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Data for June, July 1996 and Late Data

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SOLAR-GEOPHYSICAL DATA

Number 624

(Issued in Two Parts)

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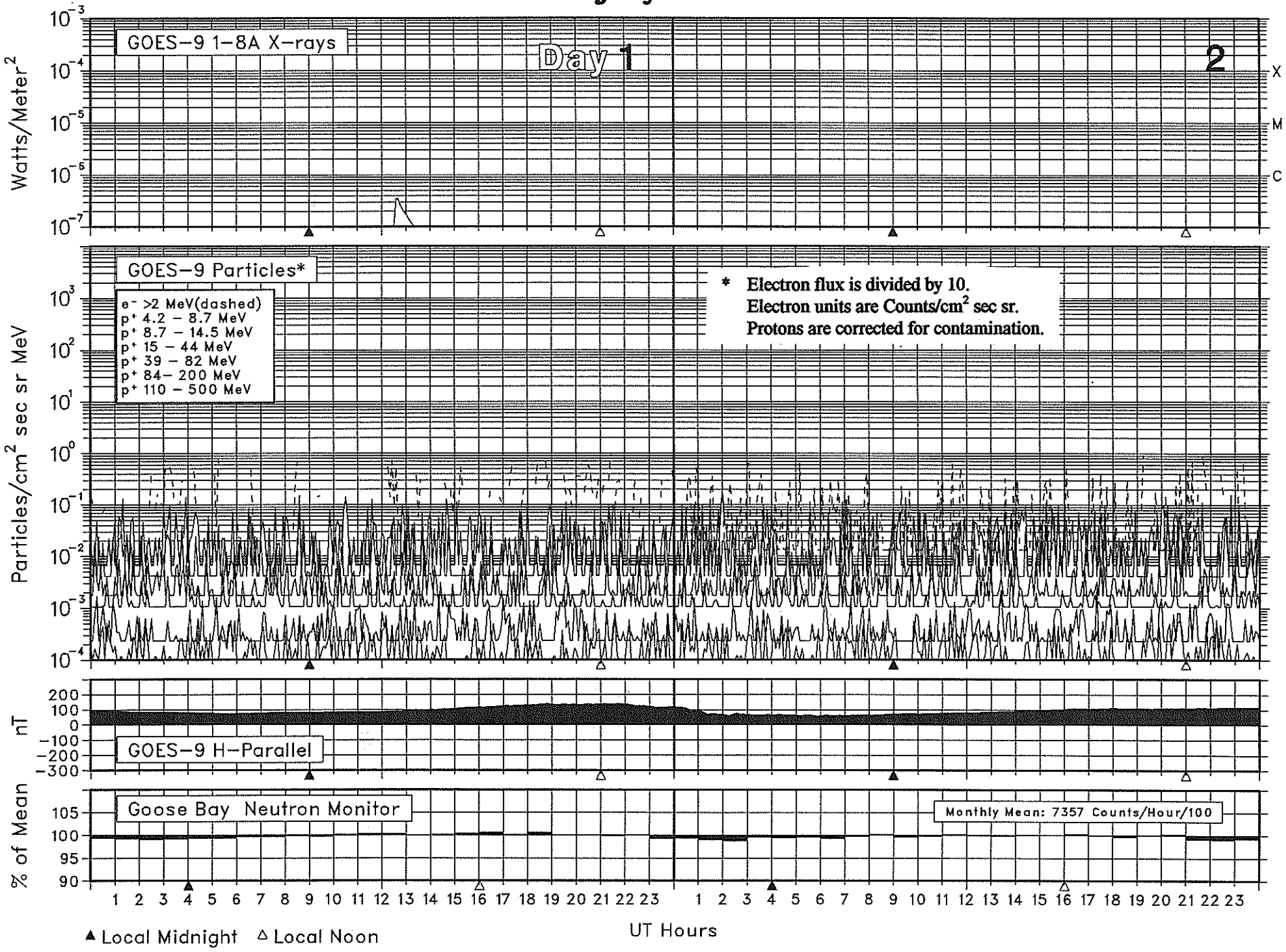
July 1996



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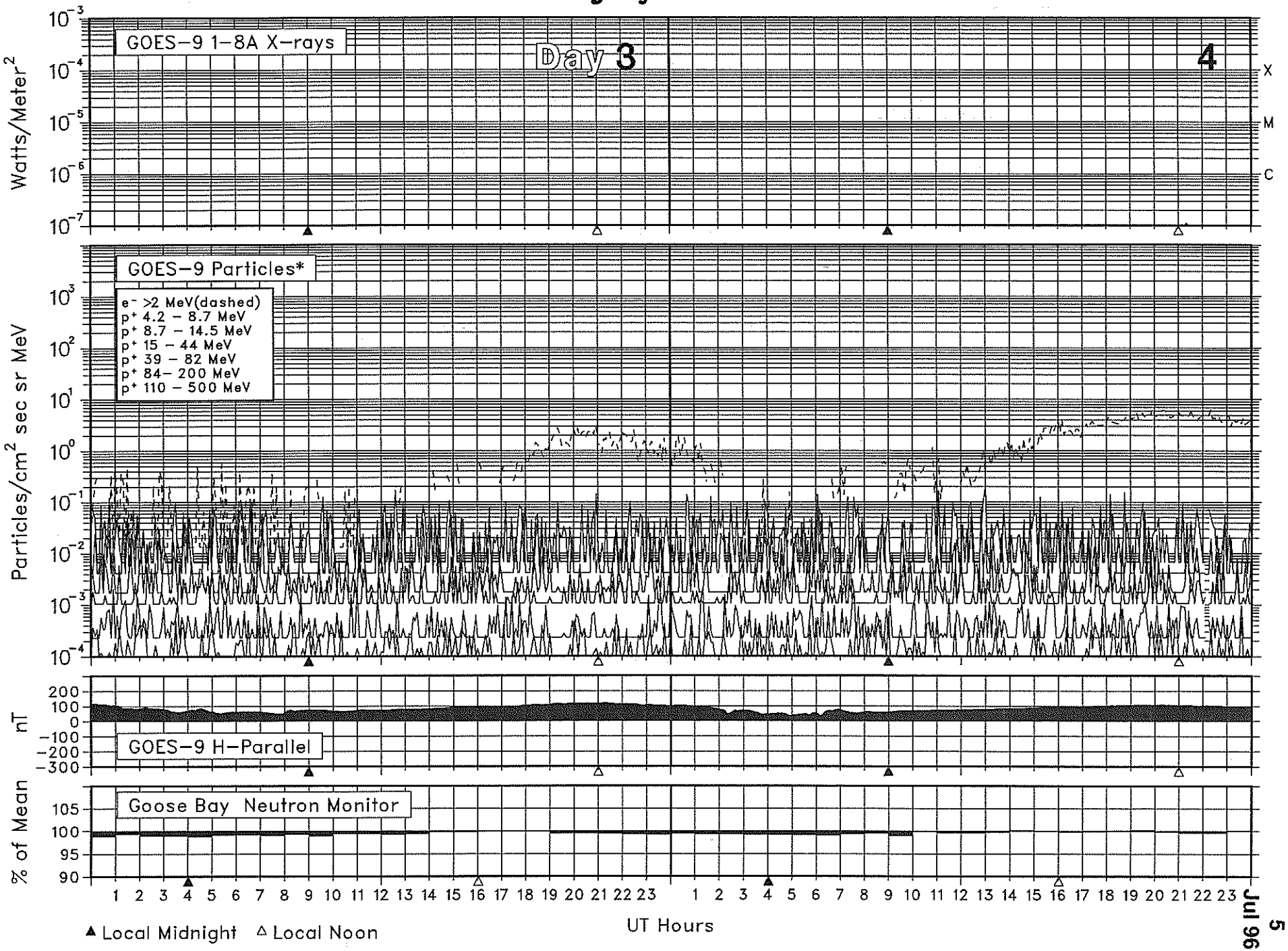

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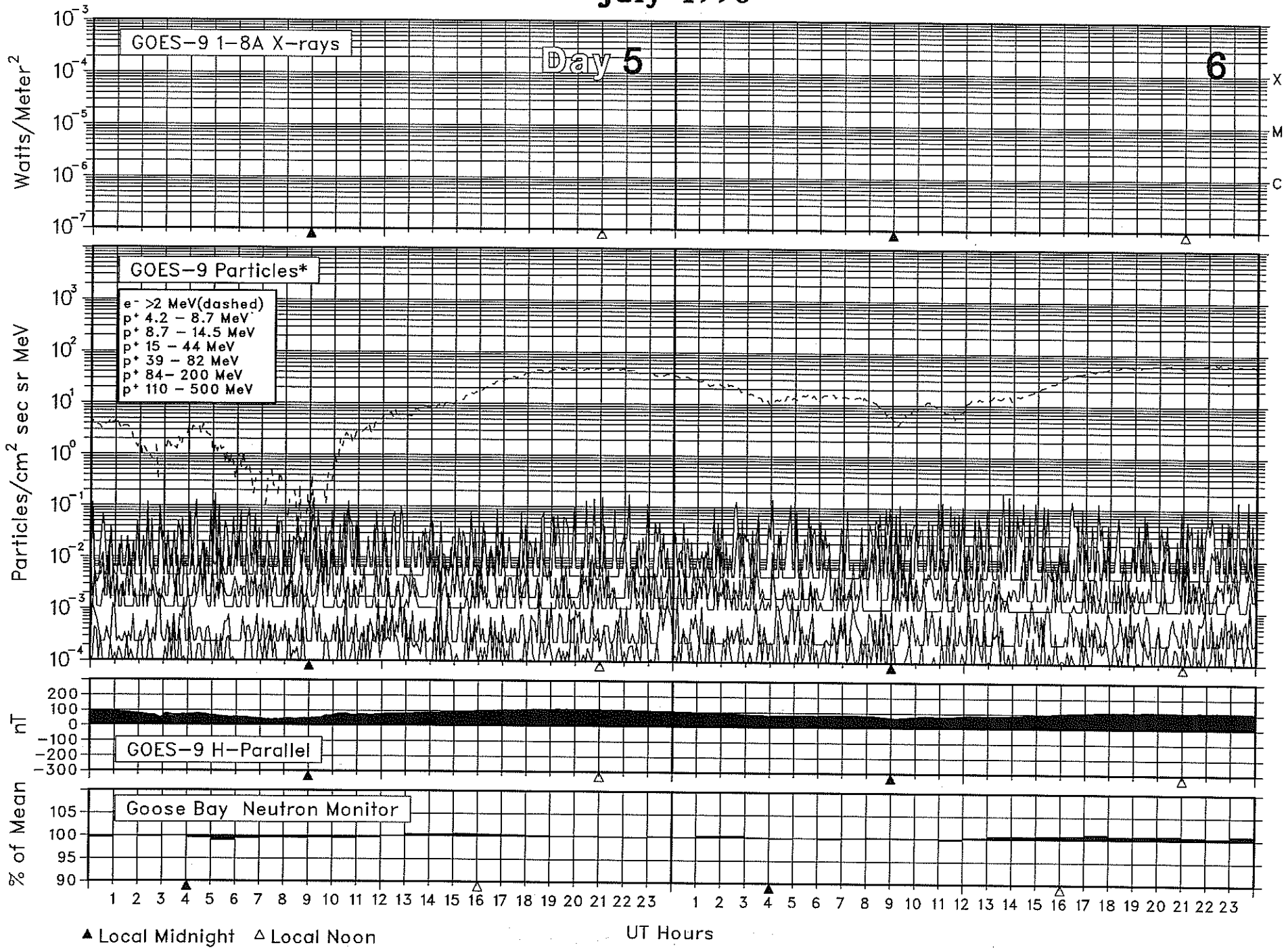

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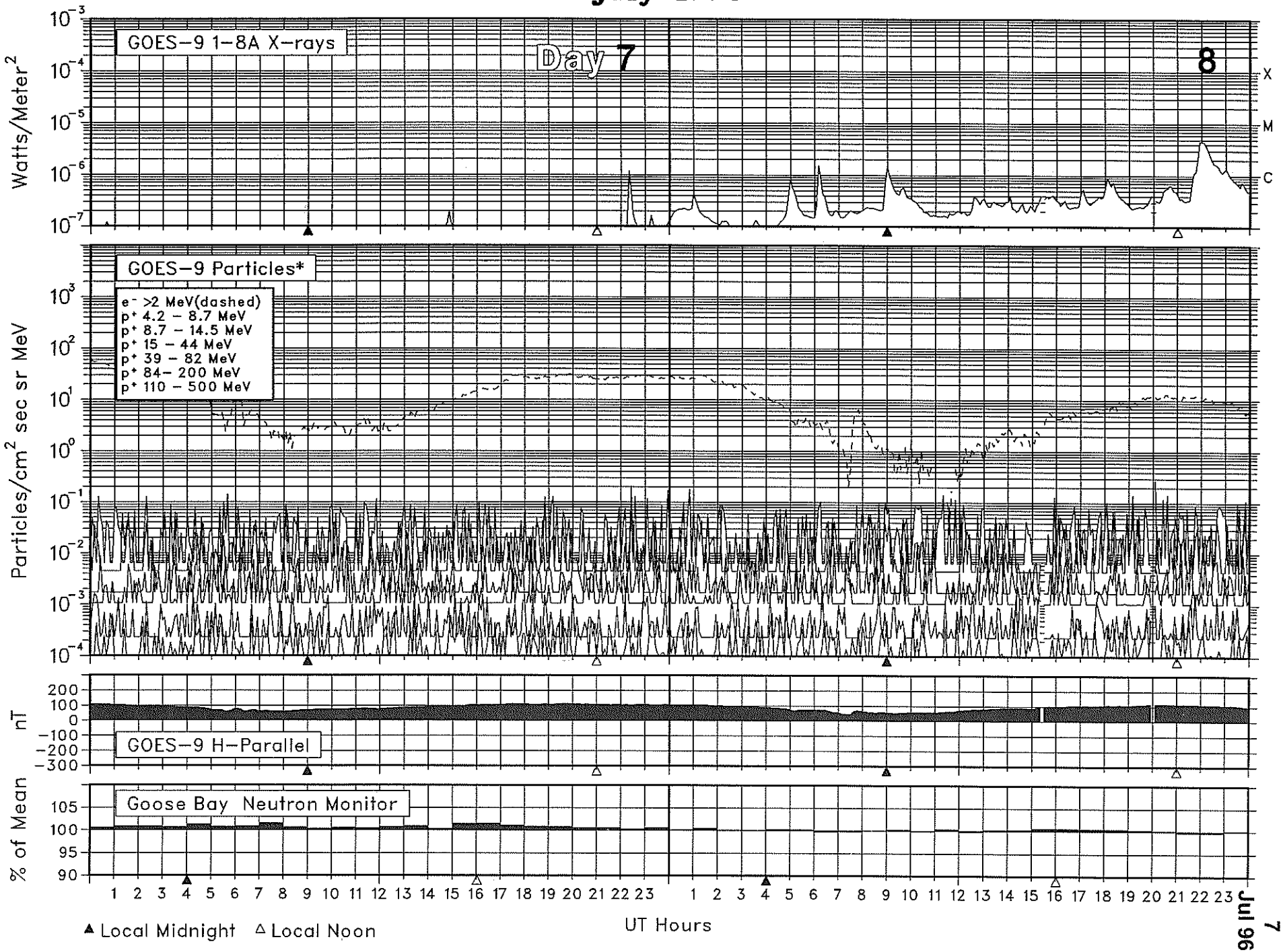
July 1996



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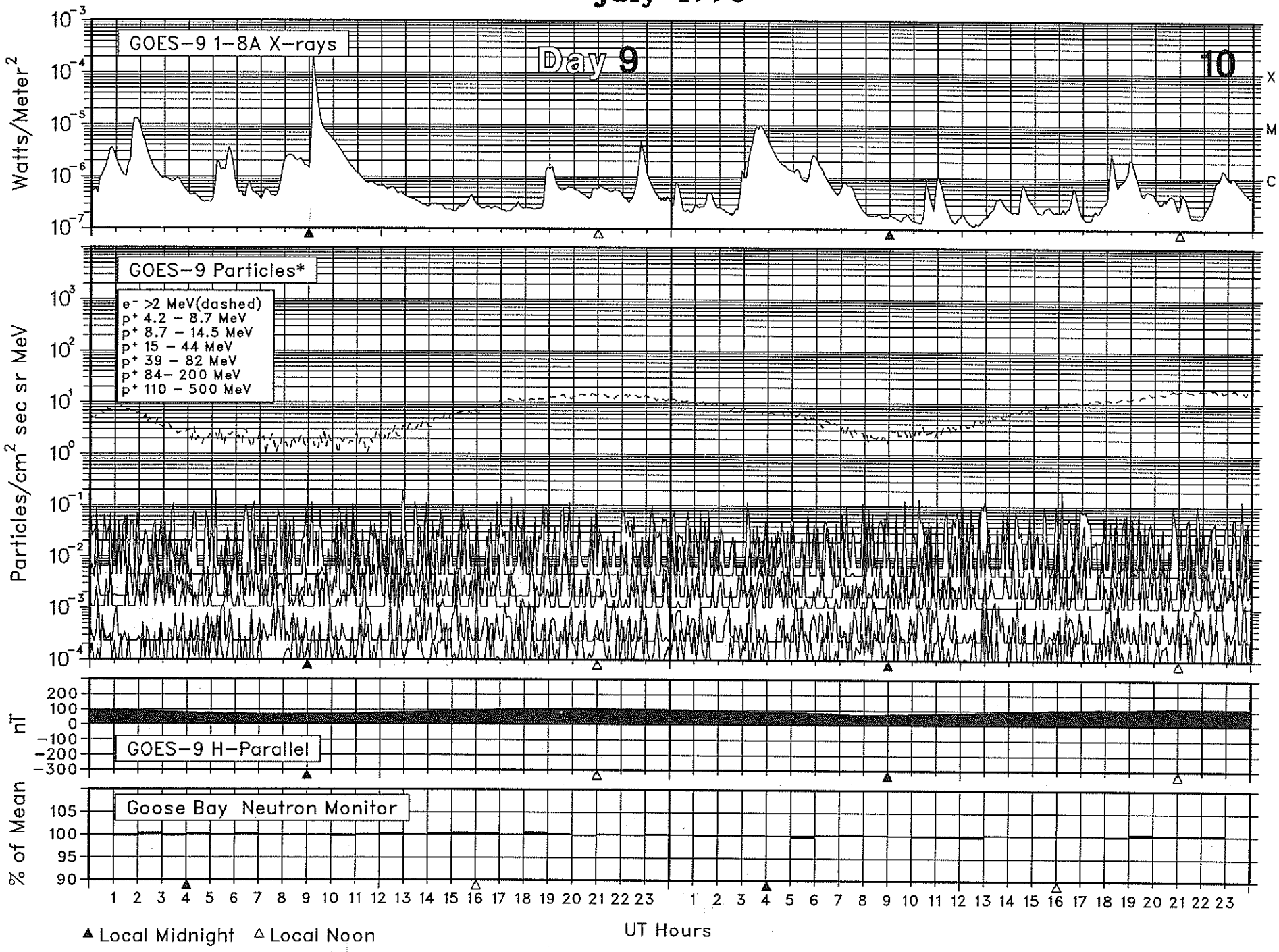

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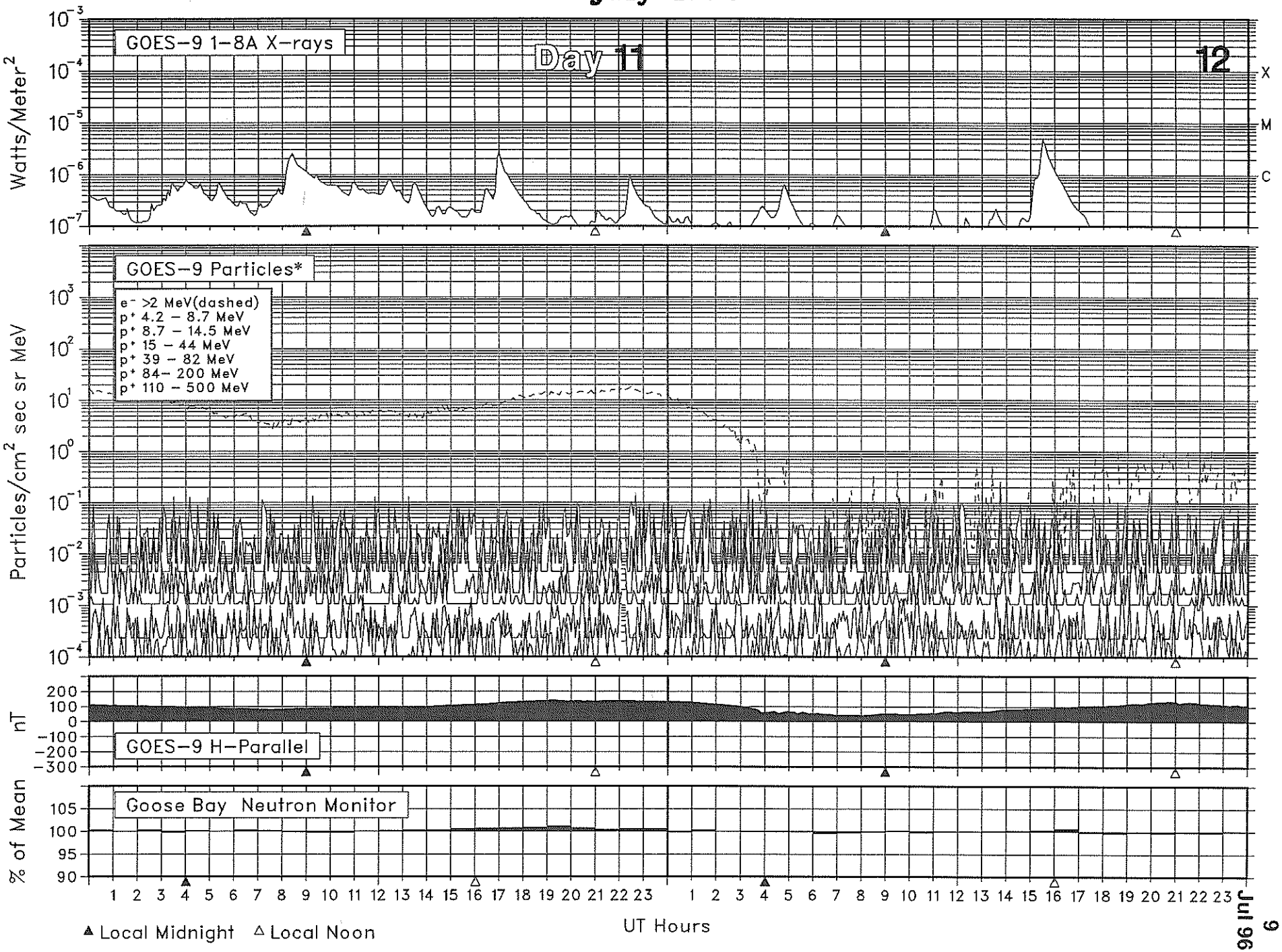

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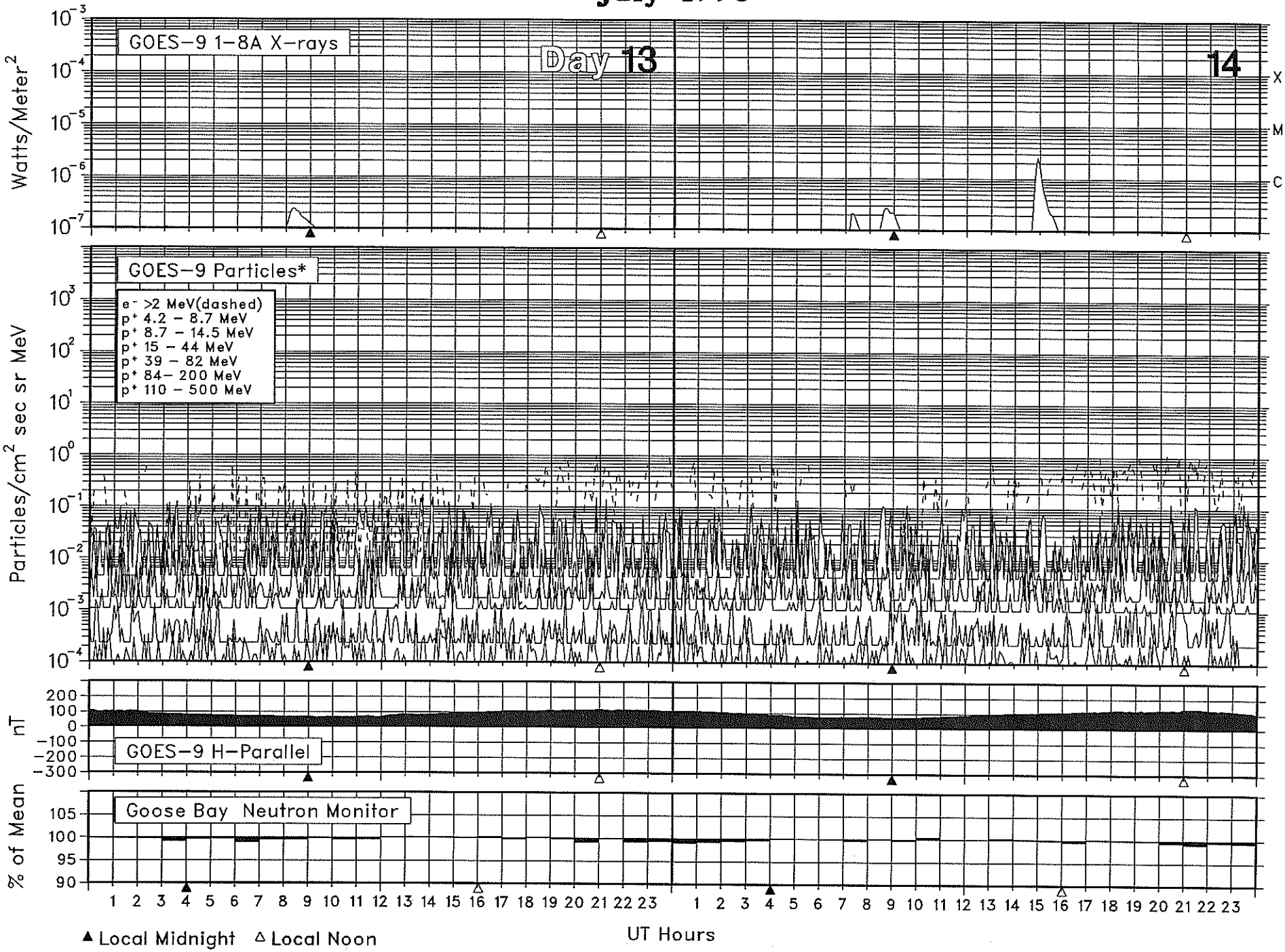

10 Jul 96

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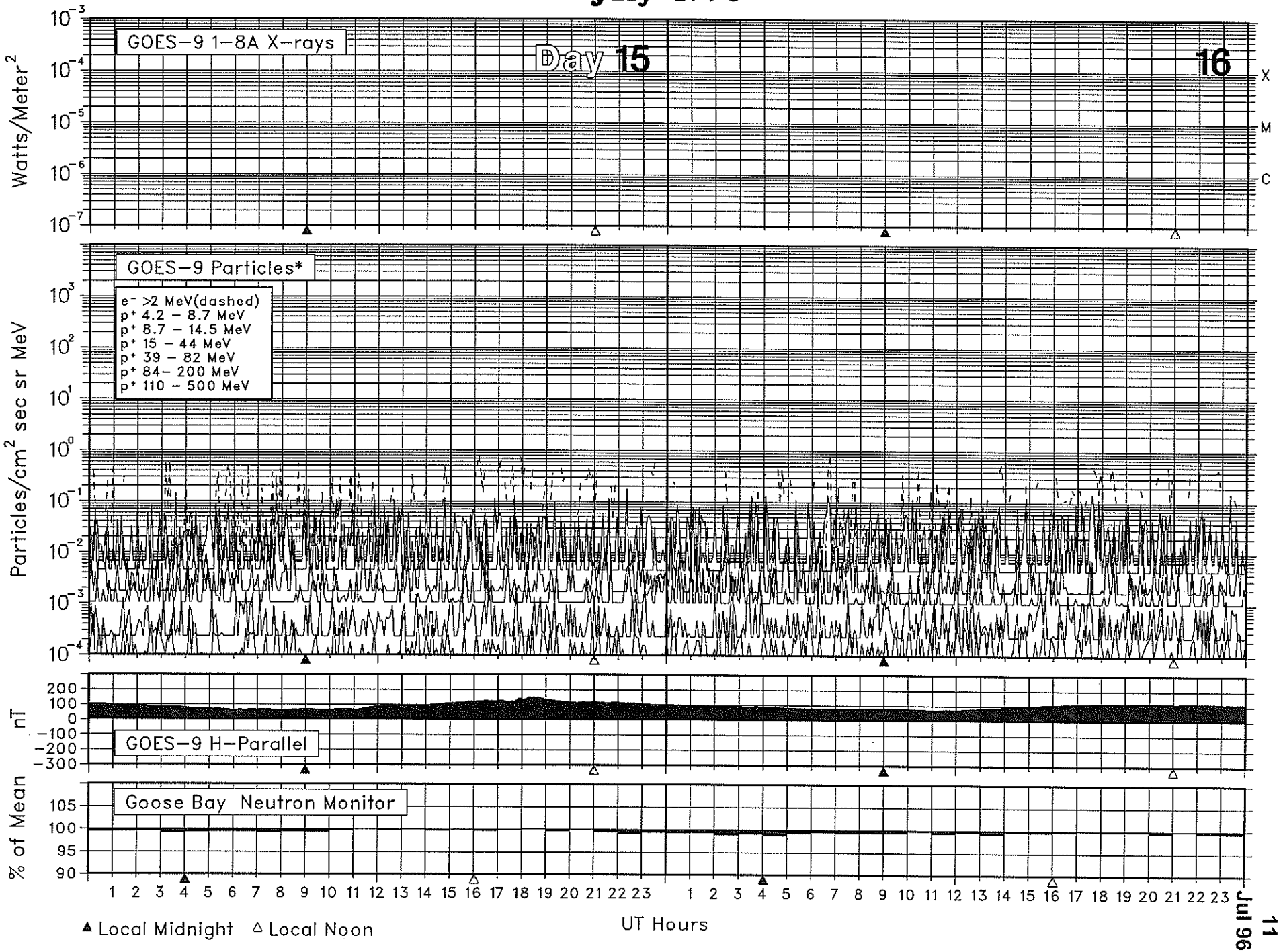

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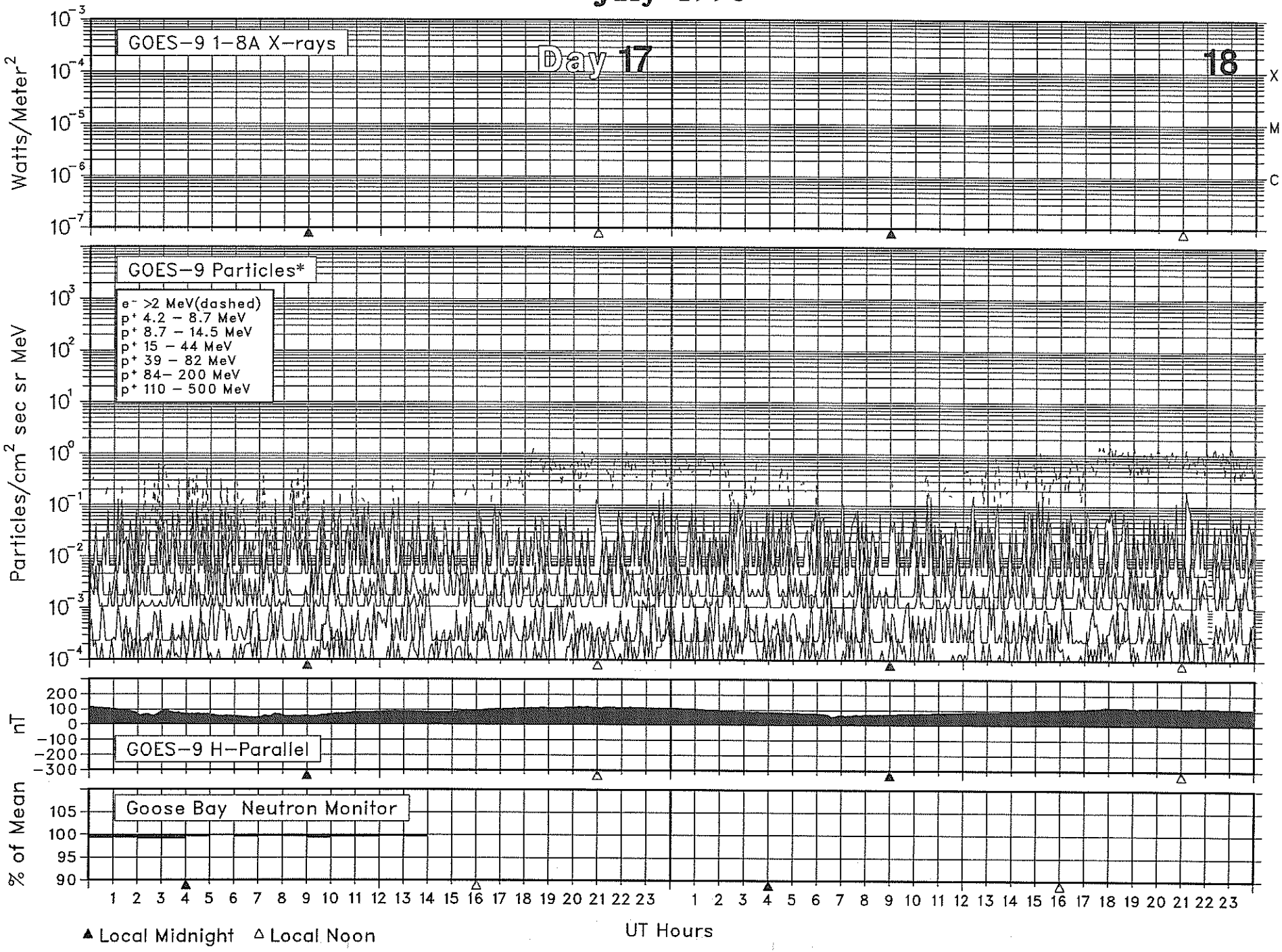

