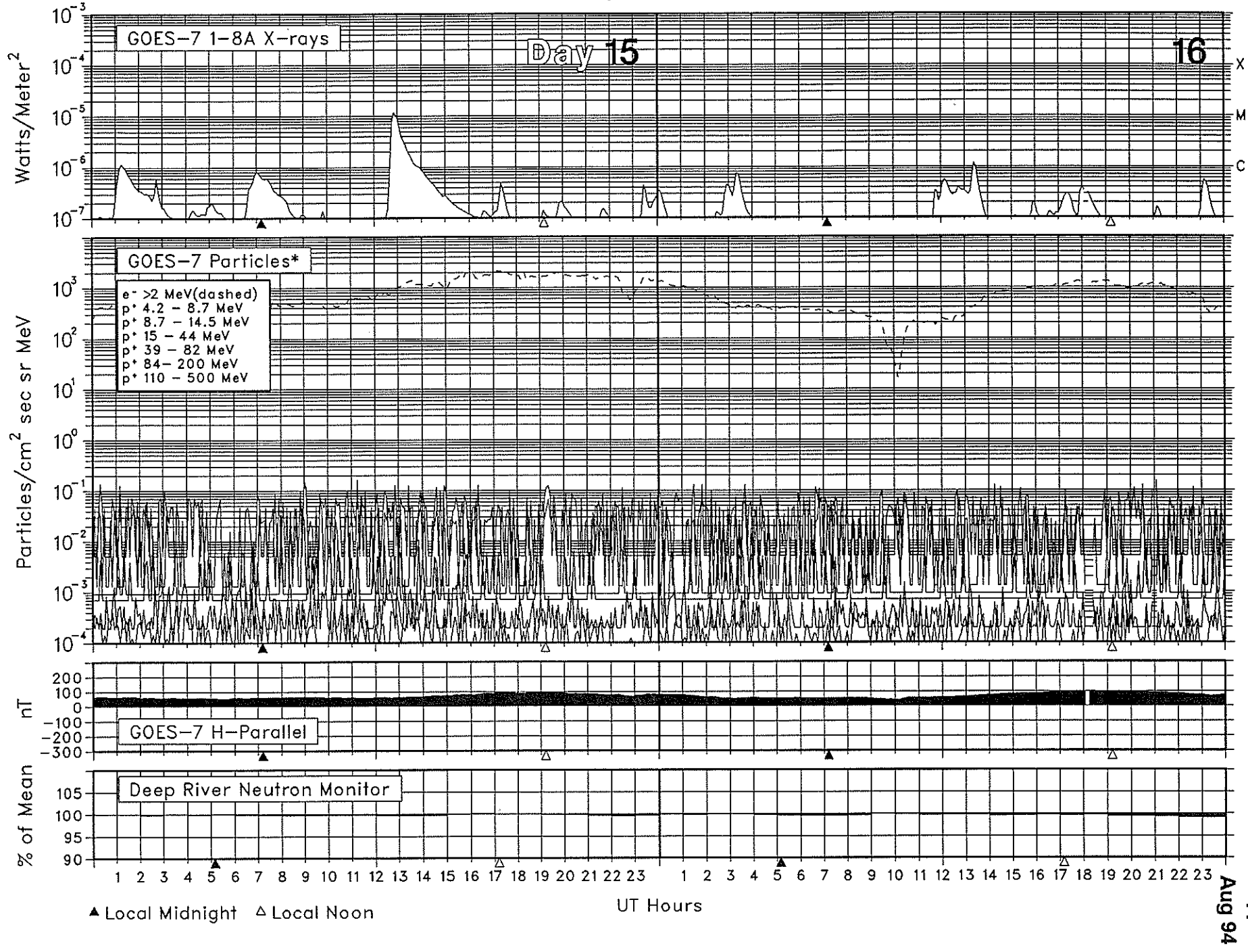

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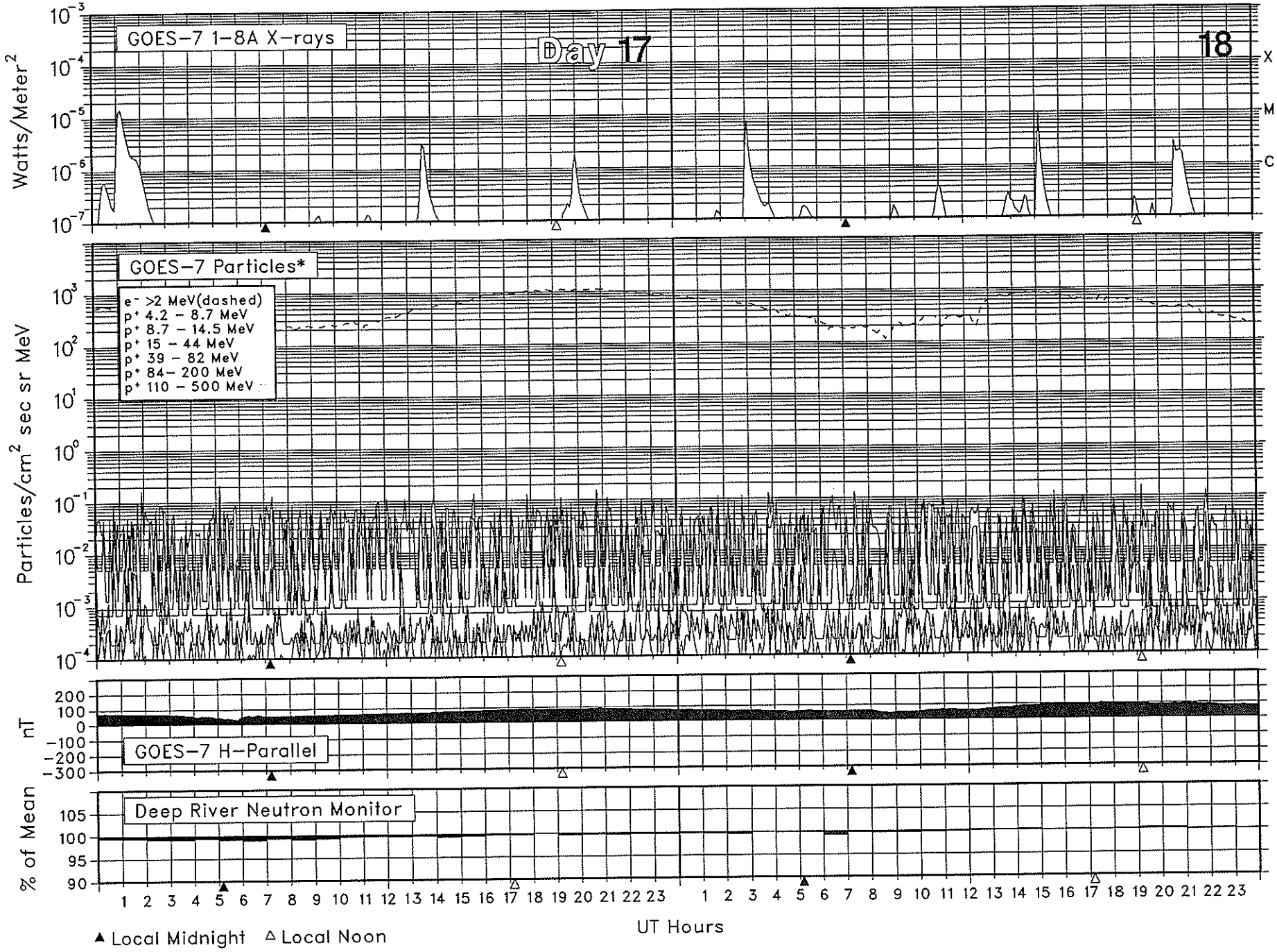

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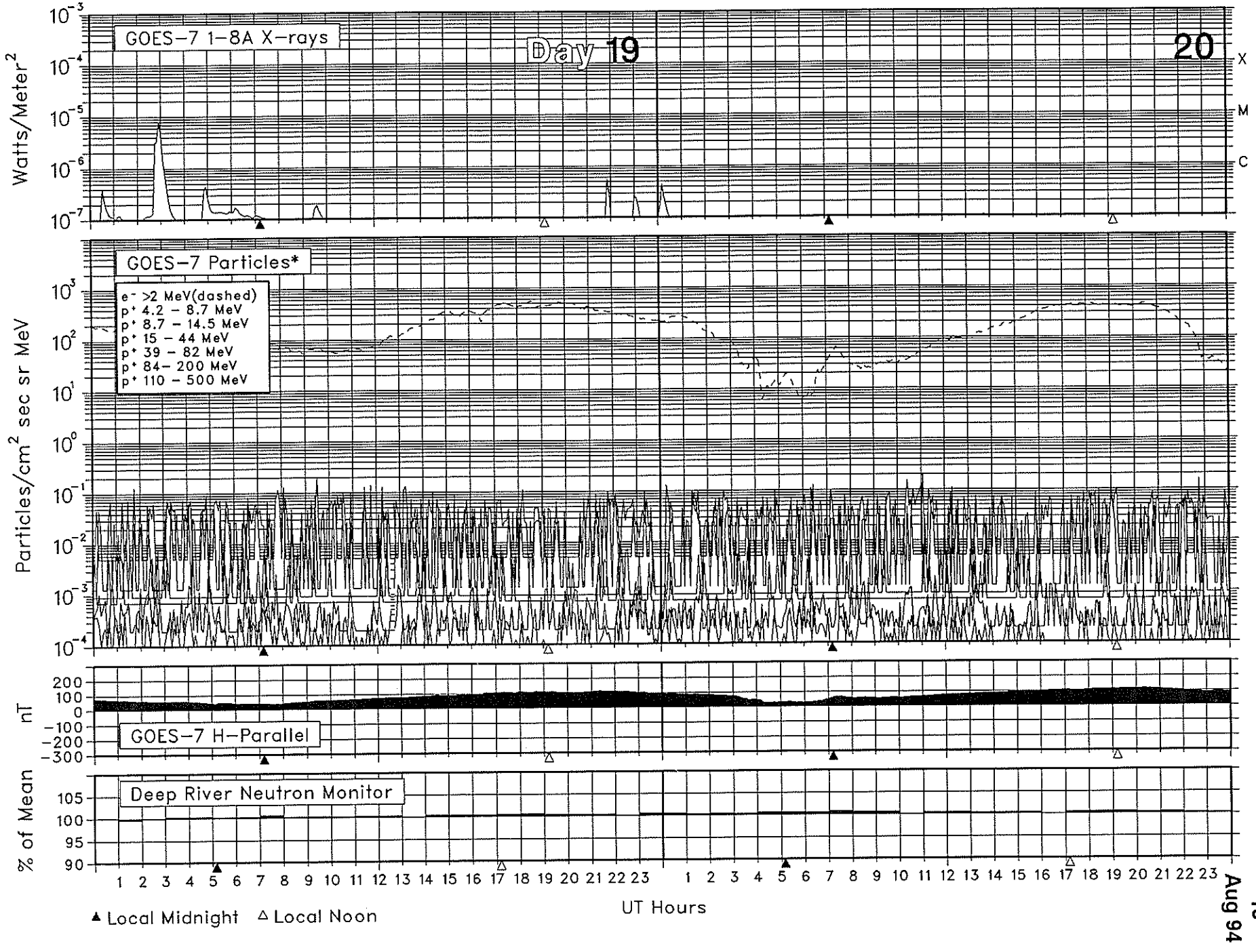

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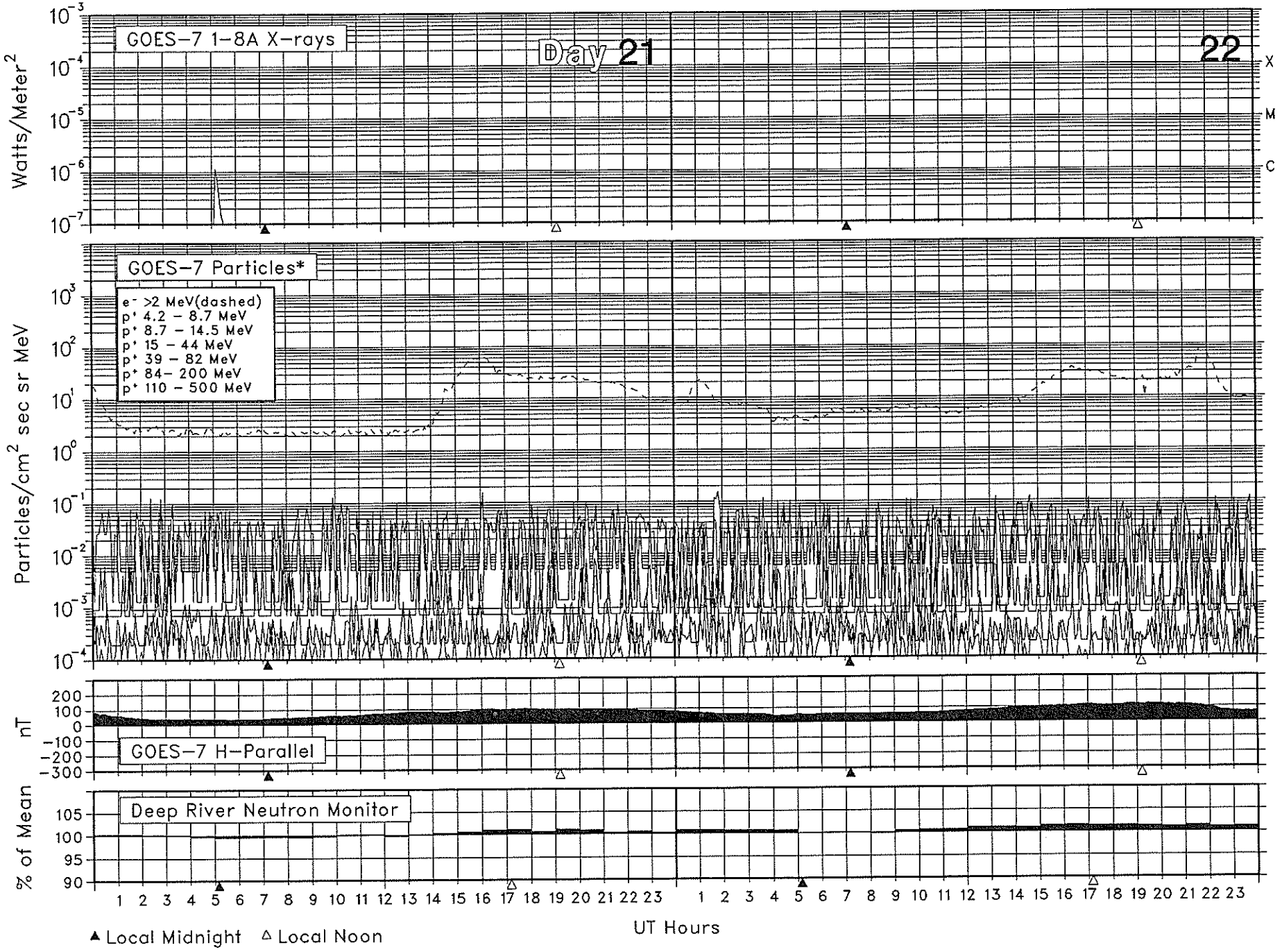

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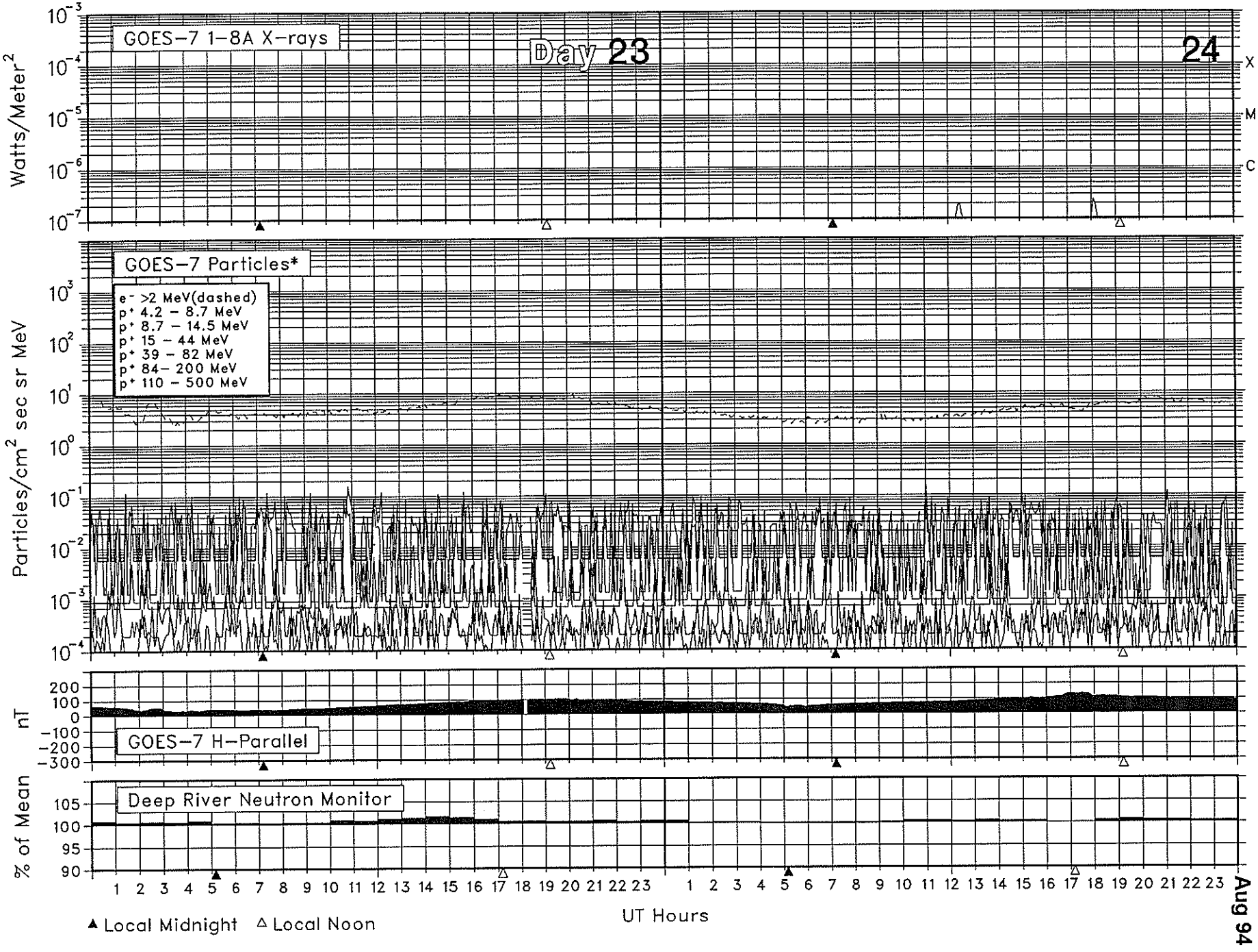

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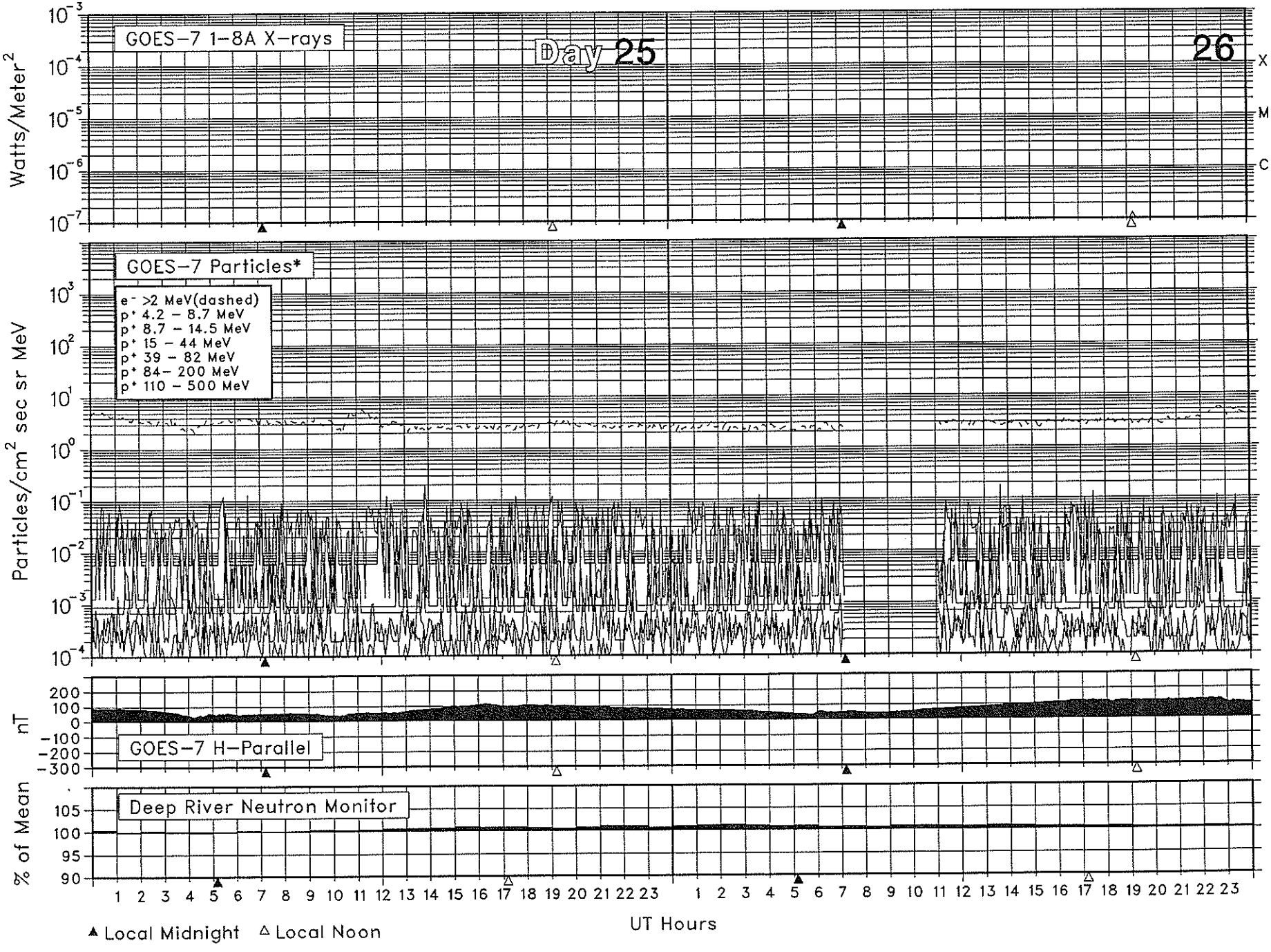

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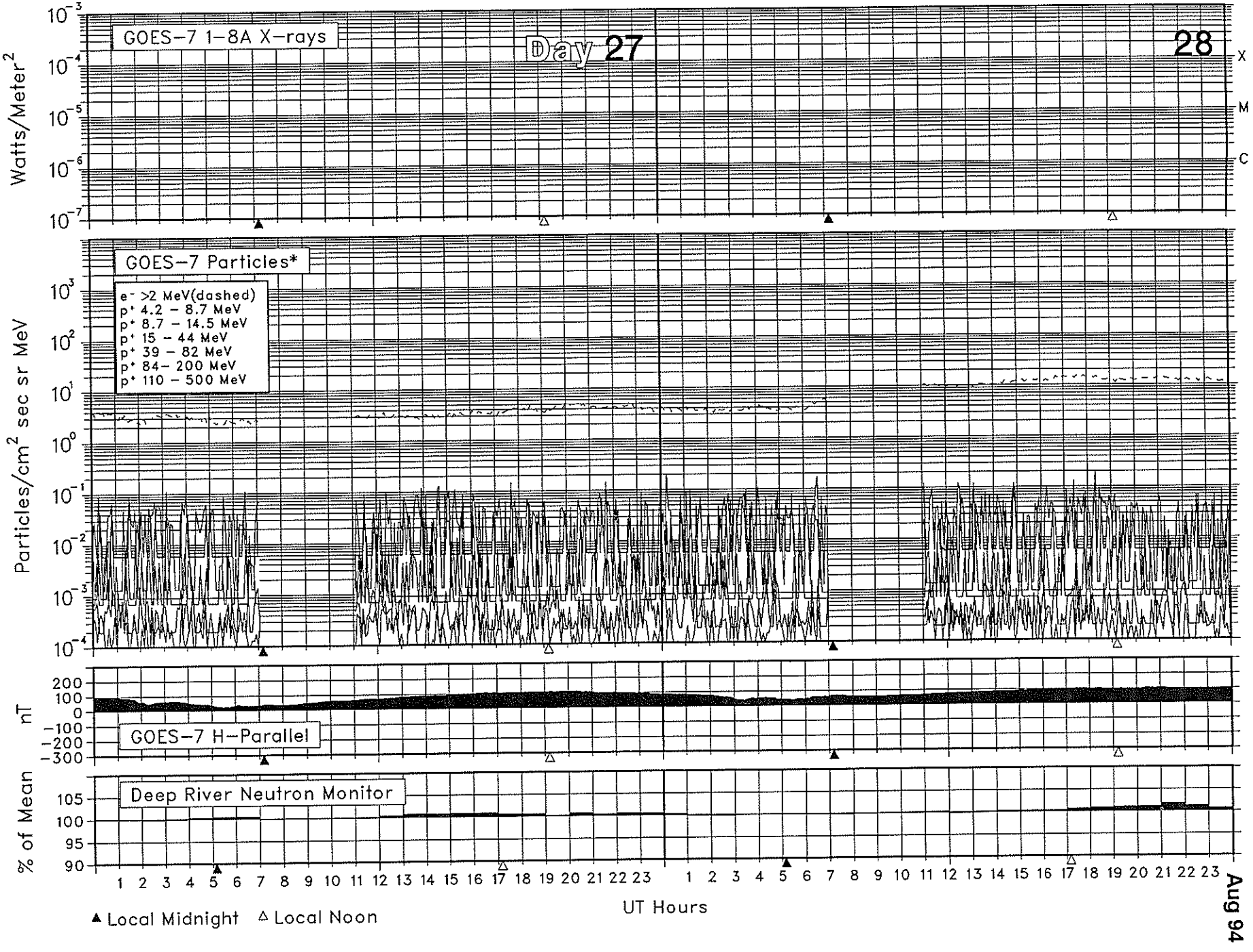

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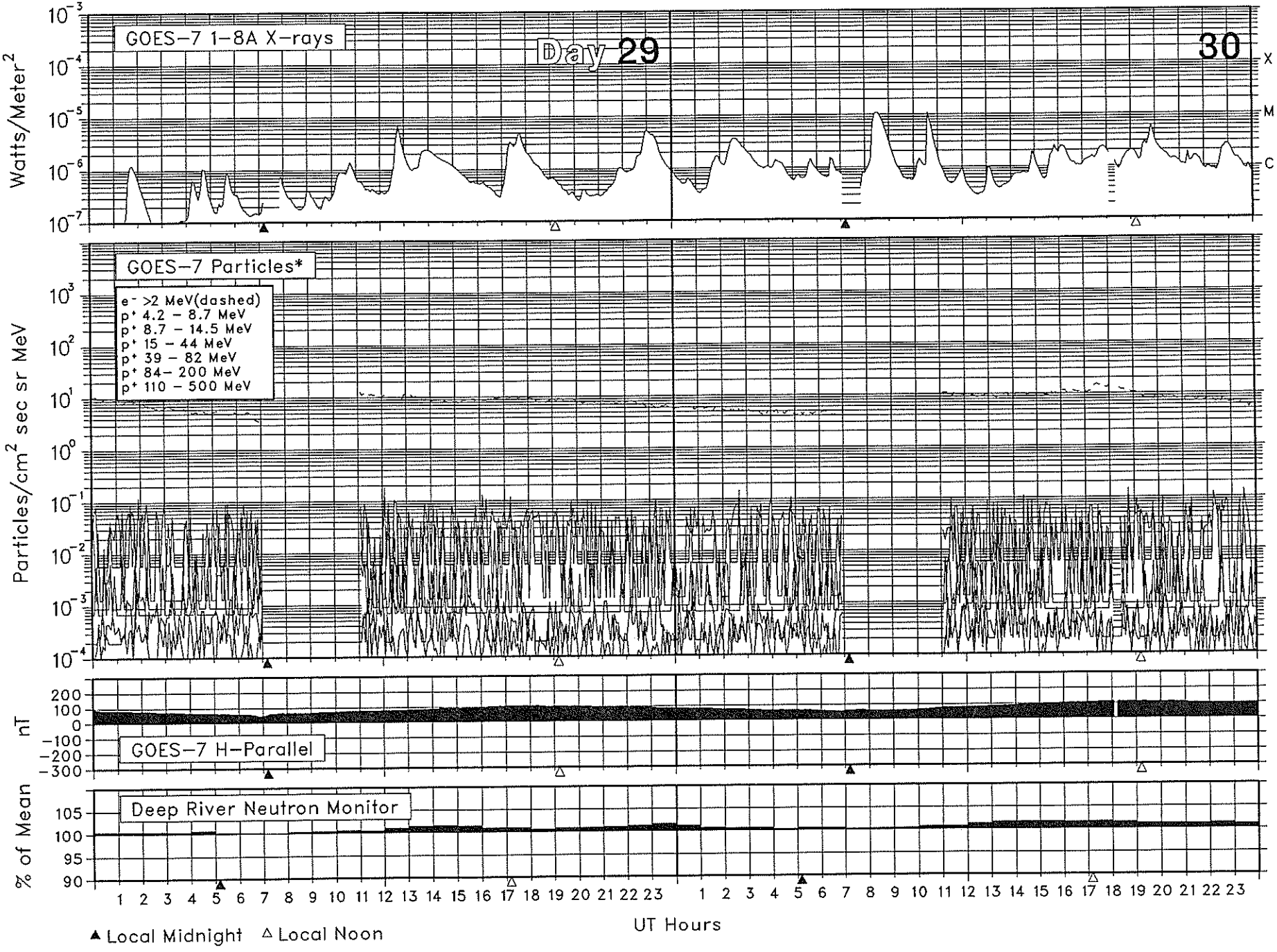

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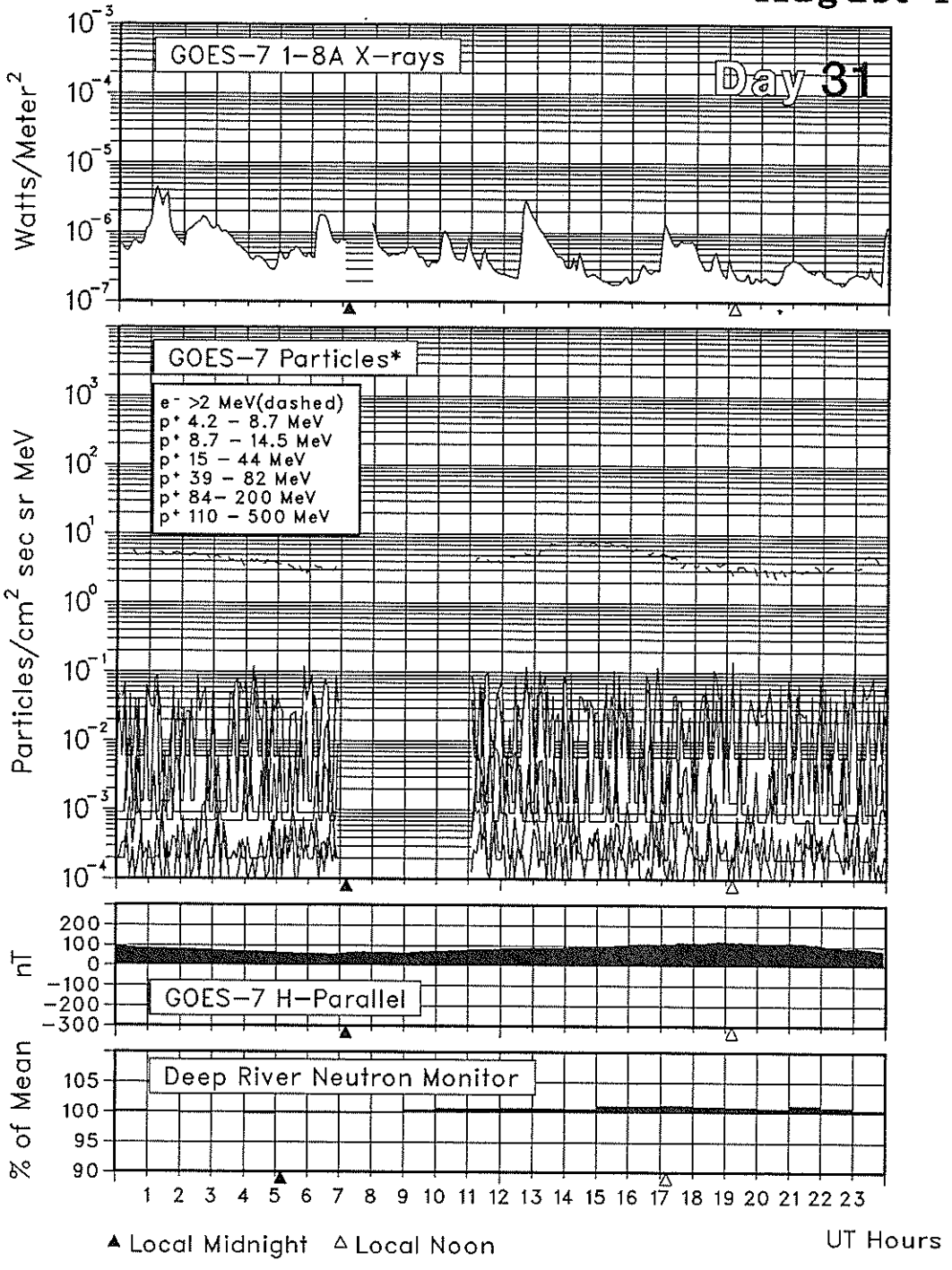


* Electron flux is divided by 10.
Electron units are Counts/cm^2 sec sr.
Protons are corrected for contamination.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — AUGUST 1994

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Region Forecast [1]	Geoadvice[1]
213	01	31	014	075	8	S07	W63	0	0	0	01	Q	SOL: Quiet
							0	0	0		01	Q	MAG: Quiet
							0	0	0		01	Q	PROTON: Quiet
214	02	01	033	074	6	N03	W17	0	0	0	02	Q	SOL: Quiet
						S07	W77	0	0	0	02	Q	MAG: Quiet
						S05	W03	0	0	0	02	Q	PROTON: Quiet
215	03	02	024	075	3	S05	W16	0	0	0	03	Q	SOL: Quiet
						N06	E71	3	0	0	03	Q	MAG: Quiet
						S05	W03	0	0	0	03	Q	PROTON: Quiet
216	04	03	019	076	6	N06	E60	0	0	0	04	Q	SOL: Quiet
						N06	E71	3	0	0	04	Q	MAG: Quiet
						S05	W03	0	0	0	04	Q	PROTON: Quiet
217	05	04	021	075	2	N06	E46	0	0	0	05	Q	SOL: Quiet
						N06	E71	3	0	0	05	Q	MAG: Quiet
						S05	W03	0	0	0	05	Q	PROTON: Quiet
218	06	05	027	076	5	N06	E32	0	0	0	06	Q	SOL: Quiet
						N06	E71	3	0	0	06	Q	MAG: Quiet
						S05	W03	0	0	0	06	Q	PROTON: Quiet
219	07	06	029	075	3	N06	E18	4	0	0	07	Q	SOL: Quiet
						N06	E71	3	0	0	07	Q	MAG: Quiet
						S05	W03	0	0	0	07	Q	PROTON: Quiet
220	08	07	018	076	1	N05	E04	3	0	0	08	Q	SOL: Quiet
						N06	E71	3	0	0	08	Q	MAG: Quiet
						S05	W03	0	0	0	08	Q	PROTON: Quiet
221	09	08	018	074	2	N05	W10	0	0	0	09	Q	SOL: Quiet
						N06	E71	3	0	0	09	Q	MAG: Quiet
						S05	W03	0	0	0	09	Q	PROTON: Quiet
222	10	09	018	075	3	N05	W25	0	0	0	10	Q	SOL: Quiet
						N06	E71	3	0	0	10	Q	MAG: Active
						S05	W03	0	0	0	10	Q	PROTON: Quiet
223	11	10	033	078	12	N04	W38	0	0	0	11	Q	SOL: Quiet
						S13	W17	0	0	0	11	Q	MAG: Active
						S05	W03	0	0	0	11	Q	PROTON: Quiet
224	12	11	037	077	17	N04	W52	0	0	0	12	Q	SOL: Quiet
						S12	W31	0	0	0	12	Q	MAG: Active
						S05	E67	1	0	0	12	Q	PROTON: Quiet
225	13	12	058	081	14	N04	W67	0	0	0	13	Q	SOL: Quiet
						S07	E54	0	0	0	13	Q	MAG: Active
						S11	E16	6	0	0	13	E	PROTON: Quiet
226	14	13	059	084	22	N04	W81	0	0	0	14	Q	SOL: Eruptive
						S06	E40	0	0	0	14	Q	MAG: Active
						S11	E02	5	0	0	14	E	PROTON: Quiet
227	15	14	075	089	26	N06	W95	0	0	0	15	Q	SOL: Eruptive
						S05	E27	0	0	0	15	Q	MAG: Active
						S10	W11	7	1	0	15	E	PROTON: Quiet
						N10	E46	0	0	0	15	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — AUGUST 1994

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Region Forecast [1]	Geoadvice[1]
						°Lat	°Long	Total	M	X			
228	16	15	061	081	13	S06	E13	0	0	0	16	Q	SOL: Eruptive
						S12	W24	5	1	0	16	E	MAG: Quiet
						N10	E32	0	0	0	16	Q	PROTON: Quiet
229	17	16	064	077	8	S06	W01	0	0	0	17	Q	SOL: Eruptive
						S11	W38	4	0	0	17	E	MAG: Active
						N09	E19	0	0	0	17	Q	PROTON: Quiet
						S13	E46	0	0	0	17	Q	
230	18	17	073	078	6	S06	W13	0	0	0	18	Q	SOL: Eruptive
						S12	W52	3	1	0	18	E	MAG: Quiet
						N09	E04	0	0	0	18	Q	PROTON: Quiet
						S12	E31	0	0	0	18	Q	
						S13	E42	0	0	0	18	Q	
231	19	18	062	077	6	S06	W27	0	0	0	19	Q	SOL: Eruptive
						S12	W66	3	1	0	19	E	MAG: Quiet
						S12	E20	1	0	0	19	Q	PROTON: Quiet
						S13	E28	0	0	0	19	Q	
232	20	19	065	075	3	S06	W41	0	0	0	20	Q	SOL: Eruptive
						S12	W77	2	1	0	20	E	MAG: Quiet
						S12	E06	0	0	0	20	E	PROTON: Quiet
						S13	E14	0	0	0	20	Q	
233	21	20	058	072	6	S06	W55	0	0	0	21	Q	SOL: Eruptive
						S13	W90	0	0	0	21	Q	MAG: Quiet
						S13	W08	2	0	0	21	E	PROTON: Quiet
						S13	E01	0	0	0	21	Q	
234	22	21	040	071	4	S08	W68	0	0	0	22	Q	SOL: Quiet
						S12	W22	0	0	0	22	Q	MAG: Quiet
						S14	W15	0	0	0	22	Q	PROTON: Quiet
235	23	22	012	071	4	S14	W36	0	0	0	23	Q	SOL: Quiet
						S12	W22	0	0	0	23	Q	MAG: Quiet
						S14	W15	0	0	0	23	Q	PROTON: Quiet
236	24	23	038	072	5	S14	W35	0	0	0	24	Q	SOL: Quiet
						N10	W47	0	0	0	24	Q	MAG: Quiet
						S07	E40	0	0	0	24	Q	PROTON: Quiet
237	25	24	050	072	4	S15	W48	0	0	0	25	Q	SOL: Quiet
						S14	W55	0	0	0	25	Q	MAG: Quiet
						N10	W60	0	0	0	25	Q	PROTON: Quiet
						S08	E26	0	0	0	25	Q	
238	26	25	015	071	12	S08	E12	0	0	0	26	Q	SOL: Quiet
						S14	W55	0	0	0	26	Q	MAG: Quiet
						N10	W60	0	0	0	26	Q	PROTON: Quiet
239	27	26	018	072	7	S08	W02	1	0	0	27	Q	SOL: Quiet
						S14	W55	0	0	0	27	Q	MAG: Quiet
						N10	W60	0	0	0	27	Q	PROTON: Quiet
240	28	27	014	071	6	S08	W14	0	0	0	28	Q	SOL: Quiet
						S14	W55	0	0	0	28	Q	MAG: Quiet
						N10	W60	0	0	0	28	Q	PROTON: Quiet
241	29	28	022	071	7	S09	W27	0	0	0	29	Q	SOL: Quiet
						N08	E76	0	0	0	29	Q	MAG: Quiet
						N10	W60	0	0	0	29	Q	PROTON: Quiet

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages **AUGUST 1994**

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Region Forecast [1]	Geoadvice[1]
242	30	29	024	078	4	N07	E62	0	0	0	30	Q	SOL: Eruptive
						S22	E05	0	0	0	30	Q	MAG: Quiet
						N10	W60	0	0	0	30	Q	PROTON: Quiet
243	31	30	045	083	4	N07	E50	0	0	0	31	Q	SOL: Eruptive
						S23	W12	0	0	0	31	Q	MAG: Quiet
						S09	E71	9	2	0	31	A	PROTON: Quiet

[1] **Region Forecast and Flare Geoadvice**

Q =Quiet (<50% probability of C-class flares)
E =Eruptive (C-class flares expected, probability >=50%)
A =Active (M-class flares expected, probability >=50%)
M =Major (X-class flares expected, probabiljty >=50%)
P =Proton (Proton flares exptected, probability >=50%)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

Magnetic Geoadvice

Quiet
Active conditions expected (A>=20 or K=4)
Minor storm expected (A>=30 or K=5)
Major magstorm expected (A>=50 or K>=6)
Severe magstorm expected (A>=100 or K>=7)
Magstorm in progress (A>=30 or K>=4)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

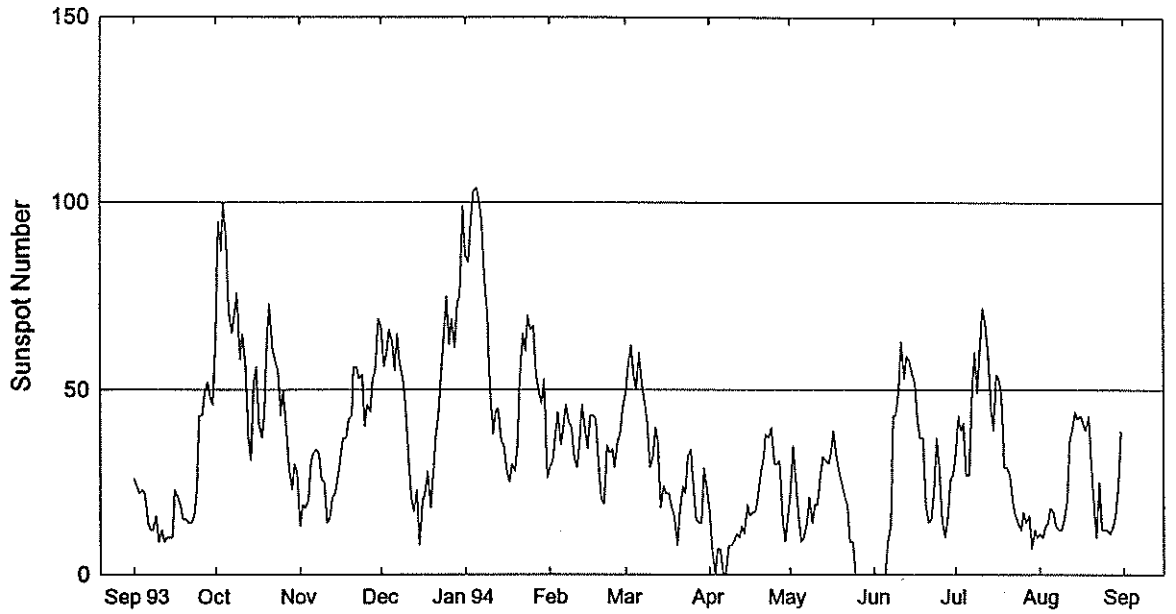
Proton Geoadvice

Quiet
Proton event expected (10 pfu at >10 MeV)
Major proton event expected (100 pfu at >100 MeV)
Proton event in progress (>10 MeV)
Warning condition (activity levels expected to increase, but no numeric forecast given)
Nil (end of Alert period)
No forecast

STRATWARM ALERTS

No Stratwarms recorded

International Relative Sunspot Numbers
Sep 1993 - Aug 1994

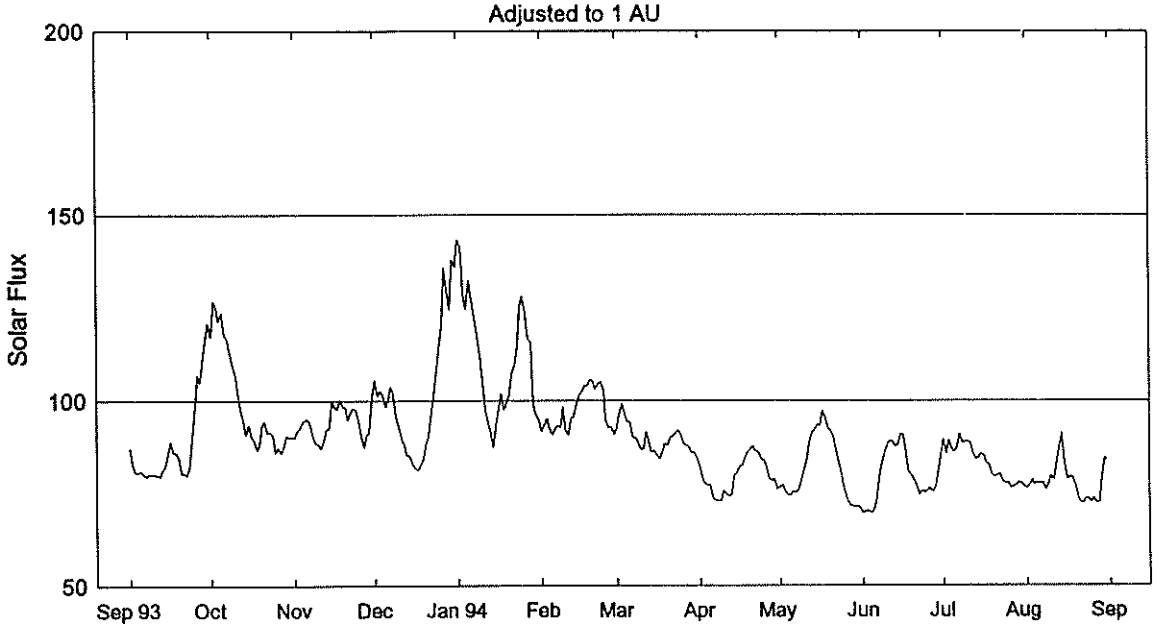


Day	Sep 93	Oct	Nov	Dec	Jan 94*	Feb*	Mar*	Apr*	May*	Jun*	Jul*	Aug*
1	26	64	13	67	86	29	49	17	21	0	32	11
2	24	95	19	56	84	31	56	7	35	0	43	10
3	22	87	18	60	95	38	62	0	26	0	39	13
4	23	100	20	66	103	44	54	7	15	0	41	14
5	22	90	30	63	104	35	50	7	9	0	27	18
6	14	71	33	55	101	40	60	0	10	9	27	17
7	12	65	34	65	94	46	52	0	14	13	47	13
8	12	70	33	57	81	41	46	8	21	43	60	12
9	16	76	26	53	71	40	41	8	14	43	49	12
10	9	58	25	46	51	32	29	9	19	50	60	15
11	12	65	14	31	38	29	32	11	19	63	72	20
12	9	56	15	21	44	36	40	10	27	53	68	36
13	10	37	21	17	45	46	36	13	31	59	59	39
14	10	31	22	23	36	39	18	11	21	58	45	44
15	10	52	27	8	35	34	24	19	30	54	39	42
16	23	56	32	20	29	43	22	16	33	52	54	43
17	21	41	37	22	25	43	22	17	39	42	53	41
18	19	37	37	28	30	42	18	17	33	37	48	39
19	15	44	42	18	28	28	16	21	28	37	29	43
20	15	63	43	27	35	20	8	28	25	19	29	30
21	14	73	56	37	53	19	17	31	25	14	27	19
22	14	61	56	44	65	35	24	38	21	15	19	10
23	16	58	53	54	60	33	22	37	19	22	16	25
24	23	55	54	63	70	34	32	40	9	37	14	12
25	43	43	40	75	66	29	34	30	9	29	12	12
26	43	50	46	62	67	36	24	30	0	15	17	12
27	49	39	44	69	54	38	15	31	0	10	14	11
28	52	29	53	61	49	46	14	15	0	15	16	13
29	48	23	55	73	46		14	9	0	26	7	16
30	46	30	69	75	53		29	15	0	27	12	25
31		28		99	26		24		0		10	39
Mean	22.4	56.4	35.6	48.9	58.8	35.9	31.7	16.7	18.2	28.1	35.0	22.8

* = Provisional. The definitive yearly mean sunspot number equals 54.6 for 1993.

Penticton 2800 MHz (10.7cm) Solar Flux
Sep 1993 - Aug 1994

Adjusted to 1 AU



Day	Sep 93	Oct	Nov	Dec	Jan 94	Feb	Mar	Apr	May	Jun	Jul	Aug
1	87.1	117.1	90.0	105.6	143.4	91.7	92.4	82.4	76.3	69.6	89.7	76.2
2	82.6	126.9	91.8	101.3	141.4	93.5	96.3	79.3	77.1	69.9	85.6	77.2
3	80.9	124.8	92.4	102.6	128.7	95.1	99.2	77.4	75.6	70.3	89.3	78.7
4	80.5	121.5	94.1	101.6	124.6	92.7	96.3	77.2	74.4	69.5	87.4	77.4
5	81.0	123.7	94.8	98.3	132.4	90.6	94.2	77.2	74.4	70.3	86.2	77.8
6	80.2	118.0	94.9	99.9	127.7	92.2	94.1	73.3	75.3	72.7	87.1	77.5
7	79.6	116.6	93.5	103.8	122.1	93.3	90.0	73.0	75.2	79.4	91.1	77.9
8	80.2	113.1	90.2	101.9	118.9	92.6	89.9	72.9	75.8	82.9	88.7	75.9
9	80.1	110.1	88.7	95.4	113.1	98.3	88.7	72.9	78.8	85.5	88.8	77.4
10	80.1	107.1	88.2	93.2	106.5	91.8	86.8	75.7	81.4	88.0	88.9	79.7
11	79.8	102.3	87.0	89.7	97.8	90.7	87.0	74.6	83.6	89.1	88.5	78.7
12	79.5	97.3	88.9	88.1	94.6	95.1	91.7	74.2	89.2	89.0	85.7	82.9
13	81.1	94.5	92.2	85.1	91.9	95.4	89.1	74.3	91.4	87.7	84.1	86.7
14	82.6	90.8	92.3	85.1	87.3	98.9	86.2	79.9	92.1	88.0	84.6	91.2
15	85.6	93.5	99.9	82.8	92.6	101.3	86.5	80.6	93.4	91.0	85.7	83.5
16	89.0	90.3	98.2	81.9	97.0	102.3	85.3	82.3	93.3	90.8	85.1	78.8
17	85.9	89.4	97.7	81.1	102.0	103.9	84.3	82.5	97.2	86.6	83.0	79.5
18	86.0	86.7	100.2	82.4	97.5	103.9	85.9	84.9	95.8	80.9	82.7	79.3
19	85.0	88.1	98.7	84.2	99.5	105.6	88.3	86.2	92.7	79.8	80.1	77.1
20	80.3	93.5	98.0	88.1	101.6	105.2	87.9	87.0	91.9	78.9	79.4	74.0
21	80.6	94.2	94.8	89.9	107.3	103.1	90.0	87.6	89.9	76.8	79.8	72.7
22	79.8	91.3	96.8	96.6	109.5	104.4	90.5	86.3	86.7	74.6	80.1	72.2
23	82.0+	91.4	97.9	101.6	114.6	105.1	91.2	86.1	83.6	75.5	78.2	73.5
24	90.0+	90.6	97.5	107.5	125.1	102.9	92.1	84.3	79.9	75.2	77.7	73.5
25	96.5	86.0	94.7	115.2	128.1	94.8	90.4	83.8	76.1	75.5	77.8	72.5
26	106.8	87.4	90.8	120.5	123.9	92.6	88.1	82.0	73.4	76.3	76.3	73.7
27	104.9	86.0	87.3	135.8	116.8	93.0	88.0	79.0	72.1	75.4	76.6	72.5
28	111.7	87.3	90.7	129.2	115.7	90.8	87.3	78.4	71.4	76.4	77.1	72.5
29	116.8	90.5	91.2	124.4	98.9		85.8	78.9	71.4	81.4	78.0	79.1
30	120.9	90.0	100.8	138.0	96.1		86.1	76.0	71.3	85.4	77.6	84.7
31		90.1		136.2	94.7		84.9		71.1		76.8	83.8
Mean	87.9	99.7	93.8	101.5	111.3	97.2	89.5	79.7	81.7	79.7	83.2	78.0

+ = suspect values due to software problems.

DAILY SOLAR INDICES

August 1994

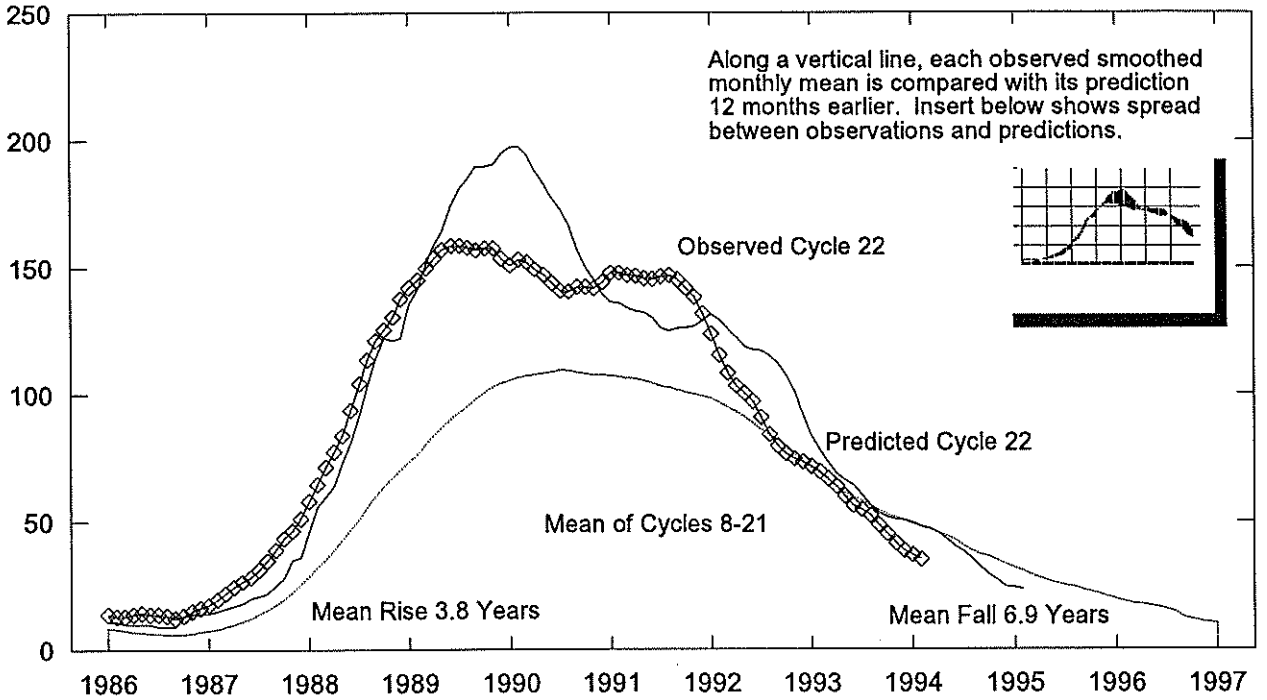
Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Amer	Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit — LEAR (15400)	LEAR (8800)	LEAR (4995)	Pentic (2800)	LEAR (2695)	LEAR (1415)	LEAR (610)	LEAR (410)	LEAR (245)
1	213	26	11	12	74.0	527	218	128	76.2	74	56	43	22	12
2	214	27	10	12	75.0	510	212	128	77.2	73	56	42	21	12
3	215	1	13	14	76.4	533	217	129	78.7	76	57	44	23	12
4	216	2	14	15	75.2	484	209	127	77.4	75	57	42	21	12
5	217	3	18	17	75.7	--	--	--	77.8	--	--	--	--	--
6	218	4	17	17	75.3	--	--	--	77.5	--	--	--	--	--
7	219	5	13	13	75.8	502	212	127	77.9	75	57	41	21	14
8	220	6	12	14	73.8	514	215	127	75.9	76	56	40	21	13
9	221	7	12	14	75.3	501	214	126	77.4	73	56	27	13	9
10	222	8	15	17	77.6	544	219	128	79.7	72	56	26	12	10
11	223	9	20	22	76.7	514	216	128	78.7	75	56	24	11	8
12	224	10	36	39	80.8	501	215	128	82.9	76	56	32	19	12
13	225	11	39	47	84.5	513	222	133	86.7	79	58	40	21	13
14	226	12	44	42	88.9	509	225	139	91.2	85	60	40	21	13
15	227	13	42	42	81.4	519	221	135	83.5	82	58	40	21	12
16	228	14	43	45	76.8	539	220	132	78.8	79	56	39	21	16
17	229	15	41	42	77.6	516	218	128	79.5	76	56	--	--	--
18	230	16	39	38	77.4	551	217	128	79.3	76	56	37	19	11
19	231	17	43	44	75.3	518	215	131	77.1	75	56	38	20	11
20	232	18	30	29	72.3	522	214	126	74.0	74	53	37	19	11
21	233	19	19	16	71.1	516	212	125	72.7	70	53	37	19	11
22	234	20	10	11	70.6	517	213	124	72.2	69	51	36	18	12
23	235	21	25	19	71.9	522	213	125	73.5	69	52	36	18	11
24	236	22	12	18	71.9	527	214	125	73.5	72	51	37	20	12
25	237	23	12	13	71.0	531	210	124	72.5	71	52	37	20	11
26	238	24	12	13	72.2	517	215	124	73.7	69	51	38	20	12
27	239	25	11	11	71.1	518	214	124	72.5	70	53	38	20	12
28	240	26	13	12	71.0	533	209	124	72.5	67	51	37	16	11
29	241	27	16	13	77.6	522	210	125	79.1	69	52	37	20	12
30	242	1	25	26	83.1	541	219	133	84.7	79	56	40	20	12
31	243	2	39	38	82.3	522	223	135	83.8	80	57	41	23	15
MEAN			22.8	23.5	76.1	520	215	128	78.0	74	55	37	19	11

The International numbers shown above are preliminary values; the American numbers are final.

The observed and the adjusted Penticton fluxes tabulated here are the "Series C" daily values reported by the Dominion Radio Astrophysical Observatory, Penticton, British Columbia, Canada. Numbers in parentheses in the column headings denote frequencies in MHz.

Equipment problems produced any gaps in the Air Weather Service's Learmonth (LEAR) observations.

Cycle 22 Smoothed Sunspot Numbers: Observed and Predicted



Smoothed Sunspot Numbers (Observed and Predicted) for Parts of Solar Cycles 21 and 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
1987	18	20	22	24	26	28	31	35	39	44	47	51	32
1988	58	65	71	78	84	94	104	114	121	125	130	138	99
1989	142	145	150	154	157	158	158	158	157	157	158	154	154
1990	151	153	152	149	147	144	141	140	142	142	142	144	146
1991	148	148	147	146	146	145	146	147	145	142	138	132	144
1992	124	115	108	103	100	97	91	84	80	76	74	73	94
1993	71	69	67	64	60	56	55	52	49	45	41	39	56
1994	37	35	34	33	33	32	30	28	26	26	25	24	30
( )			(2)	(4)	(6)	(9)	(11)	(13)	(14)	(16)	(17)	(18)	(11)
1995	24	23	22	21	20	19	18	18	18	17	16	15	19
( )	(19)	(20)	(20)	(20)	(19)	(19)	(19)	(19)	(19)	(18)	(17)	(17)	(19)
1996	14	13	12	12	11	11	10	9	9	8	8	8	10
( )	(17)	(17)	(18)	(18)	(18)	(18)	(17)	(16)	(16)	(15)	(15)	(14)	(17)

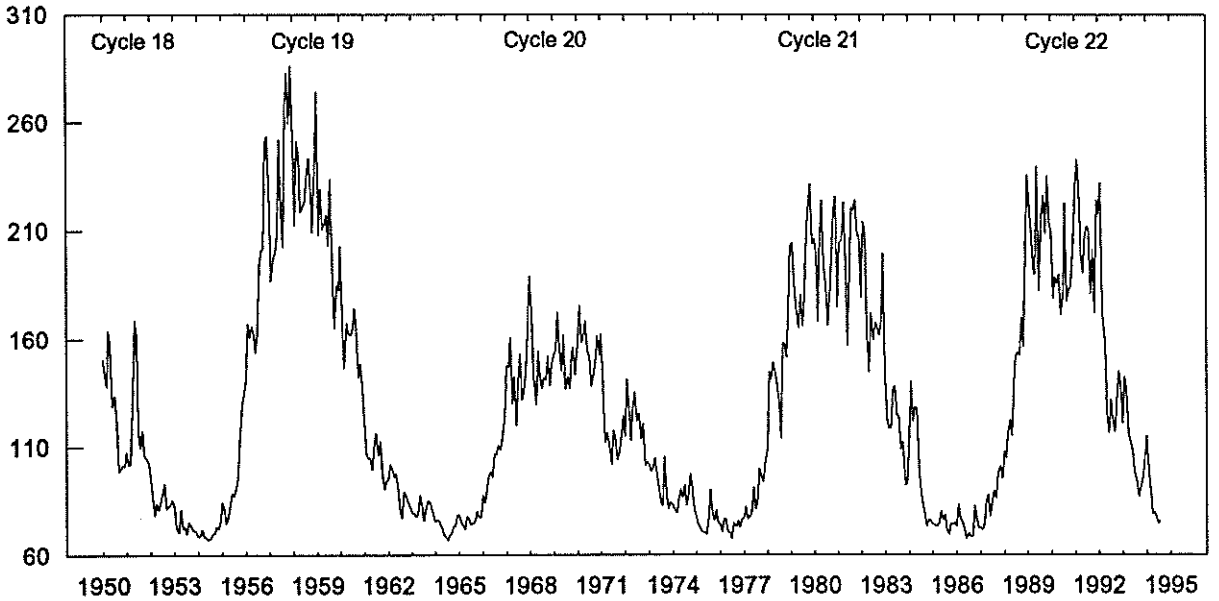
Solar Cycle 22 — Min, Max, and Predictions

September 1986 marks the minimum of Solar Cycle 21 and the onset of Cycle 22, which in turn, reached a maximum in July 1989.

Observed and Predicted Numbers. For the end of Cycle 21, and the rise and decline of Cycle 22, the table above lists observed smoothed sunspot numbers up to the one that includes the most recent monthly mean. We based these smoothed values on final monthly means through Dec 1993 and on provisional numbers thereafter. Table entries with numbers in parentheses below them denote predictions by the McNish-Lincoln method. (See page 9 in the Jul 1987 supplement to *Solar-Geophysical Data*.) Adding the number in parentheses to the predicted value generates the upper limit of the 90% confidence interval. Subtracting the number from the predicted value generates the lower limit. Consider, for example, the Feb 1995 prediction. There exists a 90% chance that in Feb 1995, the actual smoothed number will fall somewhere between 3 and 43.

Points to Ponder. The McNish-Lincoln prediction method generates useful estimates of smoothed, monthly mean sunspot numbers for no more than 12 months ahead. Beyond 12 months, the predictions regress toward the mean of all 14 cycles of observations used in the computation. Moreover, the method remains very sensitive to the date defining the onset of the current cycle, that is, to the date of the most recent sunspot minimum. The new cycle predictions tabulated above are based on the minimum value of 12.3 that occurred in Sep 1986.

Monthly Mean 2800 MHz Solar Flux (Observed)
Jan 1950 - Aug 1994



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	150.7	143.3	137.8	164.3	157.1	128.7	134.1	120.9	98.6	99.9	101.9	101.1	128.2
1951	107.9	101.9	102.5	127.1	168.6	161.7	116.3	109.8	117.8	106.0	104.4	102.4	118.9
1952	95.4	86.2	78.5	84.0	80.9	84.8	88.8	93.3	81.5	82.8	83.4	85.7	85.4
1953	83.2	72.8	70.4	81.0	72.5	73.0	69.8	75.5	74.3	71.9	71.4	70.8	73.9
1954	68.7	69.2	71.9	68.7	68.0	67.3	67.7	69.9	70.1	73.2	72.6	75.5	70.2
1955	84.3	82.0	74.8	77.3	82.8	88.8	87.3	90.7	91.1	111.8	130.0	134.6	95.0
1956	141.2	167.2	160.6	165.9	163.4	154.0	162.8	193.8	200.9	201.6	250.4	253.7	184.6
1957	231.2	186.7	197.8	200.0	208.5	252.1	218.0	202.3	267.1	283.1	259.2	286.5	232.7
1958	251.5	212.2	251.5	245.9	218.6	220.5	224.1	237.0	243.5	228.0	209.2	238.2	231.7
1959	274.5	207.9	229.2	210.6	212.7	217.5	203.0	234.2	194.3	165.1	184.8	182.2	209.7
1960	202.6	170.9	146.8	167.6	162.7	161.9	163.9	174.4	164.5	142.3	148.9	138.1	162.0
1961	122.0	106.4	104.8	105.0	99.3	109.9	116.5	106.2	112.7	96.7	90.3	94.8	105.4
1962	94.9	102.2	100.3	96.2	97.9	91.0	80.7	77.3	89.5	87.8	84.9	82.0	90.4
1963	79.5	79.7	77.8	79.5	87.8	83.5	75.9	80.9	85.1	85.1	81.7	78.4	81.2
1964	75.4	76.8	75.9	72.6	69.5	69.0	67.0	69.3	70.2	73.4	73.7	78.8	72.6
1965	78.6	75.2	74.1	72.0	78.2	77.0	74.3	74.8	76.6	80.2	77.7	77.8	76.4
1966	87.9	84.2	90.3	97.2	98.5	96.3	106.7	106.6	110.9	108.6	113.3	124.6	102.1
1967	147.7	147.0	160.6	129.9	143.0	120.2	140.3	153.7	132.1	136.1	145.3	163.0	143.2
1968	189.1	173.2	142.6	129.5	154.9	142.3	137.2	142.2	141.0	152.5	138.5	148.4	149.3
1969	152.7	155.2	172.3	155.5	145.4	162.2	136.6	143.0	137.3	154.0	156.7	143.6	151.2
1970	158.3	175.4	158.4	162.0	168.4	154.9	152.0	138.2	143.2	148.3	162.0	152.8	156.2
1971	162.6	137.8	111.9	116.7	109.9	101.7	117.4	114.1	104.0	107.2	114.0	124.5	118.5
1972	114.8	141.8	128.5	112.9	129.6	135.4	122.0	125.7	113.6	121.1	101.6	102.9	120.8
1973	102.2	98.7	100.4	105.0	97.0	91.2	84.5	82.9	105.6	87.7	81.5	84.2	93.4
1974	83.1	80.9	79.2	86.1	90.6	86.3	92.5	83.0	87.8	97.6	90.3	81.1	86.5
1975	77.5	74.2	72.4	70.7	70.1	69.7	77.2	90.4	79.6	75.7	80.8	74.6	76.1
1976	74.7	70.5	76.7	76.3	70.6	70.6	67.5	74.8	73.1	75.9	72.9	76.7	73.4
1977	77.4	82.3	76.6	77.6	79.6	91.5	81.1	84.3	99.9	96.9	93.7	102.1	86.9
1978	109.6	145.4	141.8	149.4	146.5	142.2	131.1	114.0	157.9	158.2	151.5	175.5	143.6
1979	203.0	204.1	185.8	173.8	165.2	180.3	165.9	172.7	200.2	217.9	231.7	203.5	192.0
1980	206.2	200.0	168.1	207.9	224.0	193.2	184.8	166.2	183.9	204.2	218.1	225.8	198.5
1981	174.6	204.5	205.3	223.2	194.6	156.9	191.9	220.6	219.5	224.3	207.8	207.8	202.6
1982	179.0	214.2	210.5	161.8	144.7	171.9	159.6	167.9	165.3	161.9	167.4	199.4	175.3
1983	142.3	122.6	118.6	118.9	137.1	138.6	125.0	124.4	109.0	112.4	92.5	93.4	119.6
1984	116.1	140.6	122.0	128.7	128.3	100.3	89.3	83.7	78.1	73.5	76.3	75.9	101.1
1985	74.5	73.7	73.3	75.1	80.2	76.1	78.7	71.5	69.5	74.7	74.2	74.8	74.7
1986	73.2	83.6	77.0	75.1	72.6	67.6	70.2	68.4	68.7	83.0	77.1	72.6	74.1
1987	72.5	71.5	74.0	84.9	87.8	77.9	84.2	90.0	86.1	98.1	101.2	94.4	85.3
1988	108.0	105.0	114.9	122.7	115.2	139.4	152.7	154.2	152.5	169.8	156.2	199.8	141.0
1989	235.4	222.4	205.1	189.6	190.1	239.6	181.9	217.1	225.9	208.7	235.1	213.0	213.7
1990	210.1	178.3	188.8	185.3	189.7	170.9	180.7	222.6	177.4	182.0	184.3	204.9	189.6
1991	229.4	243.0	230.0	198.8	190.3	206.8	212.0	210.3	180.6	201.3	172.0	223.9	208.1
1992	217.6	232.1	171.3	158.5	125.4	116.7	132.2	122.1	116.8	130.8	145.2	139.1	150.7
1993	121.0	142.6	136.4	115.9	112.3	109.3	99.0	93.7	87.0	100.3	95.9	104.8	109.7
1994	115.0	99.6	90.4	79.1	79.9	77.3	74.5	76.1					86.5

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	01	1041	1047	1051						10		B 4.5						
GOES		1217	1233	1240						23		B 7.2						
GOES		1326	1330	1333						7		B 1.1						
GOES		1655	1703	1709						14		B 2.2						
GOES		1727	1736	1745						18		B 1.7						
GOES	02	0254	0258	0300						6		B 1.2						
GOES		0356	0359	0404						8		B 1.3						
LEAR		0438	0438	0442	N02	E80		08	8.2	4	SF		3	E		20		
SVTO		0721	0724	0730D	N07	E80		08	8.3	9D	SF		3	E		16		
RAMY		1537	1539	1543	N06	E76		08	8.3	6	SF		3	E		23		
GOES	05	2010	2013	2015						5		B 1.0						
GOES		2134	2138	2149						15		B 1.8						
GOES		2225	2230	2233						8		B 2.5						
LEAR	06	0538	0542	0556	N03	E28	7762	08	8.3	18	SF	B 9.7	3	E		53		
SVTO		0547E	0549U	0556D	N05	E31	7762	08	8.5	9D	SF		1	E		42		F
GOES		0733	0737	0740						7		B 1.0						
GOES		1015	1019	1027						12		B 1.1						
RAMY		1222	1222	1234	N05	E27	7762	08	8.5	12	SF		3	E		15		F
SVTO		1222	1223	1230	N05	E27	7762	08	8.5	8	SF	B 2.2	3	E		15		F
RAMY		1243	1244	1311	N05	E26	7762	08	8.5	28	SF		3	E		38		F
SVTO		1243	1247	1301	N05	E27	7762	08	8.5	18	SF	B 7.1	3	E		48		F
HOLL		2056	2056	2108	N04	E22	7762	08	8.5	12	SF		3	E		10		
HOLL		2149	2149	2203	N04	E19	7762	08	8.3	14	SF	B 2.4	3	E		24		F
GOES	07	0031	0034	0037						6		B 1.0						
GOES		0039	0042	0044						5		B 1.0						
HOLL		1805	1807	1810	N04	E07	7762	08	8.3	5	SF		3	E		16		
RAMY		1933	1934	1949	N05	E06	7762	08	8.3	16	SF	B 1.3	3	E		13		F
HOLL		1934	1934	1944	N05	E07	7762	08	8.3	10	SF		3	E		13		
RAMY		1955	2006	2019	N04	E05	7762	08	8.2	24	SF		3	E		43		F
HOLL		1958	2000	2010	N04	E06	7762	08	8.3	12	SF	B 2.4	3	E		33		F
GOES	08	0908	0913	0920						12		B 2.0						
GOES	09	1019	1022	1026						7		B 1.1						
GOES	10	1214	1224	1239						25		B 1.5						
GOES		2140	2144	2147						7		B 1.1						
GOES	11	0118	0122	0126						8		B 1.2						
RAMY		1844	1847	1850	S05	E73	7764	08	17.2	6	SF		3	E		31		
PALE		1845	1847	1852D	S05	E73	7764	08	17.2	7D	SF		3	E		25		
GOES	12	0336	0341	0347						11		B 1.3						
GOES		0401	0404	0406						5		B 1.0						
LEAR		0549	0549	0555	S12	E26		08	14.2	6	SF	B 2.2	3	E		14		
LEAR		0710	0714	0716	S12	E25		08	14.2	6	SF	B 1.7	3	E		20		
LEAR		0721	0723	0729	S12	E25		08	14.2	8	SF		3	E		24		
SVTO		0724	0724	0731	S11	E24		08	14.1	7	SF		3	E		10		F
LEAR		0745	0748	0801	S12	E25		08	14.2	16	SF	B 5.6	3	E		23		
SVTO		0746	0747	0751	S12	E24		08	14.1	5	SF		3	E		17		
SVTO		1010	1011	1016	S12	E24		08	14.2	6	SF	B 6.0	3	E		16		F
RAMY		1136	1139	1146	S11	E23		08	14.2	10	SF	B 8.2	3	E		29		F
GOES		1701	1704	1706						5		B 1.7						
PALE		2320	2340U	2342D	S23	E13	7765	08	14.0	22D	SF		3	E		11		
LEAR		2329	2340	2352	S11	E14	7765	08	14.0	23	SF	B 4.2	3	E		12		
LEAR	13	0302	0302	0314	S13	E14	7765	08	14.2	12	SF		3	E		11		
LEAR		0555	0558	0615	S12	E13	7765	08	14.2	20	SF	B 8.5	3	E		20		
LEAR		0808	0811	0839	S12	E11	7765	08	14.2	31	SF	B 4.8	3	E		20		
SVTO		0812	0813	0820	S10	E10	7765	08	14.1	8	SF		3	E		13		
SVTO		1038	1047	1055	S11	E11	7765	08	14.3	17	SF	B 9.4	2	E		25		F
GOES		1222	1231	1302						40		B 2.4						
GOES		1437	1444	1458						21		B 3.0						
GOES		1539	1543	1610						31		B 2.8						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	13	1723	1750	1815	S12	E07	7765	08	14.2	52	SF	C 4.0	3	E		43		FH
HOLL		1726	1742	1803	S12	E04	7765	08	14.0	37	SF		3	E		33		FH
GOES		2157	2201	2206						9		B 3.3						
GOES		2215	2221	2226						11		B 8.1						
LEAR		2341	2342	2418	S12	E02	7765	08	14.1	37	SF	C 2.9	3	E		22		F
LEAR	14	0045	0045	0110	S12	E01	7765	08	14.1	25	SF	C 1.8	3	E		11		
GOES		0059	0105	0107						8		C 1.4						
LEAR		0118	0124	0136	S11	E02	7765	08	14.2	18	SF	C 1.6	3	E		24		
GOES		0154	0201	0210						16		C 1.3						
LEAR		0350	0351	0355	S12	E00	7765	08	14.1	5	SF		3	E		10		
LEAR		0402	0411	0412	S11	E01	7765	08	14.2	10	SF	B 7.1	3	E		12		
SVTO		0559	0606	0626	S11	W01	7765	08	14.2	27	SF	C 2.3	3	E		43		F
LEAR		0609	0609	0639	S12	W01	7765	08	14.2	30	SF		3	E		16		
GOES		0830	0900	0918						48		B 6.2						
SVTO		1010	1017	1030	S11	W04	7765	08	14.1	20	SF	C 1.0	3	E		14		F
HOLL		1734	1736		S11	W09	7765	08	14.0	386	1N	M 3.9	3	E		171		ZE
PALE		1734E	1739U	1806D	S11	W07	7765	08	14.2	32D	1N		2	E		115		FE
GOES		1944	1953	2018						34		C 1.2						
GOES		2248	2259	2318						30		B 3.9						
PALE		2341	2342	2420D	S12	E02	7765	08	15.1	39D	SF		3	E		20		F
LEAR	15	0102	0110	0131	S12	W12	7765	08	14.1	29	SF	C 1.1	3	E		42		
LEAR		0244	0246	0256	S12	W13	7765	08	14.1	12	SF	B 6.7	3	E		24		
GOES		0454	0509	0515						21		B 2.0						
LEAR		0639	0659	0746	S11	W15	7765	08	14.1	67	SF	B 8.4	3	E		58		FE
SVTO		0645	0650	0658	S11	W15	7765	08	14.1	13	SF		1	E		87		F
GOES		0946	0950	0954						8		B 1.5						
SVTO		1242	1248	1342	S12	W18	7765	08	14.2	60	2N	M 1.2	3	E		272		FH
GOES		1631	1635	1648						17		B 1.5						
RAMY		1720	1722	1734	S11	W21	7765	08	14.1	14	SF	B 5.3	3	E		18		F
GOES		1907	1912	1919						12		B 1.4						
GOES		1947	1957	2007						20		B 2.1						
GOES		2321	2328	2334						13		B 5.0						
GOES	16	0224	0259	0312						48		B 4.7						
LEAR		0316	0328	0341	S12	W27	7765	08	14.1	25	SF	B 8.0	3	E		34		
SVTO		0935	0938	0943	S11	W30	7765	08	14.1	8	SF		3	E		11		
GOES		1142	1148	1155						13		B 4.5						
RAMY		1214E	1214U	1223	S12	W30	7765	08	14.2	9D	SF	B 5.7	3	E		12		F
GOES		1245	1249	1251						6		B 4.6						
GOES		1318	1327	1334						16		C 1.2						
GOES		1502	1513	1519						17		B 1.1						
GOES		1549	1600	1603						14		B 2.5						
GOES		1715	1724	1740						25		B 3.0						
RAMY		1756	1756	1832	S13	W33	7765	08	14.2	36	SF	B 4.1	3	E		21		F
HOLL		1757	1801	1805	S11	W35	7765	08	14.1	8	SF		3	E		14		F
GOES		2103	2112	2120						17		B 1.6						
GOES		2259	2312	2323						24		B 5.6						
GOES	17	0016	0031	0042						26		B 6.3						
PALE		0107E	0108U	0153D	S15	W35	7765	08	14.4	46D	1N	M 1.5	3	E		235		F
GOES		0407	0411	0419						12		B 1.1						
RAMY		1337	1344	1402	S13	W48	7765	08	13.9	25	SF		3	E		42		F
SVTO		1339	1348	1354	S13	W47	7765	08	14.0	15	SF	C 3.7	3	E		21		
RAMY		1954	2002	2010	S12	W50	7765	08	14.1	16	SF	C 2.0	3	E		31		F
GOES	18	0144	0151	0206						22		B 1.4						
LEAR		0302	0304	0310	S08	W53	7765	08	14.1	8	1F	M 1.1	3	E		118		
PALE		0309E	0310U	0312D	S11	W53	7765	08	14.1	3D	SF		3	E		48		
LEAR		0315	0316	0319	S08	W53	7765	08	14.2	4	SF		3	E		18		
GOES		0518	0534	0547						29		B 1.7						
GOES		0904	0910	0920						16		B 1.8						
GOES		1050	1103	1111						21		B 4.3						
GOES		1352	1356	1358						6		B 3.6						
GOES		1501	1511	1513						12		M 1.3						
GOES		1902	1909	1913						11		B 2.8						
GOES		1947	1952	1956						9		B 1.7						