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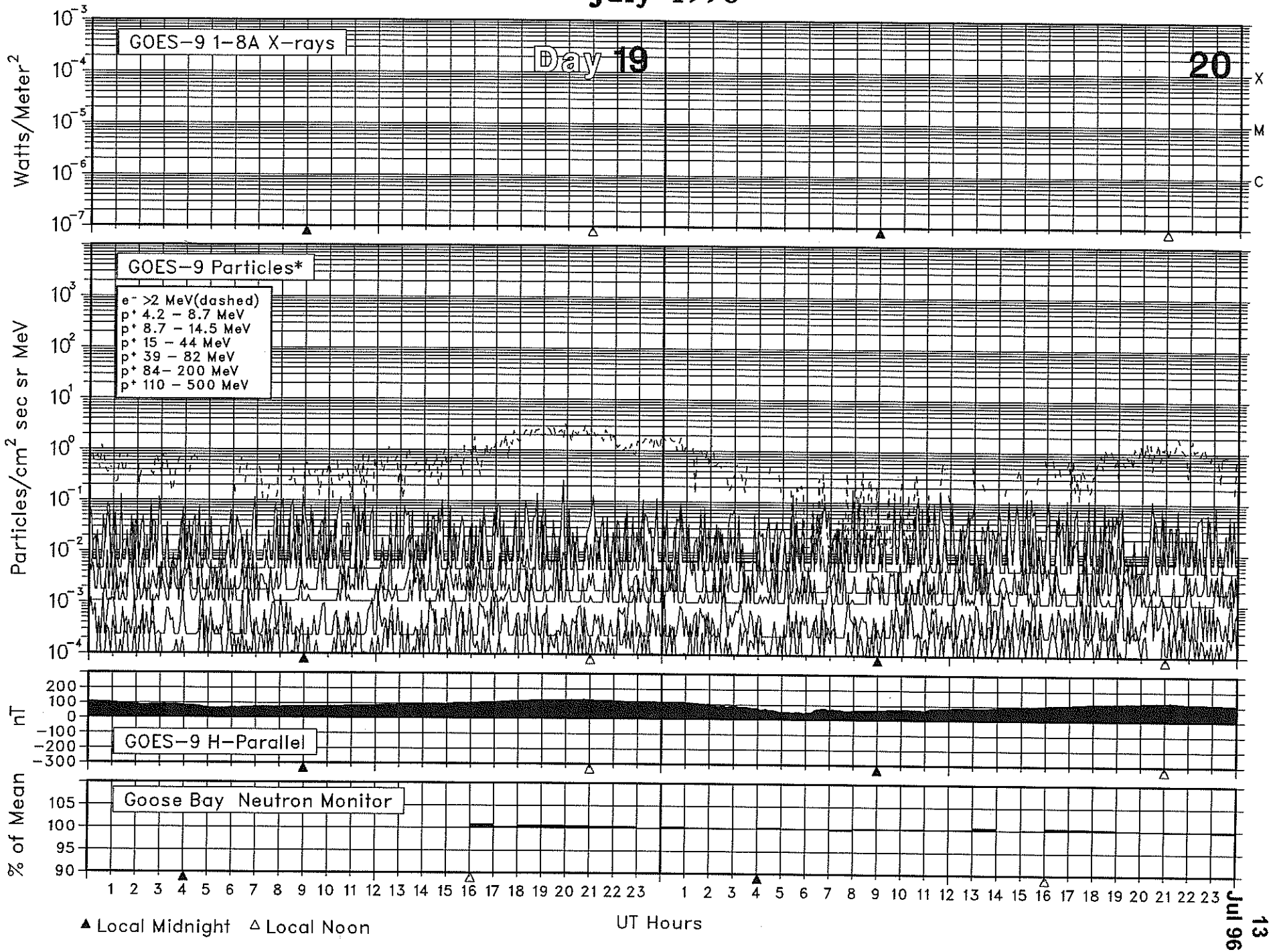

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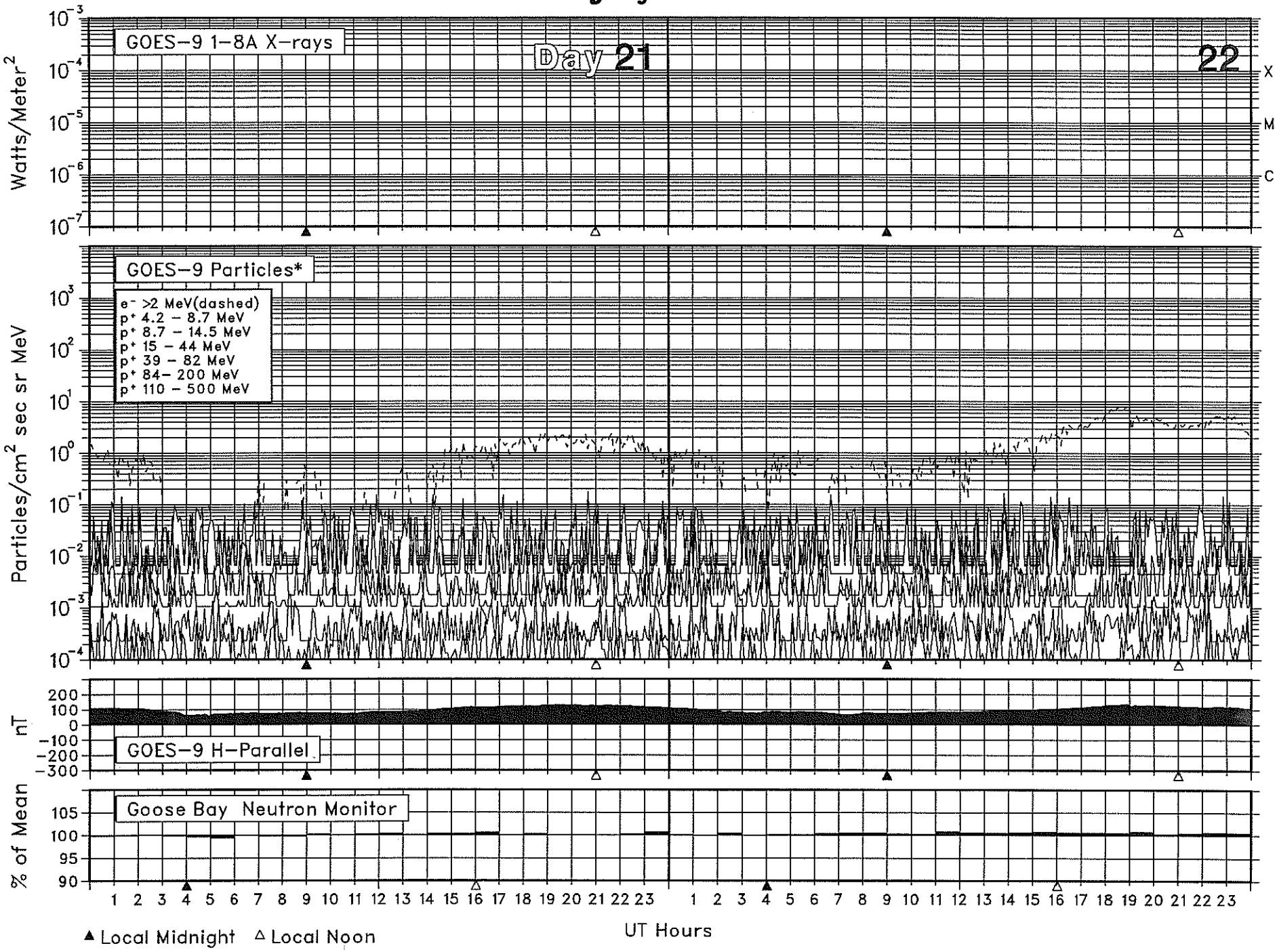

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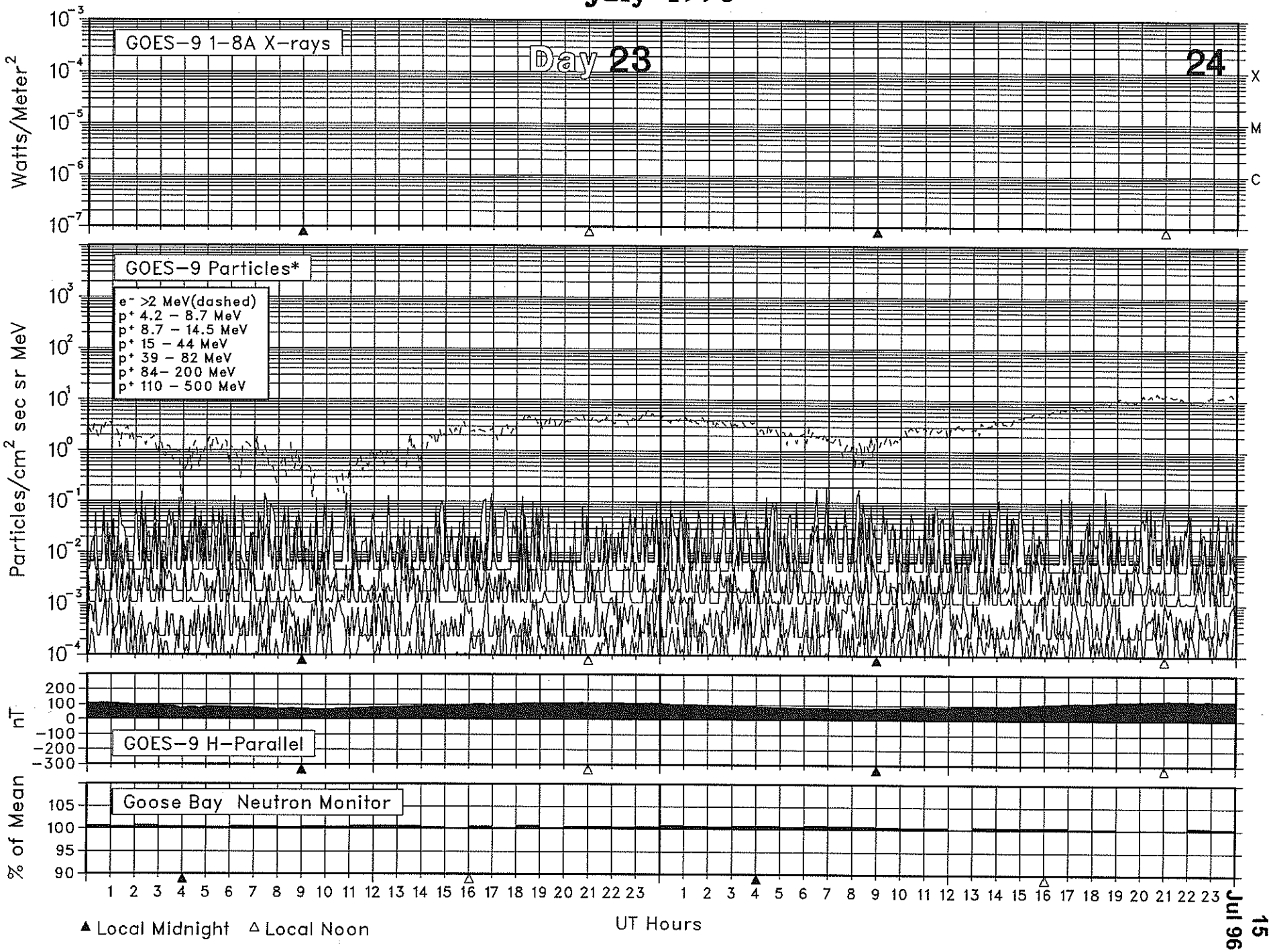

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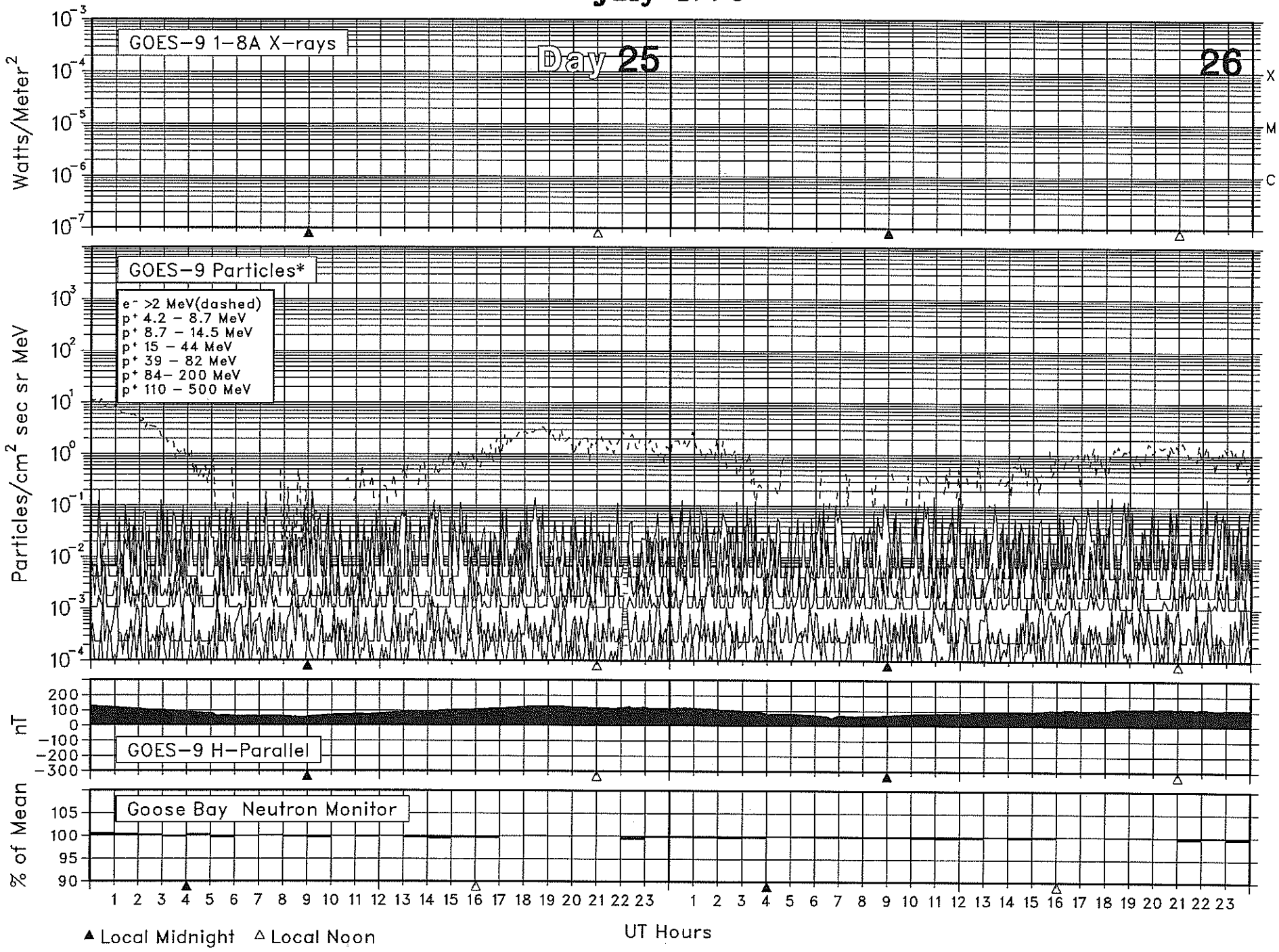
July 1996



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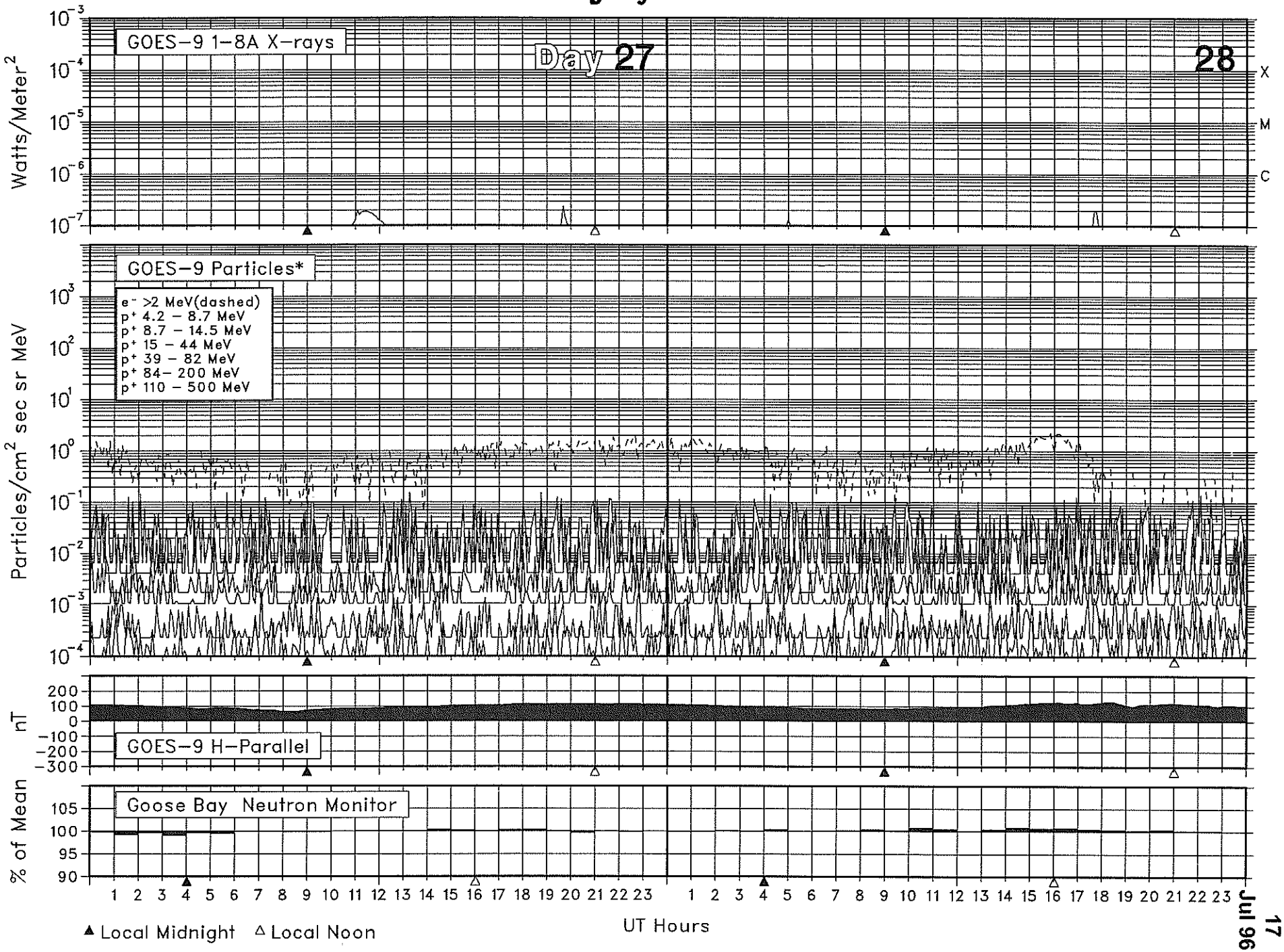

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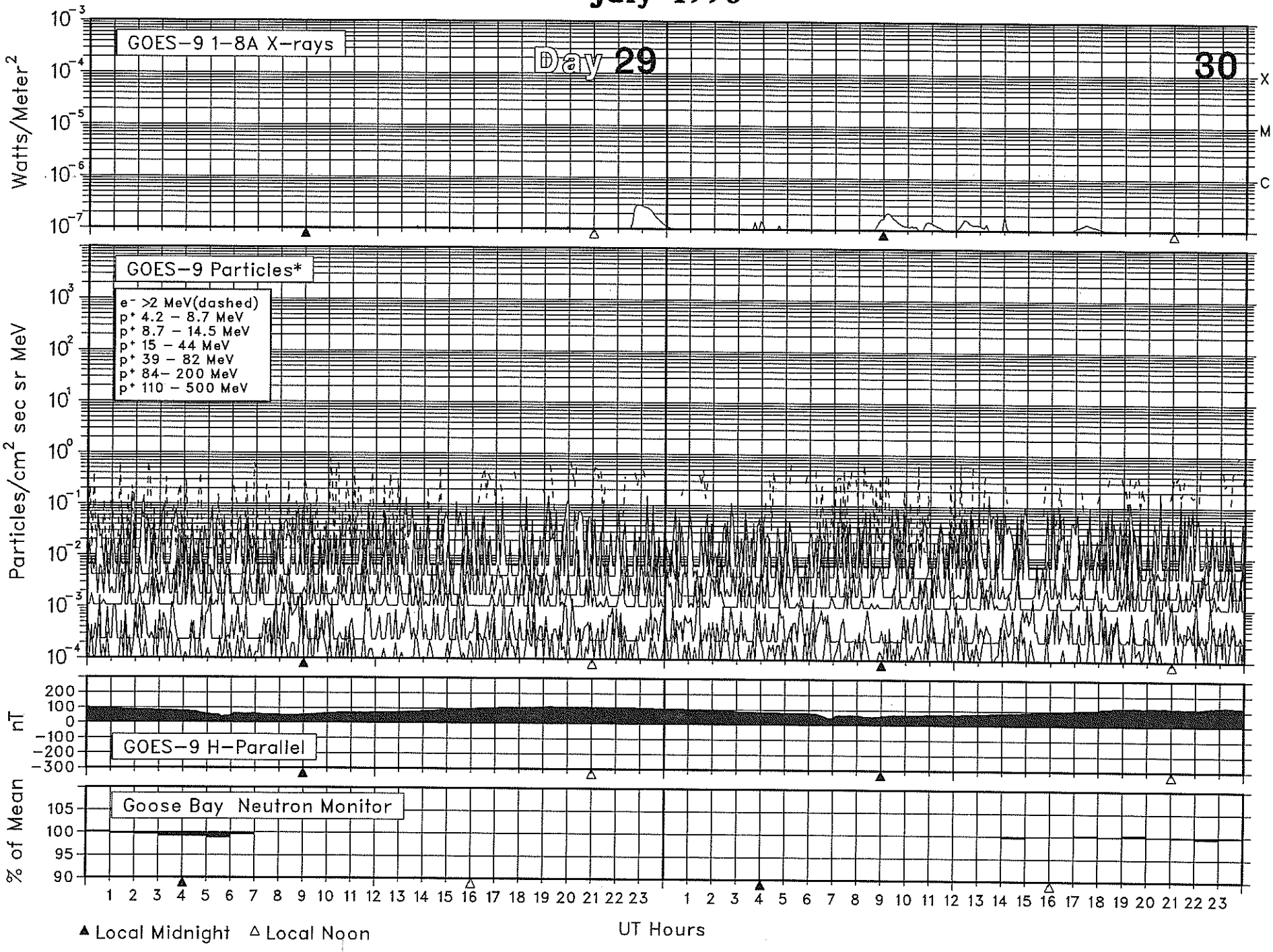

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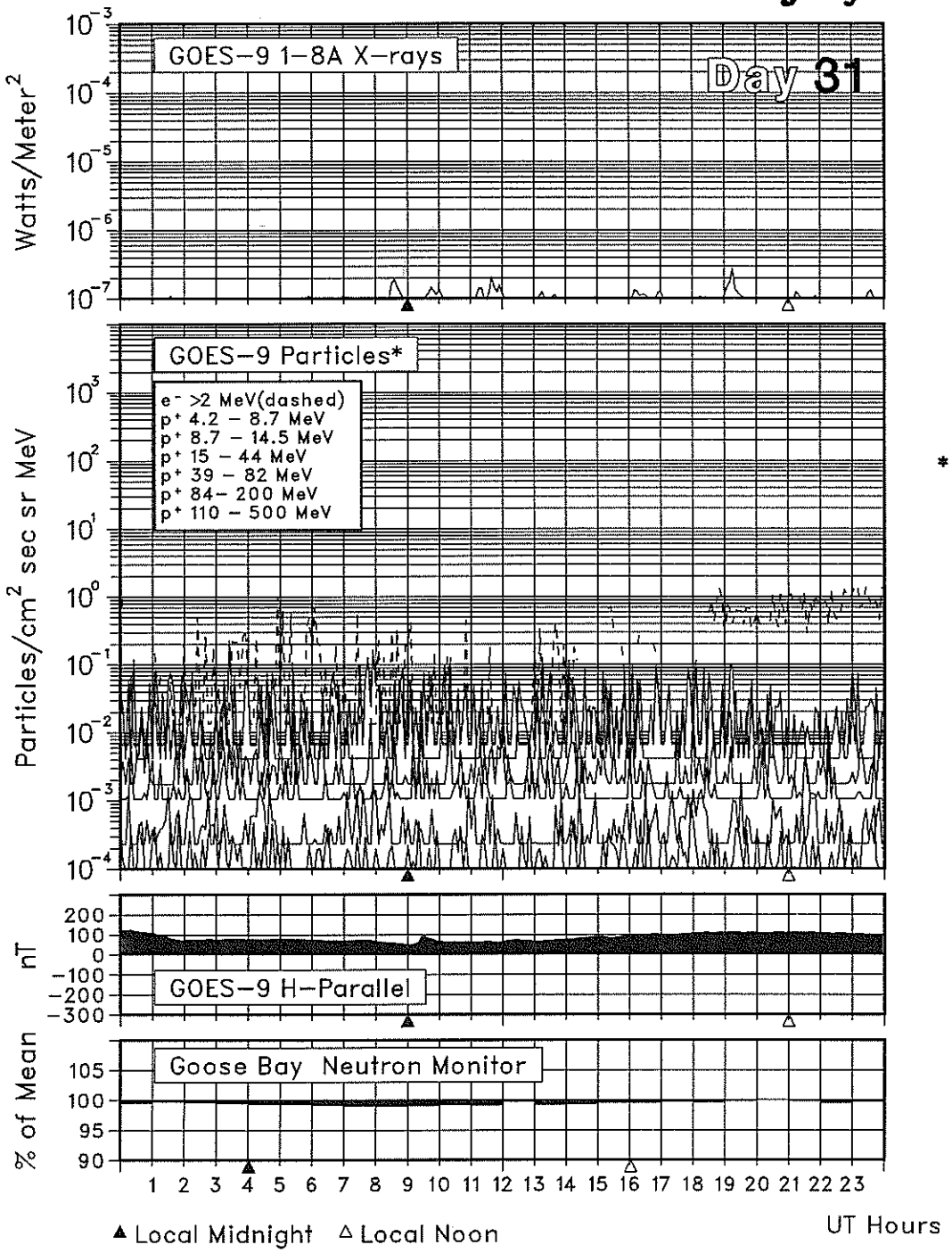


* Electron flux is divided by 10.
Electron units are Counts/cm^2 sec sr.
Protons are corrected for contamination.

A L E R T P E R I O D S
The International Space Environment Service

JULY 1996

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Location Lat	Location Long	Flares Optical	Flares M	Flares X	Date of Forecast	Region Forecast(1)	Geoadvice(1)
183	01	30	23	71	8	N06	W76	0	0	0	01	Q	SOL: Quiet
						N12	W29	0	0	0	01	Q	MAG: Quiet
								0	0	0	01		PRO: Quiet
184	02	01	11	70	6	N08	W89	0	0	0	02	Q	SOL: Quiet
								0	0	0	02		MAG: Quiet
								0	0	0	02		PRO: Quiet
185	03	02	13	70	6	N04	E16	0	0	0	03	Q	SOL: Quiet
								0	0	0	03		MAG: Quiet
								0	0	0	03		PRO: Quiet
186	04	03	13	69	12	N03	W02	0	0	0	04	Q	SOL: Quiet
								0	0	0	04		MAG: Quiet
								0	0	0	04		PRO: Quiet
187	05	04	12	69	13	S11	E28	0	0	0	05	Q	SOL: Quiet
								0	0	0	05		MAG: Quiet
								0	0	0	05		PRO: Quiet
188	06	05	12	69	12	S09	E15	0	0	0	06	Q	SOL: Quiet
								0	0	0	06		MAG: Quiet
								0	0	0	06		PRO: Quiet
189	07	06	0	68	4			0	0	0	07		SOL: Quiet
								0	0	0	07		MAG: Quiet
								0	0	0	07		PRO: Quiet
190	08	07	27	72	8	S10	W11	3	0	0	08	Q	SOL: Quiet
								0	0	0	08		MAG: Quiet
								0	0	0	08		PRO: Quiet
191	09	08	42	82	9	S10	W24	12	0	0	09	E	SOL: Eruptive
								0	0	0	09		MAG: Quiet
								0	0	0	09		PRO: Quiet
192	10	09	44	84	4	S10	W38	5	1	1	10	A	SOL: Active
								0	0	0	10		MAG: Quiet
								0	0	0	10		PRO: Quiet
193	11	10	36	80	3	S11	W51	12	1	0	11	E	SOL: Eruptive
								0	0	0	11		MAG: Active
								0	0	0	11		PRO: Quiet
194	12	11	32	77	2	S11	W65	6	0	0	12	E	SOL: Eruptive
								0	0	0	12		MAG: Active
								0	0	0	12		PRO: Quiet
195	13	12	19	74	10	S12	W76	2	0	0	13	E	SOL: Eruptive
								0	0	0	13		MAG: Quiet
								0	0	0	13		PRO: Quiet
196	14	13	11	70	8	S10	W89	0	0	0	14	Q	SOL: Quiet
								0	0	0	14		MAG: Quiet
								0	0	0	14		PRO: Quiet
197	15	14	0	68	8			0	0	0	15		SOL: Quiet
								0	0	0	15		MAG: Quiet
								0	0	0	15		PRO: Quiet
198	16	15	0	67	9			0	0	0	16		SOL: Quiet
								0	0	0	16		MAG: Quiet
								0	0	0	16		PRO: Quiet
199	17	16	0	67	6			0	0	0	17		SOL: Quiet
								0	0	0	17		MAG: Quiet
								0	0	0	17		PRO: Quiet

A L E R T P E R I O D S
The International Space Environment Service

JULY 1996

Julian Day	Date of Issue	Date of Obs	Wolf No.	10-cm Solar Flux	A-index	Location Lat	Location Long	Flares Optical	Flares M	Flares X	Date of Forecast	Region Forecast(1)	Geoadvice(1)
200	18	17	0	67	11			0	0	0	18		SOL: Quiet
								0	0	0	18		MAG: Quiet
								0	0	0	18		PRO: Quiet
201	19	18	0	65	2			0	0	0	19		SOL: Quiet
								0	0	0	19		MAG: Quiet
								0	0	0	19		PRO: Quiet
202	20	19	12	66	6	S34	E41	0	0	0	20	Q	SOL: Quiet
								0	0	0	20		MAG: Quiet
								0	0	0	20		PRO: Quiet
203	21	20	0	65	13			0	0	0	21		SOL: Quiet
								0	0	0	21		MAG: Quiet
								0	0	0	21		PRO: Quiet
204	22	21	0	65	6			0	0	0	22		SOL: Quiet
								0	0	0	22		MAG: Quiet
								0	0	0	22		PRO: Quiet
205	23	22	0	66	5			0	0	0	23		SOL: Quiet
								0	0	0	23		MAG: Quiet
								0	0	0	23		PRO: Quiet
206	24	23	0	67	5			0	0	0	24		SOL: Quiet
								0	0	0	24		MAG: Quiet
								0	0	0	24		PRO: Quiet
207	25	24	0	66	4			0	0	0	25		SOL: Quiet
								0	0	0	25		MAG: Quiet
								0	0	0	25		PRO: Quiet
208	26	25	0	68	6			0	0	0	26		SOL: Quiet
								0	0	0	26		MAG: Quiet
								0	0	0	26		PRO: Quiet
209	27	26	11	70	5	N10	W02	0	0	0	27	Q	SOL: Quiet
								0	0	0	27		MAG: Quiet
								0	0	0	27		PRO: Quiet
210	28	27	13	73	3	S11	E72	0	0	0	28	Q	SOL: Quiet
								0	0	0	28		MAG: Quiet
								0	0	0	28		PRO: Quiet
211	29	28	16	76	6	S10	E60	0	0	0	29	Q	SOL: Quiet
								0	0	0	29		MAG: Quiet
								0	0	0	29		PRO: Quiet
212	30	29	22	78	10	S10	E47	1	0	0	30	Q	SOL: Quiet
								0	0	0	30		MAG: Quiet
								0	0	0	30		PRO: Quiet
213	31	30	28	80	6	S10	E33	2	0	0	31	Q	SOL: Quiet
								0	0	0	31		MAG: Quiet
								0	0	0	31		PRO: Quiet

(1) Region Forecast and Flare (SOL) Advice
- 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, probability >=50%)
- P = Proton (Proton flares expected, probability >=50%)
- W = Warning (activity levels are expected to increase, but no numerical forecast given)
- / = No forecast available

A L E R T P E R I O D S
The International Space Environment Service

JULY 1996

Magnetic (MAG) Geoadvice

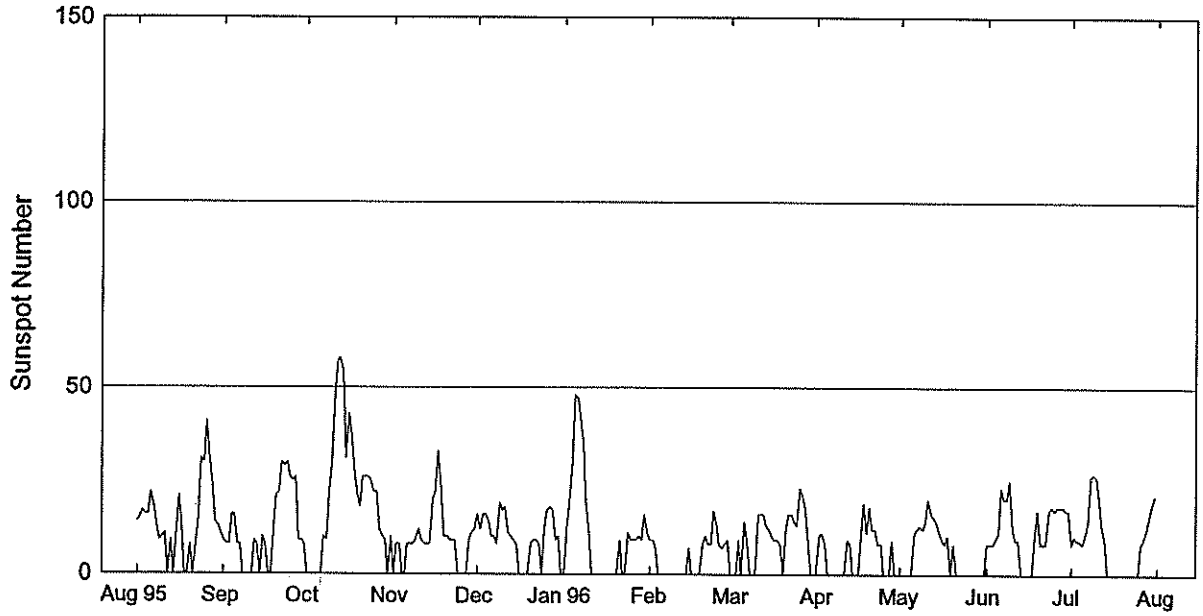
'Quiet'		
'Active'	conditions expected	(A>=20 or K=4)
'Minor'	storm expected	(A>=30 or K=5)
'Major'	storm expected	(A>=50 or K>=6)
'Severe'	storm expected	(A>=100 or K>=7)
'IP'	magstorm in progress	(A>=30 or K>=4)
'Warning'	(activity levels are expected to increase, but no numerical forecast given)	
'/'	no forecast available	

Proton (PRO) Geoadvice

'Quiet'		
'Proton'	event expected	(10pfu at >10MeV)
'Major'	proton event expected	(100pfu at >100 MeV)
'IP'	proton event in progress	(>10 MeV)
'Warning'	(activity levels are expected to increase, but no numerical forecast given)	
'/'	no forecast available	

STRATWARM ALERTS - NONE

International Relative Sunspot Numbers
Aug 1995 - Jul 1996

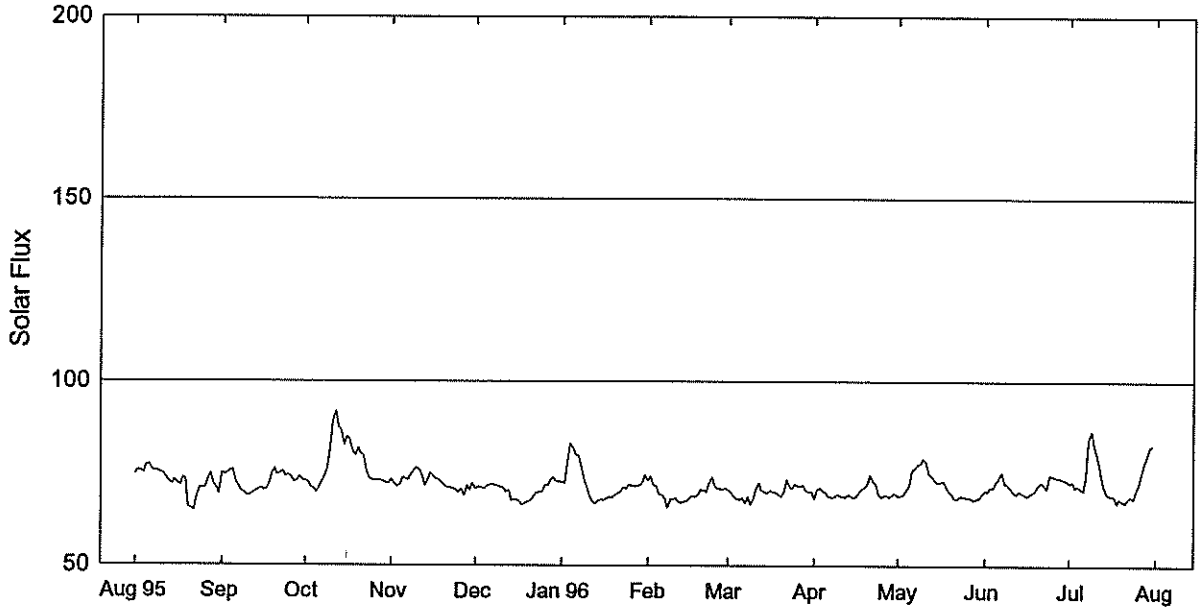


Day	Aug 95	Sep	Oct	Nov	Dec	Jan 96	Feb	Mar	Apr*	May*	Jun*	Jul*
1	14	9	0	0	16	0	9	0	0	0	8	8
2	15	8	0	8	12	12	9	0	10	0	8	10
3	17	8	0	8	16	19	7	0	11	0	8	9
4	16	16	0	0	16	30	0	9	8	0	9	9
5	16	16	0	0	14	48	0	0	0	0	11	8
6	22	8	0	8	10	47	0	14	0	11	23	10
7	18	8	10	8	10	41	0	9	0	12	20	14
8	13	0	9	8	8	35	0	0	0	13	20	26
9	9	0	22	9	19	19	0	0	0	12	25	27
10	10	0	29	12	17	11	0	0	0	14	12	26
11	11	0	48	9	18	0	0	16	0	20	9	20
12	0	9	57	8	11	0	0	16	9	16	9	13
13	9	8	58	8	10	0	0	16	8	15	0	9
14	0	0	54	8	9	0	0	13	0	14	0	0
15	12	10	31	20	8	0	7	12	0	11	0	0
16	21	8	43	22	0	0	0	10	0	9	0	0
17	13	0	37	33	0	0	0	9	10	8	0	0
18	0	0	28	23	0	0	0	9	19	10	10	0
19	0	11	21	10	0	0	0	8	11	0	17	0
20	8	21	18	10	8	0	8	0	18	8	8	0
21	0	22	26	9	9	9	10	12	12	0	8	0
22	8	30	26	9	9	0	8	16	12	0	8	0
23	15	29	26	9	8	0	8	16	8	0	17	0
24	31	30	25	0	0	11	17	14	8	0	18	0
25	30	26	22	0	12	9	13	13	0	0	17	0
26	41	25	22	0	17	9	8	23	0	0	18	8
27	32	26	12	0	18	9	7	21	0	0	18	9
28	24	9	10	9	17	10	8	18	9	0	18	12
29	14	9	9	11	9	9	9	10	0	0	17	15
30	13	8	0	12	10	16		0	0	0	17	19
31	11		10		0	11		0		0		21
Mean	14.3	11.8	21.1	9.0	10.0	11.5	4.4	9.2	5.1	5.6	11.8	8.8

* = Provisional.

Penticton 2800 MHz (10.7cm) Solar Flux
Aug 1995 - Jul 1996

Adjusted to 1 AU



Day	Aug 95	Sep	Oct	Nov	Dec	Jan 96	Feb	Mar	Apr	May	Jun	Jul
1	74.8	75.0	72.8	73.3	70.7	72.6	72.9	70.6	68.1	68.9	70.4	72.4
2	75.7	74.6	72.7	72.1	71.2	72.3	74.2	69.8	70.6	69.0	70.2	72.8
3	75.5	74.9	71.1	71.4	71.2	78.2	71.9	69.0	71.1	69.5	71.2	71.3
4	75.1	75.6	70.8	72.0	70.7	83.1	71.4	68.1	70.2	70.6	71.2	71.5
5	77.2	75.9	69.8	73.9	71.4	82.1	69.4	68.0	70.0	72.0	72.8	71.0
6	77.3	73.0	70.9	73.5	71.8	79.9	69.2	68.4	68.8	76.0	73.8	70.5
7	75.8	71.2	72.8	73.2*	71.9	79.8	68.2	66.8	68.6	76.3	75.4	74.3
8	75.6	70.1	74.1	74.8	71.8	76.7	65.7	68.8	68.6	77.5	72.4	84.3
9	75.5	69.7	76.0	75.7	71.6	73.4	68.1	66.6	69.3	77.7	72.0	86.5
10	75.0	68.9	82.1	76.5	71.3	71.4	68.0	68.2	69.1	79.1	71.1	82.5
11	74.9	68.9	89.1	75.9	71.1	69.1	68.2	70.9	68.8	78.0	70.2	79.6
12	73.8	69.5	91.8	74.6	70.0	67.2	67.3	72.4	68.7	75.1	69.5	76.2
13	72.7	70.1	87.5	71.5	70.4	66.7	67.0	70.5	69.3	74.3	70.3	72.5
14	71.9	70.3	86.7	73.4	67.6	67.4	67.2	70.0	69.1	73.4	69.8	70.0
15	73.2	70.9	82.5	75.0	68.0	67.9	67.4	69.6	68.5	72.5	69.5	69.3
16	72.3	70.4	85.0	74.2	67.7	67.6	68.5	70.3	68.8	72.6	69.0	69.1
17	71.5	70.5	84.1	73.4	67.1	68.2	69.0	70.0	69.9	72.9	69.6	69.0
18	73.6	72.3	80.9	73.4	66.4	68.7	68.6	70.0	70.8	72.0	69.9	67.0
19	73.4	74.3	79.8	72.2	67.0	68.5	69.4	69.4	71.2	70.4	70.7	68.3
20	73.0	76.2	81.8	71.5	67.3	69.1	70.6	68.8	72.3	69.6	71.9	67.5
21	72.7	74.5	80.3	71.1	67.8	69.5	70.4	69.9	74.8	68.5	72.6	67.2
22	71.9	75.1	79.7	71.0	68.9	70.0	70.1	73.4	73.2	68.1	72.0	68.2
23	75.9	75.5	75.9	70.9	69.9	71.0	72.3	71.6	71.9	68.9	70.9	68.9
24	78.8	74.2	73.5	70.4	69.9	70.7	74.1	70.9	69.5	69.0	74.7	68.3
25	78.8	74.5	73.1	69.9	70.1	71.7	71.8	72.1	68.7	68.7	74.3	70.4
26	78.9	73.9	73.0	70.8	71.7	71.5	70.9	71.6	69.1	68.7	74.2	72.4
27	81.6	72.6	73.1	68.9	71.5	71.6	70.7	71.6	69.2	68.4	73.8	75.6
28	83.2	73.0	72.9	71.5	73.4	71.4	70.8	71.7	68.6	67.8	73.8	77.8
29	79.7	74.0	72.8	70.4	73.9	71.8	70.9	70.3	69.5	68.3	73.3	80.3
30	78.9	73.0	72.3	72.3	72.8	72.5		70.1	69.6	68.4	73.1	82.3
31	77.0		72.2		72.7	74.5		70.0		69.9		82.7
Mean	75.7	72.8	77.5	72.6	70.3	72.1	69.8	70.0	69.9	71.7	71.8	73.5

* = Average of the 1800 and 2200UT readings. 2000UT reading not available.

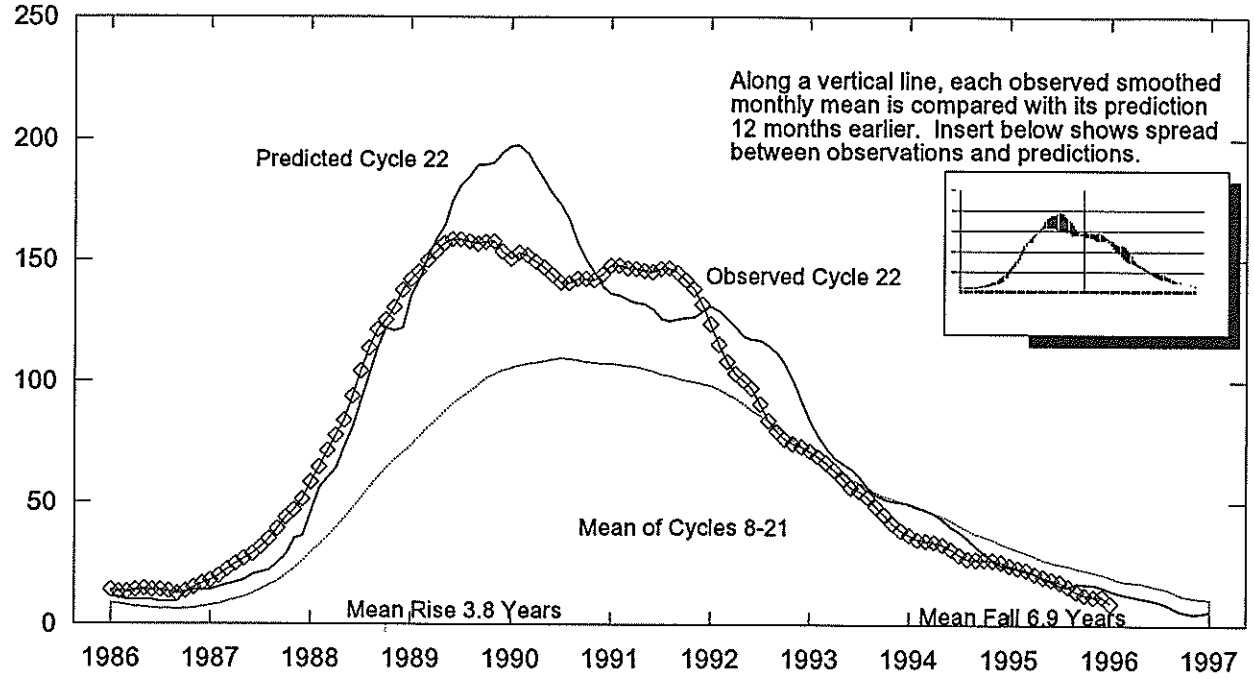
DAILY SOLAR INDICES

July 1996

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers 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	183	24	8	8	70.0	--	196	121	72.4	73	53	36	26	12
2	184	25	10	9	70.4	--	192	121	72.8	73	52	31	22	11
3	185	26	9	8	69.0	418	197	121	71.3	72	52	35	23	11
4	186	27	9	0	69.1	609	197	119	71.5	69	51	37	24	11
5	187	1	8	7	68.6	611	--	110	71.0	58	43	37	25	11
6	188	2	10	0	68.2	504	--	119	70.5	70	51	36	25	11
7	189	3	14	17	71.9	522	--	121	74.3	71	51	36	24	10
8	190	4	26	23	81.6	528	213	130	84.3	80	56	37	24	14
9	191	5	27	28	83.6	535	218	--	86.5	84	58	37	26	17
10	192	6	26	25	79.8	535	218	--	82.5	84	58	37	26	17
11	193	7	20	20	77.0	535	215	--	79.6	84	56	37	26	16
12	194	8	13	13	73.7	524	208	127	76.2	77	54	37	26	11
13	195	9	9	9	70.2	518	212	125	72.5	74	54	36	25	11
14	196	10	0	0	67.8	515	207	121	70.0	71	51	25	17	8
15	197	11	0	0	67.0	479	204	--	69.3	--	49	30	20	10
16	198	12	0	0	66.9	538	205	120	69.1	70	50	34	23	10
17	199	13	0	0	66.8	530	204	120	69.0	69	--	33	22	10
18	200	14	0	0	64.9	533	202	118	67.0	64	49	34	23	10
19	201	15	0	0	66.1	528	200	116	68.3	66	52	--	--	--
20	202	16	0	0	65.4	529	202	117	67.5	67	52	33	22	10
21	203	17	0	0	65.1	530	203	117	67.2	66	51	31	23	10
22	204	18	0	0	66.0	520	201	120	68.2	66	51	32	22	10
23	205	19	0	0	66.7	528	201	121	68.9	67	52	32	24	11
24	206	20	0	0	66.2	543	201	121	68.3	67	52	33	24	11
25	207	21	0	0	68.2	532	202	121	70.4	66	52	34	24	11
26	208	22	8	8	70.2	531	203	124	72.4	70	54	36	25	11
27	209	23	9	9	73.3	529	203	126	75.6	71	55	36	25	12
28	210	24	12	12	75.5	524	206	132	77.8	76	58	37	25	11
29	211	25	15	16	77.9	526	205	131	80.3	76	58	36	24	11
30	212	26	19	18	79.9	524	210	138	82.3	81	62	40	31	15
31	213	27	21	20	80.2	516	208	135	82.7	80	61	40	40	24
MEAN			8.8	8.1	71.2	527	204	122	73.5	72	53	34	24	11

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

Cycle 22 Smoothed Sunspot Numbers: Observed and Predicted



Smoothed Sunspot Numbers (observed and Predicted) for Parts of Solar Cycles 22 and 23

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
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	48	45	41	38	56
1994	37	35	34	34	33	31	29	27	27	27	26	26	31
1995	24	23	22	21	19	18	17	16	13	12	11	11	17
1996	11	9	8	8	8	7	7	7	6	6	6	6	7
( )		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(8)	(8)	(8)	(5)
1997	6	6	7	8	8	10	11	12	12	13	14	16	10
( )	(8)	(8)	(9)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(20)	(22)	(13)

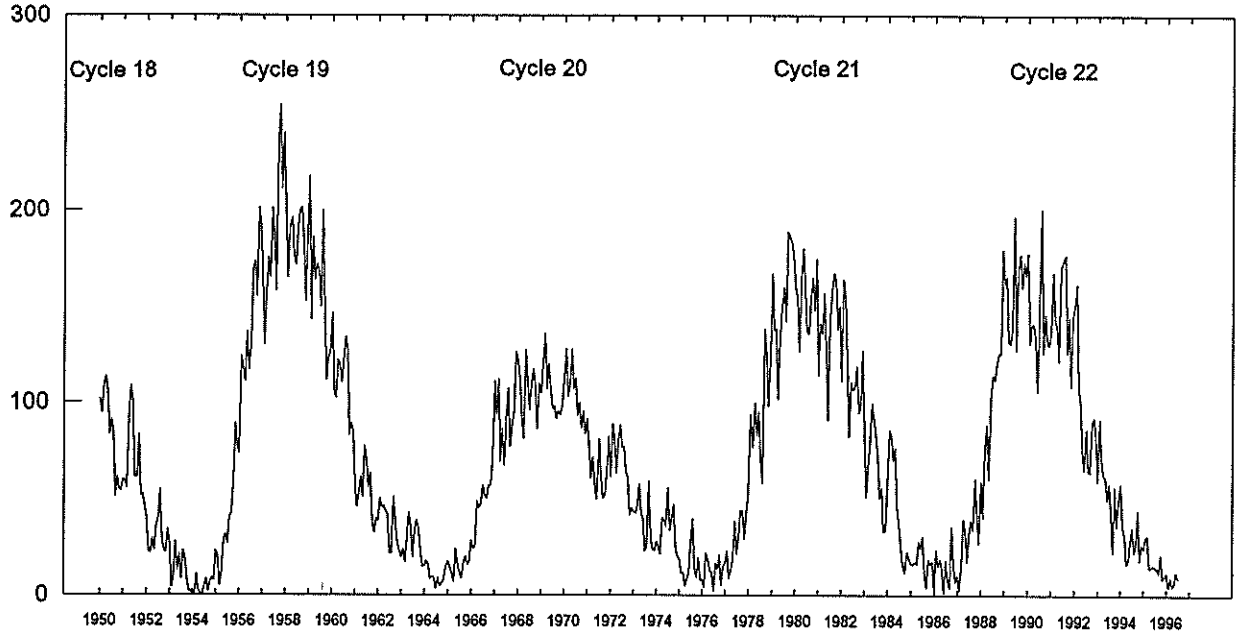
Solar Cycle 22 — Min, Max, and Predictions

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 Jun 1995 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 Jan 1997 prediction. There exists a 90% chance that in Jan 1997, the actual smoothed number will fall somewhere between 0 and 14.

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.

Mean Monthly Sunspot Numbers
Jan 1950 - Jul 1996



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9	
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4	
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5	
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9	
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4	m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0	
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7	
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2	M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8	
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0	
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	122.3	
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9	
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6	
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9	
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2	m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1	
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0	
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8	
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9	M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5	
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5	
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6	
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9	
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0	
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5	
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5	
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6	m
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2	27.5	
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7	92.5	
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3	155.4	M
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4	154.6	
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1	140.4	
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0	115.9	
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4	66.6	
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9	
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9	
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4	m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4	
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2	
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6	M
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6	
1991	136.9	167.5	141.9	140.0	121.3	169.7	173.7	176.3	125.3	144.1	108.2	144.4	145.7	
1992	150.0	161.1	106.7	99.8	73.8	65.2	85.7	64.5	63.9	88.7	91.8	82.6	94.3	
1993	59.3	91.0	69.8	62.2	61.3	49.8	57.9	42.2	22.4	56.4	35.6	48.9	54.6	
1994	57.8	35.5	31.7	16.1	17.8	28.0	35.1	22.5	25.7	44.0	18.0	26.2	29.9	
1995	24.2	29.9	31.1	14.0	14.5	15.6	14.5	14.3	11.8	21.2	9.0	10.0	17.5	
1996	11.5	4.4	9.2	5.1	5.6	11.8	8.8						8.1	

Values are preliminary after Mar 1996. For the yearly means, each 'M' marks a sunspot cycle maximum and each 'm' a minimum.

Hα SOLAR FLARES

JULY 1996

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	01	1231	1239	1255						24		B 4.0						
GOES		2021	2024	2027						6		B 1.0						
GOES	04	2116	2120	2132						16		B 1.1						
HOLL		2126	2127	2131	S11	E40		07	7.9	5	SF		3	E		17		
GOES	07	0037	0040	0043						6		B 1.5						
HOLL		1334	1348	1358	S10	W06	7978	07	7.1	24	SF		3	E		13		
SVTO		1450	1451	1505	S11	W07	7978	07	7.1	15	SF	B 2.0	3	E		16		F
GOES		1551	1554	1603						12		B 1.0						
PALE		2221	2224	2233	S09	W11	7978	07	7.1	12	1F	C 1.7	3	E		131		F
GOES		2314	2318	2320						6		B 2.8						
HOLL	08	0020	0036	0044	S09	W12	7978	07	7.1	24	SF		3	E		18		F
PALE		0042	0042	0046	S11	W14	7978	07	7.0	4	SF		3	E		19		F
PALE		0043	0043	0046	S10	W02		07	7.9	3	SF		3	E		14		U
HOLL		0101	0103	0106	S10	W13	7978	07	7.1	5	SF		3	E		83		
PALE		0111	0112	0116	S10	W13	7978	07	7.1	5	SF		3	E		19		F
GOES		0330	0338	0342						12		B 1.3						
GOES		0431	0502	0508						37		C 1.0						
SVTO		0609	0616	0625	S10	W15	7978	07	7.1	16	SF	C 1.6	3	E		35		
SVTO		0858	0900	0909	S10	W17	7978	07	7.1	11	SF	C 1.8	3	E		20		FE
GOES		1231	1237	1250						19		B 3.9						
SVTO		1405E	1405U	1411	S10	W22	7978	07	6.9	6D	SF	B 5.0	3	E		17		
HOLL		1519	1519	1526	S10	W22	7978	07	7.0	7	SF		3	E		20		FH
SVTO		1620	1622	1625	S11	W23	7978	07	6.9	5	SF		3	E		10		H
GOES		1658	1704	1713						15		B 5.8						
PALE		1741	1822	1845	S09	W22	7978	07	7.1	64	SF		3	E		48		
HOLL		1744	1747	1750	S09	W21	7978	07	7.2	6	SF		3	E		19		
HOLL		1806	1806	1813	S11	W22	7978	07	7.1	7	SF	B 8.9	3	E		14		FH
PALE		2030	2031	2037	S09	W23	7978	07	7.1	7	SF		3	E		17		
GOES		2134	2159	2221						47		C 4.8						
GOES		2339	2342	2345						6		B 7.9						
GOES	09	0018	0051	0104						46		C 3.7						
PALE		0149	0204	0221	S10	W28	7978	07	7.0	32	SF	M 1.4	3	E		50		F
SVTO		0503	0513	0553	S11	W30	7978	07	6.9	50	SF	C 3.8	3	E		90		F
GOES		0624	0632	0635						11		B 8.2						
GOES		0705	0709	0726						21		B 5.8						
SVTO		0751	0758	0853	S10	W24	7978	07	7.5	62	SF	C 2.6	3	E		49		F
LEAR		0809	0816	0833	S11	W23	7978	07	7.6	24	SF		3	E		12		
SVTO		0901	0912	0949	S10	W30	7978	07	7.1	48	1B	X 2.6	3	E		158		
HOLL		1849	1901	1935	S11	W37	7978	07	7.0	46	SF	C 1.7	3	E		57		F
GOES		2221	2225	2227						6		B 6.2						
GOES		2229	2246	2254						25		C 5.0						
PALE	10	0010	0027	0032	S13	W40	7978	07	7.0	22	SF	B 9.4	3	E		12		
GOES		0126	0131	0145						19		B 4.7						
PALE		0253	0331U	0412D	S14	W42	7978	07	6.9	79D	1F		3	E		169		U
LEAR		0330	0340	0340U	S11	W39	7978	07	7.2	10U	SF	M 1.0	3	E		24		U
SVTO		0544	0547	0604	S10	W42	7978	07	7.1	20	SF	C 2.7	3	E		14		
SVTO		1029	1030	1042	S11	W48	7978	07	6.8	13	SF	B 9.8	3	E		19		
SVTO		1057	1058	1114	S11	W47	7978	07	6.9	17	SF	C 1.2	3	E		35		F
SVTO		1330	1332	1340	S11	W48	7978	07	6.9	10	SF		3	E		11		
SVTO		1428	1430	1510	S12	W49	7978	07	6.9	42	SF	B 7.2	3	E		15		
HOLL		1638	1641	1644	S11	W50	7978	07	6.9	6	SF	B 6.6	3	E		13		F
PALE		1804	1816	1826	S14	W49	7978	07	7.0	22	SF	C 3.1	3	E		50		
RAMY		1806	1807	1827	S12	W50	7978	07	7.0	21	SF		3	E		27		
HOLL		1808	1815	1831	S09	W48	7978	07	7.1	23	SF		3	E		69		
HOLL		1848	1856	1905D	S12	W51	7978	07	6.9	17D	SF	C 2.2	3	E		52		H
RAMY		1854E	1855U	1900D	S13	W50	7978	07	7.0	6D	SF		3	E		15		
PALE		1854	1857	1859	S14	W50	7978	07	7.0	5	SF		3	E		11		
HOLL		1951	2002	2006	S09	W49	7978	07	7.1	15	SF		3	E		15		
GOES		2102	2107	2115						13		B 5.4						
PALE		2243	2247	2258	S13	W46	7978	07	7.5	15	SF	C 1.5	3	E		18		
GOES	11	0132	0135	0138						6		B 2.5						
PALE		0236	0237	0240	S13	W51	7978	07	7.3	4	SF	B 3.4	3	E		18		

Hα SOLAR FLARES

JULY 1996

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
PALE	11	0317	0317	0324	S09	W53	7978	07	7.1	7	SF	B 6.2	3	E		29		
GOES		0324	0327	0331						7		B 9.0						
GOES		0519	0523	0528						9		B 8.7						
GOES		0700	0704	0710						10		B 2.9						
SVTO		0808	0826U	0840	S09	W55	7978	07	7.2	32	SF	C 2.6	3	E		33		
RAMY		1052E	1054U	1107	S12	W57	7978	07	7.1	15D	SF	B 7.4	3	E		11		
RAMY		1231	1231	1243	S13	W59	7978	07	7.1	12	SF		4	E		12		
GOES		1321	1332	1341						20		B 7.1						
GOES		1619	1630	1644						25		B 5.4						
SVTO		1654	1657	1711	S10	W64	7978	07	6.9	17	SF		3	E		28		F
RAMY		1656	1659	1710	S11	W63	7978	07	7.0	14	SF	C 2.8	4	E		23		FH
GOES		2104	2108	2112						8		B 2.5						
GOES		2218	2228	2234						16		C 1.2						
GOES		2359	2404	2408						9		B 1.7						
GOES	12	0046	0049	0052						6		B 1.9						
GOES		0231	0235	0237						6		B 1.5						
GOES		0437	0450	0459						22		B 7.1						
SVTO		0657	0702	0716	S10	W60	7978	07	7.8	19	SF		3	E		15		S
GOES		1055	1104	1111						16		B 2.5						
GOES		1218	1222	1227						9		B 1.7						
GOES		1317	1335	1343						26		B 2.2						
SVTO		1502	1502	1511	S10	W67	7978	07	7.6	9	SF		2	E		19		FS
RAMY		1510E	1513U	1522	S13	W64	7978	07	7.8	12D	SF		3	E		59		
SVTO		1513	1530	1631	S11	W72	7978	07	7.2	78	1F	C 4.9	2	E		122		S
HOLL		1515	1528	1550	S10	W68	7978	07	7.5	35	SF		3	E		91		SF
RAMY		1530E	1530U	1547	S17	W69	7978	07	7.4	17D	SF		3	E		46		FS
GOES	13	0301	0305	0307						6		B 1.4						
GOES		2045	2049	2056						11		B 1.1						
GOES	14	0710	0719	0729						19		B 2.3						
GOES		0831	0842	0853						22		B 2.5						
GOES		1156	1159	1210						14		B 1.0						
GOES		1330	1500	1507						97		C 1.6						
GOES	27	0810	0813	0815						5		B 1.2						
GOES		1103	1107	1109						6		B 2.3						
GOES		1939	1942	1945						6		B 2.9						
GOES	28	0456	0501	0506						10		B 1.3						
GOES		1245	1248	1252						7		B 1.1						
GOES		1739	1744	1747						8		B 3.1						
GOES		1805	1808	1810						5		B 1.6						
GOES		2104	2108	2111						7		B 1.3						
GOES	29	0532	0536	0540						8		B 1.1						
GOES		0644	0648	0650						6		B 1.2						
GOES		1932	1935	1938						6		B 1.0						
GOES		1956	1959	2001						5		B 1.7						
PALE		2241	2244	2257	S06	E56	7981	08	3.1	16	SF	B 2.8	3	E		19		
GOES	30	0338	0341	0344						6		B 1.6						
GOES		0352	0400	0402						10		B 1.4						
GOES		0439	0442	0445						6		B 1.2						
HOLL		1401	1401	1410	S10	E40	7981	08	2.6	9	SF		3	E		25		
SVTO		1401	1404	1409	S09	E38	7981	08	2.4	8	SF	B 2.2	3	E		19		
HOLL		1603	1603	1608	S10	E37	7981	08	2.4	5	SF		3	E		13		
RAMY		1603	1603	1611	S09	E38	7981	08	2.5	8	SF		2	E		20		
GOES	31	0132	0136	0138						6		B 1.3						
GOES		0222	0225	0227						5		B 1.2						
GOES		0700	0703	0705						5		B 1.2						
SVTO		0836	0836U	0857D	S10	E34	7981	08	2.9	21D	SF	B 2.0	3	E		17		
GOES		1114	1117	1124						10		B 1.4						
GOES		1135	1144	1147						12		B 2.1						
GOES		1154	1157	1159						5		B 1.8						
RAMY		1612	1613	1618	S11	E25	7981	08	2.5	6	SF	B 1.7	3	E		17		

Hα SOLAR FLARES

JULY 1996

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	Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	31	1915	1915	1923	S10	E23	7981	08	2.5	8	SF		3	E		21		
RAMY		1915	1915	1924	S10	E23	7981	08	2.5	9	SF	B 3.9	3	E		15		
GOES		2150	2154	2156						6		B 1.5						
GOES		2329	2335	2341						12		B 1.1						

"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

JULY 1996

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean	Int	Remarks
09	2695	LEAR	49	GB	0909.0	0920.0	26.0	1300.0			QL=4 ST=3 TYP=7
	2695	SVTO	49	GB	0909.0	0910.0	18.0	1100.0			QL=4 ST=2 TYP=6
	8800	LEAR	49	GB	0909.0	0909.0	26.0	2900.0			QL=4 ST=3 TYP=7
	8800	SVTO	49	GB	0908.0	0909.0	19.0	2700.0			QL=4 ST=2 TYP=6
12	2695	SGMR	8	S	1527.0	1528.0	2.0	5.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1527.0	1528.0	2.0	5.0			QL=4 ST=2 TYP=3

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

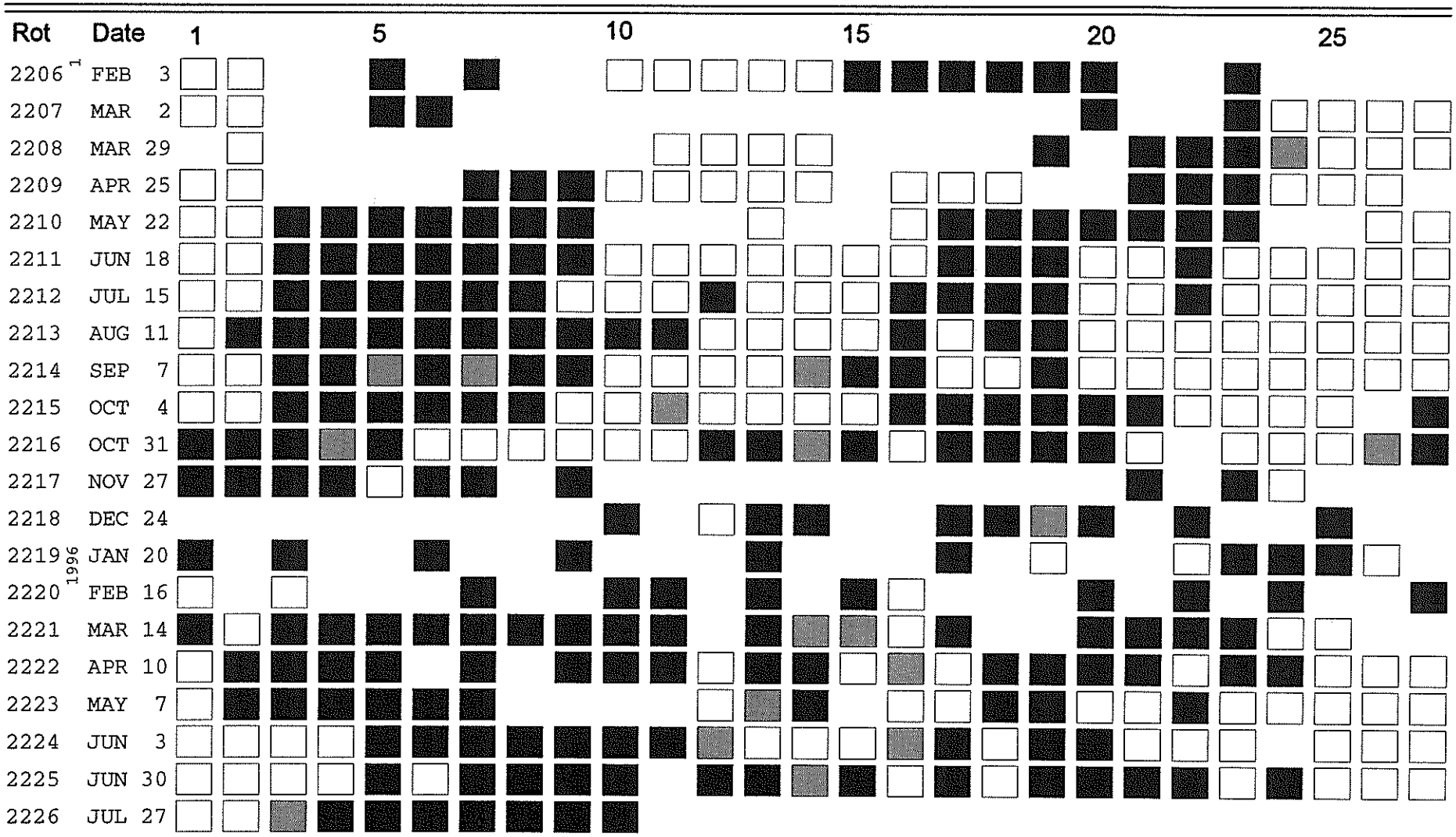
Explanation of Type Code:

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

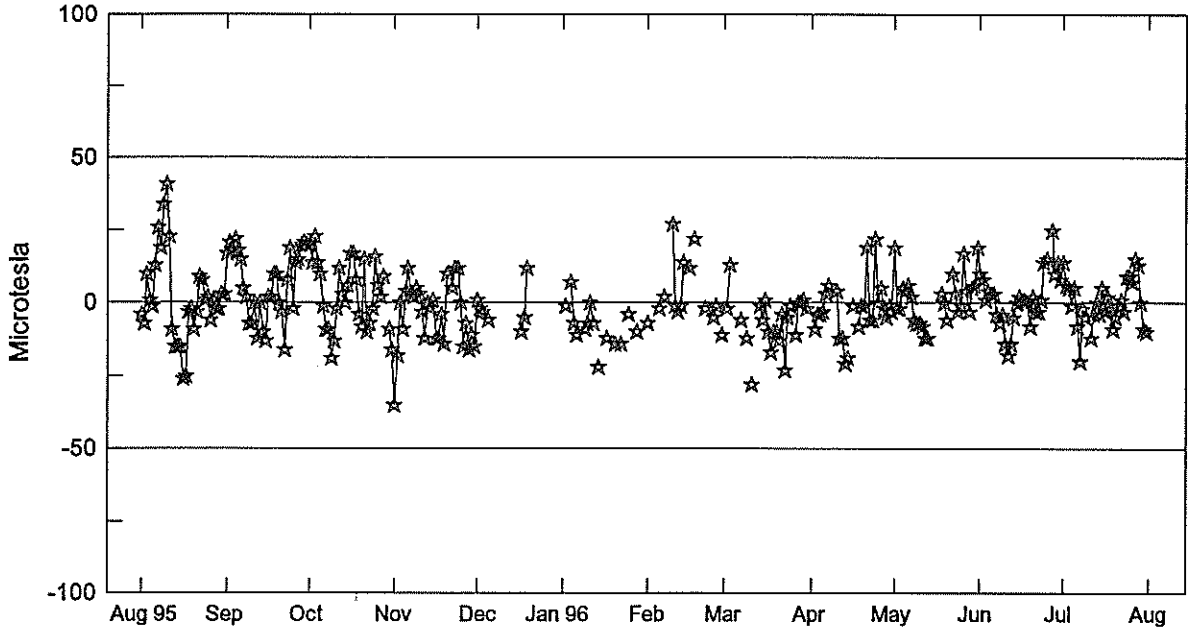


Mean Solar Magnetic Field Polarity: = field > 2 microT; = -2 microT ≤ field ≤ 2 microT

= 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.