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HOLL	18	2045	2046	2059	S11	W66	7765	08	13.9	14	SF	C 3.5	3	E		28		F
PALE		2335	2340	2350D	S11	E22	7767	08	20.6	15D	SF		3	E		20		
LEAR	19	0030	0031	0035	S09	W70	7765	08	13.8	5	SF	B 4.8	3	E		16		
LEAR		0246	0257	0308	S09	W67	7765	08	14.1	22	SF	M 1.6	3	E		70		F
GOES		0446	0456	0502						16		B 4.7						
GOES		0928	0936	0944						16		B 1.9						
GOES		1555	1559	1601						6		B 1.2						
GOES		2036	2040	2043						7		B 1.1						
GOES		2148	2152	2156						8		B 7.6						
GOES		2258	2301	2303						5		B 4.8						
GOES	20	0005	0010	0016						11		B 5.6						
PALE		0008	0010	0014	S15	E05	7767	08	20.4	6	SN		3	E		50		F
LEAR		0009	0009	0015	S15	E05	7767	08	20.4	6	SF		3	E		20		
LEAR		0019	0019	0024	S15	E06	7767	08	20.5	5	SF		3	E		46		
LEAR		0029	0029	0033	S15	E05	7767	08	20.4	4	SF		3	E		32		
GOES		1017	1021	1026						9		B 1.0						
GOES		1342	1348	1355						13		B 1.1						
GOES		1421	1425	1431						10		B 1.1						
GOES	21	0507	0512	0516						9		C 1.5						
GOES	22	0929	0933	0936						7		B 1.9						
GOES	24	1222	1230	1237						15		B 2.1						
GOES		1800	1808	1816						16		B 2.4						
RAMY	26	1911	1912	1934D	S08	E02	7770	08	26.9	23D	SF	B 1.3	3	E		11		F
GOES	29	0130	0145	0201						31		C 1.2						
GOES		0406	0419	0426						20		B 7.2						
GOES		0434	0444	0451						17		C 1.1						
GOES		0517	0522	0529						12		B 2.4						
GOES		0531	0542	0551						20		B 9.4						
GOES		0710	0753	0755						45		C 1.0						
GOES		0858	0903	0909						11		B 4.8						
GOES		1229	1247	1255						26		C 7.0						
GOES		1340	1357	1421						41		C 2.4						
GOES		1707	1745	1755						48		C 5.3						
GOES		2019	2022	2030						11		B 4.4						
GOES		2140	2154	2206						26		C 1.0						
GOES		2210	2303	2326						76		C 5.3						
LEAR		2324	2330	2334	S12	E84		09	5.3	10	SF		3	E		15		
LEAR	30	0038	0040	0103	S11	E89		09	5.7	25	SF		3	E		70		
LEAR		0137	0137	0151	S10	E81		09	5.1	14	SF	C 1.7	3	E		13		
GOES		0539	0544	0553						14		C 1.5						
GOES		0633	0638	0644						11		C 1.8						
SVTO		0823	0825	0839	S06	E82		09	5.5	16	SF	M 1.1	3	E		39		FH
LEAR		0824	0826	0833	S11	E79		09	5.3	9	SF		3	E		34		F
GOES		1007	1017	1028						21		C 1.4						
SVTO		1036	1036	1048	S08	E83		09	5.7	12	SF	M 1.4	4	E		20		
GOES		1156	1200	1205						9		C 1.0						
GOES		1300	1310	1316						16		C 1.0						
GOES		1449	1457	1504						15		C 2.0						
SVTO		1539	1551	1554	S06	E78	7773	09	5.5	15	SF		4	E		30		F
SVTO		1603	1611	1616	S06	E72	7773	09	5.0	13	SF	C 2.7	4	E		80		H
RAMY		1604	1610	1616	S07	E77	7773	09	5.4	12	SF		3	E		82		F
RAMY		1704	1704	1709	S08	E78	7773	09	5.5	5	SF		3	E		13		
RAMY		1711	1716	1723	S08	E77	7773	09	5.5	12	SF		3	E		40		
RAMY		1740	1744	1748	S08	E79	7773	09	5.6	8	SF		3	E		12		
HOLL		1928	1933	1945	S09	E83	7773	09	6.0	17	SF	C 6.2	3	E		81		F
RAMY		1931	1934	1938	S08	E78	7773	09	5.7	7	SF		3	E		40		
GOES		2118	2122	2124						6		C 2.4						
GOES		2242	2258	2311						29		C 2.7						
LEAR	31	0104	0106	0117	S13	E75	7773	09	5.7	13	SF	C 5.1	3	E		22		

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GOES	31	0125	0130	0133						8		C 4.7						
GOES		0203	0238	0254						51		C 1.7						
GOES		0456	0503	0508						12		B 5.8						
SVTO		0609	0613	0626	S08	E72	7773	09	5.6	17	SF	C 1.8	3	E		65		F
LEAR		0612	0612	0619	S12	E68	7773	09	5.4	7	SF		3	E		16		
SVTO		0711	0711	0713	S07	E69	7773	09	5.5	2	SF	C 2.8	3	E		19		
GOES		0753	0757	0803						10		C 1.7						
LEAR		0818	0819	0822	S12	E67	7773	09	5.4	4	SF		3	E		17		
LEAR		0849	0859	0905	S12	E66	7773	09	5.3	16	SF	B 6.2	3	E		31		
SVTO		0851	0858	0903	S08	E71	7773	09	5.7	12	SF		3	E		13		F
GOES		1002	1012	1022						20		C 1.0						
GOES		1052	1055	1057						5		C 1.5						
GOES		1100	1103	1105						5		B 6.6						
GOES		1120	1124	1128						8		B 7.8						
RAMY		1235	1237	1248	S08	E69	7773	09	5.7	13	SF	C 3.1	3	E		27		F
GOES		1419	1423	1426						7		B 7.0						
GOES		1616	1620	1627						11		B 3.7						
RAMY		1655	1659	1717	S07	E66	7773	09	5.6	22	SF	C 1.5	3	E		71		F
RAMY		1722	1909	2043	S08	E66	7773	09	5.7	201	SF		3	E		41		F
GOES		1831	1834	1838						7		B 7.6						
HOLL		1856	1909	1916	S09	E65	7773	09	5.7	20	SF	B 6.0	3	E		19		
GOES		1932	1937	1940						8		B 2.7						
GOES		1946	1949	1957						11		B 2.6						
GOES		2321	2325	2329						8		B 3.7						
LEAR		2352	2353	2359	S11	E59	7773	09	5.4	7	SF		3	E		40		
HOLL		2352	2353	2402	S10	E63	7773	09	5.7	10	SF	C 1.5	3	E		41		

"Remarks"

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

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

S O L A R R A D I O E M I S S I O N
Selected Fixed Frequency Events

AUGUST 1994

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
14	8800	PALE	4 S/F	1734.0	1736.0	9.0	450.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1734.0	1736.0	18.0	490.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	1735.0	1737.0	8.0	180.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	1735.0	1737.0	7.0	210.0			QL=4 ST=2 TYP=3
15	2695	SVTO	4 S/F	1025.0	1025.0	4.0	93.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1243.0	1246.0	15.0	40.0			QL=2 ST=3 TYP=3
	2695	SGMR	4 S/F	1243.0	1246.0	15.0	250.0			QL=2 ST=3 TYP=3
	2695	SVTO	4 S/F	1245.0	1246.0	4.0	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	1246.0	1246.0	U	23.0			QL=4 ST=2 TYP=3
18	8800	SGMR	8 S	1508.0	1509.0	2.0	40.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1508.0	1508.0	1.0	19.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:
LEAR = Learmonth PALE = Palehua SGMR = Sagamore Hill SVTO = San Vito

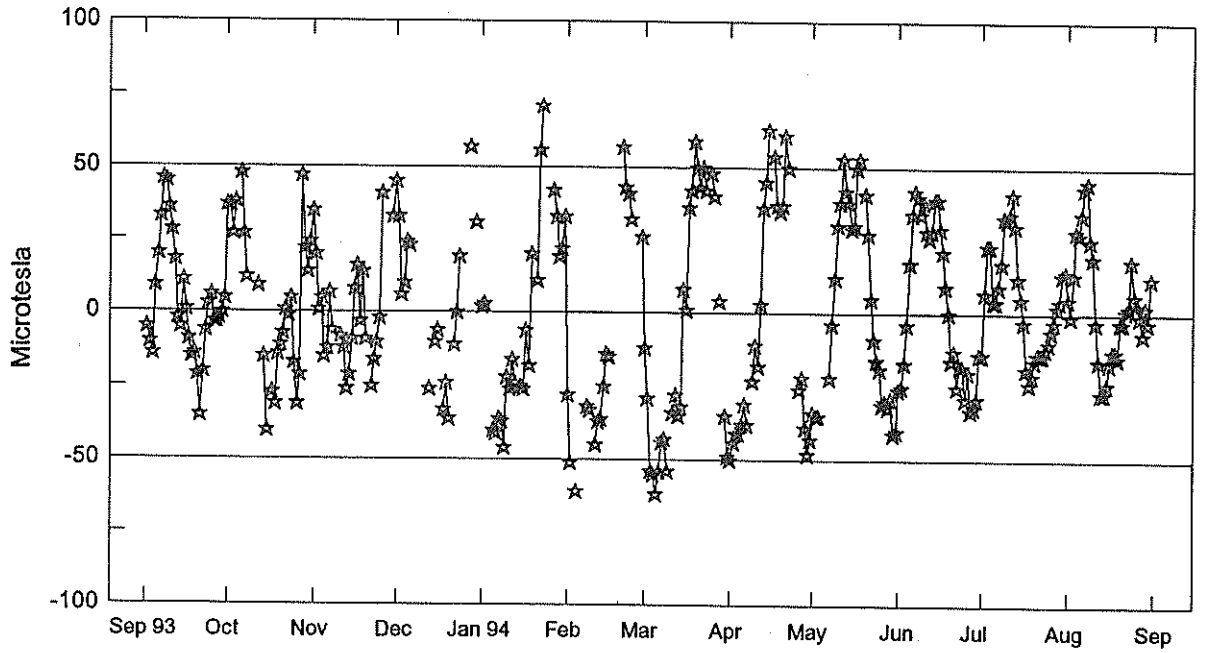
Explanation of Type Code:

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

1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

RSTN Site Information: Beginning in April 1986, the RSTN sites LEAR, PALE, SGMR, and SVTO fixed frequency solar radio data are periodically adjusted to several world standard stations. These world standard stations include: Kislovodsk, USSR 15,500 MHz; Penticton, Canada 2800 MHz; Hiraiso, Japan 500 and 200 MHz; and Toyokawa, Japan 9400, 3750, 2000 and 1000 MHz.

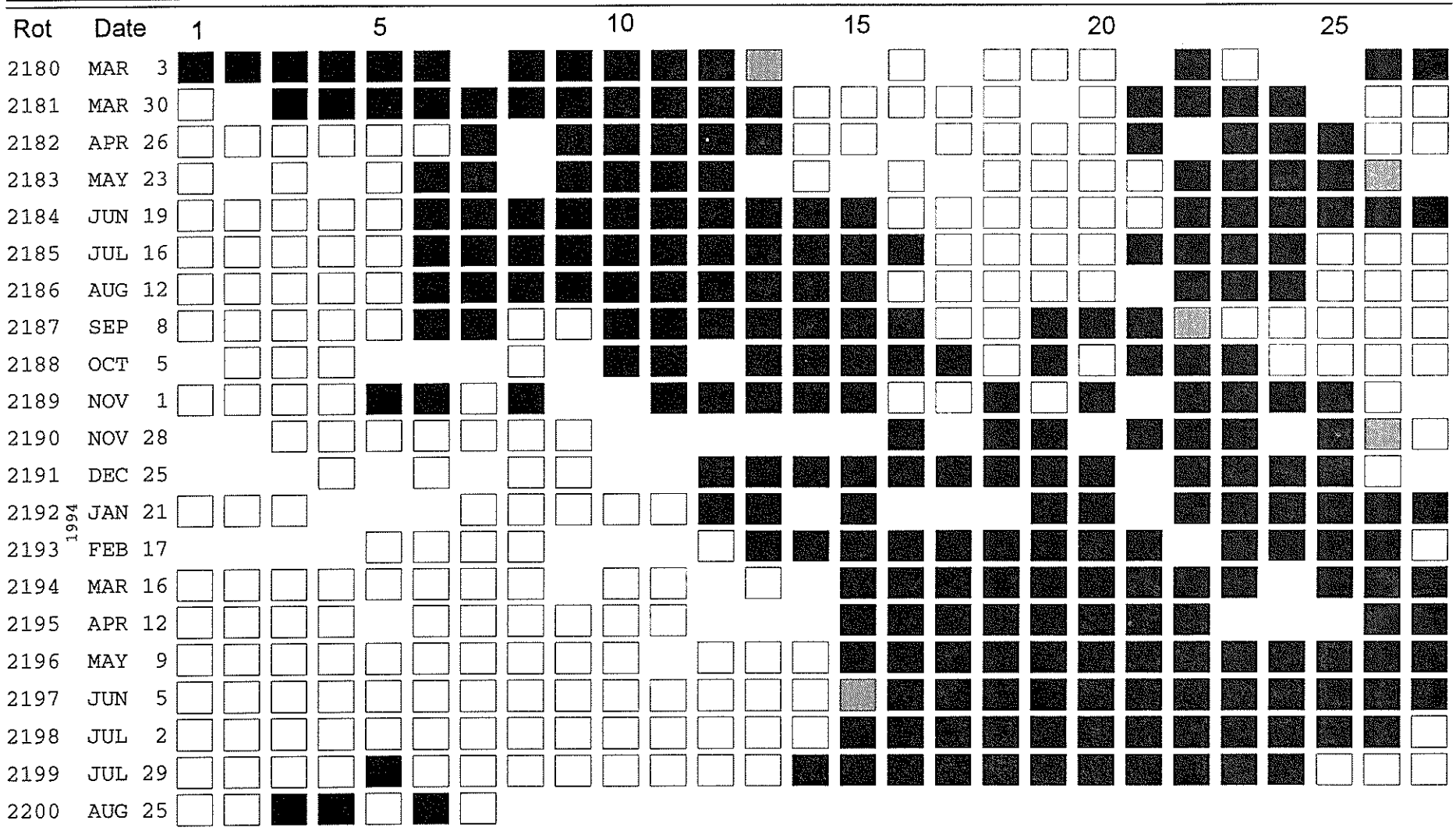
Stanford Mean Solar Magnetic Field (Microtesla)
"Sun-As-A-Star"



Day	Sep 93	Oct	Nov	Dec	Jan 94	Feb	Mar	Apr	May	Jun	Jul	Aug
1	---	37	35	45	2	-28	-12	-50	-34	-26	-14	5
2	-5	37	20	33	3	-51	-29	-44	-35	-25	7	-1
3	-10	27	1	6	---	---	-54	-41	-35	-17	23	13
4	-14	38	5	10	---	-61	-55	-41	---	-4	23	28
5	9	---	-15	24	-40	---	-62	-38	---	17	4	27
6	20	48	-12	23	-41	---	-54	-31	---	34	4	34
7	33	27	7	---	-36	---	-44	-38	-22	42	9	43
8	46	12	-6	---	-37	-32	-43	---	-4	40	17	45
9	45	---	---	---	-46	-33	-54	-23	12	34	33	25
10	36	---	---	---	-22	---	---	-11	30	38	32	19
11	28	---	-8	---	-26	-45	-34	-18	38	28	34	-3
12	18	9	-12	---	-16	-37	-28	3	53	26	41	-16
13	-2	---	-26	-26	-24	-36	-35	36	42	28	30	-27
14	-5	-15	-21	---	---	-25	-32	45	38	39	15	-27
15	11	-40	-9	-10	-25	-14	8	63	29	39	5	-24
16	1	---	8	-6	-26	-15	1	---	30	29	-3	-17
17	-9	-27	16	---	-6	---	36	54	50	21	-19	-13
18	-15	-31	-3	-33	-18	---	42	37	53	9	-24	-13
19	-14	-14	14	-24	20	---	59	35	---	0	-21	-15
20	-21	-11	-9	-36	---	---	50	37	41	-16	-16	-3
21	-35	-7	---	---	11	57	43	61	27	-13	-14	-3
22	-20	1	-25	-11	56	43	50	50	5	-25	-14	1
23	-6	-1	-16	0	71	41	42	---	-9	-18	-14	2
24	3	5	-10	19	---	32	---	---	-16	-18	-12	18
25	6	-17	-2	---	---	---	48	---	-19	-29	-10	6
26	-3	-31	41	---	---	---	40	-26	-31	-20	-6	3
27	-3	-21	---	---	42	---	---	-22	-30	-33	-3	-1
28	-2	47	---	57	33	26	4	-39	-32	-32	2	-7
29	0	22	---	---	19		---	-48	-29	-29	4	2
30	5	14	33	31	22		-35	-43	-41	-14	13	-3
31		24		---	33		-49		-40		14	12

Note: --- Indicates no data available for the day.

STANFORD MEAN SOLAR MAGNETIC FIELD



Mean Solar Magnetic Field Polarity:

= field > 2 microT;

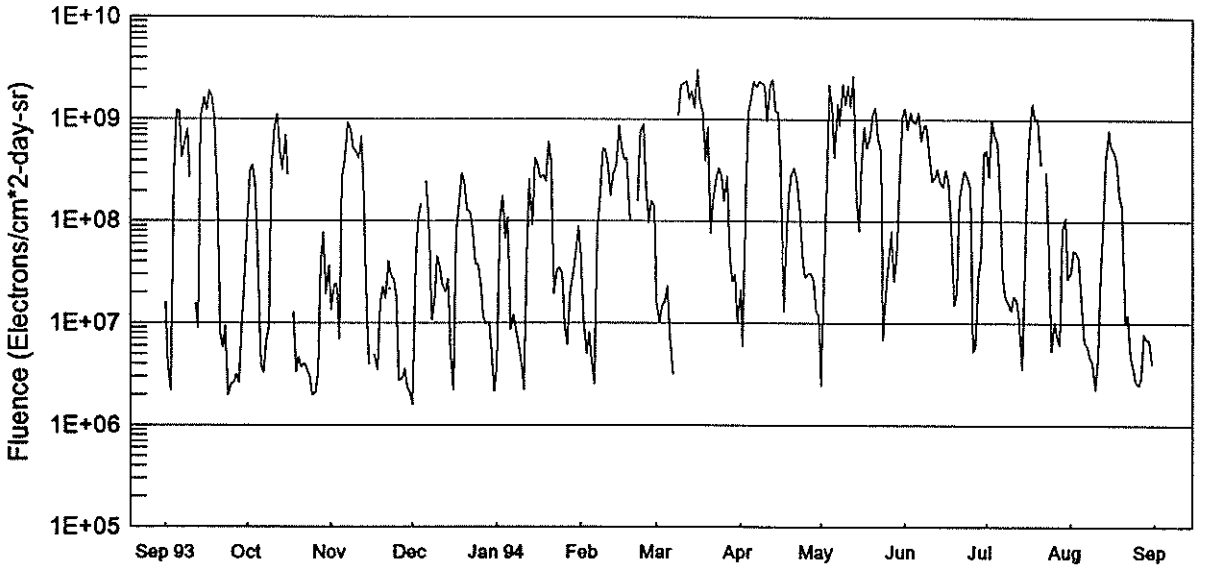
= -2 microT ≤ field ≤ 2 microT

= field < -2 microT;

No box = no data available

Observations are taken at 2000 UT. Rotation numbers given are the Bartels series, but the dates are not; these dates are five days earlier, to mark times of occurrence of phenomena on the Sun that affect the Earth during the given Bartels Rotation.

GOES7 Daily Electron Fluence
Sep 93 - Aug 94



Day	Sep 93	Oct	Nov	Dec	Jan 94	Feb	Mar	Apr	May	Jun	Jul	Aug
1	1.6E+07	9.6E+07	1.3E+07	1.6E+06	3.8E+06	4.5E+07	1.6E+07	2.1E+07	2.5E+06	1.3E+09	5.0E+08	3.0E+07
2	3.6E+06	3.1E+08	2.4E+07	4.1E+07	1.1E+08	1.1E+07	9.9E+06	5.9E+06	2.3E+07	8.1E+08	2.8E+08	5.1E+07
3	2.2E+06	3.6E+08	2.4E+07	1.1E+08	1.8E+08	5.0E+06	1.5E+07	1.9E+08	2.5E+08	1.2E+09	1.0E+09	4.9E+07
4	3.0E+08	2.4E+08	6.9E+06	1.5E+08	6.6E+07	8.1E+06	1.6E+07	1.2E+09	2.2E+09	9.6E+08	7.3E+08	4.3E+07
5	1.2E+09	4.4E+07	2.7E+08	--	1.1E+08	4.1E+06	2.3E+07	1.6E+09	1.4E+09	9.3E+08	6.1E+08	1.6E+07
6	1.2E+09	3.8E+06	3.9E+08	2.5E+08	8.5E+06	2.5E+06	7.5E+06	2.4E+09	4.3E+08	1.2E+09	1.7E+08	6.4E+06
7	4.3E+08	3.3E+06	9.3E+08	1.0E+08	1.2E+07	7.7E+07	3.1E+06	2.1E+09	1.5E+09	6.2E+08	2.7E+07	6.1E+06
8	5.8E+08	6.7E+06	8.2E+08	1.1E+07	9.2E+06	1.9E+08	--	2.4E+09	8.8E+08	9.0E+08	1.8E+07	4.6E+06
9	8.1E+08	8.9E+06	5.3E+08	1.6E+07	6.0E+06	5.3E+08	1.1E+09	2.3E+09	2.2E+09	9.0E+08	1.6E+07	4.2E+06
10	2.7E+08	3.2E+08	5.0E+08	4.5E+07	4.1E+06	5.1E+08	2.2E+09	2.2E+09	1.4E+09	4.2E+08	1.3E+07	2.2E+06
11	--	8.7E+08	4.2E+08	3.6E+07	2.2E+06	3.5E+08	2.3E+09	9.6E+08	2.2E+09	2.5E+08	1.8E+07	4.6E+06
12	1.6E+07	1.1E+09	6.9E+08	2.3E+07	4.3E+07	1.8E+08	2.4E+09	2.3E+09	1.3E+09	2.7E+08	1.7E+07	3.0E+07
13	8.9E+06	4.8E+08	1.7E+08	2.0E+07	2.6E+08	3.0E+08	1.6E+09	2.5E+09	2.7E+09	3.3E+08	1.1E+07	9.1E+07
14	1.1E+09	3.2E+08	1.5E+07	2.7E+07	9.1E+07	3.6E+08	1.9E+09	1.2E+09	1.6E+08	2.4E+08	3.5E+06	3.9E+08
15	1.6E+09	7.1E+08	3.9E+06	4.8E+06	4.2E+08	8.8E+08	1.3E+09	1.2E+09	8.0E+07	2.2E+08	2.0E+07	8.0E+08
16	1.2E+09	2.9E+08	--	2.2E+06	3.7E+08	5.4E+08	3.1E+09	3.6E+08	3.9E+08	3.3E+08	3.0E+08	5.6E+08
17	1.9E+09	--	5.0E+06	7.5E+07	2.7E+08	4.1E+08	1.6E+09	1.3E+07	8.6E+08	2.5E+08	7.9E+08	4.9E+08
18	1.7E+09	1.3E+07	3.5E+06	1.6E+08	2.9E+08	4.2E+08	1.2E+09	6.8E+07	5.3E+08	9.1E+07	1.5E+09	3.8E+08
19	1.0E+09	3.3E+06	1.5E+07	3.0E+08	2.5E+08	1.0E+08	4.0E+08	1.9E+08	6.7E+08	1.5E+07	9.9E+08	1.8E+08
20	1.7E+08	4.6E+06	2.3E+07	2.4E+08	6.1E+08	-999	8.6E+08	3.0E+08	1.1E+09	2.0E+07	1.0E+09	1.4E+08
21	7.9E+06	3.8E+06	1.7E+07	1.3E+08	3.9E+08	-999	7.5E+07	3.4E+08	1.3E+09	1.7E+08	3.6E+08	1.0E+07
22	5.7E+06	4.0E+06	4.0E+07	1.2E+08	1.9E+07	1.6E+08	1.6E+08	2.7E+08	6.8E+08	2.4E+08	--	1.2E+07
23	9.4E+06	3.5E+06	2.9E+07	9.3E+07	3.3E+07	7.9E+08	2.7E+08	1.3E+08	4.9E+08	3.2E+08	3.1E+08	4.9E+06
24	2.0E+06	3.0E+06	2.6E+07	3.8E+07	3.5E+07	9.1E+08	3.4E+08	4.4E+07	6.8E+06	2.7E+08	4.8E+07	3.7E+06
25	2.5E+06	2.0E+06	1.8E+07	3.8E+07	3.1E+07	2.2E+08	2.9E+08	2.8E+07	2.3E+07	2.1E+08	5.4E+06	2.7E+06
26	2.6E+06	2.1E+06	2.7E+06	2.5E+07	9.3E+06	9.6E+07	1.6E+08	3.0E+07	4.3E+07	5.3E+06	1.0E+07	2.4E+06
27	3.2E+06	3.3E+06	2.9E+06	1.1E+07	6.2E+06	1.6E+08	2.8E+08	3.1E+07	8.0E+07	5.8E+06	7.2E+06	2.9E+06
28	2.7E+06	4.0E+07	3.6E+06	9.9E+06	1.9E+07	1.4E+08	4.4E+07	2.7E+07	2.5E+07	2.8E+07	6.2E+06	7.9E+06
29	8.9E+06	7.7E+07	2.3E+06	1.0E+07	3.1E+07		2.5E+07	1.3E+07	4.4E+07	4.3E+07	8.1E+07	6.9E+06
30	2.5E+07	1.9E+07	2.1E+06	5.3E+06	4.9E+07		3.0E+07	1.2E+07	2.9E+08	4.8E+08	1.1E+08	6.8E+06
31		3.7E+07		2.2E+06	9.0E+07		--		1.1E+09		2.7E+07	3.9E+06

NOTE: The electron detector responds significantly to protons above 32 MeV; therefore, electron data are contaminated when a proton event is in progress. These days are indicated with '-999' in the table and are not plotted. '--' indicates data not available.

CONTENTS

Prompt Reports Number 601 Part I

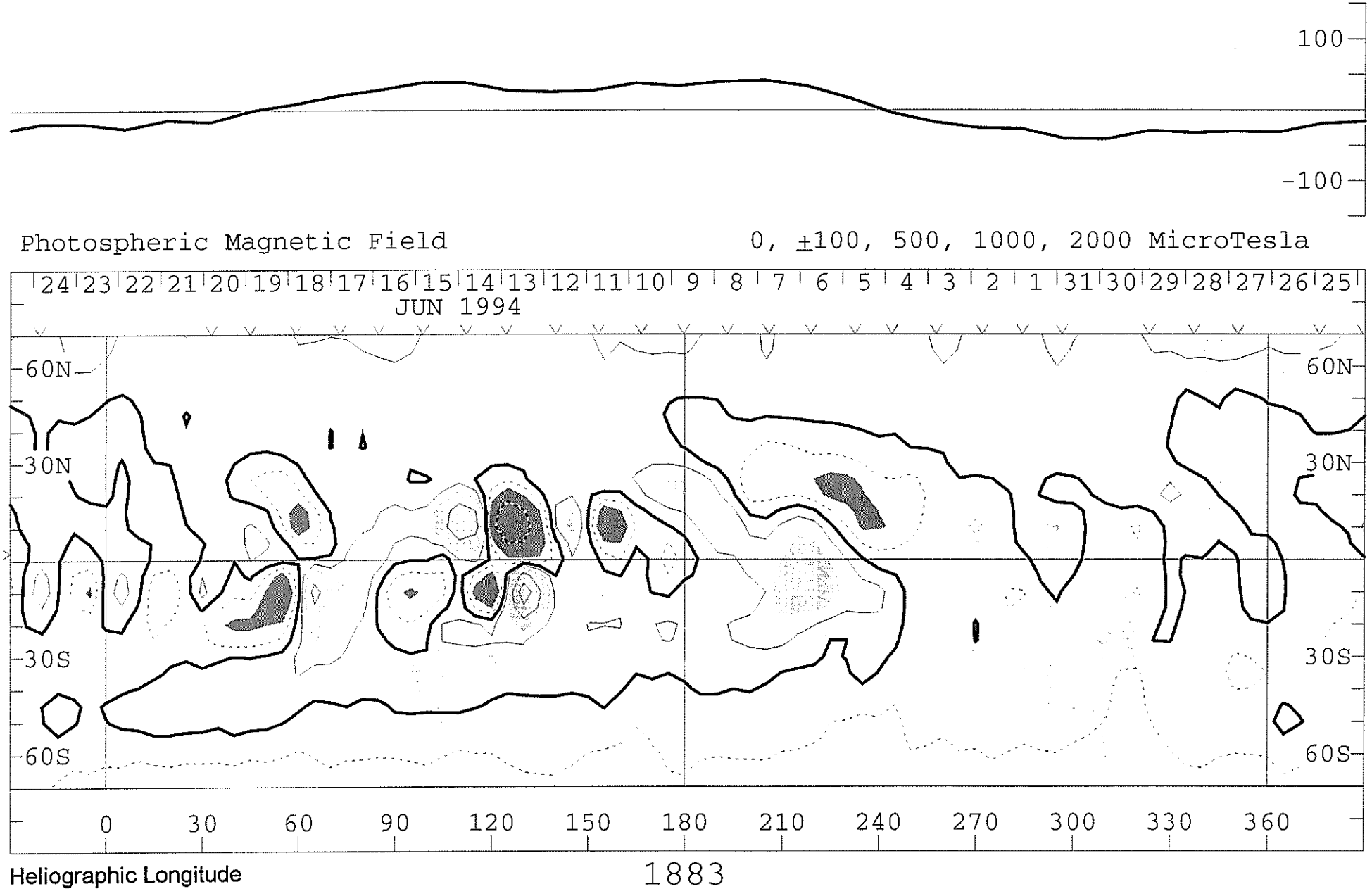
DATA FOR JULY 1994

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1883

(27 May to 23 June 1994)

WILCOX SOLAR OBSERVATORY



SOLAR MAGNETIC FIELD SYNOPTIC CHART

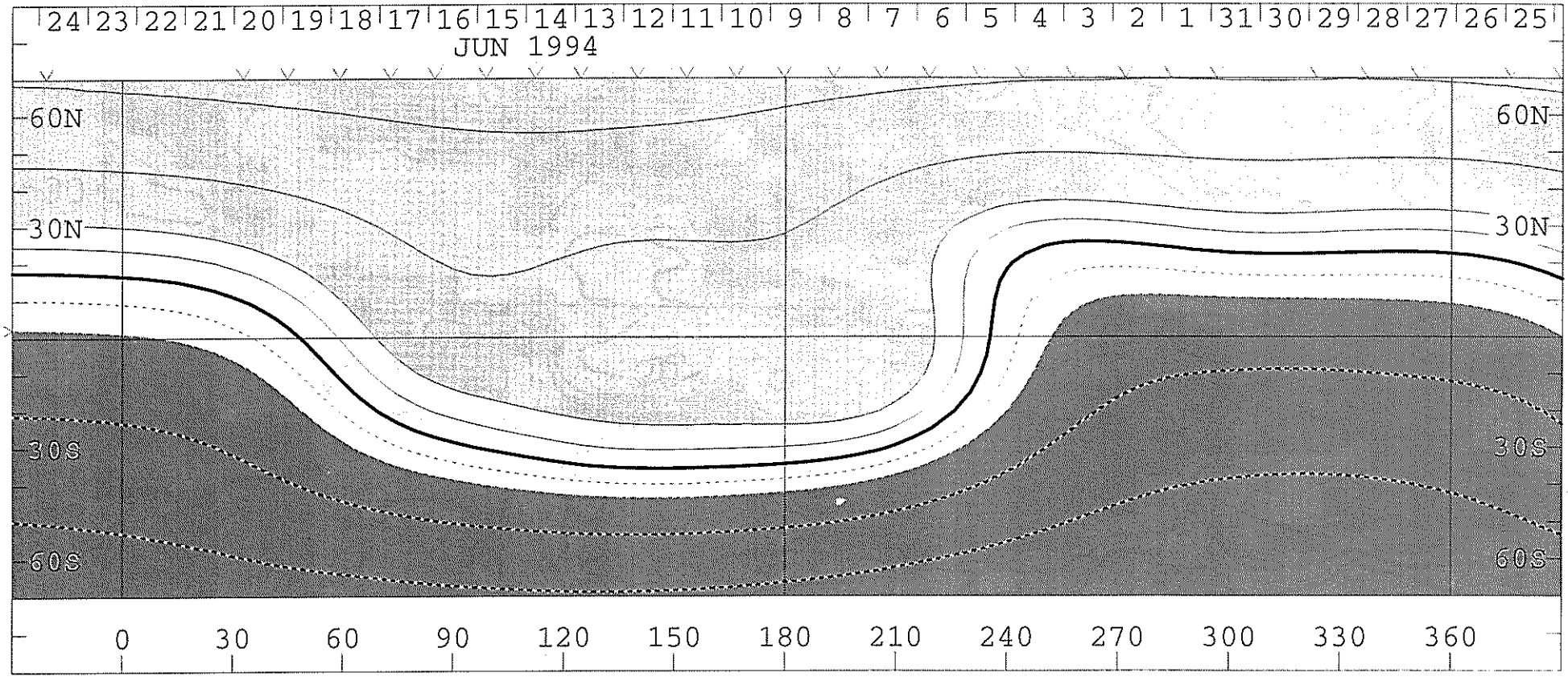
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1883

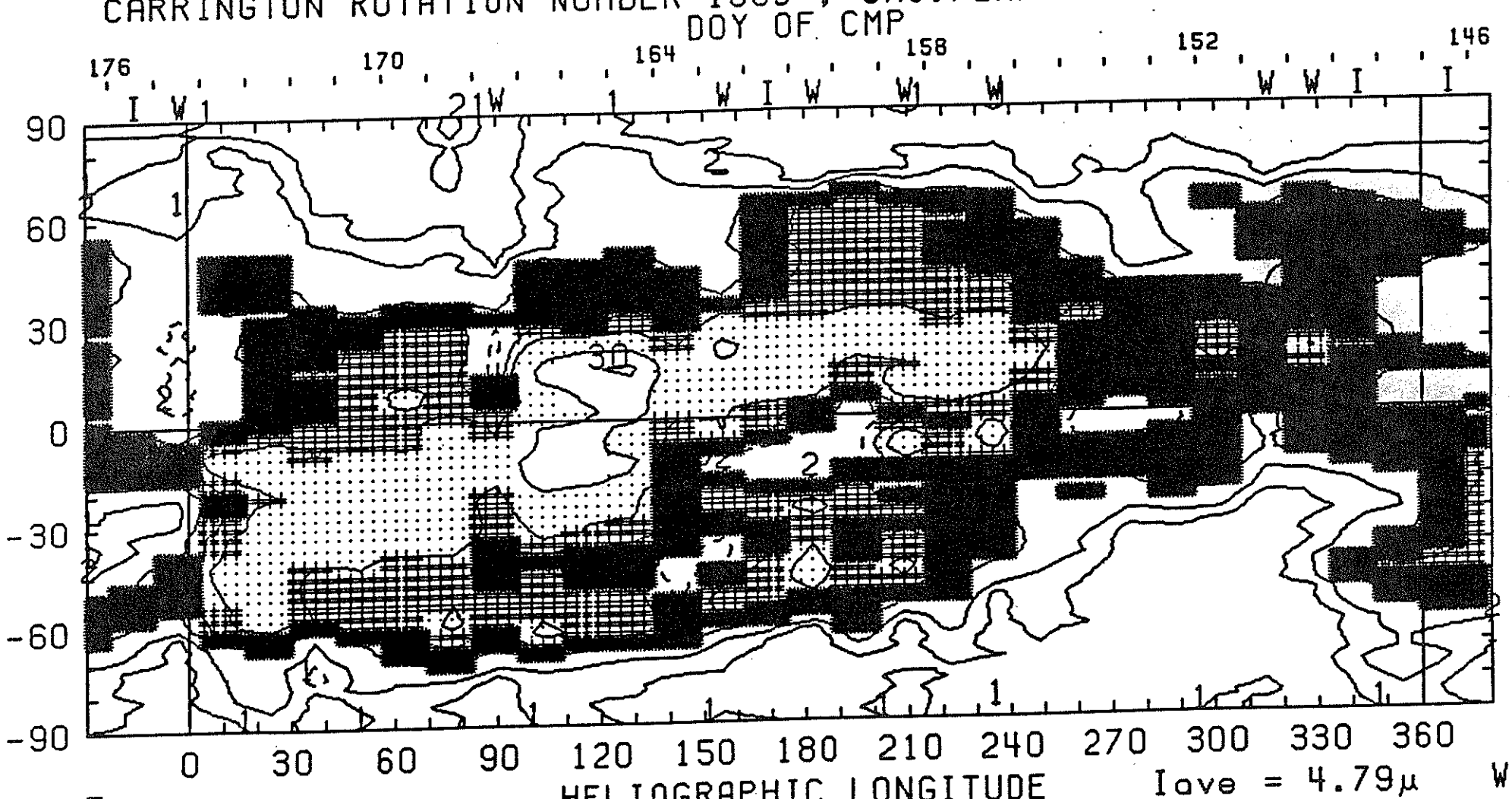
(27 May to 23 June 1994)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



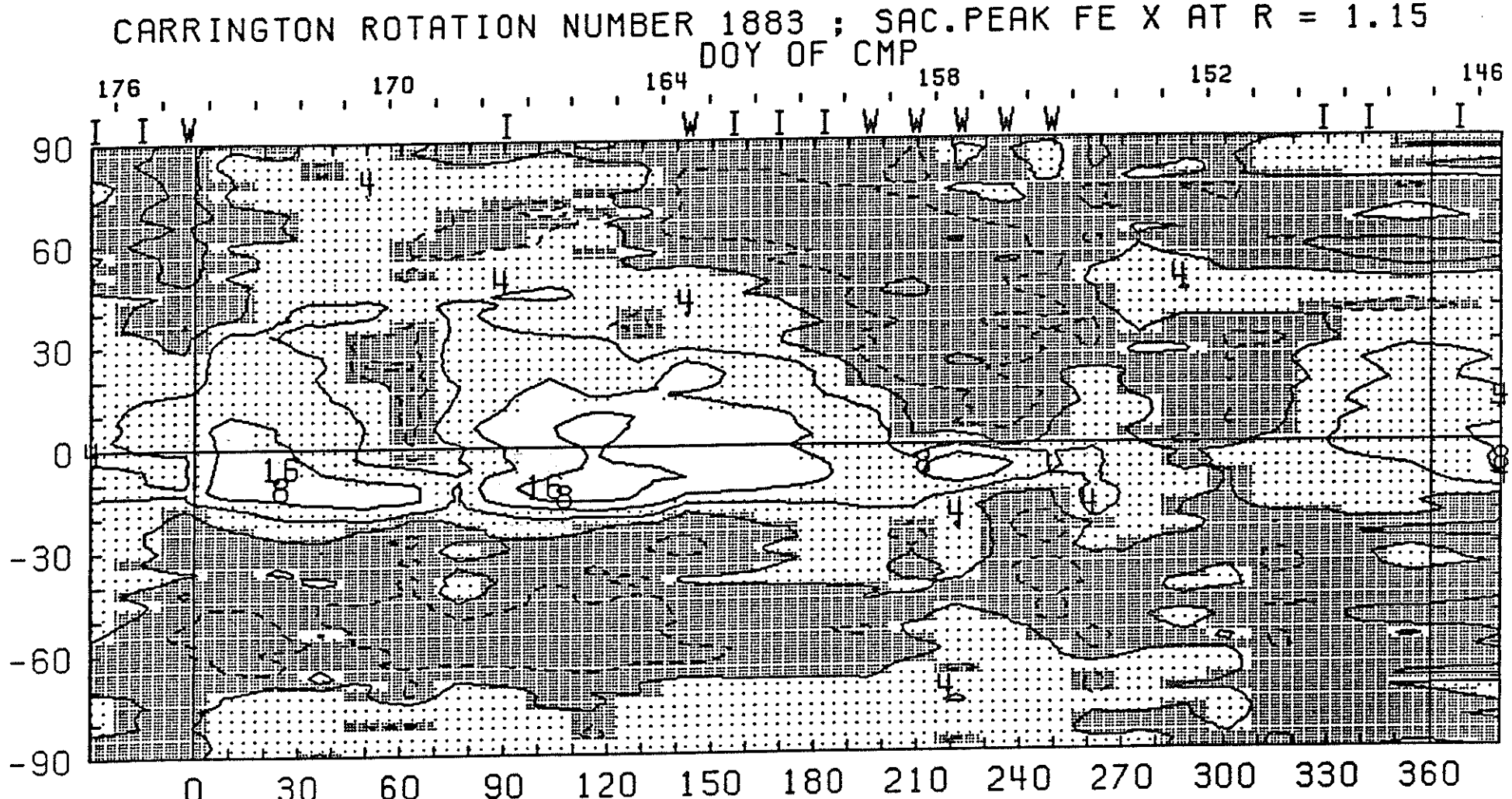
CARRINGTON ROTATION NUMBER 1883 ; SAC.PEAK FE XIV AT R = 1.15

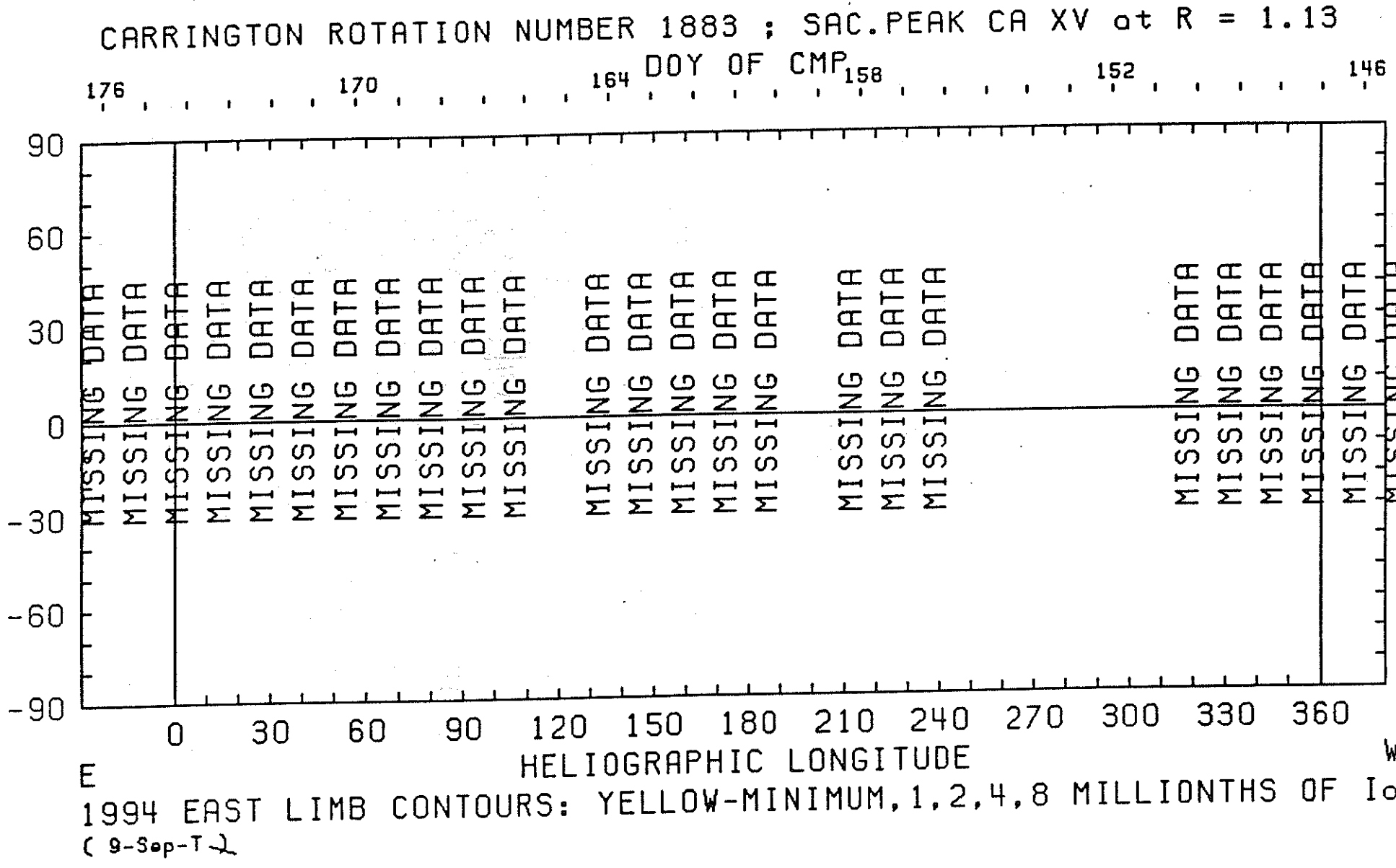


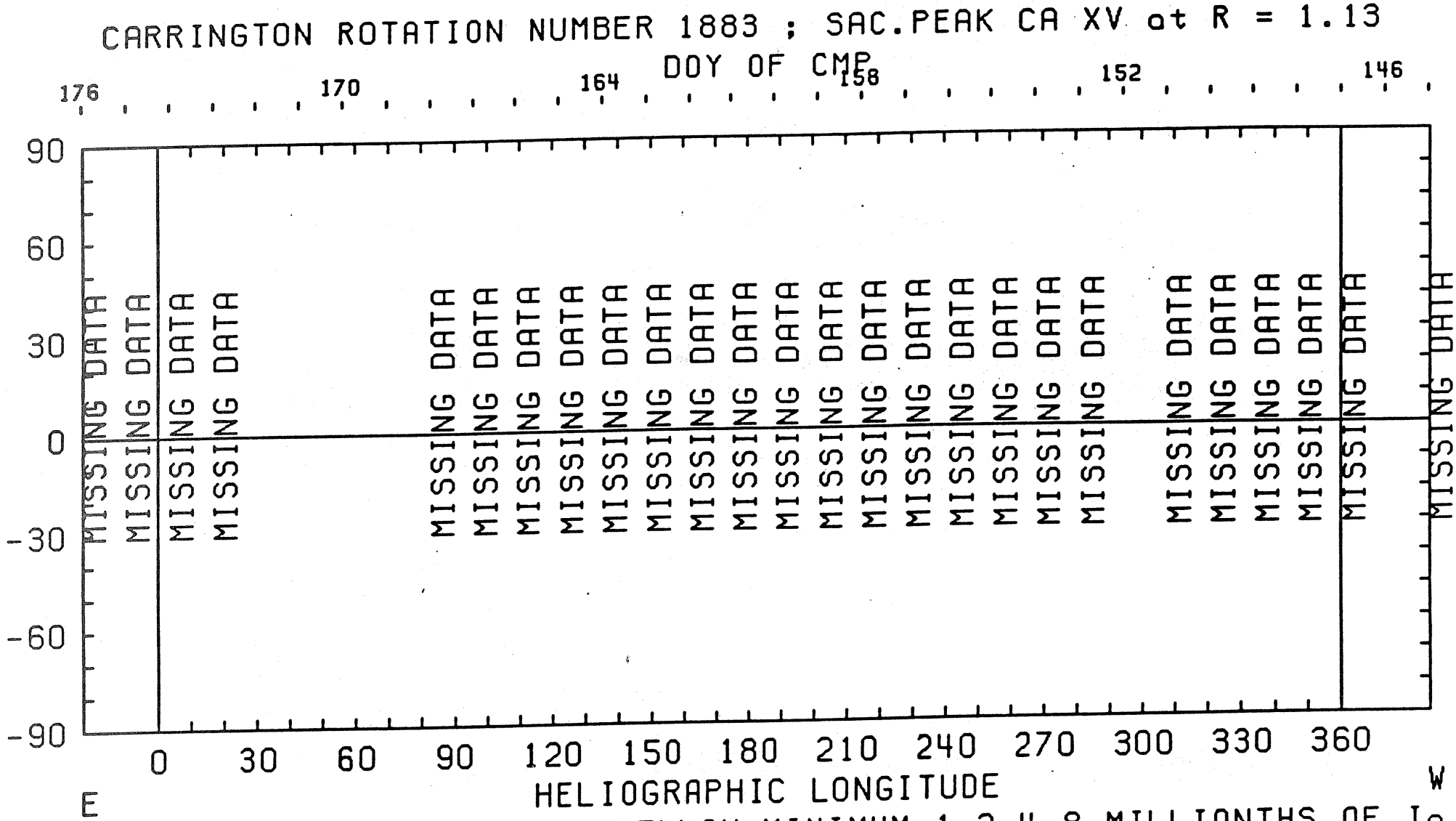
Iave = 4.79μ

1994 E+W LIMB CONTOURS: 1,2,4,7,10,20,30,40,50 MILLIONTHS OF Io

(22-Sep-94) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK


CARRINGTON ROTATION NUMBER 1883 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
176
170
164
158
152
146
I I W I W I I I W W W W W I I I
90
60
30
0
-30
-60
-90
0 30 60 90 120 150 180 210 240 270 300 330 360
E
HELIOGRAPHIC LONGITUDE
Iave = 2.77μ
W
1994 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io
(8-Sep-94)


CARRINGTON ROTATION NUMBER 1883 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
176
170
164
158
152
146
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1994 EAST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(9-Sep-T)


CARRINGTON ROTATION NUMBER 1883 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
176
170
164
158
152
146
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1994 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
(9-Sep-T)

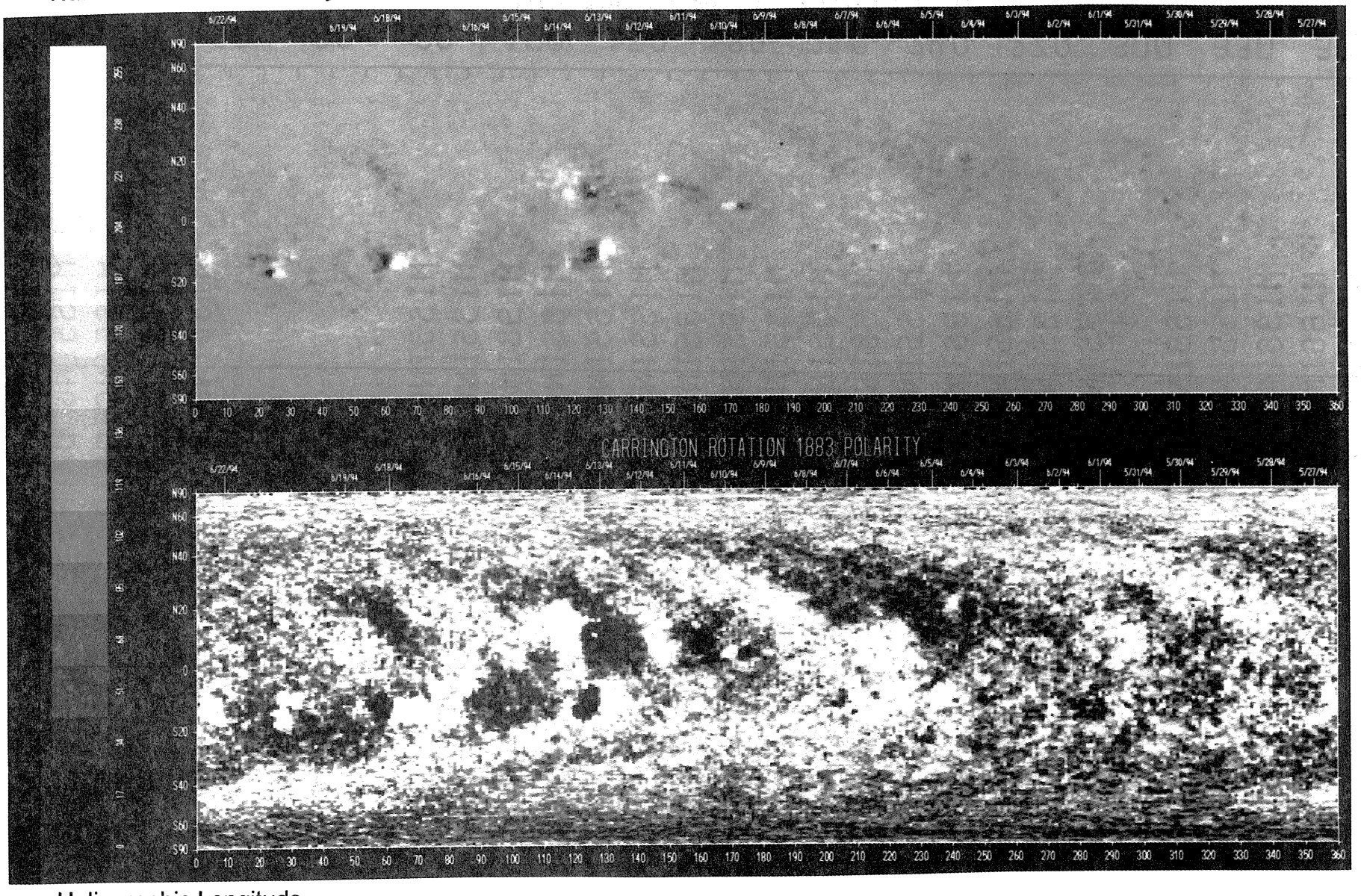
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1883

(27 May to 23 June 1994)

National Solar Observatory/Kitt Peak

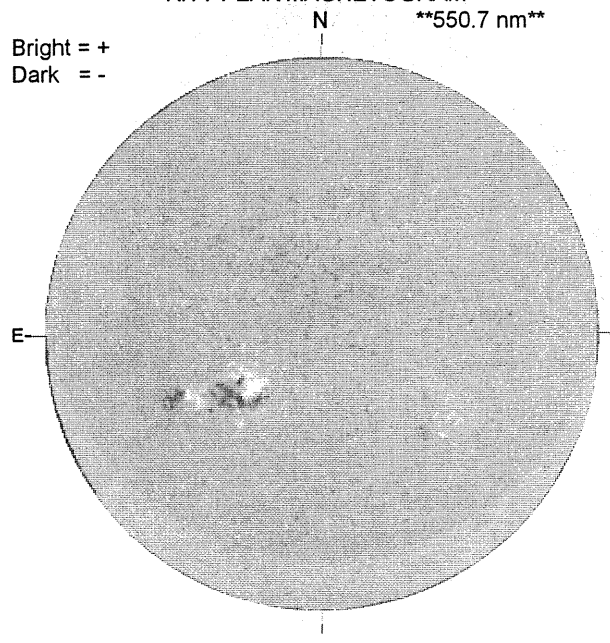
Dates of Observation



Heliographic Longitude

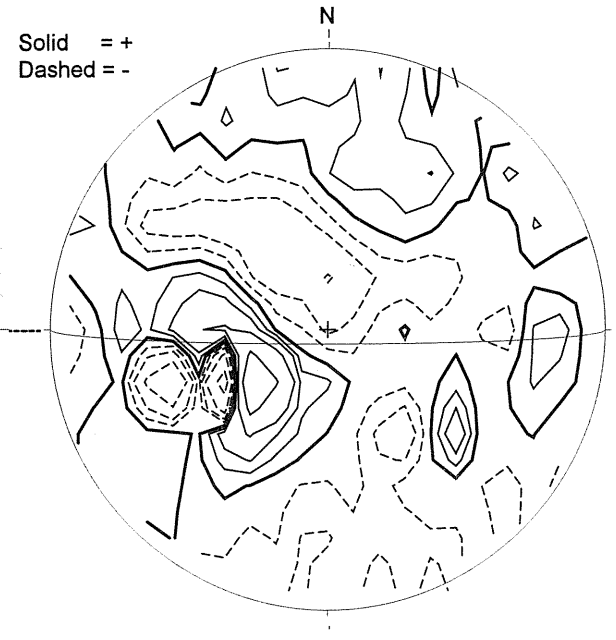
JULY 1, 1994 (P= -2.81, Bo = 2.86, Lo = 257.83)

KITT PEAK MAGNETOGRAM



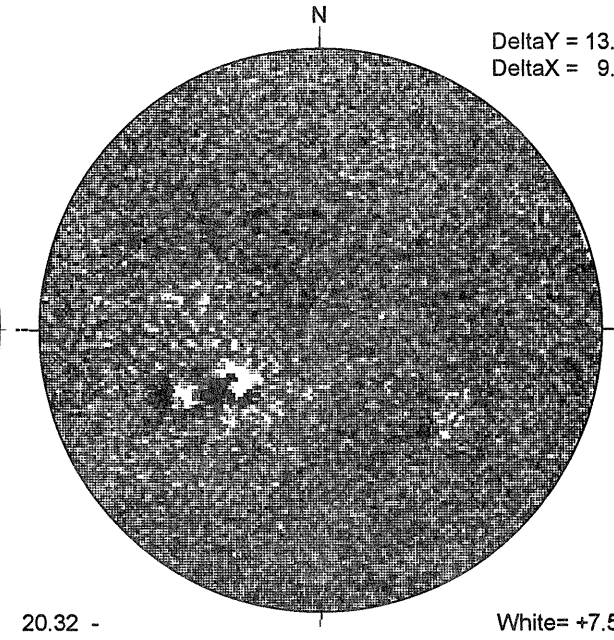
2029 UT

STANFORD MAGNETOGRAM



1848 UT

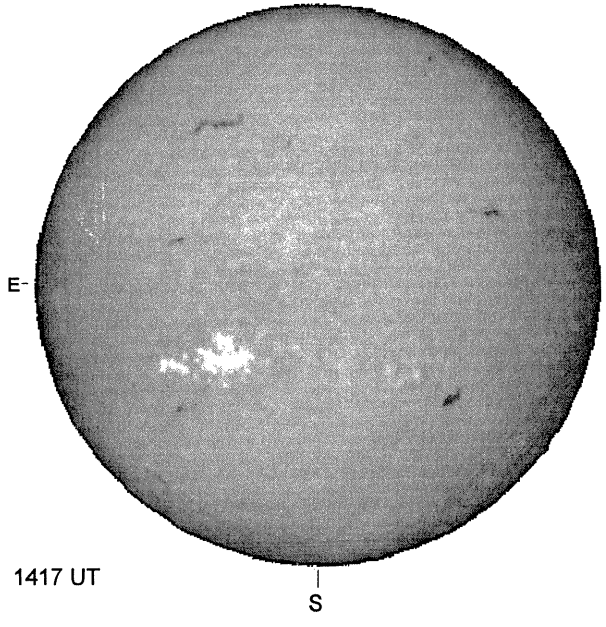
MT. WILSON MAGNETOGRAM



20.32 -
21.24 UT

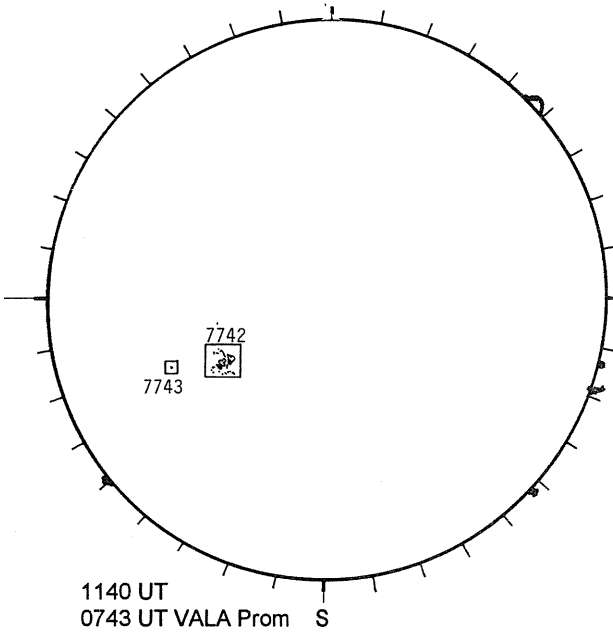
White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA



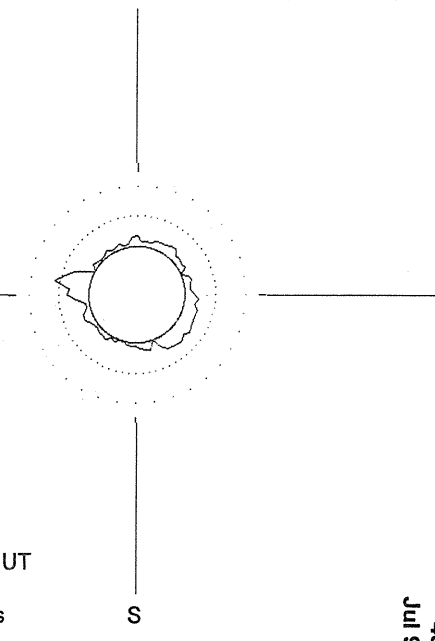
1417 UT

RAMEY SUNSPOT



1140 UT
0743 UT VALA Prom

LOMNICKY PEAK CORONA (1.04 Radii)----



530.3 nm 0827 UT
... 50 abs. units
. . 100 abs. units

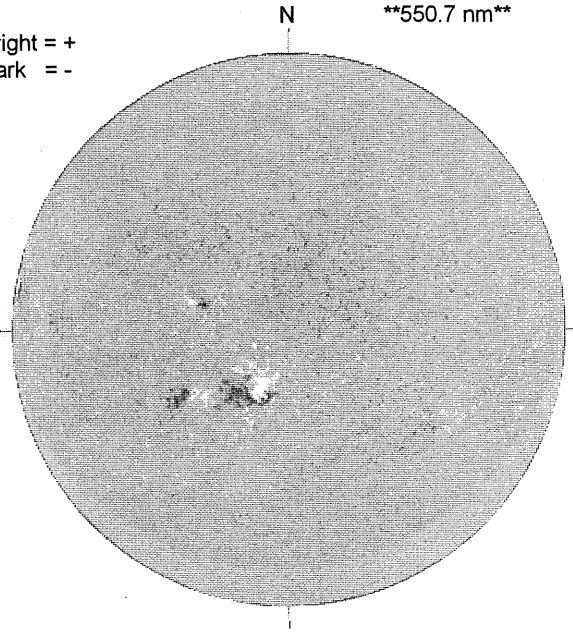
45
Jul 94

JULY 2, 1994 (P= -2.35, Bo = 2.97, Lo = 244.59)

KITT PEAK MAGNETOGRAM

550.7 nm

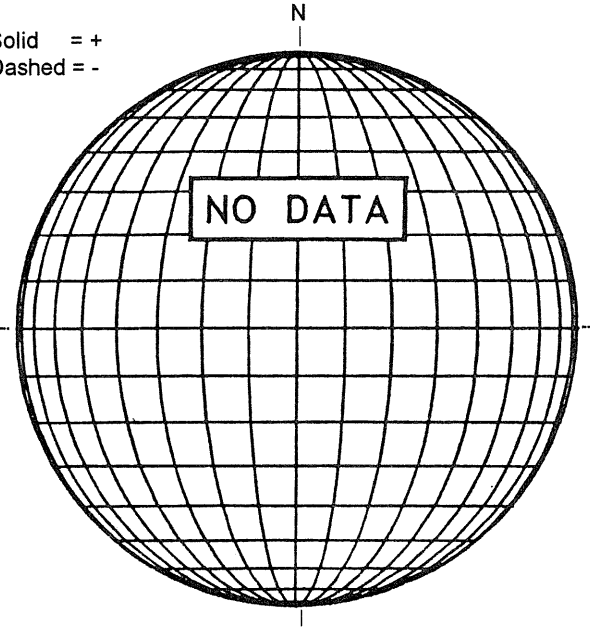
Bright = +
Dark = -



1331 UT

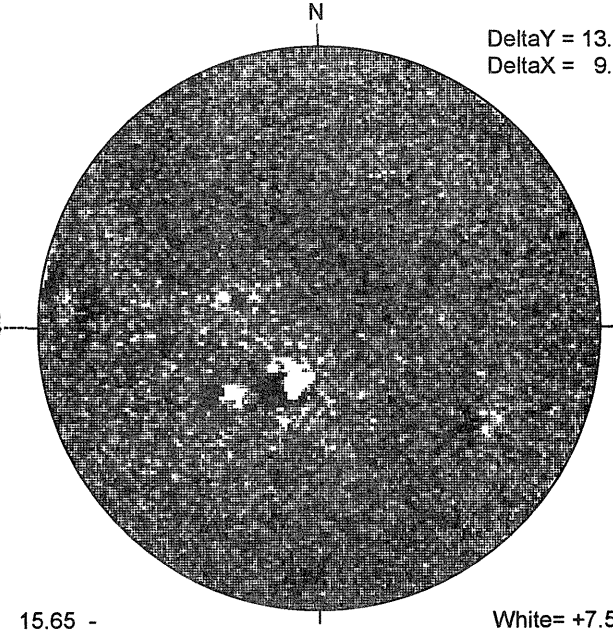
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

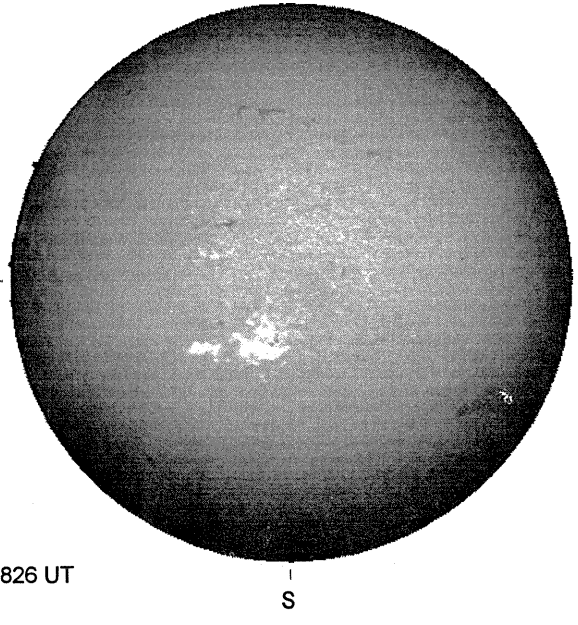
DeltaY = 13.1
DeltaX = 9.6



15.65 -
16.57 UT

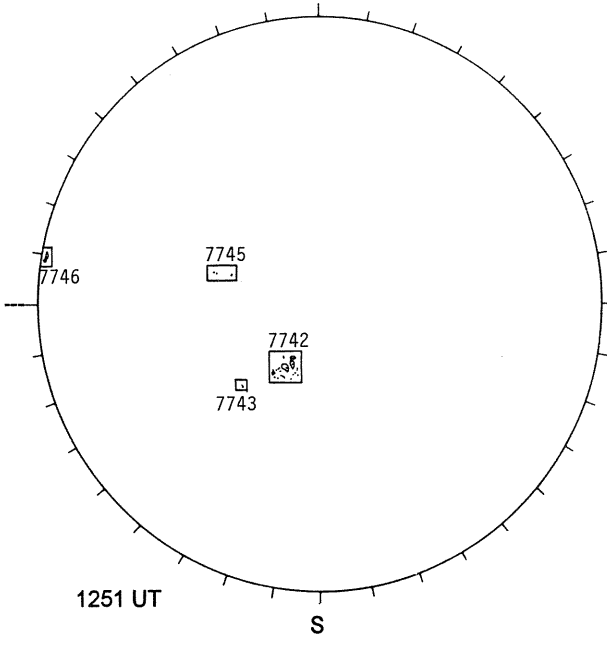
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



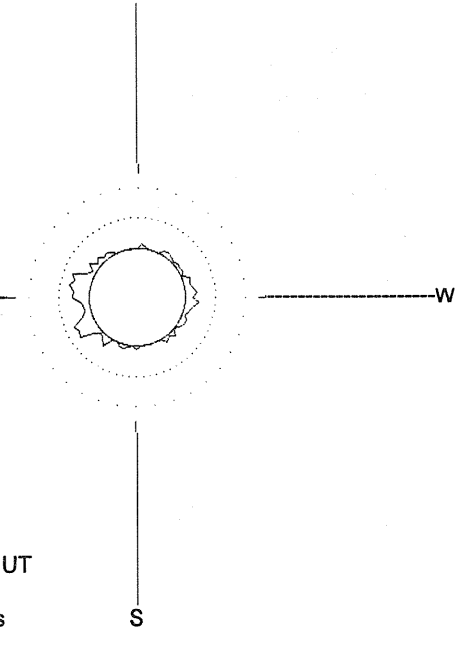
1826 UT

RAMEY SUNSPOT



1251 UT

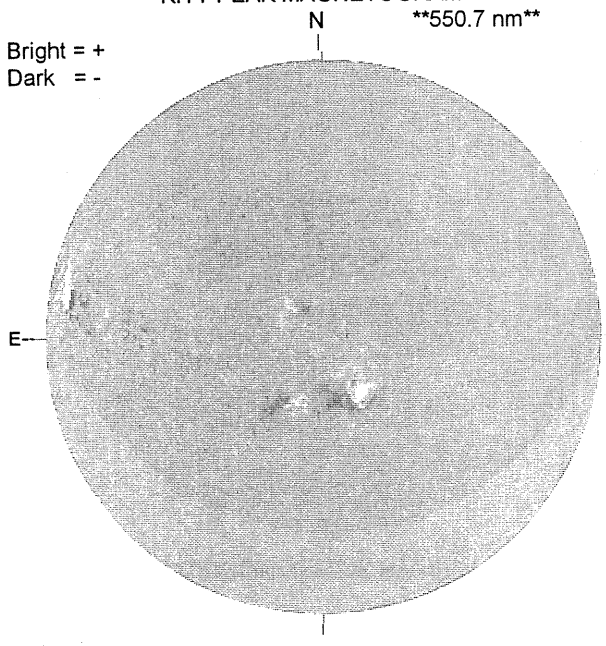
LOMNICKY PEAK CORONA (1.04 Radii)



530.3 nm 0423 UT
... 50 abs. units
. . 100 abs. units

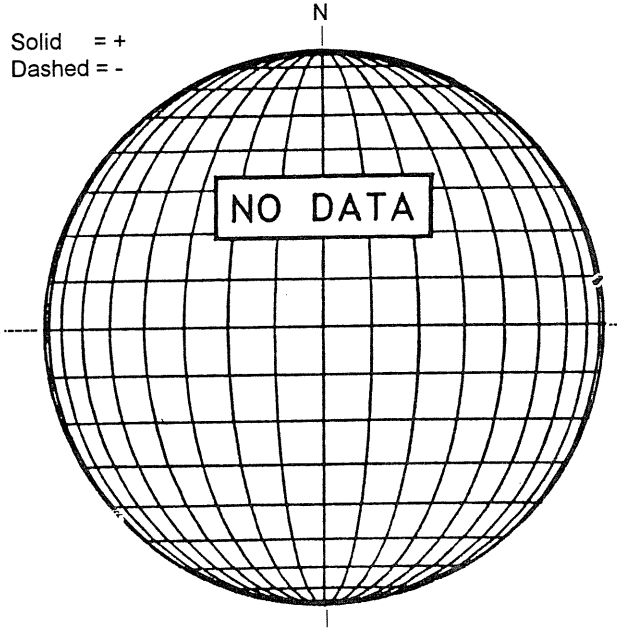
JULY 3, 1994 (P= -1.90, Bo = 3.08, Lo = 231.36)

KITT PEAK MAGNETOGRAM

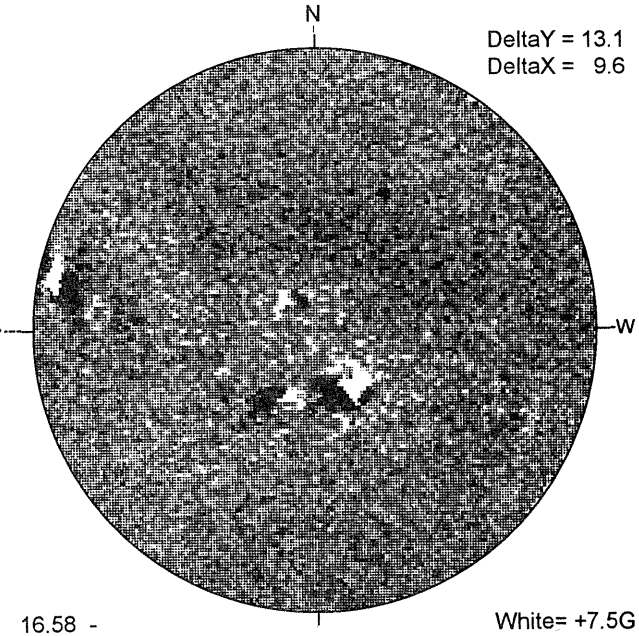


1459 UT

STANFORD MAGNETOGRAM



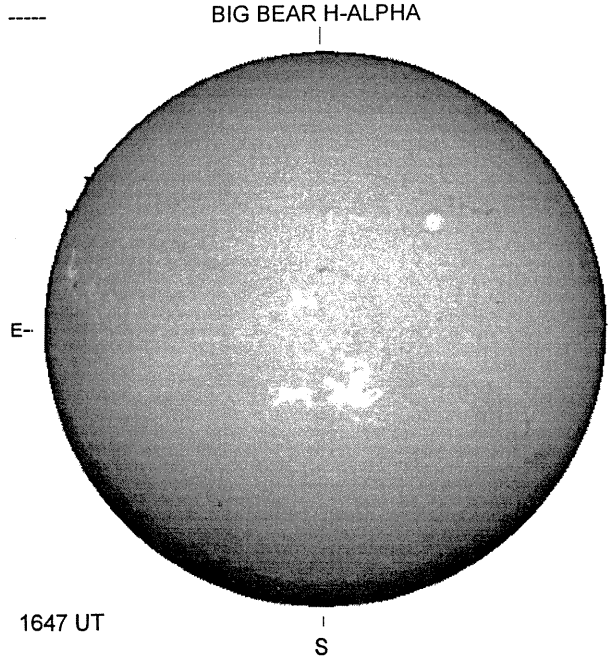
MT. WILSON MAGNETOGRAM



16.58 -
17.50 UT

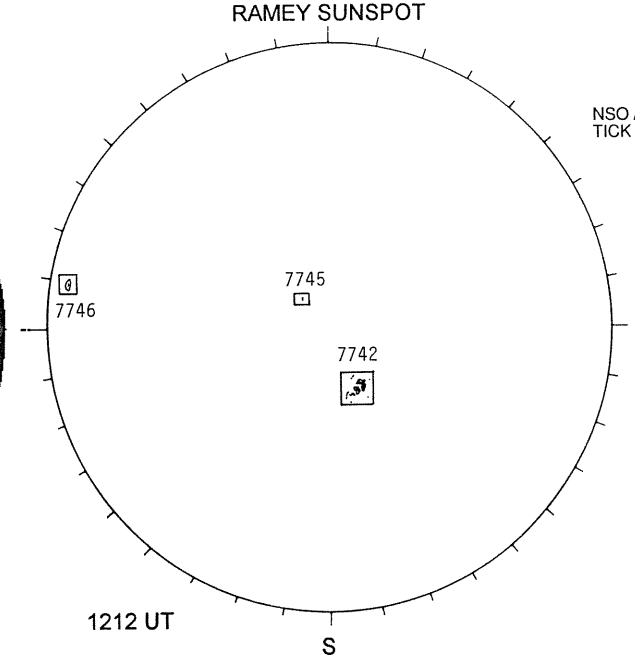
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



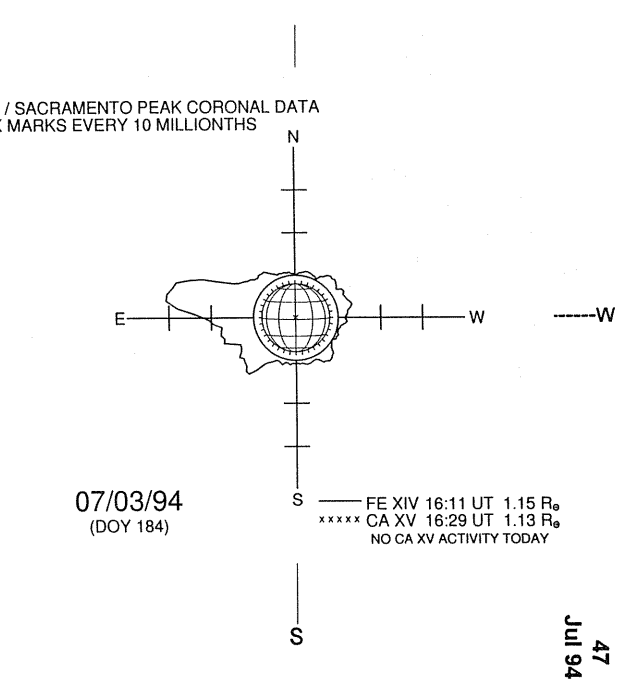
1647 UT

RAMEY SUNSPOT



1212 UT

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



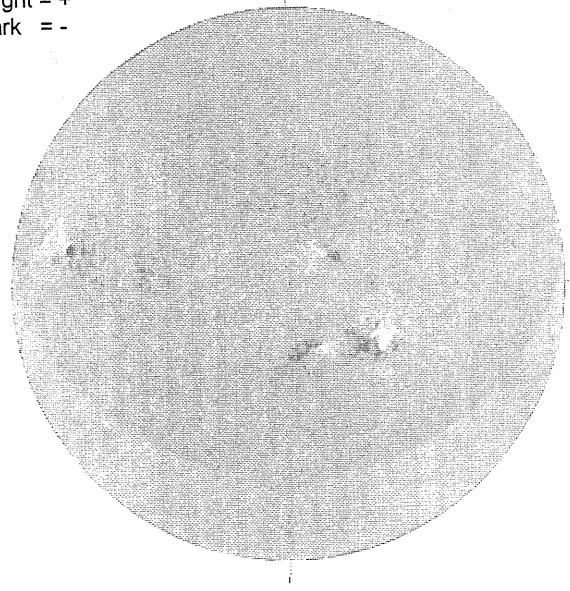
07/03/94
(DOY 184)