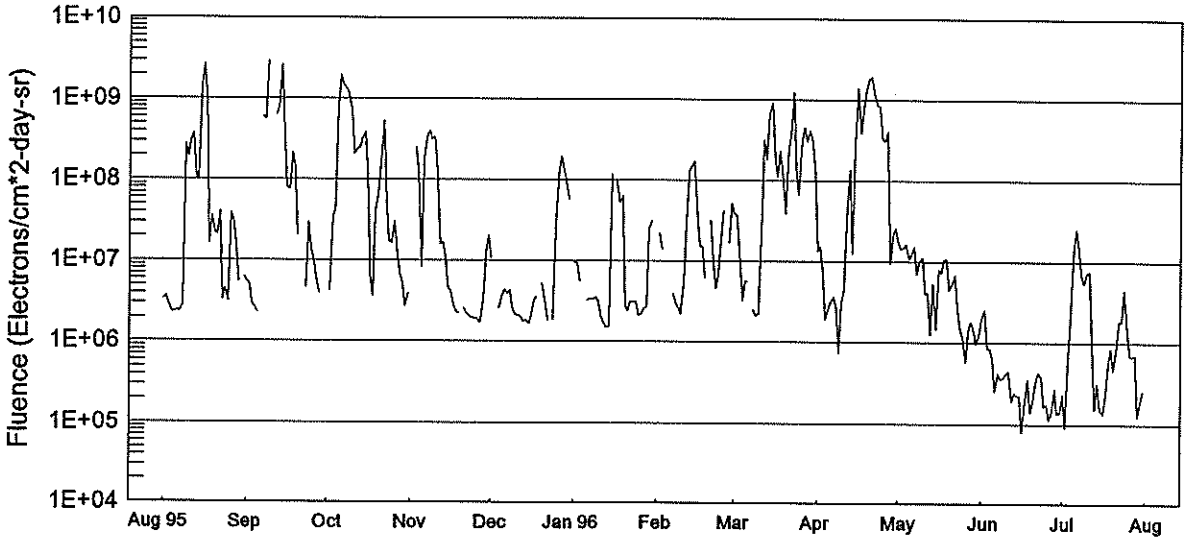
Stanford Mean Solar Magnetic Field (Microtesla)
"Sun-As-A-Star"



Day	Aug 95	Sep	Oct	Nov	Dec	Jan 96	Feb	Mar	Apr	May	Jun	Jul
1	-4	17	20	-35	1	---	-7	-2	---	19	10	14
2	-7	21	14	-18	-2	-1	---	13	-9	-2	8	6
3	10	18	23	0	-3	---	---	---	-4	-2	1	5
4	1	22	14	-9	---	7	---	---	-4	5	4	-1
5	-1	18	10	4	6	-7	-2	---	-3	4	3	5
6	13	15	-1	12	---	-11	---	-6	3	6	3	-8
7	26	5	-9	3	---	---	2	---	6	2	-4	-20
8	19	2	-9	2	---	---	---	-12	---	-6	-7	-2
9	34	-7	-19	5	---	-9	---	---	---	-7	-4	-5
10	41	-7	-13	3	---	-7	27	-28	4	-7	-14	---
11	23	0	-2	-3	---	0	-1	---	-12	-8	-18	-12
12	-9	-12	12	-12	---	-7	-3	---	-12	-12	-14	-4
13	-15	0	3	0	---	---	-1	-1	-21	-12	-5	0
14	-15	-10	0	-2	---	-22	14	-6	-19	---	0	-4
15	-15	-13	6	1	---	---	---	1	---	---	2	5
16	-26	2	17	-12	---	---	12	-10	-1	---	1	-3
17	-25	2	17	-12	-10	-12	---	-17	---	---	1	2
18	-3	10	8	-4	---	---	22	-10	-8	3	0	-2
19	-2	10	-4	-14	-5	---	---	-10	-1	0	-8	-9
20	-9	0	-8	10	12	-14	---	-13	-1	-6	2	-5
21	-3	-3	15	---	---	---	---	-4	19	---	-3	-1
22	9	-16	-10	5	---	-14	-2	-23	-6	10	-3	1
23	8	8	-7	12	---	---	---	-5	-6	3	1	-3
24	1	19	-2	12	---	---	---	-1	22	-3	14	9
25	2	-2	16	0	---	-4	-5	---	0	-1	15	9
26	-6	14	6	-15	---	---	-1	-11	5	17	---	7
27	1	15	2	-7	---	---	---	0	-2	4	25	15
28	-2	20	9	-16	---	-10	-11	0	-5	-3	10	13
29	-2	21	---	-11	---	---	---	1	-1	5	14	0
30	3	20	-9	-15	---	---		-2	-3	6	8	-9
31	3		-16		---	---		---		19		-10

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

GOES Daily Electron Fluence
Aug 95 - Jul 96



Day	Aug 95	Sep	Oct	Nov	Dec	Jan 96	Feb	Mar	Apr	May	Jun	Jul
1	3.3E+06	5.5E+06	--	--	1.0E+07	9.7E+06	--	3.8E+07	1.3E+07	1.7E+07	1.9E+06	2.3E+05
2	3.6E+06	5.1E+06	4.2E+06	--	--	9.4E+06	2.1E+07	3.6E+07	1.5E+07	1.4E+07	2.5E+06	9.1E+04
3	2.7E+06	2.9E+06	3.4E+07	2.4E+08	--	5.6E+06	1.4E+07	9.9E+06	7.5E+06	1.4E+07	8.5E+05	5.1E+05
4	2.2E+06	2.6E+06	4.5E+07	1.1E+08	2.6E+06	--	--	3.2E+06	1.9E+06	1.6E+07	8.6E+05	1.8E+06
5	2.3E+06	2.2E+06	8.6E+08	8.3E+06	3.7E+06	--	--	5.7E+06	2.6E+06	1.1E+07	6.6E+05	1.4E+07
6	2.3E+06	--	1.9E+09	1.7E+08	4.4E+06	3.3E+06	--	5.5E+06	3.1E+06	1.2E+07	2.5E+05	2.5E+07
7	2.3E+06	5.9E+08	1.4E+09	3.5E+08	3.8E+06	3.4E+06	3.8E+06	--	3.6E+06	1.5E+07	4.2E+05	1.5E+07
8	2.8E+06	5.6E+08	1.3E+09	4.0E+08	4.3E+06	3.3E+06	3.1E+06	2.4E+06	2.6E+06	7.1E+06	3.5E+05	6.9E+06
9	2.7E+08	2.9E+09	1.1E+09	3.1E+08	2.5E+06	3.5E+06	2.6E+06	2.1E+06	7.5E+05	1.0E+07	3.7E+05	5.4E+06
10	1.9E+08	--	7.2E+08	3.3E+08	2.1E+06	3.2E+06	2.2E+06	2.2E+06	3.0E+06	1.1E+07	4.1E+05	7.4E+06
11	3.1E+08	--	2.0E+08	1.3E+08	2.1E+06	2.0E+06	5.3E+06	2.0E+07	4.3E+06	4.0E+06	4.4E+05	7.6E+06
12	3.7E+08	6.4E+08	2.3E+08	1.5E+07	2.0E+06	1.7E+06	3.0E+07	3.1E+08	4.9E+07	4.1E+06	1.9E+05	9.6E+05
13	1.0E+08	8.3E+08	2.4E+08	1.6E+07	1.7E+06	1.4E+06	1.3E+08	1.8E+08	1.3E+08	1.2E+06	2.4E+05	1.5E+05
14	9.8E+07	2.6E+09	3.1E+08	1.1E+07	1.8E+06	1.5E+06	1.4E+08	6.6E+08	1.2E+07	5.2E+06	2.2E+05	3.1E+05
15	1.4E+09	3.9E+08	3.8E+08	4.6E+06	1.6E+06	1.2E+08	1.7E+08	9.2E+08	2.9E+08	1.4E+06	2.2E+05	1.5E+05
16	2.6E+09	8.0E+07	1.1E+08	4.2E+06	2.0E+06	--	3.9E+07	1.9E+08	1.4E+09	8.0E+06	7.7E+04	1.3E+05
17	9.6E+08	7.6E+07	6.6E+06	2.7E+06	3.3E+06	9.6E+07	1.5E+07	1.1E+08	3.9E+08	7.4E+06	1.7E+05	2.2E+05
18	1.6E+07	2.1E+08	3.6E+06	2.2E+06	3.6E+06	5.2E+07	1.5E+07	2.3E+08	8.2E+08	1.0E+07	3.6E+05	5.2E+05
19	3.6E+07	1.4E+08	4.0E+07	2.2E+06	--	6.3E+07	6.1E+06	1.2E+08	1.3E+09	1.1E+07	1.3E+05	8.5E+05
20	2.1E+07	2.0E+07	7.4E+07	--	5.2E+06	2.8E+06	--	3.8E+07	1.8E+09	4.5E+06	1.9E+05	4.7E+05
21	2.1E+07	--	1.9E+08	2.5E+06	3.1E+06	2.4E+06	3.1E+07	2.4E+08	1.9E+09	5.2E+06	3.2E+05	8.5E+05
22	3.9E+07	--	5.3E+08	2.2E+06	1.8E+06	3.1E+06	1.0E+07	3.7E+08	1.2E+09	6.8E+06	4.3E+05	1.8E+06
23	3.3E+06	4.6E+06	5.4E+07	2.0E+06	--	3.1E+06	4.5E+06	1.2E+09	8.6E+08	2.6E+06	3.9E+05	1.8E+06
24	4.5E+06	2.9E+07	1.7E+07	1.9E+06	1.8E+06	3.1E+06	6.8E+06	1.3E+08	8.3E+08	1.4E+06	1.6E+05	4.4E+06
25	3.1E+06	1.4E+07	1.6E+07	1.9E+06	2.4E+07	2.0E+06	2.2E+07	6.6E+07	3.3E+08	1.1E+06	1.7E+05	1.6E+06
26	3.8E+07	1.0E+07	3.0E+07	1.8E+06	1.2E+08	2.2E+06	4.2E+07	3.0E+08	3.0E+08	5.8E+05	1.1E+05	6.9E+05
27	3.1E+07	6.1E+06	1.2E+07	1.7E+06	1.9E+08	2.5E+06	--	4.5E+08	4.1E+08	1.4E+06	1.4E+05	6.8E+05
28	1.6E+07	3.8E+06	6.8E+06	3.4E+06	1.3E+08	2.7E+06	1.6E+07	3.1E+08	9.5E+06	1.8E+06	2.7E+05	6.9E+05
29	5.3E+06	--	5.5E+06	1.2E+07	9.2E+07	2.5E+07	5.1E+07	4.1E+08	2.1E+07	1.4E+06	1.3E+05	1.2E+05
30	--	--	2.7E+06	2.0E+07	5.7E+07	3.1E+07		3.3E+08	2.6E+07	9.7E+05	1.4E+05	1.8E+05
31	6.2E+06		3.9E+06		--	--		1.2E+08		1.3E+06		2.5E+05

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. GOES9 data begins April, 1996.

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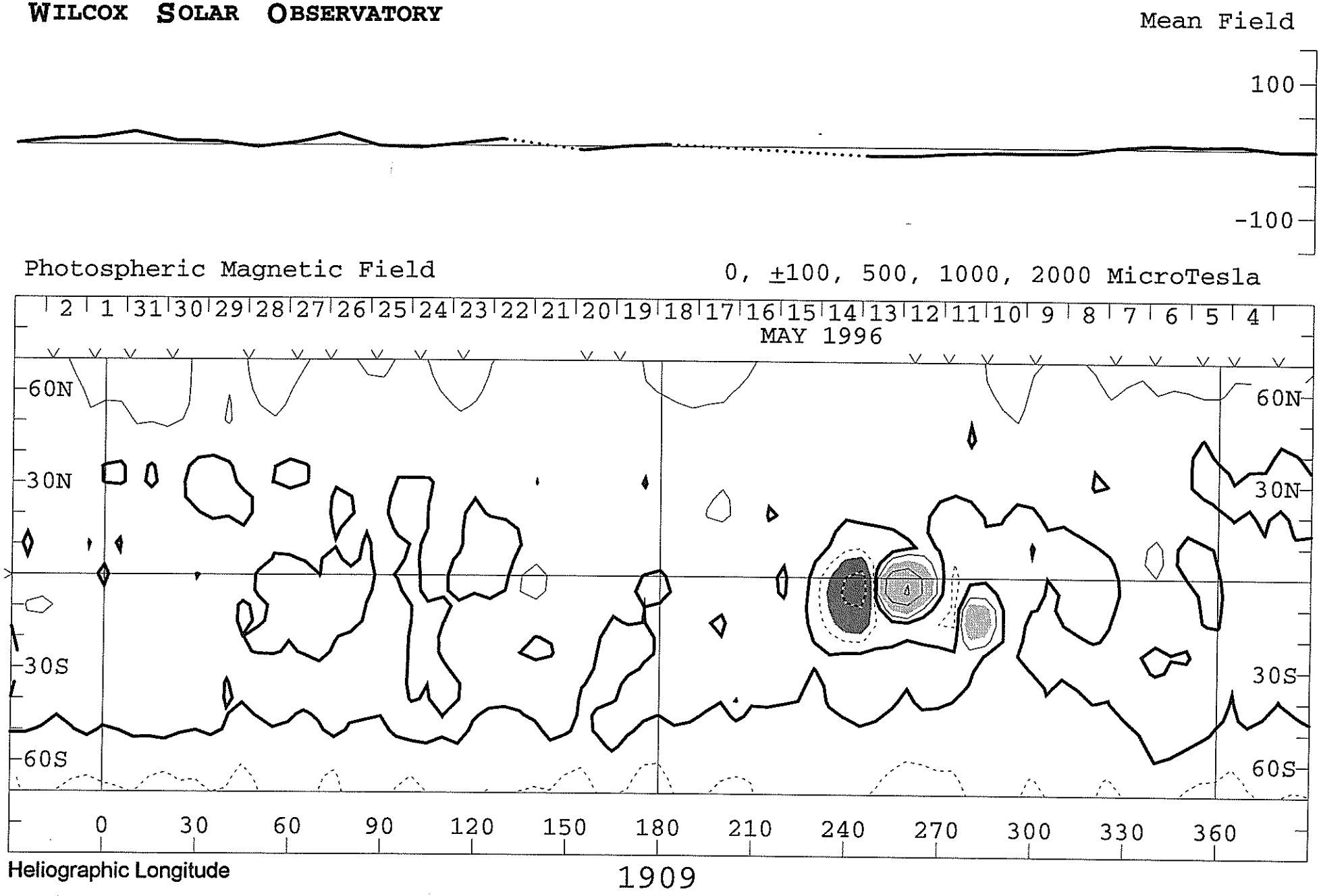
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1909
(5 May to 1 June 1996)

WILCOX SOLAR OBSERVATORY



SOLAR MAGNETIC FIELD SYNOPTIC CHART

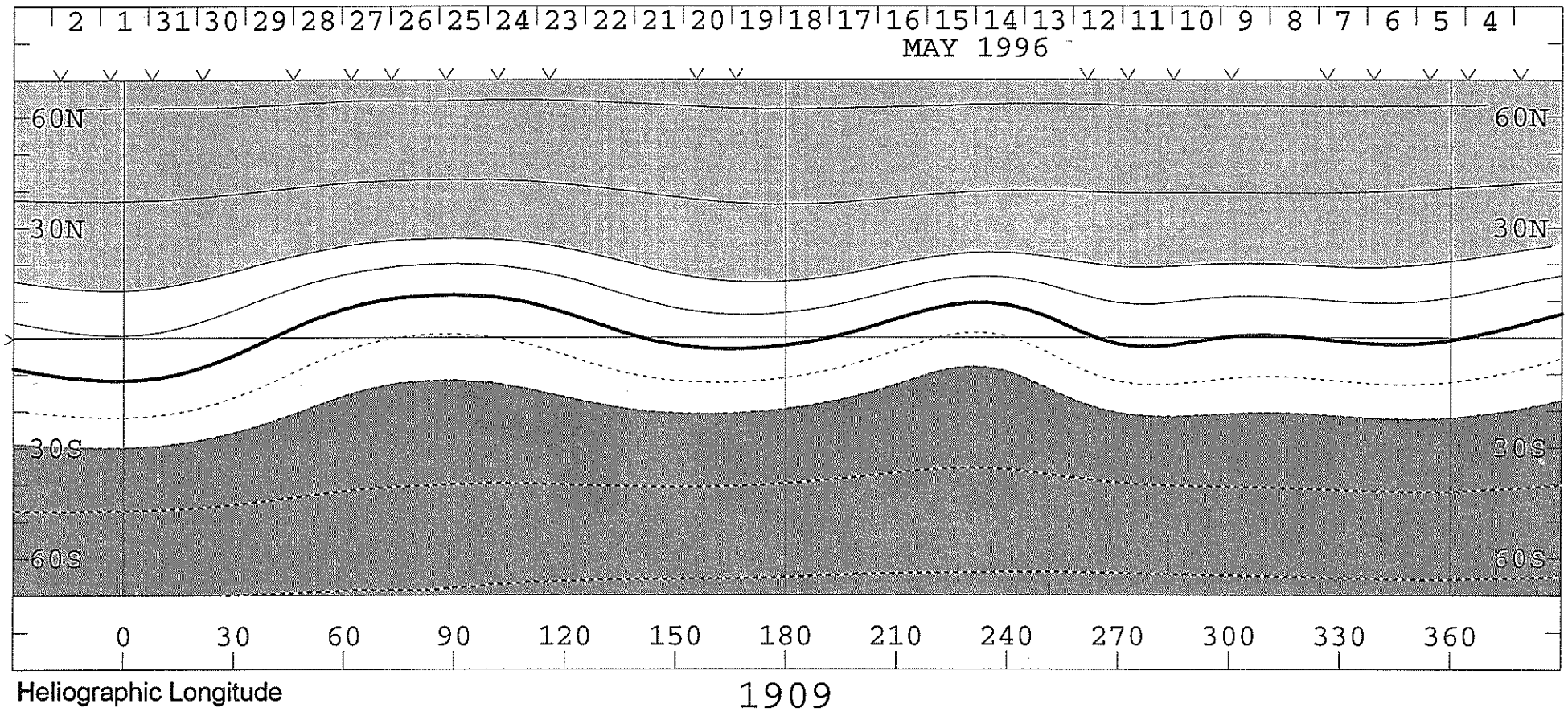
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1909

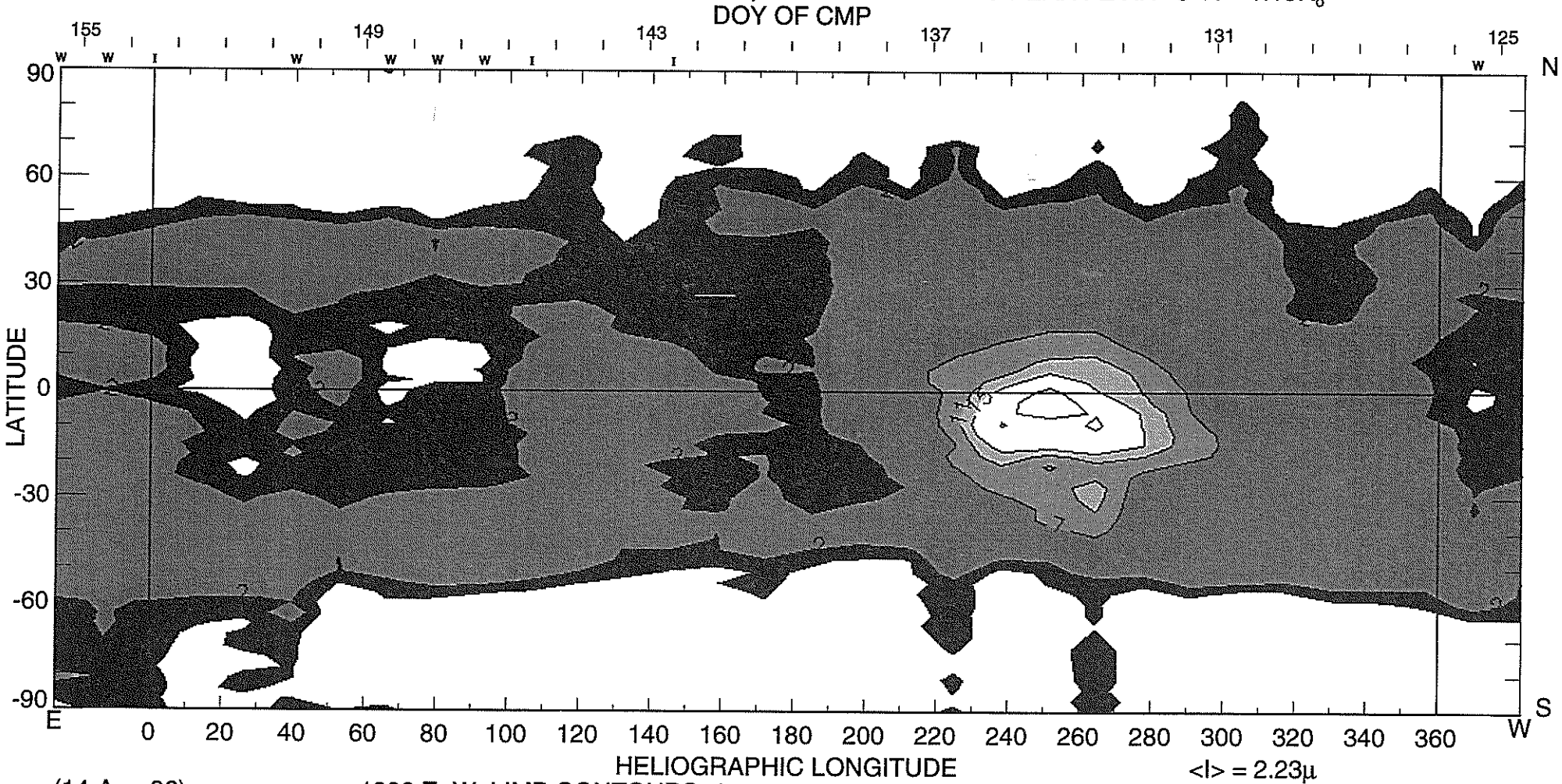
(5 May to 1 June 1996)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



CARRINGTON ROTATION NUMBER 1909 ; NSO/SACRAMENTO PEAK FE XIV @ R = 1.15R_o



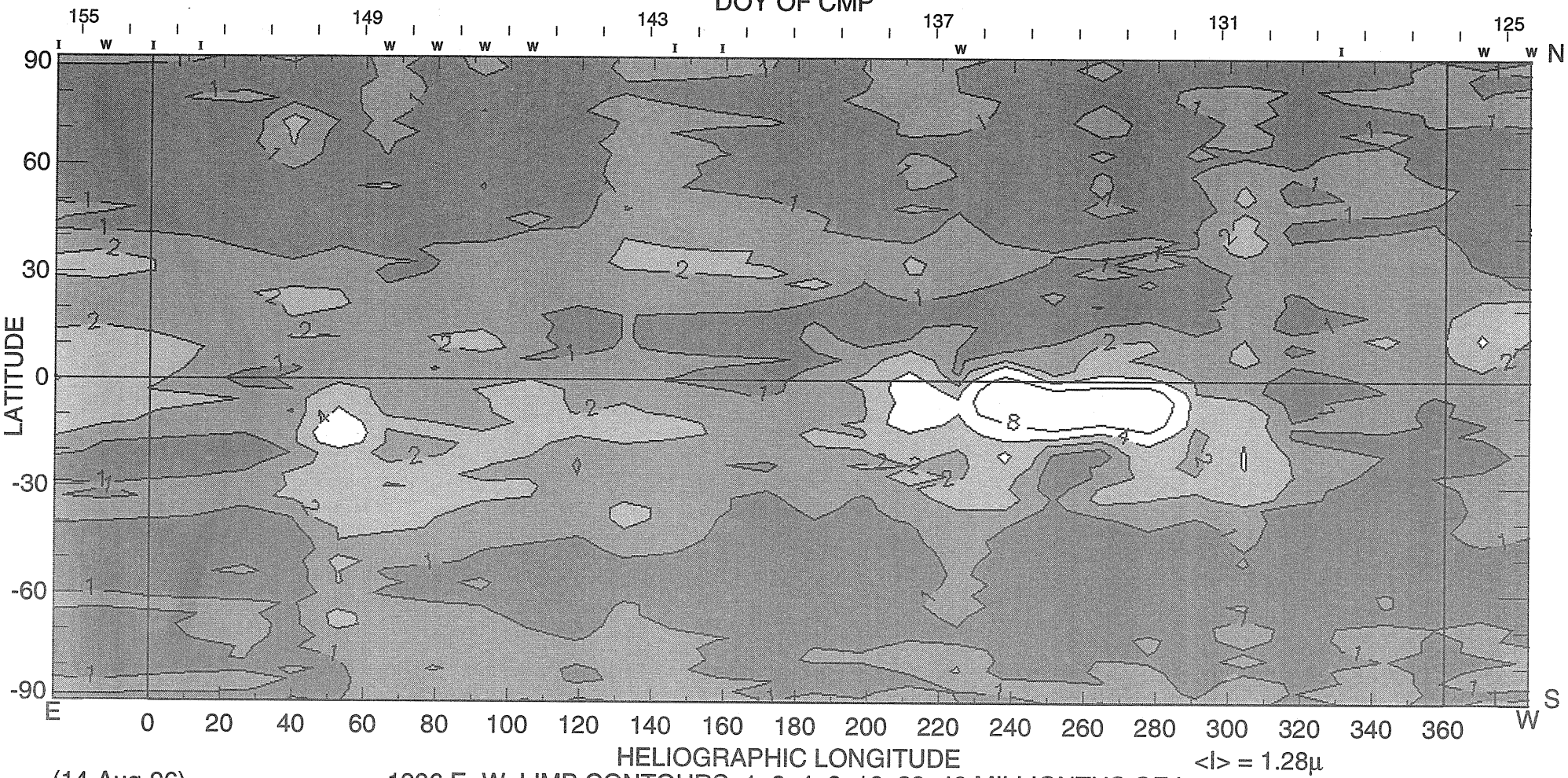
(14-Aug-96)

<I> = 2.23μ

1996 E+W LIMB CONTOURS: 1, 2, 7, 11, 15, 25, 35, 45 MILLIONTHS OF I_o

CORONAL HOLES ARE SHOWN AS WHITE BORDERED BY BLACK

CARRINGTON ROTATION NUMBER 1909 ; NSO/SACRAMENTO PEAK FE X @ R = 1.15R_o



(14-Aug-96)

<I> = 1.28μ

1996 E+W LIMB CONTOURS: 1, 2, 4, 8, 16, 32, 48 MILLIONTHS OF I_o

NOTE: No Ca XV emission observed at Sacramento Peak for rotation 1909.