FE XIV 16:11 UT 1.15 $R_\odot$
xxxxx CA XV 16:29 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

47
Jul 94

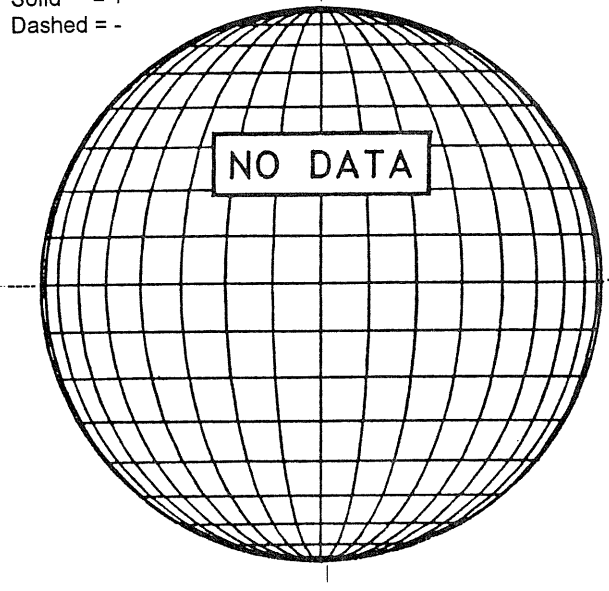
JULY 4, 1994 (P= -1.45, Bo = 3.19, Lo = 218.12)

KITT PEAK MAGNETOGRAM
N
550.7 nm
Bright = +
Dark = -
E-

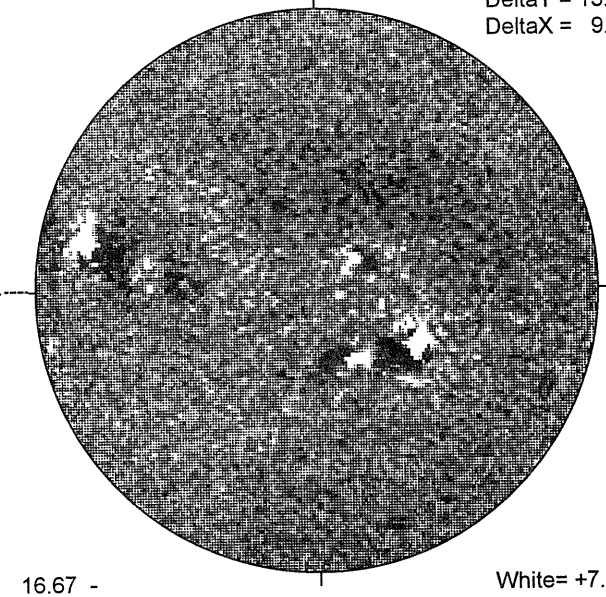


1435 UT

STANFORD MAGNETOGRAM
N
Solid = +
Dashed = -



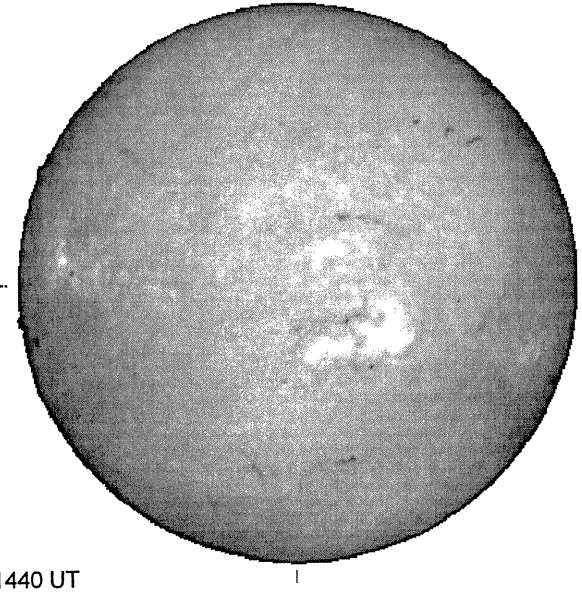
MT. WILSON MAGNETOGRAM
N
DeltaY = 13.1
DeltaX = 9.6



-W
16.67 -
17.58 UT
White= +7.5G
Black = -7.5G

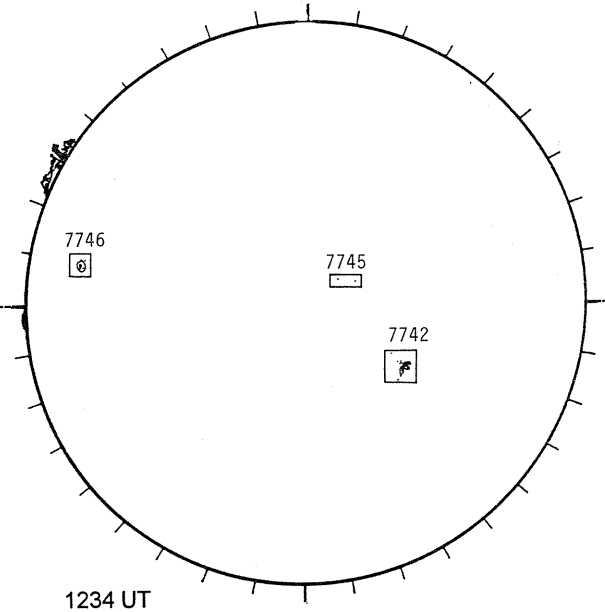
SACRAMENTO PEAK H-ALPHA

E--



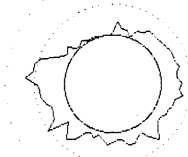
1440 UT
S

RAMEY SUNSPOT



1234 UT
0825 UT VALA Prom
S

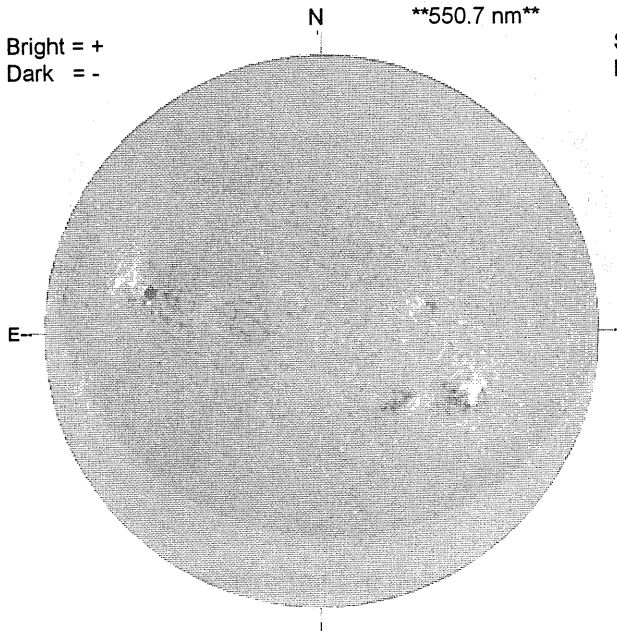
LOMNICKY PEAK CORONA (1.04 Radii)----



----------W
530.3 nm 0422 UT
... 50 abs. units
. . 100 abs. units
S

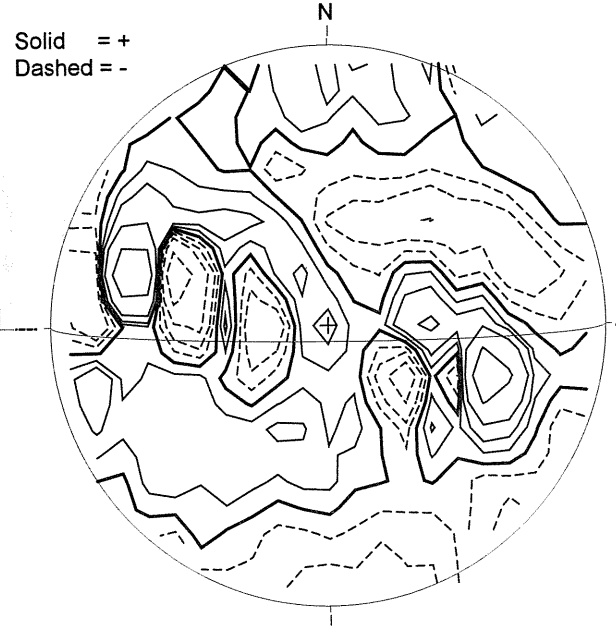
JULY 5, 1994 (P= -0.99, Bo = 3.29, Lo = 204.89)

KITT PEAK MAGNETOGRAM



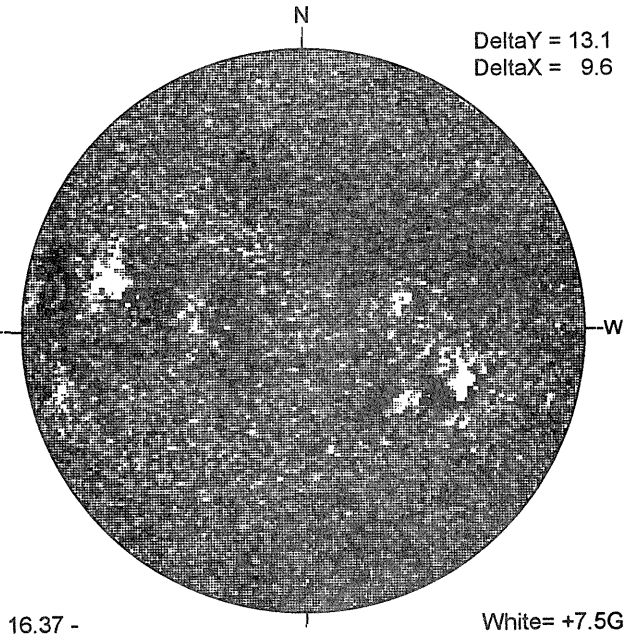
1457 UT

STANFORD MAGNETOGRAM



1755 UT

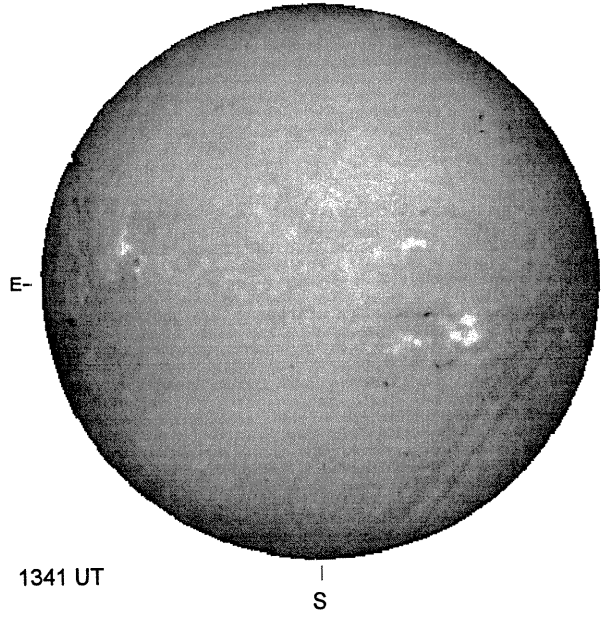
MT. WILSON MAGNETOGRAM



16.37 - 17.29 UT

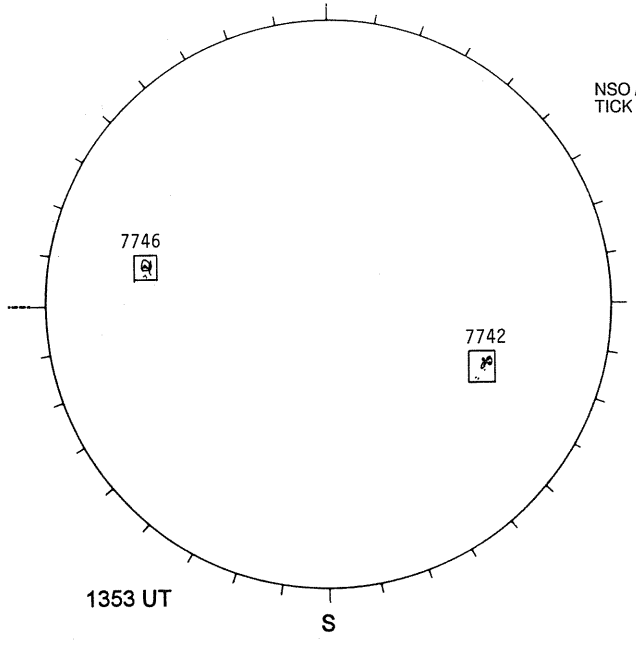
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



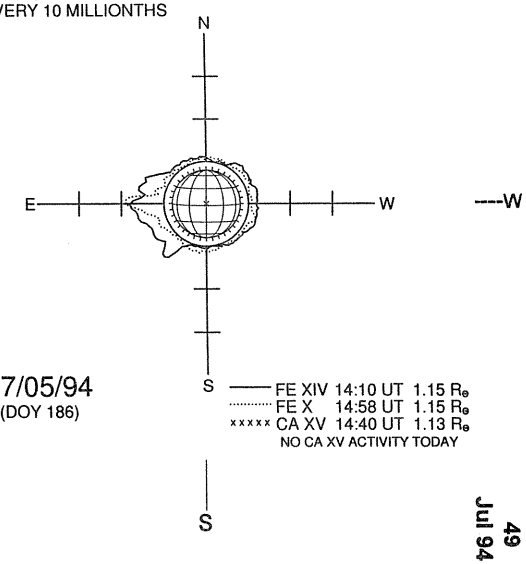
1341 UT

RAMEY SUNSPOT



1353 UT

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



07/05/94
(DOY 186)

FE XIV 14:10 UT 1.15 $R_\odot$
FE X 14:58 UT 1.15 $R_\odot$
xxxxx CA XV 14:40 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

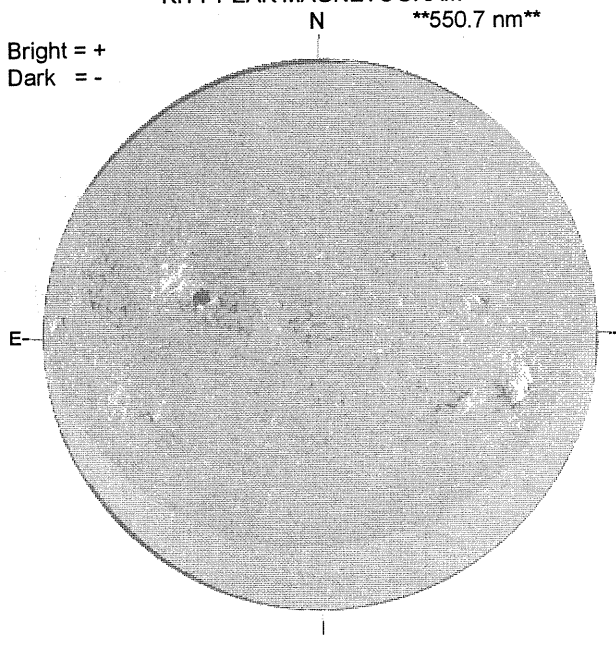
49
Jul 94

JULY 6, 1994 (P= -0.54, Bo = 3.40, Lo = 191.65)

KITT PEAK MAGNETOGRAM

550.7 nm

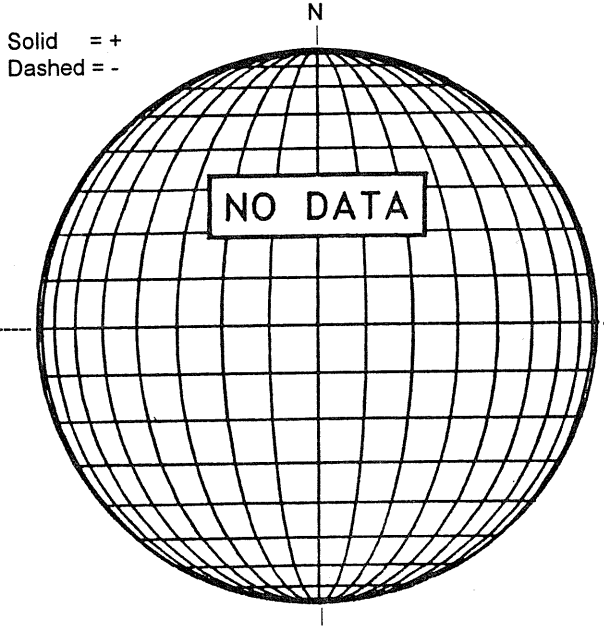
Bright = +
Dark = -



1442 UT

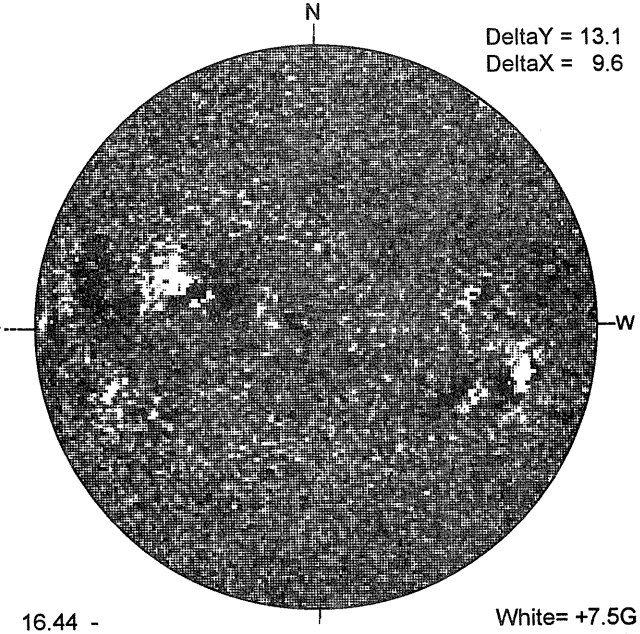
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

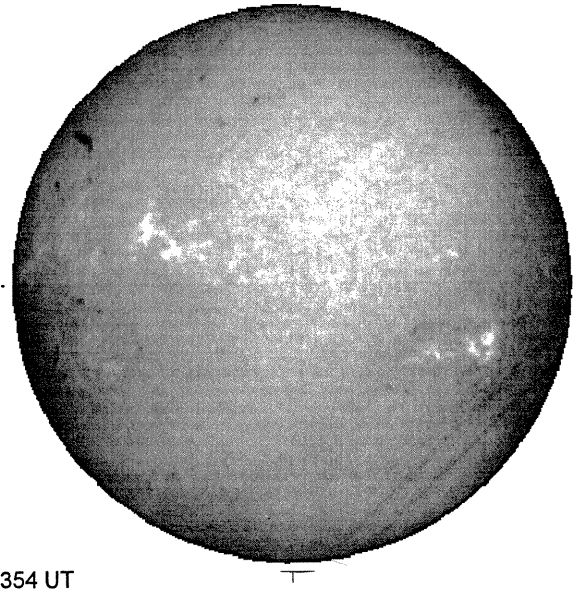
DeltaY = 13.1
DeltaX = 9.6



16.44 -
17.36 UT

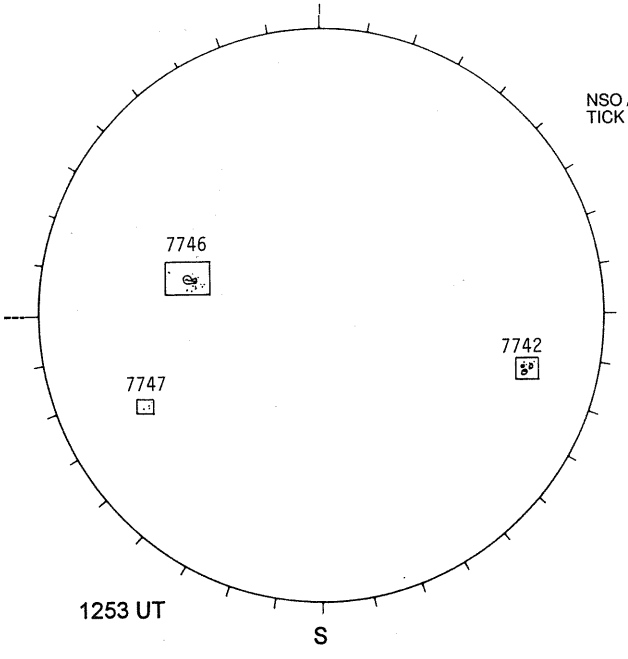
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



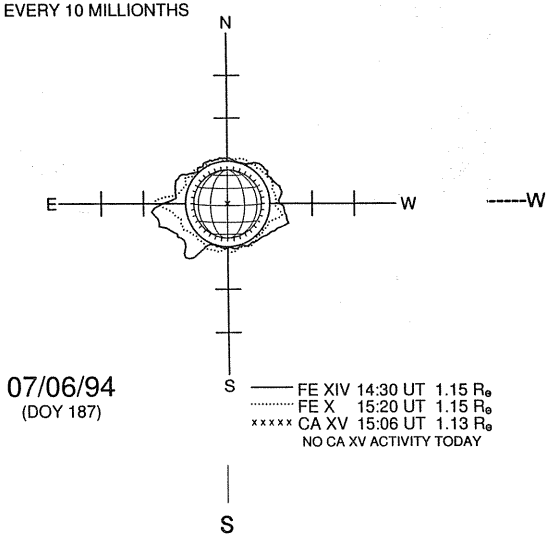
1354 UT

RAMEY SUNSPOT



1253 UT

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

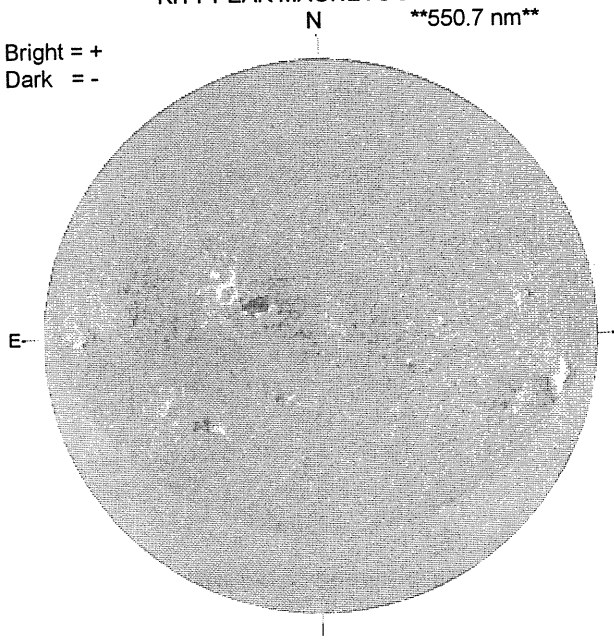


07/06/94
(DOY 187)

FE XIV 14:30 UT 1.15 $R_\odot$
FE X 15:20 UT 1.15 $R_\odot$
CA XV 15:06 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

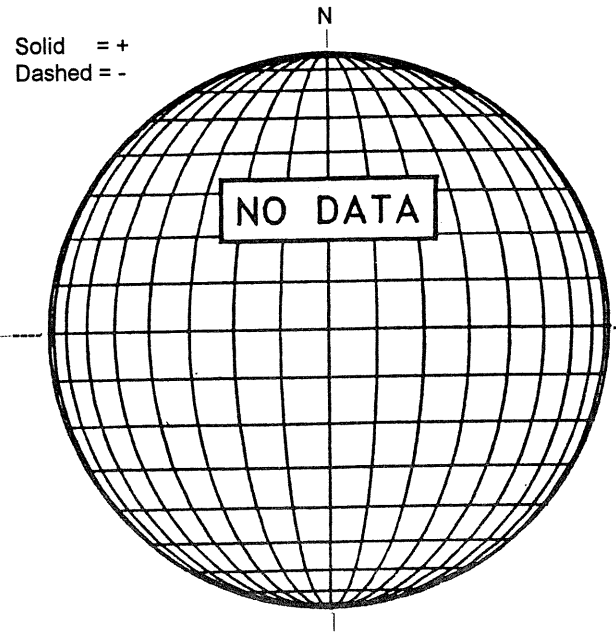
JULY 7, 1994 (P= -0.08, Bo = 3.51, Lo = 178.42)

KITT PEAK MAGNETOGRAM

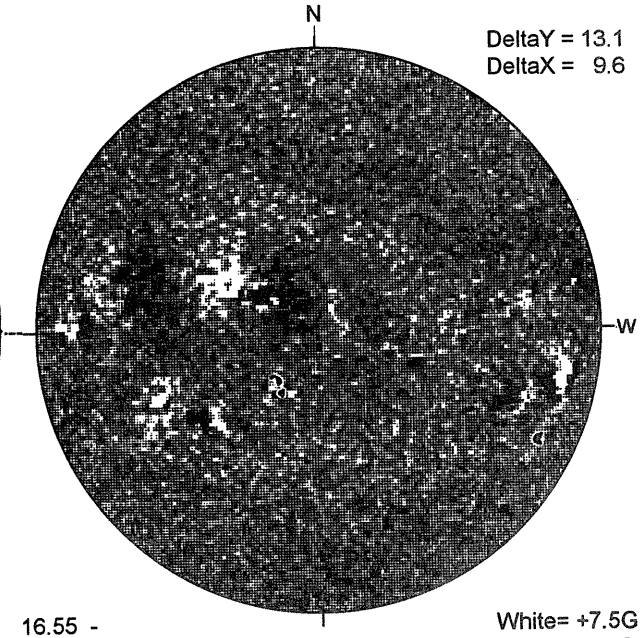


1347 UT

STANFORD MAGNETOGRAM



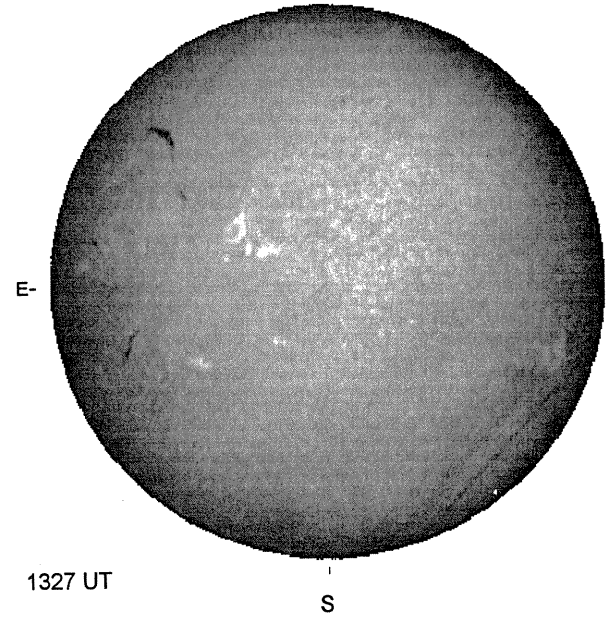
MT. WILSON MAGNETOGRAM



16.55 - 17.46 UT

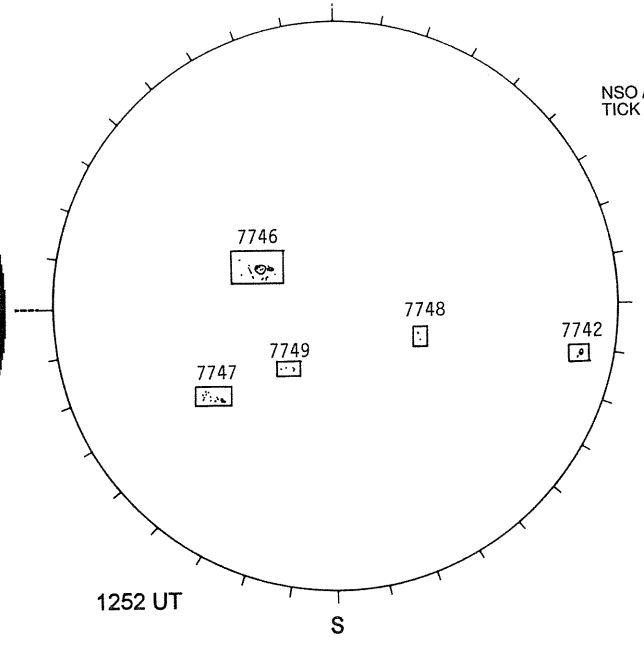
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



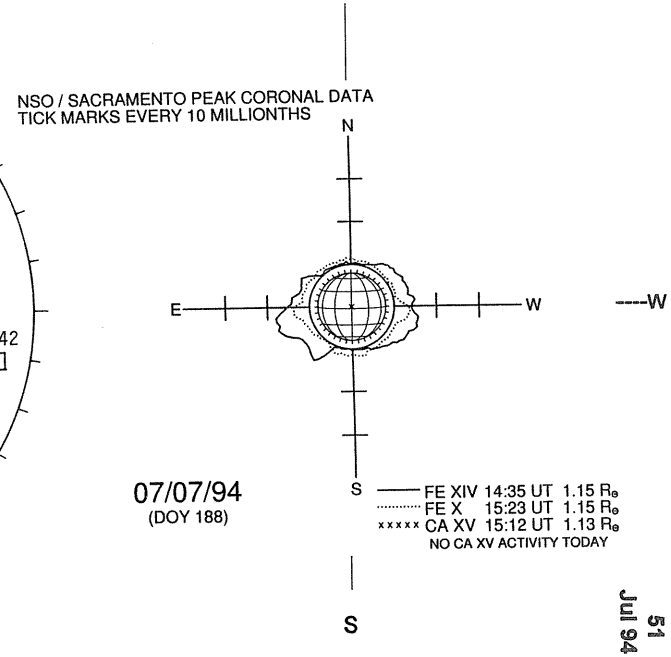
1327 UT

RAMEY SUNSPOT



1252 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

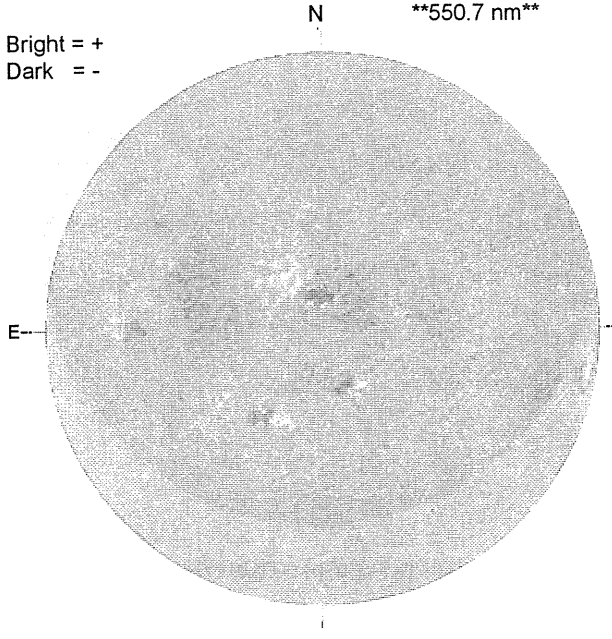
51
Jul 94

JULY 8, 1994 (P= 0.37, Bo = 3.61, Lo = 165.18)

KITT PEAK MAGNETOGRAM

550.7 nm

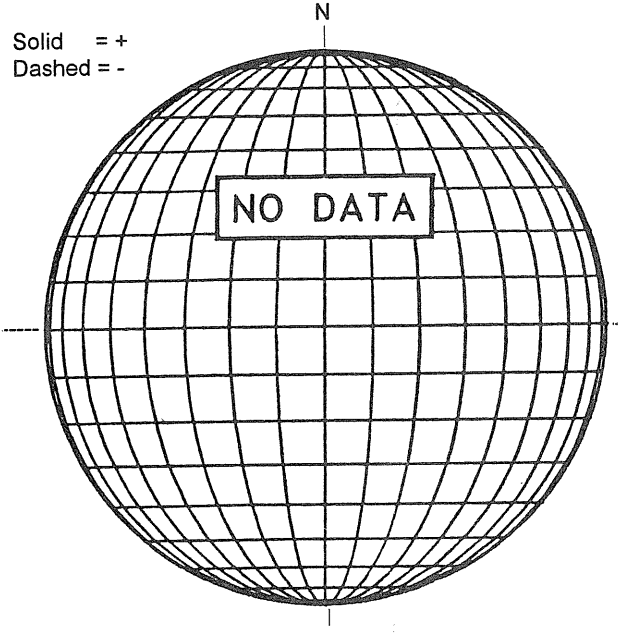
Bright = +
Dark = -



1328 UT

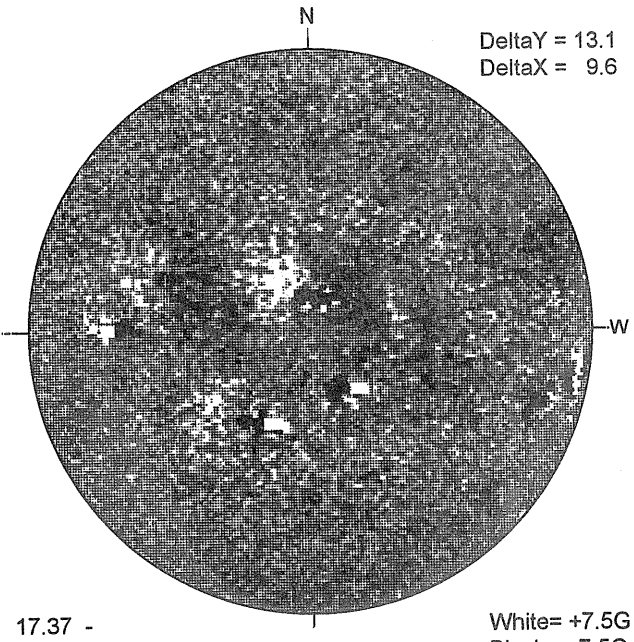
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

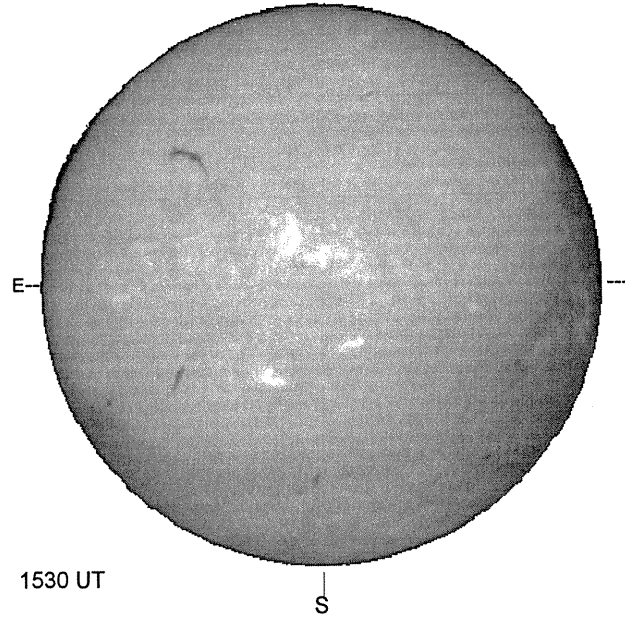
DeltaY = 13.1
DeltaX = 9.6



17.37 -
18.29 UT

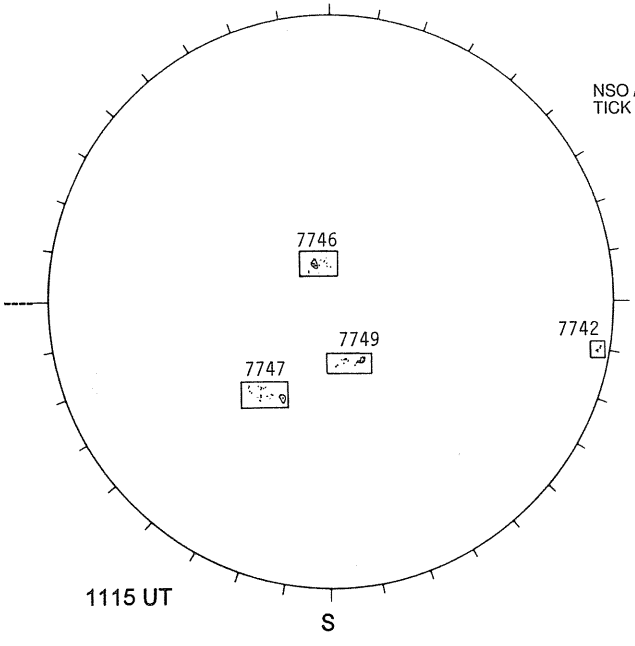
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



1530 UT

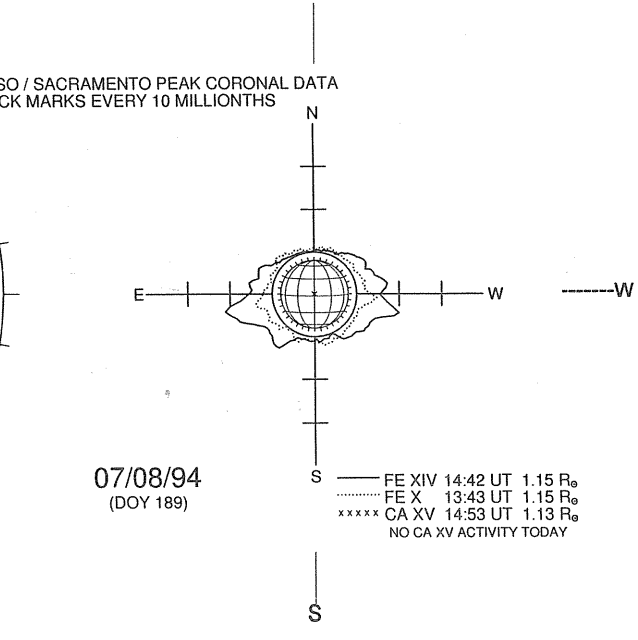
RAMEY SUNSPOT



1115 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

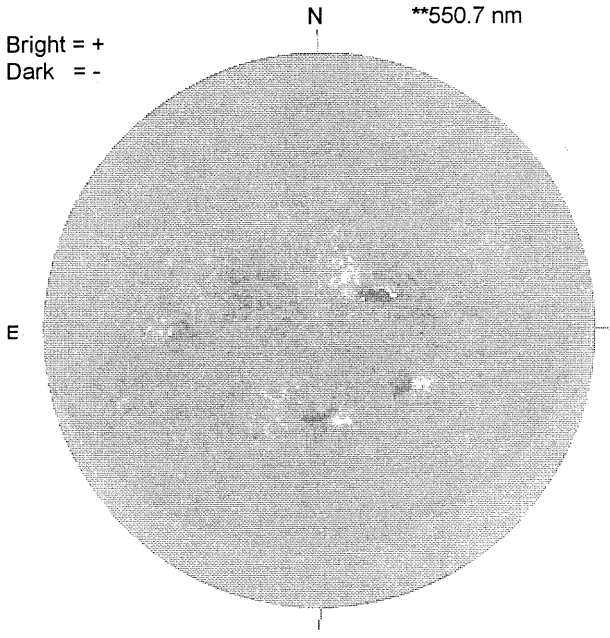


07/08/94
(DOY 189)

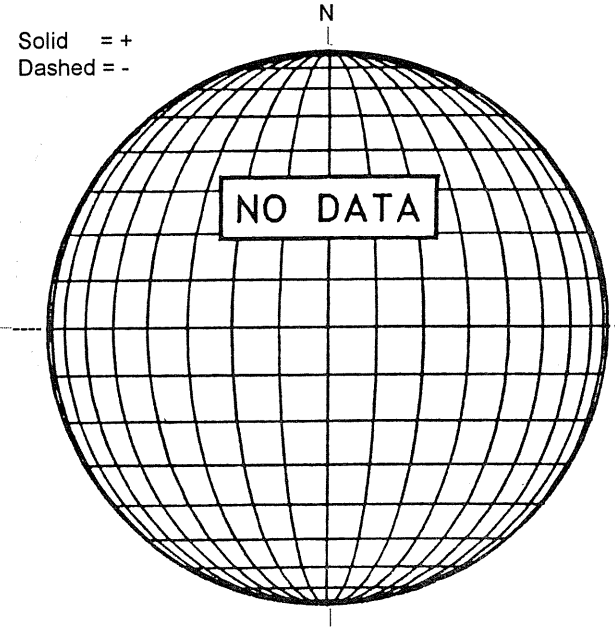
FE XIV 14:42 UT 1.15 $R_\odot$
FE X 13:43 UT 1.15 $R_\odot$
CA XV 14:53 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

JULY 9, 1994 (P= 0.82, Bo = 3.72, Lo = 151.95)

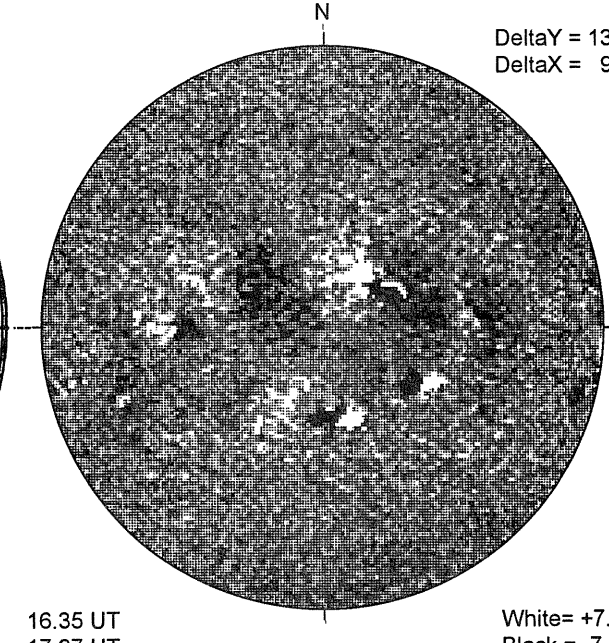
KITT PEAK MAGNETOGRAM



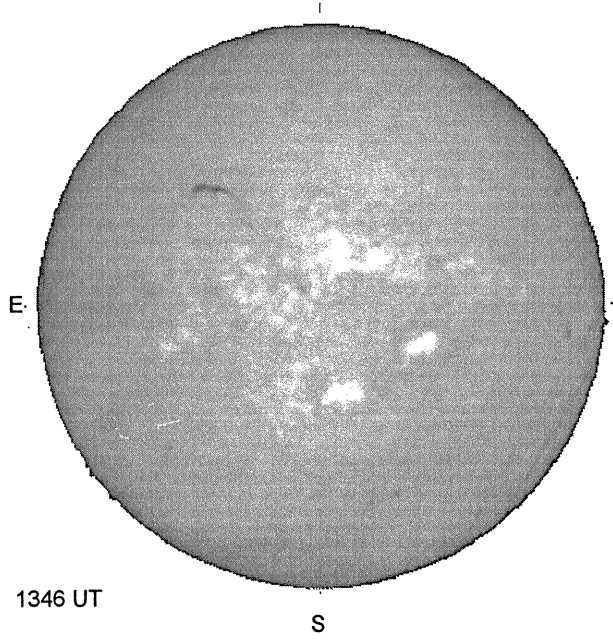
STANFORD MAGNETOGRAM



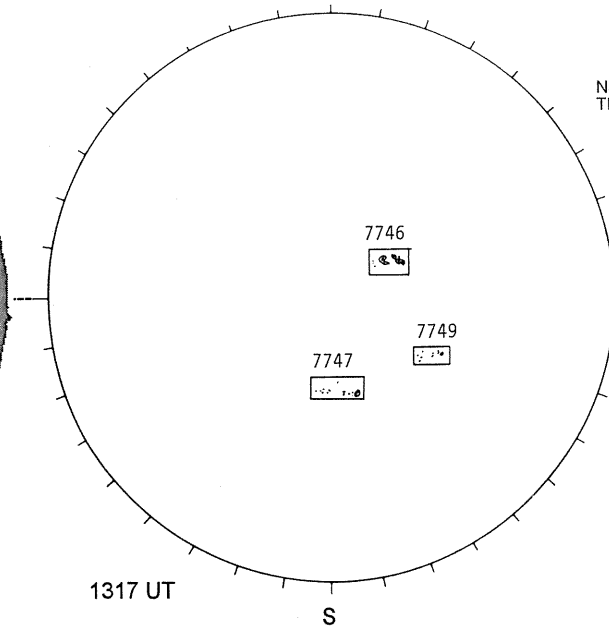
MT. WILSON MAGNETOGRAM



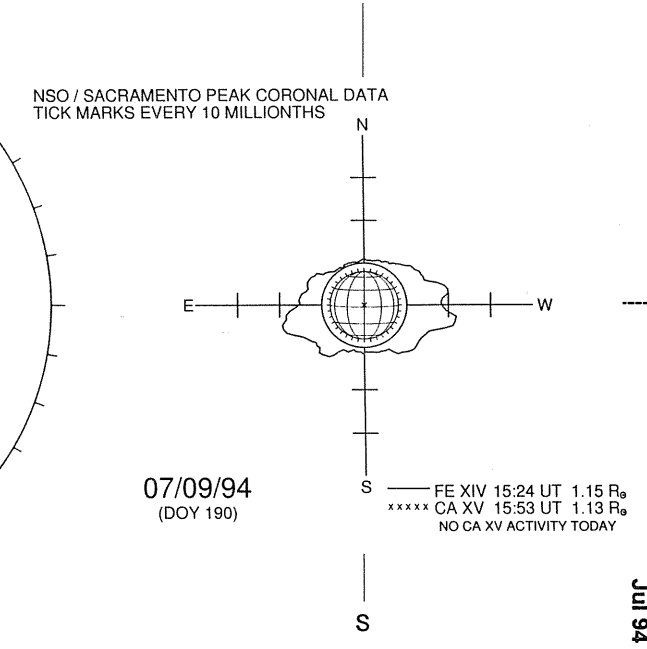
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

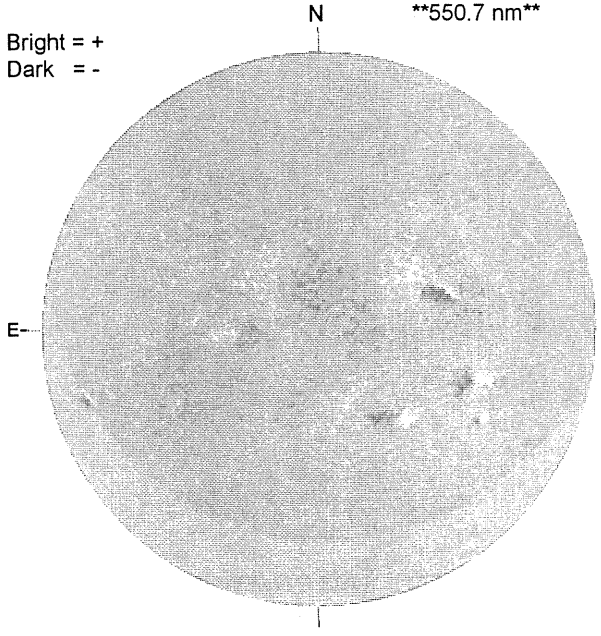


SACRAMENTO PEAK CORONA (1.15 Radii)----



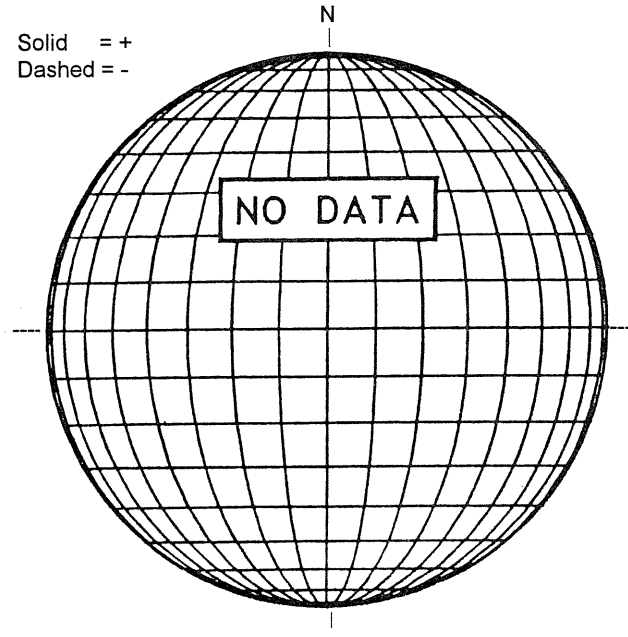
JULY 10, 1994 (P= 1.27, Bo = 3.82, Lo = 138.71)

KITT PEAK MAGNETOGRAM

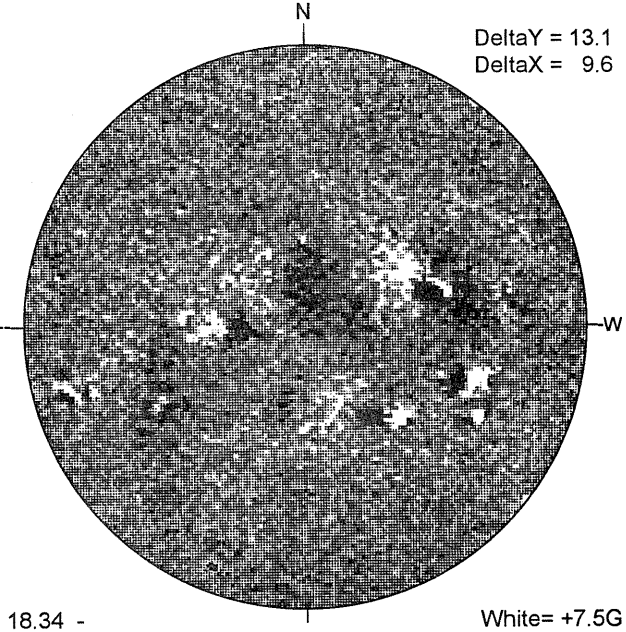


1526 UT

STANFORD MAGNETOGRAM



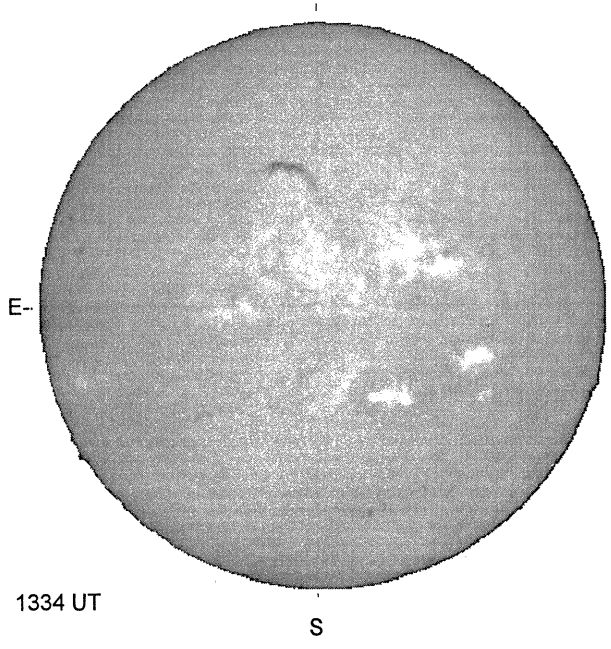
MT. WILSON MAGNETOGRAM



18.34 -
19.26 UT

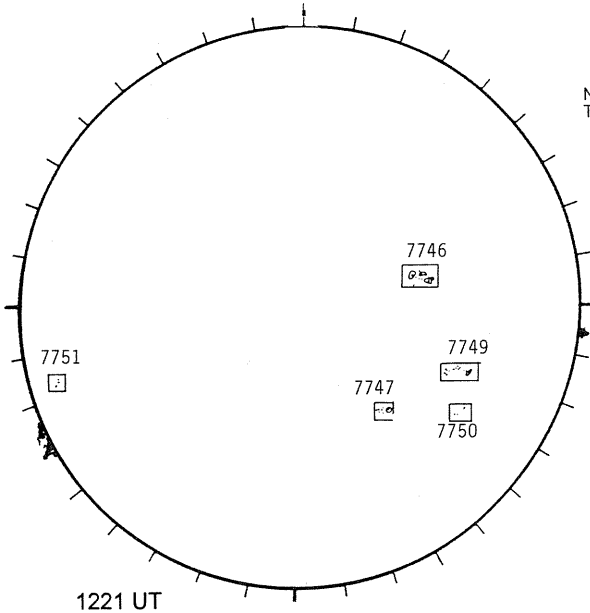
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



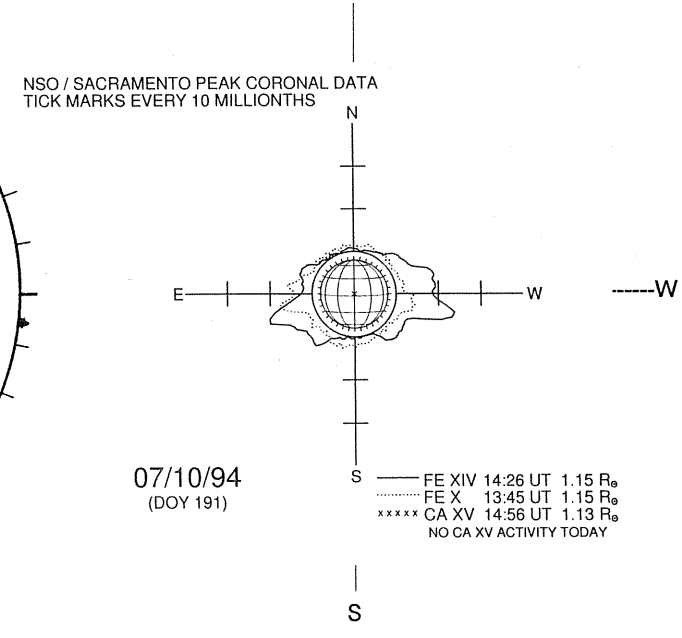
1334 UT

RAMEY SUNSPOT



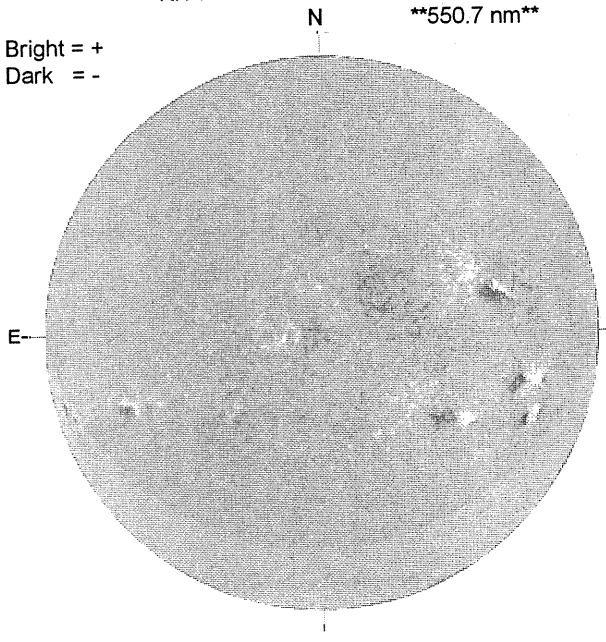
1221 UT
1512 UT VALA Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



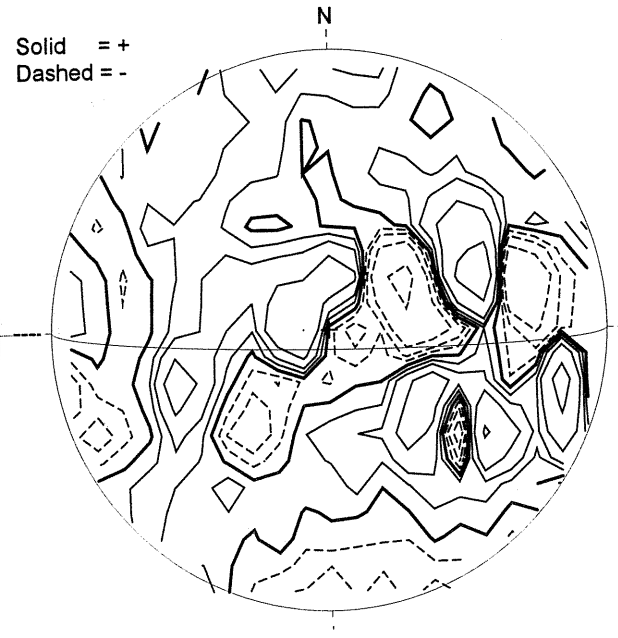
JULY 11, 1994 (P= 1.72 Bo = 3.92, Lo = 125.48)

KITT PEAK MAGNETOGRAM



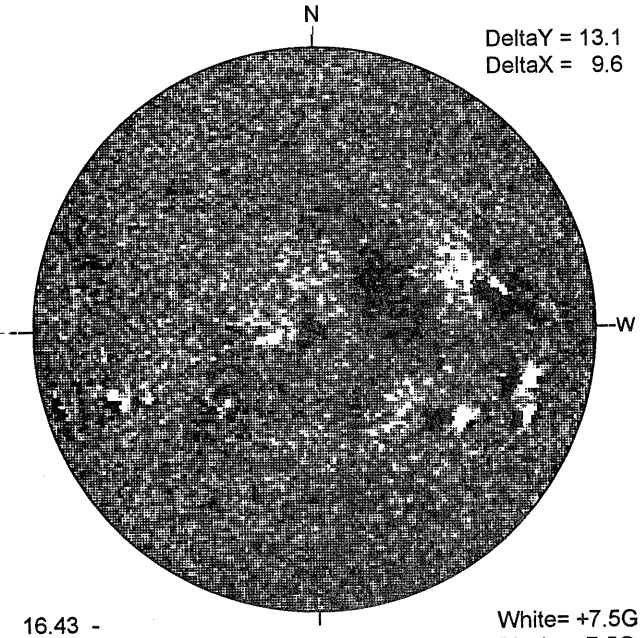
1453 UT

STANFORD MAGNETOGRAM



2127 UT

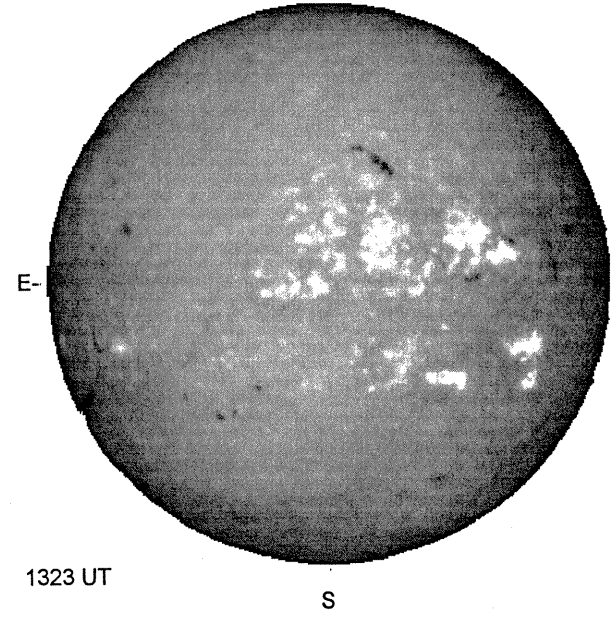
MT. WILSON MAGNETOGRAM



16.43 -
17.35 UT

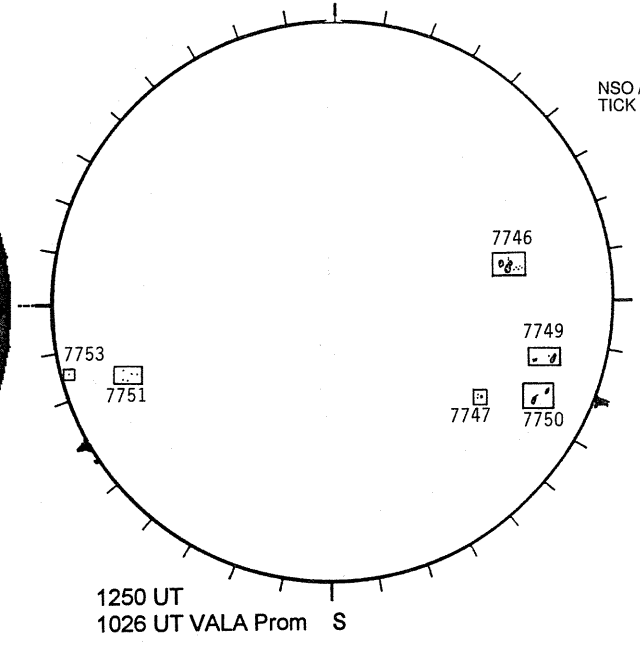
White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA



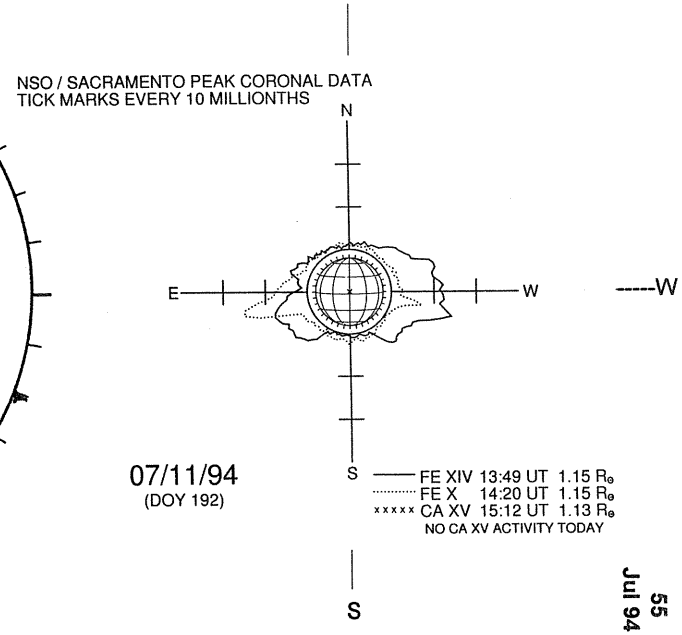
1323 UT

RAMEY SUNSPOT



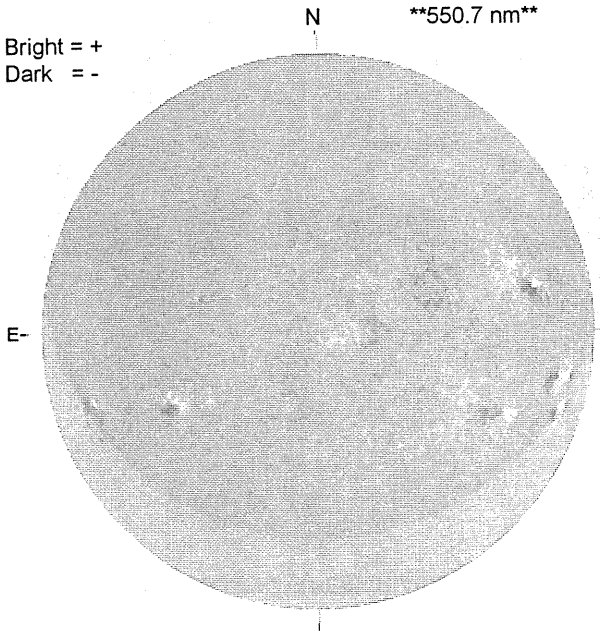
1250 UT
1026 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----



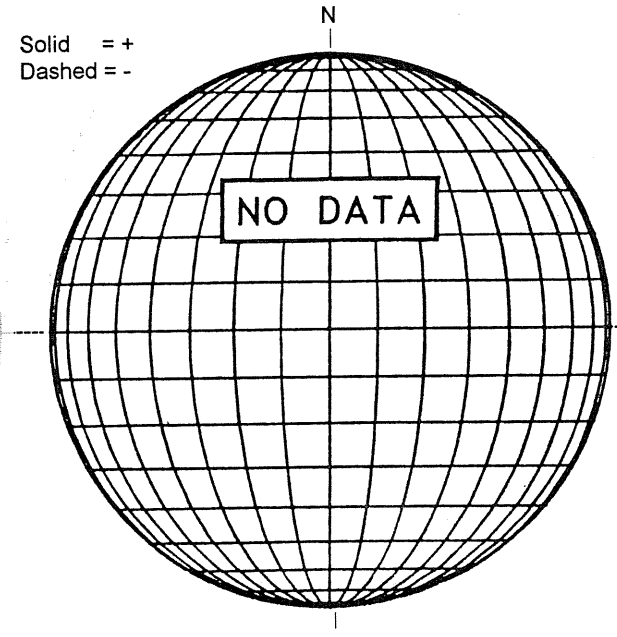
JULY 12, 1994 (P= 2.17, Bo = 4.02, Lo = 112.25)

KITT PEAK MAGNETOGRAM

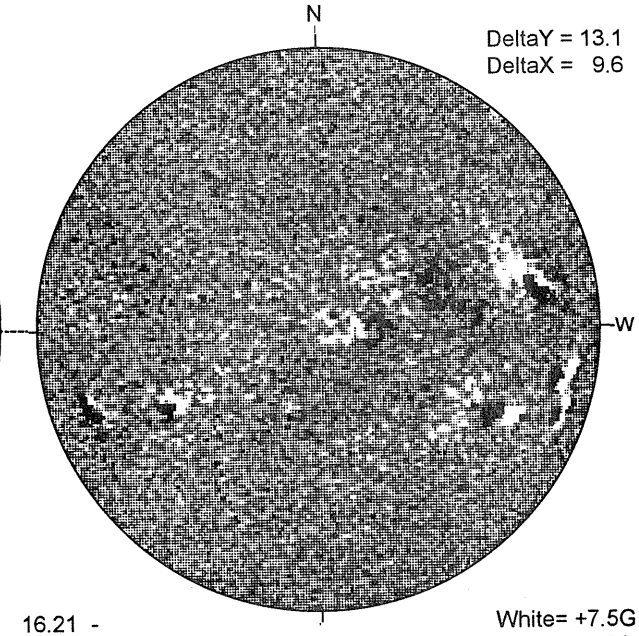


1449 UT

STANFORD MAGNETOGRAM



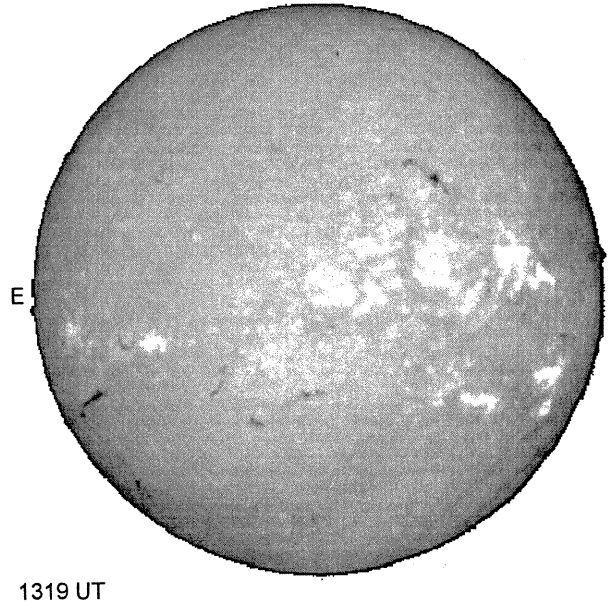
MT. WILSON MAGNETOGRAM



16.21 -
17.12 UT

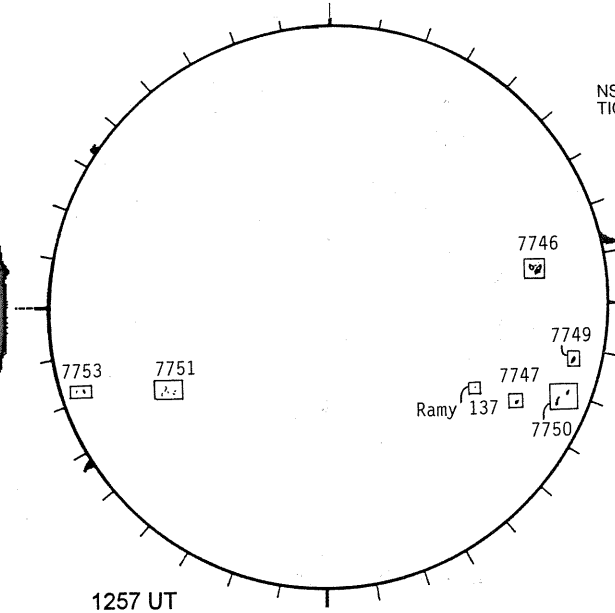
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



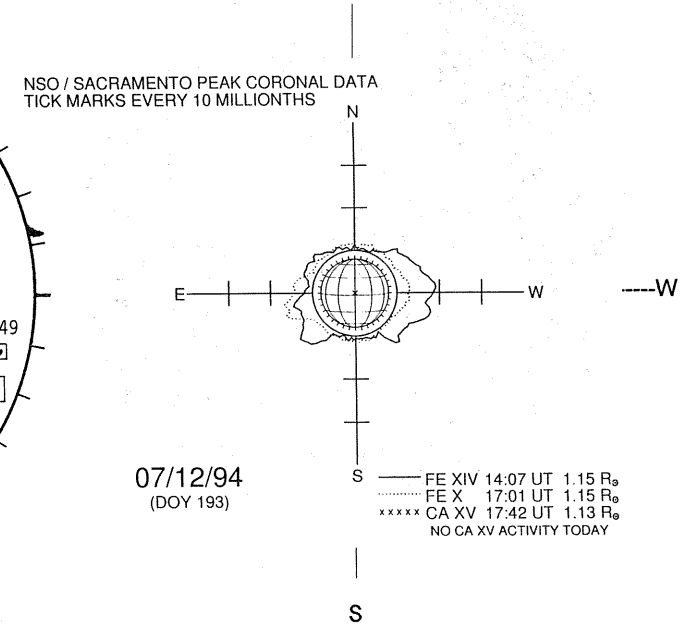
1319 UT

RAMEY SUNSPOT



1257 UT
0645 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----



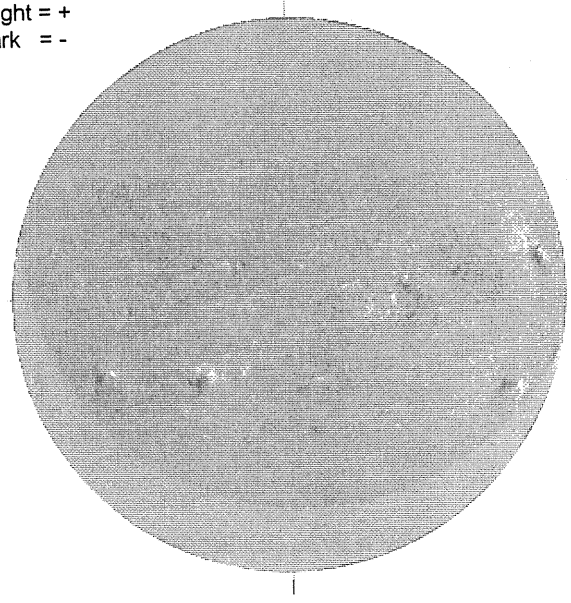
07/12/94
(DOY 193)

JULY 13, 1994 (P= 2.62, Bo = 4.12, Lo = 99.01)

KITT PEAK MAGNETOGRAM

550.7 nm

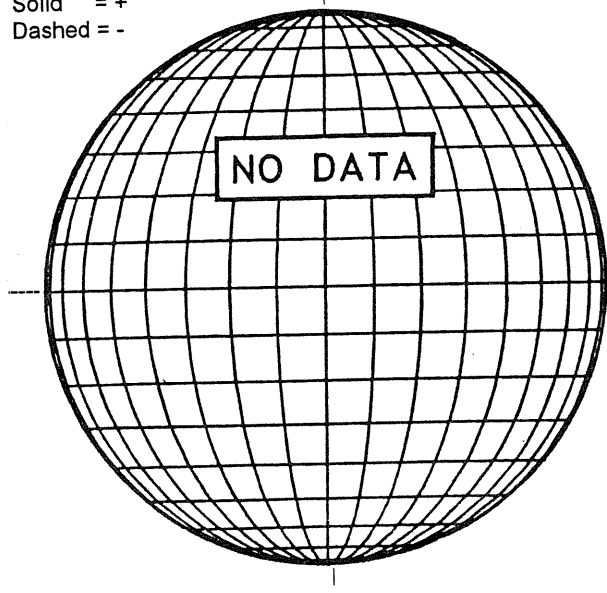
Bright = +
Dark = -



1444 UT

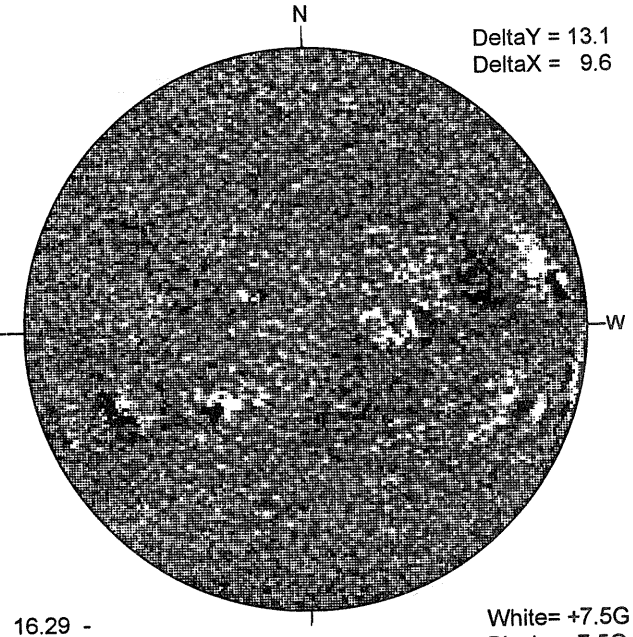
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

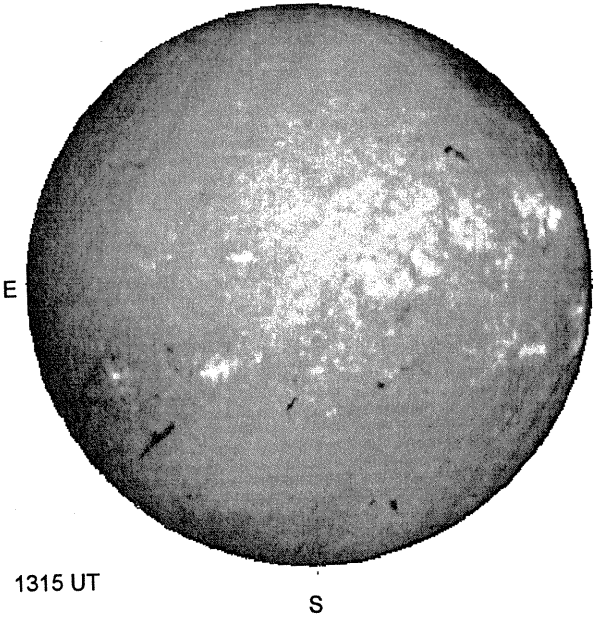
DeltaY = 13.1
DeltaX = 9.6



16.29 -
17.21 UT

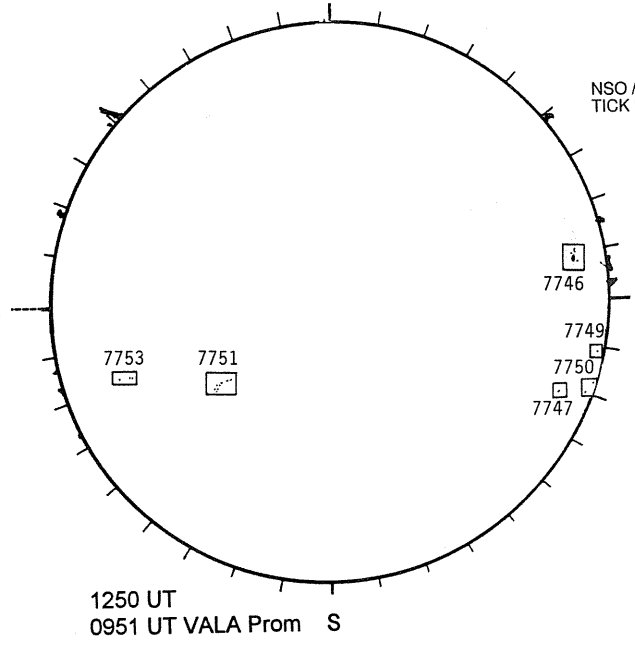
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



1315 UT

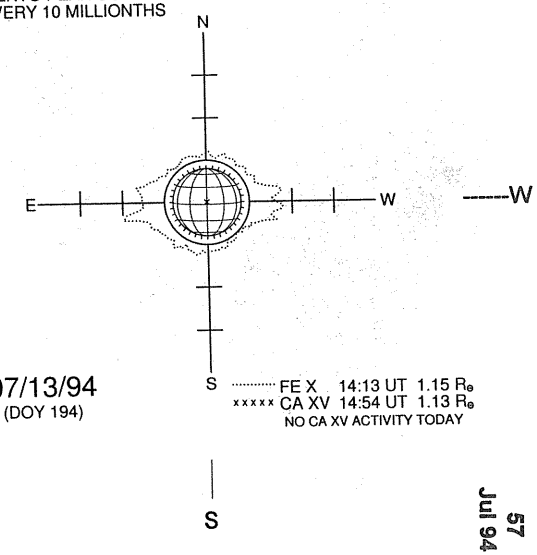
RAMEY SUNSPOT



1250 UT
0951 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



07/13/94
(DOY 194)