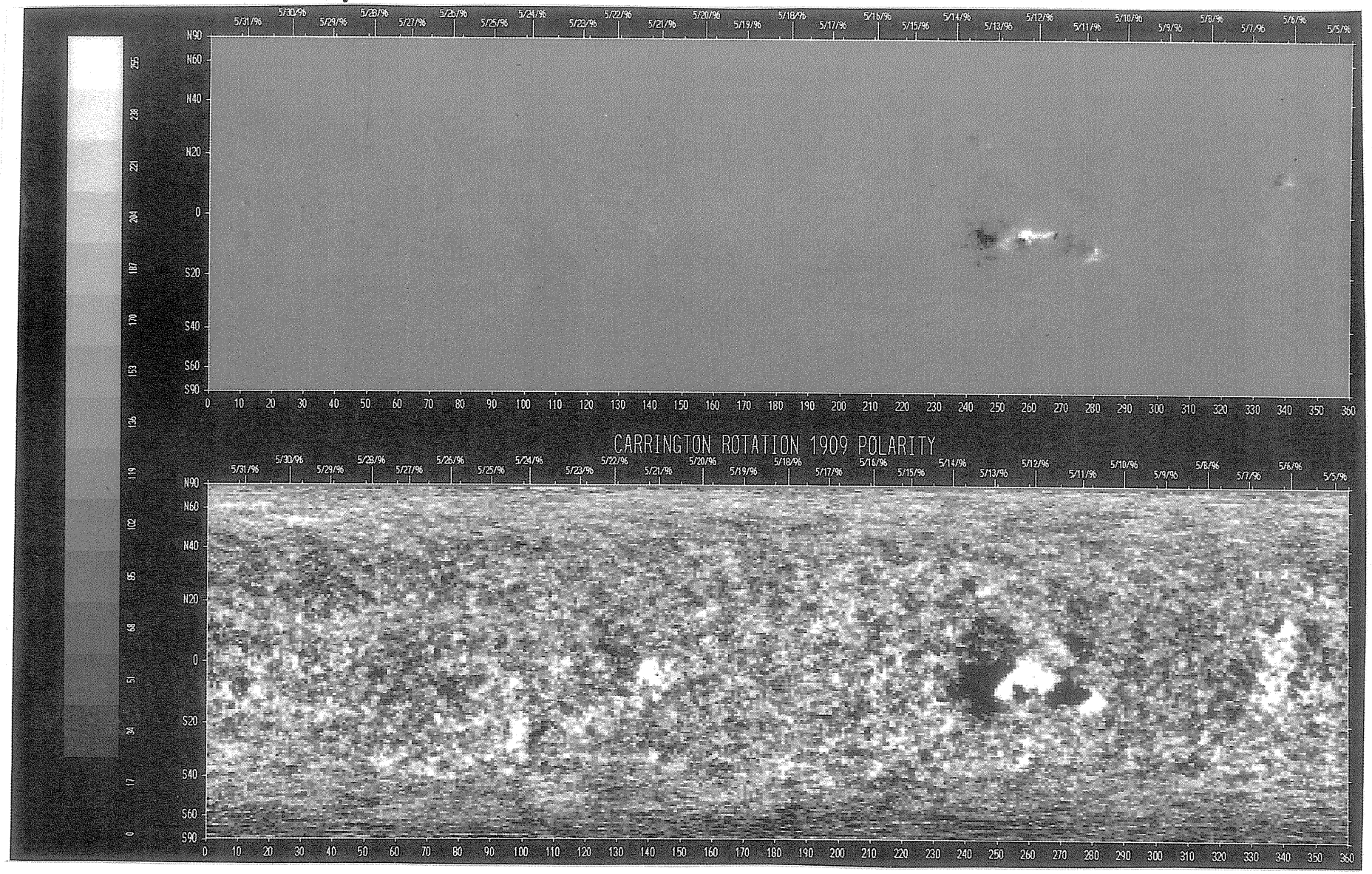
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1909

(5 May to 1 June 1996)

National Solar Observatory/Kitt Peak

Dates of Observation

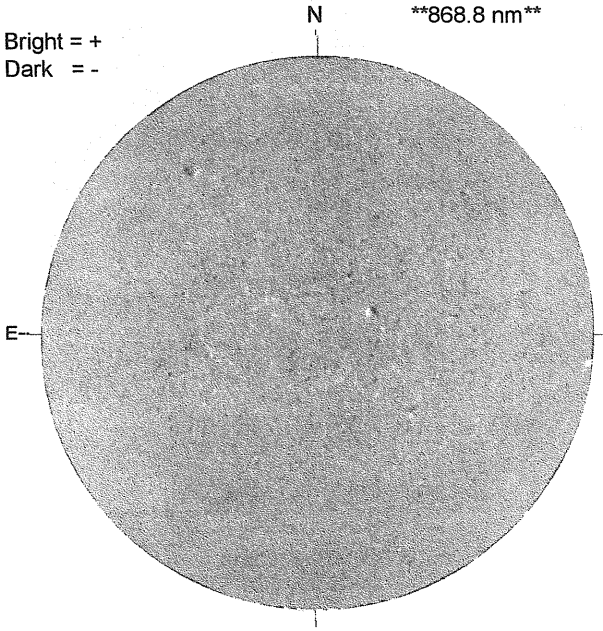


Heliographic Longitude

JUNE 1, 1996 (P= -15.33, Bo = -0.62, Lo = 6.60)

KITT PEAK MAGNETOGRAM

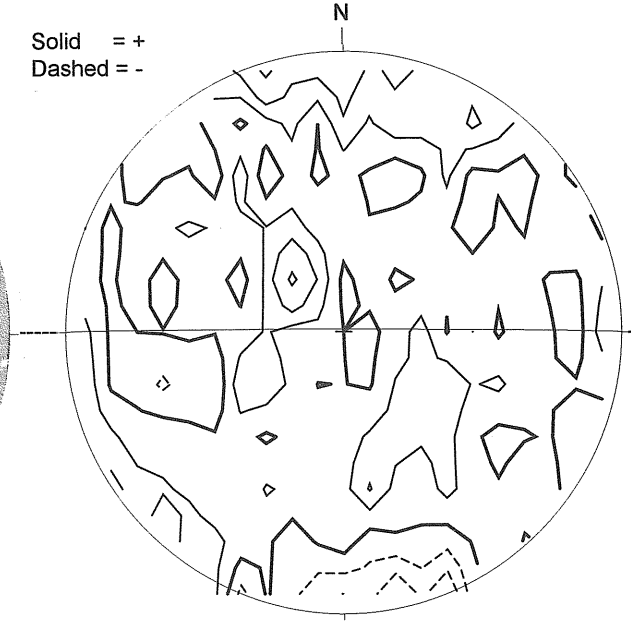
Bright = +
Dark = -



1418 UT

STANFORD MAGNETOGRAM

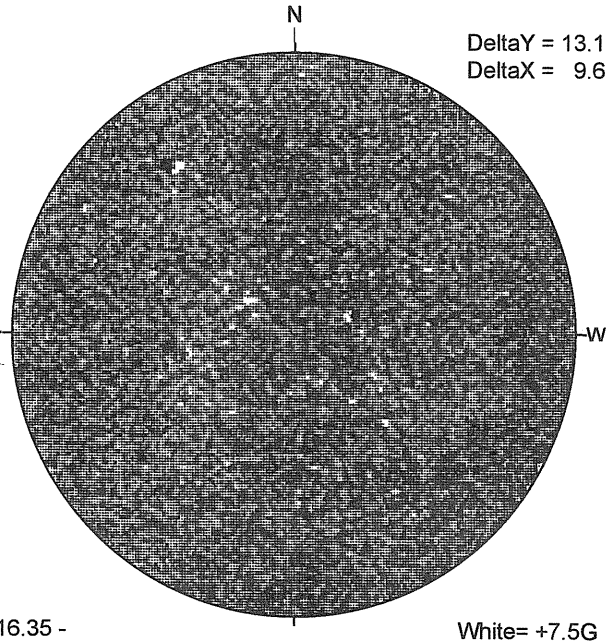
Solid = +
Dashed = -



1851 UT

MT. WILSON MAGNETOGRAM

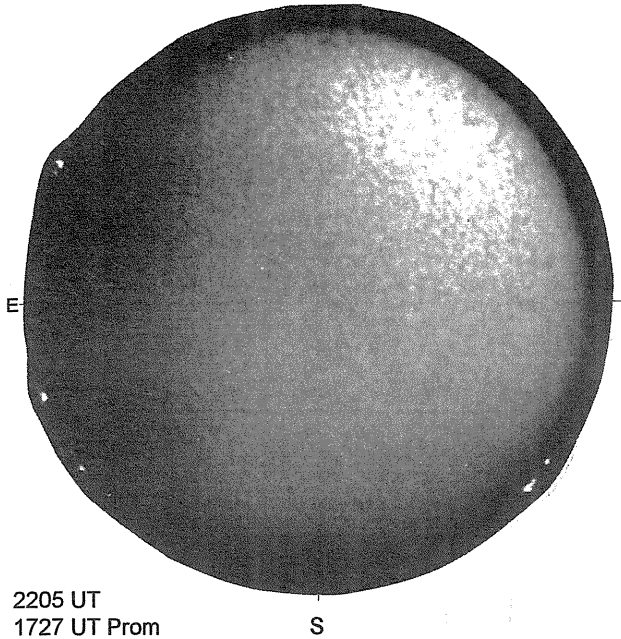
DeltaY = 13.1
DeltaX = 9.6



16.35 -
17.27 UT

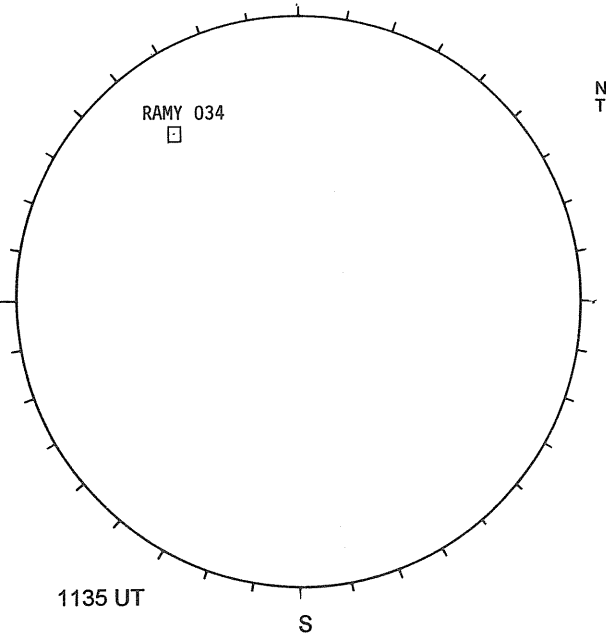
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



2205 UT
1727 UT Prom

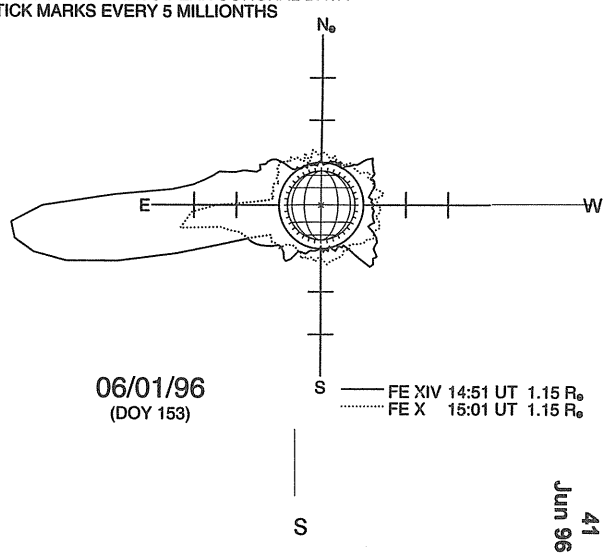
RAMEY SUNSPOT



1135 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



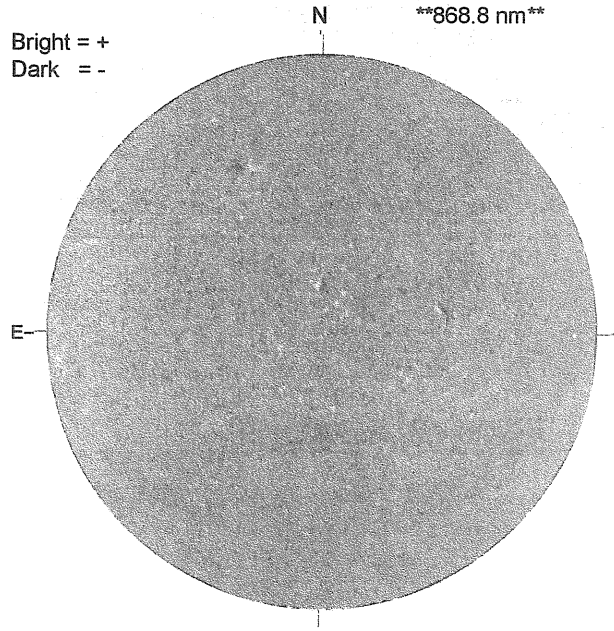
06/01/96
(DOY 153)

S

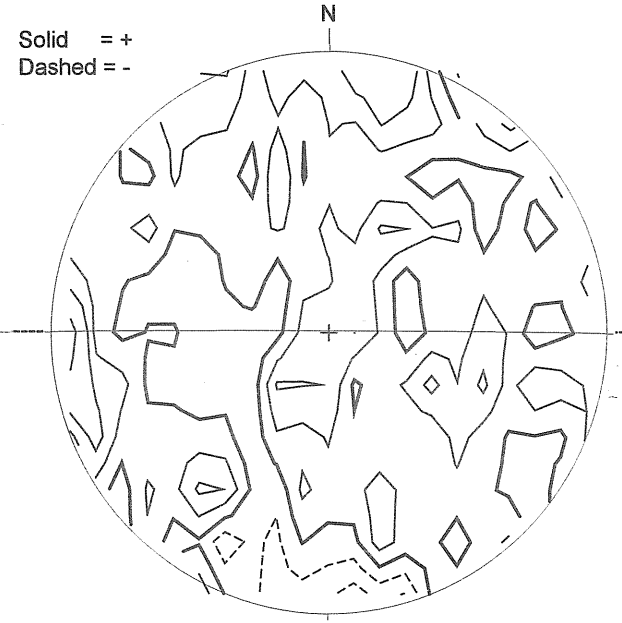
41
Jun 96

JUNE 2, 1996 (P= -14.95, Bo = -0.50, Lo = 353.36)

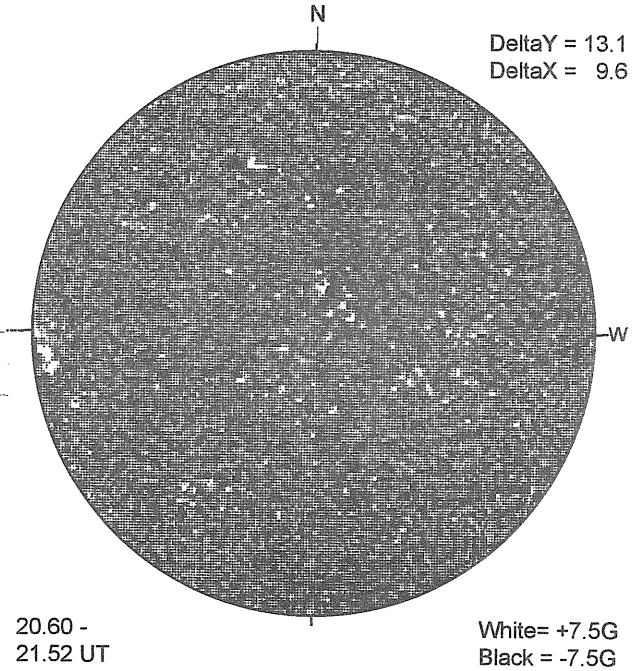
KITT PEAK MAGNETOGRAM



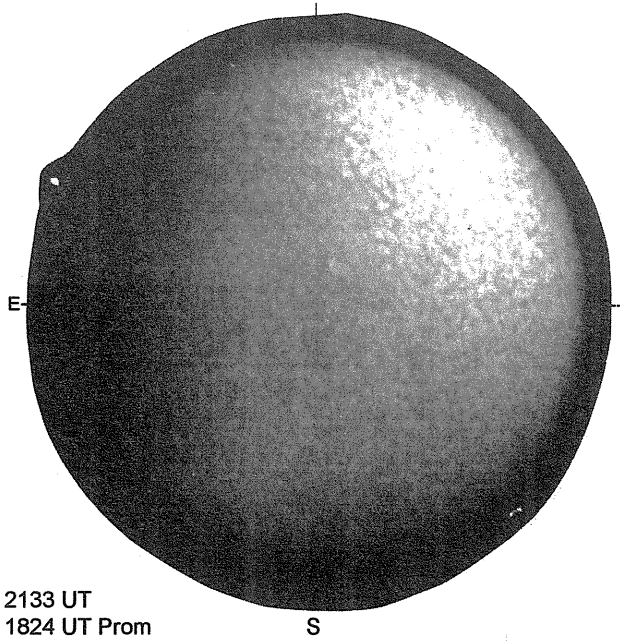
STANFORD MAGNETOGRAM



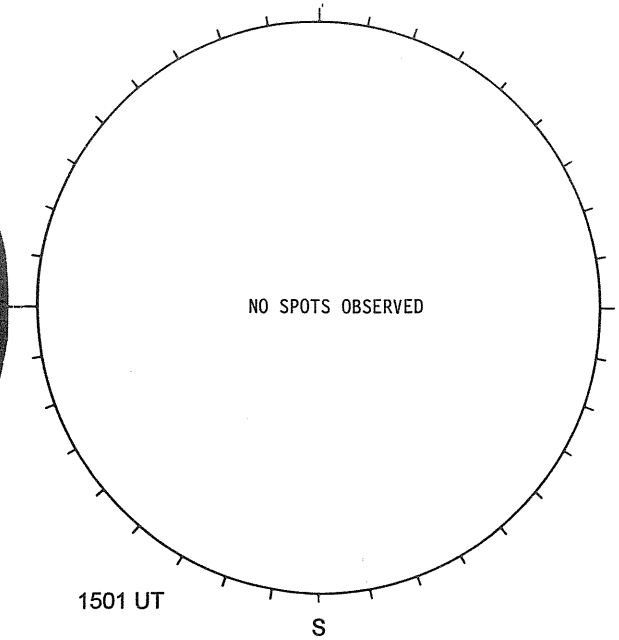
MT. WILSON MAGNETOGRAM



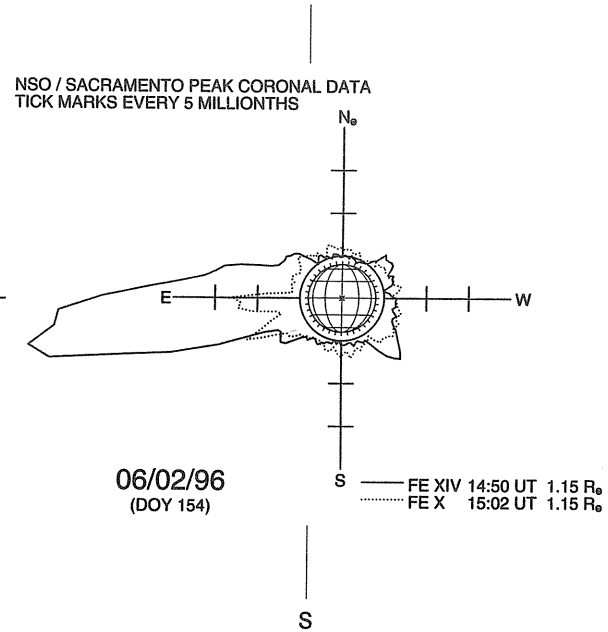
MAUNA LOA H-ALPHA



RAMEY SUNSPOT

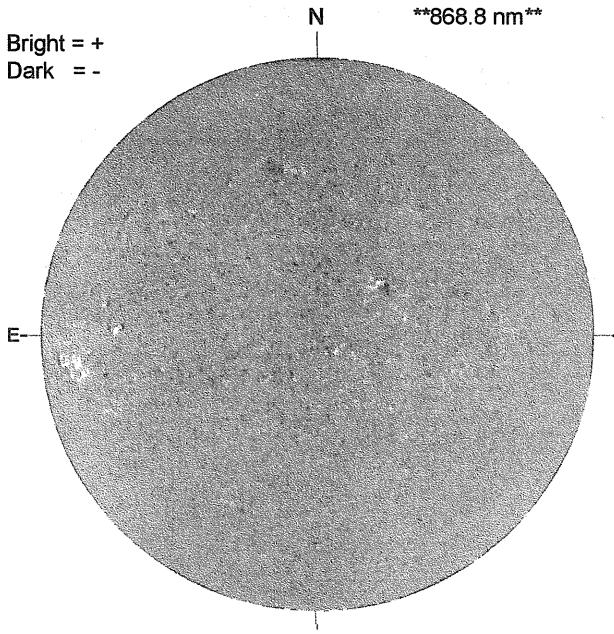


SACRAMENTO PEAK CORONA (1.15 Radii)

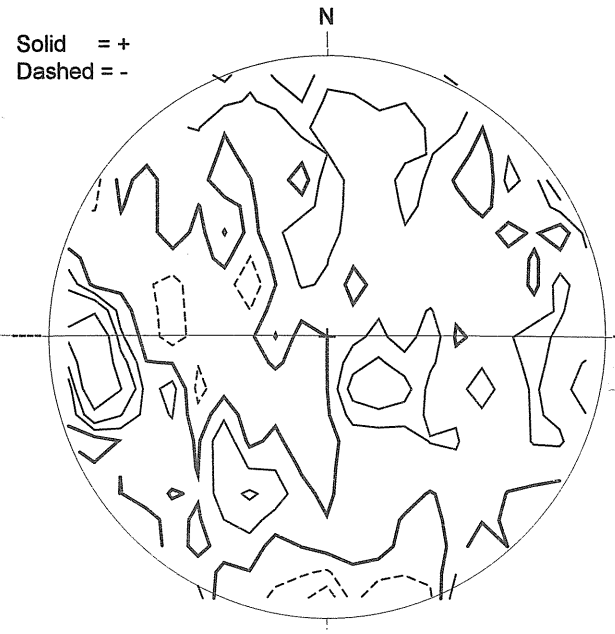


JUNE 3, 1996 (P= -14.57, Bo = -0.38, Lo = 340.13)

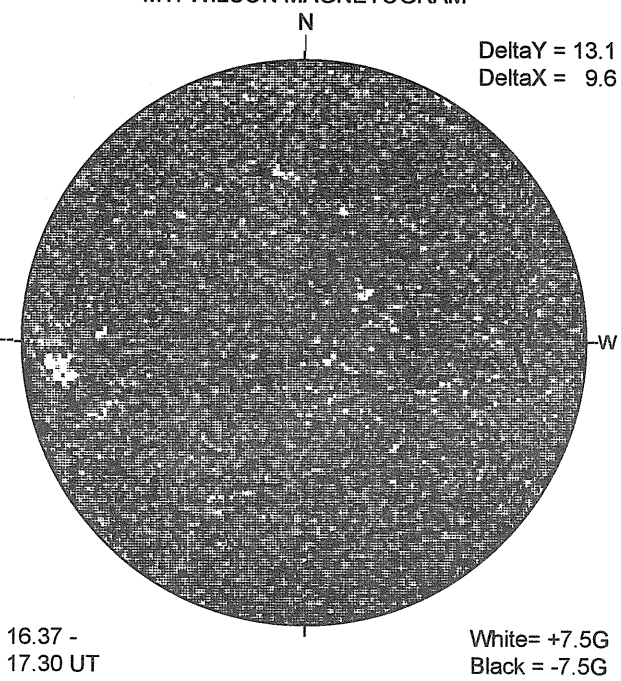
KITT PEAK MAGNETOGRAM



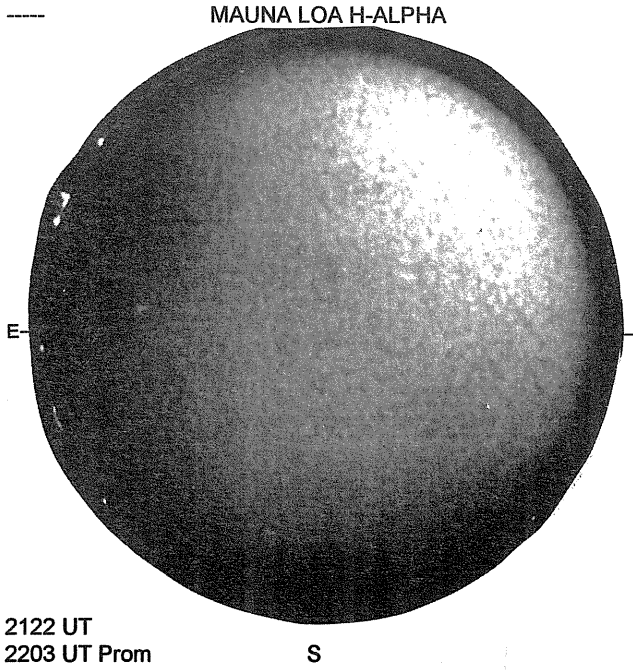
STANFORD MAGNETOGRAM



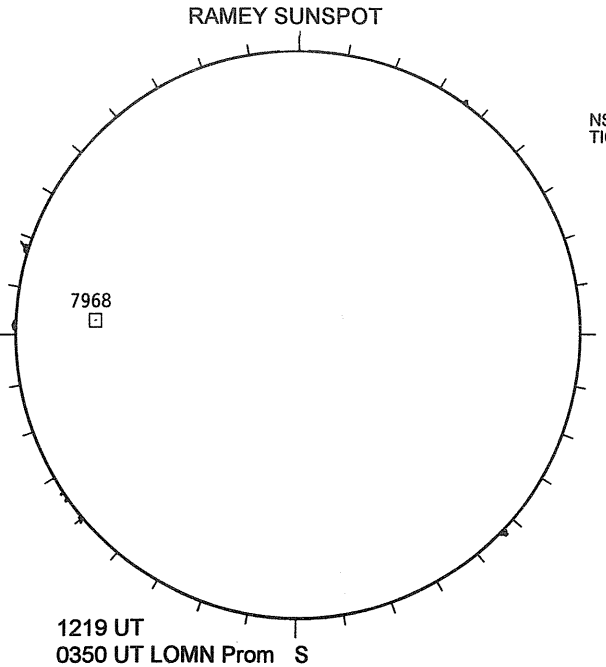
MT. WILSON MAGNETOGRAM



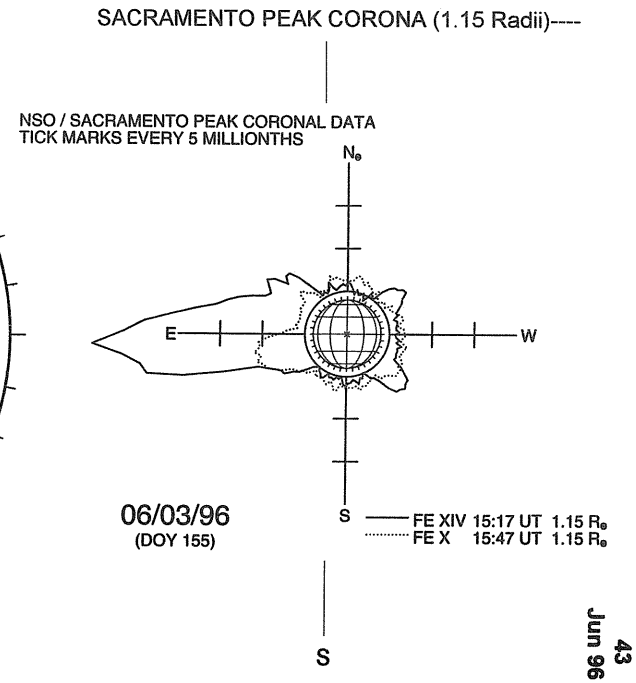
MAUNA LOA H-ALPHA



RAMEY SUNSPOT

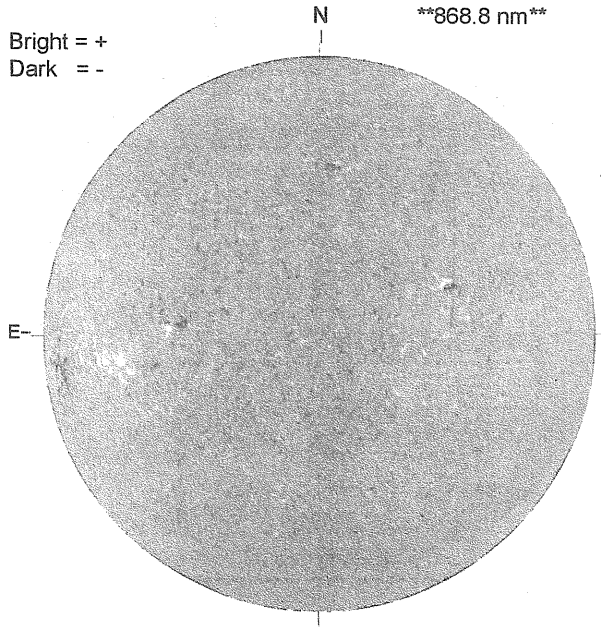


SACRAMENTO PEAK CORONA (1.15 Radii)----



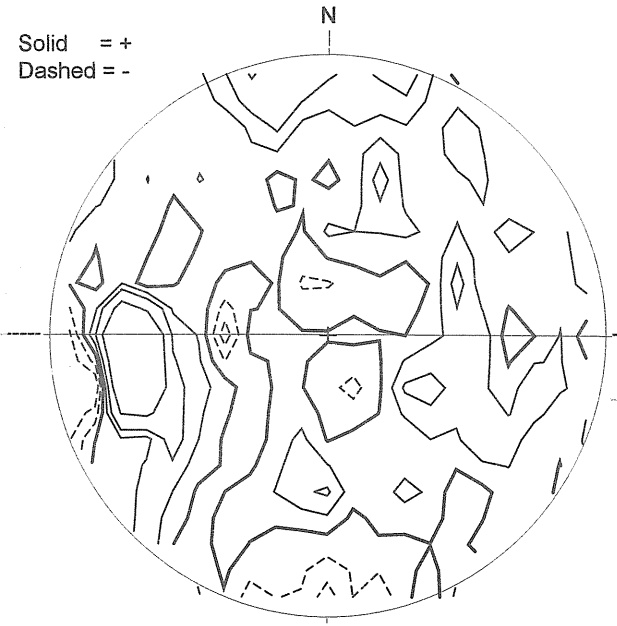
JUNE 4, 1996 (P= -14.18, Bo = -0.26 Lo = 326.89)

KITT PEAK MAGNETOGRAM



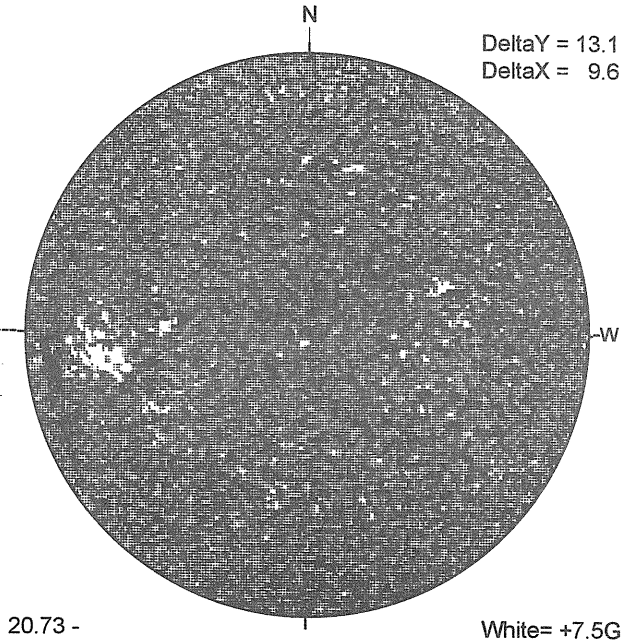
1520 UT

STANFORD MAGNETOGRAM



2132 UT

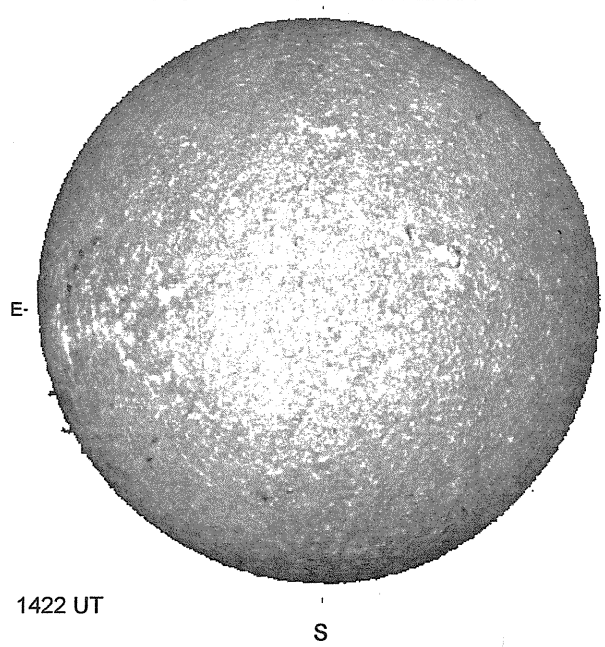
MT. WILSON MAGNETOGRAM



20.73 -
21.65 UT

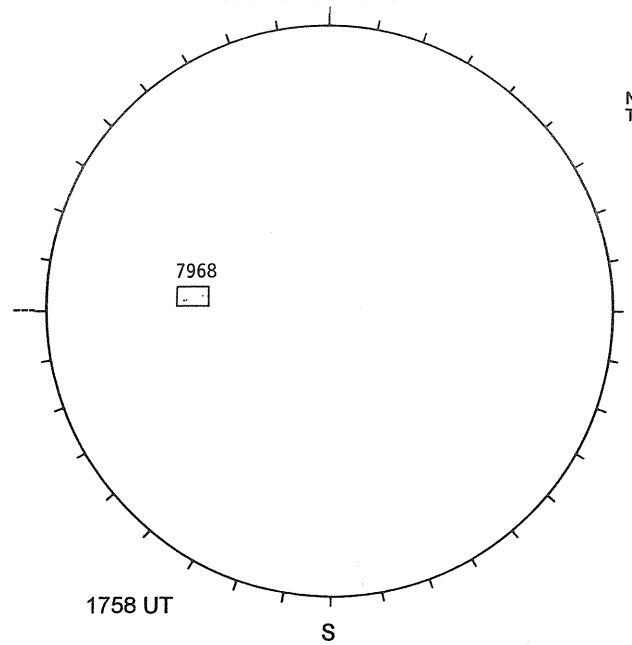
White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



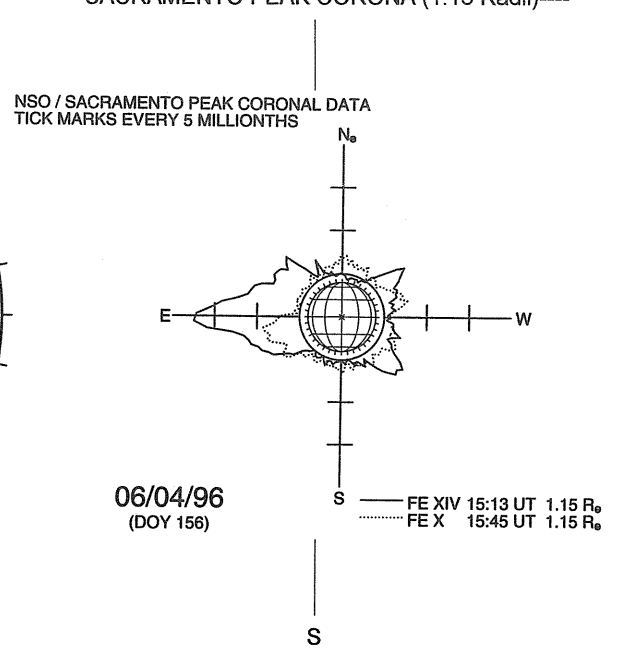
1422 UT

RAMEY SUNSPOT



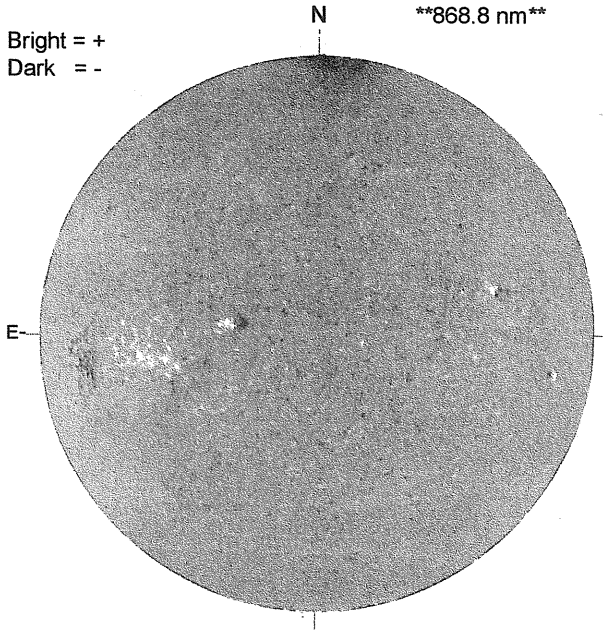
1758 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

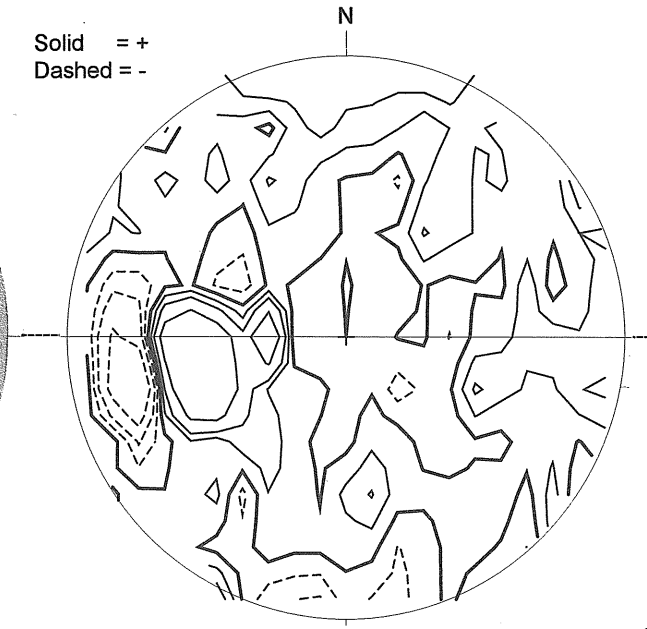


JUNE 5, 1996 (P= -13.79, Bo = -0.14, Lo = 313.66)

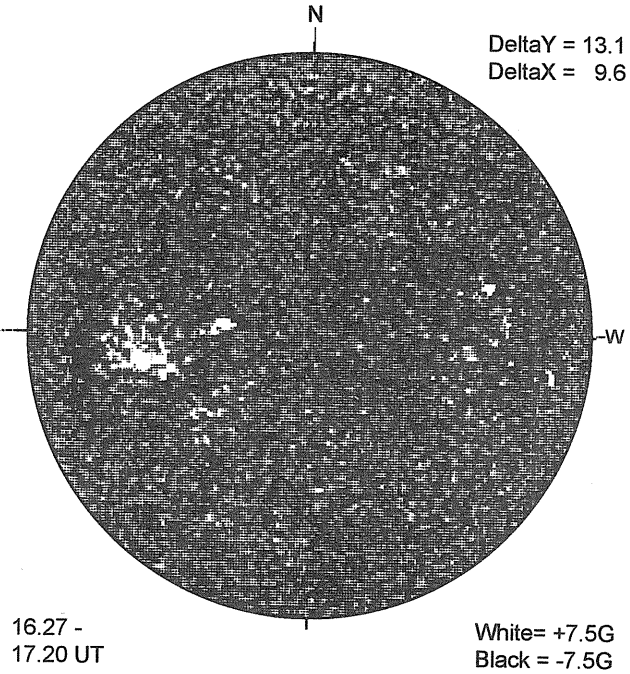
KITT PEAK MAGNETOGRAM



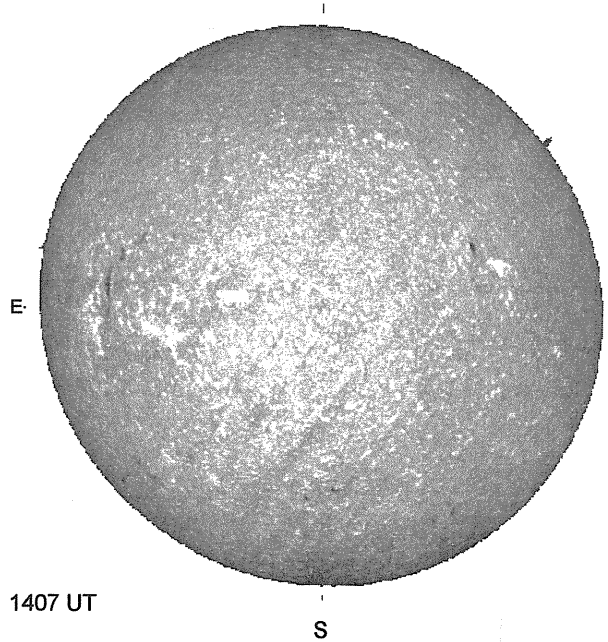
STANFORD MAGNETOGRAM



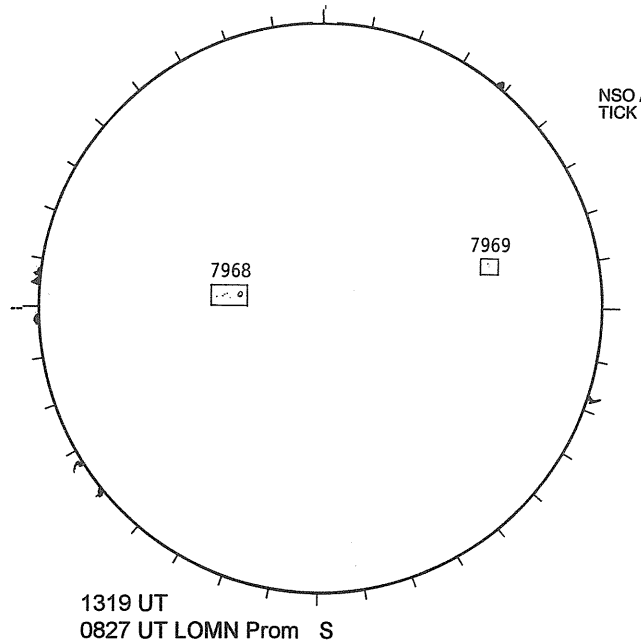
MT. WILSON MAGNETOGRAM



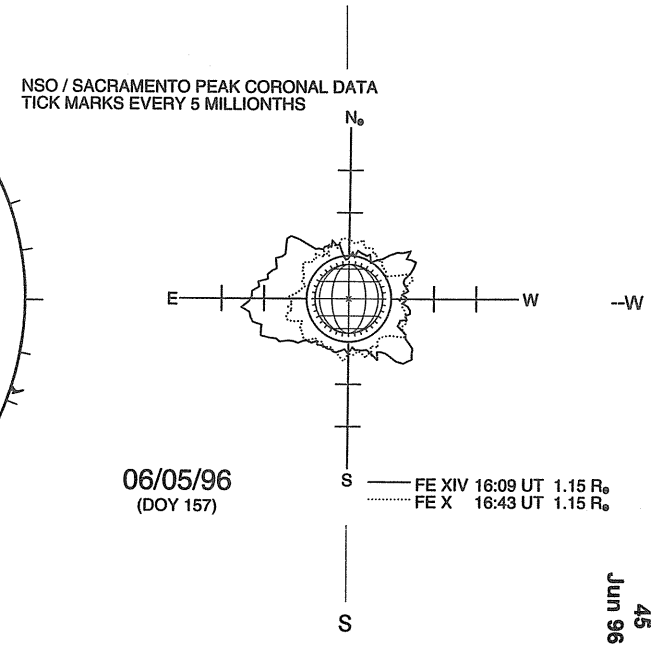
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----

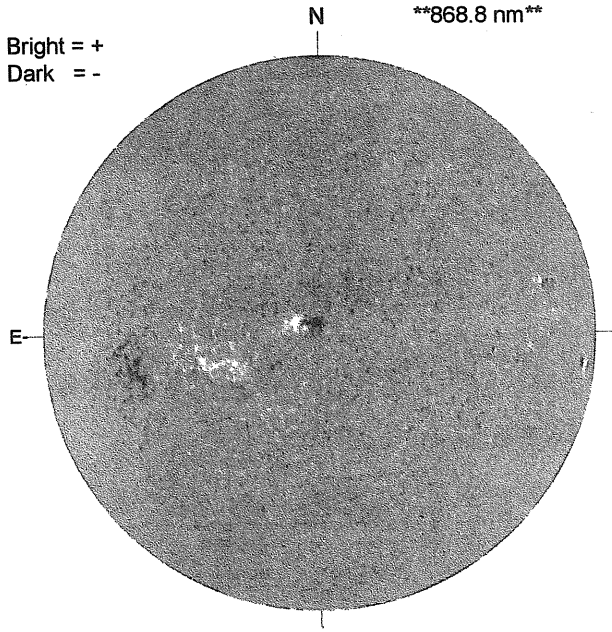


JUNE 6, 1996 (P= -13.40, Bo = -0.02 Lo = 300.42)

KITT PEAK MAGNETOGRAM

868.8 nm

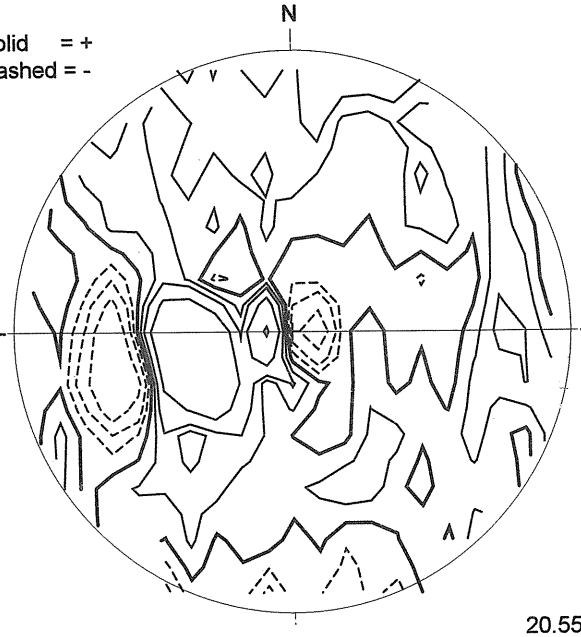
Bright = +
Dark = -



1516 UT

STANFORD MAGNETOGRAM

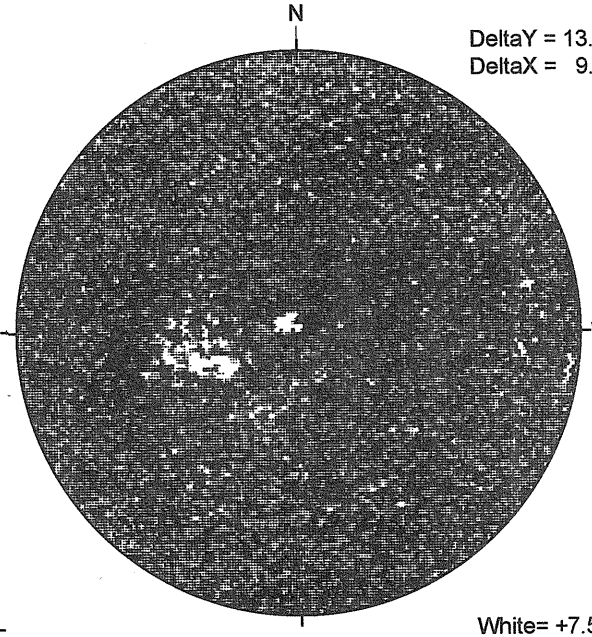
Solid = +
Dashed = -



1823 UT

MT. WILSON MAGNETOGRAM

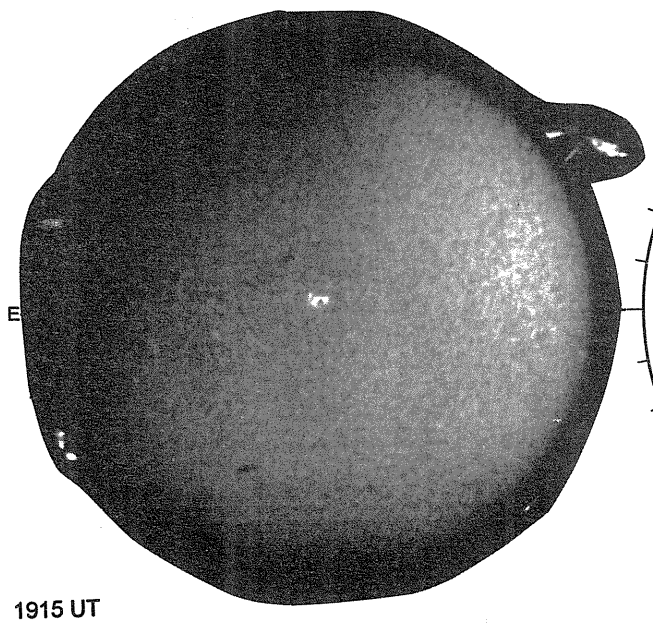
DeltaY = 13.1
DeltaX = 9.6



20.55 -
21.47 UT

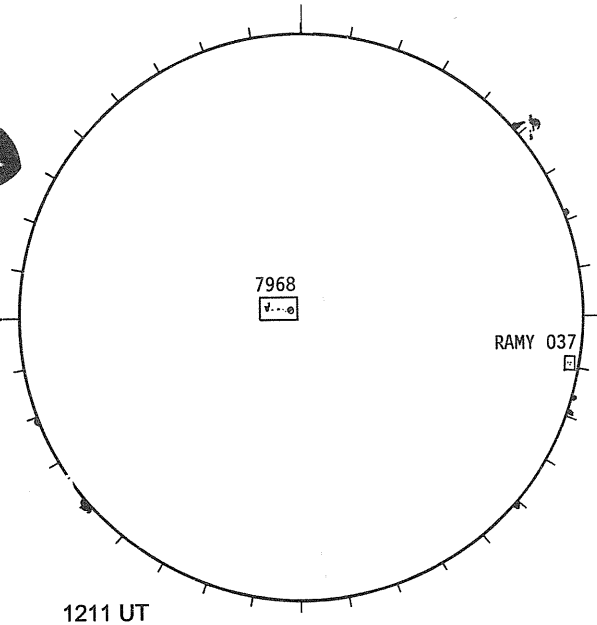
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



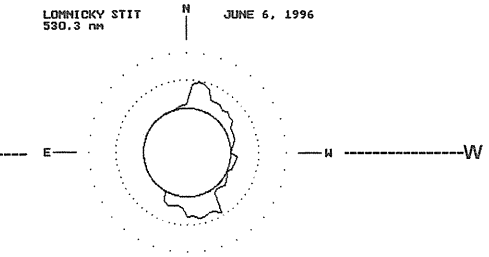
1915 UT
2142 UT Prom S

RAMEY SUNSPOT



1211 UT
0723 UT LOMN Prom S

LOMNICKY PEAK CORONA (1.04 Radii)----



530.3 nm, 0912 UT
... 50 abs. units
. . 100 abs. units

S

JUNE 7, 1996 (P= -13.00, Bo = 0.10 Lo = 287.19)

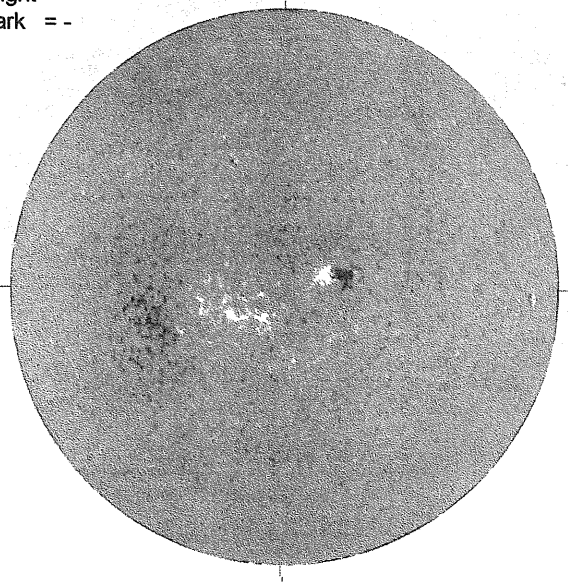
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

N

868.8 nm

E-

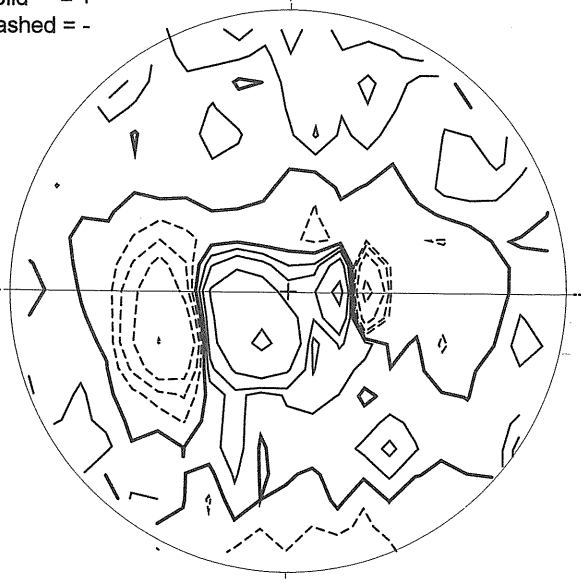


1429 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

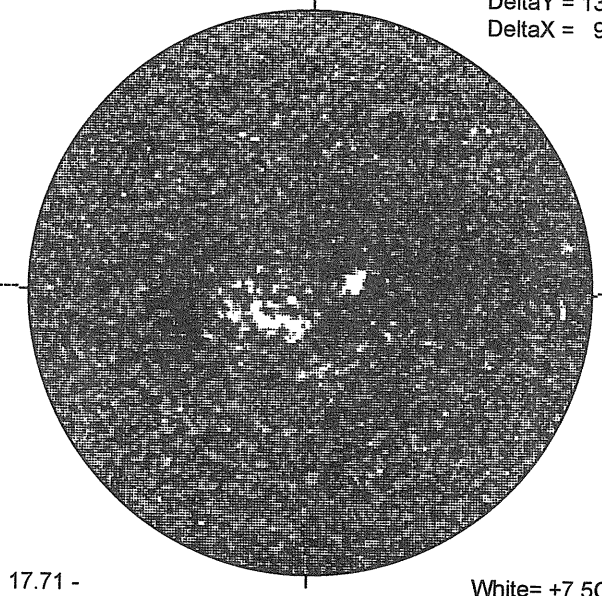


1903 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6



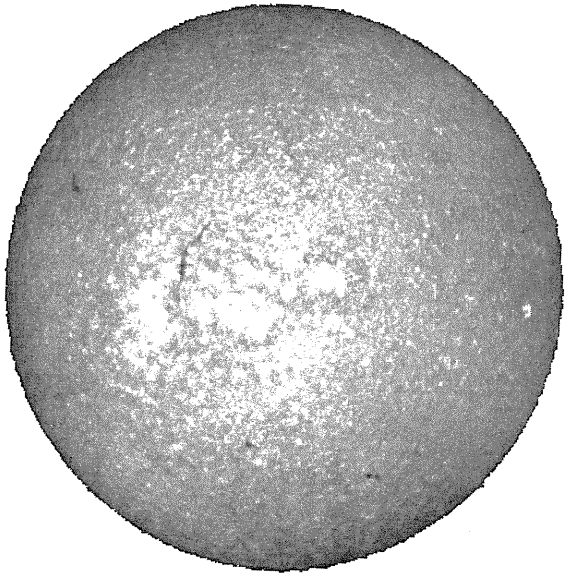
-W

17.71 -
18.63 UT

White= +7.5G
Black = -7.5G

----- SACRAMENTO PEAK H-ALPHA

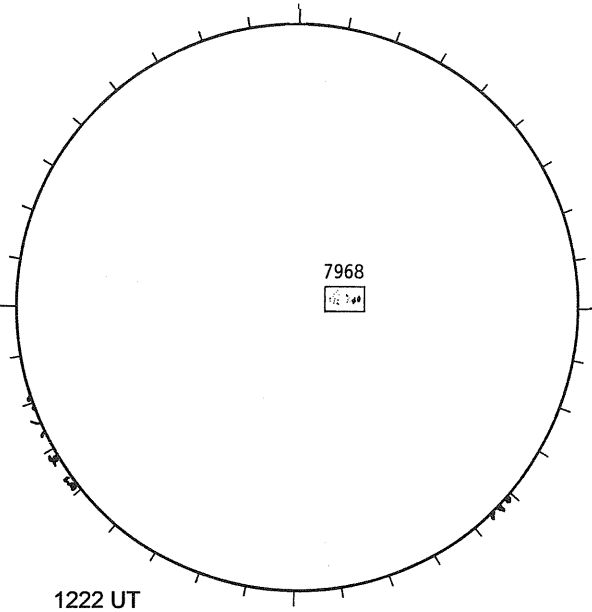
E-



1401 UT
Time uncertain.

S

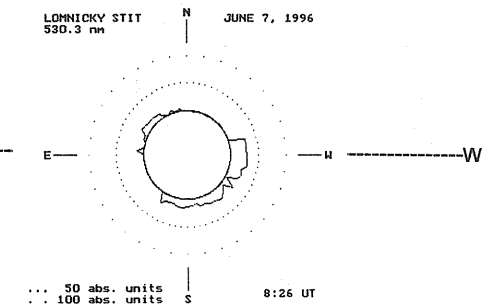
RAMEY SUNSPOT



1222 UT
0756 UT LOMN Prom

S

LOMNICKY PEAK CORONA (1.04 Radii)----



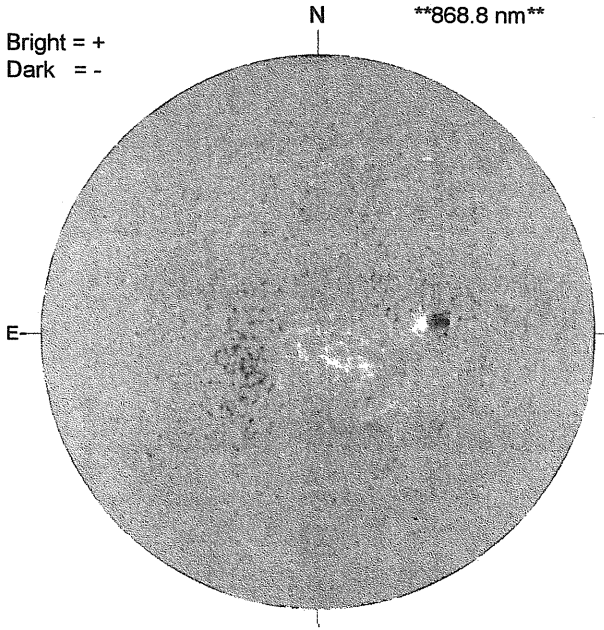
530.3 nm, 0826 UT
... 50 abs. units
. . 100 abs. units

S

JUNE 8, 1996 (P= -12.60, Bo = 0.22, Lo = 273.95)

KITT PEAK MAGNETOGRAM

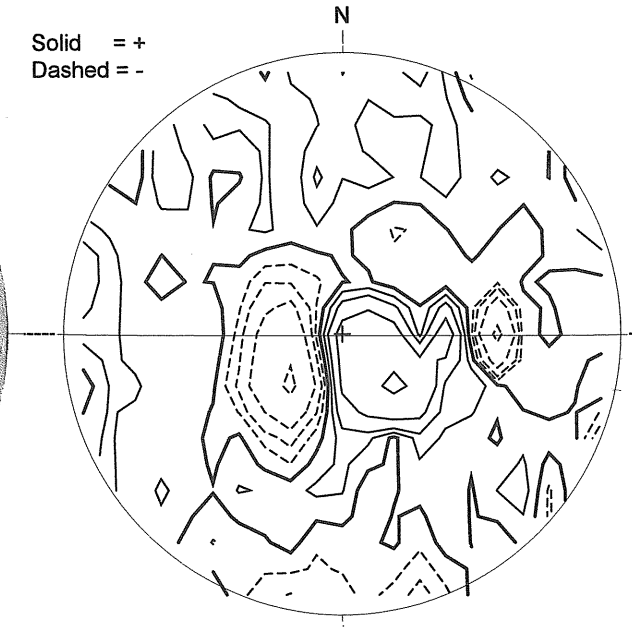
Bright = +
Dark = -



1601 UT

STANFORD MAGNETOGRAM

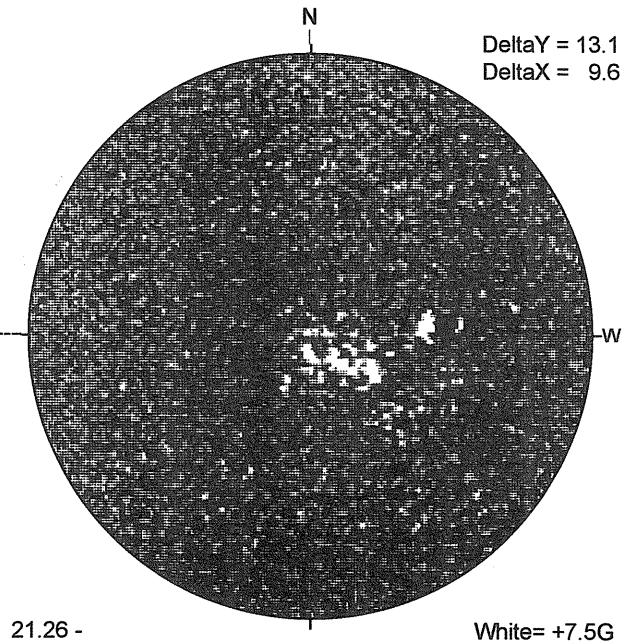
Solid = +
Dashed = -



2209 UT

MT. WILSON MAGNETOGRAM

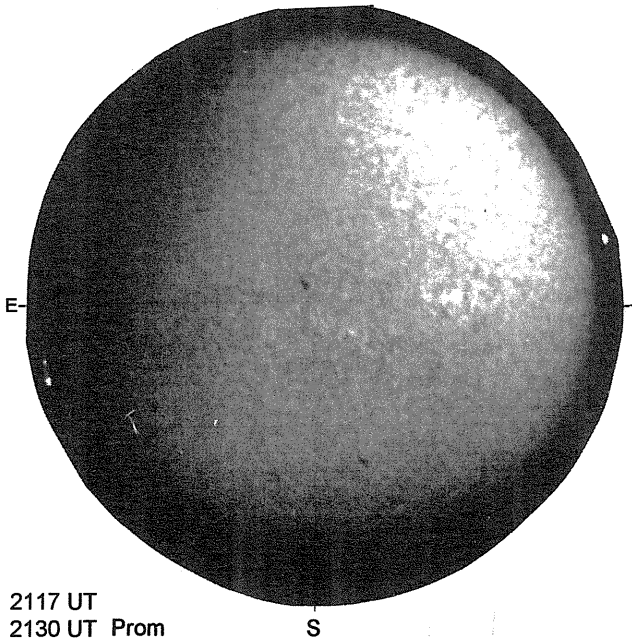
DeltaY = 13.1
DeltaX = 9.6



21.26 -
22.19 UT

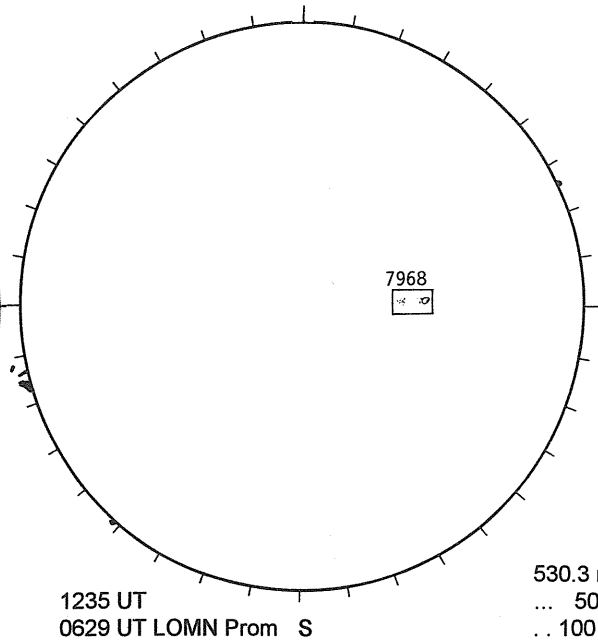
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



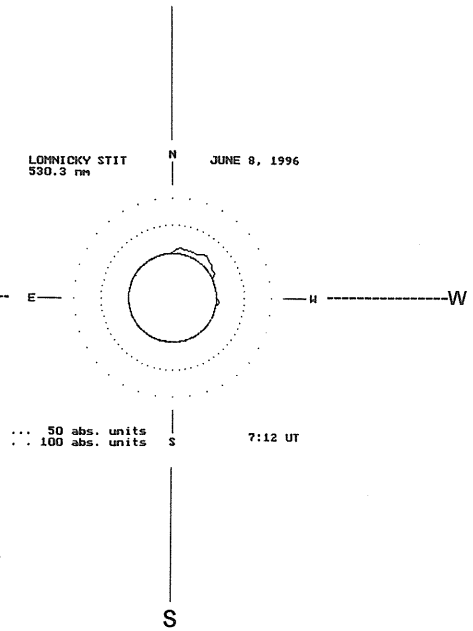
2117 UT
2130 UT Prom

RAMEY SUNSPOT



1235 UT
0629 UT LOMN Prom

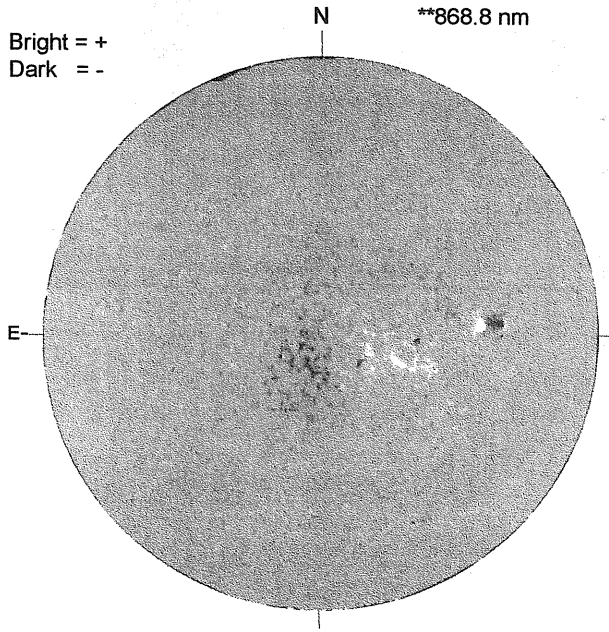
LOMNICKY PEAK CORONA (1.04 Radii)



530.3 nm, 0712 UT
... 50 abs. units
. . 100 abs. units

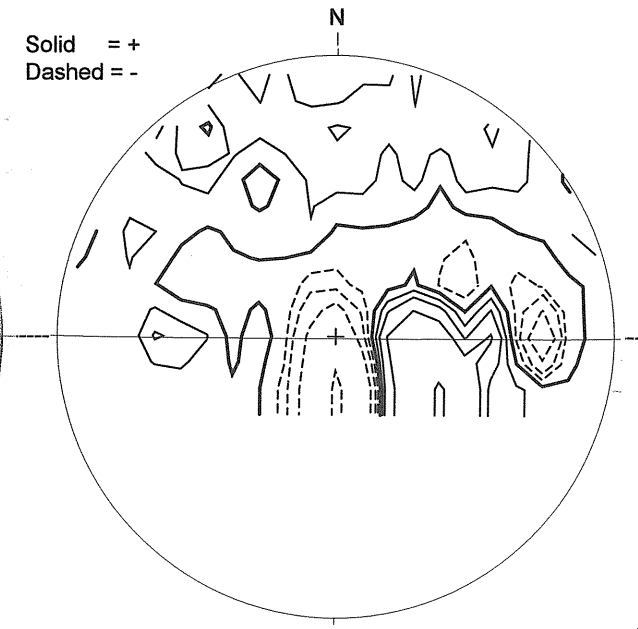
JUNE 9, 1996 (P= -12.19 Bo = 0.34, Lo = 260.72)