FE X 14:13 UT 1.15 R_s
CA XV 14:54 UT 1.13 R_s
NO CA XV ACTIVITY TODAY

S

57
Jul 94

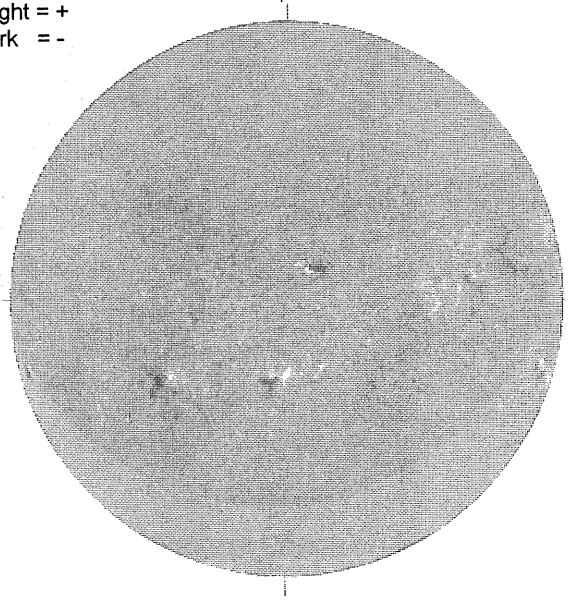
JULY 14, 1994 (P= 3.07, Bo = 4.22, Lo = 85.78)

KITT PEAK MAGNETOGRAM

N

550.7 nm

Bright = +
Dark = -

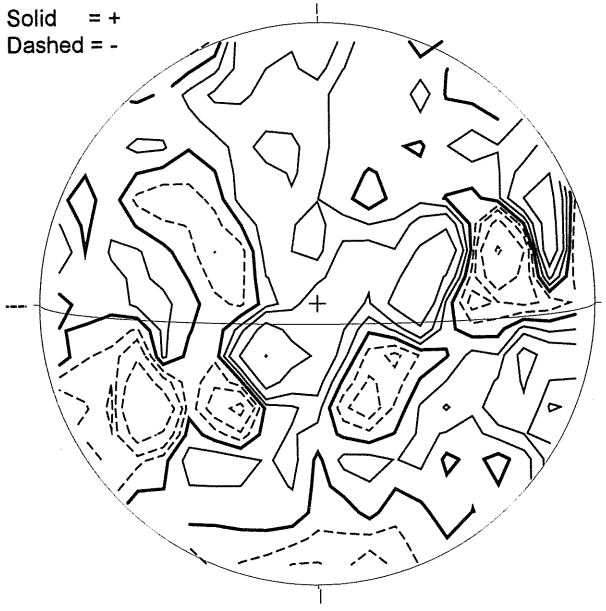


1956 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

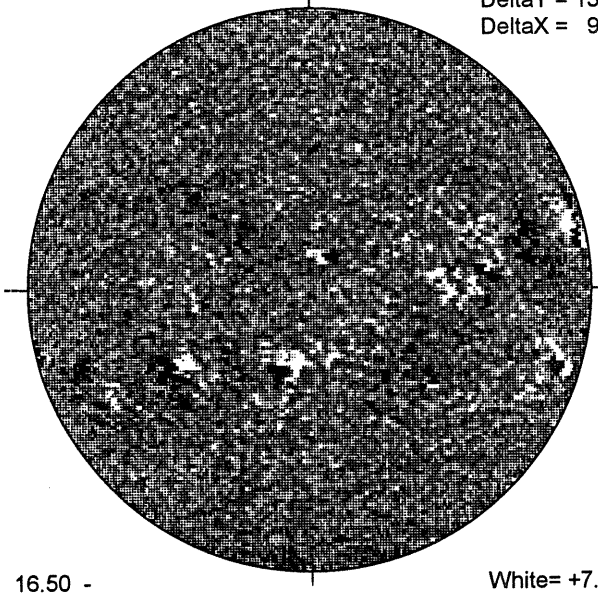


0105 UT

MT. WILSON MAGNETOGRAM

N

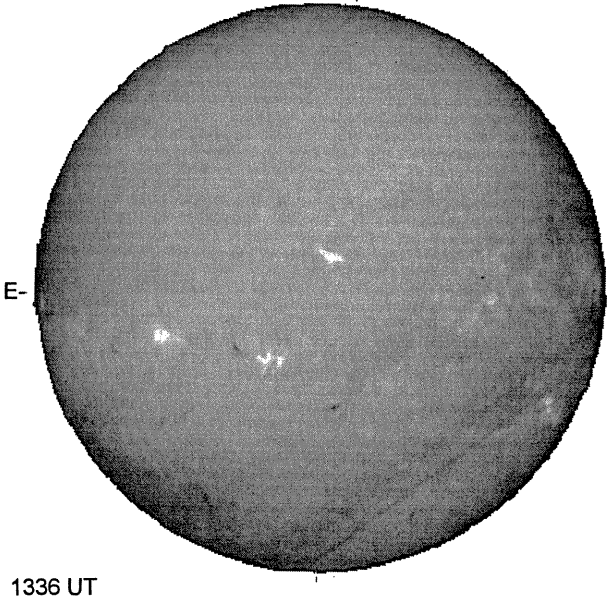
DeltaY = 13.1
DeltaX = 9.6



16.50 -
17.42 UT

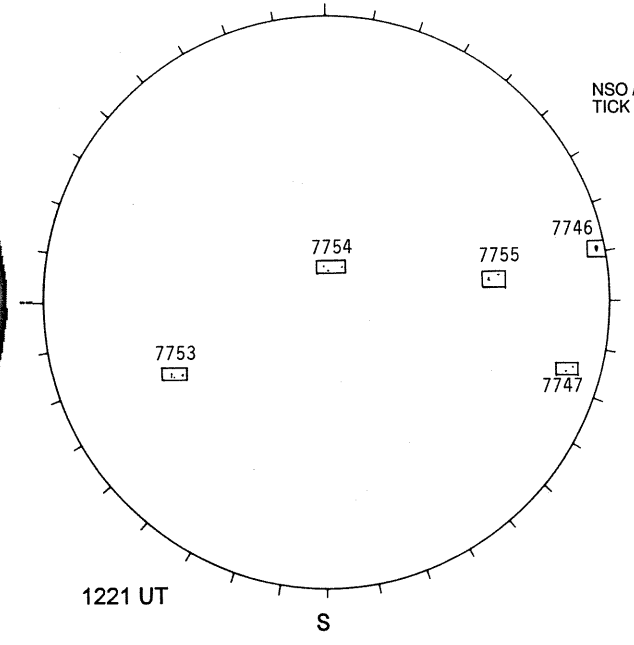
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



1336 UT

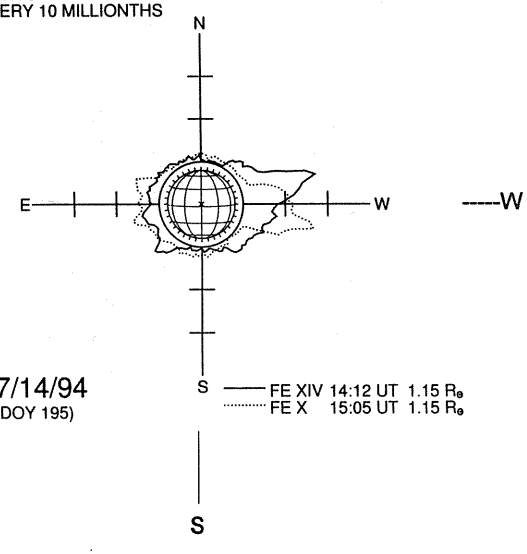
RAMEY SUNSPOT



1221 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

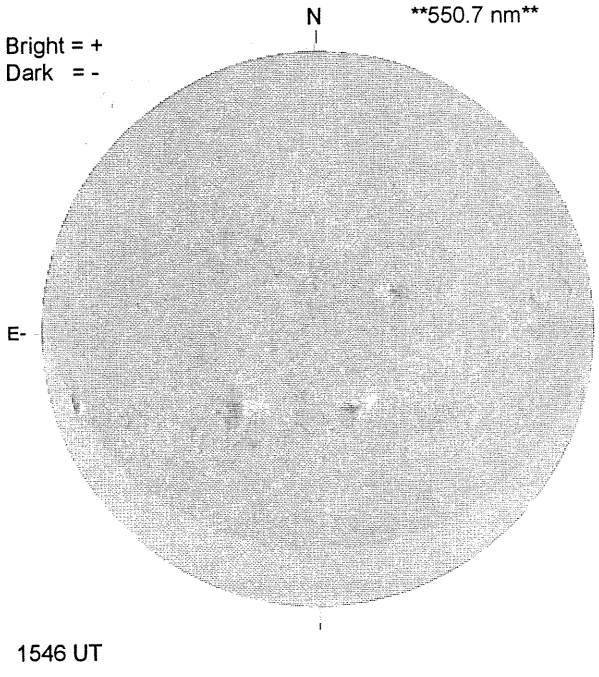


07/14/94
(DOY 195)

FE XIV 14:12 UT 1.15 $R_\odot$
FE X 15:05 UT 1.15 $R_\odot$

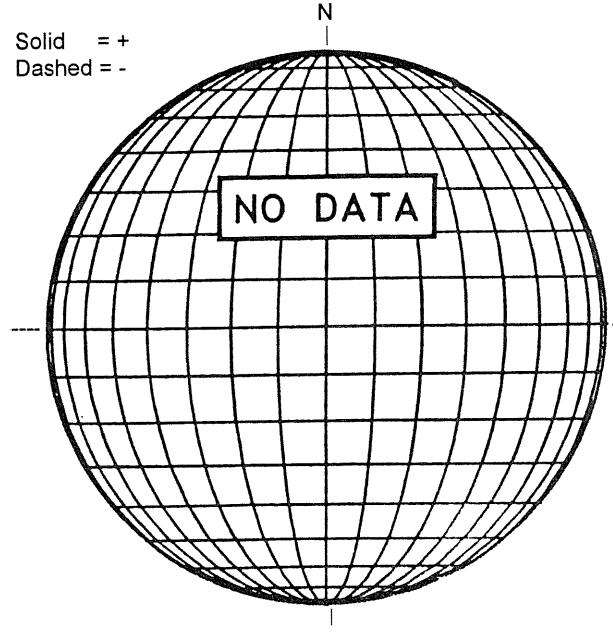
JULY 15, 1994 (P= 3.51, Bo = 4.32, Lo = 72.55)

KITT PEAK MAGNETOGRAM

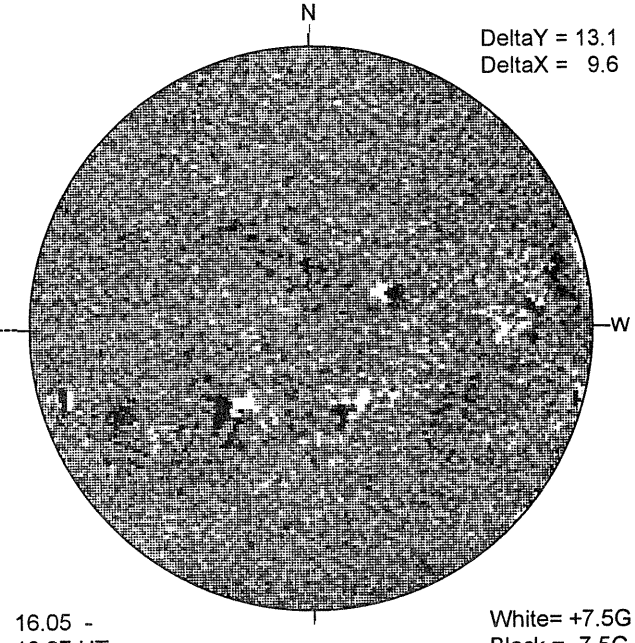


1546 UT

STANFORD MAGNETOGRAM



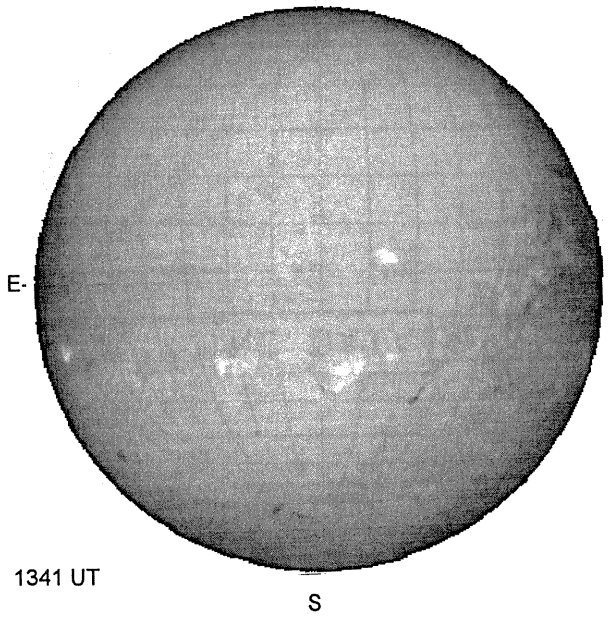
MT. WILSON MAGNETOGRAM



16.05 -
16.97 UT

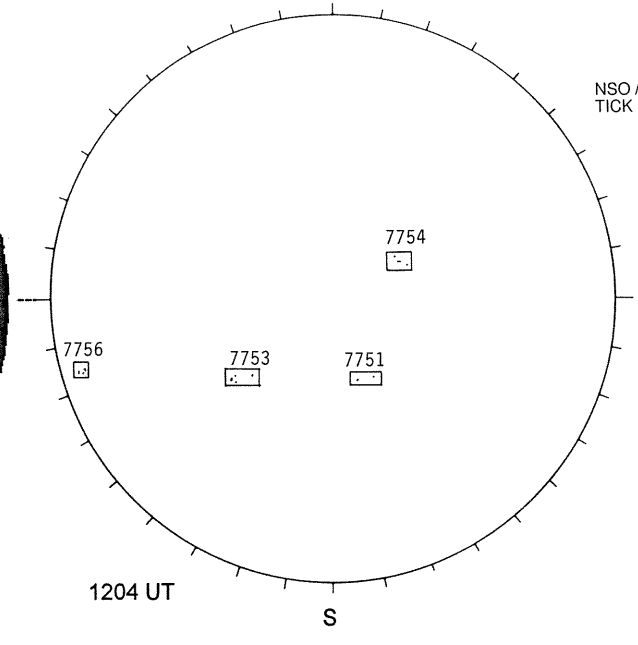
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



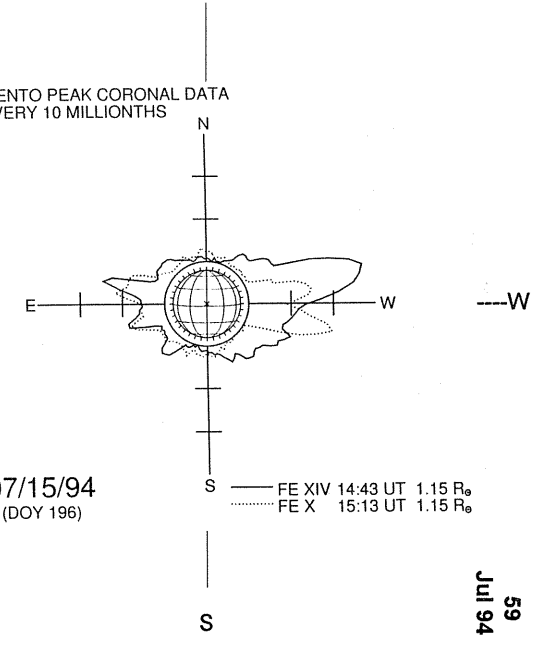
1341 UT

RAMEY SUNSPOT



1204 UT

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS



07/15/94
(DOY 196)

FE XIV 14:43 UT 1.15 $R_\odot$
FE X 15:13 UT 1.15 $R_\odot$

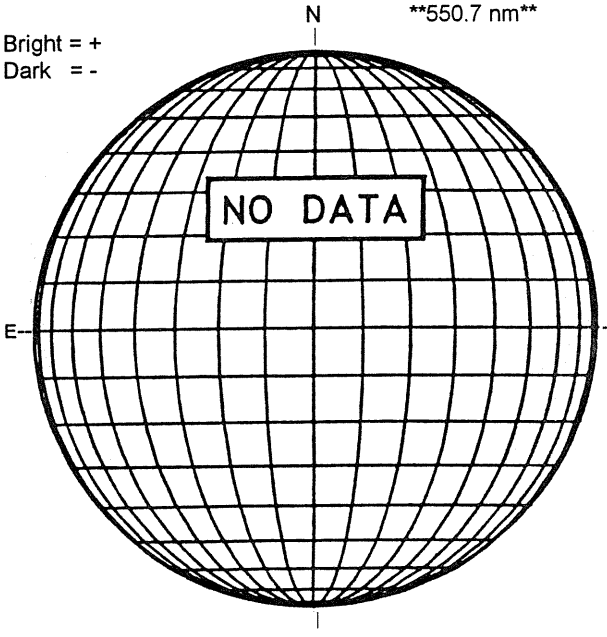
59
Jul 94

JULY 16, 1994 (P= 3.95, Bo = 4.41, Lo = 59.31)

KITT PEAK MAGNETOGRAM

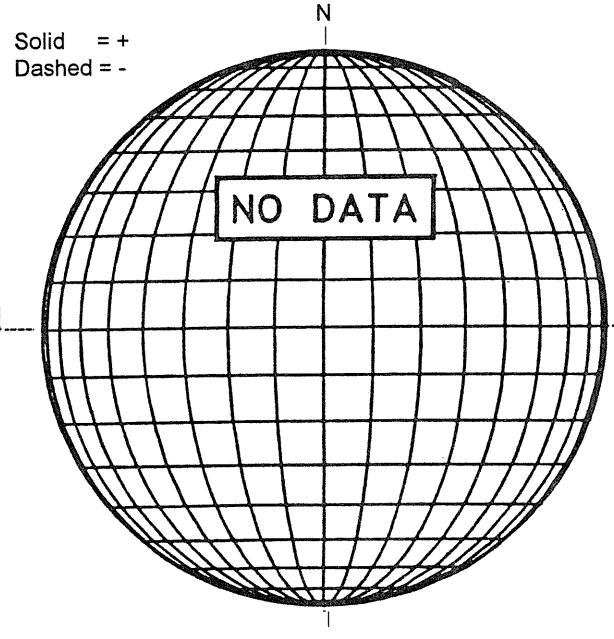
550.7 nm

Bright = +
Dark = -



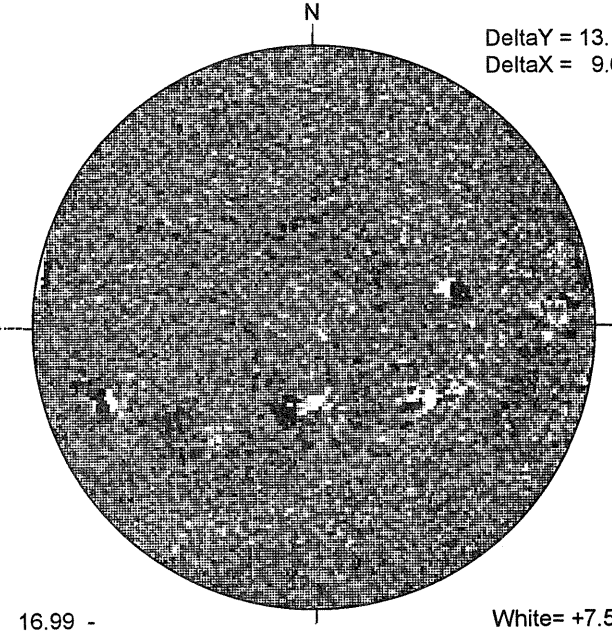
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

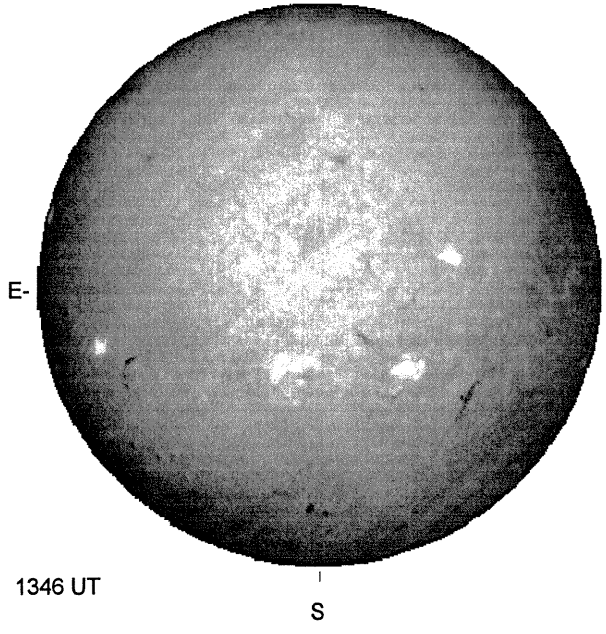
DeltaY = 13.1
DeltaX = 9.6



16.99 -
17.91 UT

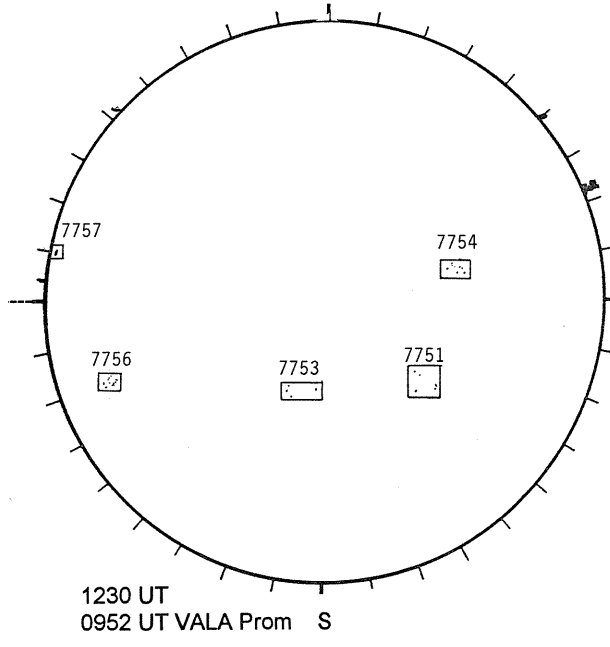
White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA



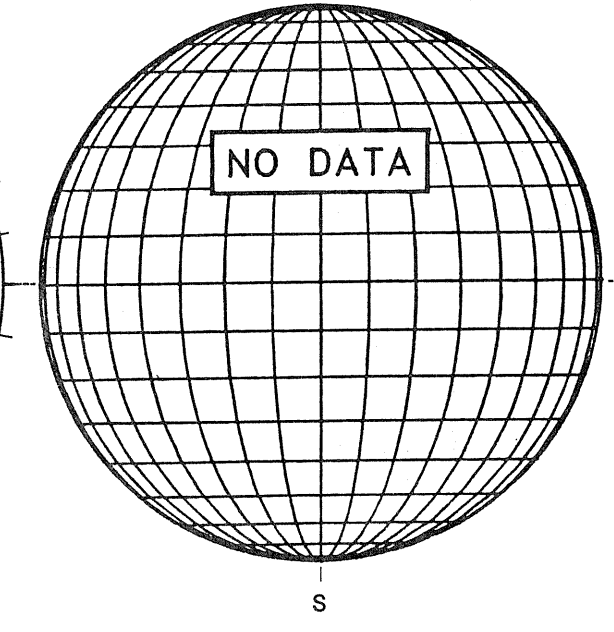
1346 UT

RAMEY SUNSPOT



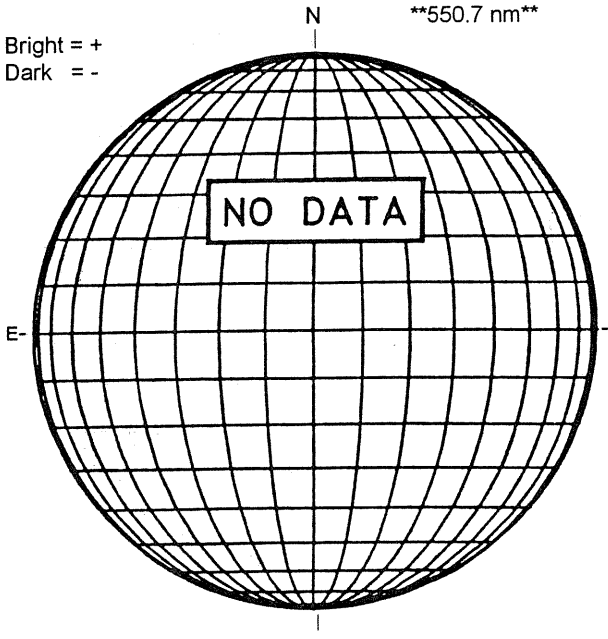
1230 UT
0952 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----

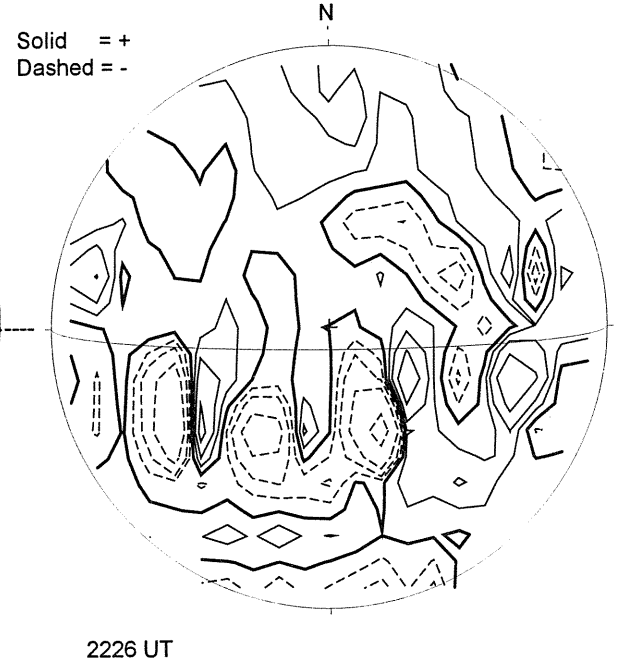


JULY 17, 1994 (P= 4.40, Bo = 4.51, Lo = 46.08)

KITT PEAK MAGNETOGRAM

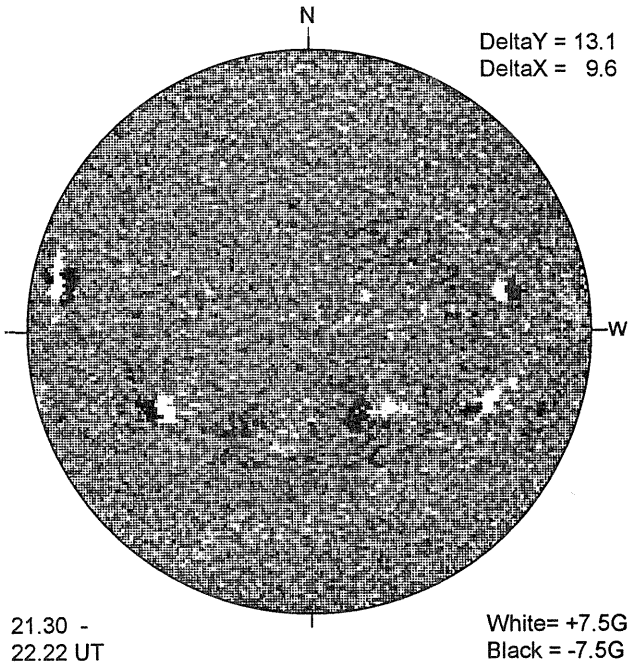


STANFORD MAGNETOGRAM



2226 UT

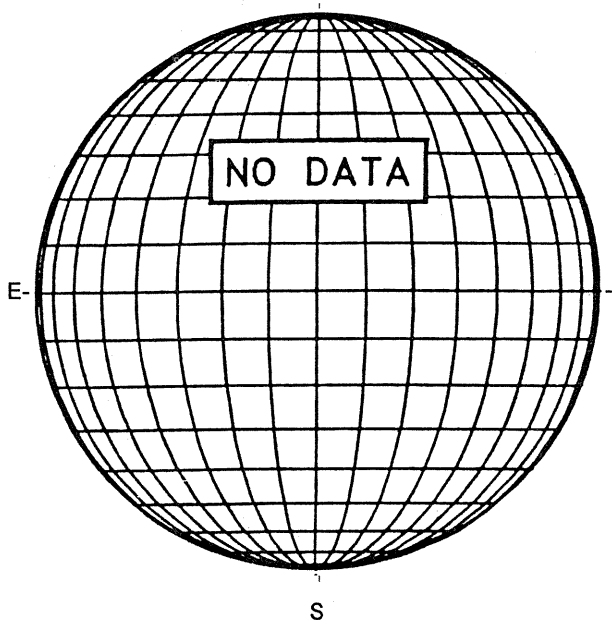
MT. WILSON MAGNETOGRAM



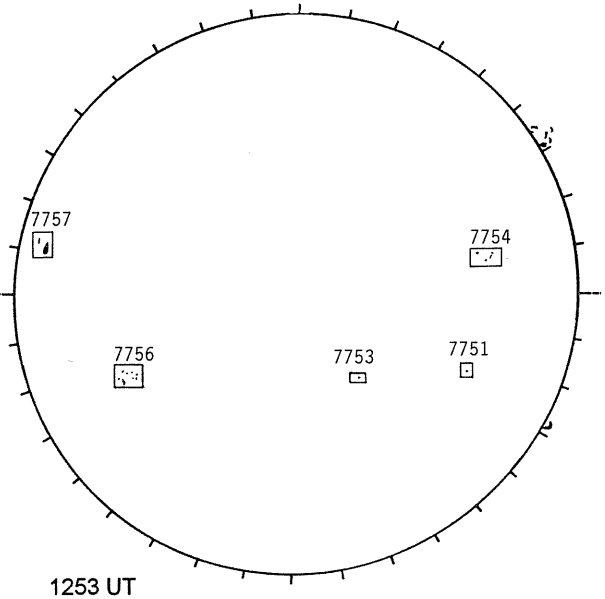
21.30 -
22.22 UT

White= +7.5G
Black = -7.5G

----- BIG BEAR H-ALPHA

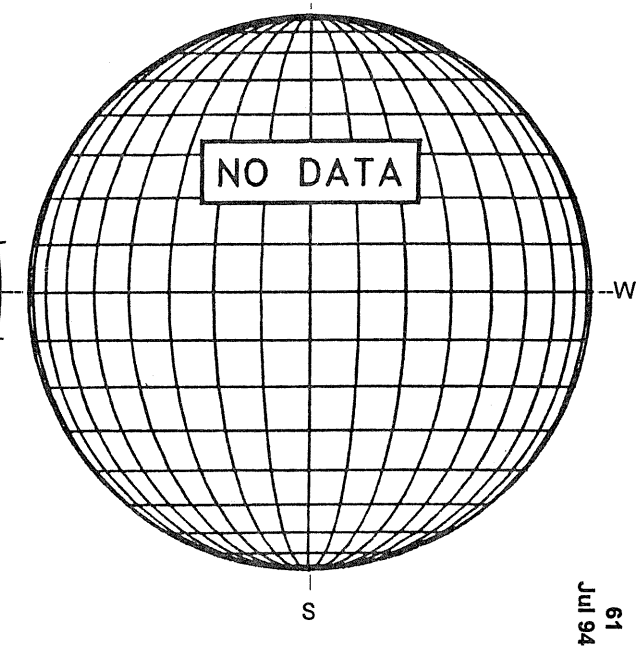


RAMEY SUNSPOT



1253 UT
0538 UT LOMN Prom S

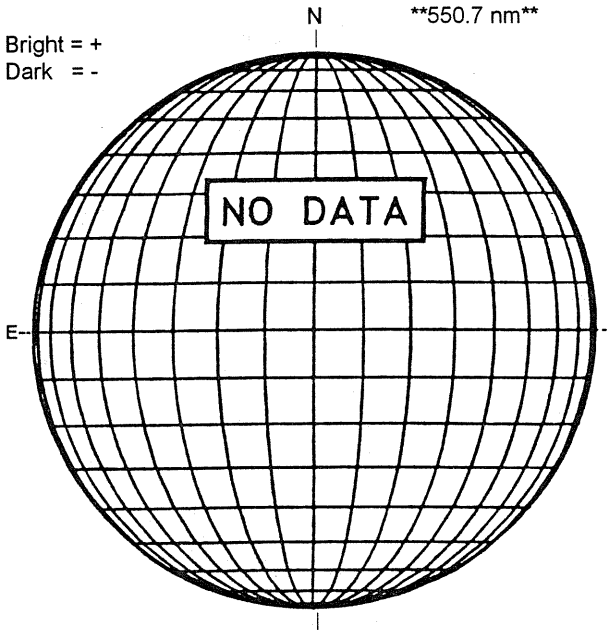
SACRAMENTO PEAK CORONA (1.15 Radii)----



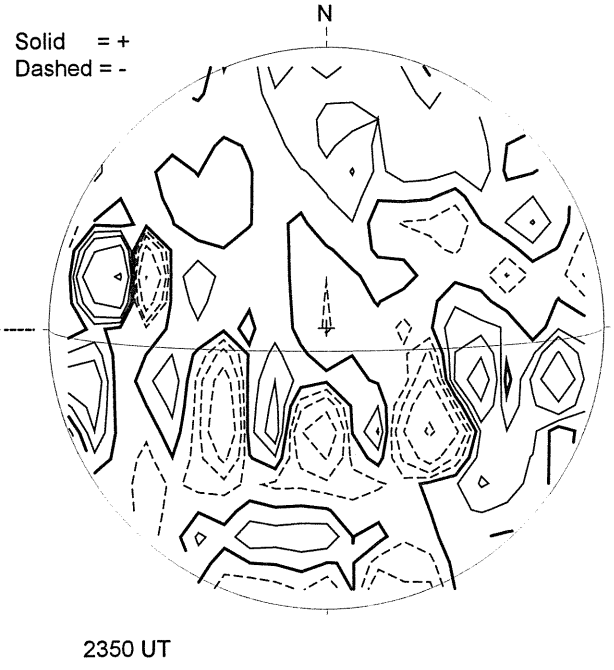
61
Jul 94

JULY 18, 1994 (P= 4.84, Bo = 4.60, Lo = 32.85)

KITT PEAK MAGNETOGRAM

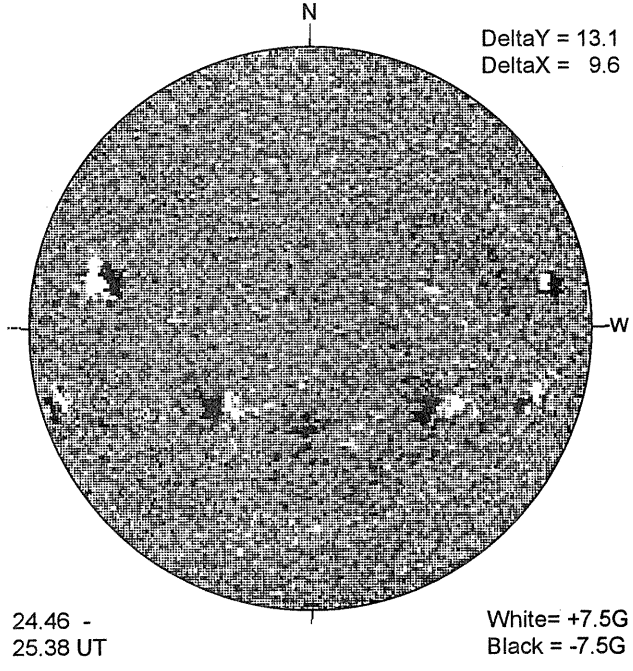


STANFORD MAGNETOGRAM



2350 UT

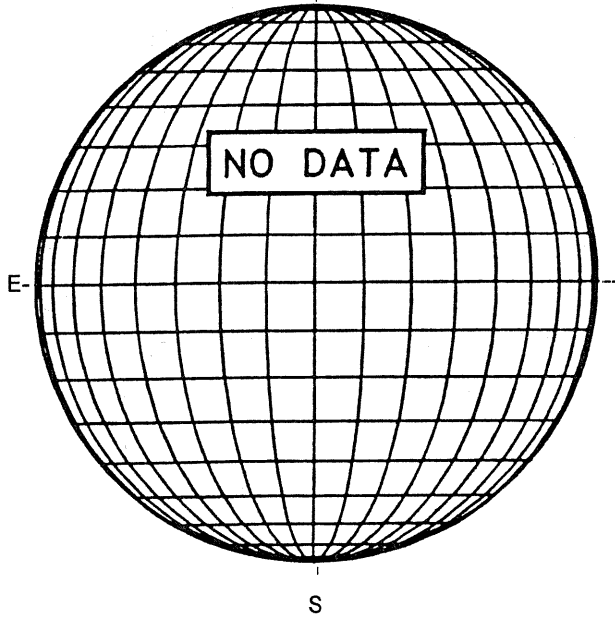
MT. WILSON MAGNETOGRAM



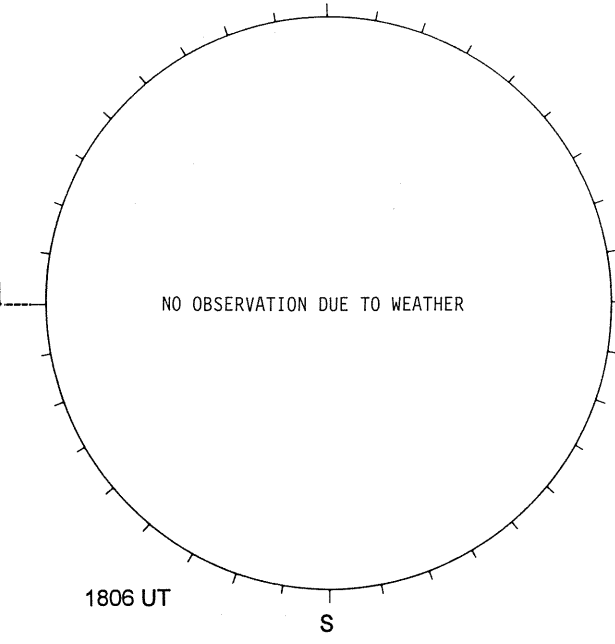
24.46 -
25.38 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

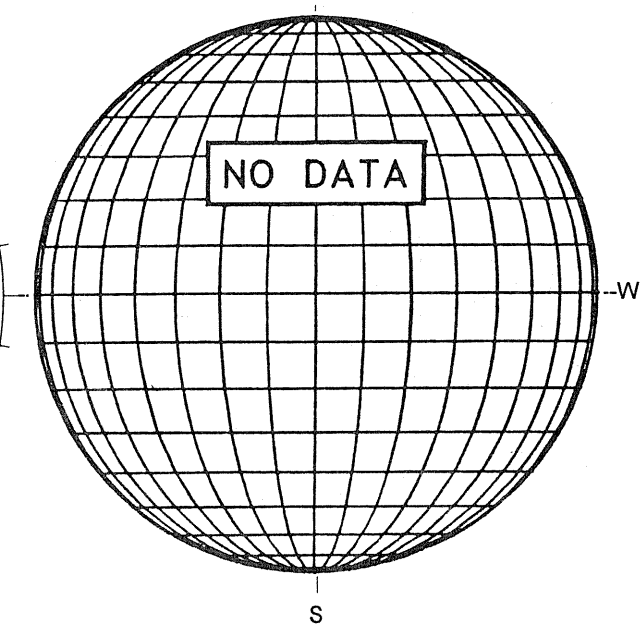


RAMEY SUNSPOT



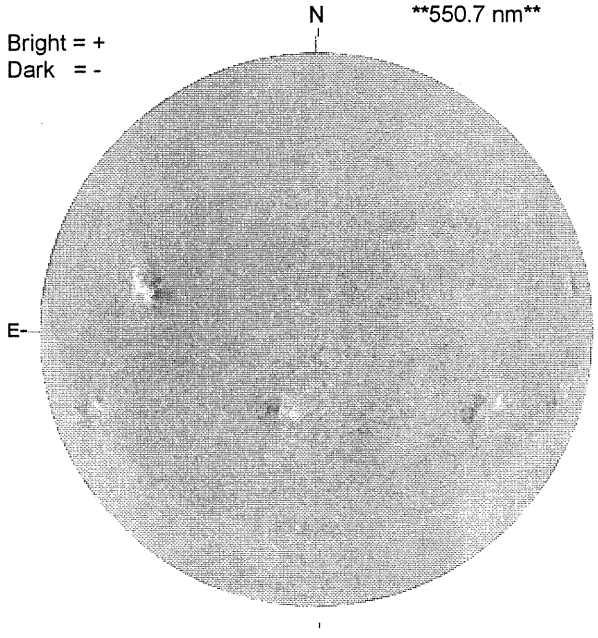
1806 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



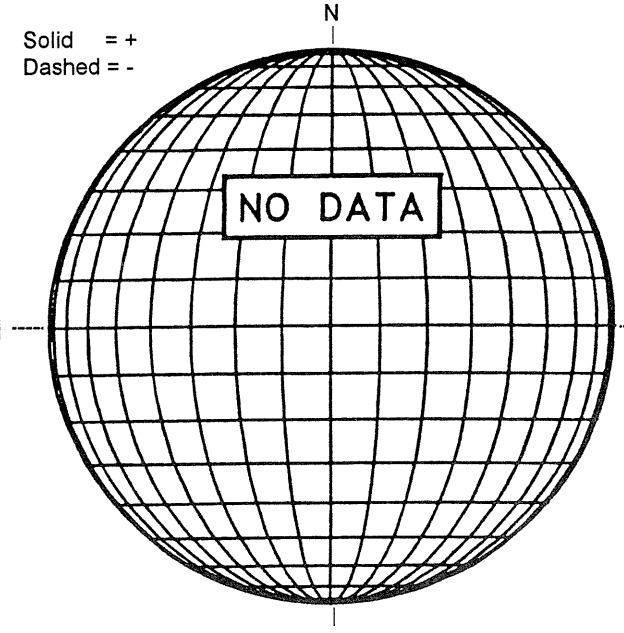
JULY 19, 1994 (P= 5.27, Bo = 4.69, Lo = 19.62)

KITT PEAK MAGNETOGRAM

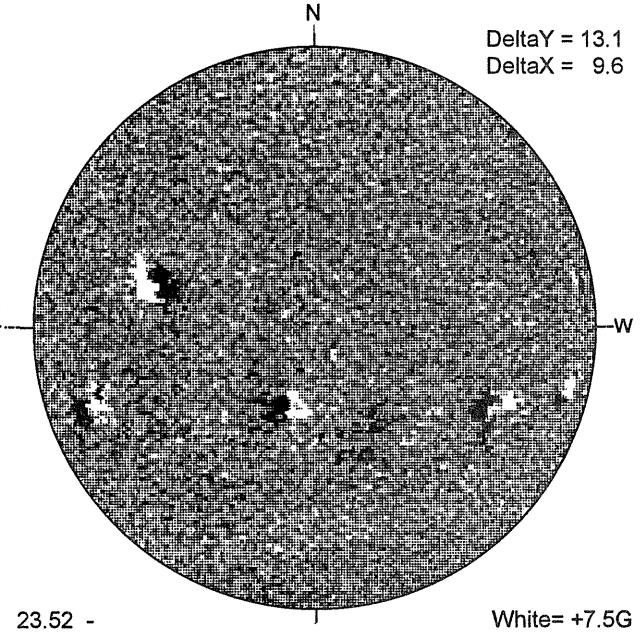


1641 UT

STANFORD MAGNETOGRAM



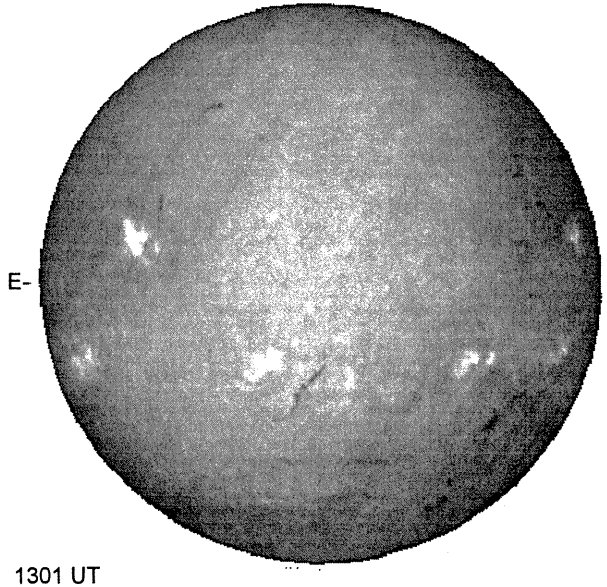
MT. WILSON MAGNETOGRAM



23.52 -
24.43 UT

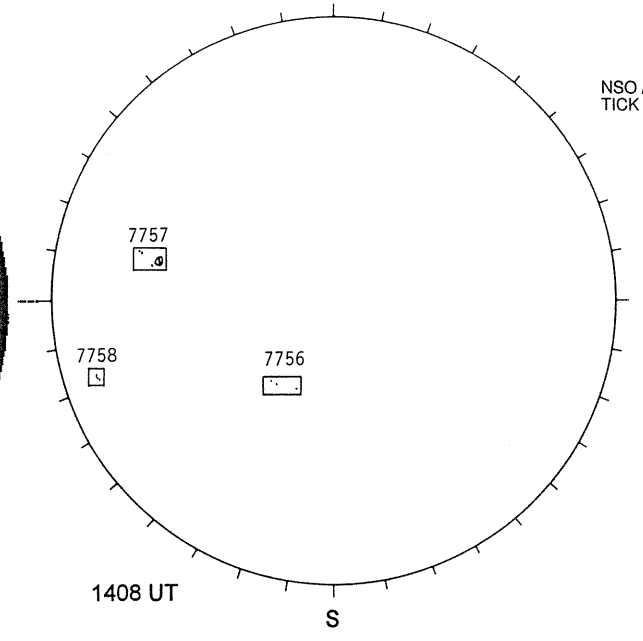
White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA



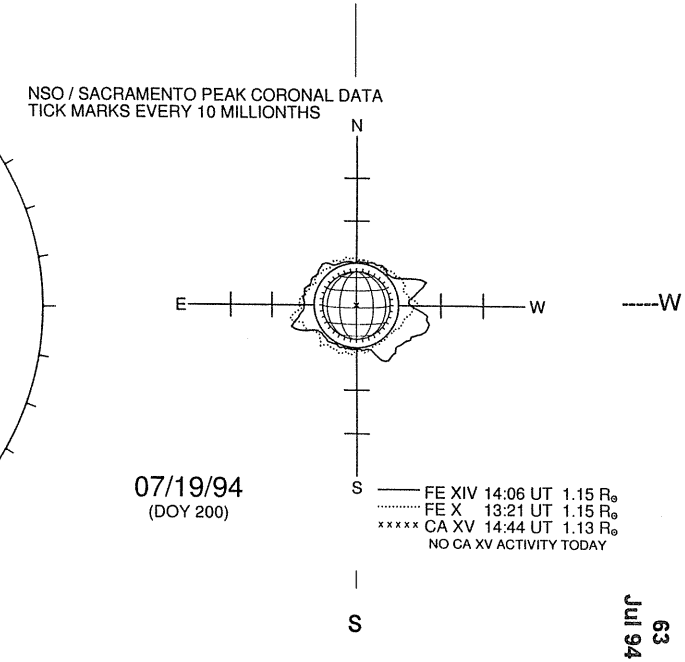
1301 UT

RAMEY SUNSPOT



1408 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



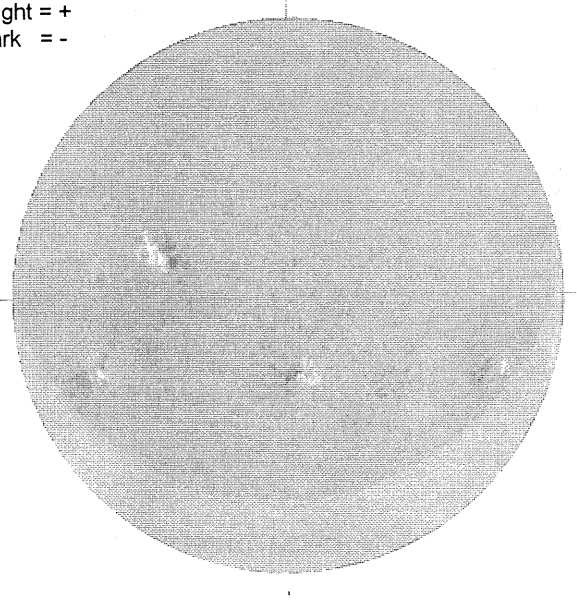
JULY 20, 1994 (P= 5.71, Bo = 4.79, Lo = 6.39)

KITT PEAK MAGNETOGRAM

N

550.7 nm

Bright = +
Dark = -

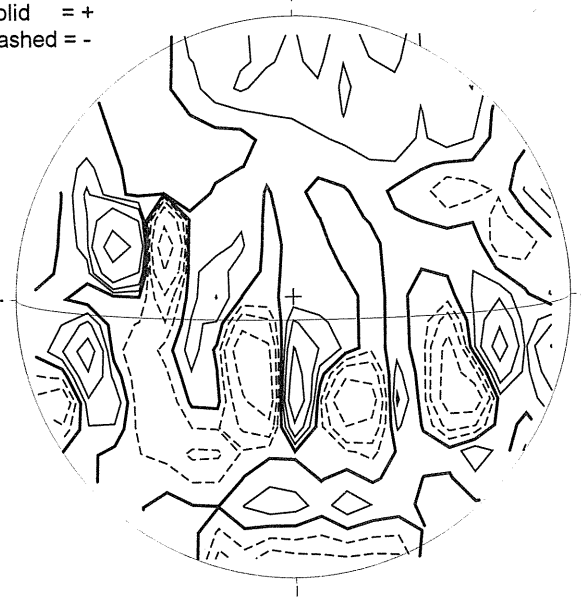


1342 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

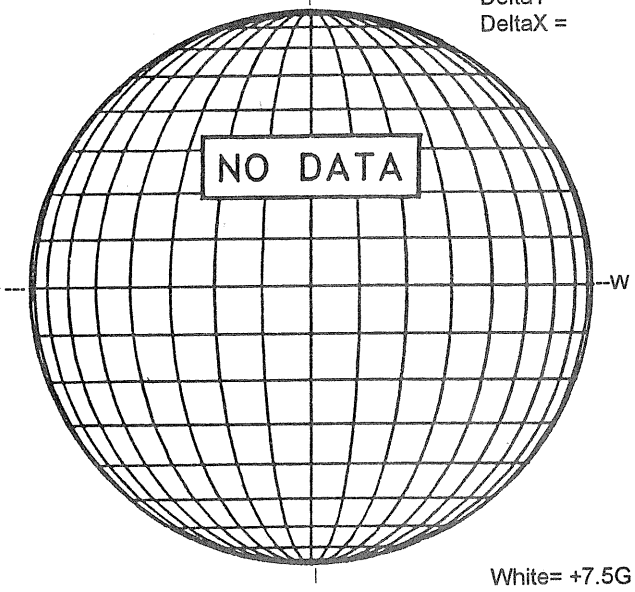


0040 UT

MT. WILSON MAGNETOGRAM

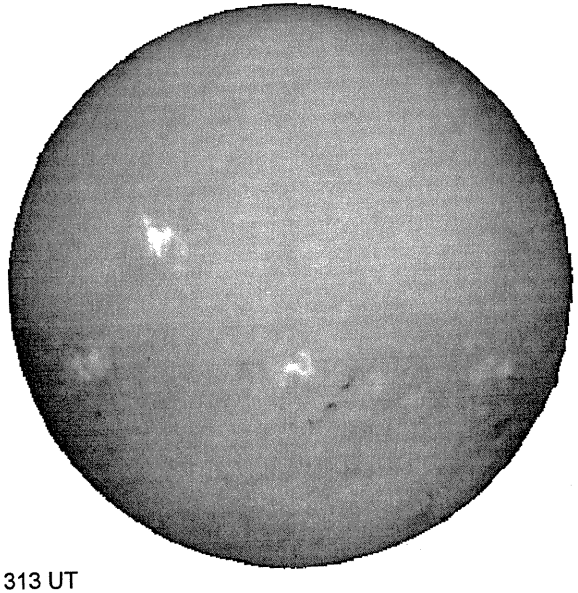
N

DeltaY =
DeltaX =



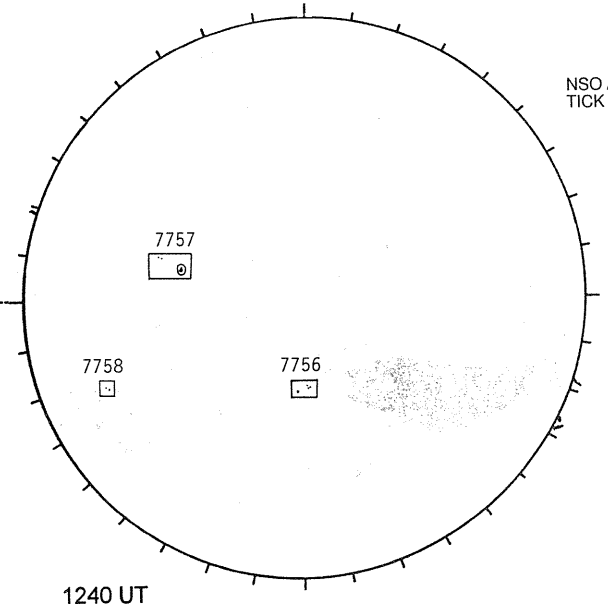
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



1313 UT

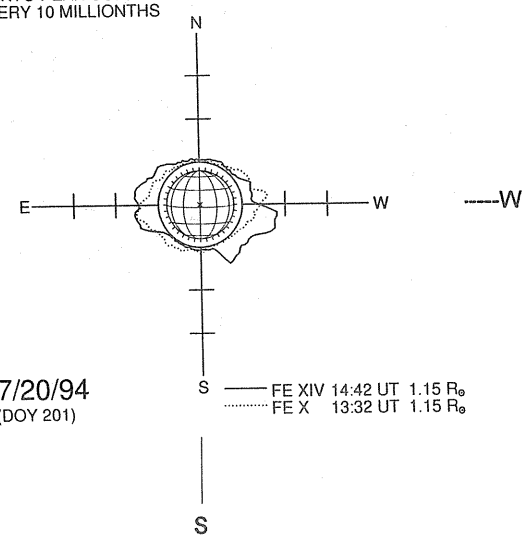
RAMEY SUNSPOT



1240 UT
0527 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 10 MILLIONTHS

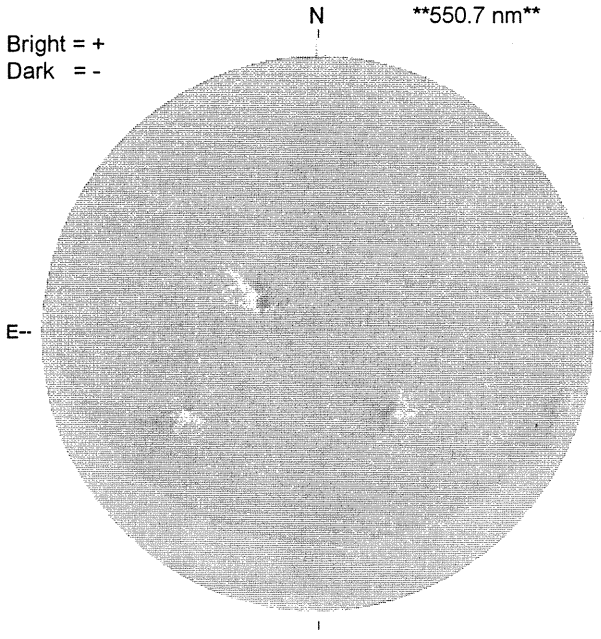


07/20/94
(DOY 201)

FE XIV 14:42 UT 1.15 $R_\odot$
FE X 13:32 UT 1.15 $R_\odot$

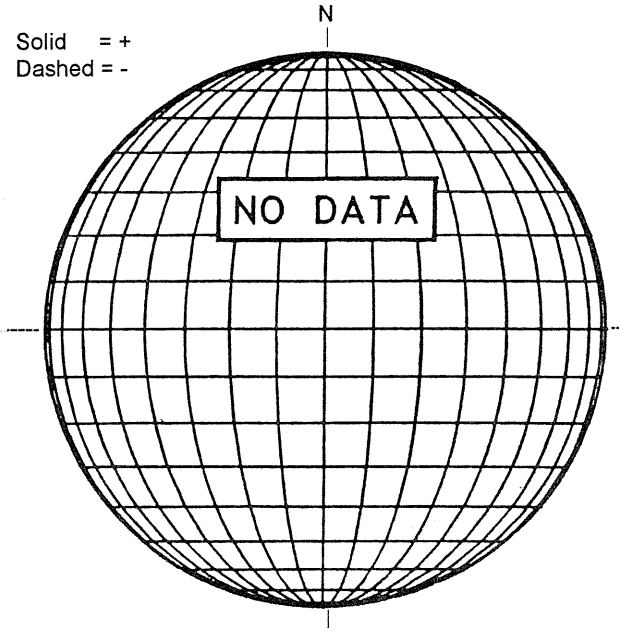
JULY 21, 1994 (P= 6.14, Bo = 4.88, Lo = 353.16)

KITT PEAK MAGNETOGRAM

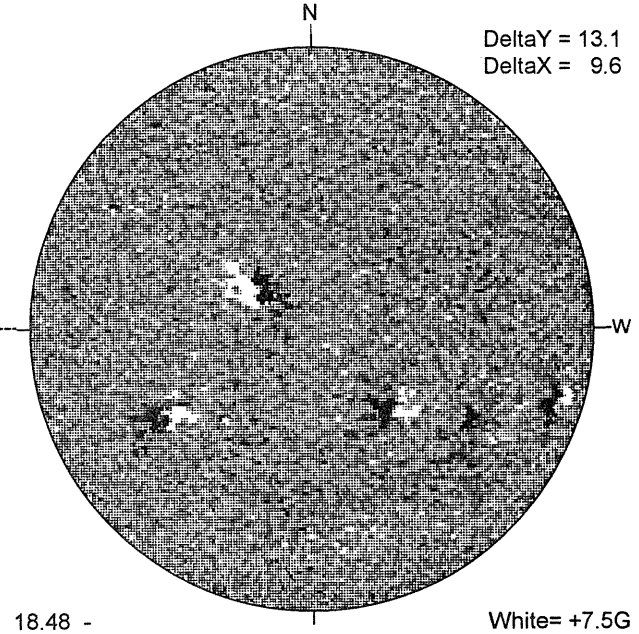


1521 UT

STANFORD MAGNETOGRAM



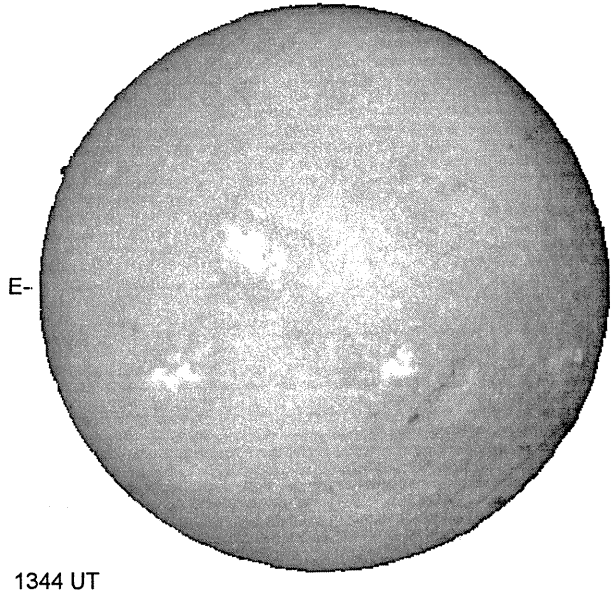
MT. WILSON MAGNETOGRAM



18.48 -
19.40 UT

White= +7.5G
Black = -7.5G

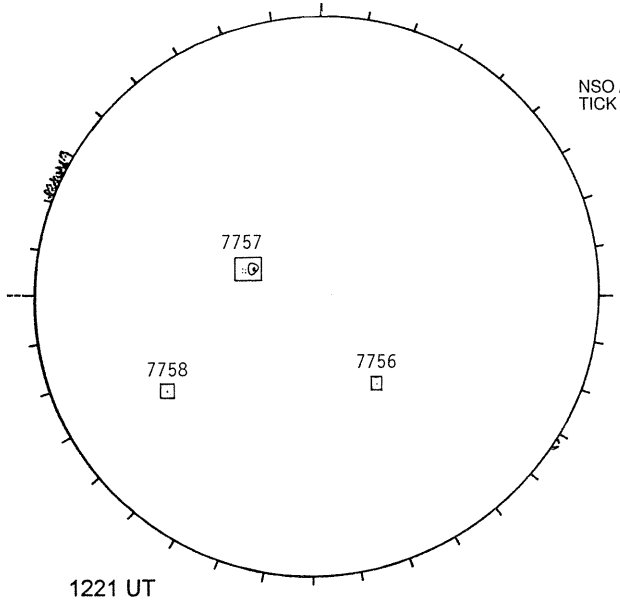
----- SACRAMENTO PEAK H-ALPHA



1344 UT

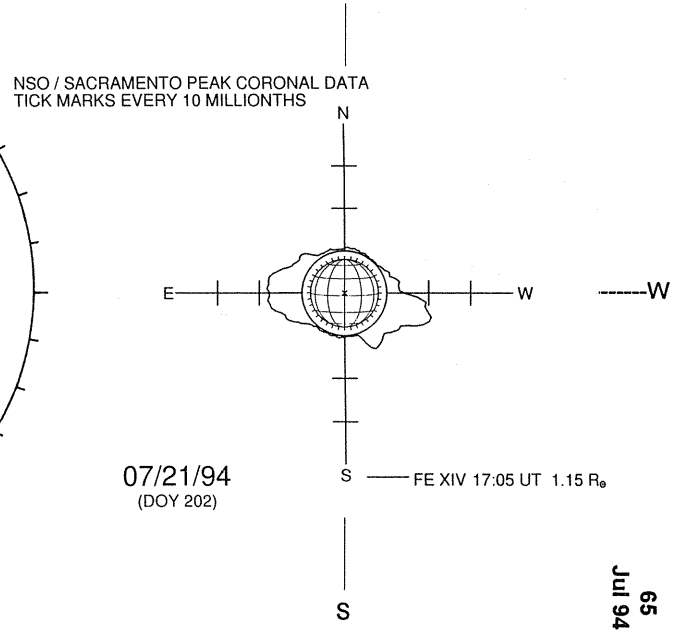
S

RAMEY SUNSPOT



1221 UT
0849 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

65
Jul 94

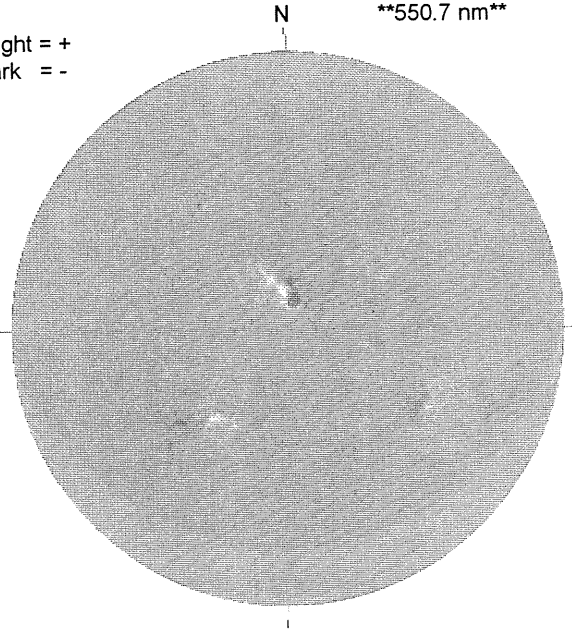
JULY 22, 1994 (P= 6.57, Bo = 4.96, Lo = 339.92)

Jul 94 96

KITT PEAK MAGNETOGRAM

550.7 nm

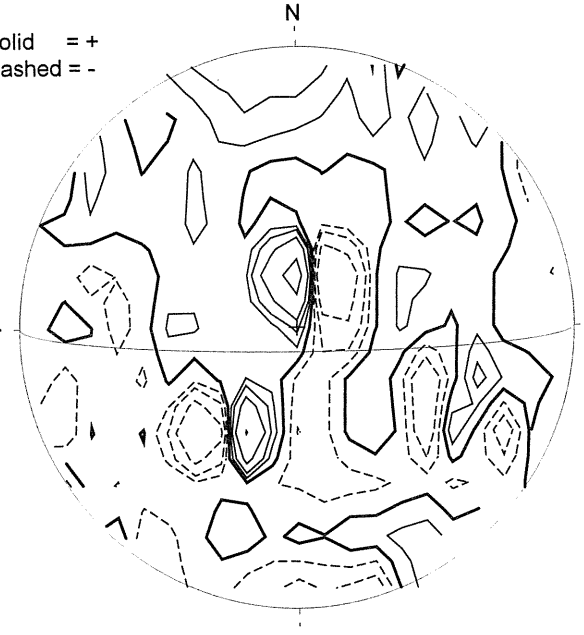
Bright = +
Dark = -



1502 UT

STANFORD MAGNETOGRAM

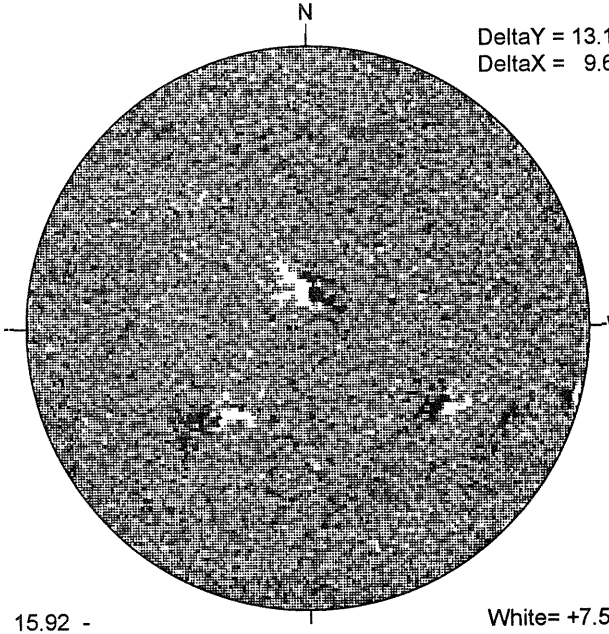
Solid = +
Dashed = -



2346 UT

MT. WILSON MAGNETOGRAM

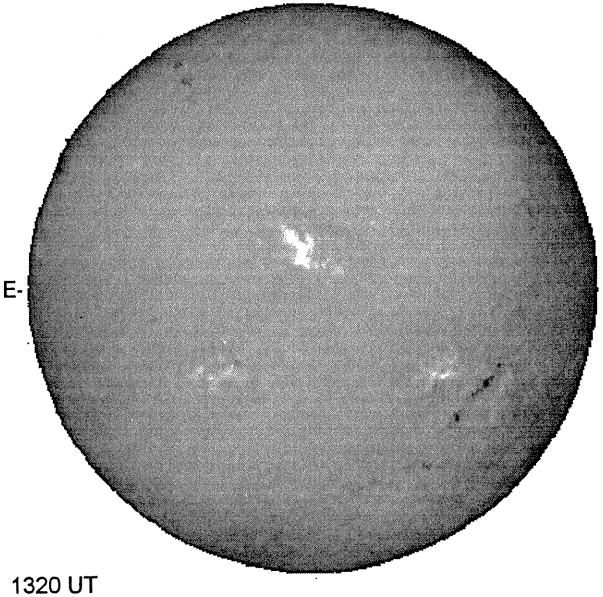
DeltaY = 13.1
DeltaX = 9.6



15.92 -
16.84 UT

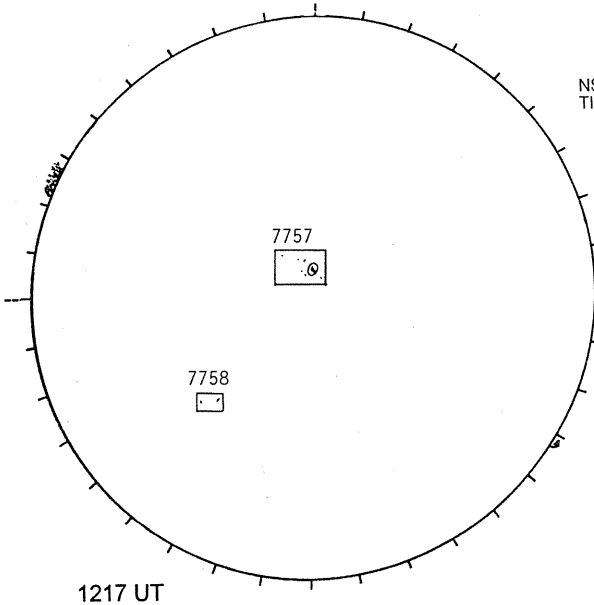
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



1320 UT

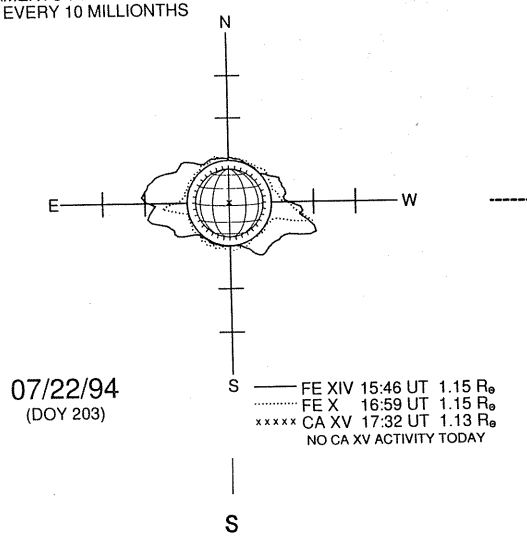
RAMEY SUNSPOT



1217 UT
0516 UT LOMN Prom S

NSO / SACRAMENTO PEAK CORONAL DATA

TICK MARKS EVERY 10 MILLIONTHS



07/22/94
(DOY 203)

FE XIV 15:46 UT 1.15 $R_\odot$
FE X 16:59 UT 1.15 $R_\odot$
xxxxx CA XV 17:32 UT 1.13 $R_\odot$
NO CA XV ACTIVITY TODAY

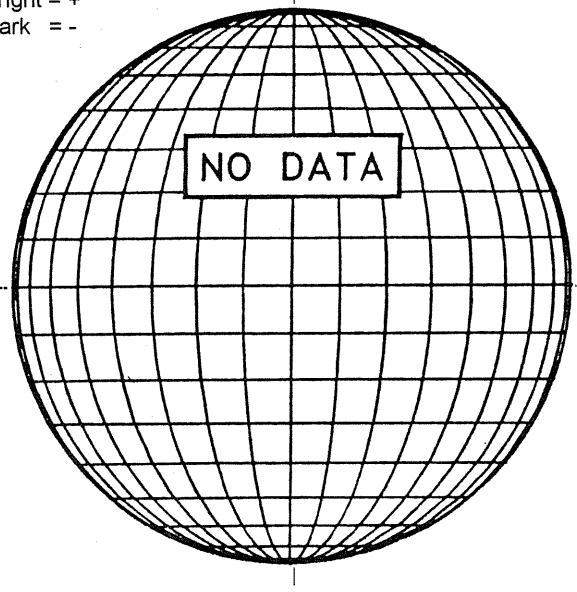
JULY 23, 1994 (P= 7.00, Bo = 5.05, Lo = 326.69)

KITT PEAK MAGNETOGRAM

N

550.7 nm

Bright = +
Dark = -

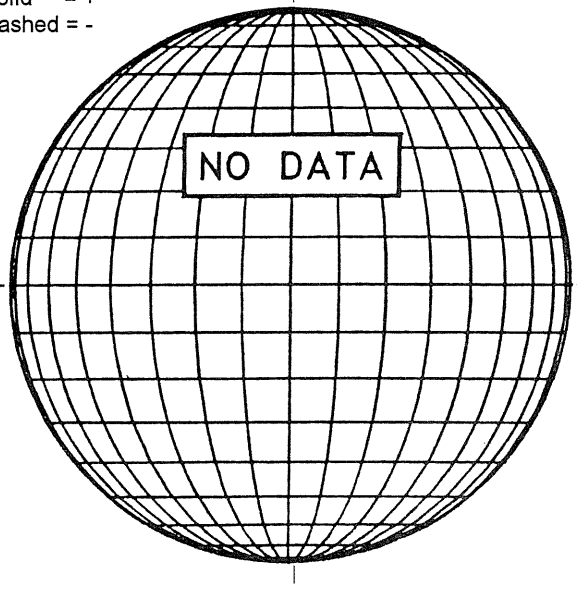


E--

STANFORD MAGNETOGRAM

N

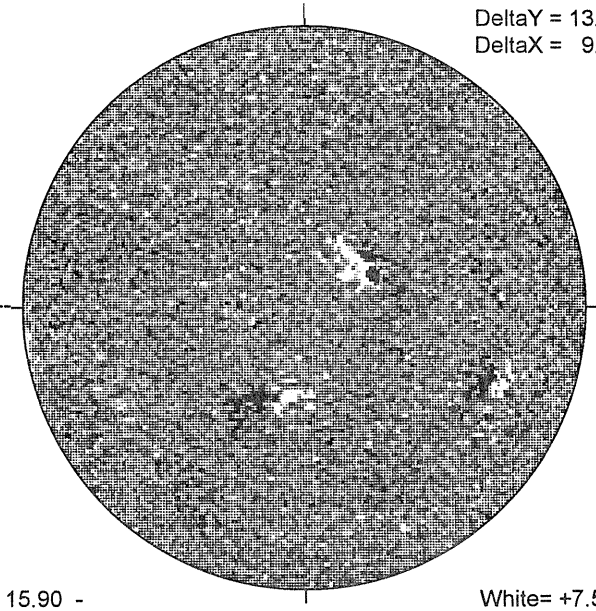
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

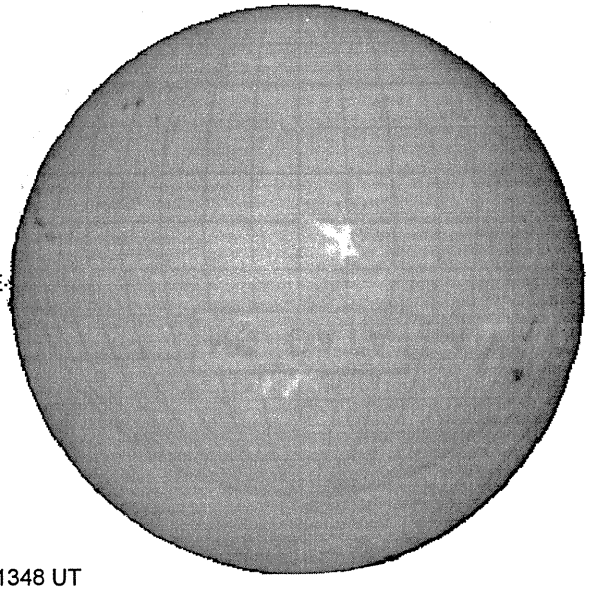


--W

15.90 -
16.81 UT

White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA

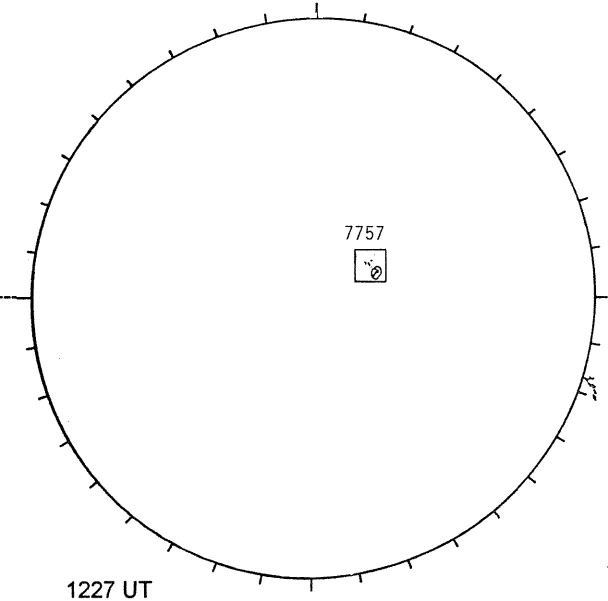


E-

1348 UT

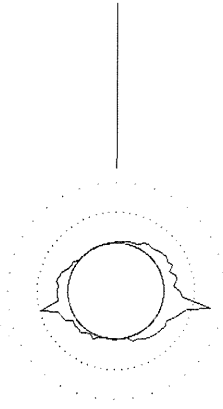
S

RAMEY SUNSPOT



1227 UT
0458 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



----------W

530.3 nm 0544 UT
... 50 abs. units
. . 100 abs. units

S

67
Jul 94

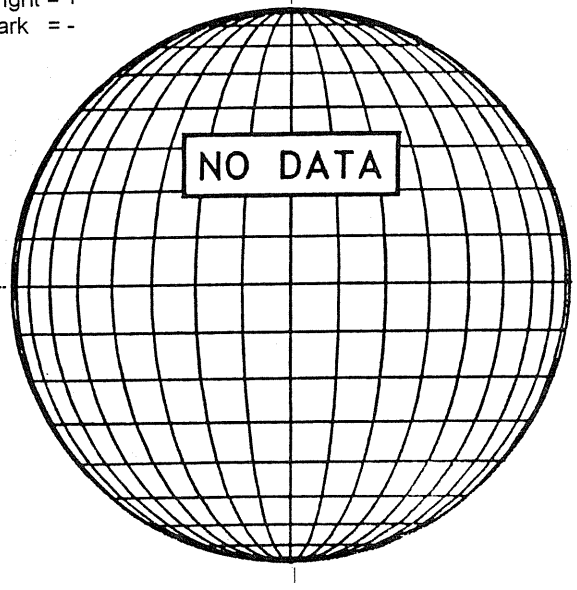
JULY 24, 1994 (P= 7.42, Bo = 5.14, Lo = 313.46)