KITT PEAK MAGNETOGRAM



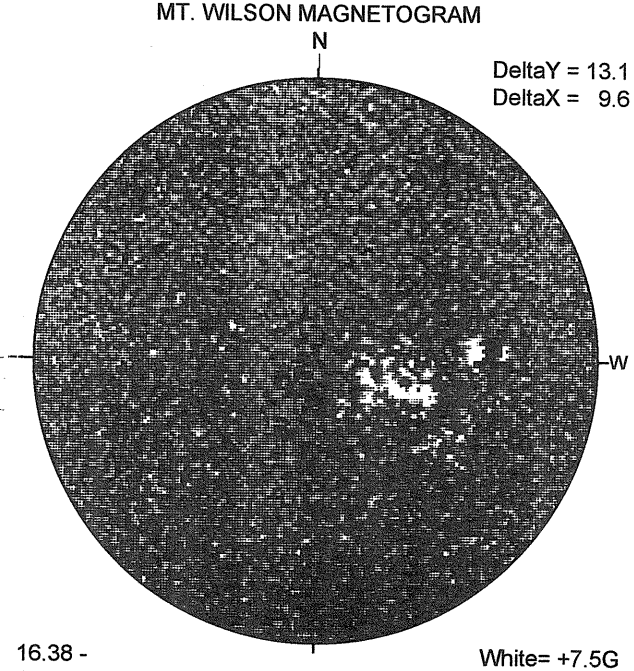
1606 UT

STANFORD MAGNETOGRAM



2057 UT

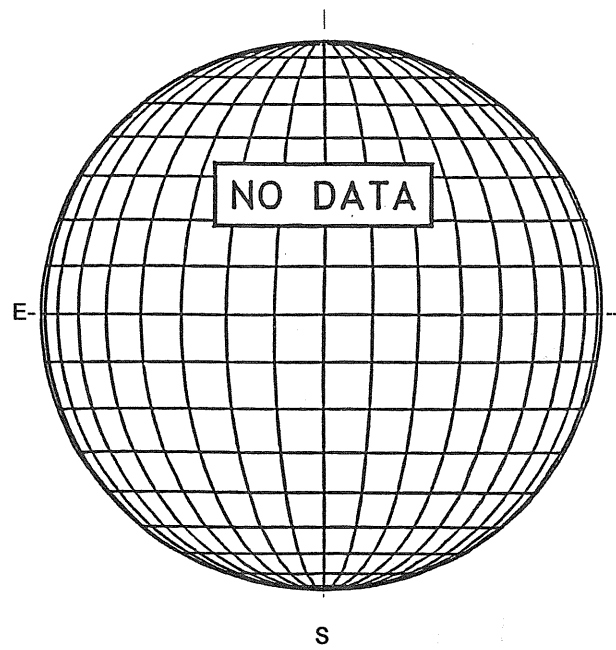
MT. WILSON MAGNETOGRAM



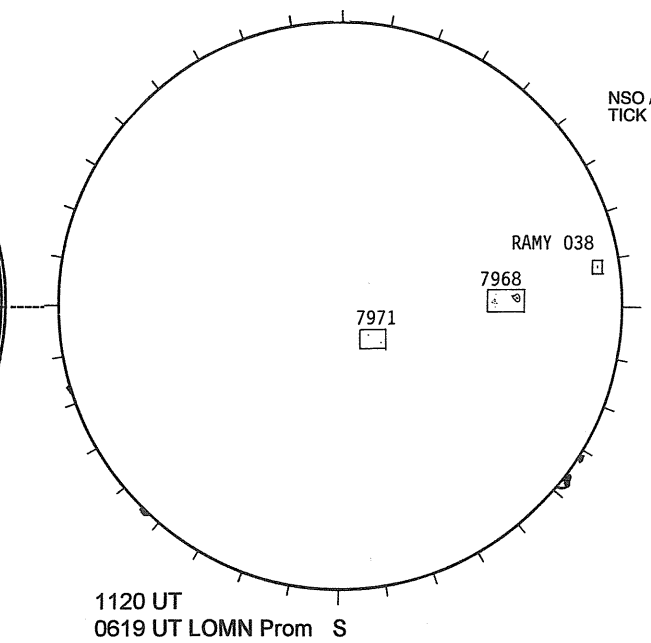
16.38 -
17.30 UT

White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

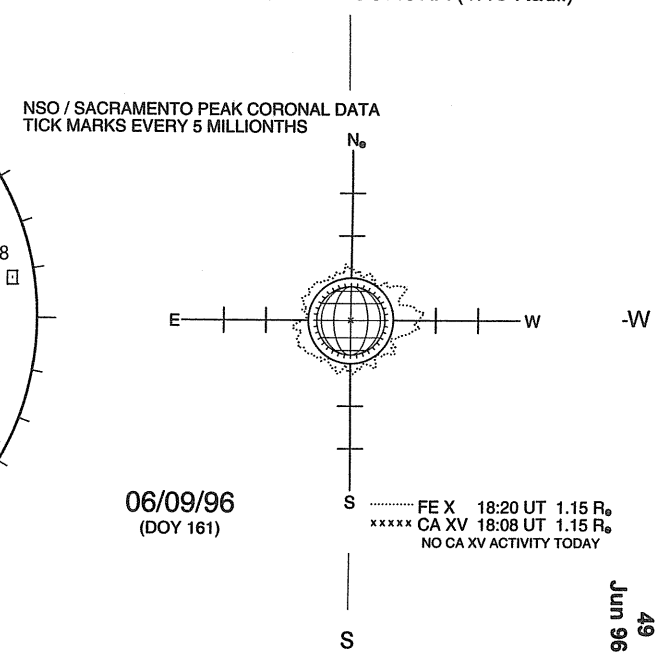


RAMEY SUNSPOT



1120 UT
0619 UT LOMN Prom

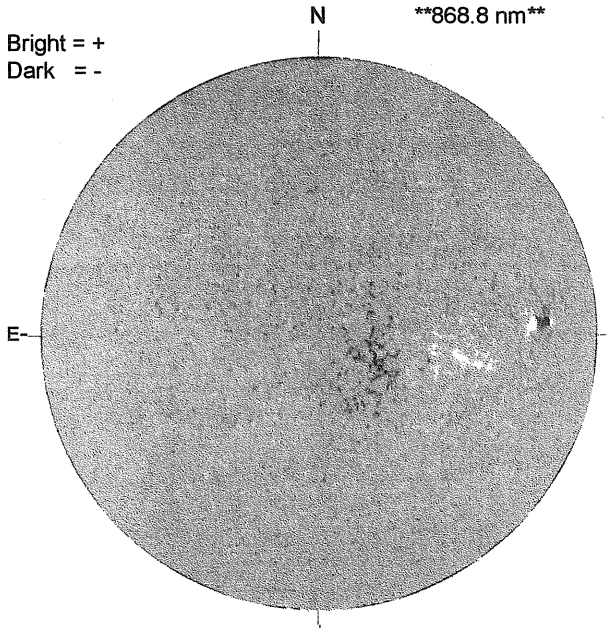
SACRAMENTO PEAK CORONA (1.15 Radii)----



JUNE 10, 1996 (P= -11.78, Bo = 0.46, Lo = 247.48)

KITT PEAK MAGNETOGRAM

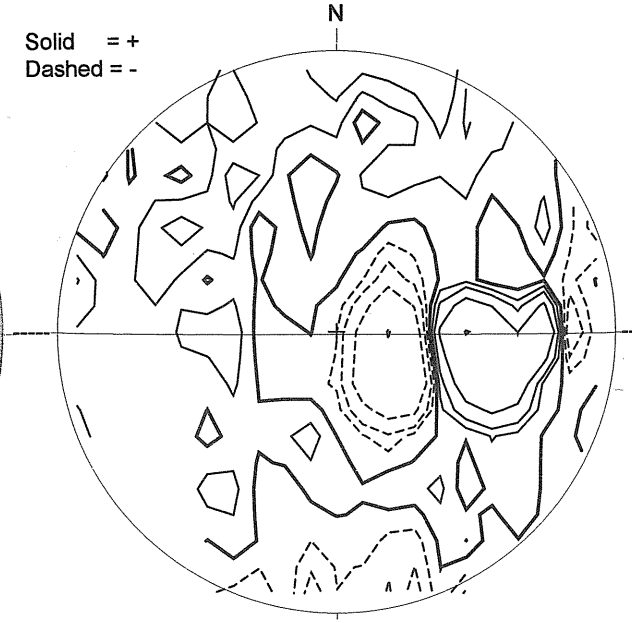
Bright = +
Dark = -



1557 UT

STANFORD MAGNETOGRAM

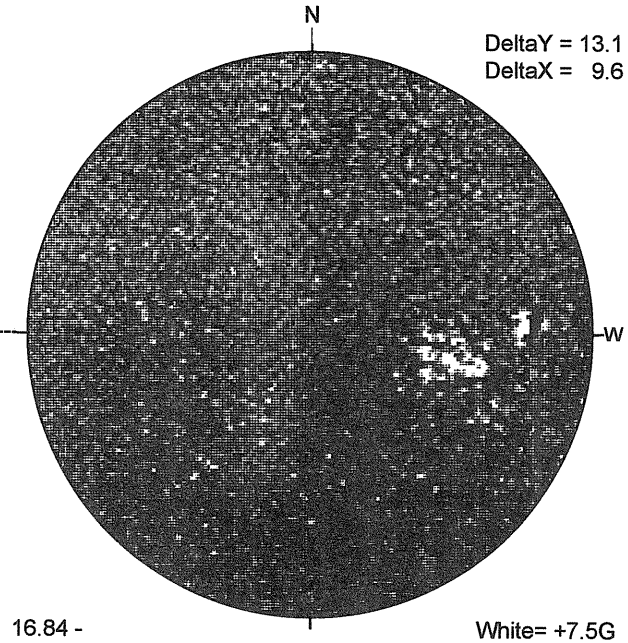
Solid = +
Dashed = -



1807 UT

MT. WILSON MAGNETOGRAM

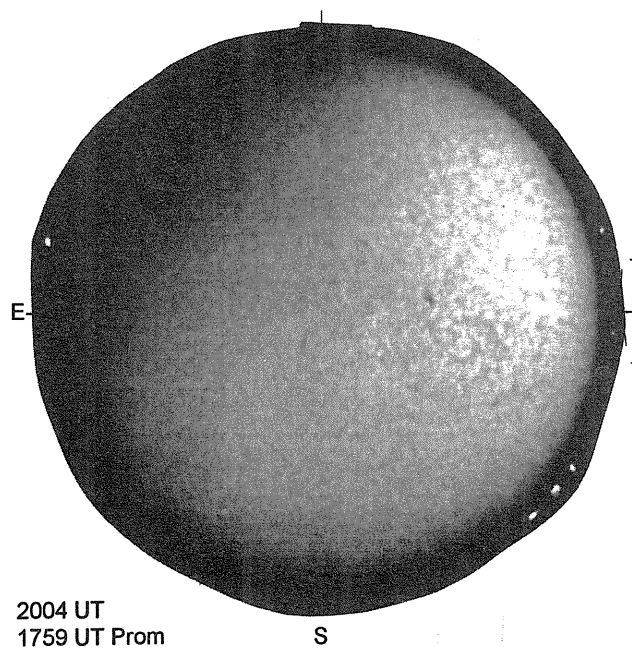
DeltaY = 13.1
DeltaX = 9.6



16.84 -
17.76 UT

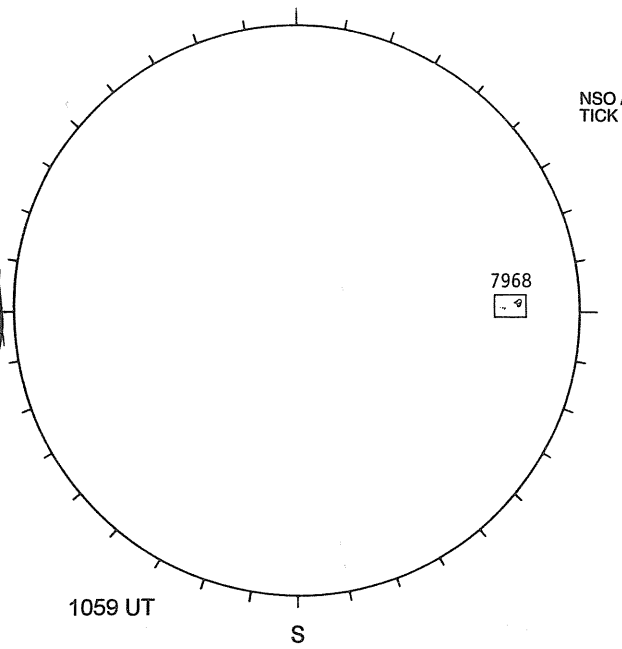
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



2004 UT
1759 UT Prom

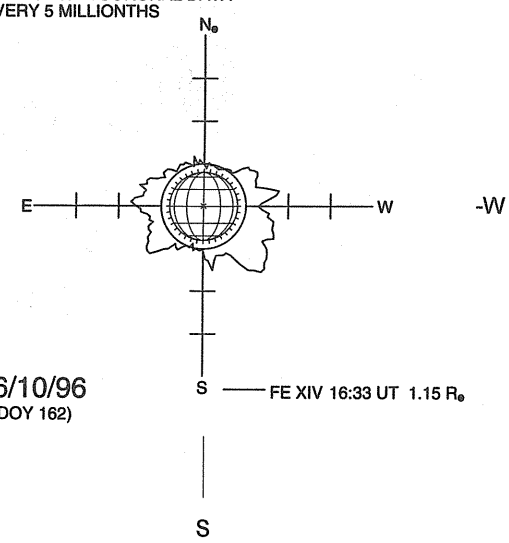
RAMEY SUNSPOT



1059 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



06/10/96
(DOY 162)

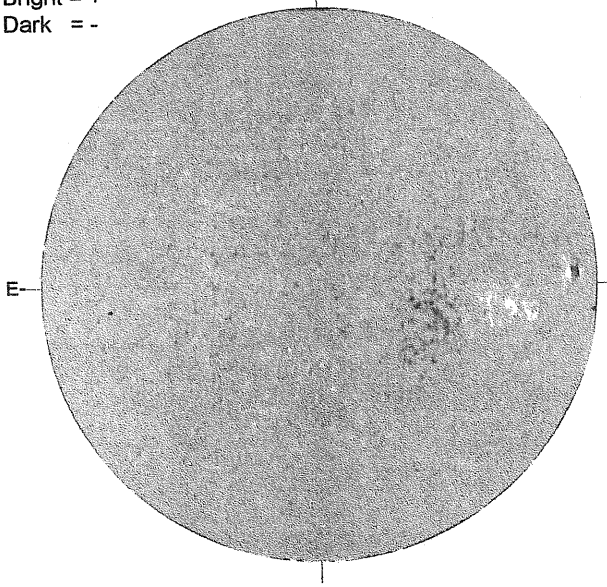
FE XIV 16:33 UT 1.15 $R_\odot$

JUNE 11, 1996 (P= -11.37 Bo = 0.58, Lo = 234.25)

KITT PEAK MAGNETOGRAM

868.8 nm

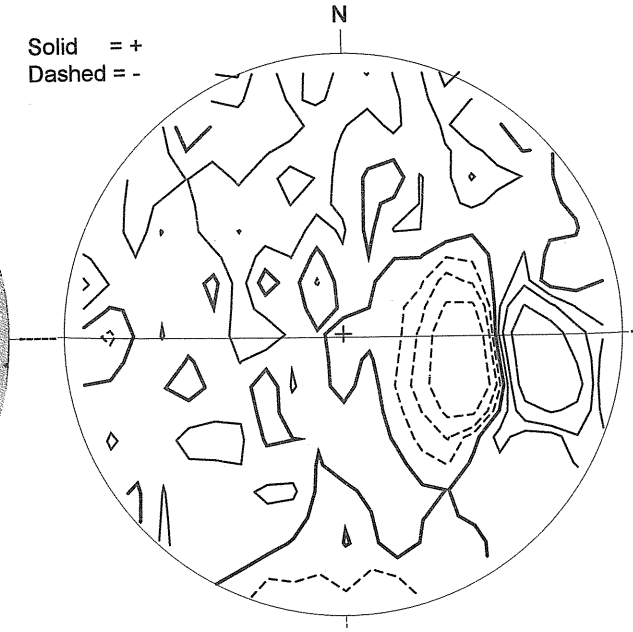
Bright = +
Dark = -



1604 UT

STANFORD MAGNETOGRAM

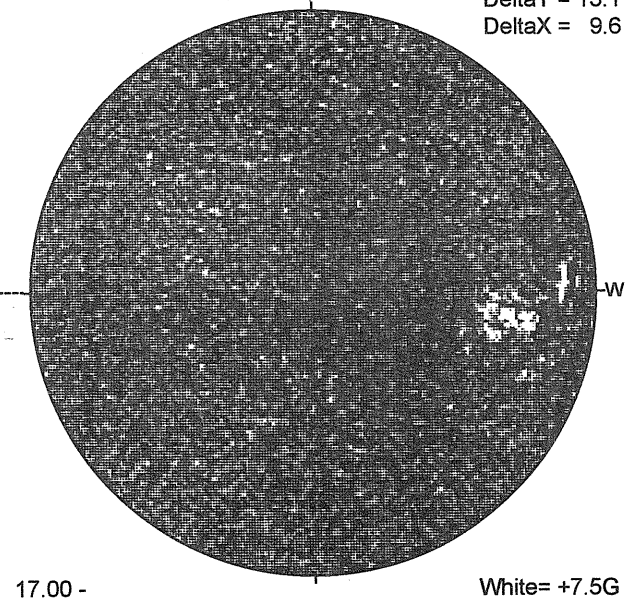
Solid = +
Dashed = -



1949 UT

MT. WILSON MAGNETOGRAM

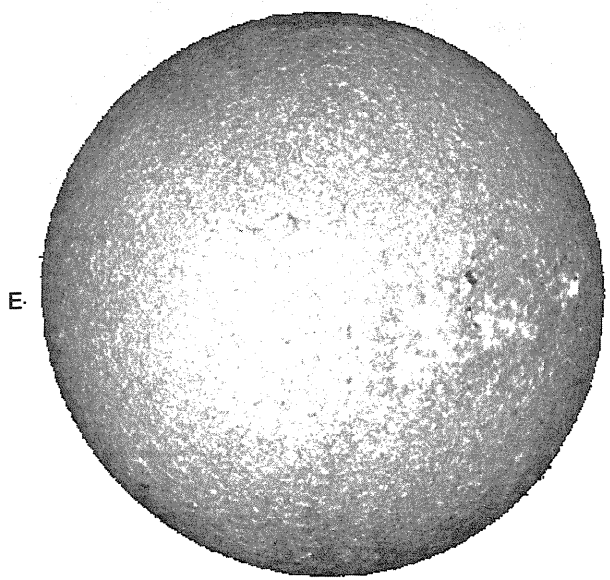
DeltaY = 13.1
DeltaX = 9.6



17.00 -
17.92 UT

White= +7.5G
Black = -7.5G

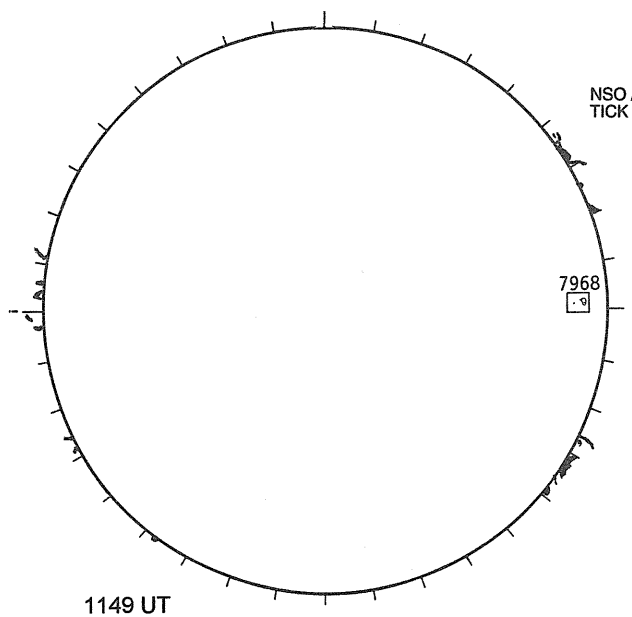
----- SACRAMENTO PEAK H-ALPHA



1358 UT
Time uncertain.

S

RAMEY SUNSPOT

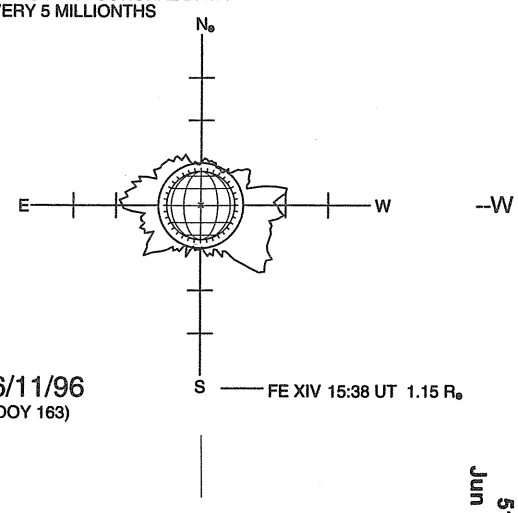


1149 UT
0432 UT LOMN Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



06/11/96
(DOY 163)

FE XIV 15:38 UT 1.15 R

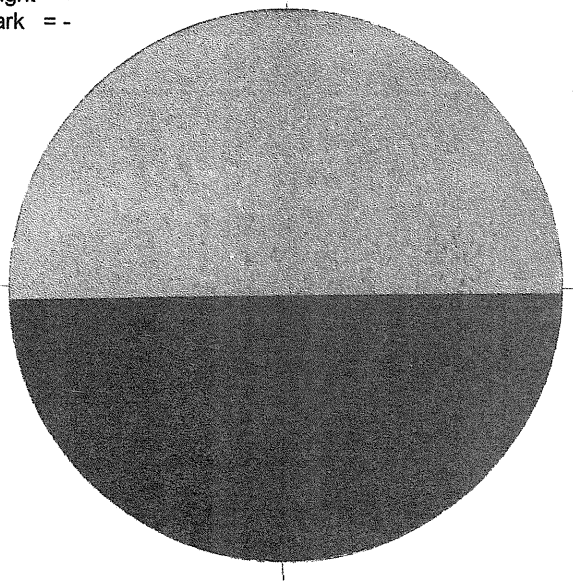
S

JUNE 12, 1996 (P= -10.95, Bo = 0.70, Lo = 221.01)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



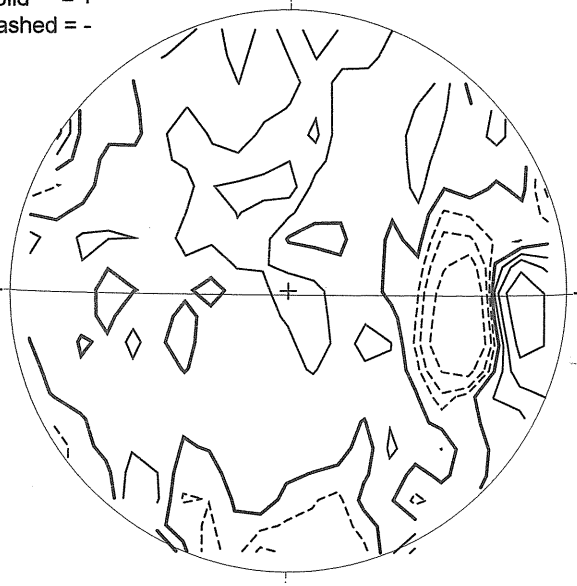
E-

1726 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

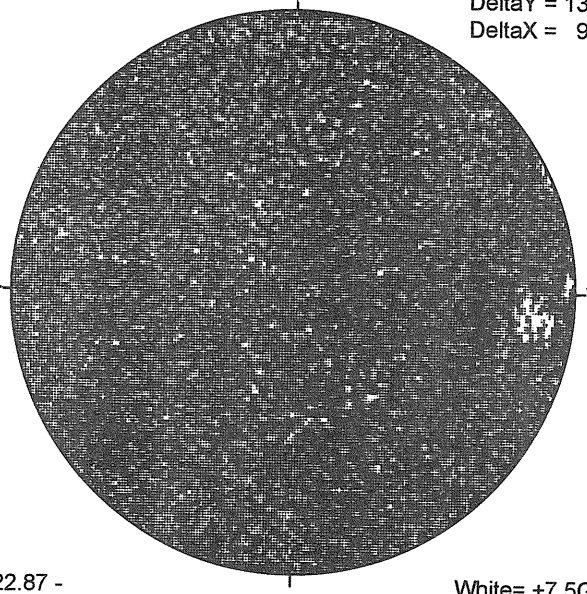


2149 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

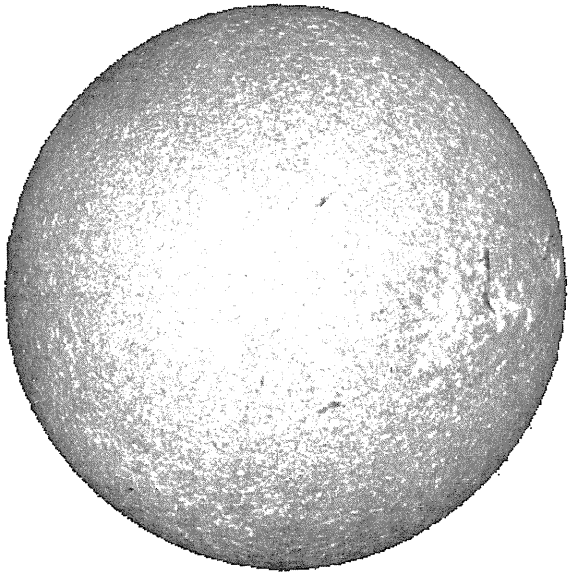


-W

22.87 -
23.79 UT

White= +7.5G
Black = -7.5G

---- SACRAMENTO PEAK H-ALPHA

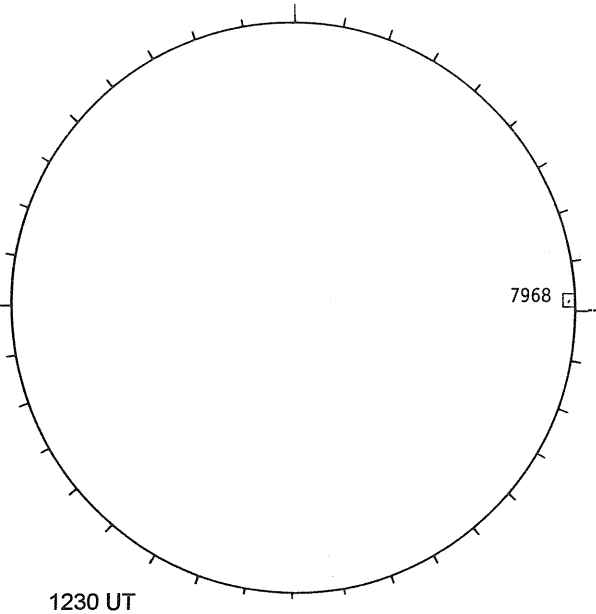


E-

1354 UT
Time uncertain.

S

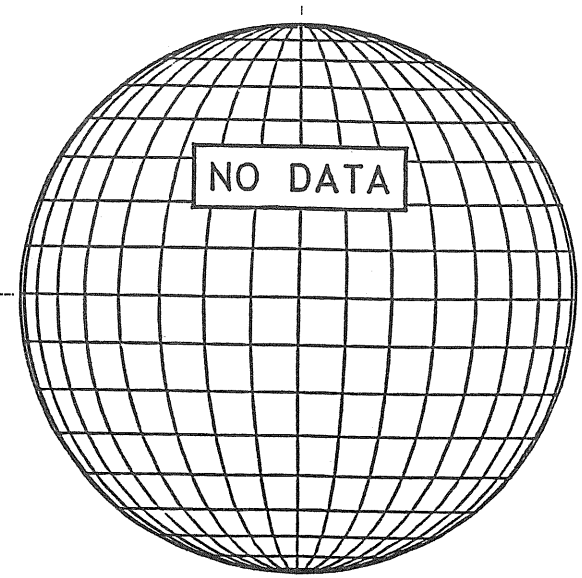
RAMEY SUNSPOT



1230 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

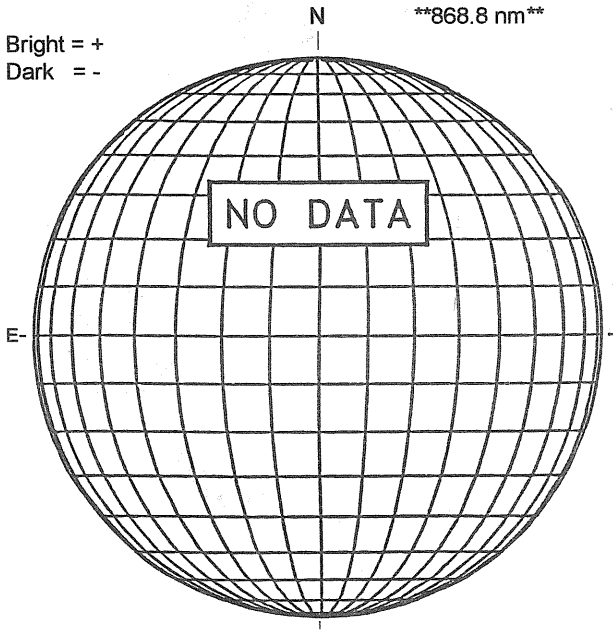


-W

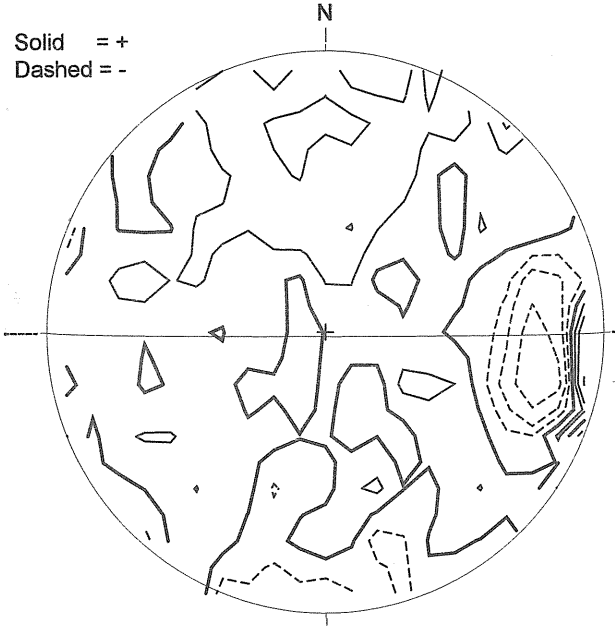
S

JUNE 13, 1996 (P= -10.53, Bo = 0.82, Lo = 207.77)

KITT PEAK MAGNETOGRAM

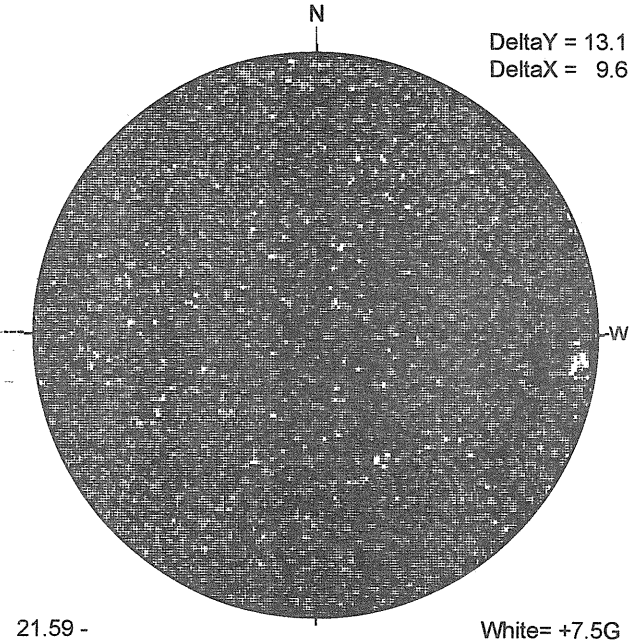


STANFORD MAGNETOGRAM



1953 UT

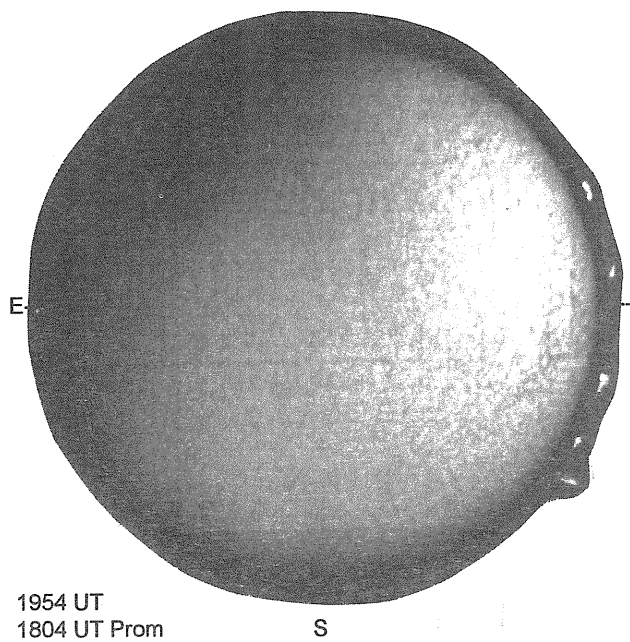
MT. WILSON MAGNETOGRAM



21.59 -
22.51 UT

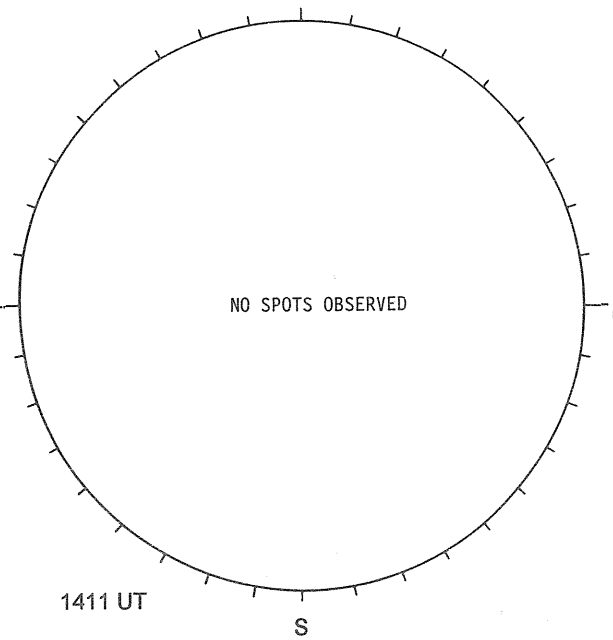
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



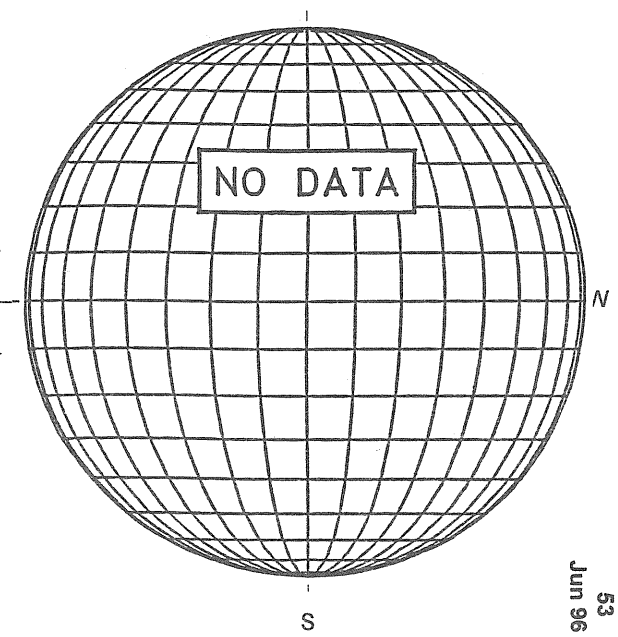
1954 UT
1804 UT Prom

RAMEY SUNSPOT



1411 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----

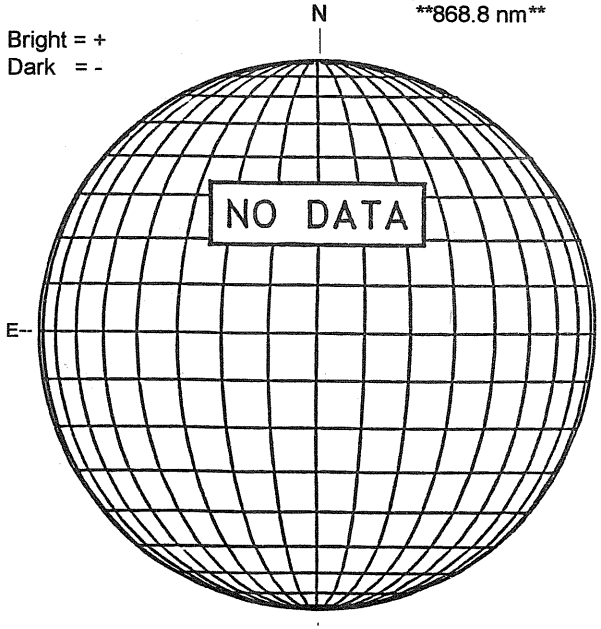


JUNE 14, 1996 (P= -10.10, Bo = 0.94, Lo= 194.54)