KITT PEAK MAGNETOGRAM

N

550.7 nm

Bright = +
Dark = -

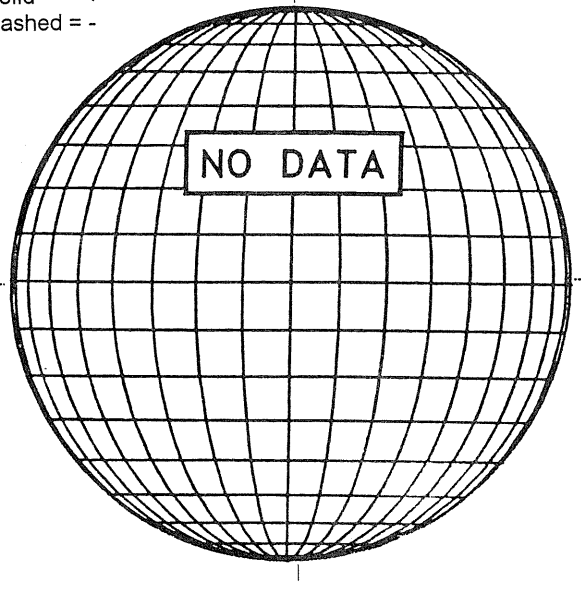


E--

STANFORD MAGNETOGRAM

N

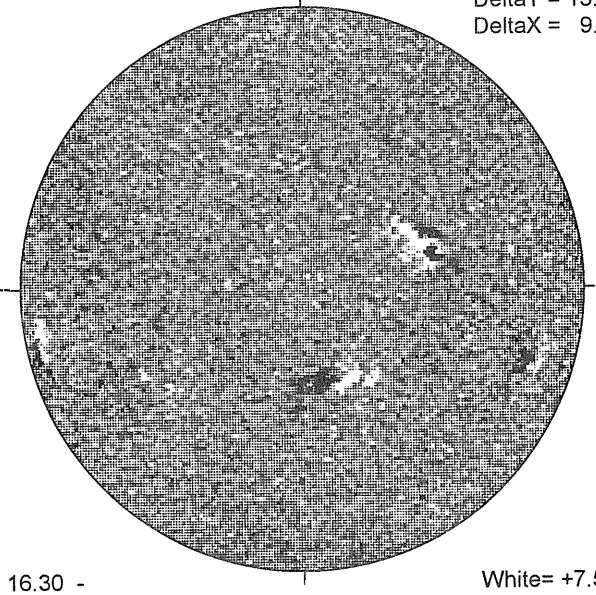
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

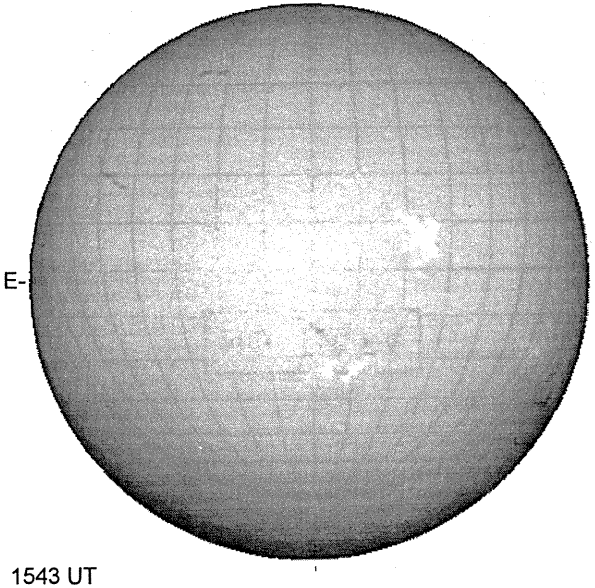


--W

16.30 -
17.22 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

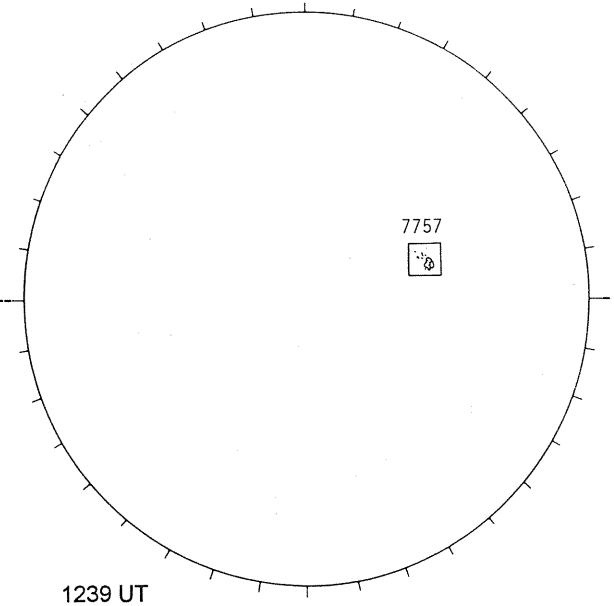


E-

1543 UT

S

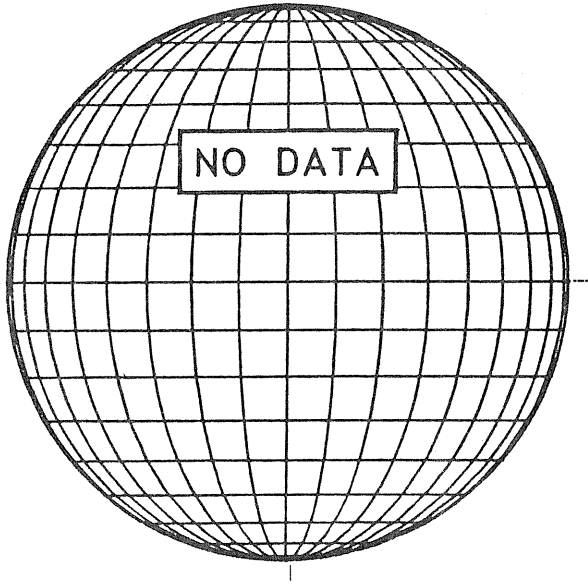
RAMEY SUNSPOT



1239 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

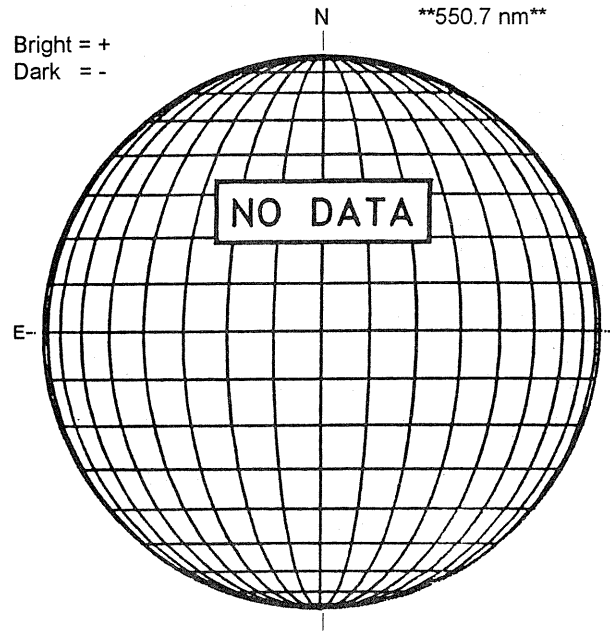


--W

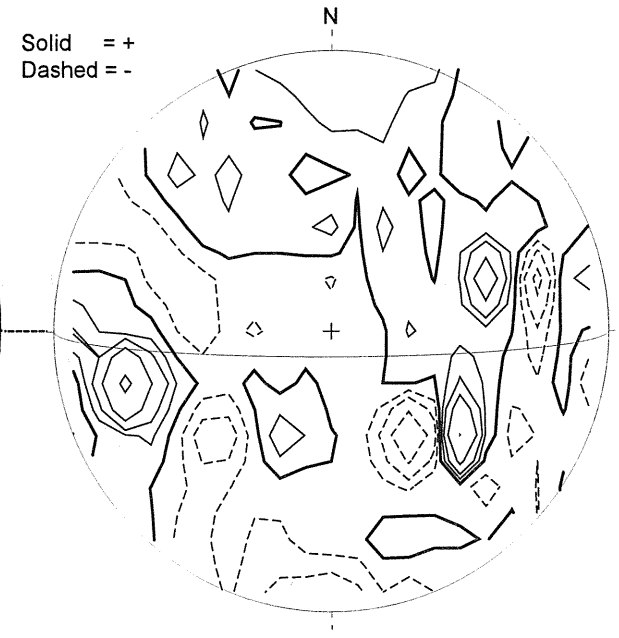
S

JULY 25, 1994 (P= 7.85, Bo = 5.22, Lo = 300.23)

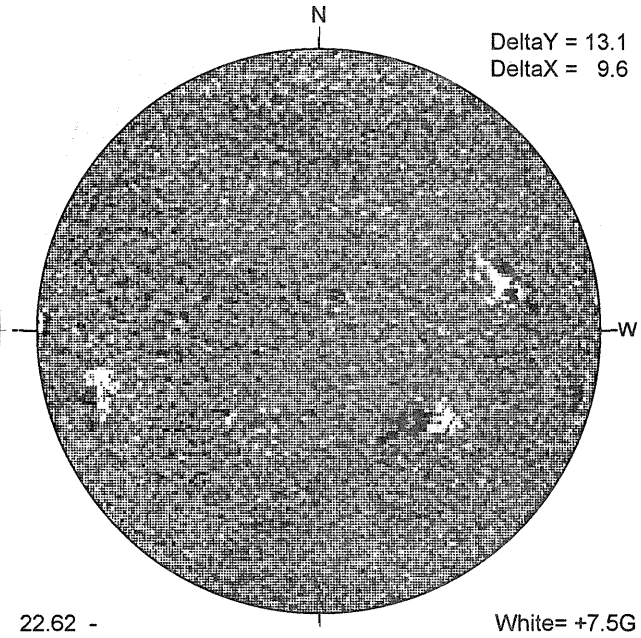
KITT PEAK MAGNETOGRAM



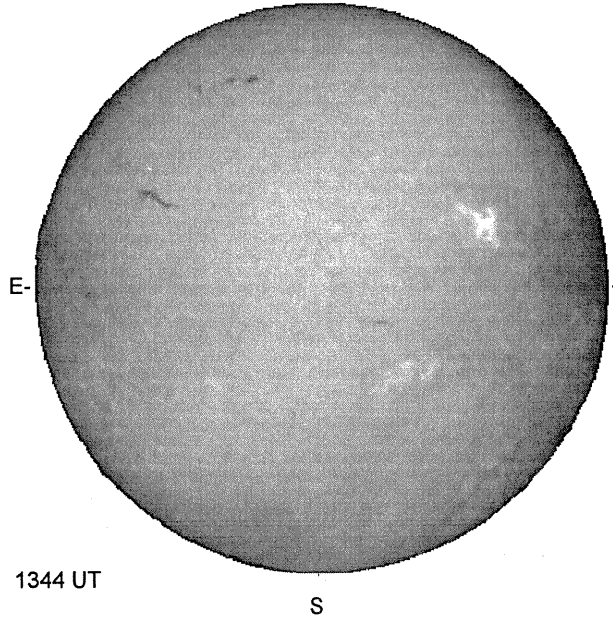
STANFORD MAGNETOGRAM



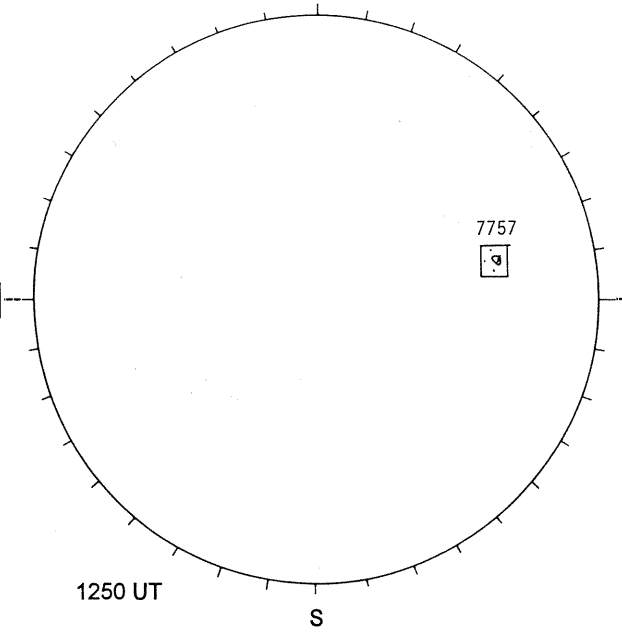
MT. WILSON MAGNETOGRAM



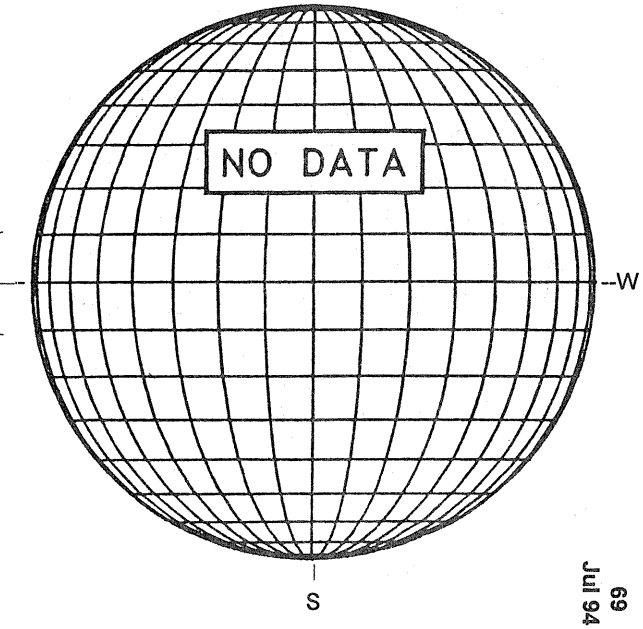
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT

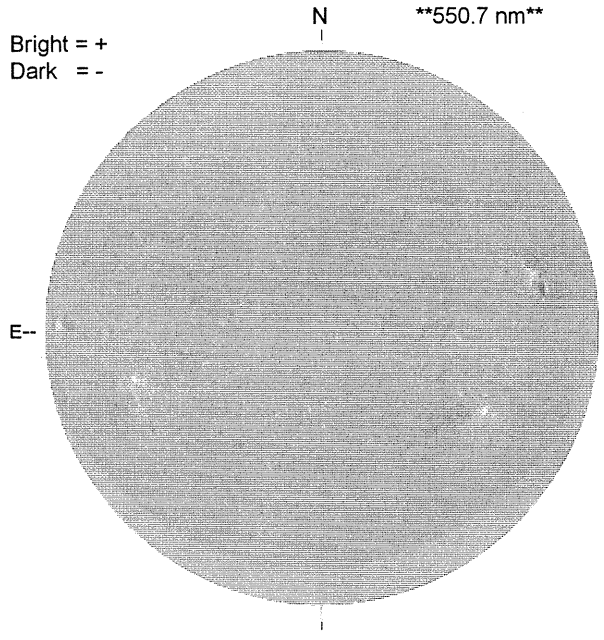


SACRAMENTO PEAK CORONA (1.15 Radii)



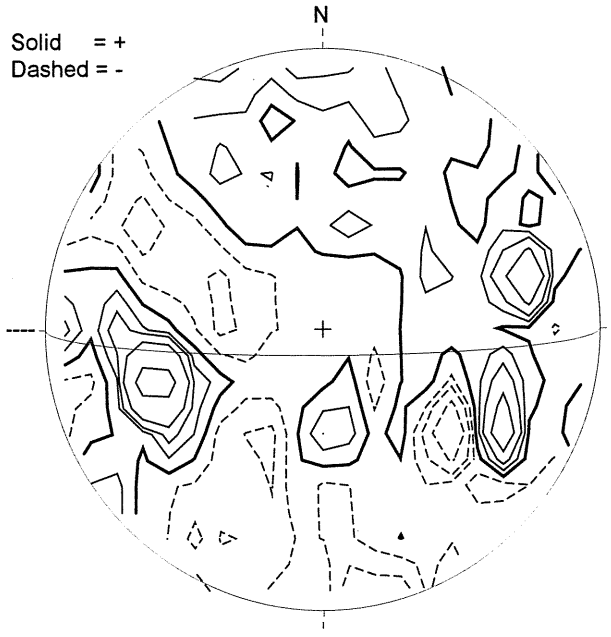
JULY 26, 1994 (P= 8.27, Bo = 5.31, Lo = 287.01)

KITT PEAK MAGNETOGRAM



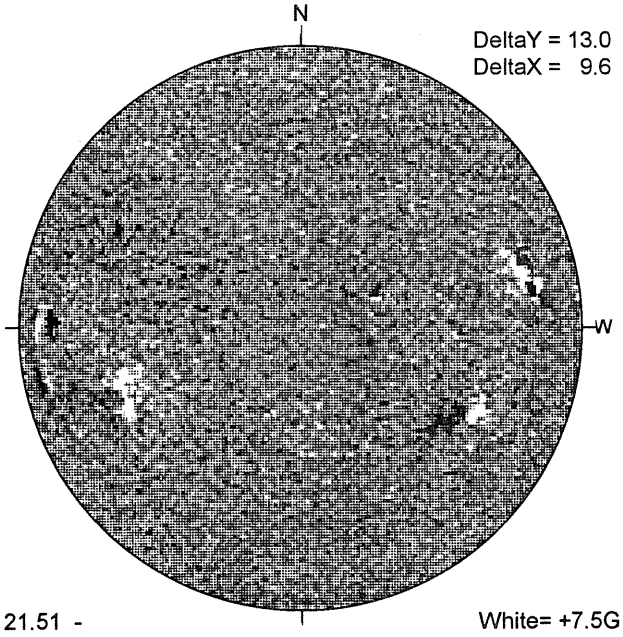
1410 UT

STANFORD MAGNETOGRAM



2034 UT

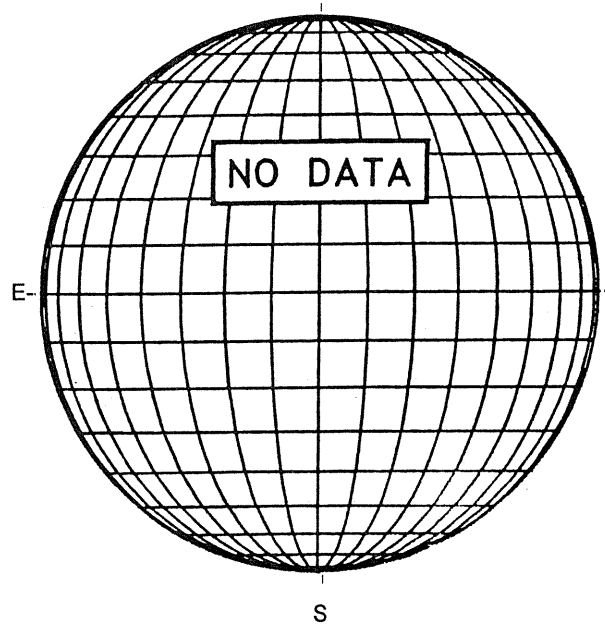
MT. WILSON MAGNETOGRAM



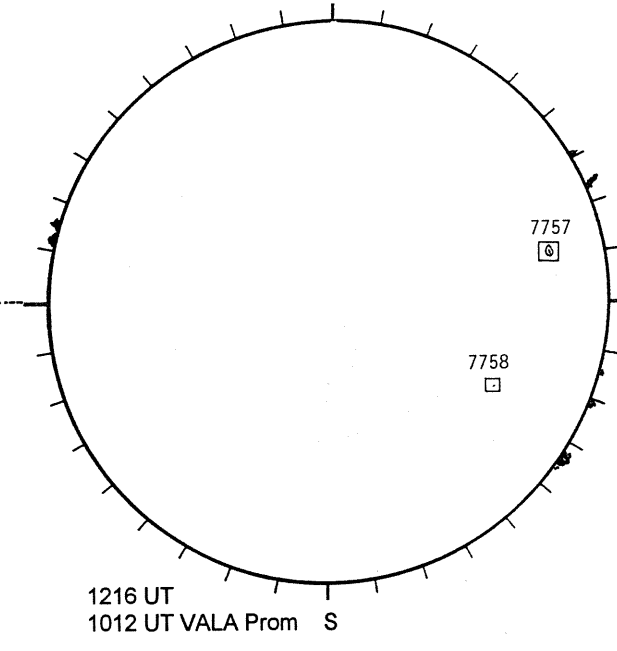
21.51 -
22.43 UT

White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA

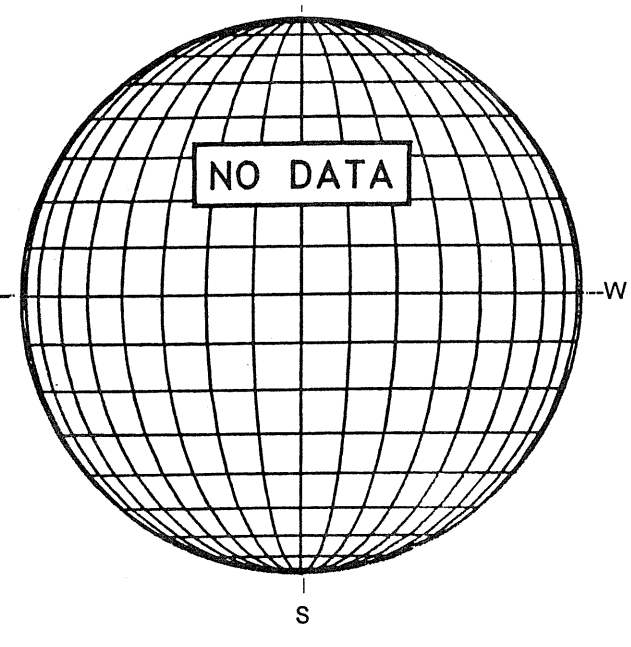


RAMEY SUNSPOT



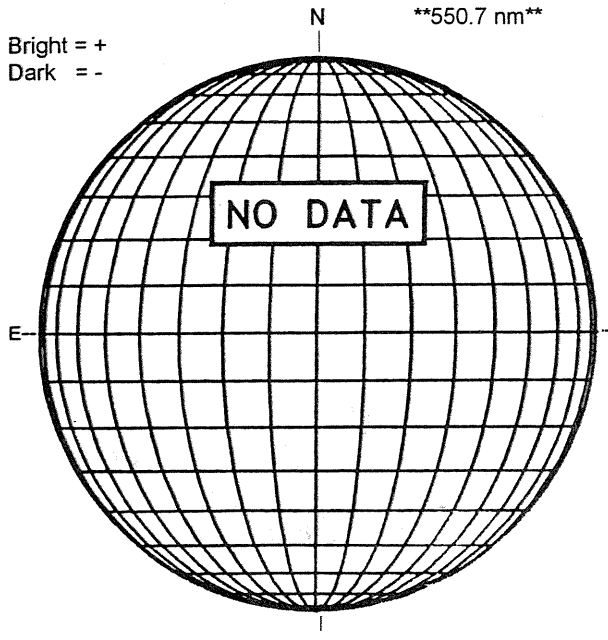
1216 UT
1012 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

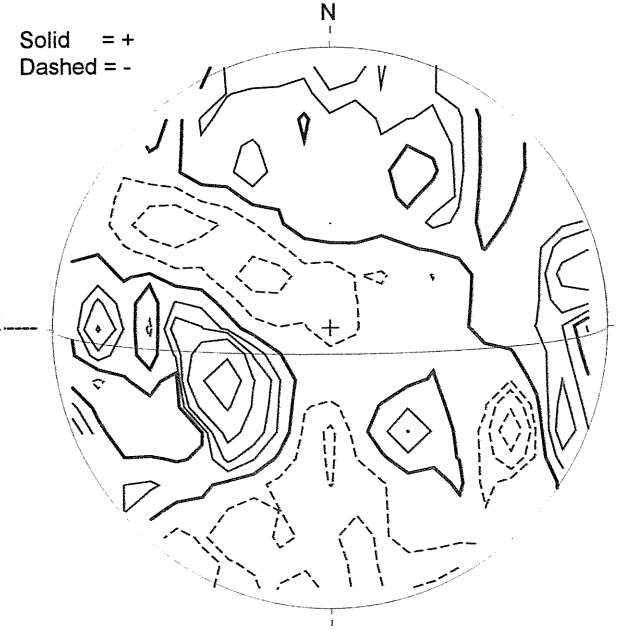


JULY 27, 1994 (P= 8.68, Bo = 5.39, Lo = 273.78)

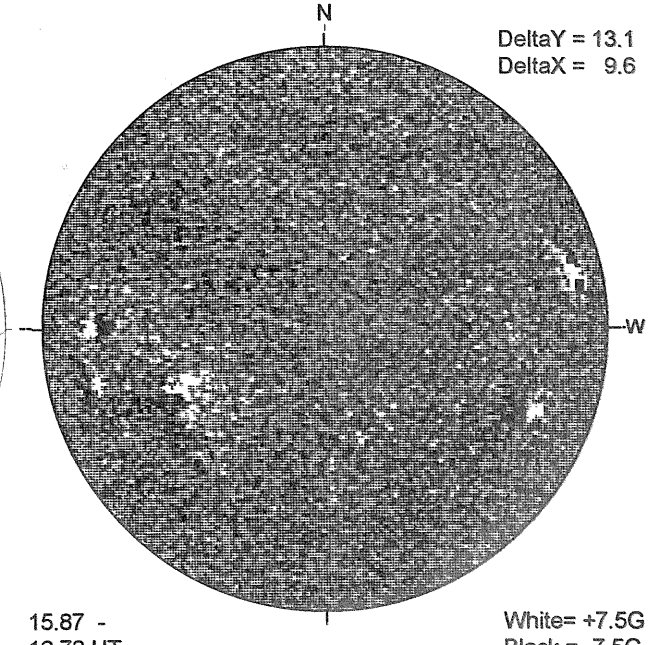
KITT PEAK MAGNETOGRAM



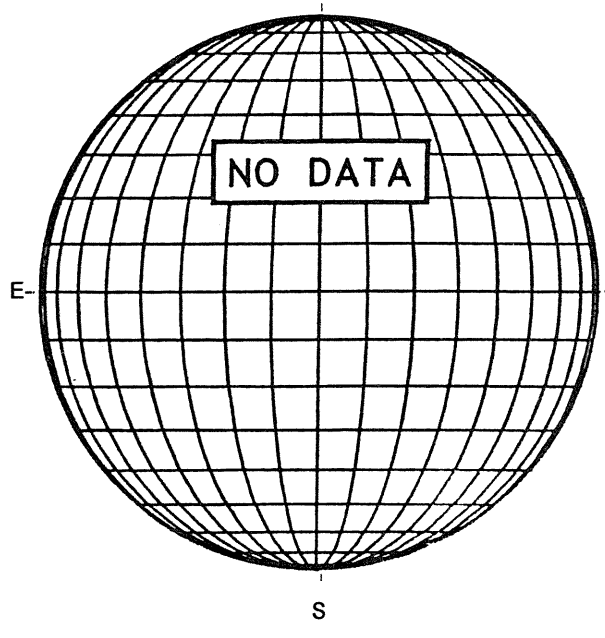
STANFORD MAGNETOGRAM



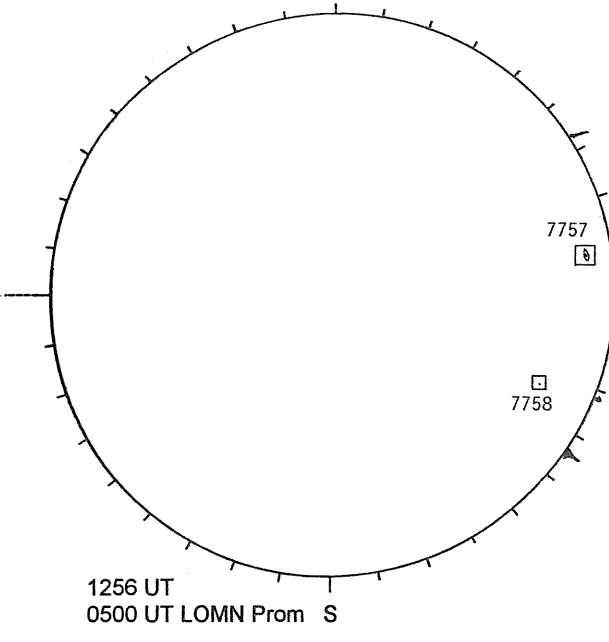
MT. WILSON MAGNETOGRAM



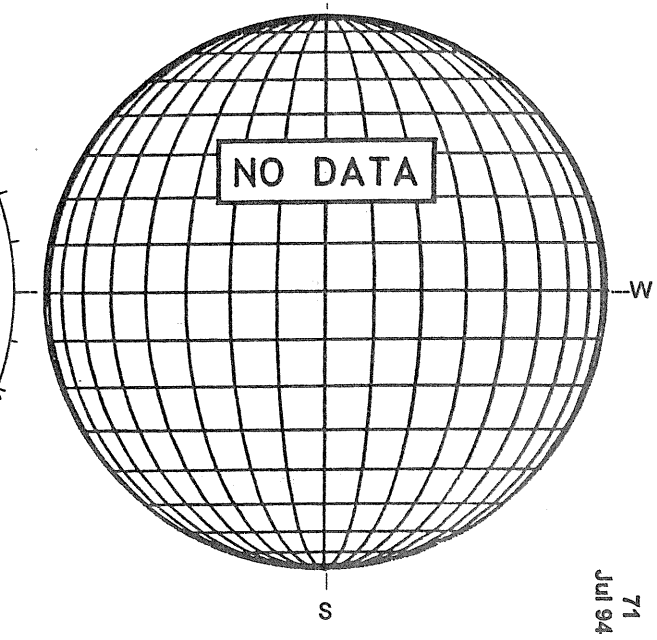
BIG BEAR H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



71
Jul 94

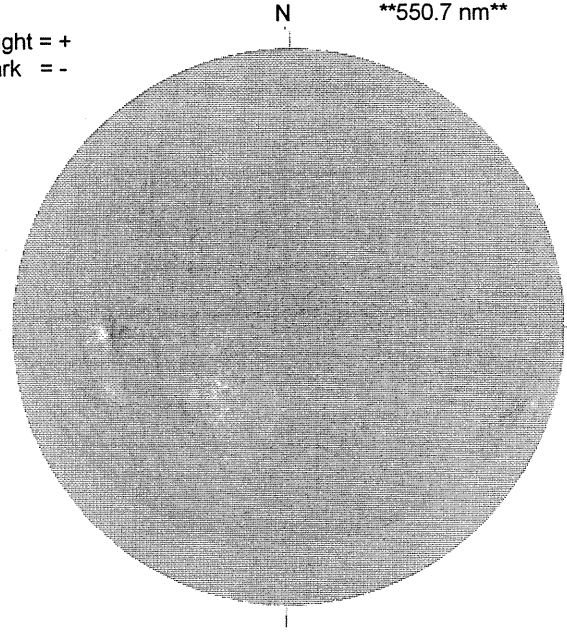
JULY 28, 1994 (P= 9.10, Bo = 5.47, Lo = 260.55)

72
Jul 94

KITT PEAK MAGNETOGRAM

550.7 nm

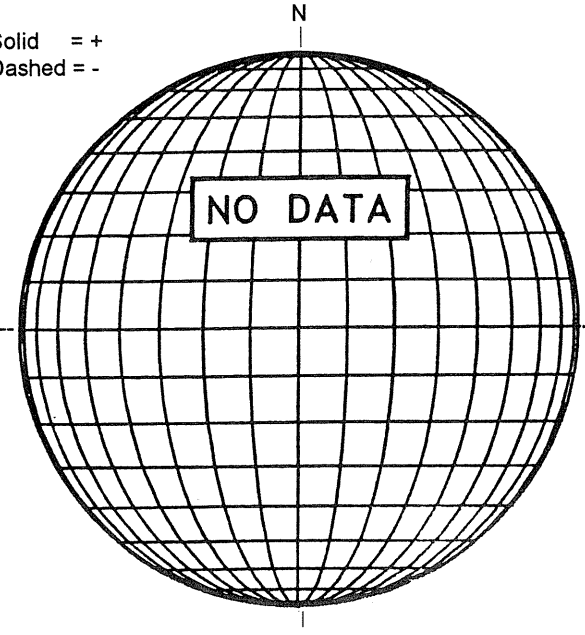
Bright = +
Dark = -



1454 UT

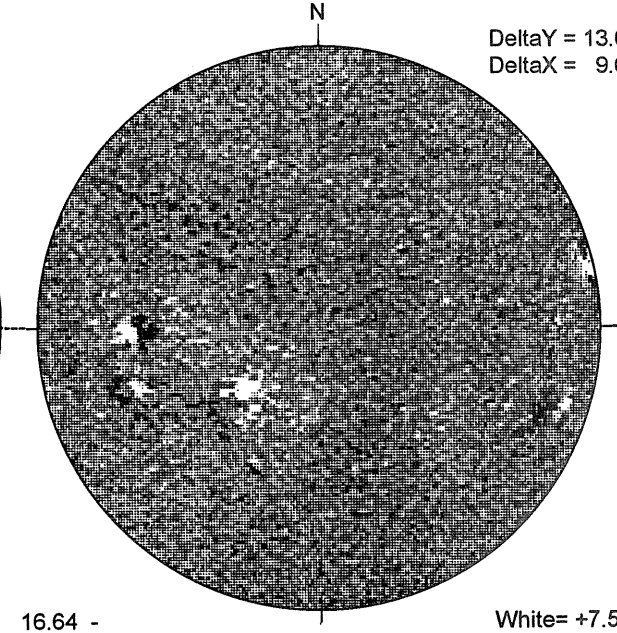
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

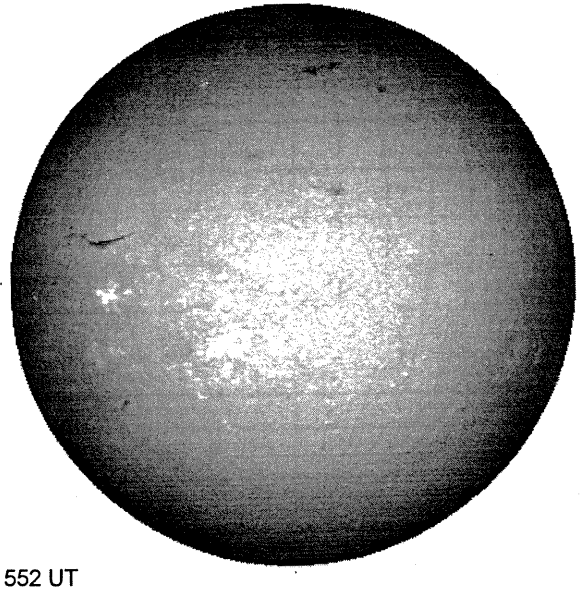
DeltaY = 13.0
DeltaX = 9.6



16.64 -
17.59 UT

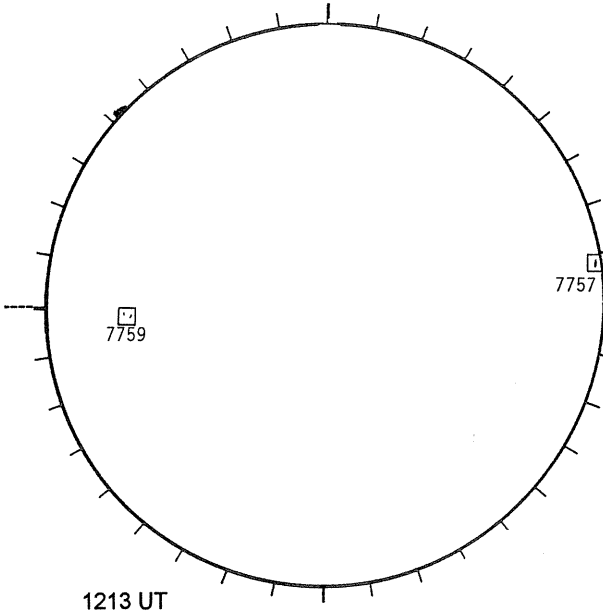
White= +7.5G
Black = -7.5G

BIG BEAR H-ALPHA



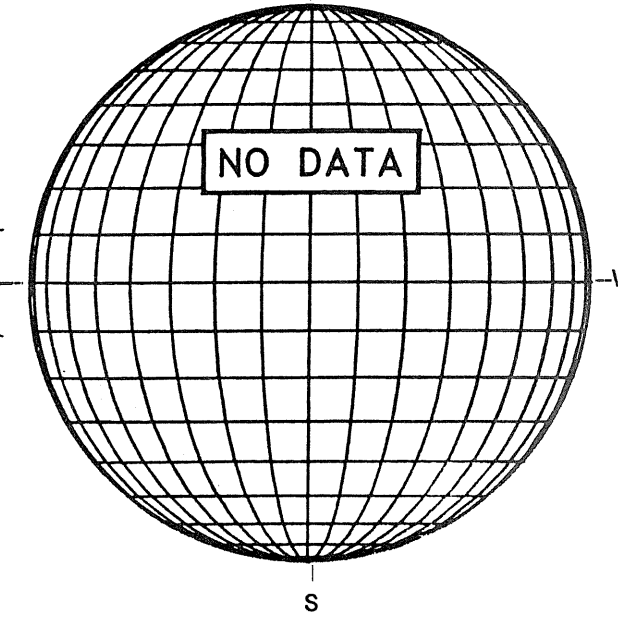
1552 UT

RAMEY SUNSPOT



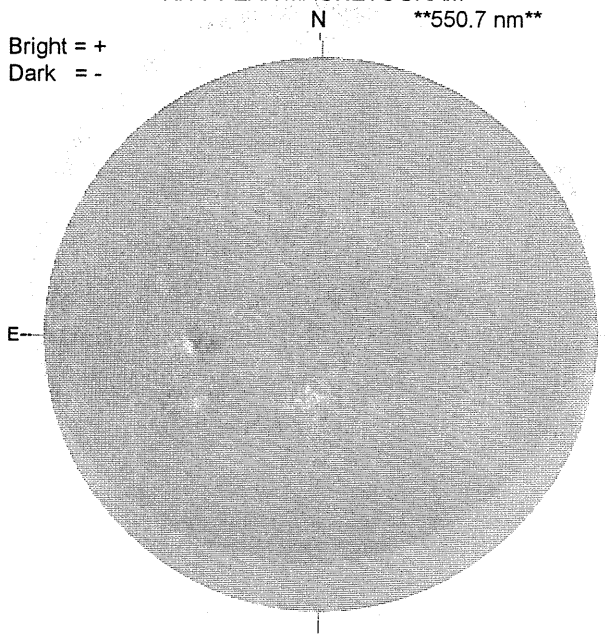
1213 UT
0624 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)----

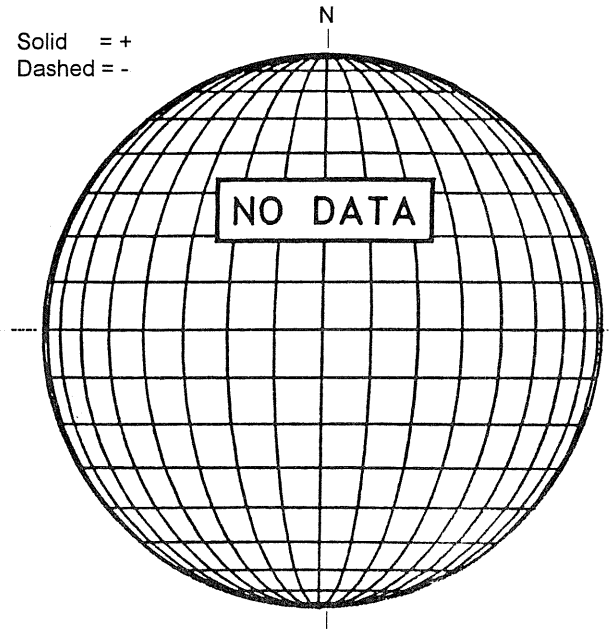


JULY 29, 1994 (P= 9.51, Bo = 5.55, Lo = 247.32)

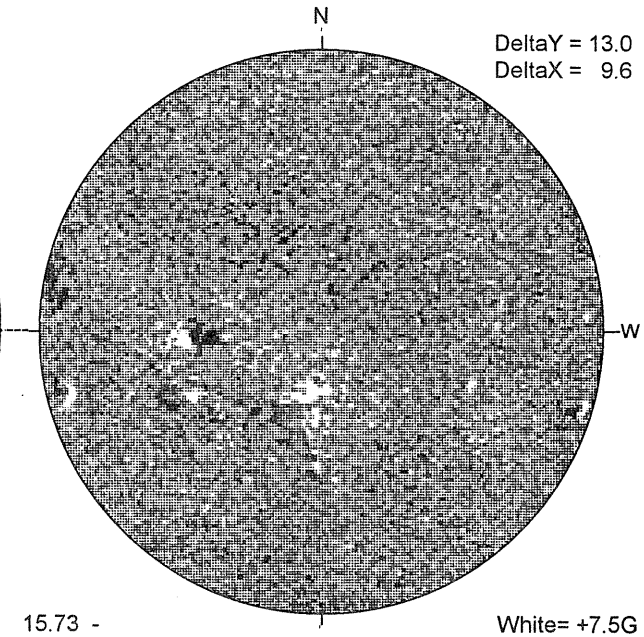
KITT PEAK MAGNETOGRAM



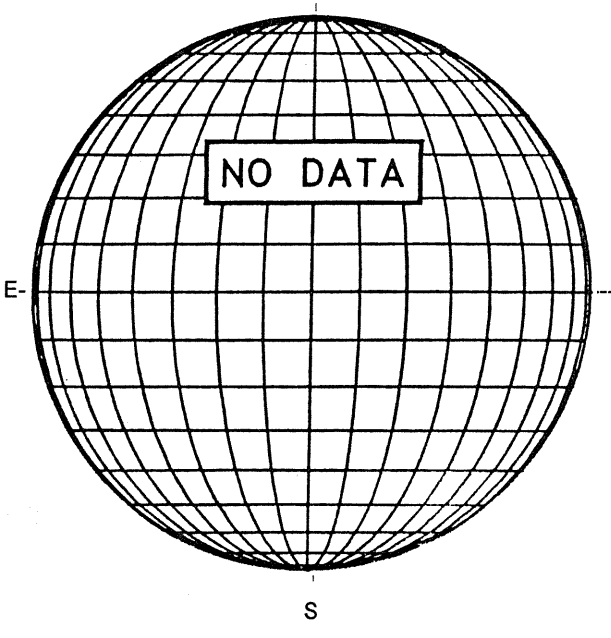
STANFORD MAGNETOGRAM



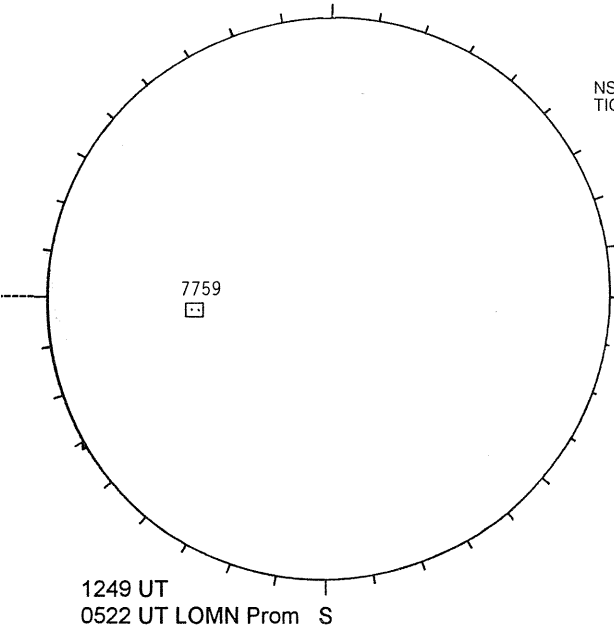
MT. WILSON MAGNETOGRAM

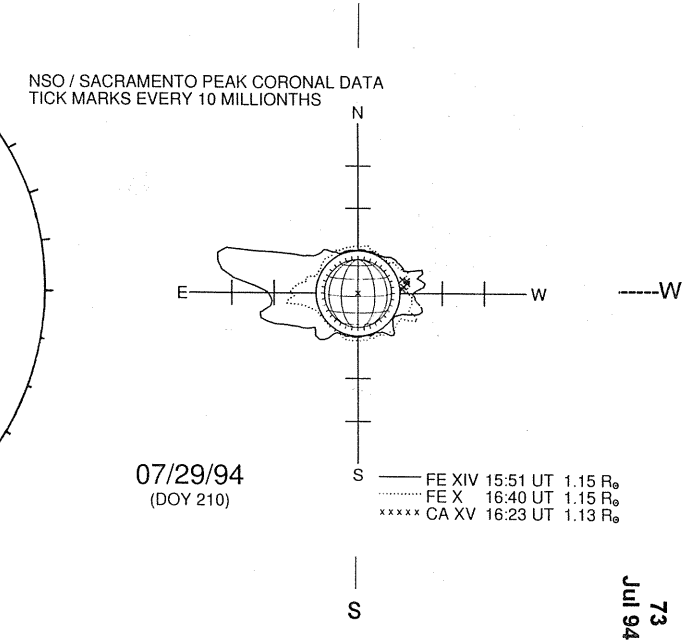


BIG BEAR H-ALPHA



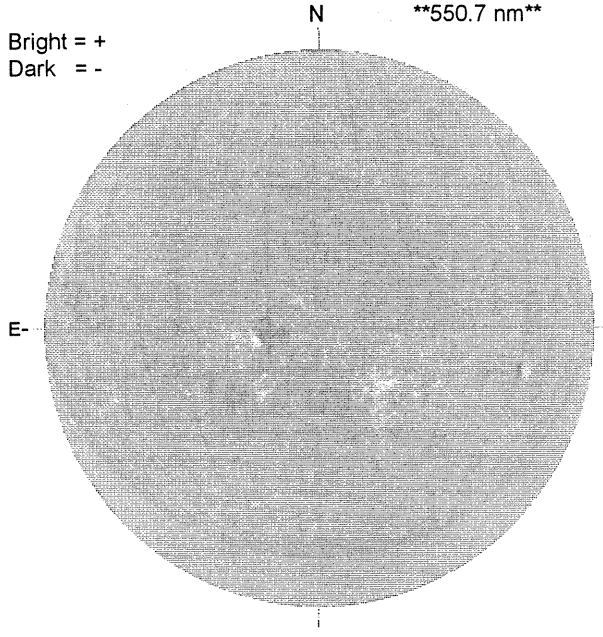
RAMEY SUNSPOT





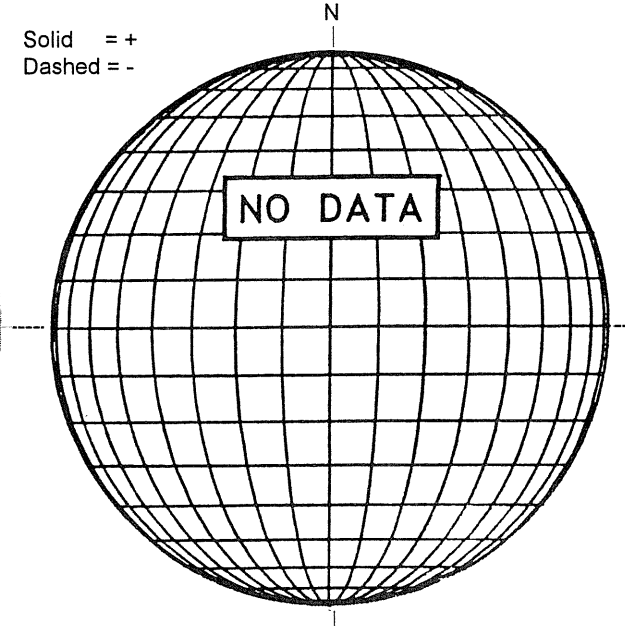
JULY 30, 1994 (P= 9.91, Bo = 5.62, Lo = 234.09)

KITT PEAK MAGNETOGRAM

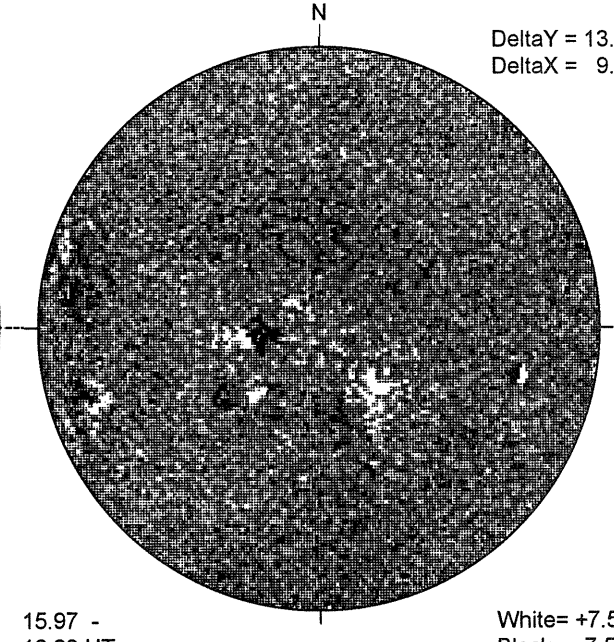


1710 UT

STANFORD MAGNETOGRAM



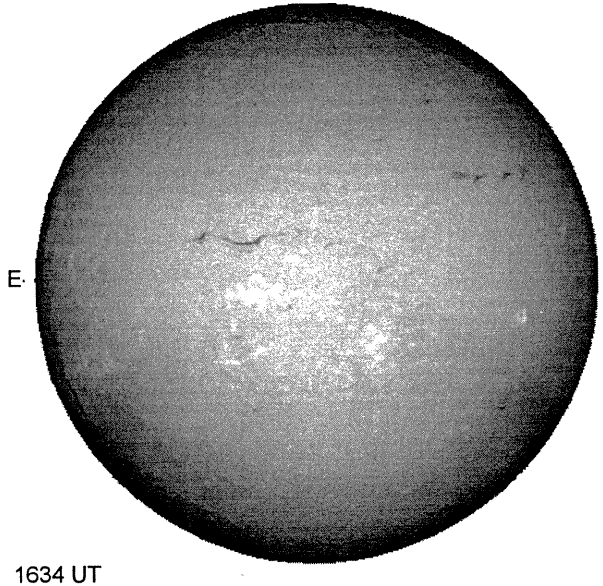
MT. WILSON MAGNETOGRAM



15.97 -
16.89 UT

White= +7.5G
Black = -7.5G

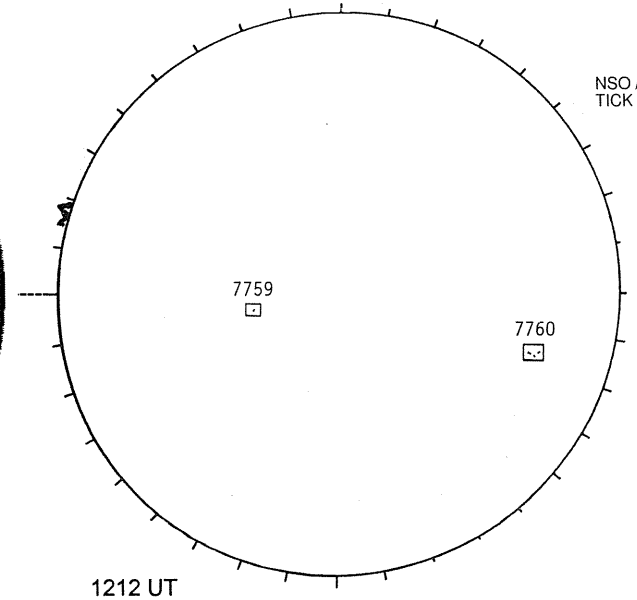
BIG BEAR H-ALPHA



1634 UT

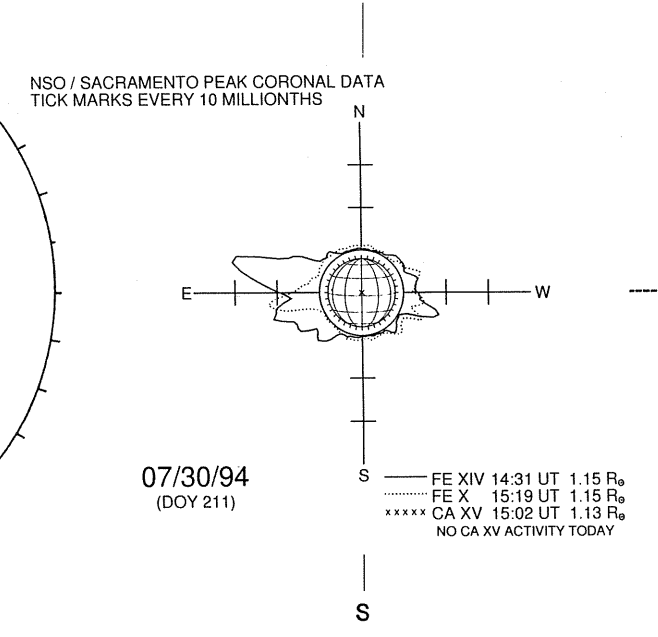
S

RAMEY SUNSPOT



1212 UT
0516 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



S

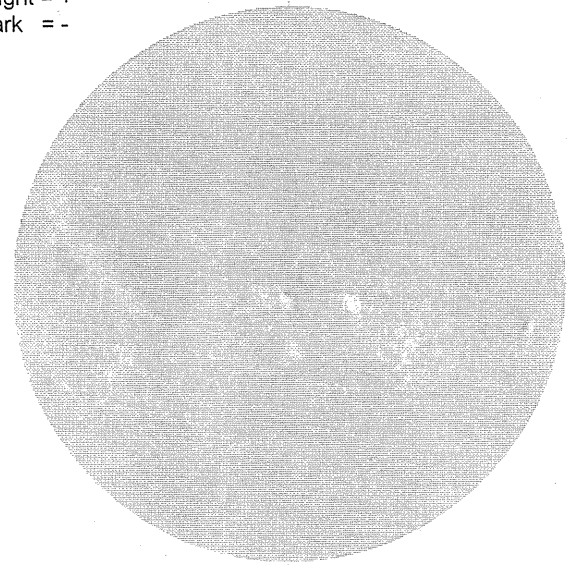
JULY 31, 1994 (P= 10.32, Bo = 5.70, Lo = 220.87)

KITT PEAK MAGNETOGRAM

N

550.7 nm

Bright = +
Dark = -



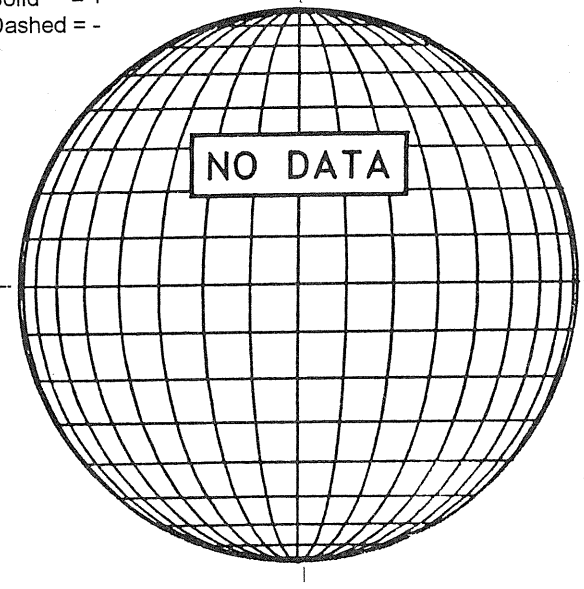
E-

1630 UT

STANFORD MAGNETOGRAM

N

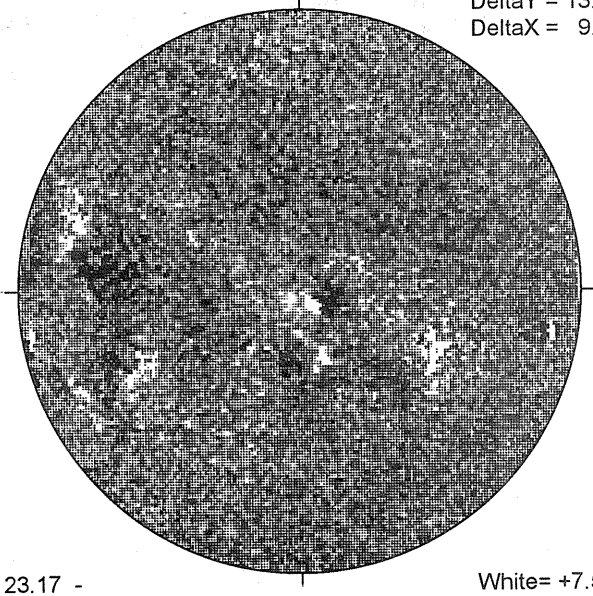
Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

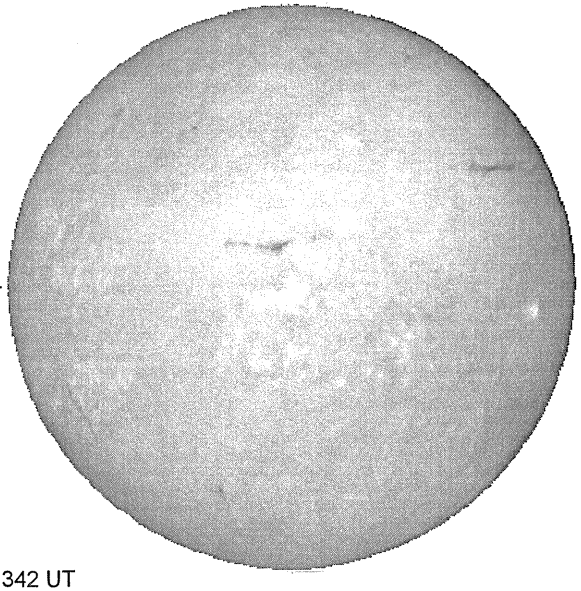


W

23.17 -
24.09 UT

White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

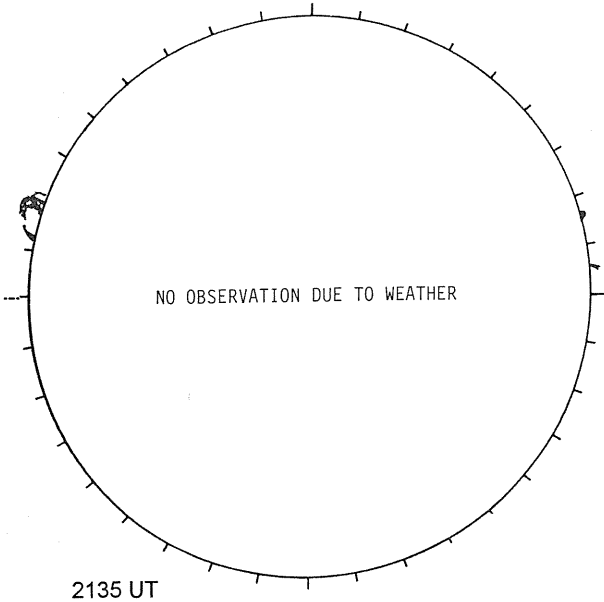


E-

1342 UT

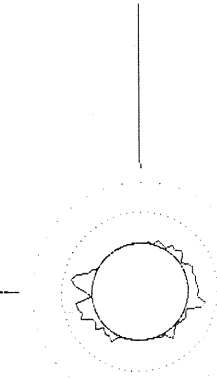
S

RAMEY SUNSPOT



2135 UT
0528 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



W

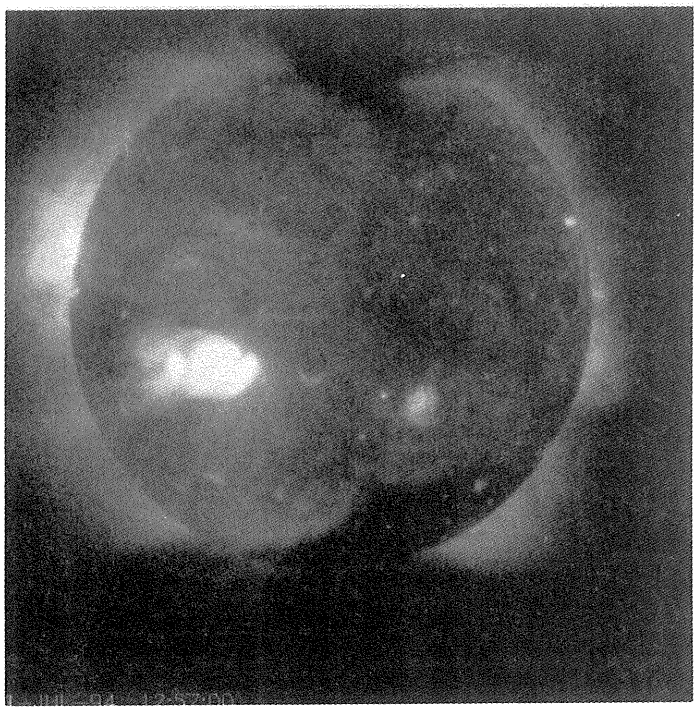
530.3 nm 0611 UT
... 50 abs. units
. . 100 abs. units

S

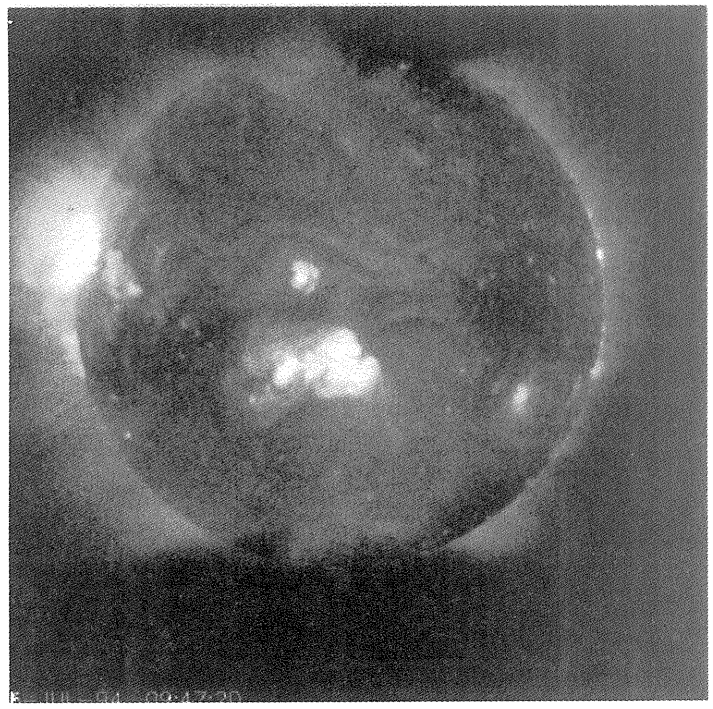
75
Jul 94

YOHKOH SOFT X-RAY TELESCOPE IMAGES

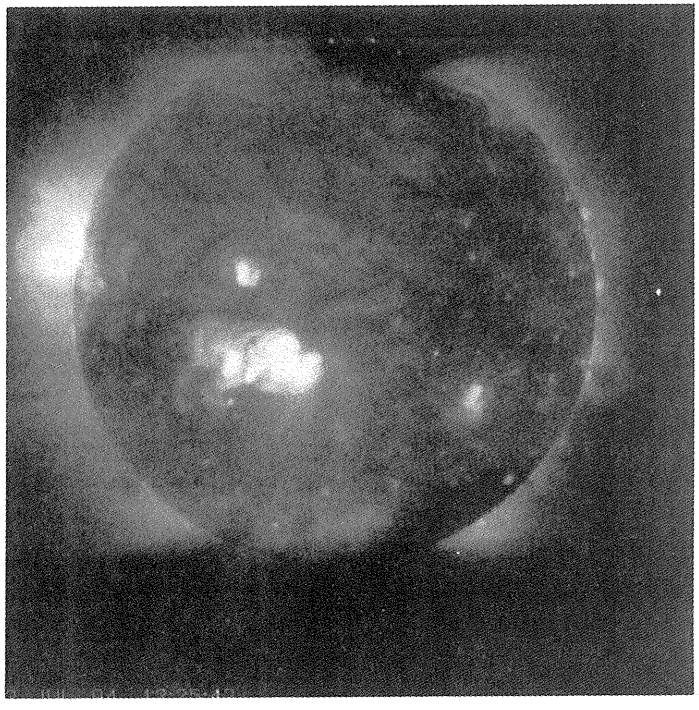
July 1994



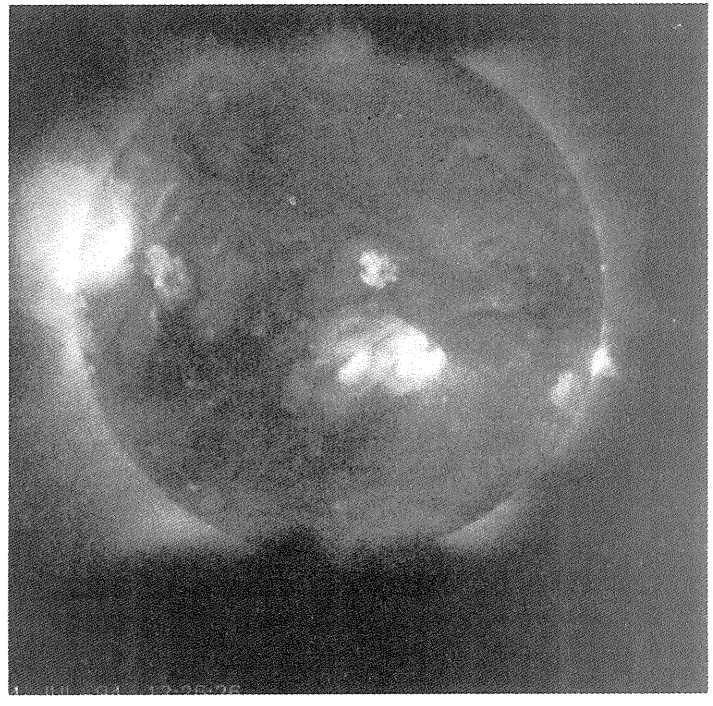
Day 1
12:57:00 UT



Day 3
09:47:20 UT



Day 2
12:25:42 UT



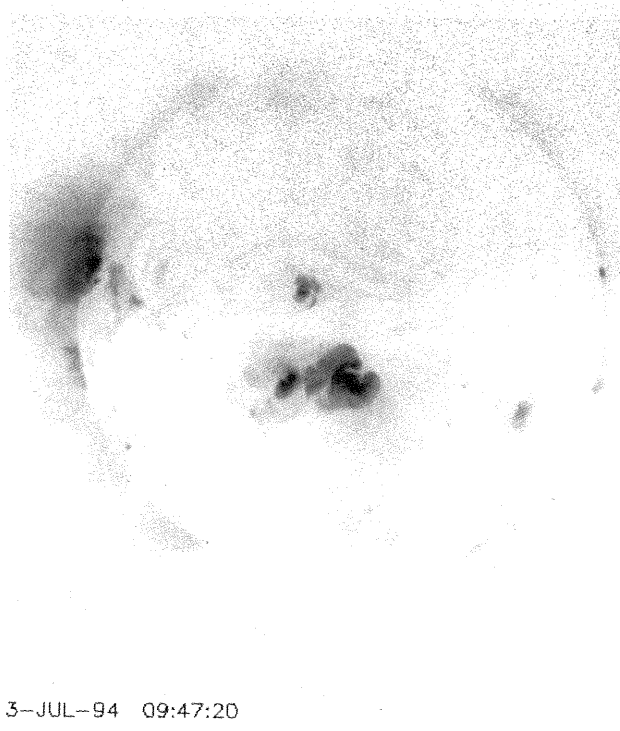
Day 4
12:26:26 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

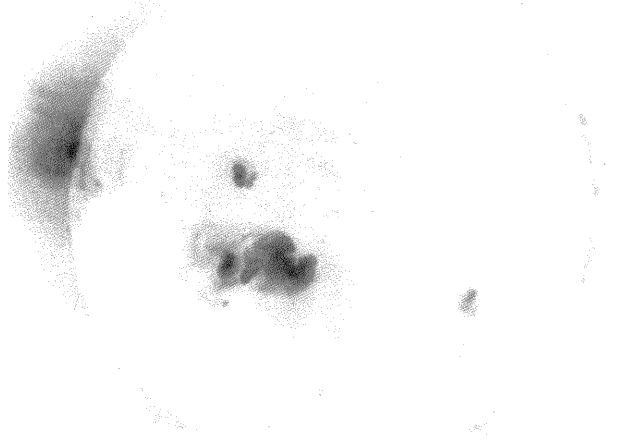
July 1994

Day 1
12:57:00 UT

Day 3
09:47:20 UT



Day 2
12:25:42 UT

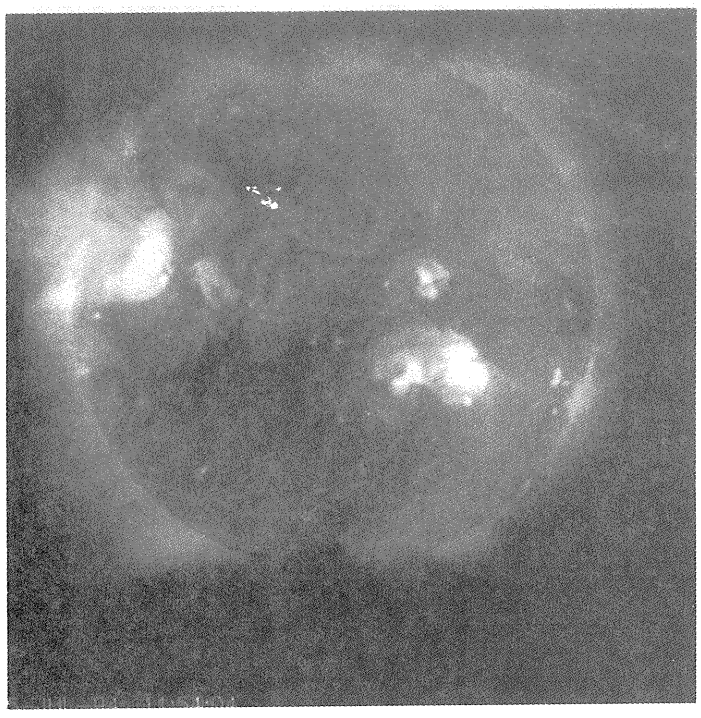


Day 4
12:26:26 UT

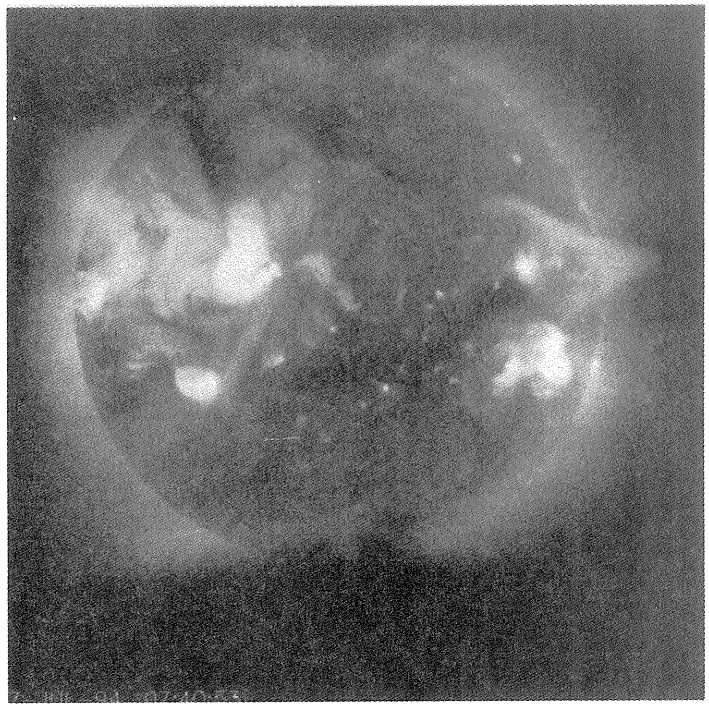
77
Jul 94

YOHKOH SOFT X-RAY TELESCOPE IMAGES

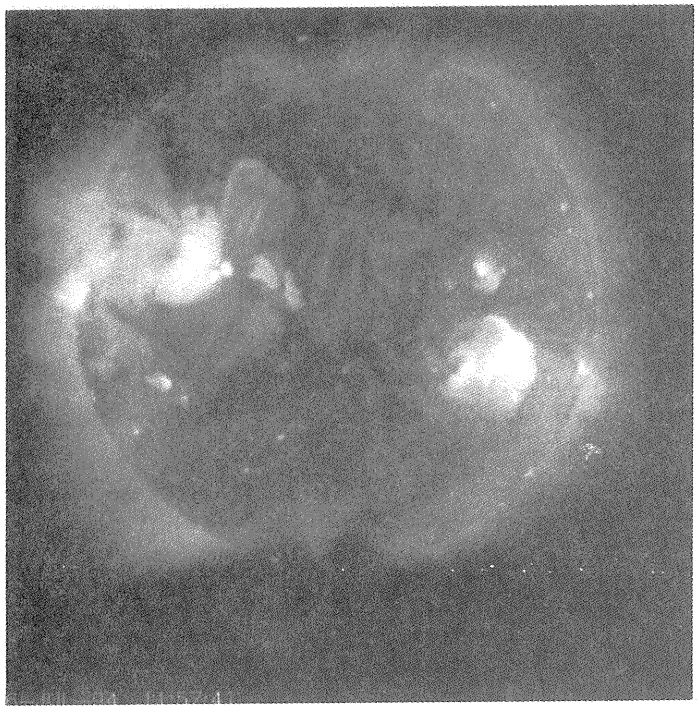
July 1994



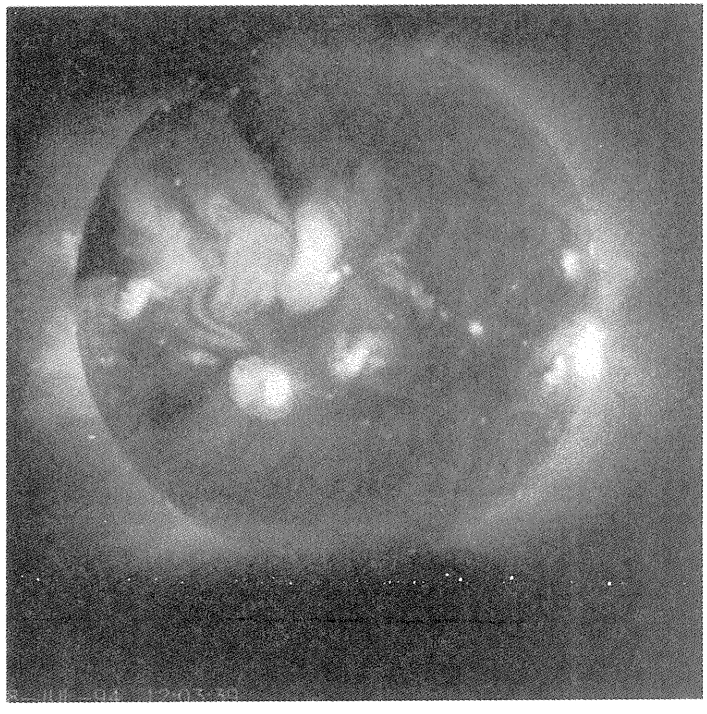
Day 5
11:54:04 UT



Day 7
07:40:53 UT



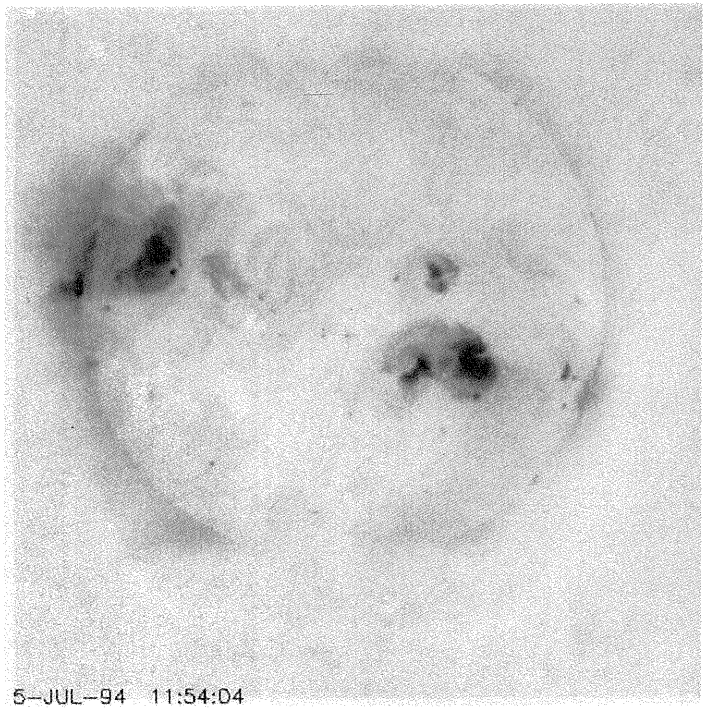
Day 6
11:57:41 UT



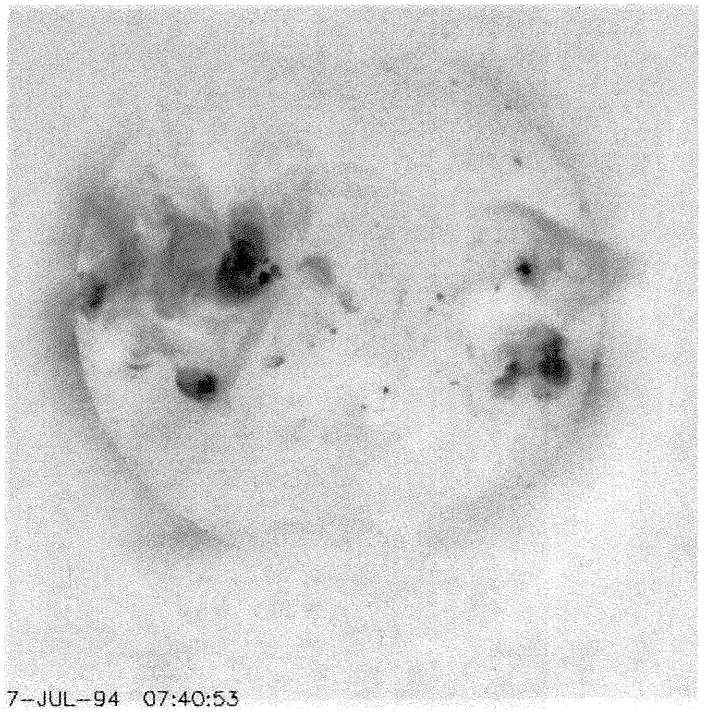
Day 8
12:03:39 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

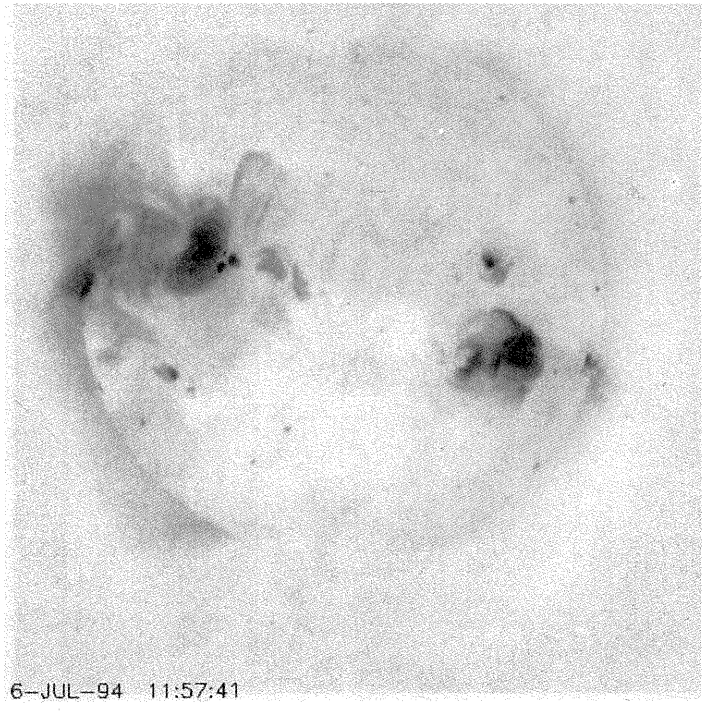
July 1994



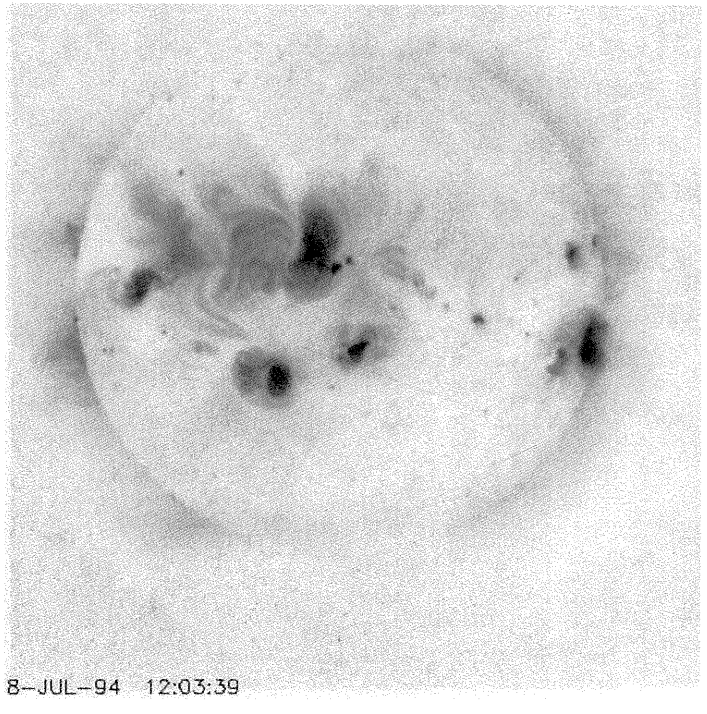
Day 5
11:54:04 UT



Day 7
07:40:53 UT



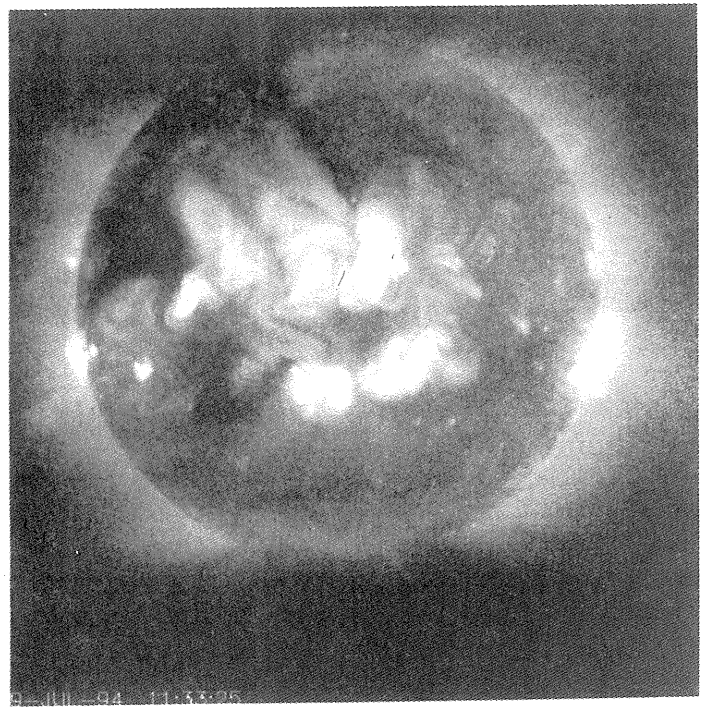
Day 6
11:57:41 UT



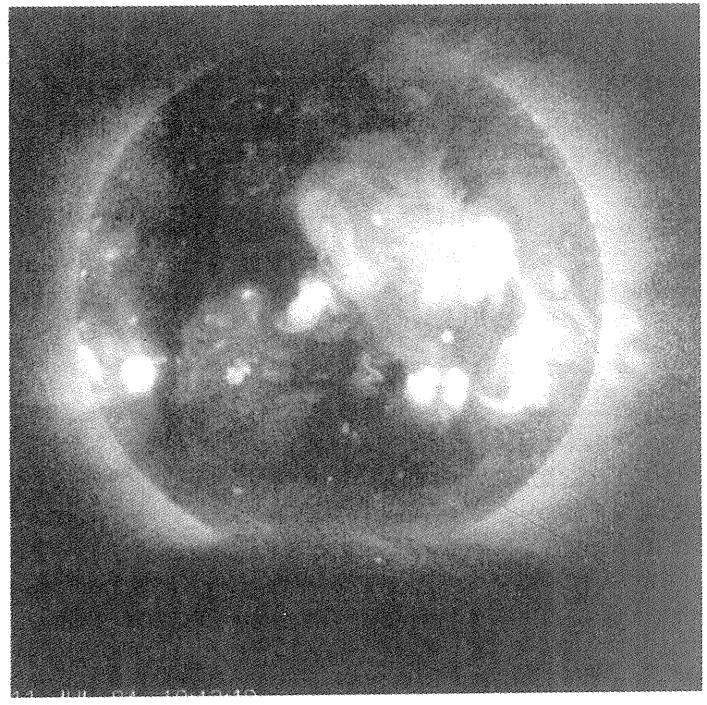
Day 8
12:03:39 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

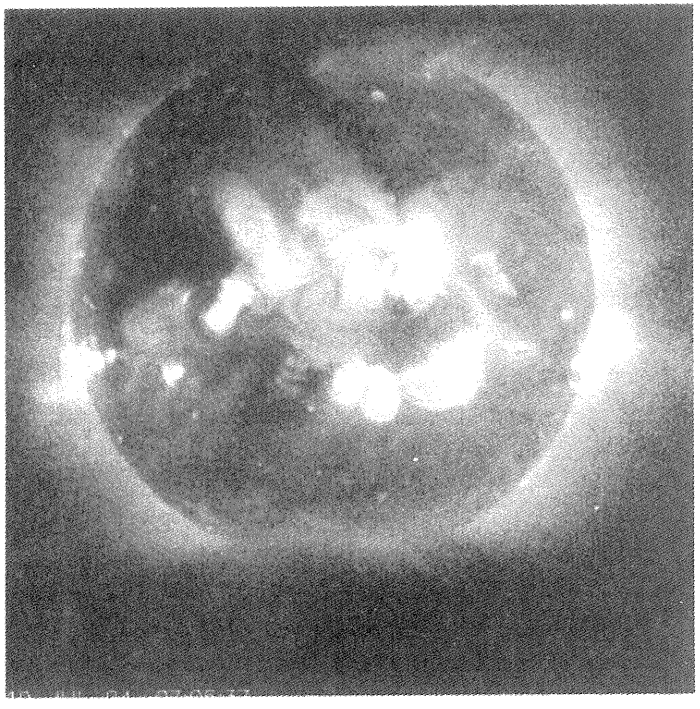
July 1994



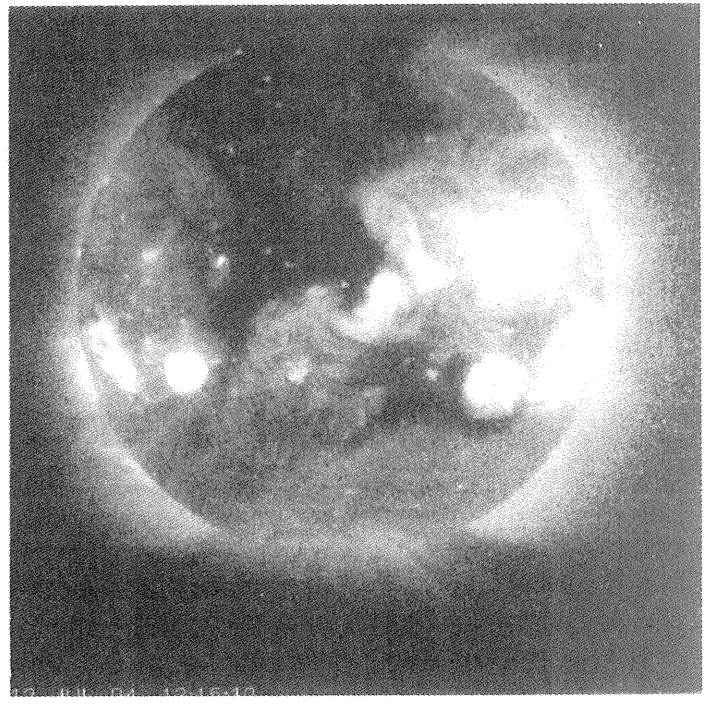
Day 9
11:33:25 UT



Day 11
10:42:10 UT



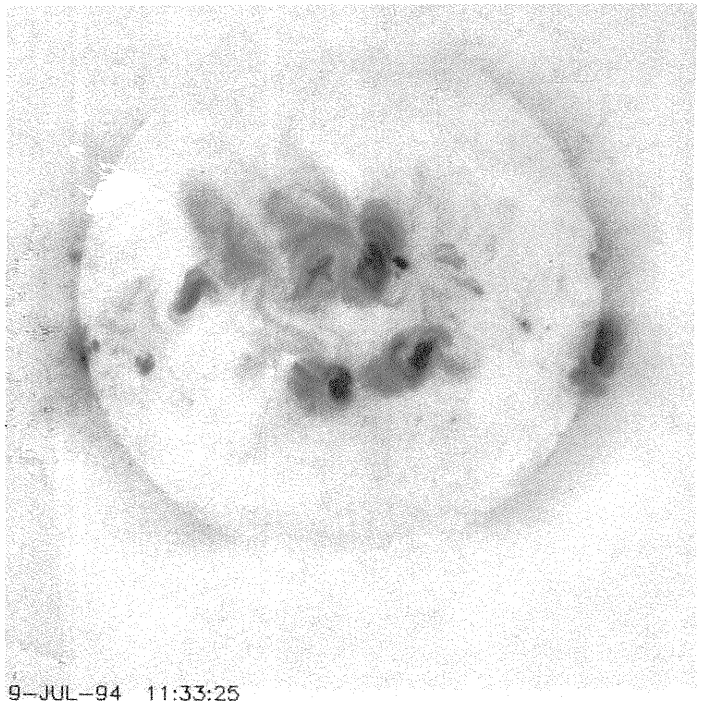
Day 10
07:05:37 UT



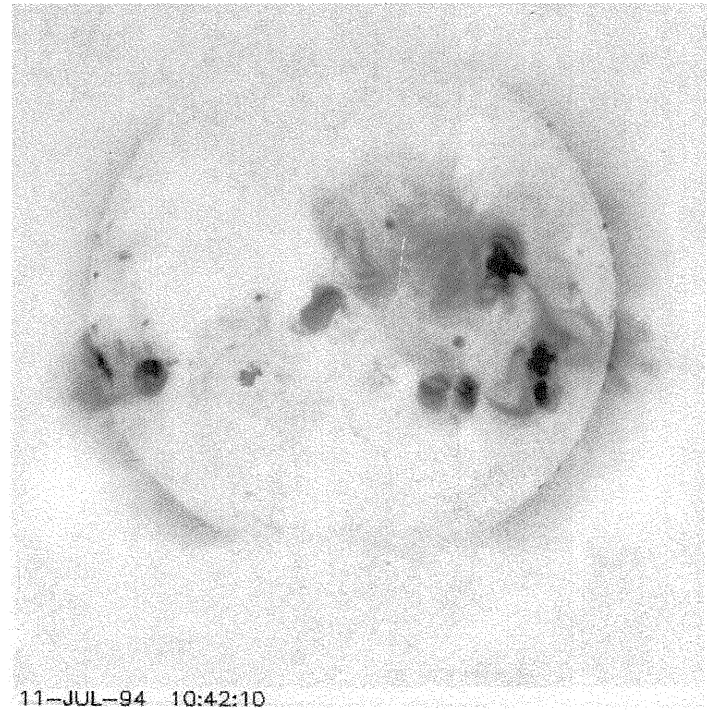
Day 12
12:15:12 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

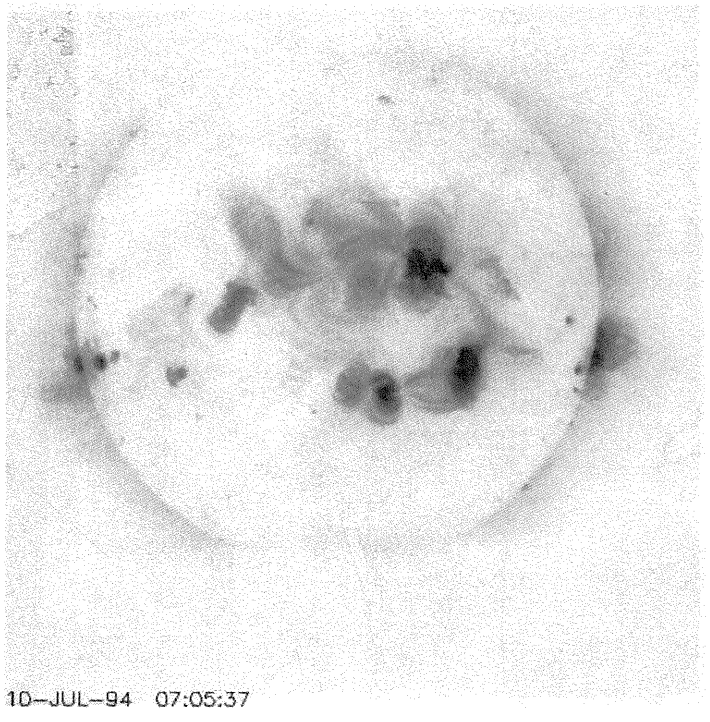
July 1994



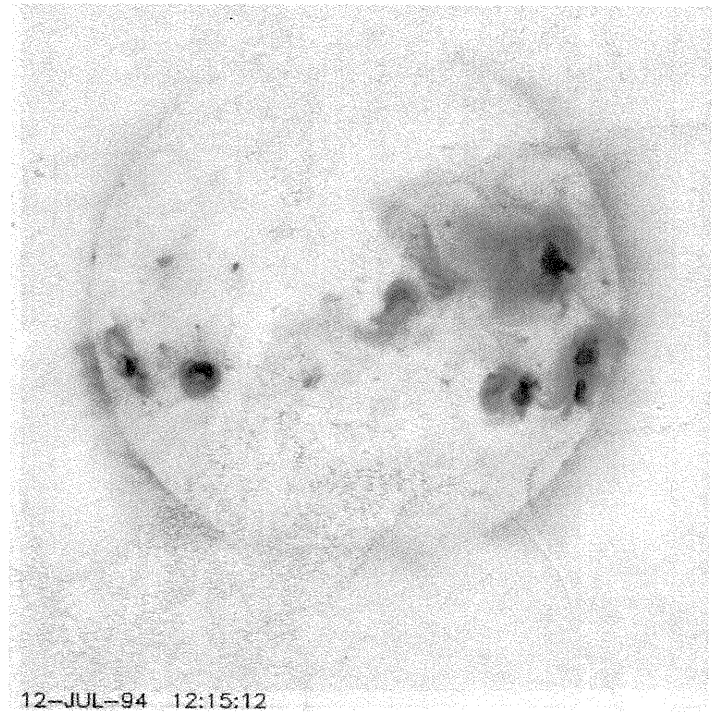
Day 9
11:33:25 UT



Day 11
10:42:10 UT



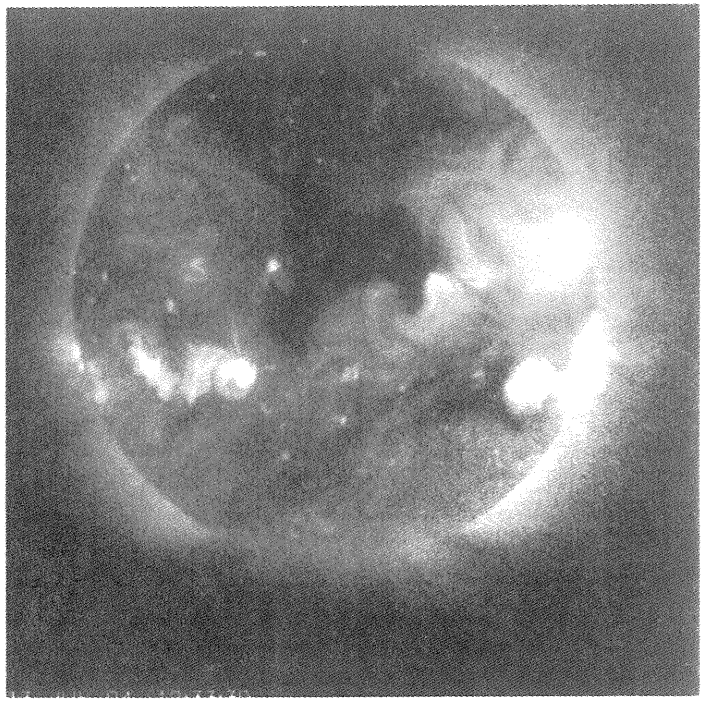
Day 10
07:05:37 UT



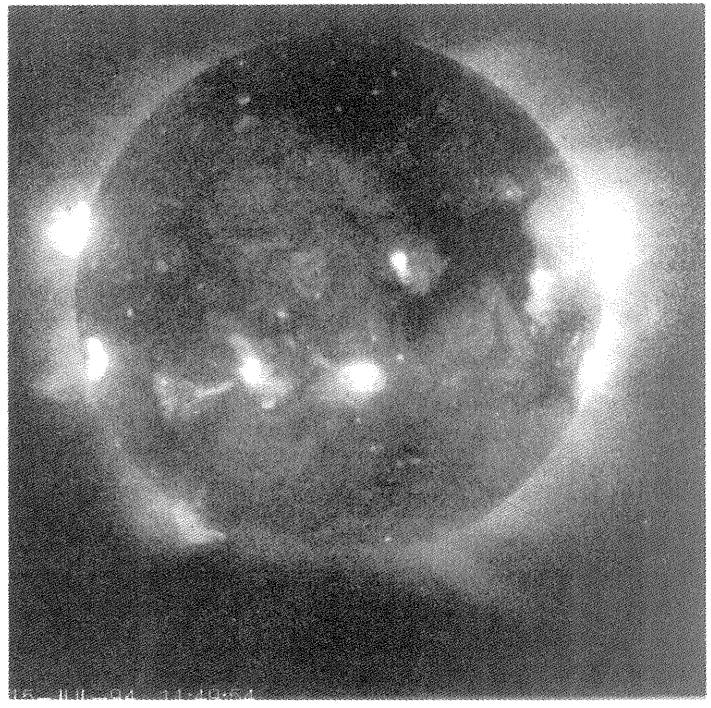
Day 12
12:15:12 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

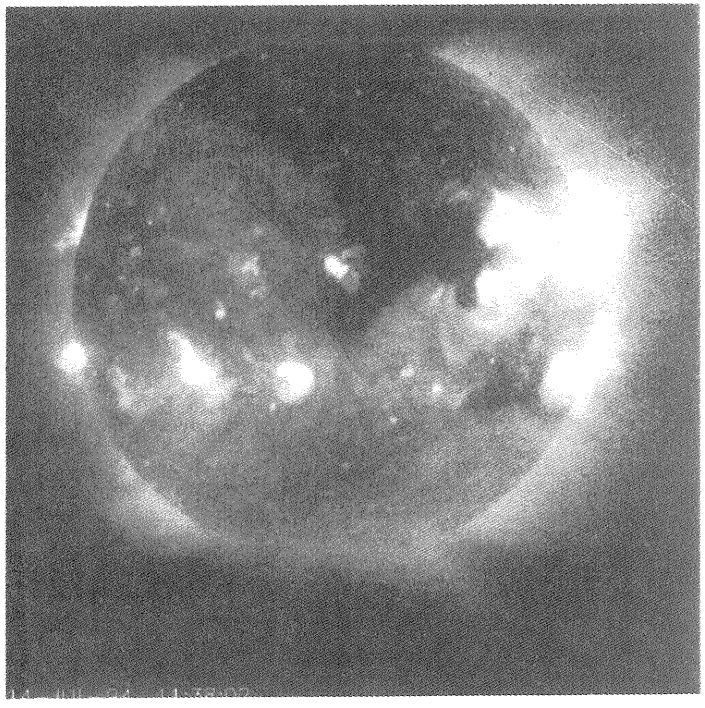
July 1994



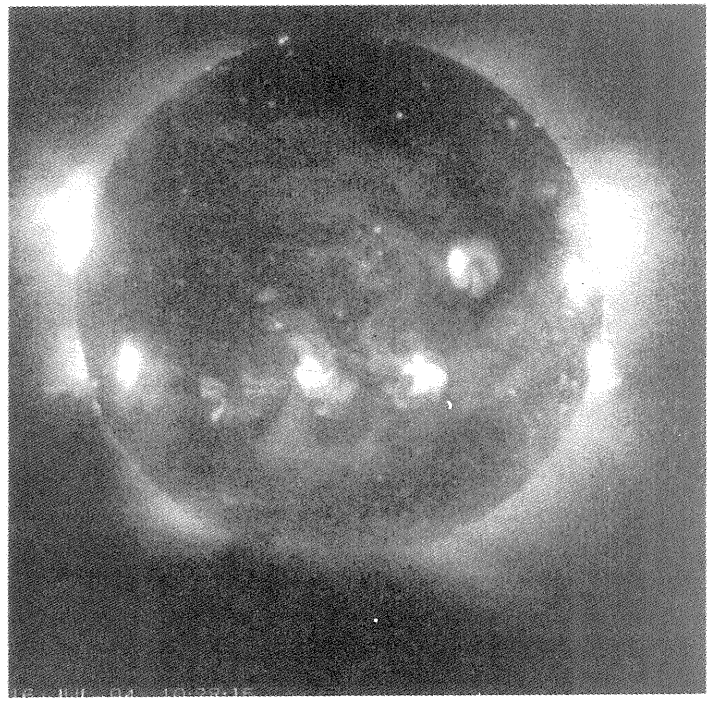
Day 13
12:33:30 UT



Day 15
11:49:54 UT



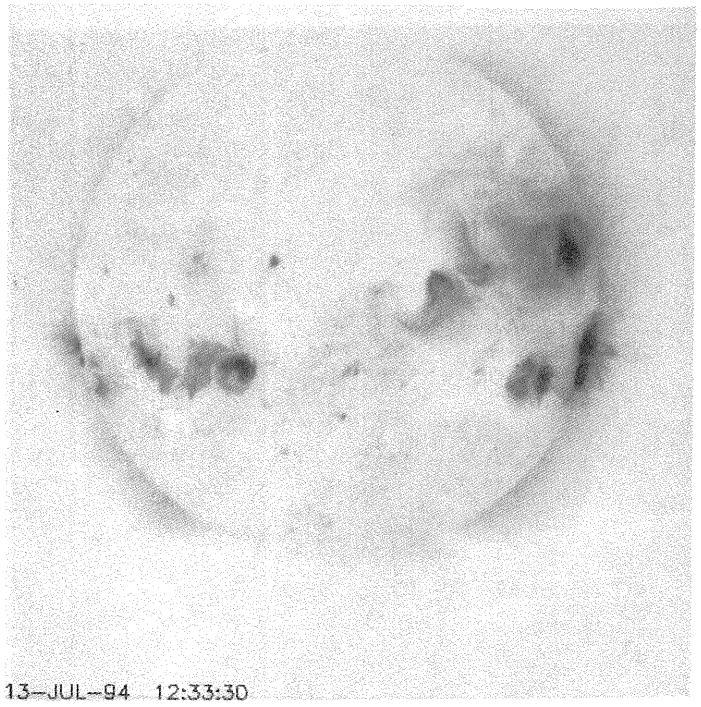
Day 14
11:38:02 UT



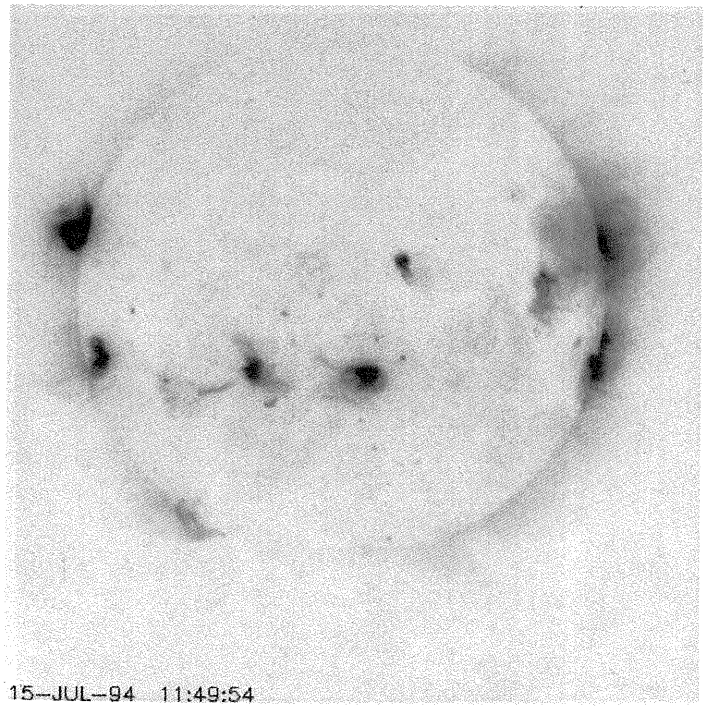
Day 16
10:28:15 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

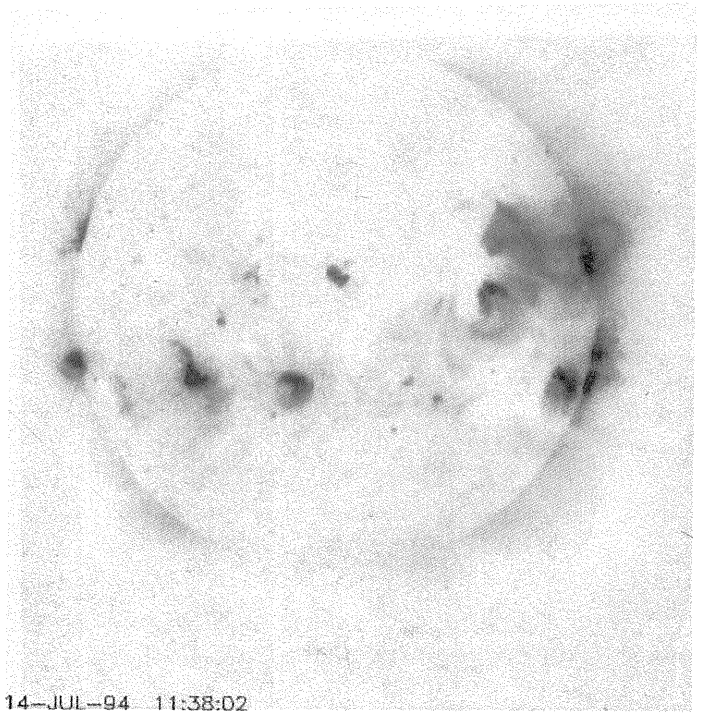
July 1994



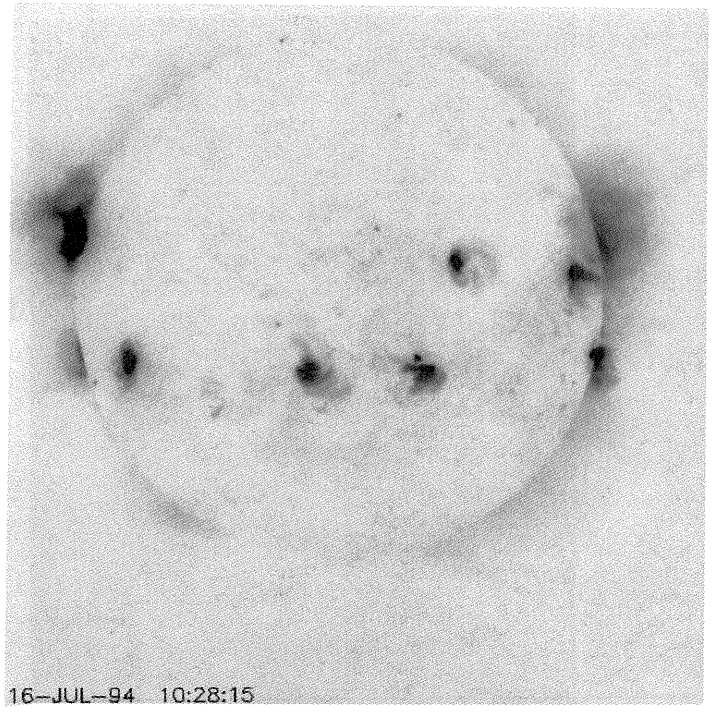
Day 13
12:33:30 UT



Day 15
11:49:54 UT



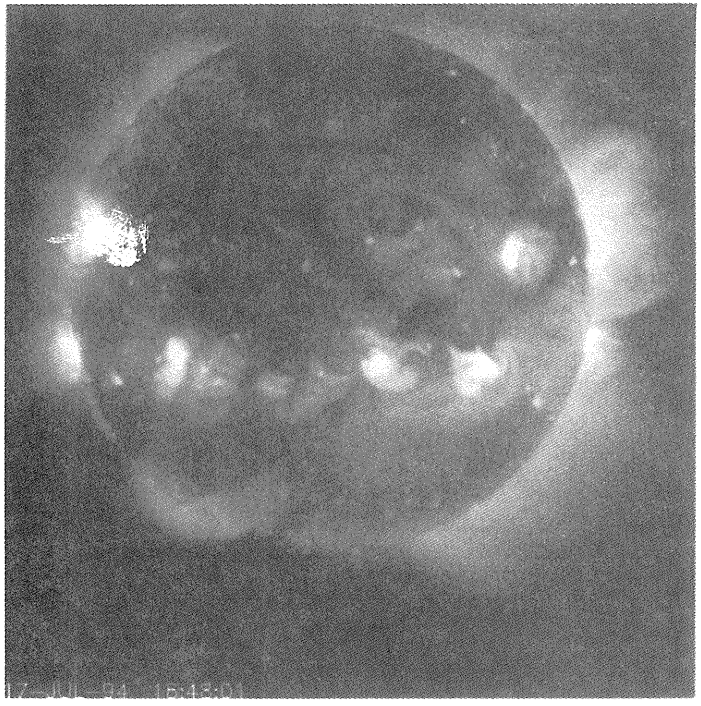
Day 14
11:38:02 UT



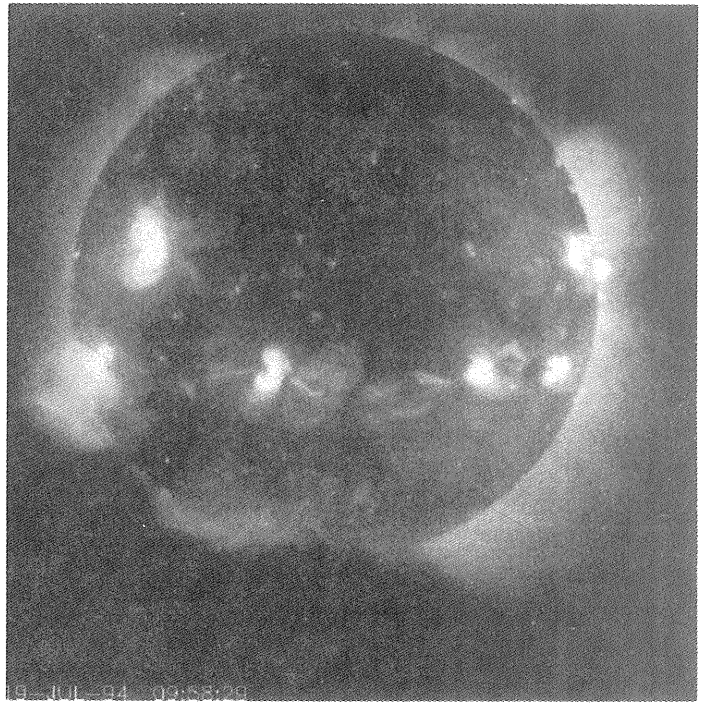
Day 16
10:28:15 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

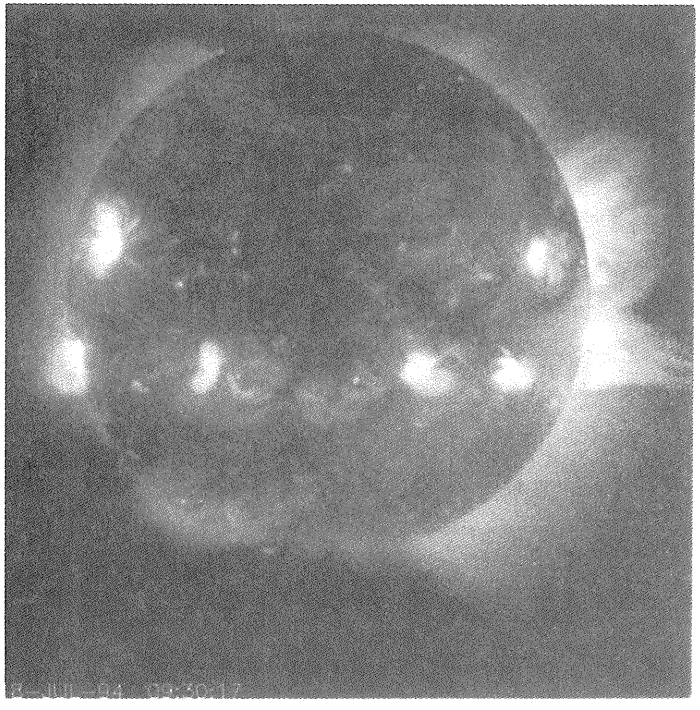
July 1994



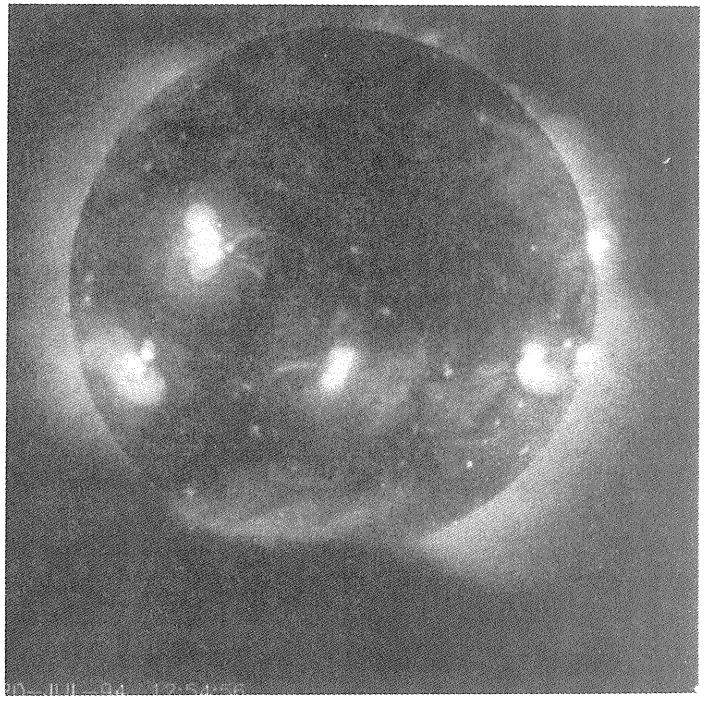
Day 17
16:48:01 UT



Day 19
09:58:29 UT



Day 18
09:30:17 UT

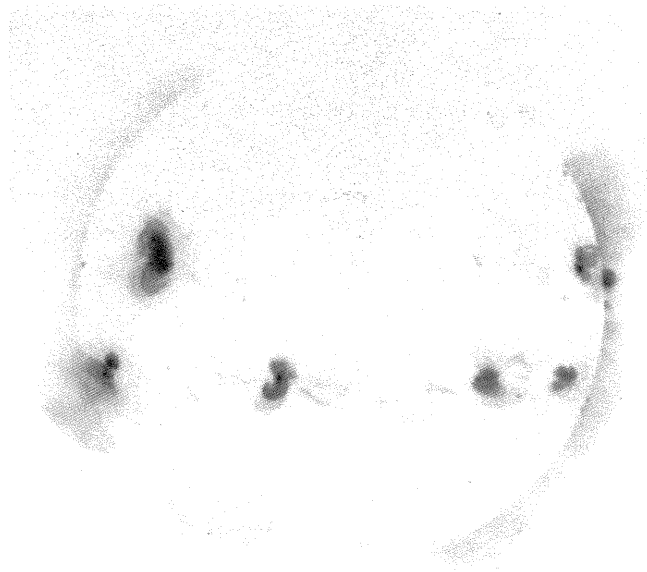


Day 20
12:54:56 UT

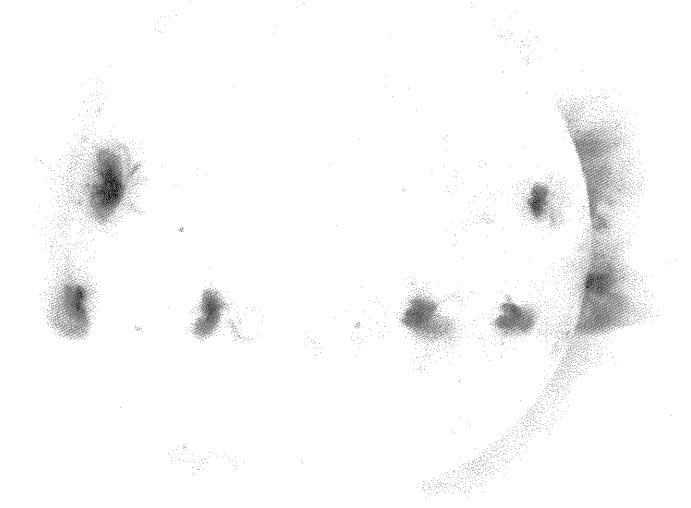
YOHKOH SOFT X-RAY TELESCOPE IMAGES

July 1994

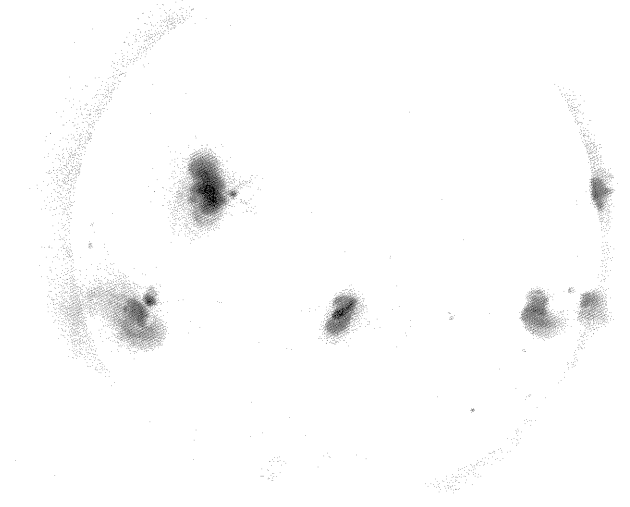
Day 17
16:48:01 UT



Day 19
09:58:29 UT



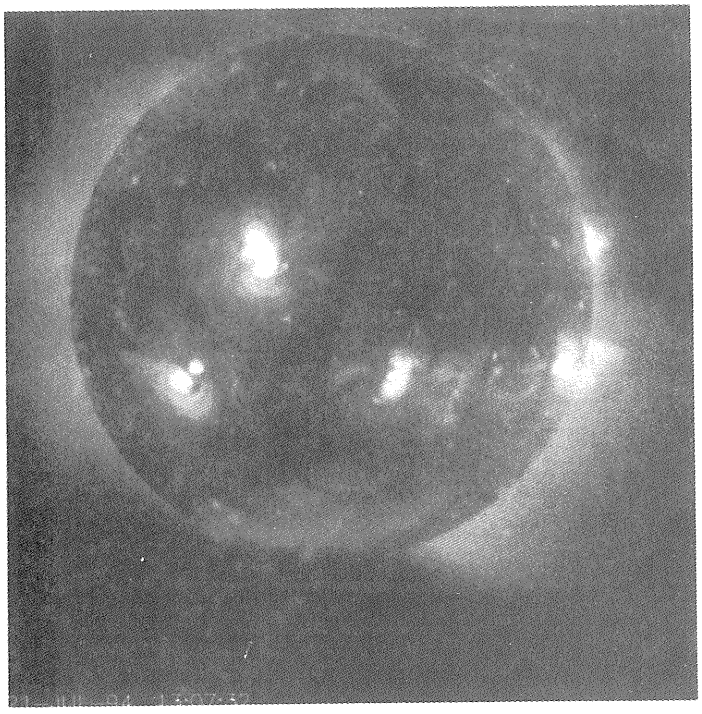
Day 18
09:30:17 UT



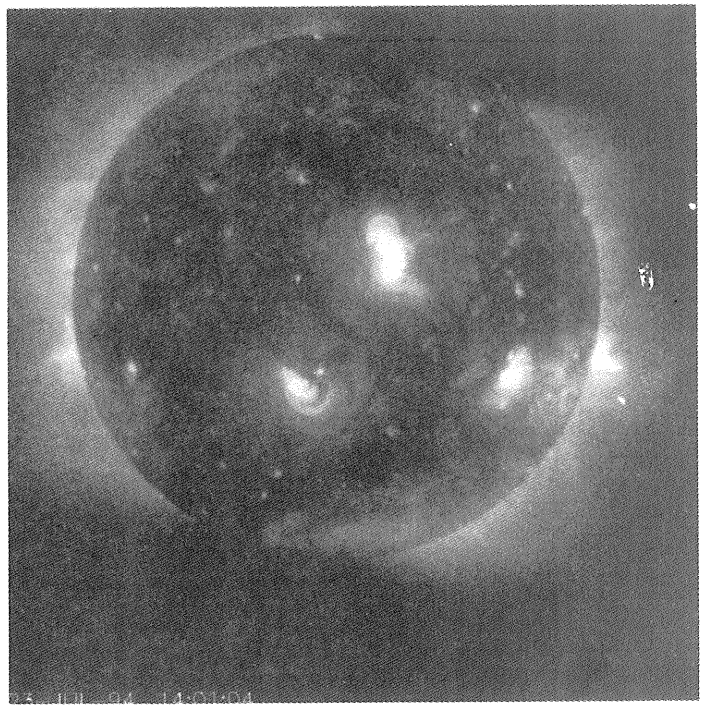
Day 20
12:54:56 UT

YOHKOH SOFT X-RAY TELESCOPE IMAGES

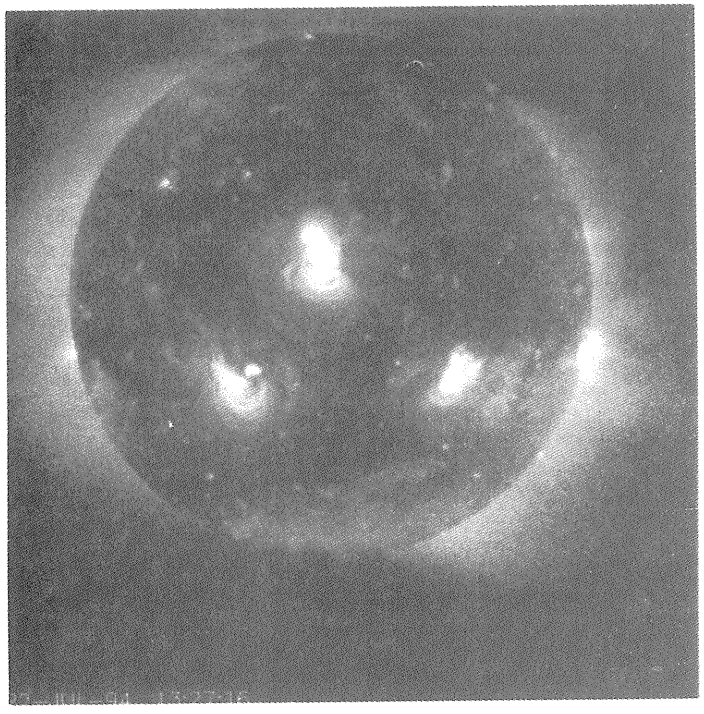
July 1994



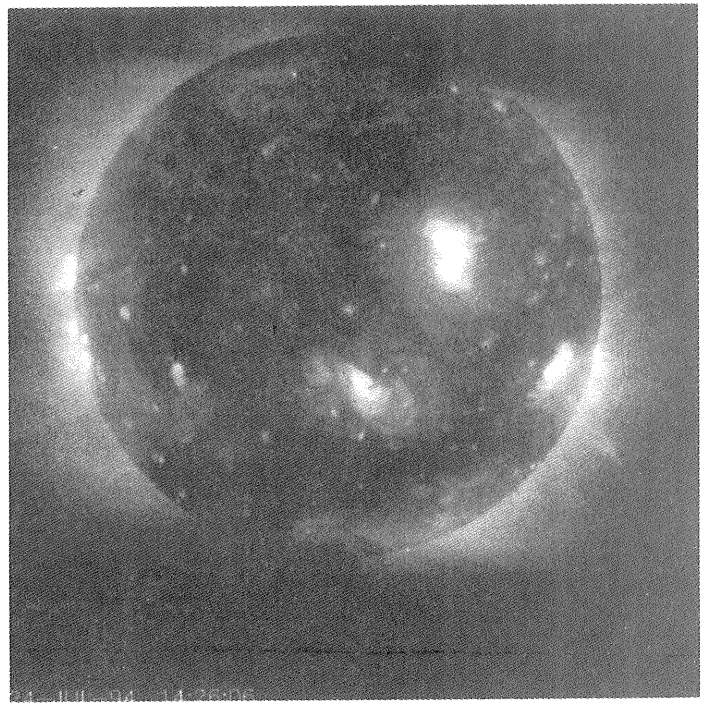
Day 21
13:07:32 UT



Day 23
14:01:04 UT



Day 22
13:27:16 UT

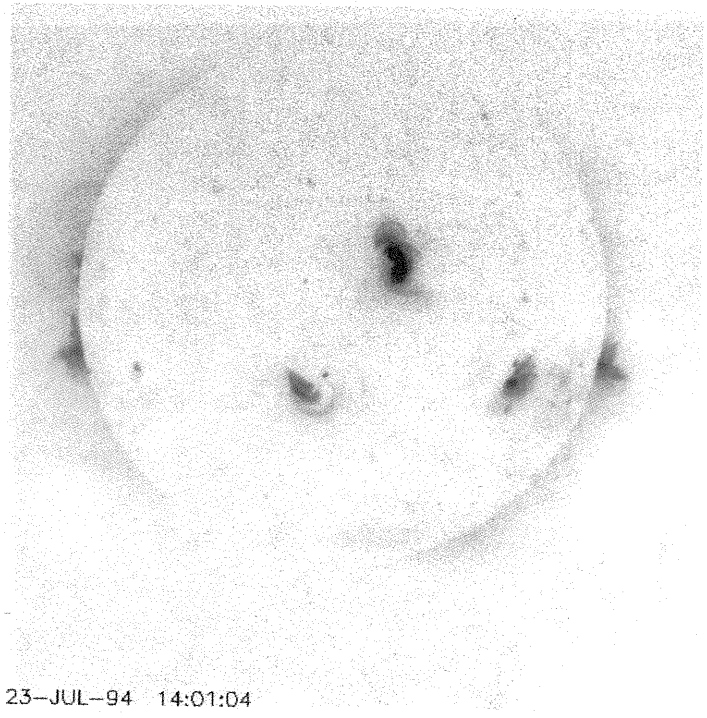


Day 24
14:26:06 UT

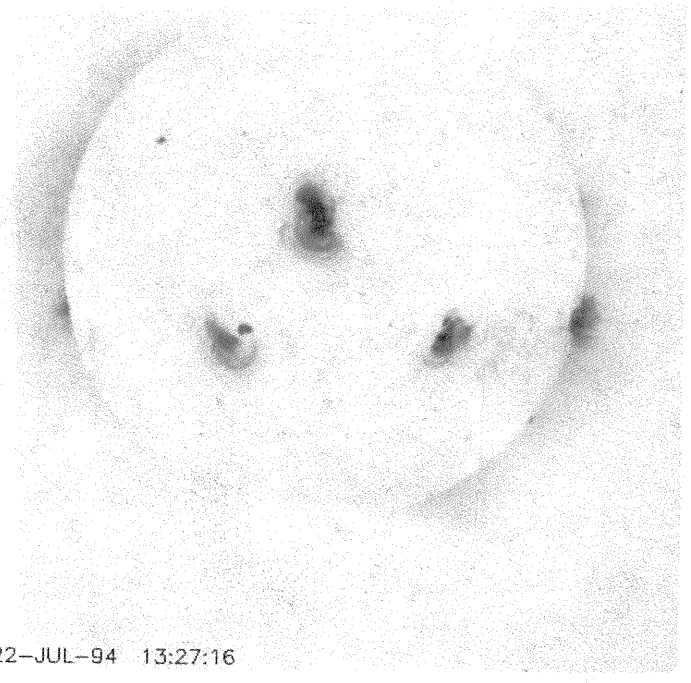
YOHKOH SOFT X-RAY TELESCOPE IMAGES

July 1994

Day 21
13:07:32 UT



Day 23
14:01:04 UT



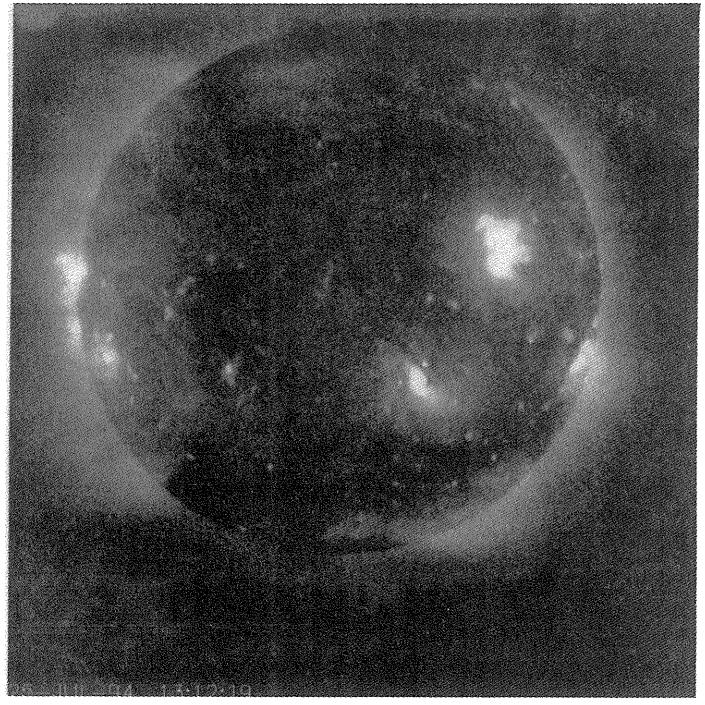
Day 22
13:27:16 UT

Day 24
14:26:06 UT

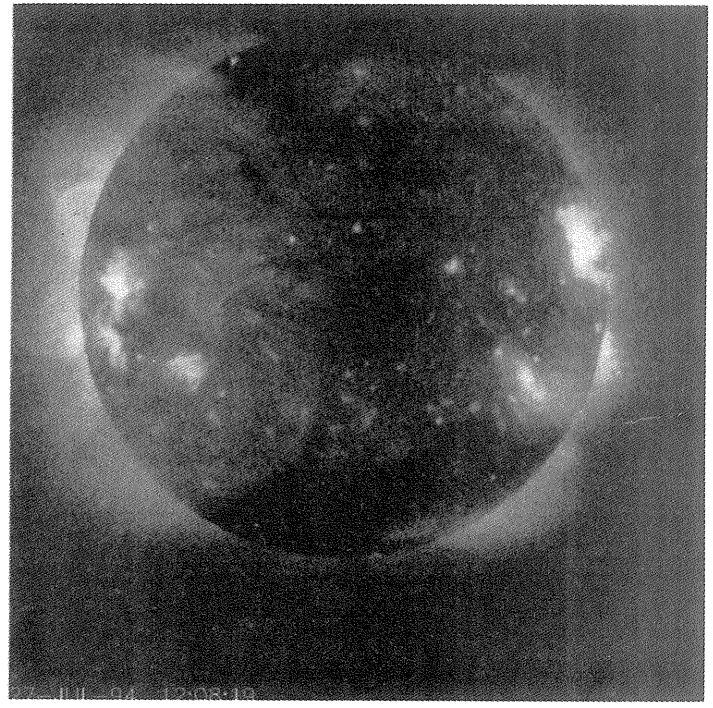
87
Jul 94

YOHKOH SOFT X-RAY TELESCOPE IMAGES

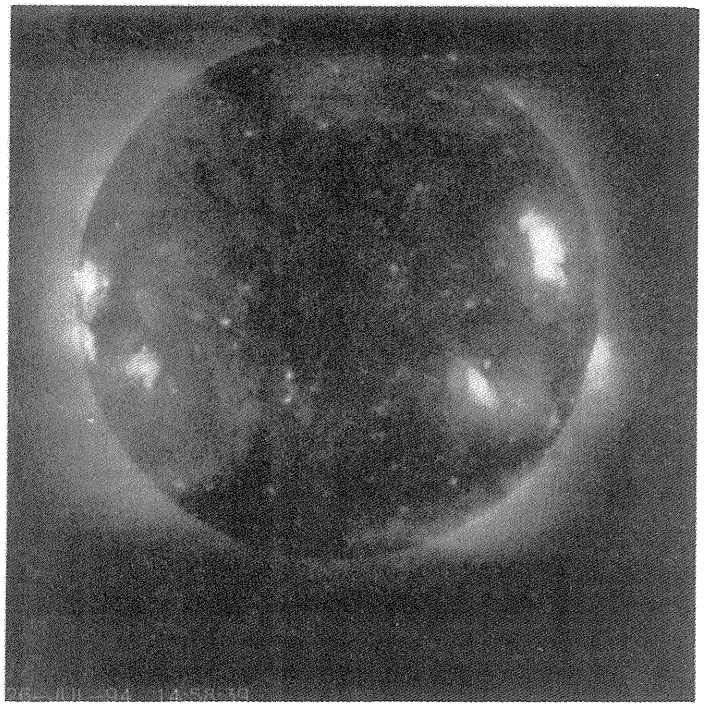
July 1994



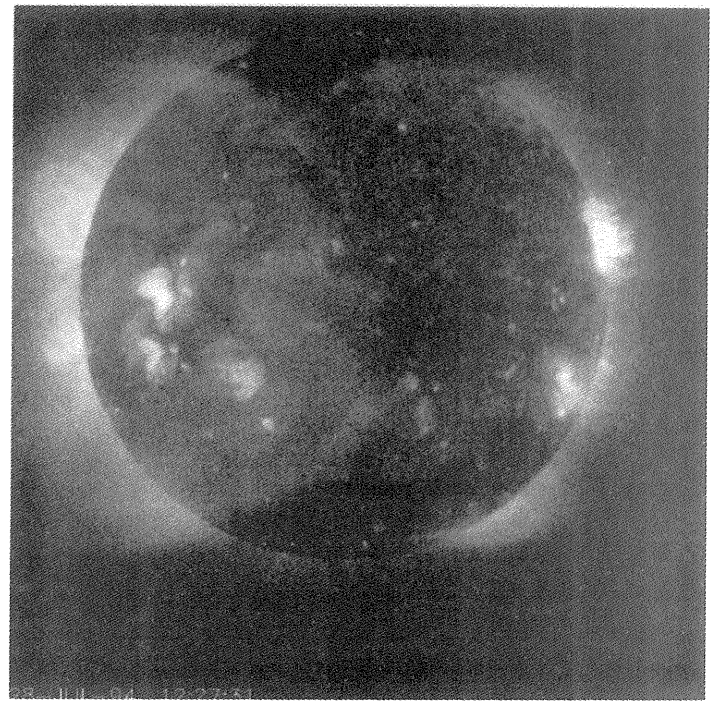
Day 25
13:12:19 UT



Day 27
12:08:19 UT



Day 26
14:58:39 UT

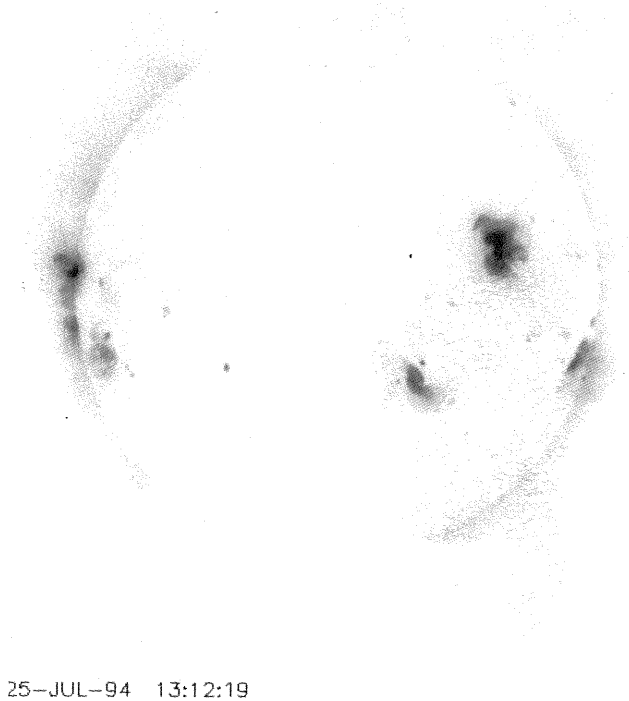


Day 28
12:27:31 UT

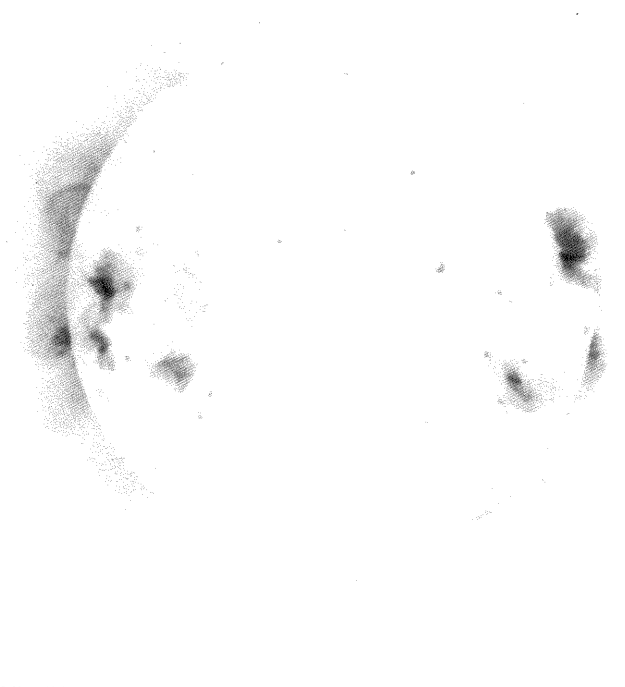
YOHKOH SOFT X-RAY TELESCOPE IMAGES

July 1994

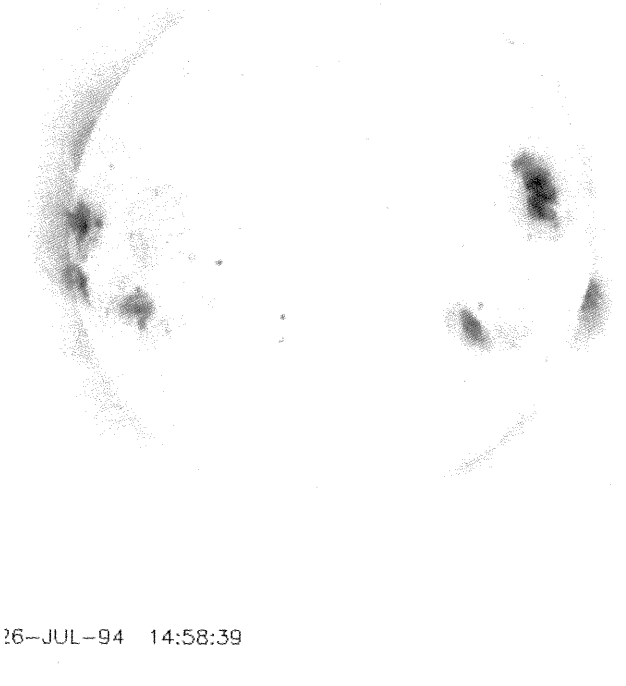
Day 25
13:12:19 UT



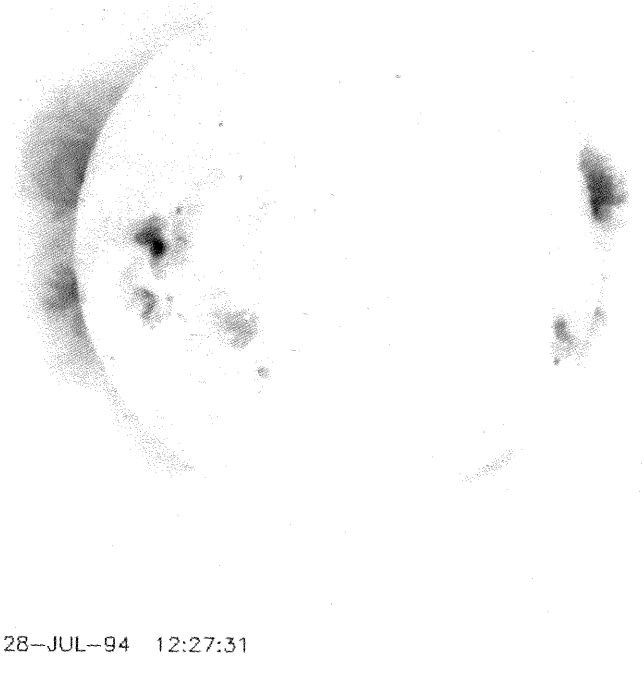
Day 27
12:08:19 UT



Day 26
14:58:39 UT

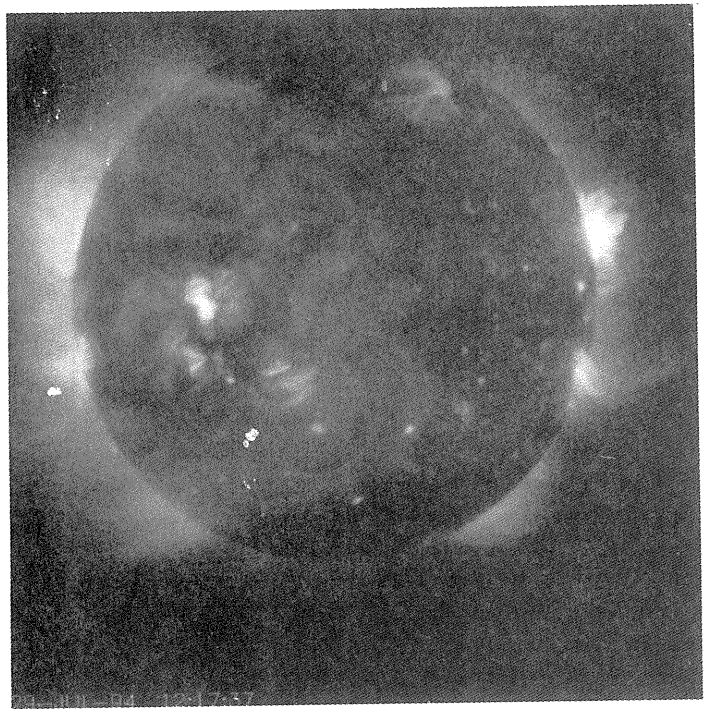


Day 28
12:27:31 UT

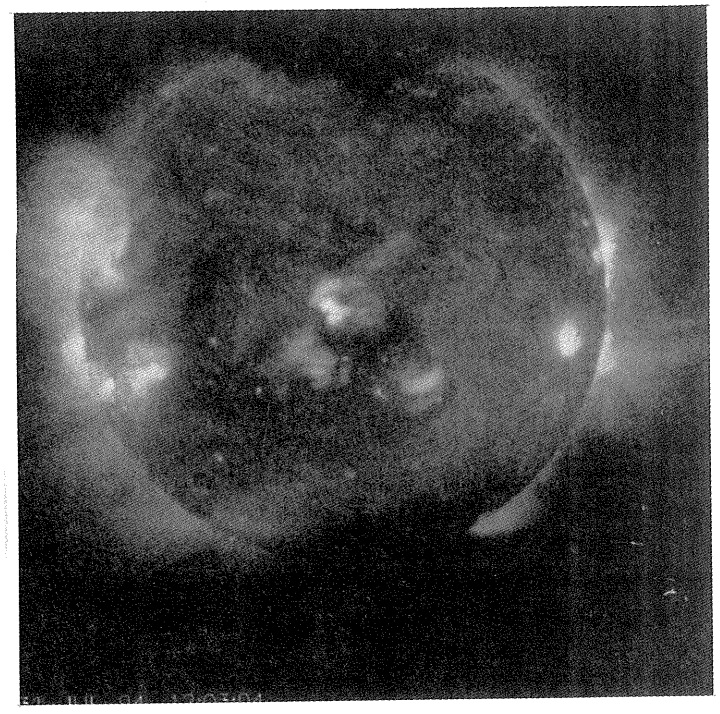


YOHKOH SOFT X-RAY TELESCOPE IMAGES

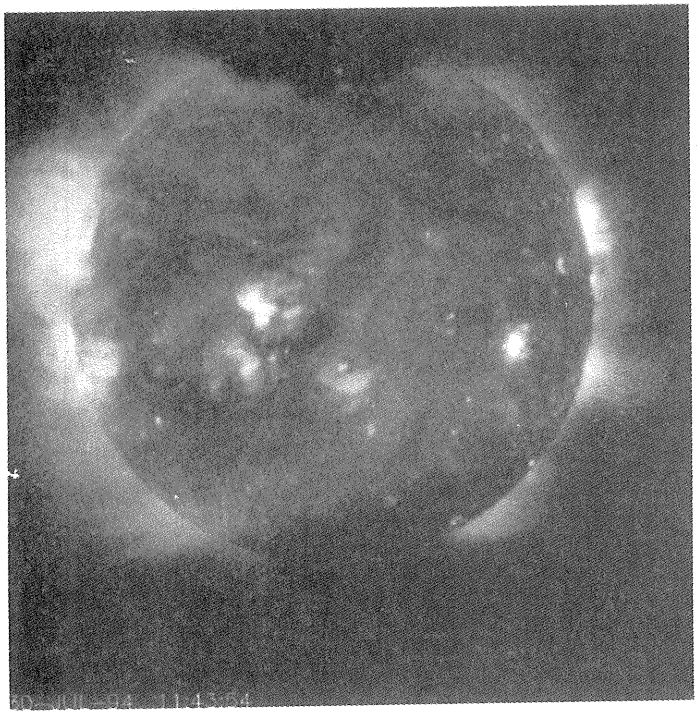
July 1994



Day 29
12:17:37 UT



Day 31
12:03:04 UT

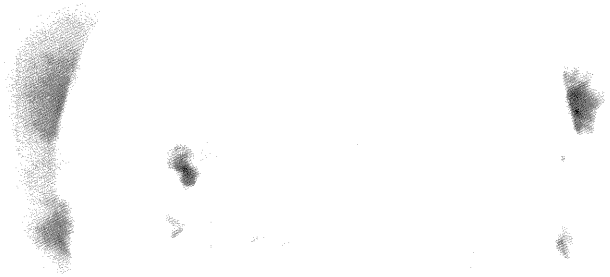


Day 30
11:43:54 UT

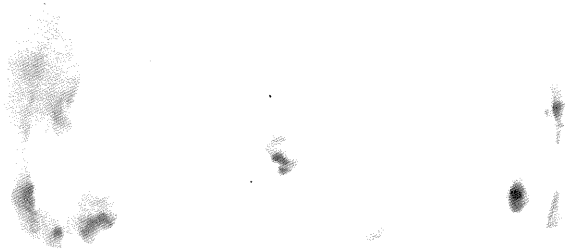
YOHKOH SOFT X-RAY TELESCOPE IMAGES

July 1994

Day 29
12:17:37 UT



Day 31
12:03:04 UT



Day 30
11:43:54 UT

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7742		SVTO	06 27 0520	S08 E78	07 3.1		A	HS	40	3	1	3
7742		RAMY	06 27 1314	S09 E72	07 2.9		A	HA	50	2	2	3
7742	28129	MWIL	06 27 1400	S08 E72	07 3.0	4	(AP)					
7742		HOLL	06 27 1414	S08 E72	07 3.0		A	HS	60	2	2	3
7742		SVTO	06 28 0605	S08 E65	07 3.1		B	DAO	70	3	4	3
7742		RAMY	06 28 1300	S09 E60	07 3.0		B	CAO	60	6	3	3
7742	28129	MWIL	06 28 1415	S08 E60	07 3.1	5	(D)					
7742		HOLL	06 28 1715	S08 E57	07 3.0		B	CAO	110	4	3	3
7742		LEAR	06 29 0130	S10 E55	07 3.2		BD	DAI	180	11	4	3
7742		SVTO	06 29 0805	S09 E50	07 3.1		B	DKO	170	13	6	2
7742		RAMY	06 29 1350	S09 E47	07 3.1		B	DAO	180	10	4	3
7742	28129	MWIL	06 29 1400	S09 E46	07 3.0	5	(G)					
7742		SVTO	06 30 0544	S09 E38	07 3.1		B	DAO	160	16	5	3
7742		RAMY	06 30 1150	S09 E36	07 3.2		BG	CAO	230	18	7	4
7742	28129	MWIL	06 30 1400	S08 E33	07 3.0	6	(BG)					
7742		HOLL	06 30 1733	S06 E32	07 3.1		B	DKI	260	16	5	3
7742		LEAR	07 01 0213	S09 E26	07 3.0		B	DAO	190	20	6	3
7742		SVTO	07 01 0825	S09 E23	07 3.1		B	DAI	210	22	5	3
7742		RAMY	07 01 1140	S09 E22	07 3.1		B	DAI	260	26	7	4
7742	28129	MWIL	07 01 1415	S08 E19	07 3.0	6	(BG)					
7742		HOLL	07 01 2010	S08 E16	07 3.0		B	DAC	220	28	7	3
7742		LEAR	07 02 0045	S09 E15	07 3.1		B	DAC	240	16	8	3
7742		SVTO	07 02 0533	S08 E12	07 3.1		B	DAI	130	24	7	3
7742		RAMY	07 02 1251	S10 E08	07 3.1		B	DAI	170	23	7	3
7742	28129	MWIL	07 02 1400	S08 E06	07 3.0	6	(BG)					
7742		HOLL	07 02 1436	S08 E06	07 3.0		B	DAC	220	27	7	3
7742		LEAR	07 03 0036	S09 E01	07 3.1		B	DAO	60	13	5	3
7742		SVTO	07 03 0620	S10 W02	07 3.1		B	DAI	110	17	6	3
7742		RAMY	07 03 1212	S09 W06	07 3.0		B	DAI	170	22	6	4
7742	28129	MWIL	07 03 1415	S08 W07	07 3.1	5	(D)					
7742		HOLL	07 03 1507	S08 W07	07 3.1		B	DAC	210	17	6	3
7742		LEAR	07 04 0045	S13 W12	07 3.1		B	DAC	120	25	8	3
7742		SVTO	07 04 0545	S09 W15	07 3.1		B	DAC	100	28	8	3
7742		RAMY	07 04 1234	S08 W19	07 3.1		B	DAI	120	16	6	3
7742	28129	MWIL	07 04 1415	S09 W21	07 3.0	5	(BG)					
7742		HOLL	07 04 1600	S08 W20	07 3.2		B	DAI	120	13	6	2
7742		SVTO	07 05 0715	S10 W31	07 3.0		B	DAI	90	9	3	3
7742		RAMY	07 05 1353	S11 W34	07 3.0		B	CAO	100	9	6	3
7742	28129	MWIL	07 05 1400	S09 W34	07 3.0	5	(BP)					
7742		HOLL	07 05 1628	S09 W36	07 3.0		B	DAO	110	6	2	3
7742		LEAR	07 06 0005	S10 W40	07 3.0		B	DAO	90	4	3	3
7742		PALE	07 06 0100	S09 W40	07 3.0		B	DAO	80	5	2	3
7742		SVTO	07 06 0530	S10 W40	07 3.2		B	DSO	100	7	3	3
7742		RAMY	07 06 1253	S09 W47	07 3.0		B	CSO	130	10	5	3
7742	28129	MWIL	07 06 1400	S08 W47	07 3.0	5	(AP)					
7742		PALE	07 06 1800	S10 W48	07 3.1		B	DAO	80	6	3	3
7742		LEAR	07 07 0033	S09 W53	07 3.0		B	DSO	50	3	3	3
7742		SVTO	07 07 0635	S09 W57	07 3.0		B	DAO	20	3	2	3
7742		RAMY	07 07 1252	S09 W60	07 3.0		A	HA	50	3	2	4
7742	28129	MWIL	07 07 1400	S09 W60	07 3.1	5	(AP)					
7742		HOLL	07 07 1450	S09 W60	07 3.1		A	HA	60	2	3	4
7742		LEAR	07 08 0110	S08 W65	07 3.2		A	HA	30	3	2	3
7742		SVTO	07 08 0733	S10 W70	07 3.0		B	CSO	100	2	4	2
7742		RAMY	07 08 1115	S09 W72	07 3.1		B	DSO	60	6	4	4
7742	28129	MWIL	07 08 1400	S09 W74	07 3.0	4	(AP)					
7742		HOLL	07 08 1605	S10 W75	07 3.0		B	BXO	30	2	4	3
7745		LEAR	07 02 0045	N08 E27	07 4.0		B	BXO	10	2	3	3
7745		SVTO	07 02 0533	N09 E24	07 4.0		B	CRO	10	3	3	3
7745		RAMY	07 02 1251	N09 E21	07 4.1		B	CRO	10	3	3	3
7745	28133	MWIL	07 02 1400	N08 E20	07 4.1	4	(B)					
7745		HOLL	07 02 1436	N09 E18	07 3.9		B	BXO	10	2	4	3
7745		LEAR	07 03 0036	N09 E15	07 4.1		A	AX		1	1	3
7745		SVTO	07 03 0620	N09 E11	07 4.1		B	BXO	10	5	3	3
7745		RAMY	07 03 1212	N08 E05	07 3.9		A	AX		1		4
7745	28133	MWIL	07 03 1415	N09 E06	07 4.0	4	(B)					
7745		LEAR	07 04 0045	N06 W01	07 3.9		B	BXO	10	3	3	3
7745		SVTO	07 04 0545	N09 W03	07 4.0		B	BXO	10	3	3	3
7745		RAMY	07 04 1234	N09 W07	07 4.0		B	BXO		2	3	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7745	28133	MWIL	07 04 1415	N08 W07	07 4.1	4	(B)					
7743		SVTO	06 28 0605	S09 E79	07 4.2		A	AX		1	1	3
7743		RAMY	06 28 1300	S10 E74	07 4.1		A	AX	10	1	1	3
7743	28130	MWIL	06 28 1415	S09 E72	07 4.0	4	(AP)					
7743		HOLL	06 28 1715	S09 E69	07 3.9		A	AX	10	1	1	3
7743		LEAR	06 29 0130	S11 E68	07 4.2		A	HR	50	1	1	3
7743		SVTO	06 29 0805	S09 E62	07 4.0		A	HR		1	1	2
7743		RAMY	06 29 1350	S10 E59	07 4.0		A	HR	10	1	1	3
7743	28130	MWIL	06 29 1400	S10 E58	07 3.9	5	(AP)					
7743		SVTO	06 30 0544	S11 E50	07 4.0		A	HR		2	1	3
7743		RAMY	06 30 1150	S15 E48	07 4.1		A	AX	10	3	1	4
7743	28130	MWIL	06 30 1400	S11 E45	07 4.0	5	(BP)					
7743		HOLL	06 30 1733	S13 E44	07 4.0		A	AX	20	2	1	3
7743		LEAR	07 01 0213	S11 E38	07 3.9		A	AX	10	1	1	3
7743		SVTO	07 01 0825	S10 E36	07 4.0		A	HR		1		3
7743		RAMY	07 01 1140	S10 E34	07 4.0		A	AX	10	3	1	4
7743	28130	MWIL	07 01 1415	S11 E32	07 4.0	4	(AP)					
7743		HOLL	07 01 2010	S09 E28	07 3.9		A	AX		1		3
7743		LEAR	07 02 0045	S10 E27	07 4.0		A	AX	10	1	1	3
7743		SVTO	07 02 0533	S11 E24	07 4.0		A	AX		2	1	3
7743		RAMY	07 02 1251	S13 E17	07 3.8		A	AX		1		3
7743	28130	MWIL	07 02 1400	S12 E17	07 3.9	4	(B)					
7743		SVTO	07 03 0620	S10 E10	07 4.0		A	AX		1		3
7743	28130	MWIL	07 03 1415	S11 E06	07 4.0	4	(B)					
7743	28130	MWIL	07 04 1415	S13 W02	07 4.4	4	(B)					
7743A	28134	MWIL	07 02 1400	N08 E45	07 5.9	3	(AP)					
7743B		RAMY	07 07 1252	S03 W18	07 6.2		B	BXO		2	2	4
7743B	28137	MWIL	07 07 1400	S02 W18	07 6.2	4	(AP)					
7743B		HOLL	07 07 1450	S02 W17	07 6.3		A	AX	10	1		4
7750		SVTO	07 10 0445	S17 W30	07 7.9		B	BXO		2	2	3
7750		RAMY	07 10 1221	S16 W35	07 7.8		B	BXO	20	3	3	3
7750	28139	MWIL	07 10 1400	S16 W36	07 7.8	4	(B)					
7750		HOLL	07 10 1655	S16 W38	07 7.8		B	DRO	40	3	4	3
7750		PALE	07 10 1728	S15 W37	07 7.9		B	BXO	20	5	3	3
7750		LEAR	07 11 0245	S16 W45	07 7.7		B	DAO	70	1	6	3
7750		SVTO	07 11 0725	S17 W47	07 7.7		B	DSO	70	8	5	3
7750		RAMY	07 11 1250	S15 W48	07 7.9		B	DAO	70	4	5	2
7750	28139	MWIL	07 11 1400	S16 W49	07 7.9	5	(B)					
7750		HOLL	07 11 1625	S17 W51	07 7.8		B	DRO	170	6	5	3
7750		PALE	07 11 1748	S17 W53	07 7.7		B	DAO	70	5	5	3
7750		LEAR	07 12 0245	S15 W57	07 7.8		B	CAO	40	5	5	3
7750		SVTO	07 12 0810	S16 W60	07 7.8		B	DSO	100	6	10	3
7750		RAMY	07 12 1257	S16 W62	07 7.8		B	DAO	80	5	7	3
7750	28139	MWIL	07 12 1400	S16 W62	07 7.9	5	(B)					
7750		HOLL	07 12 1443	S16 W64	07 7.7		B	DSO	70	6	6	3
7750		PALE	07 12 1913	S17 W65	07 7.9		B	DSO	100	3	5	2
7750		LEAR	07 13 0045	S15 W69	07 7.8		B	CAO	60	4	6	3
7750		SVTO	07 13 0618	S16 W73	07 7.7		B	CRO	50	4	6	3
7750		RAMY	07 13 1250	S15 W75	07 7.8		B	BXO	10	2	8	4
7750	28139	MWIL	07 13 1400	S16 W78	07 7.7	4	(B)					
7750		HOLL	07 13 1536	S16 W80	07 7.6		A	AX	30	1	1	4
7749		RAMY	07 07 1252	S09 E09	07 8.2		B	BXO	10	6	3	4
7749	28138	MWIL	07 07 1400	S09 E09	07 8.2	4	(B)					
7749		HOLL	07 07 1450	S09 E09	07 8.3		B	BXO	20	6	4	4
7749		LEAR	07 08 0110	S09 E03	07 8.3		B	CAO	30	6	5	3
7749		SVTO	07 08 0733	S08 W02	07 8.2		B	DAO	80	8	6	2
7749		RAMY	07 08 1115	S09 W03	07 8.2		B	DAO	80	17	6	4
7749	28138	MWIL	07 08 1400	S08 W05	07 8.2	5	(B)					
7749		HOLL	07 08 1605	S08 W07	07 8.1		B	CRO	40	14	7	3
7749		SVTO	07 09 0650	S08 W17	07 8.0		B	DAO	40	5	6	2
7749		RAMY	07 09 1317	S07 W21	07 8.0		B	CAO	50	10	6	2
7749	28138	MWIL	07 09 1400	S08 W20	07 8.1	5	(BP)					
7749		HOLL	07 09 1503	S08 W21	07 8.0		B	CAO	70	8	6	3
7749		PALE	07 09 1915	S09 W21	07 8.2		B	CSO	40	17	7	4

SUNSPOT GROUPS
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JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7749		LEAR	07 10 0100	S08 W26	07 8.1		B	CSO	80	12	9	3
7749		SVTO	07 10 0445	S09 W28	07 8.1		B	DAO	40	13	8	3
7749		RAMY	07 10 1221	S08 W33	07 8.0		B	DAI	60	12	8	3
7749	28138	MWIL	07 10 1400	S08 W34	07 8.0	5	(B)					
7749		HOLL	07 10 1655	S08 W35	07 8.1		B	CAI	60	14	7	3
7749		PALE	07 10 1728	S07 W36	07 8.0		B	DAO	60	11	8	3
7749		LEAR	07 11 0245	S08 W43	07 7.9		B	DAO	120	5	8	3
7749		SVTO	07 11 0725	S09 W46	07 7.8		B	DAO	80	8	8	3
7749		RAMY	07 11 1250	S07 W47	07 8.0		B	DAO	50	6	6	2
7749	28138	MWIL	07 11 1400	S07 W48	07 8.0	5	(B)					
7749		HOLL	07 11 1625	S09 W50	07 7.9		B	DRO	100	10	8	3
7749		PALE	07 11 1748	S09 W50	07 8.0		B	DAO	60	6	7	3
7749		LEAR	07 12 0245	S08 W58	07 7.8		B	CSO	50	6	8	3
7749		SVTO	07 12 0810	S08 W59	07 7.9		B	CAO	90	3	8	3
7749		RAMY	07 12 1257	S08 W65	07 7.7		A	HA	40	2	2	3
7749	28138	MWIL	07 12 1400	S08 W65	07 7.7	5	(AP)					
7749		HOLL	07 12 1443	S08 W67	07 7.6		A	HS	50	1	1	3
7749		PALE	07 12 1913	S10 W66	07 7.8		A	AX	20	1	1	2
7749		LEAR	07 13 0045	S08 W71	07 7.7		A	HSO	10	1	1	3
7749		SVTO	07 13 0618	S08 W75	07 7.6		A	HS	30	1	2	3
7749		RAMY	07 13 1250	S07 W75	07 7.9		A	AX	10	1		4
7749	28138	MWIL	07 13 1400	S07 W79	07 7.7	4	(AP)					
7749		HOLL	07 13 1536	S09 W78	07 7.8		A	AX	30	1	1	4
7749		LEAR	07 14 0110	S08 W81	07 8.0		A	AX	10	1	1	3
7746		SVTO	07 02 0533	N11 E85	07 8.6		A	HS	60	1	4	3
7746		RAMY	07 02 1251	N10 E83	07 8.8		A	HS	90	1	2	3
7746	28135	MWIL	07 02 1400	N11 E80	07 8.6	5	(AP)					
7746		HOLL	07 02 1436	N12 E78	07 8.5		A	HS	120	1	2	3
7746		LEAR	07 03 0036	N10 E75	07 8.7		A	HS	120	1	2	3
7746		SVTO	07 03 0620	N11 E72	07 8.7		A	HS	60	1	2	3
7746		RAMY	07 03 1212	N10 E68	07 8.6		A	HS	120	1	2	4
7746	28135	MWIL	07 03 1415	N12 E67	07 8.6	5	(BP)					
7746		HOLL	07 03 1507	N12 E67	07 8.7		A	HS	140	1	2	3
7746		LEAR	07 04 0045	N09 E60	07 8.5		B	CSO	160	2	2	3
7746		SVTO	07 04 0545	N12 E58	07 8.6		B	CHO	170	5	5	3
7746		RAMY	07 04 1234	N10 E55	07 8.6		A	HS	170	3	3	3
7746	28135	MWIL	07 04 1415	N11 E54	07 8.6	6	(AP)					
7746		HOLL	07 04 1600	N10 E52	07 8.6		A	HS	180	2	2	2
7746		SVTO	07 05 0715	N11 E43	07 8.5		B	CHO	190	6	3	3
7746		RAMY	07 05 1353	N09 E41	07 8.6		A	HA	180	11	4	3
7746	28135	MWIL	07 05 1400	N11 E41	07 8.7	5	(BP)					
7746		HOLL	07 05 1628	N10 E39	07 8.6		B	CSO	210	13	4	3
7746		LEAR	07 06 0005	N10 E33	07 8.5		B	CAO	210	6	4	3
7746		PALE	07 06 0100	N10 E34	07 8.6		A	HS	130	6	2	3
7746		SVTO	07 06 0530	N10 E33	07 8.7		B	DKO	200	11	6	3
7746		RAMY	07 06 1253	N10 E29	07 8.7		B	CAO	230	18	9	3
7746	28135	MWIL	07 06 1400	N11 E28	07 8.7	5	(BG)					
7746		LEAR	07 07 0033	N10 E22	07 8.7		B	DAO	100	13	5	3
7746		SVTO	07 07 0635	N11 E19	07 8.7		B	DHO	160	16	5	3
7746		RAMY	07 07 1252	N10 E16	07 8.7		BG	CAI	190	30	8	4
7746	28135	MWIL	07 07 1400	N11 E15	07 8.7	5	(G)					
7746		HOLL	07 07 1450	N12 E15	07 8.7		B	CSI	180	16	6	4
7746		LEAR	07 08 0110	N11 E09	07 8.7		B	CAI	140	14	7	3
7746		SVTO	07 08 0733	N11 E04	07 8.6		B	DSO	130	12	5	2
7746		RAMY	07 08 1115	N10 E03	07 8.7		B	CAI	120	13	5	4
7746	28135	MWIL	07 08 1400	N11 E01	07 8.6	5	(BG)					
7746		HOLL	07 08 1605	N11 E00	07 8.7		B	CAO	120	13	5	3
7746		SVTO	07 09 0650	N11 W08	07 8.7		B	DAO	110	11	7	2
7746		RAMY	07 09 1317	N12 W12	07 8.6		B	CAI	140	15	6	2
7746	28135	MWIL	07 09 1400	N11 W12	07 8.7	5	(D)					
7746		HOLL	07 09 1503	N12 W14	07 8.6		B	DAI	180	16	8	3
7746		PALE	07 09 1915	N11 W12	07 8.9		B	CAO	100	20	9	4
7746		LEAR	07 10 0100	N11 W19	07 8.6		B	DAI	170	9	6	3
7746		SVTO	07 10 0445	N12 W19	07 8.8		B	EAI	110	13	12	3
7746		RAMY	07 10 1221	N12 W25	07 8.6		B	DAI	130	12	6	3
7746	28135	MWIL	07 10 1400	N11 W26	07 8.6	5	(D)					
7746		HOLL	07 10 1655	N11 W27	07 8.7		B	DAI	160	15	6	3
7746		PALE	07 10 1728	N12 W27	07 8.7		B	DAO	90	13	6	3

S U N S P O T G R O U P S
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JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo	Day	(UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7746		LEAR	07	11	0245	N12	W33	07	8.6		B	DAI	190	15	7	3
7746		SVTO	07	11	0725	N11	W37	07	8.5		B	DSI	110	18	7	3
7746		RAMY	07	11	1250	N12	W39	07	8.6		B	DAI	140	16	6	2
7746	28135	MWIL	07	11	1400	N12	W38	07	8.7	5	(D)					
7746		HOLL	07	11	1625	N11	W41	07	8.6		BD	DAC	140	21	7	3
7746		PALE	07	11	1748	N11	W42	07	8.6		B	DAO	120	17	6	3
7746		LEAR	07	12	0245	N11	W47	07	8.6		BD	DAI	1300	9	8	3
7746		SVTO	07	12	0810	N11	W49	07	8.6		B	DAO	100	9	4	3
7746		RAMY	07	12	1257	N11	W51	07	8.7		BD	DAI	110	8	4	3
7746	28135	MWIL	07	12	1400	N11	W51	07	8.7	5	(DB)					
7746		HOLL	07	12	1443	N11	W53	07	8.6		BD	DSO	190	8	7	3
7746		PALE	07	12	1913	N09	W53	07	8.8		B	DAO	100	4	3	2
7746		LEAR	07	13	0045	N11	W58	07	8.7		BD	DAI	170	6	5	3
7746		SVTO	07	13	0618	N11	W61	07	8.7		B	CRO	40	6	4	3
7746		RAMY	07	13	1250	N13	W65	07	8.6		B	CAO	70	7	4	4
7746	28135	MWIL	07	13	1400	N13	W65	07	8.7	5	(BG)					
7746		HOLL	07	13	1536	N12	W65	07	8.7		B	CAO	60	4	7	4
7746		LEAR	07	14	0110	N12	W71	07	8.7		B	CAO	80	3	4	3
7746		SVTO	07	14	0655	N10	W75	07	8.6		A	HR	30	1	1	3
7746		RAMY	07	14	1221	N12	W75	07	8.9		A	HA	30	1	2	3
7746	28135	MWIL	07	14	1400	N12	W78	07	8.7	5	(AP)					
7746		HOLL	07	14	1534	N09	W79	07	8.7		A	HS	30	2	1	3
7746		PALE	07	14	1920	N10	W80	07	8.8		A	HS	40	1	1	3
7747		RAMY	07	06	1253	S16	E40	07	9.6		A	AX	10	3	2	3
7747	28136	MWIL	07	06	1400	S15	E39	07	9.5	4	(B)					
7747		PALE	07	06	1800	S17	E37	07	9.6		A	AX	10	2	2	3
7747		LEAR	07	07	0033	S16	E33	07	9.5		A	AX		1	1	3
7747		SVTO	07	07	0635	S14	E30	07	9.5		B	CAO	30	6	4	3
7747		RAMY	07	07	1252	S16	E27	07	9.6		BG	DAO	40	13	5	4
7747	28136	MWIL	07	07	1400	S15	E25	07	9.5	5	(B)					
7747		HOLL	07	07	1450	S14	E26	07	9.6		B	DXI	40	14	7	4
7747		LEAR	07	08	0110	S15	E21	07	9.6		B	DAO	90	11	6	3
7747		SVTO	07	08	0733	S14	E16	07	9.5		B	DSO	90	11	8	2
7747		RAMY	07	08	1115	S15	E15	07	9.6		B	DSI	140	16	8	4
7747	28136	MWIL	07	08	1400	S15	E12	07	9.5	5	(B)					
7747		HOLL	07	08	1605	S15	E12	07	9.6		B	CSI	70	20	8	3
7747		SVTO	07	09	0650	S15	E03	07	9.5		B	DSO	70	17	9	2
7747		RAMY	07	09	1317	S15	W02	07	9.4		B	DAI	80	15	10	2
7747	28136	MWIL	07	09	1400	S15	W06	07	9.1	5	(BP)					
7747		HOLL	07	09	1503	S16	W03	07	9.4		B	CAO	20	11	9	3
7747		PALE	07	09	1915	S15	W03	07	9.6		B	CSO	50	16	10	4
7747		LEAR	07	10	0100	S15	W08	07	9.4		B	CSO	50	9	8	3
7747		SVTO	07	10	0445	S16	W09	07	9.5		B	CSO	30	11	9	3
7747		RAMY	07	10	1221	S15	W17	07	9.2		B	CSO	50	7	3	3
7747	28136	MWIL	07	10	1400	S16	W18	07	9.2	5	(BP)					
7747		HOLL	07	10	1655	S16	W18	07	9.3		B	CSO	60	5	8	3
7747		PALE	07	10	1728	S14	W17	07	9.4		B	CSO	30	6	6	3
7747		LEAR	07	11	0245	S16	W26	07	9.1		B	CAO	30	2	2	3
7747		SVTO	07	11	0725	S16	W29	07	9.1		A	HS	20	2	2	3
7747		RAMY	07	11	1250	S14	W32	07	9.1		A	HA	20	3	2	2
7747	28136	MWIL	07	11	1400	S15	W33	07	9.1	5	(AP)					
7747		HOLL	07	11	1625	S16	W33	07	9.2		A	HR	40	4	2	3
7747		PALE	07	11	1748	S16	W36	07	9.0		A	HS	20	3	2	3
7747		LEAR	07	12	0245	S16	W41	07	9.0		A	HS	40	1	2	3
7747		SVTO	07	12	0810	S14	W37	07	9.5		B	CSO	20	2	13	3
7747		RAMY	07	12	1257	S15	W46	07	9.0		A	HA	20	1	1	3
7747	28136	MWIL	07	12	1400	S15	W46	07	9.1	5	(AP)					
7747		HOLL	07	12	1443	S16	W47	07	9.0		A	HR	30	1	1	3
7747		PALE	07	12	1913	S16	W48	07	9.2		A	HS	20	1	1	2
7747		LEAR	07	13	0045	S15	W52	07	9.1		A	HRO	10	1	1	3
7747		SVTO	07	13	0618	S16	W55	07	9.1		A	HA	20	1	2	3
7747		RAMY	07	13	1250	S15	W59	07	9.1		A	AX	10	2	1	4
7747	28136	MWIL	07	13	1400	S15	W59	07	9.1	4	(AP)					
7747		HOLL	07	13	1536	S18	W61	07	9.0		A	AX	20	1	1	4
7747		SVTO	07	14	0655	S13	W68	07	9.1		B	BXO		2	1	3
7747		RAMY	07	14	1221	S12	W72	07	9.1		B	BXO	10	2	3	3
7747		HOLL	07	14	1534	S14	W74	07	9.0		B	BXO	30	4	4	3
7747		PALE	07	14	1920	S15	W76	07	9.0		B	BXO	30	2	3	3

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JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7747A		RAMY	07 12 1257	S11 W34	07 10.0		A	AX		1		3
7747A	28143	MWIL	07 12 1400	S12 W34	07 10.0	4	(AP)					
7747A		HOLL	07 12 1443	S12 W35	07 10.0		A	AX	10	1	1	3
7747A	28145	MWIL	07 14 1400	S12 W63	07 9.8	5	(B)					
7747A	28145	MWIL	07 15 1400	S11 W78	07 9.7	3	X					
7747B	28140	MWIL	07 10 1400	N21 E03	07 10.8	4	(B)					
7755		PALE	07 12 1910	N06 W12	07 11.9		A	AX	10	1	1	2
7755	28144	MWIL	07 13 1400	N08 W22	07 11.9	4	(B)					
7755		HOLL	07 13 1536	N08 W24	07 11.8		A	AX	10	1		4
7755		SVTO	07 14 0655	N07 W34	07 11.7		B	BXO	10	2	3	3
7755		RAMY	07 14 1221	N08 W36	07 11.8		B	BXO	10	4	3	3
7755	28144	MWIL	07 14 1400	N07 W37	07 11.8	4	(B)					
7755		HOLL	07 14 1534	N07 W39	07 11.7		B	BXO	10	2	3	3
7755		PALE	07 14 1920	N05 W38	07 12.0		A	AX	10	1		3
7754		PALE	07 12 1910	N10 E22	07 14.4		A	AX	10	1	1	2
7754		HOLL	07 13 1536	N11 E11	07 14.5		A	AX	10	1		4
7754		LEAR	07 14 0110	N10 E05	07 14.4		A	AX	10	2	2	3
7754		SVTO	07 14 0655	N11 E02	07 14.4		B	BXO	10	3	3	3
7754		RAMY	07 14 1221	N11 W01	07 14.4		B	BXO	10	3	4	3
7754	28146	MWIL	07 14 1400	N11 W02	07 14.4	4	(B)					
7754		HOLL	07 14 1534	N11 W04	07 14.3		B	BXO	10	4	4	3
7754		PALE	07 14 1920	N10 W04	07 14.5		B	BXO	20	4	3	3
7754		SVTO	07 15 0735	N11 W12	07 14.4		B	BXO	20	6	3	3
7754		RAMY	07 15 1204	N12 W14	07 14.4		B	BXO	10	4	3	4
7754	28146	MWIL	07 15 1400	N12 W14	07 14.5	4	(B)					
7754		HOLL	07 15 1413	N12 W15	07 14.5		B	BXO	10	4	2	3
7754		PALE	07 15 1905	N10 W17	07 14.5		B	DRO	30	11	3	3
7754		LEAR	07 16 0230	N12 W23	07 14.4		B	BXO	20	5	4	3
7754		SVTO	07 16 0727	N12 W25	07 14.4		B	BXO	20	5	4	3
7754		RAMY	07 16 1230	N12 W28	07 14.4		B	BXO	20	8	5	3
7754	28146	MWIL	07 16 1400	N12 W28	07 14.5	5	(BG)					
7754		HOLL	07 16 1625	N11 W30	07 14.4		B	CRO	20	6	3	3
7754		PALE	07 16 1745	N10 W31	07 14.4		B	BXO	10	5	3	3
7754		SVTO	07 17 0730	N12 W38	07 14.4		B	BXO	20	7	4	3
7754		RAMY	07 17 1253	N13 W42	07 14.4		B	BXO	10	5	4	3
7754	28146	MWIL	07 17 1415	N12 W42	07 14.4	4	(B)					
7754		HOLL	07 17 1623	N11 W43	07 14.4		B	BXO	10	3	5	2
7754		PALE	07 17 2035	N13 W45	07 14.5		B	BXO	10	5	4	2
7754		LEAR	07 18 0355	N13 W50	07 14.4		B	BXO	10	3	4	3
7754		SVTO	07 18 0628	N13 W50	07 14.5		B	BXO	10	3	3	3
7754	28146	MWIL	07 18 2015	N13 W57	07 14.5	3	X					
7751		RAMY	07 10 1221	S12 E62	07 15.2		B	BXO	20	3	2	3
7751	28141	MWIL	07 10 1400	S12 E60	07 15.1	4	(B)					
7751		HOLL	07 10 1655	S12 E60	07 15.2		B	BXO	40	7	3	3
7751		PALE	07 10 1728	S11 E59	07 15.2		A	AX	20	5	2	3
7751		LEAR	07 11 0245	S11 E55	07 15.2		B	BXO	30	6	5	3
7751		SVTO	07 11 0725	S12 E52	07 15.2		B	CSO	20	6	5	3
7751		RAMY	07 11 1250	S12 E47	07 15.1		B	CRO	20	6	5	2
7751	28141	MWIL	07 11 1400	S12 E47	07 15.1	4	(B)					
7751		HOLL	07 11 1625	S11 E46	07 15.1		B	CRO	40	8	5	3
7751		PALE	07 11 1748	S12 E45	07 15.1		B	BXO	30	7	5	3
7751		LEAR	07 12 0245	S13 E38	07 15.0		B	CSO	30	5	6	3
7751		SVTO	07 12 0810	S11 E35	07 15.0		B	BXO	10	4	3	3
7751		RAMY	07 12 1257	S12 E33	07 15.0		B	BXO	20	10	5	3
7751	28141	MWIL	07 12 1400	S11 E32	07 15.0	4	(B)					
7751		HOLL	07 12 1443	S12 E33	07 15.1		B	CSO	20	8	6	3
7751		PALE	07 12 1913	S11 E30	07 15.0		B	BXO	20	3	4	2
7751		LEAR	07 13 0045	S12 E27	07 15.1		B	CAO	30	7	6	3
7751		SVTO	07 13 0618	S12 E24	07 15.1		B	BXO	30	8	6	3
7751		RAMY	07 13 1250	S12 E22	07 15.2		B	BXO	10	8	4	4
7751	28141	MWIL	07 13 1400	S12 E19	07 15.0	4	(B)					
7751		HOLL	07 13 1536	S12 E19	07 15.1		B	CRO	20	6	5	4
7751		LEAR	07 14 0110	S12 E13	07 15.0		B	CRO	10	3	3	3
7751		SVTO	07 14 0655	S17 E05	07 14.7		B	BXO	10	2	3	3
7751	28141	MWIL	07 14 1400	S13 E05	07 15.0	4	(B)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7751		PALE	07 14 1920	S13 E06	07 15.2		A	AX		1		3
7751		LEAR	07 15 0145	S12 W02	07 14.9		B	CSO	20	2	2	3
7751		SVTO	07 15 0735	S12 W04	07 15.0		B	BXO	10	3	4	3
7751		RAMY	07 15 1204	S12 W07	07 15.0		B	CRO	10	3	4	4
7751	28141	MWIL	07 15 1400	S12 W09	07 14.9	4	(B)					
7751		HOLL	07 15 1413	S12 W07	07 15.1		B	BXO	10	2	4	3
7751		PALE	07 15 1905	S14 W10	07 15.0		B	CRO	30	5	5	3
7751		LEAR	07 16 0230	S12 W16	07 14.9		B	CRO	30	6	5	3
7751		SVTO	07 16 0727	S12 W18	07 14.9		A	HR	10	1	1	3
7751		RAMY	07 16 1230	S11 W20	07 15.0		B	CRO	20	5	7	3
7751	28141	MWIL	07 16 1400	S11 W23	07 14.8	5	(BP)					
7751		HOLL	07 16 1625	S12 W23	07 14.9		B	CRO	30	3	6	3
7751		PALE	07 16 1745	S12 W23	07 15.0		B	CRO	20	3	5	3
7751		SVTO	07 17 0730	S12 W30	07 15.0		B	BXO	10	2	6	3
7751		RAMY	07 17 1253	S11 W36	07 14.8		A	AX	10	1	1	3
7751	28141	MWIL	07 17 1415	S12 W37	07 14.8	5	(AP)					
7751		HOLL	07 17 1623	S13 W38	07 14.8		A	AXO	10	1	1	2
7751		PALE	07 17 2035	S10 W40	07 14.8		A	AX	10	1	1	2
7751		LEAR	07 18 0355	S11 W45	07 14.8		A	AX		1	1	3
7751		SVTO	07 18 0628	S12 W45	07 14.9		A	AX		1		3
7753		RAMY	07 11 1250	S12 E73	07 17.0		A	AX	10	1	1	2
7753	28142	MWIL	07 11 1400	S13 E73	07 17.1	4	(AF)					
7753		HOLL	07 11 1625	S12 E71	07 17.0		B	BXO	30	2	5	3
7753		PALE	07 11 1748	S13 E69	07 16.9		A	AX	20	2	2	3
7753		LEAR	07 12 0245	S13 E62	07 16.8		A	AX		1		3
7753		SVTO	07 12 0810	S12 E62	07 17.0		B	BXO	10	2	4	3
7753		RAMY	07 12 1257	S12 E59	07 17.0		B	DAO	40	2	3	3
7753	28142	MWIL	07 12 1400	S12 E58	07 16.9	4	(B)					
7753		HOLL	07 12 1443	S11 E57	07 16.9		B	CSO	20	2	4	3
7753		PALE	07 12 1913	S11 E56	07 17.0		B	CSO	40	2	4	2
7753		LEAR	07 13 0045	S13 E52	07 16.9		B	CAO	30	3	5	3
7753		SVTO	07 13 0618	S12 E50	07 17.0		B	CSO	20	2	4	3
7753		RAMY	07 13 1250	S12 E45	07 16.9		B	CRO	10	3	4	4
7753	28142	MWIL	07 13 1400	S12 E44	07 16.9	5	(B)					
7753		HOLL	07 13 1536	S12 E43	07 16.9		B	BXO	20	3	4	4
7753		LEAR	07 14 0110	S13 E38	07 16.9		B	CRO	20	4	4	3
7753		SVTO	07 14 0655	S12 E36	07 17.0		B	BXO	10	3	4	3
7753		RAMY	07 14 1221	S12 E32	07 16.9		B	CRO	20	6	4	3
7753	28142	MWIL	07 14 1400	S12 E31	07 16.9	5	(B)					
7753		HOLL	07 14 1534	S11 E31	07 17.0		B	CSO	20	7	4	3
7753		PALE	07 14 1920	S12 E29	07 17.0		B	CRO	30	6	4	3
7753		LEAR	07 15 0145	S13 E25	07 16.9		B	CSO	30	8	4	3
7753		SVTO	07 15 0735	S12 E22	07 17.0		B	CRO	40	5	5	3
7753		RAMY	07 15 1204	S13 E18	07 16.9		B	DRO	20	5	6	4
7753	28142	MWIL	07 15 1400	S12 E17	07 16.9	4	(B)					
7753		HOLL	07 15 1413	S12 E19	07 17.0		B	CRO	30	4	6	3
7753		PALE	07 15 1905	S13 E16	07 17.0		B	CRO	30	7	6	3
7753		LEAR	07 16 0230	S12 E09	07 16.8		B	CRO	20	5	6	3
7753		SVTO	07 16 0727	S12 E09	07 17.0		B	BXO	20	4	6	3
7753		RAMY	07 16 1230	S12 E05	07 16.9		B	CRO	10	5	6	3
7753	28142	MWIL	07 16 1400	S12 E04	07 16.9	5	(B)					
7753		HOLL	07 16 1625	S13 E04	07 17.0		B	CRO	20	3	7	3
7753		PALE	07 16 1745	S13 E04	07 17.0		B	BXO	10	6	7	3
7753		SVTO	07 17 0730	S12 W04	07 17.0		B	BXO	10	4	8	3
7753		RAMY	07 17 1253	S12 W12	07 16.6		A	AX		1		3
7753	28142	MWIL	07 17 1415	S12 W10	07 16.8	4	(B)					
7753		HOLL	07 17 1623	S13 W14	07 16.6		A	AXO		1		2
7753		PALE	07 18 1920	S12 W27	07 16.8		A	AX		1		2
7753	28142	MWIL	07 18 2015	S14 W22	07 17.2	3	(AF)					
7756	28147	MWIL	07 14 1400	S12 E75	07 20.2	3	AP					
7756		SVTO	07 15 0735	S12 E68	07 20.4		B	CRO	30	2	3	3
7756		RAMY	07 15 1204	S13 E64	07 20.3		B	CRO	40	4	4	4
7756	28147	MWIL	07 15 1400	S12 E64	07 20.4	4	(B)					
7756		HOLL	07 15 1413	S12 E65	07 20.5		B	DSO	70	4	5	3
7756		PALE	07 15 1905	S13 E65	07 20.7		B	BXO	80	7	5	3
7756		LEAR	07 16 0230	S14 E57	07 20.4		B	BXO	40	6	5	3
7756		SVTO	07 16 0727	S12 E55	07 20.4		B	BXO	30	5	5	3

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7756		RAMY	07 16 1230	S12 E52	07 20.4		B	BXO	40	10	5	3
7756	28147	MWIL	07 16 1400	S12 E51	07 20.4	5	(B)					
7756		HOLL	07 16 1625	S12 E51	07 20.5		B	BXO	50	10	5	3
7756		PALE	07 16 1745	S13 E50	07 20.5		B	BXO	30	9	6	3
7756		SVTO	07 17 0730	S12 E42	07 20.5		B	BXO	50	12	5	3
7756		RAMY	07 17 1253	S12 E38	07 20.4		B	BXO	30	12	6	3
7756	28147	MWIL	07 17 1415	S12 E37	07 20.4	5	(B)					
7756		HOLL	07 17 1623	S12 E37	07 20.5		B	BXO	40	12	6	2
7756		PALE	07 17 2035	S12 E36	07 20.6		B	DSO	40	10	5	2
7756		LEAR	07 18 0355	S12 E30	07 20.4		B	BXO	30	12	5	3
7756		SVTO	07 18 0628	S12 E28	07 20.4		B	BXO	50	14	5	3
7756		HOLL	07 18 1920	S12 E21	07 20.4		B	BXO	10	4	5	3
7756		PALE	07 18 1920	S12 E23	07 20.5		B	BXO	10	1	4	2
7756	28147	MWIL	07 18 2015	S12 E18	07 20.2	3	(B)					
7756		LEAR	07 19 0015	S12 E17	07 20.3		B	BXO	20	5	4	3
7756		SVTO	07 19 0638	S13 E15	07 20.4		B	BXO	20	4	6	3
7756	28147	MWIL	07 19 1400	S12 E10	07 20.3	4	(B)					
7756		RAMY	07 19 1408	S12 E11	07 20.4		B	BXO	10	3	6	4
7756		HOLL	07 19 1424	S10 E12	07 20.5		B	BXO	10	4	2	4
7756		LEAR	07 20 0045	S12 E07	07 20.5		B	CAO	20	3	3	3
7756		SVTO	07 20 0620	S11 E04	07 20.6		B	CAO	20	4	3	3
7756		RAMY	07 20 1240	S12 E00	07 20.5		B	CRO	20	4	3	3
7756		HOLL	07 20 1409	S12 W02	07 20.4		B	BXO	20	4	3	3
7756		LEAR	07 21 0130	S11 W08	07 20.5		B	CRO	20	3	3	3
7756		SVTO	07 21 0740	S13 W09	07 20.6		A	HR		1		1
7756		RAMY	07 21 1221	S12 W12	07 20.6		A	AX	10	1	1	3
7756		HOLL	07 21 1535	S12 W13	07 20.7		A	AX	10	1		3
7756	28147	MWIL	07 21 2200	S12 W17	07 20.6	3	(AF)					
7757		SVTO	07 16 0727	N12 E85	07 22.7		A	HS	60	1	5	3
7757		RAMY	07 16 1230	N12 E79	07 22.5		A	HA	60	1	2	3
7757	28148	MWIL	07 16 1400	N12 E79	07 22.5	5	(BP					
7757		HOLL	07 16 1625	N15 E80	07 22.7		B	CAO	210	2	6	3
7757		PALE	07 16 1745	N13 E79	07 22.7		B	CSO	80	3	5	3
7757		SVTO	07 17 0730	N14 E73	07 22.8		B	CAO	120	4	7	3
7757		RAMY	07 17 1253	N12 E66	07 22.5		B	DAO	120	3	6	3
7757	28148	MWIL	07 17 1415	N14 E68	07 22.7	5	(B)					
7757		HOLL	07 17 1623	N13 E65	07 22.6		B	DAO	250	3	9	2
7757		PALE	07 17 2035	N13 E67	07 22.9		B	DSO	180	4	6	2
7757		LEAR	07 18 0355	N12 E60	07 22.7		B	DAO	200	4	9	3
7757		SVTO	07 18 0628	N13 E58	07 22.6		B	DAO	150	2	7	3
7757		PALE	07 18 1920	N12 E52	07 22.7		B	DSO	80	2	6	2
7757		HOLL	07 18 1920	N15 E52	07 22.7		B	DSO	190	7	9	3
7757	28148	MWIL	07 18 2015	N12 E51	07 22.7	5	(B)					
7757		LEAR	07 19 0015	N13 E50	07 22.8		B	DAO	170	8	8	3
7757		SVTO	07 19 0638	N13 E46	07 22.7		B	CKO	150	6	7	3
7757	28148	MWIL	07 19 1400	N12 E40	07 22.6	5	(BP)					
7757		RAMY	07 19 1408	N13 E42	07 22.7		B	CSO	140	4	7	4
7757		HOLL	07 19 1424	N14 E42	07 22.8		B	CSO	210	9	10	4
7757		LEAR	07 20 0045	N12 E35	07 22.7		B	DAO	120	3	9	3
7757		SVTO	07 20 0620	N14 E32	07 22.7		B	CHO	170	3	7	3
7757		RAMY	07 20 1240	N13 E28	07 22.6		B	CSO	200	3	7	3
7757		HOLL	07 20 1409	N13 E27	07 22.6		B	CSO	170	3	7	3
7757		LEAR	07 21 0130	N12 E20	07 22.6		B	CSO	160	6	4	3
7757		SVTO	07 21 0740	N13 E17	07 22.6		B	CHO	230	4	7	1
7757		RAMY	07 21 1221	N13 E16	07 22.7		B	CSO	180	6	7	3
7757		HOLL	07 21 1535	N12 E12	07 22.5		B	CSO	160	6	4	3
7757	28148	MWIL	07 21 2200	N12 E08	07 22.5	5	(BP)					
7757		LEAR	07 22 0052	N12 E08	07 22.6		B	CSO	150	7	6	3
7757		SVTO	07 22 0752	N12 E03	07 22.5		B	CHO	200	2	4	1
7757		RAMY	07 22 1217	N13 E03	07 22.7		B	CSO	130	9	10	3
7757	28148	MWIL	07 22 1400	N12 W01	07 22.5	5	(BP)					
7757		HOLL	07 22 1725	N12 W02	07 22.6		B	CSO	150	5	5	3
7757		LEAR	07 23 0240	N12 W08	07 22.5		B	CSO	110	3	5	3
7757		SVTO	07 23 1110	N13 W12	07 22.5		B	CAO	120	9	5	3
7757		RAMY	07 23 1227	N12 W12	07 22.6		B	DSO	180	11	4	3
7757	28148	MWIL	07 23 1400	N12 W13	07 22.6	5	(BG)					
7757		HOLL	07 23 1525	N13 W14	07 22.6		B	CSI	170	10	6	3
7757		LEAR	07 24 0025	N12 W19	07 22.6		B	CSO	130	4	4	2

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7757		SVTO	07	24	0634	N12	W23	07	22.5		B	CSO	150	12	4	4
7757		RAMY	07	24	1249	N13	W25	07	22.6		B	CAO	160	14	5	4
7757	28148	MWIL	07	24	1400	N12	W27	07	22.5	5	(BG)					
7757		HOLL	07	24	1707	N12	W30	07	22.4		B	CAO	190	5	4	2
7757		LEAR	07	25	0040	N12	W33	07	22.5		B	DAO	130	6	5	3
7757		SVTO	07	25	0845	N13	W37	07	22.6		B	CSO	190	4	3	3
7757		RAMY	07	25	1250	N13	W39	07	22.6		B	CSO	120	5	4	4
7757		HOLL	07	25	1456	N11	W41	07	22.5		B	CSO	120	2	3	4
7757	28148	MWIL	07	25	1500	N12	W40	07	22.6	5	(BG)					
7757		LEAR	07	26	0100	N12	W46	07	22.6		B	CAO	100	3	4	3
7757		SVTO	07	26	0700	N10	W51	07	22.4		A	HS	150	1	3	3
7757		RAMY	07	26	1216	N14	W52	07	22.6		A	HS	130	1	2	4
7757	28148	MWIL	07	26	1400	N12	W54	07	22.5	5	(AP)					
7757		HOLL	07	26	2305	N12	W59	07	22.5		A	HS	110	1	1	2
7757		LEAR	07	27	0110	N11	W59	07	22.6		B	CAO	180	4	5	3
7757		SVTO	07	27	0726	N11	W65	07	22.4		A	HS	90	1	2	1
7757		RAMY	07	27	1256	N12	W67	07	22.5		A	HS	130	1	2	3
7757	28148	MWIL	07	27	1400	N12	W66	07	22.6	5	(AP)					
7757		LEAR	07	28	0130	N12	W75	07	22.4		B	CAO	120	2	3	3
7757		SVTO	07	28	0710	N09	W78	07	22.4		A	HS	100	1	2	3
7757		RAMY	07	28	1213	N12	W79	07	22.5		A	HS	40	1	2	3
7757	28148	MWIL	07	28	1420	N11	W80	07	22.6	5	(AP)					
7757		HOLL	07	28	1530	N10	W80	07	22.6		A	HS	90	1	2	2
7758		LEAR	07	18	0355	S14	E76	07	23.9		A	AX		1	1	3
7758		SVTO	07	18	0628	S12	E76	07	24.0		A	AX		2		3
7758		HOLL	07	18	1920	S10	E69	07	24.0		A	AX	10	2	2	3
7758		PALE	07	18	1920	S12	E70	07	24.1		A	HS	10	1	1	2
7758	28149	MWIL	07	18	2015	S15	E66	07	23.8	4	(AP)					
7758		LEAR	07	19	0015	S12	E66	07	24.0		A	AX	10	2	1	3
7758		SVTO	07	19	0638	S12	E62	07	23.9		B	BXO	30	5	3	3
7758	28149	MWIL	07	19	1400	S13	E58	07	23.9	4	(AP)					
7758		RAMY	07	19	1408	S13	E58	07	24.0		A	AX	10	3	2	4
7758		HOLL	07	19	1424	S12	E56	07	23.8		A	AX	20	3	2	4
7758		LEAR	07	20	0045	S13	E52	07	23.9		A	AX	10	2	2	3
7758		SVTO	07	20	0620	S12	E49	07	23.9		A	HR		2	1	3
7758		RAMY	07	20	1240	S14	E45	07	23.9		A	AX	10	2	2	3
7758		HOLL	07	20	1409	S12	E44	07	23.9		B	AX	10	2	1	3
7758		LEAR	07	21	0130	S11	E39	07	24.0		A	AX	20	1	2	3
7758		SVTO	07	21	0740	S12	E34	07	23.9		B	BXO		2	4	1
7758		RAMY	07	21	1221	S14	E32	07	23.9		A	AX		1		3
7758		HOLL	07	21	1535	S13	E32	07	24.1		A	AX		1		3
7758		SVTO	07	22	0752	S14	E22	07	24.0		A	AX		1		1
7758		RAMY	07	22	1217	S15	E22	07	24.2		B	BXO		2	5	3
7758		LEAR	07	26	0100	S14	W28	07	23.9		A	AX		1	1	3
7758		SVTO	07	26	0700	S16	W32	07	23.9		A	AX		1		3
7758		RAMY	07	26	1216	S12	W36	07	23.8		A	AX	10	1	1	4
7758	28150	MWIL	07	26	1400	S14	W36	07	23.9	4	(AP)					
7758		LEAR	07	27	0110	S14	W43	07	23.8		A	AX	10	1	1	3
7758		SVTO	07	27	0726	S14	W46	07	23.8		A	AX		1		1
7758		RAMY	07	27	1256	S13	W50	07	23.8		A	AX		1		3
7758	28150	MWIL	07	27	1400	S14	W50	07	23.8	3	(AP)					
7760		LEAR	07	30	0600	S05	W40	07	27.2		A	AX	10	1		3
7760		SVTO	07	30	0735	S06	W42	07	27.2		B	BXO	10	4	3	3
7760		RAMY	07	30	1212	S06	W44	07	27.2		B	BXO	10	4	3	5
7760	28152	MWIL	07	30	1400	S06	W45	07	27.2	4	(B)					
7760		HOLL	07	30	1610	S06	W46	07	27.2		B	BXO	10	5	4	3
7760		LEAR	07	31	0120	S06	W51	07	27.2		B	BXO	20	4	3	3
7760		SVTO	07	31	0600	S07	W53	07	27.3		B	BXO	20	4	3	4
7760	28152	MWIL	07	31	1400	S06	W57	07	27.3	4	(B)					
7760		PALE	07	31	1907	S06	W61	07	27.2		B	BXO	30	3	4	3
7760		SVTO	08	01	0750	S08	W67	07	27.4		B	BXO		2	3	3
7760		RAMY	08	01	1212	S07	W73	07	27.1		A	AX	10	1	1	4
7760	28152	MWIL	08	01	1430	S06	W75	07	27.1	3	(AP)					
7760		PALE	08	01	1915	S05	W74	07	27.4		A	AX		1		3
7760A		LEAR	07	29	0410	S07	E07	07	29.7		A	AX		1	1	3

S U N S P O T G R O U P S
(Ordered by Central Meridian Passage Date)

JULY 1994

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7759	28151	MWIL	07 27 1400	N04 E56	07 31.8	3	(AF)					
7759		SVTO	07 28 0710	N04 E45	07 31.7		B	BXO	10	6	3	3
7759		RAMY	07 28 1213	N03 E42	07 31.6		B	BXO	10	2	2	3
7759	28151	MWIL	07 28 1420	N03 E41	07 31.7	4	(B)					
7759		HOLL	07 28 1530	N05 E42	07 31.8		B	BXO	10	5	3	2
7759		RAMY	07 29 1249	N04 E28	07 31.6		B	BXO		2	2	4
7759		HOLL	07 29 1530	N04 E27	07 31.7		A	AX		1		3
7759		LEAR	07 30 0600	N02 E18	07 31.6		A	AX	10	1		3
7759		SVTO	07 30 0735	N04 E19	07 31.7		A	AX		1		3
7759		RAMY	07 30 1212	N04 E17	07 31.8		A	AX		1		5
7759		PALE	08 01 1915	N03 W14	07 31.7		A	AX		1		3

Stations reporting:

BOUL = Boulder
CULG = Culgoora
HOLL = Holloman
LEAR = Learmonth
MWIL = Mt. Wilson
PALE = Palehua
RAMY = Ramey
SVTO = San Vito

JULY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
01	1011	1015	1025	1-	1					1	1011	B1.7	
01	1621	1628	1646D	1	1					1	1620	B7.0	
01	1631	1646	1714	2	5					4	1620	B7.0	
01	2056	2101	2111	1-	1					1	2053	B2.7	
02	1445	1447	1458	1-	1					1	1445	B2.6	7742
02	1501	1522U	1541	1	1		1				No flare		
02	1703	1708	1802	1	1		1				*		
03	1449	1458	1529	1+	5		1			2	1451	C1.0	7742
03	1618	1625	1636	1	1					1	1619	B3.1	7742
04	1803	1814	1829	1	3					3	1801	B4.9	
05	1307	1315	1335	1	1		1				No flare		
05	1645	1648	1707	1	1					1	1644	B1.5	
05	2107	2109	2135	1+	1					1	2107	B1.4	7746
06	1645	1647	1709	1	5					4	1646	B7.9	7746
06	1754	1757	1809	1-	1					1	1753	B1.3	
07	0955	1007	1114	2+	5	1	2	1		6	0956	M1.3	7746
07	1108	1109	1125D	1-	1					1	1108	B2.7	7742
07	1125	1130	1144U	1	1					1	1125	B2.1	7746
07	1517	1521	1533	1-	1					1	1522	B4.1	7746
07	1930	1932	1946	1-	1					1	1931	B8.2	7746
07	2116	2117	2125	1-	1					1	2116	B1.3	
08	0531	0541	0620	1-	1			1			0537	C1.0	7749
08	1529	1546	1615	1	3		3				1519	B1.1	
08	1722	1749	1807	1	1		1				No flare		
09	0915	0924	0952	1	1		1				0933	B1.6	7746
09	1554	1610U	1632	1	1		1				No flare		
09	1848	1851	1907	1	5					2	1848	B4.5	7749
10	1752	1753	1758	1-	1					1	1750	B1.1	
11	1001	1002	1013	1-	1					1	1001	B6.4	7749
12	0914	0924	1020	2	5	2	2	1		3	0915	C6.0	7746
12	1339	1340	1346	1-	1					1	1336	B1.1	
13	1604	1609	1635	1-	3		1			1	1555	B2.3	
14	0848	0854	0918	1-	1			1			0849	C1.9	7746
14	1039	1052U	1112	1	1		1				1036	B2.1	
14	1256	1309	1333	1	1		1				No flare		
14	1902	1903	1911	1-	1					1	1902		7746
14	1958	2000	2015	1-	3					6	1958	C2.3	
14	2355	2355	2402	1-	1					1	2355	B7.5	
15	0718	0734	0800	1-	1			1			0728	C1.1	
15	0922	0924	0931	1-	1					2	0922	B2.2	
15	1255	1316	1332	1	3		2			2	1251	B9.1	7746
15	1629	1631	1645	1-	1					1	1625	B3.3	
15	1715	1719	1735	1-	5					5	1716	C1.1	7754
16	0308	0322	0406	1-	1			1			0251	C1.4	
16	0915	0916	0929	1-	1					2	0916	B5.5	
16	1049	1114	1137	1	3		3				No flare		
16	1244	1247	1300U	1-	1					1	1235	B2.0	
16	1950	1958	2020	1+	1					3	1950	B3.7	
17	1013	1021	1036	1	1		1				No flare		
17	1110	1122	1142	1	1		2				No flare		

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

JULY 1994

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
18	0849	0858	0928	1	1		1				No flare		
18	1329	1332	1403	2-	5					6	1330	C3.2	
19	1121	1125	1157	2	1					1	1112	B1.1	
19	1206	1244	1301	1	1		2				1151	B3.2	7758
19	1649	1717	1815	2-	1		2				No flare		
20	0606	0611	0648	1+	1		2				No flare		
20	1140	1157	1243	1+	1		2				No flare		
21	2016	2018	2021	1-	1					1	2013	B1.1	
23	1016	1016	1025	1-	1					1	1016	B2.5	7757
25	1209	1226	1238	1	3		3				No flare		
25	1324	1400	1438	1	1		1			1	1418		7757
29	1058	1114	1126	1	1		1				No flare		
29	1353	1359	1425	1+	1					3	1351	B4.3	
30	1032	1040	1059	1	1		1				No flare		

* = no flare patrol.

OBSERVATORIES REPORTING FOR JULY 1994

Amherst, New Hampshire, USA	SES	Madison, Wisconsin, USA	SES
Brazilian Antarctic Station	SPA, SES	McDonough, Georgia, USA	SES
Cambridge, England, UK	SES	Nampa, Idaho, USA	SES
Cranford, New Jersey, USA	SES	Nerja, Spain	SES
Durham, New Hampshire, USA	SES	Panska Ves, Czech Republic	SES, SEA, SWF
Fort Wayne, Indiana, USA	SES	Parma, OH, USA	SES
Gettysburg, Pennsylvania, USA	SES	Rimavska Sobota, Slovakia	SEA
Hiraiso, Japan	SWF	Rochester, New Hampshire, USA	SES
Houston, Texas, USA	SES	Tucson, Arizona, USA	SES
Hudson, Ohio, USA	SES	Upice, Slovakia	SEA
Inubo, Japan	SPA	Wellington, Ohio, USA	SES
Itapetinga, Brazil	SPA, SES	Windsor Locks, Connecticut, USA	SES
Koniz, Switzerland	SES	Ziar nad Hronom, Slovakia	SEA
LaCrescenta, California, USA	SES	Zilina, Slovakia	SEA

Observations are not necessarily continuous.

S O L A R R A D I O E M I S S I O N
Spectral Observations

JULY 1994

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	FREQUENCY Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
01	0000	0704	CULG	0215.0	0240.0	I	S	1	120	170	
			CULG	0223.0	0223.0	III	B	1	20	80	
			CULG	0310.0	0420.0	I	S	1	150	170	
	0500	1200	IZMI	0506.9	0507.5	III	G	1	110	180X	
			CULG	0545.0	0612.0	I	S	1	150	170	
	0608	1735	ONDR								
	0700	1500	POTS	0700 E	1500 U	I	S,C,DC	1	100U	300	
			POTS	0736.2	0736.5	III	G	1	40X	170U	
			POTS	0859.3	0859.7	III	B	1	40X	170U	
			SVTO	0916.0	0918.0	III		1	35	55	
			POTS	0916.2	0919.1	III	GG,V	2	40X	250	
			IZMI	0916.3	0916.8	III	G	2	45U	180X	
			IZMI	0917.5	0918.7	III	GG	2	45U	180X	
			POTS	0936.9	0939.0	III	G	1	100U	170U	
			POTS	0958.3	0958.5	III	B	1	40X	150	
			POTS	1009.2	1009.3	III	B	1	100U	170U	
			POTS	1028.6	1037.1	III	GG	1	100U	170U	
			POTS	1106.2	1116.5	III	G	1	100U	170U	
			SVTO	1140.0	1141.0	III		2	37	77	
			POTS	1202.2	1203.8	III	G	1	100U	160	
			POTS	1215.2	1216.0	III	B	1	40X	140	
			POTS	1233.4	1238.9	III	GG	1	100U	170U	
			POTS	1256.4	1259.8	III	G	1	40X	170U	
			POTS	1325.4	1333.8	III	G	1	40X	150	
			POTS	1359.6	1402.7	III	G	1	100U	170U	
			POTS	1424.0	1426.3	III	G	1	40X	150	
			SGMR	1453.0	1454.0	III		1	30	45	
			SGMR	1514.0	2022.0	III	N	1	30	80	
			PALE	1903.0	1904.0	III		1	25	52	
	2105	2400	CULG								
02	0000	0704	CULG	0020.0	0049.0	III	N	1	20	120	
			PALE	0023.0	0024.0	III		1	25	60	
			PALE	0038.0	0039.0	III		1	25	35	
	0416	1735	ONDR								
			CULG	0500.0	0504.0	III	GG	3	18X	180	
			LEAR	0500.0	0507.0	V		3	30	80	
			SVTO	0500.0	0507.0	V		3	35	85	
			CULG	0504.0	0507.0	III	G	2	20	180	
	0500	1200	IZMI	0525.0	1200.0D	I	S	1	95	180X	
			SGMR	1429.0	1429.0	III		1	30	45	
			SGMR	1549.0	1753.0	III	N	1	30	45	
	2105	2400	CULG	2112.0	2141.0	I	S	1	100	180	
			CULG	2127.0	2127.0	III	B	1	50	80	
			CULG	2248.0	2319.0	III	N	1	18	40	
03	0000	0704	CULG	0040.0	0136.0	III	S	1	18	50	
			CULG	0131.0	0133.0	III	G	2	25X	170	
			PALE	0132.0	0132.0	III		1	40	60	
			CULG	0313.0	0615.0	III	N	1	18	40	
			CULG	0418.0	0421.0	III	B	1	30	165	
	0500	1200	IZMI	0710.3	0711.2	I	G	1	120	150	
			IZMI	0807.3	0807.6	III	G	1	95	180X	
			SVTO	0855.0	1442.0	III	N	1	35	51	
	0933	1749	ONDR								
			SGMR	1304.0	2030.0	III	N	1	30	60	
			SVTO	1312.0	1351.0	III	N	2	35	53	
			SVTO	1531.0	1531.0	III		2	36	55	
			PALE	1847.0	0143.0	III	N	1	25	35	
	2105	2400	CULG	2311.0	2312.0	III	B	1	18	160	
			CULG	2332.0	2345.0	I	S	1	60	90	
04	0000	0704	CULG	0000.0	0017.0	I	S	2	60	90	
			CULG	0000.0	0505.0	III	S	1	18	50	
			LEAR	0158.0	0630.0	III	N	1	30	37	
	0418	1749	ONDR								
	0500	1200	IZMI								
			SVTO	1224.0	1224.0	III		1	35	48	
			SGMR	1448.0	1449.0	III		1	30	50	

SOLAR RADIO EMISSION
Spectral Observations

JULY 1994

OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
04		SGMR	1501.0	2000.0	III	N	1	30	45	
		SVTO	1556.0	1556.0	III		2	36	60	
2105	2400	CULG	2324.0	2324.0	III	B	1	40	140	
05 0000	0705	CULG	0128.0	0129.0	III	B	1	30	90	
0418	1751	ONDR								
		CULG	0434.0	0434.0	III	B	1	18	90	
		CULG	0441.0	0441.0	III	B	1	18	160	
		CULG	0456.0	0456.0	III	B	1	18	90	
0500	1200	IZMI	0518.0	0825.0	I	N	1	95	180X	
0700	1500	POTS	0700 E	1500 U	I	S	1	100U	170U	
		POTS	0753.1	0753.2	III	B	1	100U	170U	
		POTS	1108.6	1108.8	III	B	1	50	170U	
		IZMI	1123.1	1123.2	III		1	105	145	
		POTS	1123.1	1123.5	III	G	1	100U	170U	
		POTS	1349.4	1355.2	III	G	1	100U	170U	
		POTS	1403.3	1403.6	III	G	1	250	400	
		SGMR	1406.0	1407.0	III		1	45	65	
		POTS	1406.8	1407.5	III	G	2	40X	250	
		SVTO	1407.0	1407.0	III		2	35	67	
		POTS	1421.9	1422.6	III	G	1	100U	170U	
		SGMR	1539.0	1540.0	V		2	30	65	
		PALE	2059.0	2106.0	III		1	25	65	
		SGMR	2059.0	2107.0	III		1	30	80	
2105	2400	CULG	2106.0	2106.0	III	B	1	20	150	
06		PALE	0029.0	0036.0	III		1	25	66	
0000	0705	CULG	0029.0	0033.0	III	G	1	18	140	
		LEAR	0032.0	0033.0	III		1	30	50	
		CULG	0058.0	0106.0	III	N	1	20	180	
		PALE	0058.0	0103.0	III		2	25	75	
		CULG	0101.0	0103.0	III	G	2	20	180	
		LEAR	0102.0	0103.0	III		2	30	80	
		CULG	0203.0	0444.0	III	N	2	18X	180	
		PALE	0203.0	0203.0	III		1	31	75	
		LEAR	0225.0	0356.0	III	N	3	30	80	
		PALE	0225.0	0326.0	III	N	2	25	75	
		CULG	0324.0	0325.0	III	G	3	18X	180	
		LEAR	0439.0	0441.0	III		3	30	80	
		PALE	0440.0	0440.0	III		1	25	75	
		SVTO	0440.0	0441.0	III		3	35	85	
		CULG	0457.0	0705.0D	III	N	1	25	180	
0500	1200	IZMI	0503.0	0503.8	III	GG	1	45U	180X	
		IZMI	0518.6	0519.2	III	G	2	45U	180X	
		IZMI	0522.3	0522.6	III	G	1	45U	180X	
		IZMI	0527.1	0527.3	III	G	2	45U	180X	
		IZMI	0530.9	0531.1	III		2	45U	180X	
		IZMI	0546.1	0546.5	III	G	1	105	180X	
		IZMI	0613.4	0613.6	III	G	2	45U	180X	
		IZMI	0624.9	0628.6	III	GG	1	45U	180X	
		IZMI	0637.0	0637.5	III	G	1	45U	180X	
		IZMI	0645.9	0646.3	III	G	1	45U	90	
		IZMI	0655.1	0655.4	III	G	1	110	145	
		IZMI	0656.8	0657.2	III	G	1	110	145	
		SVTO	0709.0	0709.0	III		2	35	85	
		IZMI	0709.2	0709.5	III	G	2	45U	180X	
0700	1500	POTS	0720.9	0721.8	III	G	1	100U	170U	
		POTS	0723	1500 U	I	S	1	100U	170U	
		IZMI	0733.8	0734.0	III	HARM	2	45U	180X	
		POTS	0733.9	0734.0	III	B	1	40X	170U	
		SVTO	0734.0	0734.0	III		1	43	60	
		IZMI	0831.4	0831.9	III	G	1	45U	180X	
		POTS	0831.4	0839.2	III	GG	2	40X	250	
		SVTO	0838.0	0839.0	III		2	35	77	
		IZMI	0838.3	0839.3	III	GG	2	45U	180X	
		IZMI	0847.8	0848.9	III	G	1	45U	185	
		POTS	0847.8	0848.7	III	G	1	40X	170U	
		POTS	0958.2	1008.1	III	G	1	40X	170U	
		POTS	1018.8	1027.8	III	GG	1	50	350	

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OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
06		POTS	1041.6	1041.7	III	U	1	160	220	
		POTS	1113.8	1113.9	III	B	1	100U	170U	
		POTS	1211.5	1212.1	III	G	1	40X	170U	
		POTS	1251.6	1252.3	III	G	1	40X	140	
		POTS	1334.0	1340.4	III	GG,RS	1	40X	400	
		SGMR	1336.0	1338.0	V		2	30	80	
		SVTO	1336.0	1337.0	III		3	35	85	
		SVTO	1644.0	1648.0	III		3	35	85	
		PALE	1645.0	1648.0	III		3	25	75	
		SGMR	1645.0	1652.0	V		3	30	80	
0418	1749	ONDR	1646.3	1646.7	DCIM		3	1000	2000	
		SGMR	1655.0	1704.0	II		2	30	70	ESS 1600
		PALE	1656.0	1701.0	II		1	38	57	ESS 1400
		SVTO	1656.0	1702.0	II		2	35	59	ESS 2000
		SVTO	1737.0	1737.0	III		3	36	78	
		PALE	1842.0	1842.0	III		1	25	60	
		SGMR	1842.0	1842.0	III		1	40	70	
2105	2400	CULG	2126.0	2130.0	III	G	2	35	170	
		PALE	2127.0	2129.0	III		1	25	75	
		SGMR	2127.0	2129.0	III		1	45	65	
		CULG	2342.0	2345.0	III	G	3	18X	180	
		LEAR	2342.0	2344.0	III		2	30	80	
		PALE	2343.0	2345.0	V		2	25	75	
		CULG	2348.0	2348.0	III	B	2	60	170	
		PALE	2349.0	0006.0	II		2	25	75	ESS 2000
		CULG	2352.0	2359.0	II	FN	3	18X	40	ESS 1000
		CULG	2352.0	2400.0	II	SH	3	35	80	ESS 900
		LEAR	2352.0	2359.0	II		2	30	67	ESS 1600
07		LEAR	0258.0	0301.0	III		2	30	80	
		PALE	0258.0	0259.0	III		2	25	75	
0000	0705	CULG	0259.0	0301.0	III	G	2	20	130	
0419	1739	ONDR								
		CULG	0550.0	0550.0	III	B	1	25	90	
		LEAR	0550.0	0550.0	III		1	30	44	
0500	1200	IZMI	0613.6	0616.3	III	GG	1	45U	180X	
		CULG	0614.0	0616.0	III	G	2	20	180	
		LEAR	0614.0	0615.0	III		2	30	80	
		SVTO	0614.0	0616.0	III		3	35	85	
		IZMI	0614.3	0614.8	III	G	2	45U	180X	
0700	1500	POTS	0820.4	0831.6	III	GG	2	40X	350	
		POTS	0821.1	0821.6	DCIM		1	400	500	
		IZMI	0822.8	0825.6	III	GG	2	95	180X	
		SVTO	0824.0	0824.0	III		1	35	75	
		IZMI	0827.5	0831.4	III	GG	2	45U	180X	
		POTS	0831.5	0831.9	DCIM		1	600	700	
		POTS	0838.2	0840.0	I	S	1	130	150	
		POTS	0955.0	1021	III	GG,U?,RS,C	3	40X	500	
		SVTO	0955.0	0959.0	III		2	36	60	
		SVTO	0955.0	1021.0	IV		2	35	85	
		IZMI	0956.1	0956.4	III	G	1	125	180X	
		IZMI	0957.2	0958.9	III	G	2	45X	180X	
		POTS	0958.4	1002.4	II	FN,H	1	50	125	
		IZMI	0958.5	1020.4	II	HARM	2	45U	180X	
		IZMI	0958.8	0959.2	V		2	45X	145	
		POTS	0958.9	1003.9	II	SH,H	2	100U	350	
		SVTO	0959.0	1021.0	II		2	35	85	ESS 1400
		POTS	1003.9	1007.5	II	FN,H	1	40X	75	
		POTS	1004	1006.8	II	SH,H	2	100U	210	
		SGMR	1014.0	1019.0	IV		1	30	40	
		POTS	1020	1500 U	I	S	1	100U	170U	
		POTS	1027.3	1034.4	III	G	1	100U	400	
		POTS	1125.6	1126.1	III	G	1	40X	170U	
		SVTO	1139.0	1139.0	III		1	35	73	
		POTS	1148.6	1151.3	III	GG,U	1	40X	500	
		SGMR	1149.0	1150.0	III		1	30	70	
		SVTO	1149.0	1149.0	III		1	35	73	
		IZMI	1149.1	1152.5	III	GG	2	45U	180X	
		POTS	1149.4	1150.0	V	G	1	40X	70	

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07		POTS	1152.2	1152.9	III	G	1	40X	170U	
		POTS	1214.7	1215.5	III	G	1	100U	170U	
		POTS	1303.0	1305.2	III	GG	1	100U	170U	
		POTS	1453.1	1453.3	DCIM		1	300	450	
		SGMR	1522.0	1525.0	V		2	30	80	
		SVTO	1522.0	1533.0	III		3	36	85	
		SGMR	1723.0	1725.0	V		1	30	70	
		PALE	1928.0	1932.0	V		2	25	75	
		SGMR	1928.0	1933.0	V		2	30	80	
		PALE	1943.0	1946.0	II		1	38	57	ESS 1000
		SGMR	1943.0	1946.0	II		2	40	65	ESS 1000
		PALE	2351.0	2352.0	III		1	25	75	
	2105 2400	CULG	2352.0	2353.0	III	B	2	22	170	
08		LEAR	0147.0	0147.0	III		1	30	40	
	0000 0705	CULG	0147.0	0153.0	III	G	3	18X	250	
		LEAR	0150.0	0152.0	III		2	30	80	
		PALE	0150.0	0152.0	III		2	25	75	
	0500 1200	IZMI	0528.7	0528.8	III		1	70	180X	
	0700 1500	POTS	0701.6	0701.7	III	B	1	220	350	
	0708 1749	ONDR								
		SVTO	0724.0	0724.0	III		2	35	85	
		IZMI	0724.6	0724.9	III	G	2	45U	180X	
		POTS	0724.6	0724.9	III	G	1	40X	200U	
		LEAR	0906.0	0907.0	III		1	30	49	
		POTS	0906.1	0910.4	III	U	1	40X	250	
		POTS	0907.0	0908.4	V		1	40X	70	
		SVTO	0907.0	0908.0	III		2	36	84	
		IZMI	0907.3	0908.2	III	V	2	45U	150	
		POTS	1108.2	1108.5	III	G	1	200U	350	
		POTS	1455.1	1455.8	III	G	1	130	375	
		POTS	1457.8	1458.4	III	G	1	100U	400	
		POTS	1459.2	1459.6	DCIM		1	200U	500	
		SGMR	1607.0	1608.0	V		1	30	60	
		SVTO	1607.0	1608.0	III		1	35	53	
		SGMR	1629.0	1630.0	V		1	30	65	
		SGMR	1754.0	1755.0	V		1	30	60	
		PALE	2049.0	2050.0	III		2	25	55	
		SGMR	2049.0	2050.0	III		1	30	65	
		PALE	2222.0	2225.0	V		3	25	75	
		SGMR	2222.0	2224.0	V		3	30	80	
	2105 2400	CULG	2223.0	2225.0	III	G	3	18X	260	
		CULG	2243.0	2245.0	III	G	2	20	160	
		PALE	2244.0	2248.0	V		2	25	75	
		SGMR	2244.0	2245.0	III		2	30	75	
		CULG	2248.0	2248.0	III	B	1	21	86	
		LEAR	2351.0	2352.0	III		1	30	37	
09		LEAR	0005.0	0006.0	III		1	32	43	
		PALE	0005.0	0006.0	III		1	25	50	
	0000 0705	CULG	0006.0	0006.0	III	B	1	22	68	
		CULG	0025.0	0030.0	III	G	2	20	180	
		LEAR	0025.0	0029.0	III		2	30	71	
		PALE	0025.0	0030.0	III		2	25	70	
		CULG	0237.0	0237.0	III	B	1	24	155	
		LEAR	0237.0	0237.0	III		1	30	36	
		LEAR	0339.0	0340.0	III		2	30	50	
		PALE	0339.0	0339.0	III		1	30	45	
		CULG	0340.0	0342.0	III	G	1	18	120	
		CULG	0645.0	0646.0	III	B	2	21	180	
		LEAR	0645.0	0646.0	III		2	30	50	
		SVTO	0645.0	0646.0	III		2	35	85	
	0500 1200	IZMI	0645.2	0645.7	III	G	2	45X	180X	
		IZMI	0645.7	0646.2	CONT		1	45X	90	
		SVTO	0717.0	0718.0	III		2	39U	44U	
		IZMI	0717.8	0718.2	III	G	1	45U	180X	
		IZMI	0717.8	0719.1	III	G	1	55	135	
		LEAR	0718.0	0718.0	III		1	33	44	
		IZMI	0722.7	0722.8	III		1	110	145	

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Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
09			SGMR	0930.0	0934.0	V		1	30	80	
			LEAR	0932.0	0934.0	III		2	30	80	
			SVTO	0932.0	0934.0	III		3	35	85	
			IZMI	0932.5	0934.2	III	GG	2	45X	180X	
			IZMI	0932.6	0934.6	V		2	45X	80	
			IZMI	0936.2	0936.3	III		1	45X	90U	
			IZMI	0937.2	0937.3	III		1	45U	90	
			IZMI	0948.8	0950.0	III	G	2	45U	180X	
			PALE	1848.0	1856.0	III		1	30	60	
			SGMR	1848.0	1849.0	V		1	35	75	
			SGMR	1855.0	1856.0	III		1	41	78	
	2105	2400	CULG								
			PALE	2107.0	2108.0	V		2	25	55	
			SGMR	2107.0	2108.0	III		1	30	60	
10			SVTO	0406.0	0407.0	III		2	58	78	
			SVTO	0436.0	0437.0	III		2	58	78	
	0000	0705	CULG	0437.0	0437.0	III	B	2	35	220	
			CULG	0520.0	0528.0	III	G	1	20	150	
	0500	1200	IZMI	0525.0	0526.2	III	G	1	45U	180X	
			IZMI	0643.5	0643.6	III		1	90	95	
			IZMI	0723.7	0723.9	III		1	45U	90	
	0809	1749	ONDR								
			SVTO	0819.0	0821.0	V		3	35	82	
			IZMI	0820.0	0820.5	III	G	2	45X	180X	
			IZMI	0820.0	0821.5	V		2	45X	90	
			LEAR	0820.0	0821.0	III		2	30	80	
			SGMR	1500.0	1500.0	III		1	40	65	
			SVTO	1500.0	1500.0	III		2	38	50	
			PALE	1849.0	1849.0	III		1	42	55	
			SGMR	1849.0	1849.0	III		1	35	75	
	2105	2400	CULG								
11	0000	0705	CULG								
	0611	1748	ONDR								
	0700	1500	POTS	0836.8	0836.9	III	B	1	100U	170U	
	0500	1200	IZMI	0836.9	0837.0	III		1	120	180X	
			POTS	1049.2	1049.5	I	S	1	130	160	
			PALE	2105.0	2109.0	III		2	25	75	
			SGMR	2108.0	2108.0	III		1	30	80	
	2105	2400	CULG	2108.0	2108.0	III	B	1	18	160	
			CULG	2257.0	2258.0	III	B	1	20	60	
			PALE	2257.0	2257.0	III		1	25	63	
12	0500	1200	IZMI	0547.5	0547.6	III		1	95	180X	
			IZMI	0549.4	0549.8	III	G	1	95	180X	
			IZMI	0550.9	0552.2	III	G	2	95	180X	
			IZMI	0619.9	0820.1	III		1	60	90	
	0000	0705	CULG	0629.0	0629.0	III	B	1	50	70	
			IZMI	0629.3	0629.4	III	G	1	60	90	
			CULG	0658.0	0700.0	III	G	1	18	170	
			LEAR	0658.0	0659.0	III		2	30	48	
			SVTO	0658.0	0659.0	V		2	36	85	
			IZMI	0658.1	0659.4	III	GG	2	45U	180X	
			SVTO	0714.0	0715.0	III		2	46	60	
	0700	1500	POTS	0714.8	0720.8	III	G	1	40X	450	
			IZMI	0715.0	0715.1	III		1	65	90	
			LEAR	0742.0	0742.0	III		1	30	45	
			SVTO	0742.0	0742.0	III		2	36	85	
			IZMI	0742.2	0742.8	III	G	2	45U	180X	
			POTS	0742.2	0743.0	III	G	2	40X	250	
			SVTO	0758.0	0758.0	III		2	35	63	
			POTS	0758.2	0759.1	III	G	1	40X	170U	
			IZMI	0758.5	0759.0	III	G	2	45U	84	
			IZMI	0812.2	0813.3	III	G	1	60	180X	
			POTS	0812.4	0813.2	III	G	1	40X	170U	
			POTS	0911.2	0914.1	V	G	2	40X	75	
			LEAR	0912.0	0917.0	V		2	30	80	
			SVTO	0912.0	0918.0	III		3	35	85	

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OBSERVATION Day	Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
12			IZMI	0912.2	0917.0	CONT		2	45X	135U	
			IZMI	0912.2	0917.9	III	GG	2	45X	180X	
			POTS	0912.2	0934 U	III	GG,UG	3	40X	250	
	0556	1510	ONDR	0914.9	0918.6	DCIM		3	2500	4200	
			LEAR	0919.0	0932.0	II		3	30	80	ESS 4000
			SGMR	0919.0	0932.0	II		2	30	80	ESS 2000
			SVTO	0919.0	0939.0	II		3	35	85	ESS 4000
			IZMI	0919.1	0930.0	II	HARM	3	45U	180X	
			POTS	0919.1	0929.8	II	SH,H	2	40X	140	
	0700	1500	POTS	0919.1	0925.9	II	FN,H	3	40X	65	
			POTS	1036.4	1036.5	III	B	1	300	400	
			POTS	1059.9	1100.0	III	G	1	50	350	
			POTS	1229.9	1236.1	III	S,G,C	1	40X	750	
			POTS	1332.2	1332.3	III	G	1	250	375	
			POTS	1345.6	1345.7	UNCLF		1	50	60	
			SVTO	1529.0	1529.0	III		3	36	82	
			PALE	2240.0	2258.0	III	N	1	25	75	
	2105	2400	CULG	2242.0	2254.0	III	G	2	18	170	
			SGMR	2243.0	2243.0	III		1	50	70	
			CULG	2258.0	2258.0	III	B	1	20	86	
13	0000	0705	CULG	0018.0	0018.0	III	B	1	22	170	
			CULG	0046.0	0054.0	III	G	2	18X	180	
			LEAR	0046.0	0047.0	III		2	30U	45U	
			PALE	0046.0	0053.0	V		1	25	75	
	0609	1747	ONDR								
			CULG	0628.0	0630.0	III	B	3	20	190	
			LEAR	0628.0	0634.0	III		3	30	77	
			SVTO	0628.0	0635.0	III		3	35	85	
			IZMI	0628.4	0629.4	III	GG	3	45X	180X	
	0500	1200	IZMI	0628.4	0628.7	V		2	45X	90U	
			CULG	0633.0	0634.0	III	G	1	21	84	
			IZMI	0633.4	0633.6	III	G	2	45U	180X	
			IZMI	0635.2	0635.3	III		1	45U	90	
	0700	1500	POTS	0731.3	0731.6	III	G	1	130	325	
			POTS	0902.6	0902.7	III	B	1	40X	170U	
			POTS	1139.8	1149 U	III	GG,C	3	40X	300	
			SGMR	1140.0	1141.0	V		2	30	80	
			IZMI	1140.3	1141.2	III	GG	2	45X	180X	
			IZMI	1141.3	1141.7	CONT		2	60	85	
			POTS	1145.3	1148.5U	II?	UE	1	100U	160	
			POTS	1255.5	1259.9	III	GG	3	40X	170U	
			SGMR	1257.0	1300.0	V		2	30	80	
			SVTO	1257.0	1300.0	V		2	36	77	
			POTS	1312.6	1312.8	III	B	1	50	170U	
			SVTO	1502.0	1504.0	III		3	35	85	
			SGMR	1503.0	1504.0	III		2	30	80	
			SGMR	1513.0	1521.0	V		1	30	80	
			SVTO	1513.0	1521.0	III		2	35	81	
			SGMR	1558.0	1600.0	V		2	30	80	
			SVTO	1558.0	1559.0	III		3	35	85	
			SGMR	1649.0	1652.0	V		2	30	80	
			SVTO	1649.0	1711.0	III	N	2	36	85	
			PALE	1650.0	1659.0	III		2	25	75	
			PALE	1650.0	1711.0	III	N	2	25	75	
			SGMR	1656.0	1659.0	V		2	30	80	
			SGMR	1710.0	1711.0	V		2	30	80	
			PALE	1759.0	1759.0	III		1	40	75	
			SGMR	1759.0	1800.0	V		1	30	65	
			PALE	1925.0	1925.0	III		1	45	57	
	2108	2400	CULG	2228.0	2229.0	III	B	1	35	75	
14			PALE	0026.0	0041.0	III	N	1	25	75	
	0000	0708	CULG	0026.0	0026.0	III	B	1	35	150	
			CULG	0041.0	0041.0	III	B	2	20	90	
			LEAR	0041.0	0041.0	III		2	30	80	
			LEAR	0301.0	0302.0	III		2	30	53	
			PALE	0301.0	0301.0	III		1	25	75	
			CULG	0302.0	0303.0	III	B	1	20	82	

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Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
14	0500	1200	IZMI								
	0601	1745	ONDR								
	0700	1500	POTS	0847.3	0849.2	III	G,U?	1	110	250	
			POTS	1419.7	1428.2	III	G	1	50	230	
			PALE	1958.0	2002.0	III		2	25	70	
			SGMR	1958.0	2002.0	V		2	30	75	
	2108	2400	CULG								
			PALE	2222.0	2252.0	III	N	1	25	65	
15	0000	0708	CULG								
	0441	1745	ONDR								
	0500	1200	IZMI								
	0700	1500	POTS	1052.9	1053.1	III	G	1	140	170U	
			POTS	1128.3	1128.4	III	B	1	130	170U	
			POTS	1148.8	1155.2	III	G	1	130	170U	
			POTS	1244.4	1244.8	III	G	1	110	250	
			POTS	1303.3	1303.4	I		1	300	320	
	2108	2400	CULG								
16	0000	0034	CULG								
	0052	0708	CULG								
	0427	1744	ONDR								
	0500	1200	IZMI								
	2108	2400	CULG								
17			LEAR	0425.0	0425.0	III		1	33	80	
	0000	0708	CULG	0425.0	0425.0	III	B	3	34	280	
	0427	1742	ONDR								
	0500	1200	IZMI								
			SGMR	1712.0	1713.0	V		1	30	60	
	2108	2400	CULG								
18	0000	0708	CULG	0126.0	0126.0	III	B	1	30	90	
	0428	1743	ONDR								
			CULG	0548.0	0548.0	III	B	1	30	90	
			LEAR	0805.0	0809.0	III		2	30	70	
			SVTO	0805.0	0808.0	III		3	36	79	
	0700	1500	POTS	0805.3	0815.4	III	S,GG,RS,C	2	40X	500	
			POTS	0805.4	0808.0U	DCIM		1	300	800X	
	0500	1200	IZMI	0805.4	0810.0	III	G	2	45X	180X	
			IZMI	0806.9	0809.0	CONT		2	45X	85	
	0700	1500	POTS	0813.7	0815.3U	II?	UE	1	120U	160	
			POTS	0859.6	0859.8	III	G	1	110	250	
			POTS	1257.7	1257.8	III	RS	1	220	350	
			POTS	1327	1345 U	III	GG,RS	2	40X	400	
			SGMR	1328.0	1333.0	V		2	30	80	
			SVTO	1328.0	1333.0	V		3	35	85	
			POTS	1336	1500 U	I	S,C,DC	1	110	170U	
			SVTO	1338.0	1343.0	II		1	55	85	ESS 0800
			POTS	1338.1	1344 U	II?	UE	1	50	70	
			SVTO	1404.0	1446.0	IV		1	69	85	
	2105	2400	CULG								
19	0000	0708	CULG	0021.0	0022.0	III	B	2	60	180	
			CULG	0235.0	0237.0	III	G	1	20	160	
			LEAR	0236.0	0237.0	III		2	30	60	
			PALE	0236.0	0236.0	III		1	25	70	
			CULG	0251.0	0253.0	III	G	1	20	160	
			CULG	0309.0	0311.0	III	G	1	40	70	
	0429	1742	ONDR								
	0500	1200	IZMI								
			LEAR	0704.0	0705.0	III		1	30	50	
			SVTO	0704.0	0705.0	III		2	37	81	
			CULG	0705.0	0705.0	III	B	1	20	180	
	0700	1500	POTS	0707.7	0707.8	III	G	1	110	170U	
			POTS	0727	1500 U	I	S	1	120	170U	
			POTS	0853.9	0854.5	UNCLF		1	110	150	
			POTS	1148.2	1208.2	III	G	1	50	250	
	2105	2400	CULG								

S O L A R R A D I O E M I S S I O N
Spectral Observations

JULY 1994

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	EVENT Spectral Class	EVENT Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
20	0000	0710	CULG	0021.0	0021.0	III	B	2	70	90	
			CULG	0041.0	0046.0	III	G	2	18	90	
			LEAR	0041.0	0046.0	III		1	30	47	
			PALE	0041.0	0046.0	III		1	25	55	
	0430	1742	ONDR								
	0500	1200	IZMI	0619.8	0919.9	III		2	110	145	
			SVTO	0939.0	0939.0	III		1	35U	51U	
	0500	1200	IZMI	0939.1	0939.6	III	G	2	45U	160	
	0700	1500	POTS	0939.1	0939.7	III	G	1	40X	170U	
			POTS	1034.6	1034.8	III	B	1	200U	400	
	2105	2400	CULG								
21	0000	0710	CULG								
	0431	1741	ONDR								
	0500	1200	IZMI								
	0700	1500	POTS	0705.4	0705.7	III	G	2	100U	650	
			POTS	1022.4	1022.6	III	B	1	40X	160	
			PALE	2012.0	2013.0	III		1	25	75	
			SGMR	2012.0	2013.0	III		1	35	75	
	2105	2400	CULG								
22	0000	0710	CULG	0426.0	0426.0	III	B	2	25	85	
	0432	1739	ONDR								
	0500	1200	IZMI								
			SGMR	1447.0	1449.0	V		2	30	75	
	0700	1500	POTS	1447.0	1451.1	III	GG	1	40X	450	
			SVTO	1448.0	1448.0	III		2	35	85	
	2105	2400	CULG	2141.0	2143.0	III	G	2	43	235	
23	0000	0710	CULG	0108.0	0109.0	III	B	1	20	44	
	0433	1739	ONDR								
	0530	1200	IZMI								
	2104	2400	CULG								
24	0000	0710	CULG								
	0442	1738	ONDR								
	0500	1200	IZMI								
	2104	2400	CULG								
25	0000	0710	CULG								
	0436	1738	ONDR								
	0500	1200	IZMI								
	2104	2400	CULG								
26	0000	0710	CULG								
	0437	1735	ONDR								
	0500	1200	IZMI								
	2104	2400	CULG								
27	0000	0712	CULG								
	0438	1734	ONDR								
	0500	1200	IZMI								
	2104	2400	CULG								
28	0000	0712	CULG								
	0446	1732	ONDR								
	0500	1200	IZMI								
	2103	2400	CULG								
29	0000	0713	CULG								
	0446	1733	ONDR								
	0700	1500	POTS	1105.6	1120.7	III	GG	2	60	250	
	0500	1200	IZMI	1118.1	1119.0	III	G	2	60	180X	
			POTS	1318.3	1330.2	III	GG	2	50	275	
	2103	2400	CULG								
30	0000	0713	CULG								
	0500	1200	IZMI								
	0617	1723	ONDR								

S O L A R R A D I O E M I S S I O N
Spectral Observations

JULY 1994

OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
30 2103	2400	CULG								
31 0000	0713	CULG								
0909	1728	ONDR								
		SVTO	1022.0	1026.0	III		2	35	80	
		IZMI	1022.6	1024.5	V		2	45X	125	
0500	1200	IZMI	1022.6	1023.7	III	G	2	45X	180X	
		IZMI	1029.0	1041.0	II		2	45X	145	
		SVTO	1029.0	1044.0	II		2	35	85	ESS 1600
		IZMI	1029.5	1031.8	III	G, RS	2	45X	135	
		SGMR	1030.0	1042.0	II		1	40	70	ESS 1400
2100	2400	CULG								

Event Remarks:

B = Single burst	N = Intermittent activity in this period
C = Underlying continuum (particularly with Type I)	MOV = Moving (Type IV)
DC = Drifting chains	MWB = Meter wave burst
DP = Drifting pairs	RS = Reverse slope burst
FN = Fundamental emission (Type II)	S = Storm in the sense of intermittent but apparently connected actively
FS = Fine structures (Type IV) (includes fiber, pulsations, zebra)	SH = Secondary harmonic emission
G = Small group of bursts (<10)	STA = Stationary (Type IV)
GG = Large group of bursts (>10)	U = U-shaped burst of Type III
H = Herringbone	UE = Uncertain emission (Type II)
HARM = Harmonic	W = Weak

Frequency qualifiers:

X = Extends beyond instrument range	U = Uncertain frequency

Remarks:

SWF = Associated short wave fade observed	ESS = Estimated shock speed in km/s (Type II)
FLA = Associated flare observed (class optional)	

Stations Reporting: CULG = Culgoora IZMI = Izmiran LEAR = Learmonth ONDR = Ondrejov
PALE = Palehua POTS = Potsdam SGMR = Sagamore Hill SVTO = San Vito

NOTE:

Until recently, most radiospectrographs spanned only a narrow range of wavelengths. Most radio bursts would exceed this range and so only the broad wavelength range into which they fell could be stated with certainty. Several new radiospectrographs (e.g. Culgoora) cover wide wavelength ranges. This makes it feasible and desirable to record the actual wavelength (or frequency) of each burst. The high resolution of some new instruments also makes it possible to report more detailed information about radio bursts. This might prove particularly useful for bursts associated with terrestrial disturbances (e.g. Type II bursts). For these reasons, a new format for archiving radiospectrograph observations was developed. The new format begins this month with the spectral data for July, 1994.

SOLAR RADIO NOISE STORM AT 164 MHZ
FROM NANCAY RADIOHELIOGRAPH

July 1994

DAY	HELIOGRAPHIC POSITIONS MEAN VALUES*		IMP**	OBSERVING TIME***	
	E-W	S-N		START (UT)	END (UT)
01/07/94	-0.36	-0.20	1	0810E	1543D
02/07/94#	+0.02	-0.20	1	0755E	1548D
03/07/94#	+0.13	-0.20	1	0751E	1547D
04/07/94	+0.16	-0.30	1	0810E	1230
04/07/94	+0.44	-0.26	2	0810E	1545D
05/07/94	+0.61	-0.34	1	0751E	1547D
06/07/94	+0.77	-0.47	1	1203	1545D
06/07/94	-0.44	+0.11	1	0752E	0930
06/07/94	-0.42	+0.16	1	0915	1545D
07/07/94	-0.11	+0.11	1	0812E	0947
07/07/94	-0.41	-0.18	2	0954	1549D
07/07/94	-0.10	+0.14	1	1158	1549D
19/07/94	-1.11	+0.04	1	0810E	1523D

18: NO DATA
OTHER DAYS : NO DETECTABLE NOISE STORMS
2,3 Jul: THE POSITIONS ARE LESS PRECISE BECAUSE THE EAST-WEST ARRAY WAS NOT WORKING.

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* POSITIVE E-W AND S-N COORDINATES CORRESPOND TO THE N-W SOLAR QUADRANT

** IMP 1: FLUX<5 SFU IMP 2: 5<FLUX<20 IMP 3: 20<FLUX<100 SFU
IMP 4: 100FLUX<300 SFU IMP 5: FLUX>300 SFU

*** E NOISE STORM IN PROGRESS AT THE BEGINNING OF THE NANCAY OBSERVATIONS
D NOISE STORM IN PROGRESS AT THE END OF THE NANCAY OBSERVATIONS

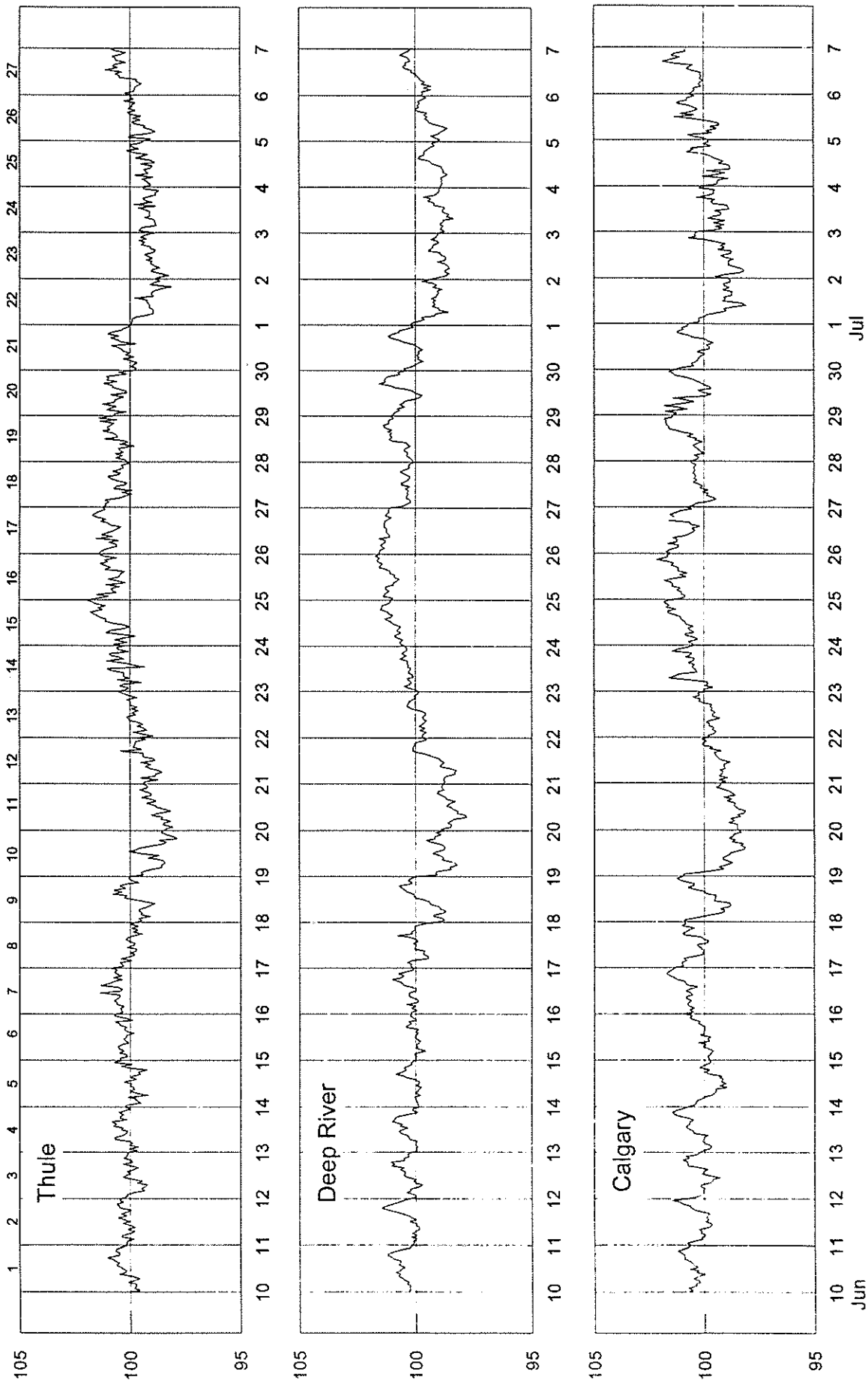
COSMIC RAY INDICES
(Neutron Monitor)
JULY 1994

Day	THULE Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	CALGARY Average (cts/h)/300	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h) 256	TOKYO Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4387	6892.1	3770.5	4008.5	1890.6	3474.5	3486.0
2	4382	6868.7	3768.7	4009.9	1886.8	3468.2	3482.2
3	4386	6868.2	3781.3	4005.4	1886.8	3470.2	3488.1
4	4397	6883.0	3785.7	4020.5	1889.9	3483.4	3493.3
5	4410	6899.5	3813.0	4040.8	1890.2	3494.7	3512.4
6	4436	6943.2	3826.0	4059.8	1891.9	3495.7	3521.8
7	4459	6972.3	3848.0	4085.0	1899.9	3515.2	3522.9
8	4465	6987.6	3847.7	4093.8	1904.0	3517.1	3535.0
9	4479	7003.6	3857.5	4091.4	1903.1	3516.8	3537.0
10	4483	7038.8	3862.0	4090.7	1904.4	3522.4	3546.0
11	4495	7050.2	3868.7	4102.5	1900.0	3517.0	3538.4
12	4524	7058.7	3839.5	4113.9	1904.8	3526.1	3537.8
13	4511	7064.7	3856.7	4109.4	1910.7	3524.7	3540.6
14	4448	7023.8	3837.5	4104.9	1901.4	3508.0	3538.8
15	4398	6921.7	3797.5	4053.8(38)	1885.4	3481.1	3493.2
16	4394	6904.3	3787.3	4036.3	1888.3	3482.2	3491.2
17	4398	6902.6	3774.0	4026.7	1884.3	3487.0	3499.5
18	4411	6917.7	3784.0	4034.0	1880.5	3496.3	3500.4
19	4441	6964.7	3814.3	4063.5	1884.8	3506.7	3517.6
20	4461	6988.2	3834.0	4079.4	1888.6	3510.9	3531.3
21	4472	6998.1	3841.2	4100.9	1887.5	3514.7	3539.6
22	4479	7033.5	3852.5	4097.8	1891.5	3516.7	3525.9
23	4487	7045.2	3857.5	4094.4	1890.6	3515.0	3529.3
24	4487	7051.6	3859.3	4106.8	1888.5	3518.7	3530.0
25	4508	7062.3	3864.2	4110.9	1891.0	3520.2	3535.7
26	4495	7057.9	3858.7	4102.5	1882.7	3514.2	3540.6
27	4492	7034.9	3842.2	4085.2	1885.8	3513.8	3535.4
28	4463	6983.8	3786.2	4062.3	1880.3	3500.1	3518.2
29	4440	6959.7	3782.5	4044.9	1874.5	3494.2	3512.5
30	4406	6919.8	3783.7	4026.9	1869.0	3478.7	3507.8
31	4409	6924.6	3797.5	4034.0	1871.4	3480.9	3519.2
Mean	4448.5	6975.0	3821.9	4067.6	1890.0	3502.1	3519.6

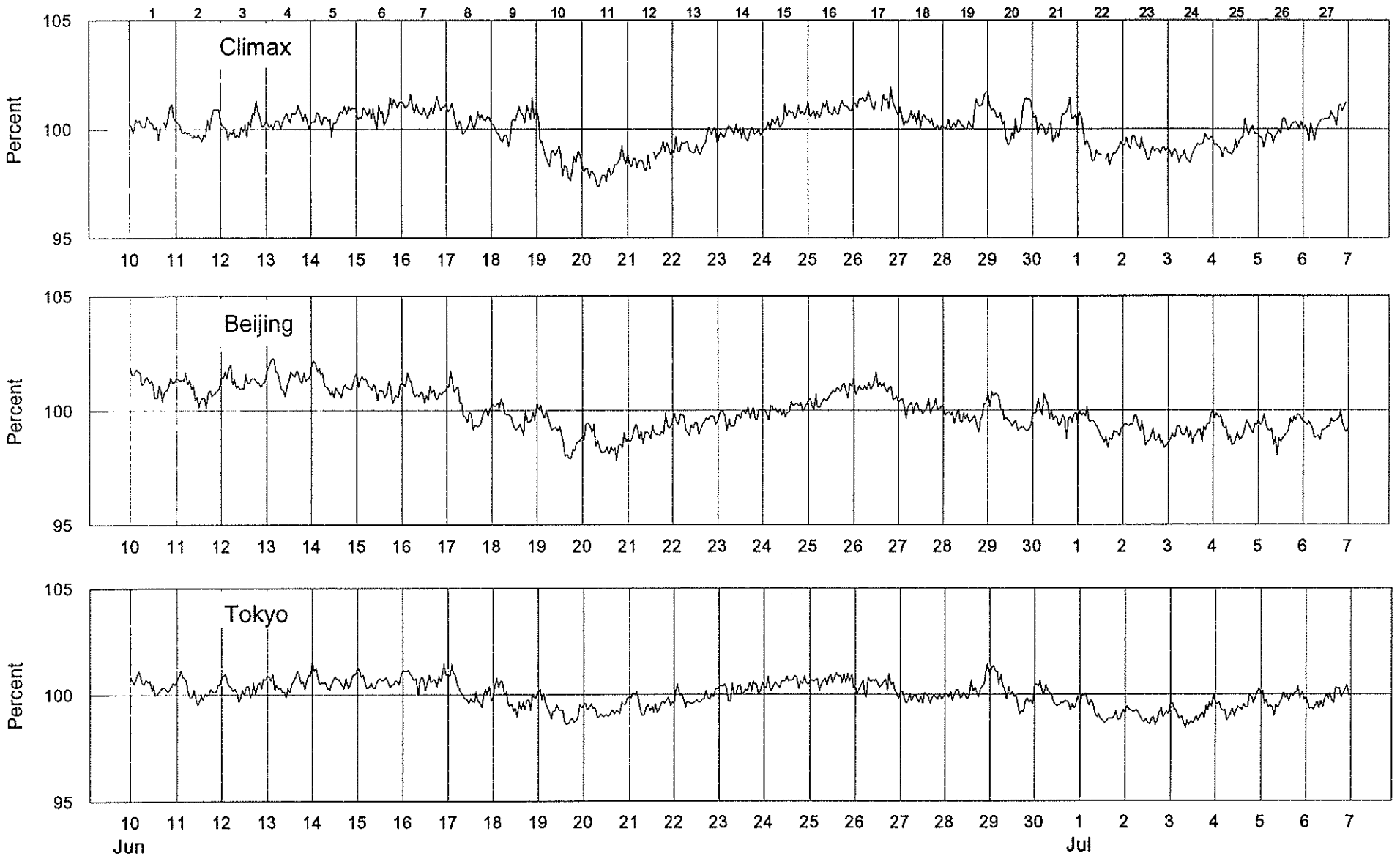
For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax and Haleakala, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours.

* = A&B includes only hours when both A&B sections are available.

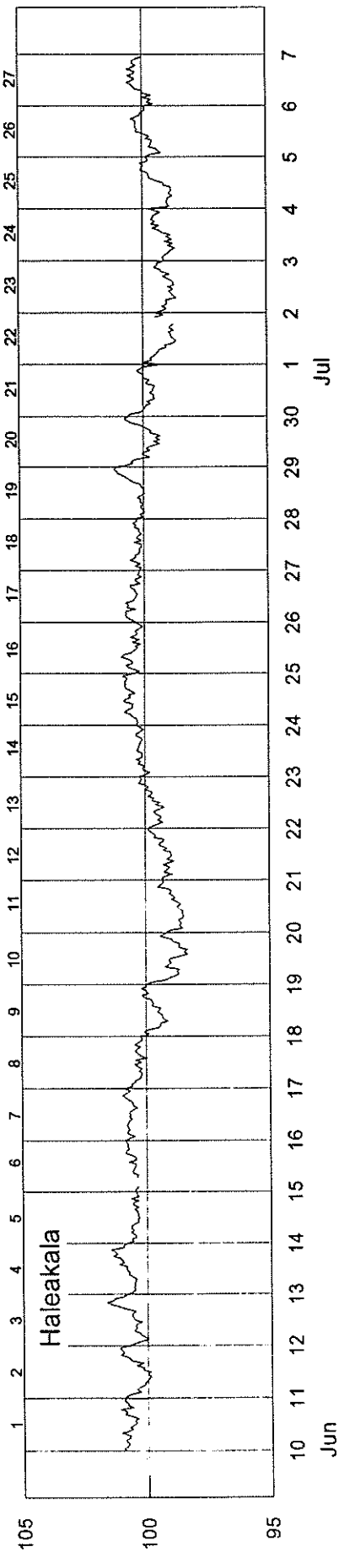
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2197 - Beginning 10 Jun 94



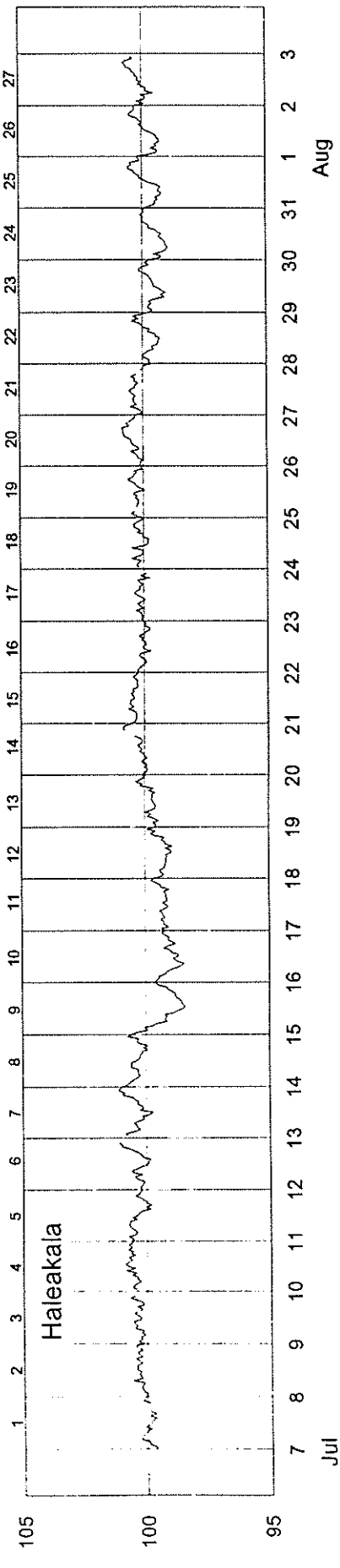
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2197 - Beginning 10 Jun 94



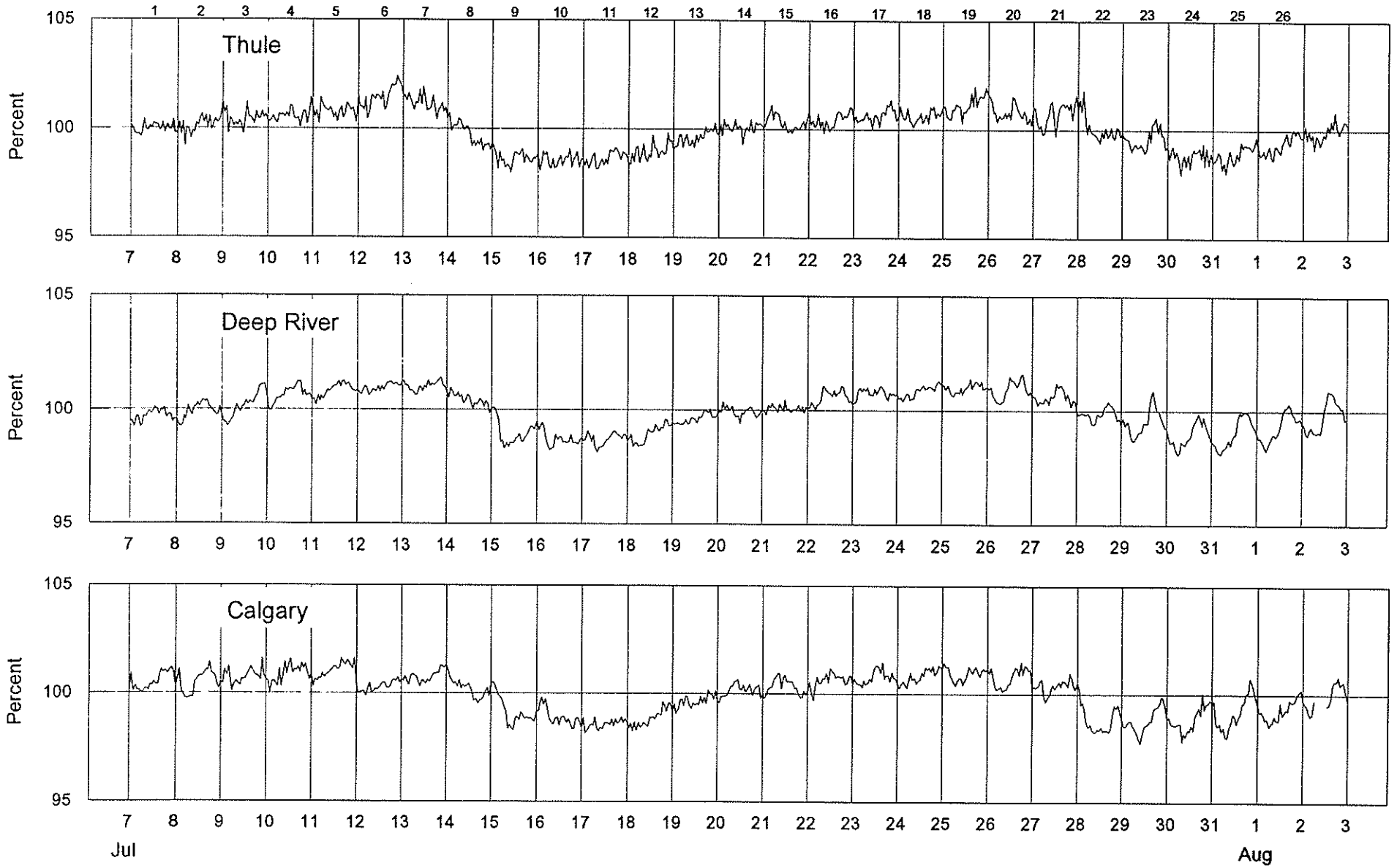
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2197 - Beginning 10 Jun 94



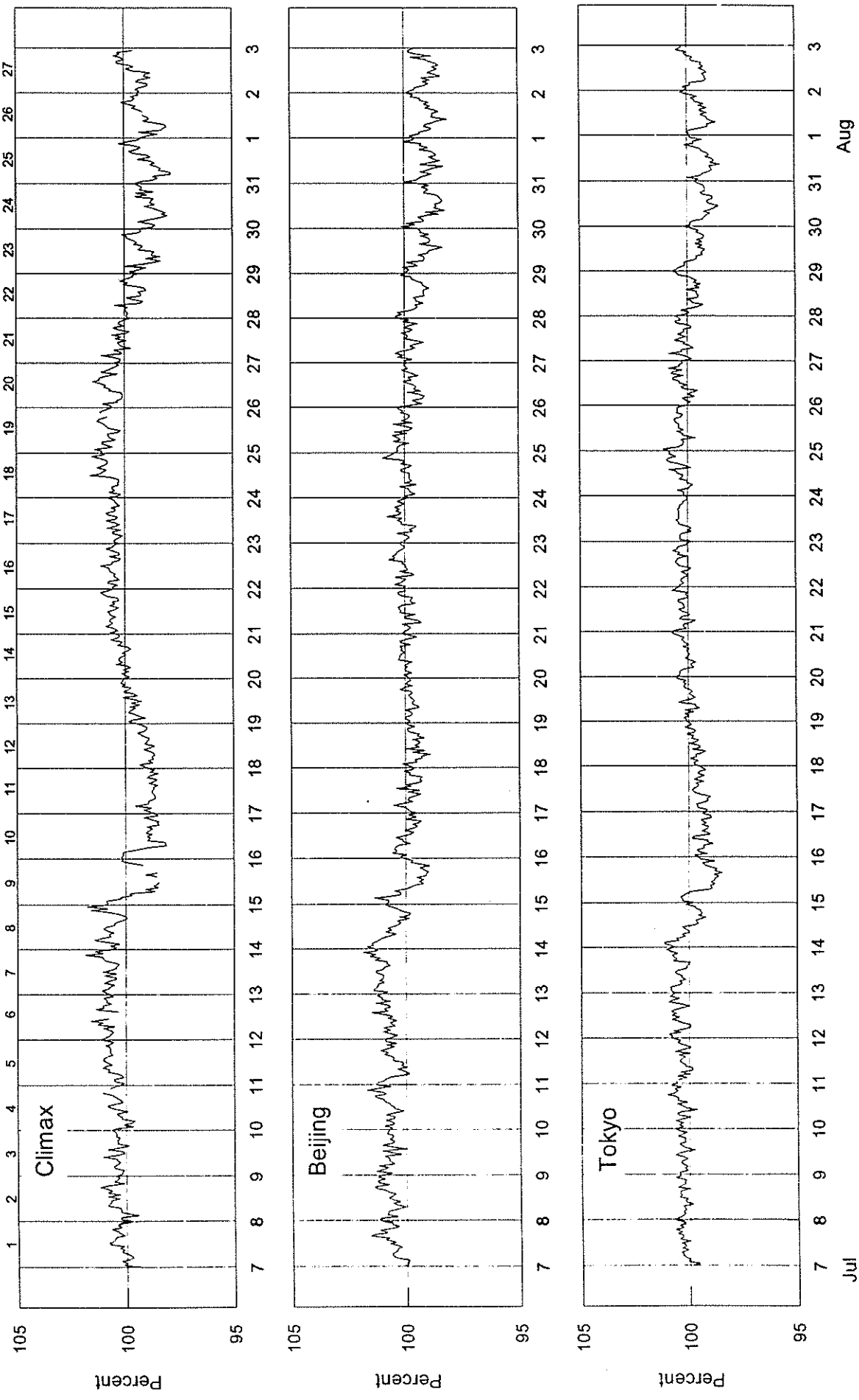
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2198 - Beginning 7 Jul 94



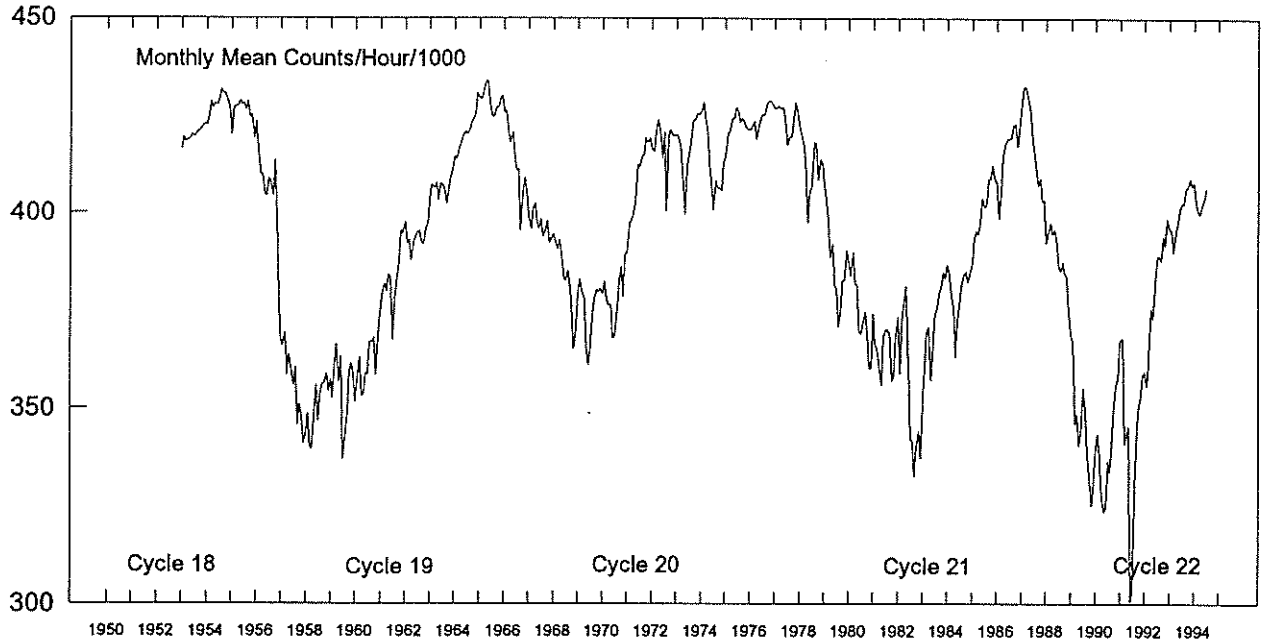
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2198 - Beginning 7 Jul 94



COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2198 - Beginning 7 Jul 94



Climax Neutron Monitor Pressure-Corrected Values
Jan 1953 - Jul 1994



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	4163	4193	4183	4187	4190	4200	4196	4205	4209	4213	4220	4226	4199
1954	4225	4246	4286	4269	4280	4277	4285	4317	4308	4306	4286	4269	4279
1955	4200	4267	4272	4273	4287	4278	4279	4264	4286	4244	4252	4193	4258
1956	4234	4160	4097	4097	4049	4045	4088	4083	4044	4135	3980	3799	4068
1957	3677	3660	3695	3585	3640	3603	3557	3606	3458	3509	3484	3410	3574
1958	3434	3485	3401	3396	3490	3560	3467	3537	3561	3564	3589	3542	3502
1959	3573	3526	3606	3664	3567	3633	3369	3420	3484	3597	3615	3587	3553
1960	3516	3573	3631	3531	3534	3589	3587	3670	3671	3682	3586	3681	3604
1961	3762	3801	3818	3800	3843	3838	3675	3784	3834	3870	3955	3949	3827
1962	3977	3922	3931	3878	3927	3941	3950	3953	3924	3919	3963	3971	3938
1963	4049	4074	4065	4077	4034	4075	4072	4060	4023	4066	4094	4112	4067
1964	4145	4139	4168	4181	4198	4208	4202	4213	4232	4240	4254	4307	4207
1965	4295	4290	4314	4335	4340	4288	4247	4246	4268	4271	4294	4300	4291
1966	4258	4262	4211	4180	4207	4146	4108	4112	3956	4055	4091	4053	4137
1967	3991	3960	4014	4025	3974	3960	3985	3940	3956	3980	3922	3933	3970
1968	3946	3925	3909	3932	3895	3830	3830	3853	3817	3761	3652	3685	3836
1969	3801	3831	3798	3783	3656	3610	3652	3730	3781	3803	3798	3807	3754
1970	3792	3824	3781	3765	3765	3679	3684	3755	3832	3862	3786	3895	3785
1971	3898	3976	3981	4003	4032	4124	4117	4145	4149	4193	4181	4192	4083
1972	4163	4158	4211	4239	4215	4141	4207	4005	4198	4214	4198	4198	4179
1973	4201	4193	4173	4075	3997	4119	4151	4180	4235	4240	4255	4253	4172
1974	4262	4283	4238	4207	4121	4077	4009	4083	4064	4064	4058	4131	4133
1975	4146	4206	4210	4239	4245	4271	4262	4231	4243	4231	4218	4214	4226
1976	4216	4223	4236	4188	4218	4244	4254	4253	4283	4287	4285	4280	4247
1977	4268	4272	4274	4267	4272	4231	4175	4194	4197	4245	4284	4260	4245
1978	4213	4198	4173	4107	3977	4058	4068	4183	4180	4085	4139	4128	4126
1979	4071	4035	3983	3888	3921	3815	3808	3710	3745	3829	3829	3905	3878
1980	3874	3842	3900	3820	3817	3697	3692	3719	3750	3687	3604	3604	3750
1981	3744	3663	3656	3601	3558	3683	3703	3702	3687	3570	3581	3682	3652
1982	3735	3590	3732	3773	3814	3606	3421	3415	3324	3402	3441	3372	3552
1983	3508	3600	3699	3708	3570	3656	3744	3752	3799	3814	3850	3834	3711
1984	3868	3850	3784	3760	3633	3727	3767	3818	3844	3851	3825	3844	3798
1985	3872	3937	3954	3948	3977	4039	4018	4026	4089	4090	4124	4091	4014
1986	4079	3988	4049	4148	4181	4191	4192	4193	4226	4229	4171	4226	4156
1987	4279	4324	4325	4294	4271	4203	4165	4120	4073	4089	4031	4035	4184
1988	3923	3949	3976	3948	3957	3934	3859	3852	3876	3846	3840	3752	3893
1989	3686	3673	3458	3485	3405	3437	3551	3494	3382	3311	3252	3309	3454
1990	3392	3434	3383	3278	3236	3244	3366	3337	3409	3497	3564	3577	3393
1991	3675	3680	3409	3428	3452	3005	3026	3253	3440	3508	3527	3585	3416
1992	3595	3557	3639	3757	3730	3830	3891	3892	3880	3941	3919	3988	3801
1993	3961	3959	3901	3955	3979	4012	4026	4027	4063	4073	4089	4073	4010
1994	4080	4030	4009	3999	4027	4036	4068						4036

Multiply table entries by 100 to obtain hourly counting rate. Climax, Colorado: N39, W106, Alt=3400 m, Cutoff Rigidity=2.99GV (1980).

NOTE: Data may differ from previously reported values due to subsequent cleanup of data and slight changes in the averaging algorithm.

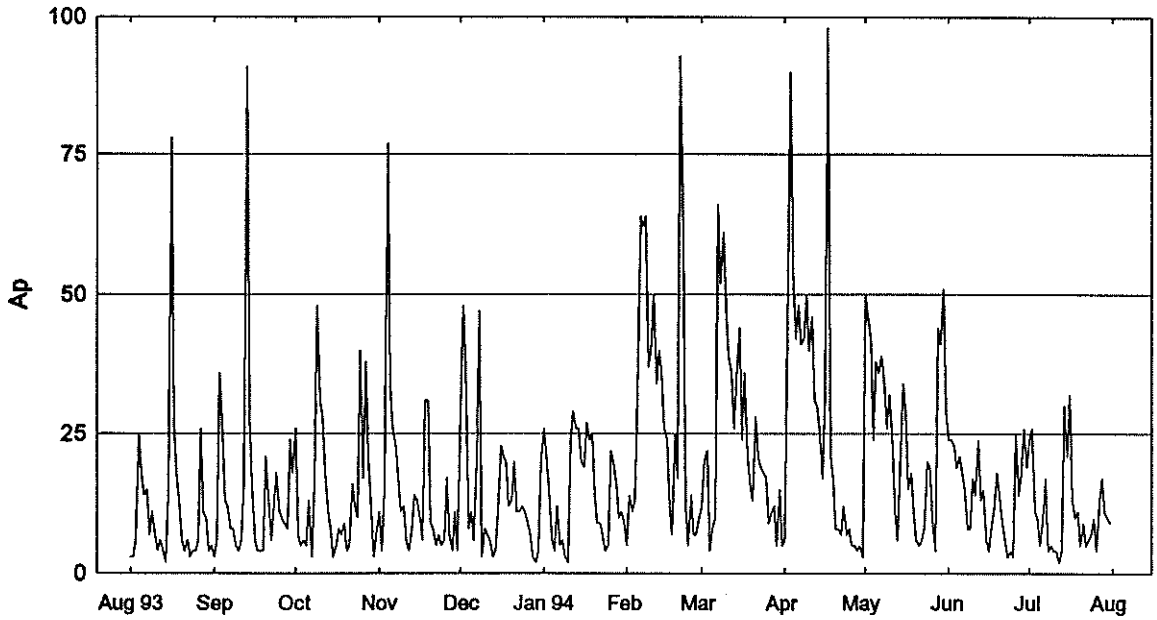
GEOMAGNETIC ACTIVITY INDICES

July 1994

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	D4	4+	4-	4	4-	3	3	4-	5-	30	24	1.2	5-	4-	4-	4o	3-	2+	3+	5-	48	42	44	49	37	
2	D3	3+	5	4+	4	3+	4	3	4	31	26	1.2	3+	5-	4o	4-	3+	3o	3-	4-	44	47	39	49	37	
3		3-	2+	3	3	2+	2-	2	3	20	11	0.6	3o	2+	4-	3+	3o	2-	2-	3o	27	20	34	31	24	
4		2-	2+	2	1+	3	3-	3	3-	19-	10	0.6	2o	2+	2+	2-	2+	2+	3-	2+	18	24	14	14	24	
5	Q8	2-	1	1+	1-	1-	1	1-	2+	9+	5	0.2	2+	1+	1+	1o	1o	1+	1-	3-	11	11	9	9	10	C
6		2	2-	2+	2-	2	2-	2+	4+	18	10	0.6	2+	2-	3-	2+	2o	2-	2o	4-	19	20	13	14	19	
7		3	4	3	2+	3+	3	4-	3-	25	17	0.9	3o	4-	3o	3-	4-	3-	3+	3-	34	36	34	35	36	
8	Q5	1+	1+	1	1	2-	1	1-	1-	9-	4	0.1	1+	1+	1o	1o	1+	1o	0+	1-	7	10	5	7	8	C
9	Q10K	1+	1-	1-	0+	2	3	1+	1-	10	5	0.2	1-	0+	0+	1-	2-	2o	1o	1-	7	15	4	5	14	CC
10	Q2	0+	0+	1+	1-	1+	1+	1+	1	8-	4	0.1	1-	0o	2-	1-	1+	1+	1o	1-	6	12	6	8	10	CC
11	Q6	1	1	0	0+	2-	2	1	1+	8+	4	0.1	1-	1o	0o	1-	1+	1+	1o	1o	6	11	5	4	12	CC
12	Q1	2-	1	0	0	0+	1	0+	0	4+	2	0.0	1+	1o	0+	0o	0+	1-	0o	0o	4	8	4	7	5	CC
13	Q3	0+	1	2-	0+	1-	1	1+	1+	8-	4	0.1	1o	2-	1o	0+	0+	1+	1-	1o	6	11	3	5	9	CK
14	D2	1+	2-	2-	4	5+	6-	4	5	29-	30	1.3	1+	2+	2+	4o	4o	5-	4-	4+	42	40	34	21	54	
15	D5	5	3-	3-	2	3-	3-	3-	5+	26-	21	1.1	4+	3o	3-	2+	2o	2o	2+	4+	32	40	24	31	33	
16	D1	6	4	3	5-	4-	4-	4-	4+	33	32	1.3	5o	4-	3o	5-	3+	3o	3+	4o	51	54	44	60	38	
17		4-	3-	2+	3+	3	2+	2+	3-	22+	13	0.8	3o	3o	2o	3+	3+	3-	2+	3-	27	28	25	25	28	
18		3+	3	2+	2	3	2-	2	1+	19-	10	0.6	3+	3-	3-	2+	3o	2o	2+	2-	22	25	18	25	17	
19		3+	3-	3-	2	2+	1	2	3+	19+	11	0.6	3-	3o	3o	2+	3-	1o	2o	3o	22	26	22	23	25	
20	Q7	2-	1-	1+	1+	2-	1	1	1	10-	5	0.2	2-	1o	1+	1+	2+	1-	1o	0+	9	11	11	9	13	C
21		2	3-	2+	2+	3	2-	2-	2	18-	9	0.5	3-	3-	3-	3-	3o	1+	2-	2-	19	20	14	17	17	
22	Q9	2+	2	1+	1+	1+	1-	1	0+	10+	5	0.2	2o	2o	2o	2-	2-	0+	1o	0+	10	14	8	13	9	CC
23		1	2	1	1+	2-	2+	2-	2	13	6	0.3	1+	2-	1o	2o	2-	2+	2-	1+	12	16	10	11	15	CC
24		2-	1+	1+	2	1+	1+	2-	3	14-	7	0.3	2-	1+	2-	2-	1+	1o	2o	3-	13	16	9	10	15	C
25		3	2+	2	2	3	2+	2-	2+	19-	10	0.5	3o	2+	3-	2+	3-	2o	1+	3-	20	24	17	21	20	
26	Q4	1	1+	1-	1	1	1-	1+	1+	8+	4	0.1	1-	2o	1o	1o	1+	1-	1o	1+	8	9	9	9	9	C
27		2+	5	2	1	1	1+	2+	3+	18+	13	0.7	2+	5-	3-	1o	1o	1+	2+	3+	25	26	21	25	22	
28		3+	4-	3	3+	3	2	4-	3+	25+	17	0.9	4-	4o	3o	3o	3-	2+	3+	3o	34	32	25	32	25	
29		3	3-	3-	2	2	3-	2+	3	20+	11	0.6	3o	3o	3-	2o	2+	3o	2+	3-	23	23	24	23	24	
30		4-	3-	2-	1+	2	2-	2	3	18	10	0.6	3+	3o	2o	2-	3-	2o	2-	3o	22	18	23	20	21	
31		2+	2	1+	2+	2	1+	1+	4	17-	9	0.5	2o	2+	1+	3o	2o	1+	2-	3+	18	20	16	15	21	
Mean											11	0.55									20.8	22.8	18.4		20.6	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	4o	3+	4-	4-	3o	3-	3+	4+	43	5o	4o	4-	4+	3-	1+	3o	5o	52	89.7	32	34	35	
2	3o	5-	4+	4-	4-	3+	3-	3+	46	3+	4+	4-	4-	3o	2+	3-	4o	42	85.6	43	41	30	
3	3-	2+	4-	3o	3o	2o	2o	3-	25	3+	3-	4-	3+	3o	1+	1+	4-	29	89.3	39	34	34	
4	2-	2+	3-	2o	3-	3-	3-	2+	20	2o	2+	2-	1+	2+	2o	3-	3-	17	87.4	41	34	32	
5	2o	2-	2o	1+	1+	2-	1o	3o	13	2+	1o	1o	1-	1-	1+	0+	2o	9	86.2	27	28	31	
6	2+	2o	3-	2+	2+	2o	3-	4+	24	2+	1+	2+	2+	2-	1+	1+	3-	15	87.1	27	31	32	
7	3o	4-	4-	3-	4-	3o	4-	3+	37	3o	4-	3-	3o	4-	3-	3-	2+	30	91.1	47	57	36	
8	1+	1+	1+	1+	2-	1+	1o	1o	9	1o	1+	1o	1-	1o	0+	0o	0o	5	88.7	60	58	34	
9	1o	1-	1-	1+	2+	3-	2-	1o	11	0+	0o	0o	0o	1o	1+	0+	0o	3	88.8	49	49	34	
10	1-	0+	2o	1o	2o	2-	1o	1+	9	0+	0o	1o	0+	0+	1-	1o	0o	3	88.9	60	61	34	
11	1o	1+	0+	1o	2-	2o	1+	1+	9	1-	1o	0o	0o	0+	0+	0+	0+	3	88.5	72	72	34	
12	2-	1-	0+	0o	0+	1+	0o	0o	4	1+	1+	0o	0o	0o	0o	0o	0o	3	85.7	68	67	31	
13	1-	1+	1+	0+	1-	2-	1+	2-	8	1+	2-	1-	0o	0o	0+	0o	0+	4	84.1	59	58	29	
14	2-	2+	2+	4o	4+	5o	4o	4+	48	1o	2+	2o	4-	4-	4+	3o	4o	35	84.6	45	55	29	
15	4o	3o	3o	3-	3-	3-	3-	5-	35	5-	3o	2o	2-	1+	1+	2o	4+	28	85.7	39	35	31	
16	5-	4-	3-	5o	3+	3+	3o	4-	50	5o	4o	3o	4+	3+	3-	3+	4+	52	85.1	54	46	30	
17	3o	3o	2+	3+	4-	3-	3-	3-	28	3o	3o	2-	3+	3-	3-	2o	3-	25	83.0	53	47	28	
18	3o	3o	3o	3-	3+	2+	3-	2+	26	3+	3-	2-	2o	3o	1+	2+	1o	19	82.7	48	43	27	
19	3-	3o	3-	3-	3-	1o	2o	3o	22	3o	3o	3o	2+	3-	1o	2+	3+	23	80.1	29	26	25	
20	2o	1o	1+	2-	2+	1+	1o	1o	10	1+	1o	1+	1+	2+	0+	1o	0o	8	79.4	29	25	24	
21	2+	3o	3-	3-	3o	2-	2-	2o	20	3o	3-	3-	2+	3o	1+	1+	2-	19	79.8	27	24	24	
22	2o	2o	2-	2o	2o	0+	1o	1-	11	2o	2o	2o	1+	1+	0o	1-	0o	9	80.1	19	15	25	
23	1+	2o	1+	2o	2+	3-	2-	2-	15	1o	2-	1-	2o	1o	2-	2-	1o	9	78.2	16	14	22	
24	2-	2-	2o	2+	2-	2-	2+	3+	17	1+	1+	1+	1+	1-	1-	1+	2+	9	77.7	14	15	22	
25	3-	3-	2+	3-	3o	3-	2-	2+	21	3o	2+	3-	2o	3-	1+	1+	3-	19	77.8	12	11	22	
26	1o	1+	1o	1o	1+	1+	2-	2-	9	1-	2+	1o	1o	1o	0o	1-	0+	6	76.3	17	13	20	
27	2o	4+	3-	1o	1+	2-	2o	3+	23	3-	5o	2+	1-	0+	1o	2+	4-	27	76.6	14	11	21	
28	3+	4-	3o	3+	3o	2+	4-	3o	33	4+	4+	3o	3o	2o	2o	3o	3+	35	77.1	16	12	21	
29	3-	3o	3-	2-	2o	3o	2+	3-	22	3o	3o	3o	2+	2+	3o	2o	3-	25	78.0	7	7	22	
30	3o	3-	1+	2-	3-	2o	2-	3-	19	4-	3+	2+	2o	2+	2-	2-	4-	25	77.6	12	12	22	
31	2-	2+	2-	3o	2+	2-	2-	3o	18	2o	2o	1o	3o	2-	1o	2-	4-	17	76.8	10	12	21	
Mean									22.1									19.5	83.2	35.0	33.8	27.9	

Daily Average Indices Ap
Aug 1993 - Jul 1994

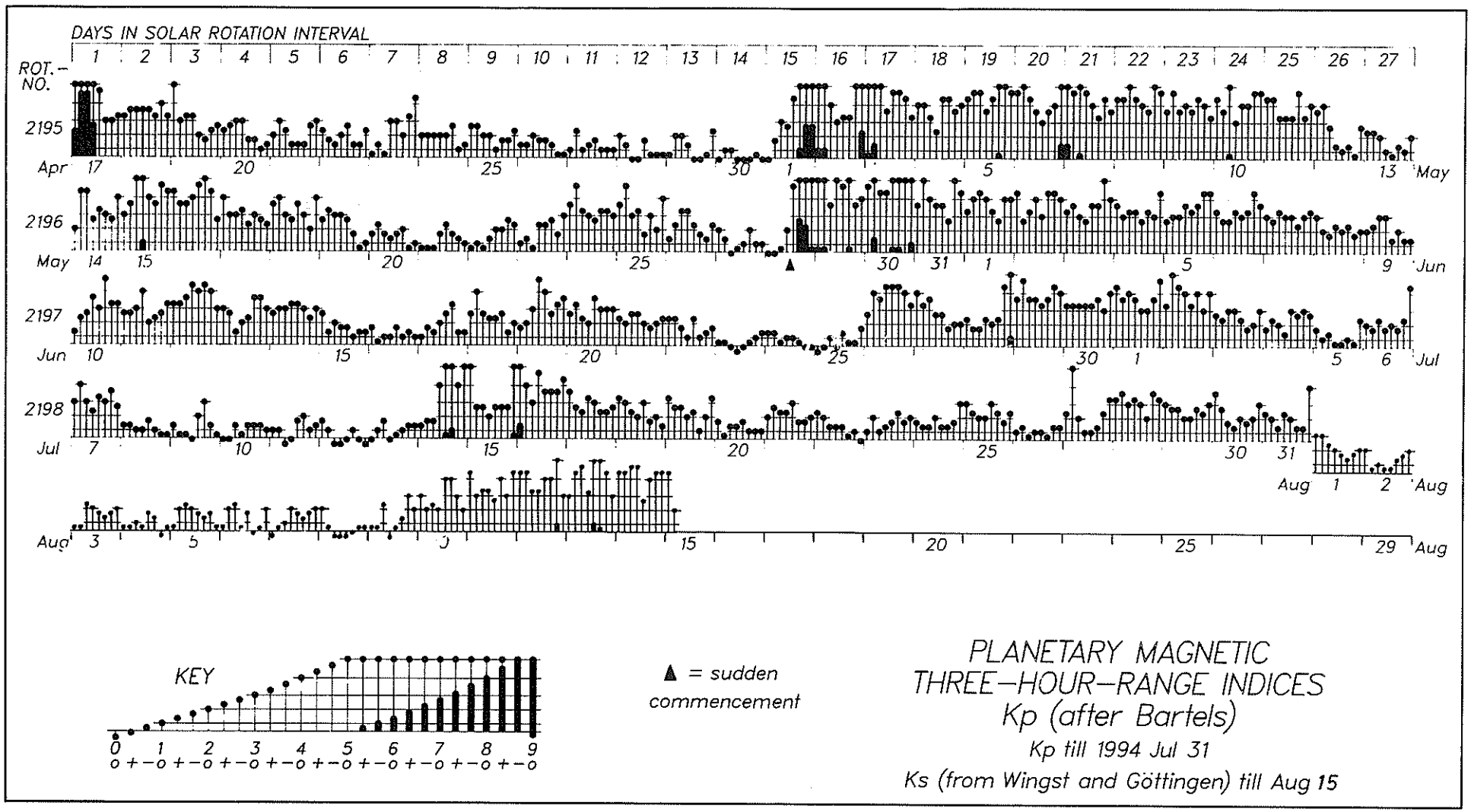


Day	Aug 93	Sep	Oct	Nov	Dec	Jan 94	Feb	Mar	Apr	May	Jun	Jul
1	3	3	26	11	29	26	5	12	6	50	24	24
2	3	6	7	4	48	21	14	20	53	46	24	26
3	6	36	5	15	37	15	11	22	90	42	23	11
4	25	25	6	77	8	6	13	4	54	24	19	10
5	18	13	5	34	11	4	32	8	42	38	21	5
6	14	12	13	26	6	12	64	10	48	36	18	10
7	15	8	3	23	20	5	62	66	41	39	15	17
8	7	8	16	17	47	6	64	52	42	35	8	4
9	11	5	48	11	3	3	37	61	50	26	8	5
10	7	4	31	12	8	2	40	48	40	32	17	4
11	4	6	28	6	7	24	50	39	46	25	14	4
12	6	16	18	4	6	29	34	36	31	11	24	2
13	4	91	11	8	3	26	40	26	30	6	13	4
14	2	28	8	14	4	26	36	35	26	19	15	30
15	14	16	3	13	11	20	26	44	17	34	6	21
16	78	6	5	10	23	19	24	24	32	29	4	32
17	27	4	8	6	21	27	12	36	98	15	8	13
18	18	4	7	31	20	24	7	21	21	18	12	10
19	12	4	9	31	12	25	25	16	17	11	18	11
20	6	21	4	9	13	14	17	13	8	6	14	5
21	4	14	5	8	20	9	93	28	8	5	9	9
22	6	6	16	5	11	9	60	21	7	6	6	5
23	3	12	12	7	11	7	12	19	12	8	3	6
24	4	18	10	5	12	4	5	18	7	20	4	7
25	4	11	40	6	11	5	14	17	8	19	3	10
26	6	10	17	17	9	22	7	9	5	10	25	4
27	26	9	38	7	7	20	7	11	5	4	14	13
28	11	8	21	4	3	16	10	12	4	44	18	17
29	10	24	11	11	2	10		5	5	41	26	11
30	4	18	3	4	4	11		15	3	51	19	10
31	5		7		20	9		5		29		9
Mean	12	15	14	15	14	15	29	24	29	25	14	11

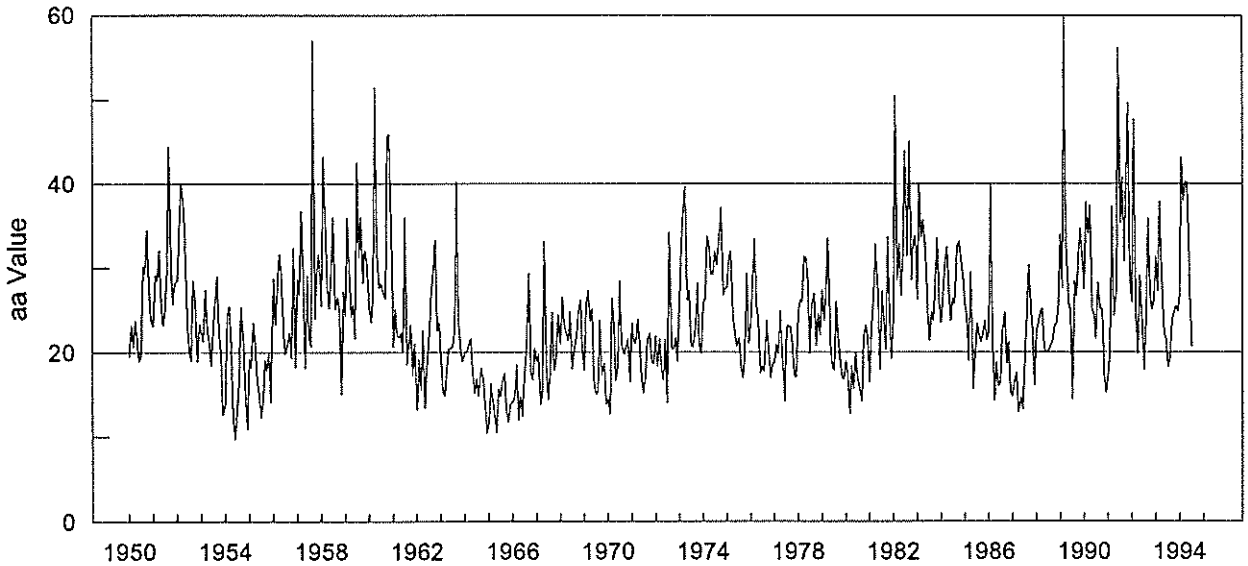
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Gottingen

Kp through July 31, 1994



Monthly Mean aa Index Jan 1950 - Jul 1994

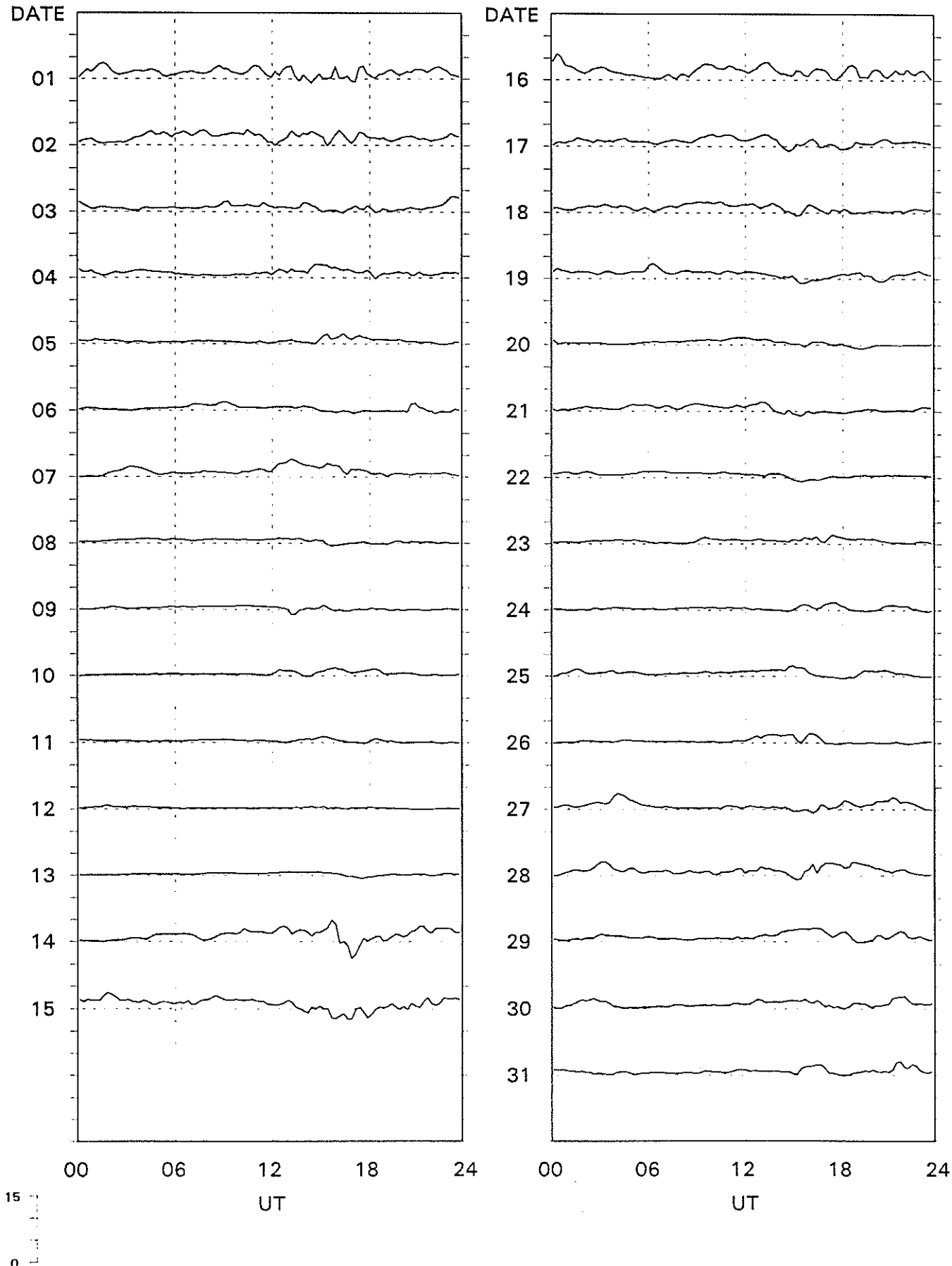


Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	24.6	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.5	23.1	26.6	32.8	26.9	18.0	27.2	24.0	20.4	33.7	24.1	19.3	24.4
1982	24.2	50.6	28.5	32.9	26.7	32.1	43.9	31.4	45.1	28.5	33.0	33.8	34.2
1983	26.2	40.0	33.6	35.7	31.6	24.9	21.3	24.9	23.7	28.3	33.5	26.0	29.1
1984	23.5	26.7	30.7	32.5	27.2	23.7	26.4	25.8	32.6	33.1	31.0	29.0	28.5
1985	25.7	24.1	19.0	29.5	15.6	19.9	23.4	22.0	21.2	22.2	23.7	21.4	22.3
1986	22.4	40.0	21.1	14.3	18.8	15.9	16.3	22.3	24.7	18.6	21.2	15.3	20.9
1987	14.8	16.6	17.6	12.9	14.7	13.2	19.3	24.3	30.3	25.8	22.4	16.0	19.0
1988	22.4	23.4	24.8	25.2	20.5	20.0	20.2	20.6	21.4	23.2	23.3	25.5	22.5
1989	33.9	27.5	60.1	32.8	25.7	24.9	14.4	28.4	26.7	31.4	34.7	31.4	31.0
1990	27.4	37.8	33.9	37.4	25.1	24.6	21.6	28.2	25.1	25.1	17.4	15.2	26.6
1991	17.2	20.1	37.3	24.3	27.3	56.2	35.2	40.8	30.7	44.1	49.7	28.0	34.2
1992	25.9	47.7	24.5	19.8	29.1	24.8	17.9	24.1	35.8	27.0	25.0	26.1	27.3
1993	31.2	27.1	37.9	29.2	22.1	21.8	18.2	19.2	23.8	24.6	25.5	24.8	25.5
1994	26.5	43.2	37.9	40.2	40.2	27.2	20.6						33.7

PC-INDEX

Thule

July, 1994



Preliminary Values.

15-min. Values.

Div. Geophys. D M I

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

JULY 1994

Sta	Geomag Lat	Commencement Day	Time (UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges K	D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
HYB	07.6N	01	0000	..	..	..	..	02(2)	5	6	89	14	03	10
GUA	04.3N	01	00--	..	..	..	..	01(1)	5	--	70	20	01	13
GUA	04.3N	01	21--	..	..	..	..	02(2)	5	--	110	20	02	16
ETT	00.7S	01	0000	..	..	..	..		-	6	117	38	03	10
HER	33.6S	01	18--	..	..	..	..	01(8)	5	19	69	65	03	08
HYB	07.6N	05	2000	..	..	..	..	06(8) 07(7)	4	5	77	21	07	23
UJJ	13.6N	06	1300	..	..	..	..		-	5	68	17	07	23
ABG	09.4N	06	1300	..	..	..	..	02(2,4,6) 06(8) 07(3,7) 14(4)	4	5	77	23	07	23
ETT	00.7S	06	1600	..	..	..	..		-	3	72	38	08	02
TRD	01.1S	06	1300	..	..	..	..		-	3	81	59	07	23
HYB	07.6N	13	2100	..	..	..	..	14(6) 16(4)	5	6	114	28	17	05
DRV	75.2S	13	1337	SC	10	10	- 24	16(5)	5	538	390	459	20	09
BJI	28.8N	14	03--	..	..	..	..	14(6)	5	6	72	27	15	03
KRC	16.4N	14	0138	..	..	..	..	14(6,8) 15(4,8) 16(4)	5	33	85	56	16	17
UJJ	13.6N	14	0700	..	..	..	..		-	5	103	22	16	20
ABG	09.4N	14	0700	..	..	..	..	14(5,6,8) 15(8) 16(4,6)	5	5	97	36	16	20
GUA	04.3N	14	10--	..	..	..	..	14(8)	5	--	60	40	15	09
ETT	00.7S	14	0400	..	..	..	..		-	5	144	57	17	10
TRD	01.1S	14	0700	..	..	..	..		-	4	129	59	16	20
AMS	46.8S	14	09--	..	..	..	..	16(1)	5	18	95	54	17	12
CZT	51.5S	14	09--	..	..	..	..	14(8) 16(1,8)	5	23	120	62	17	18
PAF	57.2S	14	09--	..	..	..	..	16(1)	6	32	321	210	17	16
GUA	04.3N	15	22--	..	..	..	..	16(1)	5	--	50	20	16	07
ETT	00.7S	24	0734	SC	- 0.3	11	6		-	5	98	26	25	20
ETT	00.7S	27	0200	..	..	..	..		-	5	74	33	30	22
HER	33.6S	27	03--	..	..	..	..	27(2)	5	13	45	48	27	08
AMS	46.8S	27	03--	..	..	..	..	27(2)	5	20	51	37	30	04
DRV	75.2S	28	0033	SC	14	-40	64	30(5)	5	354	233	401	31	09

Stations:

ABG = ALIBAG
AMS = MARTIN DE VIVIES
ANN = ANNAMALAINAGAR
BJI = BEIJING
CAN = CANBERRA
CMO = COLLEGE
CZT = PORT ALFRED
DRV = DUMONT D'URVILLE
ETT = ETAIYAPURAM
FRD = FREDERICKSBURG
GNA = GNANGARA
GUA = GUAM
HER = HERMANUS
HON = HONOLULU
HYB = HYDERABAD
JAI = JAIPUR
KRC = KARACHI
PAF = PORT AUX FRANCAIS
PMG = PORT MORESBY
SHL = SHILLONG
SIT = SITKA
TRD = TRIVANDRUM
UJJ = UJJAIN

Stations reporting no storms observed this month: CAN

MAGNETIC STORM SUDDEN COMMENCEMENTS AND SOLAR FLARE EFFECTS (PRELIMINARY REPORT ON RAPID MAGNETIC VARIATIONS)

JULY 1994

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
	None		01	0212-0217	MPO
			01	0503-0509	MPO
			04	0615-0621	MPO
			05	1548-1554	MPO
			06	2136-2148	QUE
			07	2115-2121	MPO
			09	0148-0154	MPO (ssc: BDV)
			09	1459-1546	TEN
			12	0912-0915	MPO
			13	0418-0424	MPO
			13	0842-0848	MPO
			17	0928-0933	MPO
			22	0827-0839	BDV
			23	0645-0648	MPO
			24	1007-1019	CLF (si: LER WNG HRB)
			24	1015-1021	MPO
			25	0639-0644	MPO
			27	1423-1440	TEN
			28	0633-0639	MPO

REPORTING OBSERVATORIES (up to the 2nd of September):
SOD DOB NUR LER ESK WNG NGK HAD BDV CLF HRB NAG GCK MMB AQU EBR COI BJI SPT KAK HTY KNY QUE TEN LNP MPO HER CNB AMS CZT PAF DRV

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, but unmistakable; C means very poor, doubtful; and - means no quality figure given. The * means that the SSC, at least in one component, was preceded by a small reversed impulse. SSCs are given only when five or more stations report the event. SFEs include all reports. If an SFE is confirmed by solar or ionospheric events, the name of the station is underlined.

CONTENTS

Prompt Reports Number 601 Part I

LATE DATA

GEOMAGNETIC ACTIVITY INDICES

June 1994

Day		Kp Three-Hourly Indices 1 2 3 4	5 6 7 8	Sum	Ap	Cp	Km Three-Hourly Indices 1 2 3 4	5 6 7 8	aa Provisional Am	N	S	M	
1		3+ 4 4+ 4	3+ 3- 4 4	30-	24	1.1	3+ 4- 4o 4+	3o 2+ 4- 3+	41	42	43	48	37
2	D3	4+ 3- 3+ 4	3 4+ 4+ 4	30	24	1.2	3+ 3o 3o 4o	3o 3+ 4- 4-	39	43	36	37	42
3	D5	3+ 4- 3 3-	4- 4- 5 4	29	23	1.1	3o 4- 3o 3-	3+ 3o 4o 3+	36	47	39	36	51
4		4- 3 3+ 3+	3- 3+ 3 4+	27-	19	1.0	3+ 3o 3+ 3+	3- 3+ 3- 4-	34	29	37	35	31
5		3- 3 3 4-	3+ 4- 4+ 4+	28	21	1.1	2+ 4- 4- 3o	3o 3o 3+ 3+	35	38	44	37	45
6		3+ 3- 3- 3+	3 3+ 4+ 4-	26+	18	1.0	3o 3- 3- 3+	3o 3- 4- 3+	31	36	32	32	37
7		3 3- 3+ 3	3 2+ 3 3+	24-	15	0.8	2+ 3- 3+ 3+	3- 3- 3- 3o	28	28	34	30	32
8	Q9A	3 2 2- 2+	2 2+ 2- 2	17	8	0.4	3- 2+ 2- 3-	2+ 2o 2- 2o	17	19	17	18	18
9	Q8A	2 2+ 3 3	1+ 2 1+ 1+	16+	8	0.5	2- 2+ 3o 3-	1o 2- 1o 1o	14	22	15	23	14
10		1+ 2+ 3- 4-	3 5- 3+ 3+	24+	17	0.9	1+ 3- 3o 4o	3o 3+ 3- 3-	29	39	30	32	37
11		3- 3- 3 4	2 2+ 3- 3+	23-	14	0.8	2+ 2+ 3o 4-	2- 2o 2+ 3+	25	31	24	29	26
12	D4	3+ 3+ 4- 4+	4 4+ 4 3	30	24	1.2	3o 3o 3+ 4o	4- 4o 3+ 3-	39	45	39	43	40
13		3 3- 1+ 2	2+ 4- 4- 3	22-	13	0.8	3- 2+ 1+ 2+	2+ 3o 3o 2+	21	34	16	20	30
14		3- 3 3 3+	3+ 3 2+ 3	24-	15	0.8	2+ 3- 3- 3-	3- 3- 2+ 3-	23	31	23	28	26
15	Q5	3- 1+ 2 2-	2- 1 1+ 1+	13	6	0.3	2+ 1+ 2o 2o	2- 1o 1+ 1-	11	12	11	13	10 C
16	Q4	2- 1- 1 1	2- 1 1+ 1	9+	4	0.2	1+ 1- 1o 1o	2- 1o 1+ 1-	7	11	7	7	11 CC
17	Q7A	1 2- 1+ 2	3- 3+ 1+ 1+	15-	8	0.4	1- 1+ 1+ 3-	3- 3- 2- 1+	14	17	14	11	20
18		3- 4 3- 2+	2+ 3- 1+ 2	20	12	0.7	2o 3o 2+ 3-	2o 2+ 1+ 2o	17	27	15	24	18
19		2- 2 3 5-	4 3- 3+ 4-	25	18	1.0	2- 2- 3- 4+	4- 3- 3- 3+	29	34	28	30	33
20		3- 3+ 2+ 2	4- 3 3 3	23	14	0.8	2+ 3o 2+ 2o	3+ 2+ 2+ 3-	22	34	21	19	36
21	Q10A	2+ 2 3- 3-	2 2- 2 2+	18-	9	0.5	2o 2- 3- 3o	2o 2- 2- 2o	17	20	14	18	16
22	Q6	2+ 2+ 2- 1	2+ 1 1+ 2-	14-	6	0.3	2o 2+ 2o 1+	2o 1- 1o 1+	11	17	12	17	12 K
23	Q1	1- 1- 0+ 0	0+ 1- 1 1+	5	3	0.0	1- 1- 0+ 0o	0o 0+ 1o 1+	4	8	4	5	7 CC
24	Q2	1+ 1+ 1- 1	1 1- 0+ 0+	7-	4	0.1	1o 1+ 1- 1o	1- 0+ 0+ 0+	5	9	5	10	4 CC
25	Q3	0 0+ 1 0+	1+ 1- 1- 2-	6	3	0.1	0o 0o 0+ 0+	1o 0+ 1o 1+	4	9	3	5	8 C
26	D2	3- 4 4- 4+	4+ 4+ 4 3+	31-	25	1.2	3- 4- 3+ 4-	4- 4- 4- 3+	41	48	43	39	52
27		4 3+ 4- 3-	3- 2- 2 2	22	14	0.8	4- 3+ 4o 3o	3- 1+ 2+ 2o	28	27	32	40	19
28		2+ 2- 2- 2+	2 2+ 4+ 6-	22+	18	1.0	2o 2- 2- 3-	2o 3- 3+ 5-	27	34	30	15	49
29	D1	4- 5- 4- 4-	3+ 4- 4+ 4	31	26	1.2	4- 5- 3+ 3o	2+ 4- 4- 3+	42	55	43	51	47
30		3+ 3+ 3+ 3+	3+ 4- 3 4	27+	19	1.0	3o 3+ 3+ 3+	3- 3+ 3+ 3+	34	40	34	37	37
Mean					14	0.74			24.2	29.6	24.9	27.2	

Day	Kn Three-Hourly Indices 1 2 3 4	5 6 7 8	An	Ks Three-Hourly Indices 1 2 3 4	5 6 7 8	As	Sa	Prov Ri	Ra	Rs	IMF
1	3+ 4- 4o 4+	3o 2+ 4- 3+	42	3+ 3+ 4- 4+	3- 2+ 4- 4-	39	69.6	0	0	13	
2	4- 3o 3+ 4-	3o 4- 4- 4-	41	3o 3- 3o 4o	3o 3o 4- 4-	37	69.9	0	0	13	
3	3o 4- 3o 3o	3+ 3+ 4o 3+	37	3o 4- 3o 3-	3+ 3o 4- 3o	35	70.3	0	0	14	
4	4- 3+ 4- 3+	3o 3+ 3o 4-	37	3+ 3o 3+ 3+	3- 3o 2+ 4-	32	69.5	0	0	13	
5	3- 3+ 3+ 3o	3o 3o 3+ 4-	34	2+ 4- 4- 3+	3+ 3+ 3+ 3+	36	70.3	0	0	14	
6	3o 3o 3- 3+	3o 3+ 4- 3+	32	3+ 2+ 3- 4-	3o 2o 4- 3+	31	72.7	9	7	17	
7	3- 3o 3+ 3+	3o 3- 3- 3+	29	2o 2+ 3+ 4-	3- 3- 3o 3o	28	79.4	13	22	24	
8	3o 3- 2- 3-	2- 2+ 2- 2o	18	3- 2o 2- 3-	3- 2o 2- 2o	17	82.9	43	43	28	
9	2- 3- 3o 3o	1+ 2o 2- 2-	17	2- 2o 3o 3-	1o 1+ 0o 1-	12	85.5	43	44	30	
10	2- 3- 3+ 4+	3+ 4o 3o 3o	36	1- 3- 3o 4-	3- 2- 2+ 3-	22	88.0	50	50	33	
11	3- 3o 3o 4-	2o 2+ 3- 3o	28	2- 2- 3- 4-	2- 1+ 2o 4-	21	89.1	63	56	34	
12	3o 3+ 3+ 4+	4- 4o 3+ 3-	41	3o 3o 3o 4-	4- 4o 3o 3-	37	89.0	53	53	34	
13	3- 3- 2- 3-	2+ 3o 3+ 3-	24	2+ 2o 1+ 2o	2+ 3o 3- 2+	18	87.7	59	46	33	
14	3- 3o 3- 3o	3o 3o 3- 3o	27	2+ 3- 3- 3-	2+ 2o 2o 2+	20	88.0	58	58	33	
15	3- 2- 2+ 2+	2- 1+ 1+ 1o	14	2+ 1+ 2- 2-	2- 1- 1o 0+	9	91.0	54	54	36	
16	2- 1+ 1+ 1o	2- 1+ 1+ 1+	9	1+ 0+ 1- 1o	2- 0+ 1o 0o	6	90.8	52	51	36	
17	1o 2- 1+ 3-	3o 3o 2+ 2-	18	0+ 1o 1o 2+	3- 2o 1+ 1o	11	86.6	42	42	32	
18	2+ 3+ 3- 3o	2+ 3- 2- 2o	22	2- 2o 2+ 2+	2o 1+ 1+ 2-	14	80.9	37	36	25	
19	2o 2- 3- 5-	4- 3o 3o 4-	36	1+ 2- 3o 4-	3+ 2- 2o 3-	22	79.8	37	32	24	
20	2+ 3+ 3- 2+	3+ 3- 3- 3o	26	2o 3- 2o 1+	3o 2+ 2o 2+	18	78.9	19	16	23	
21	2+ 2+ 3- 3o	2+ 2- 2o 2+	20	1+ 1+ 2o 3o	2- 2- 2- 2-	13	76.8	14	12	21	
22	2o 3- 2+ 1+	2o 1+ 1+ 2-	14	2- 2+ 1+ 1+	2o 0+ 1- 1+	10	74.6	15	16	19	
23	1o 1o 0+ 0o	0o 1- 2- 1+	5	0+ 0o 1- 0+	0o 0o 1- 1o	3	75.5	22	24	20	
24	1+ 1+ 1- 1+	1o 1- 0+ 1-	7	1- 1o 1- 1o	0o 0o 0o 0o	3	75.2	37	34	19	
25	0o 0+ 0+ 1-	1+ 1- 1o 2o	6	0o 0o 0o 0+	0+ 0o 1o 1o	3	75.5	29	25	20	
26	3- 4- 3+ 4-	4o 4- 3+ 3+	40	2+ 4- 3+ 4-	4- 4- 4+ 3+	43	76.3	15	14	20	
27	4- 3+ 4o 3-	3o 2- 2o 2o	29	3+ 3o 4- 3o	3- 1o 2+ 2o	26	75.4	10	12	19	
28	2+ 2o 2o 3o	2- 3- 4- 5-	28	2- 1o 1+ 2+	2o 2+ 3o 5o	26	76.4	15	14	21	
29	4- 5- 4- 4-	3- 4- 4- 4-	46	4- 5- 3o 3-	1+ 3+ 4- 3+	38	81.4	26	23	26	
30	3+ 4- 3+ 3o	3o 3+ 3o 4-	35	3o 3o 3o 3+	3- 3+ 3+ 3-	32	85.4	27	27	30	
Mean			26.6			22.1	79.7	28.1	27.0	24.1	

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."