KITT PEAK MAGNETOGRAM

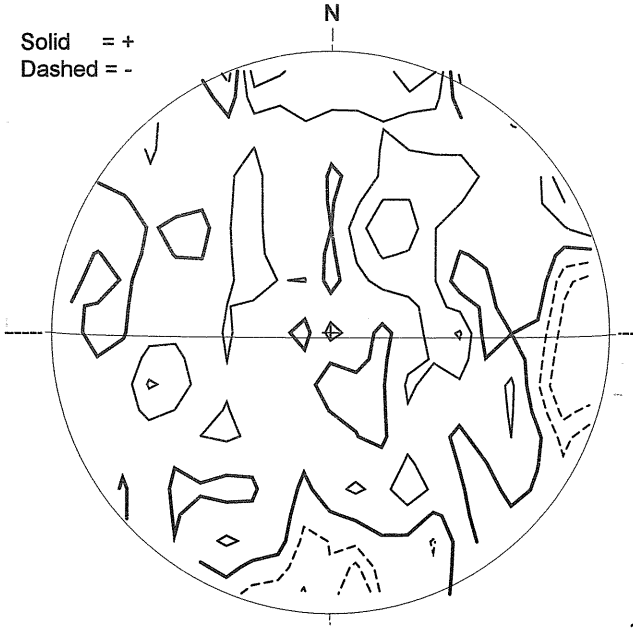
868.8 nm

Bright = +
Dark = -



STANFORD MAGNETOGRAM

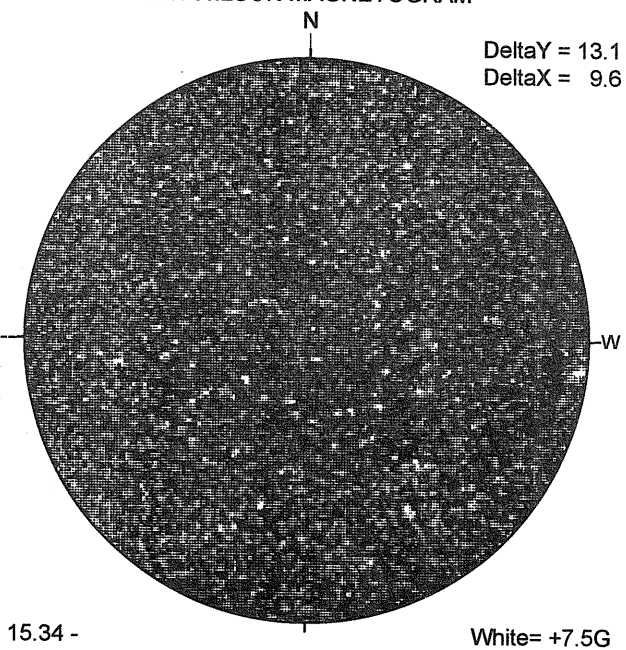
Solid = +
Dashed = -



2051 UT

MT. WILSON MAGNETOGRAM

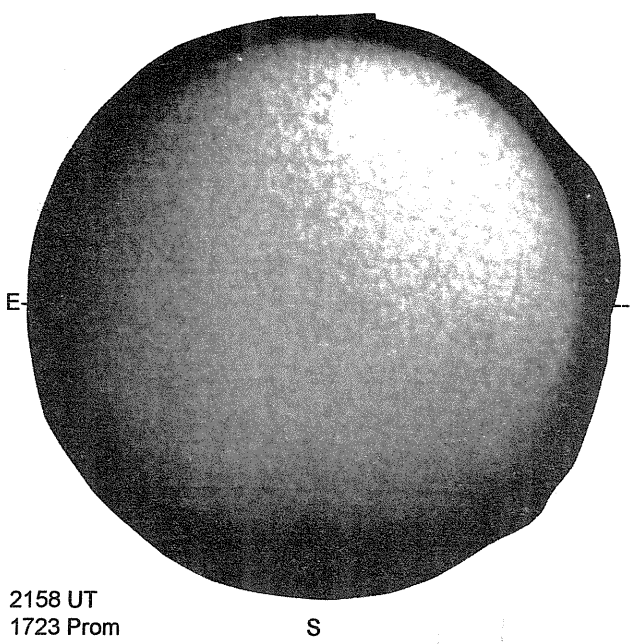
DeltaY = 13.1
DeltaX = 9.6



15.34 -
16.25 UT

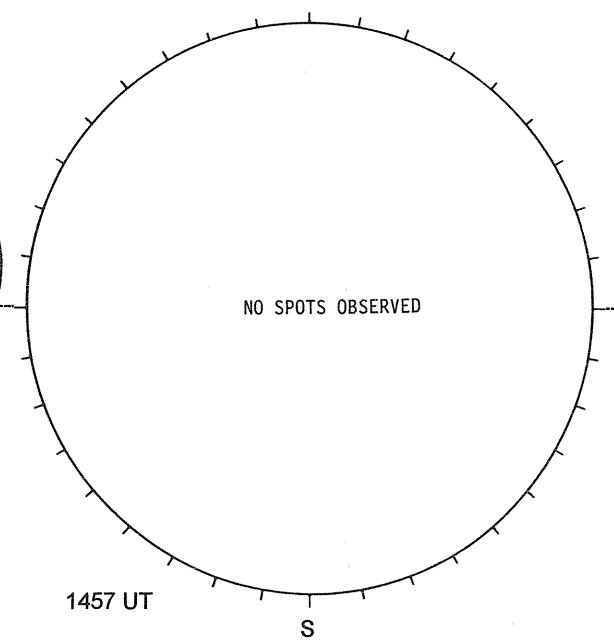
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



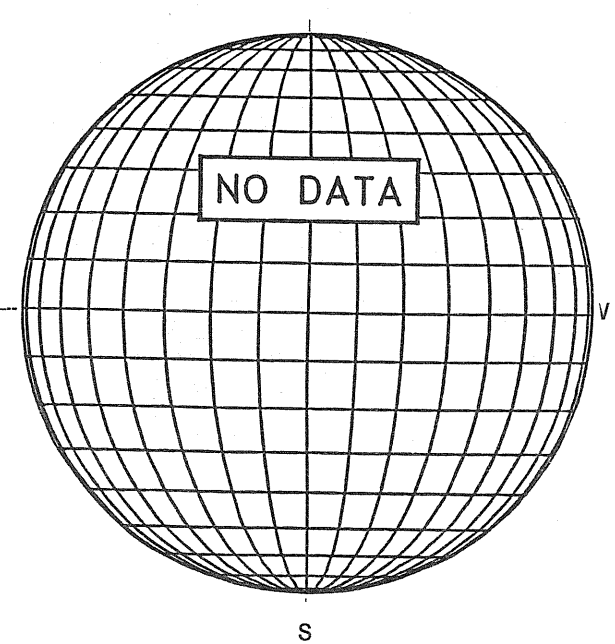
2158 UT
1723 Prom

RAMEY SUNSPOT



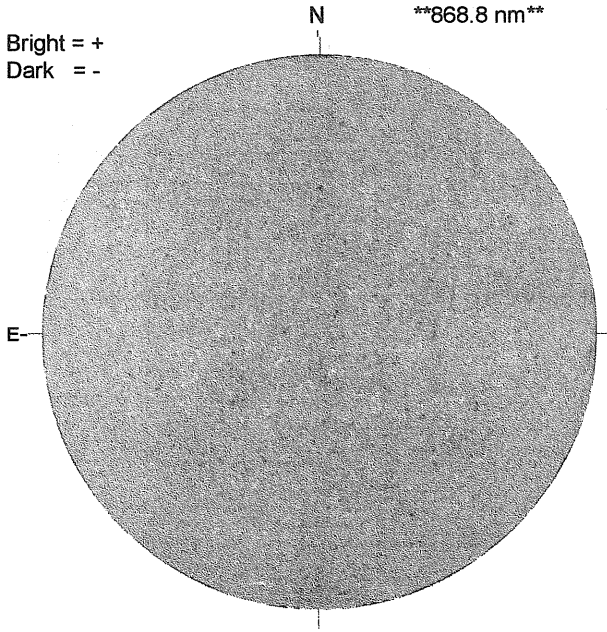
1457 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



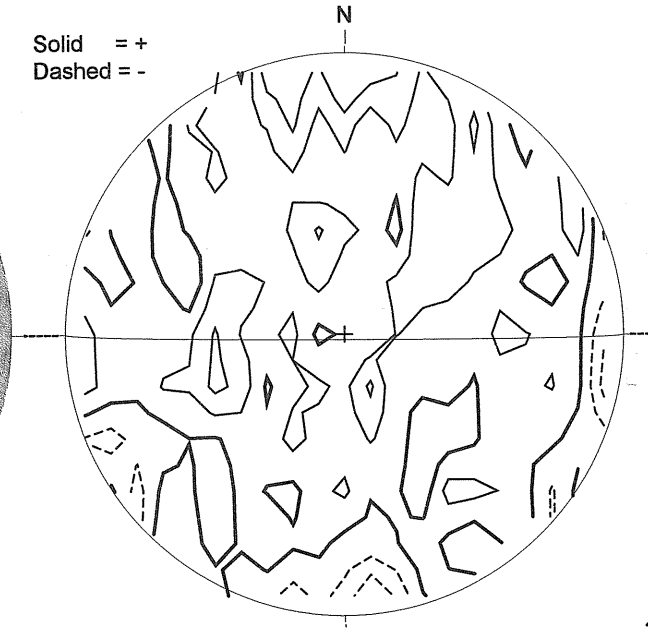
JUNE 15, 1996 (P= - 9.67, Bo = 1.06, Lo = 181.30)

KITT PEAK MAGNETOGRAM



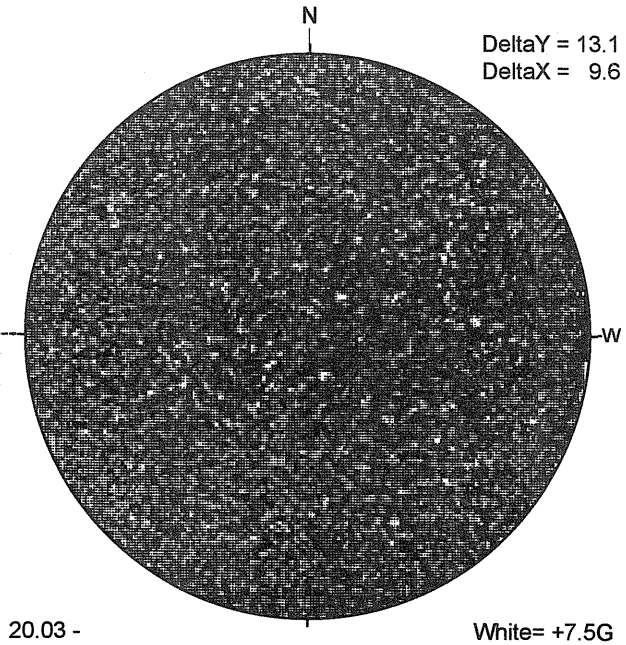
1855 UT

STANFORD MAGNETOGRAM



1837 UT

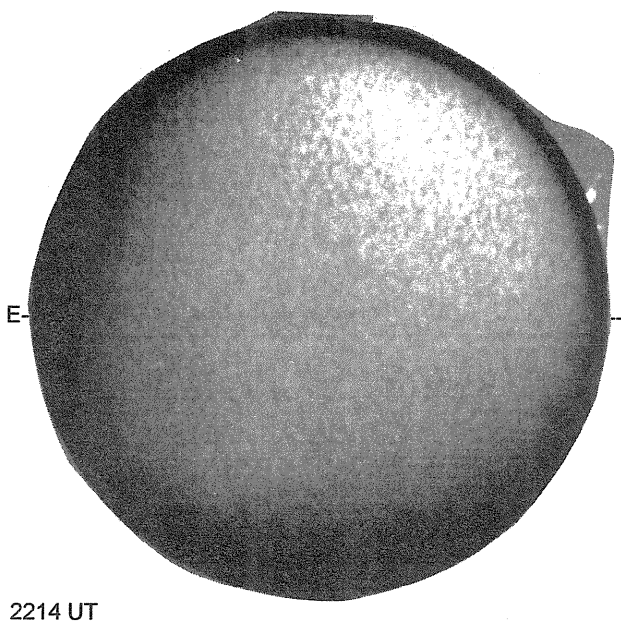
MT. WILSON MAGNETOGRAM



20.03 -
20.95 UT

White= +7.5G
Black = -7.5G

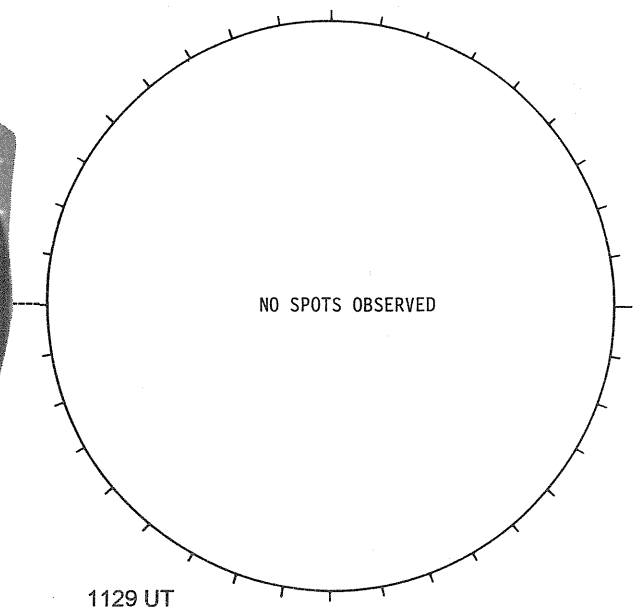
MAUNA LOA H-ALPHA



2214 UT
1654 UT Prom

S

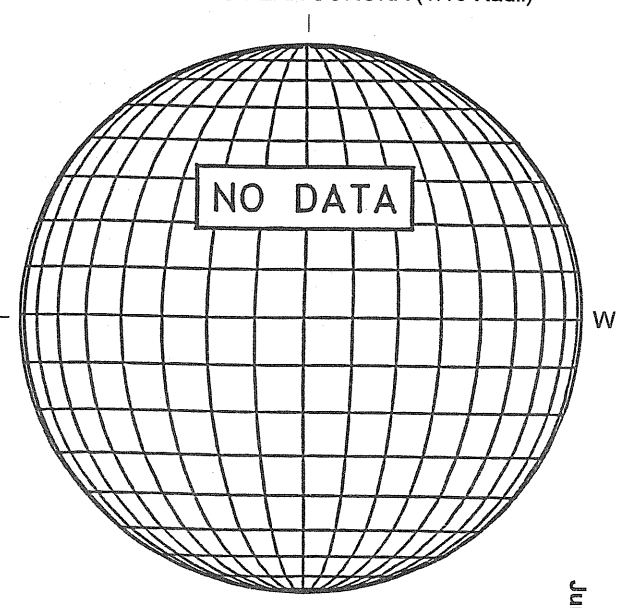
RAMEY SUNSPOT



1129 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



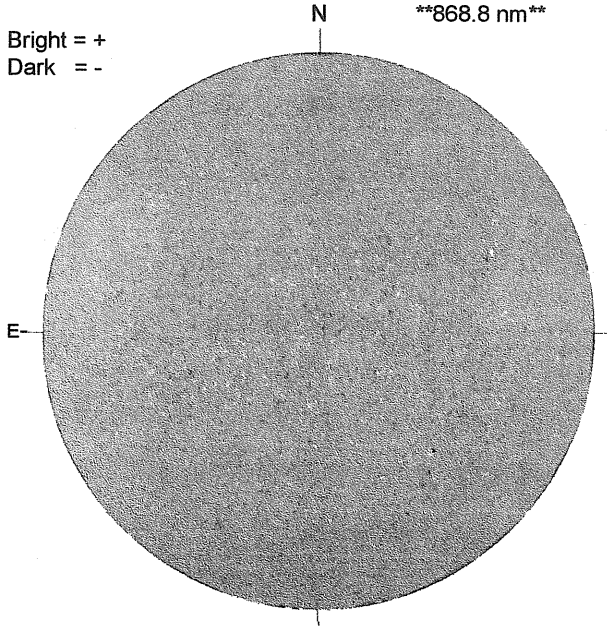
S

JUNE 16, 1996 (P= -9.24, Bo = 1.18, Lo = 168.06)

KITT PEAK MAGNETOGRAM

868.8 nm

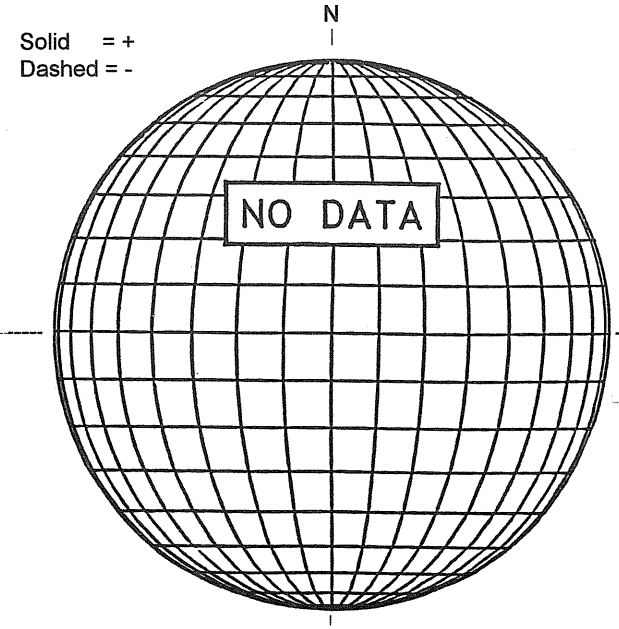
Bright = +
Dark = -



1422 UT

STANFORD MAGNETOGRAM

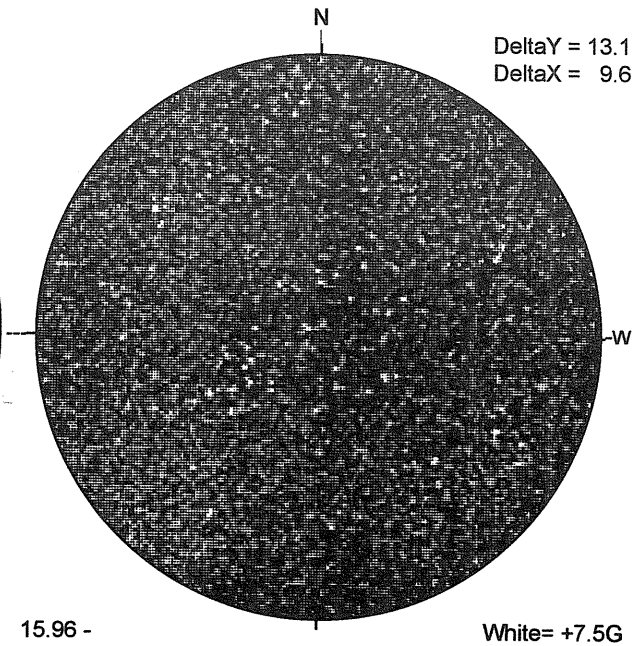
Solid = +
Dashed = -



15.96 -
16.88 UT

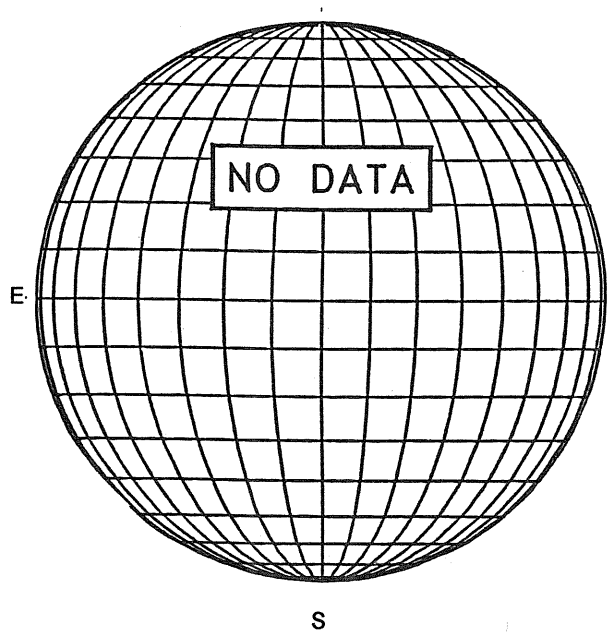
MT. WILSON MAGNETOGRAM

DeltaY = 13.1
DeltaX = 9.6

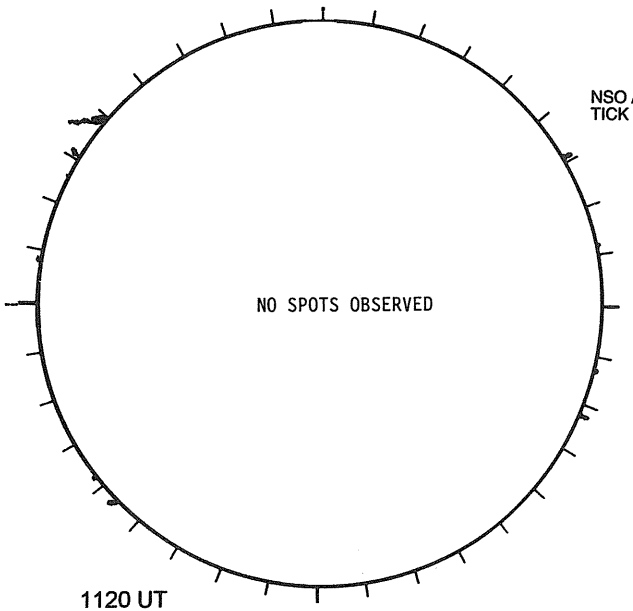


White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



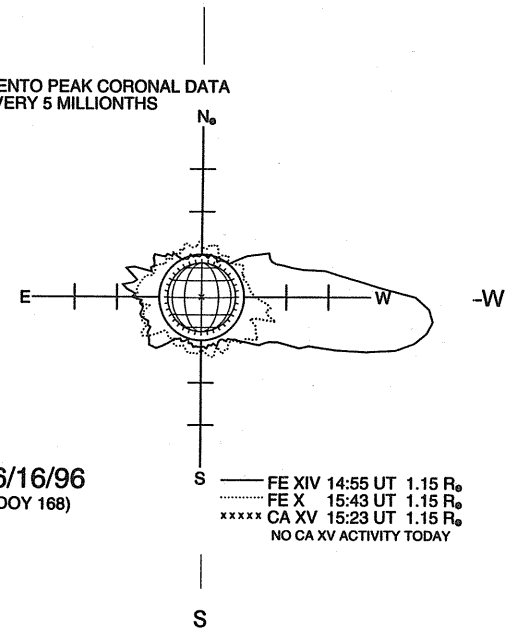
RAMEY SUNSPOT



1120 UT
0557 UT VALA Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



06/16/96
(DOY 168)

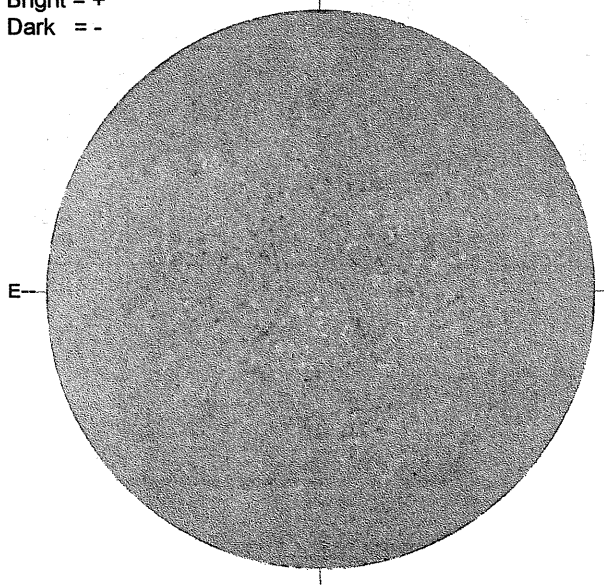
FE XIV 14:55 UT 1.15 $R_\odot$
FE X 15:43 UT 1.15 $R_\odot$
xxxxx CA XV 15:23 UT 1.15 $R_\odot$
NO CA XV ACTIVITY TODAY

JUNE 17, 1996 (P= -8.81, Bo = 1.30, Lo = 154.83)

KITT PEAK MAGNETOGRAM

868.8 nm

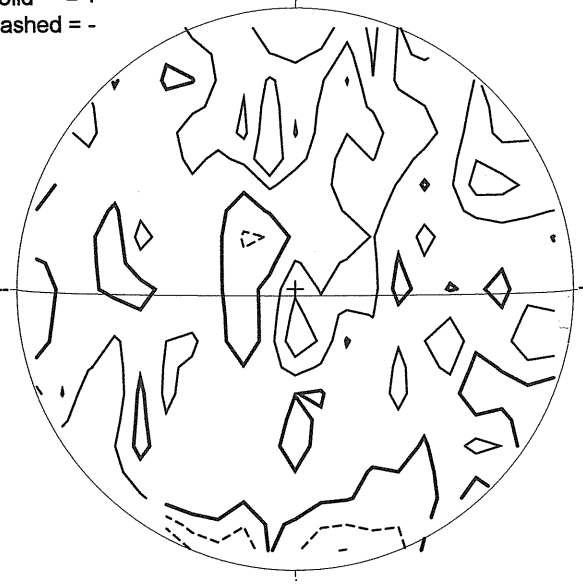
Bright = +
Dark = -



1618 UT

STANFORD MAGNETOGRAM

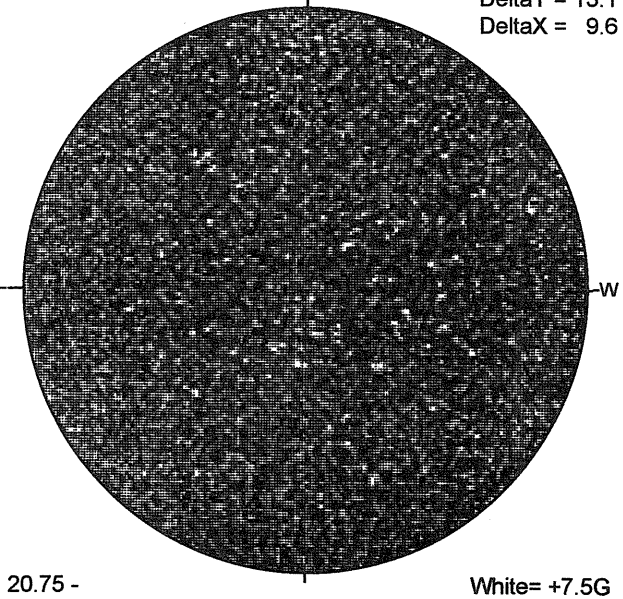
Solid = +
Dashed = -



2004 UT

MT. WILSON MAGNETOGRAM

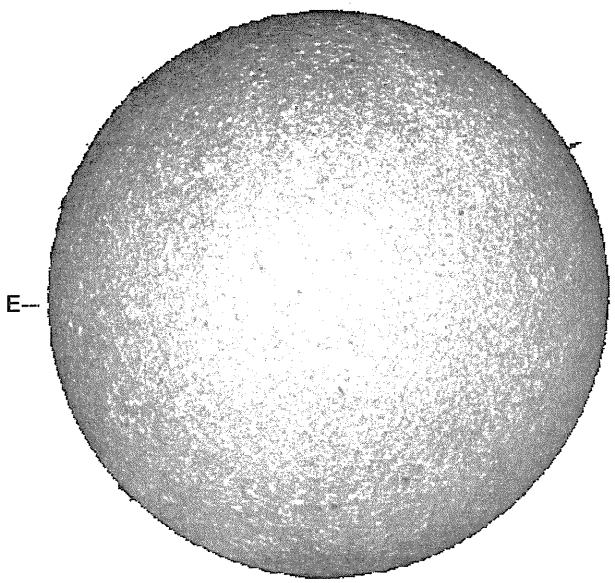
DeltaY = 13.1
DeltaX = 9.6



20.75 -
21.67 UT

White= +7.5G
Black = -7.5G

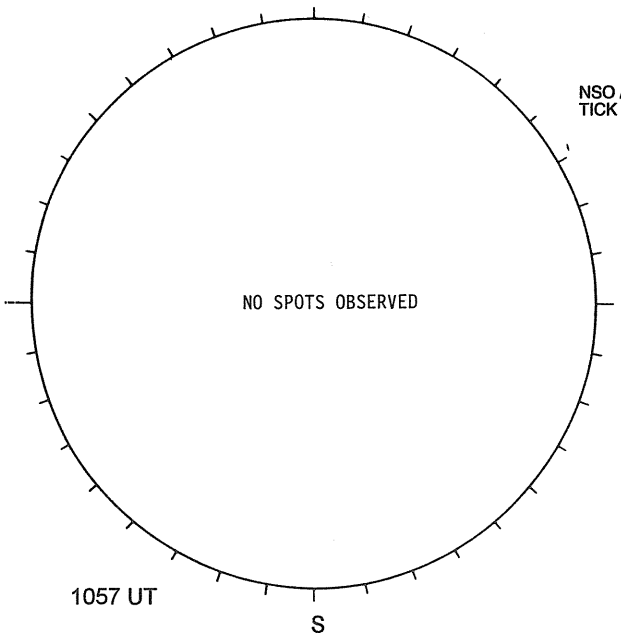
SACRAMENTO PEAK H ALPHA



1340 UT
Time uncertain.

S

RAMEY SUNSPOT

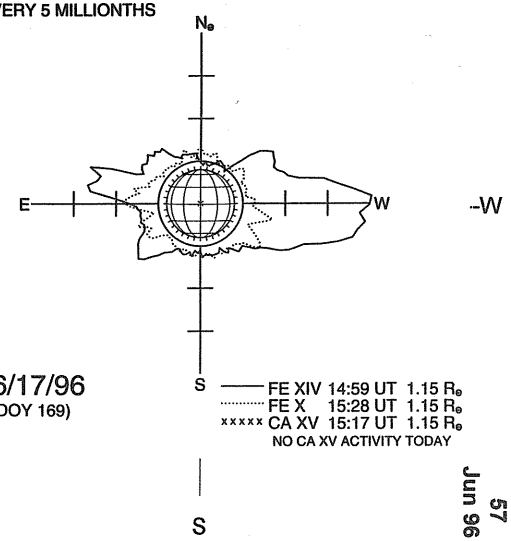


1057 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



06/17/96
(DOY 169)

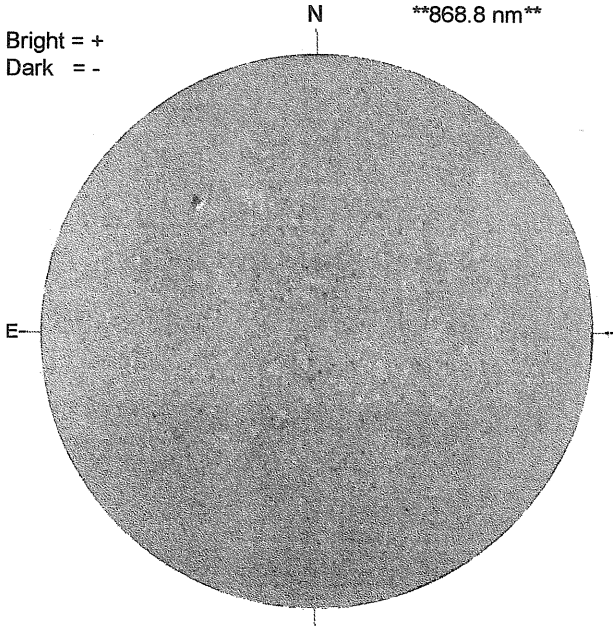
S

JUNE 18, 1996 (P= -8.38, Bo = 1.41, Lo = 141.59)

KITT PEAK MAGNETOGRAM

868.8 nm

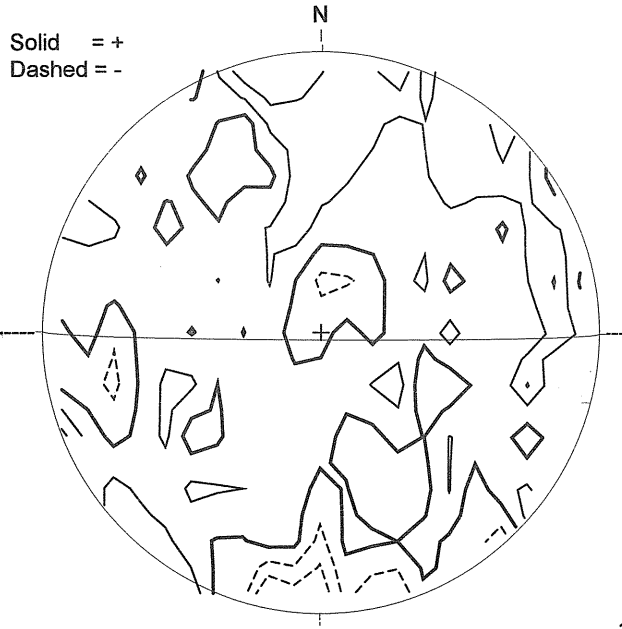
Bright = +
Dark = -



1554 UT

STANFORD MAGNETOGRAM

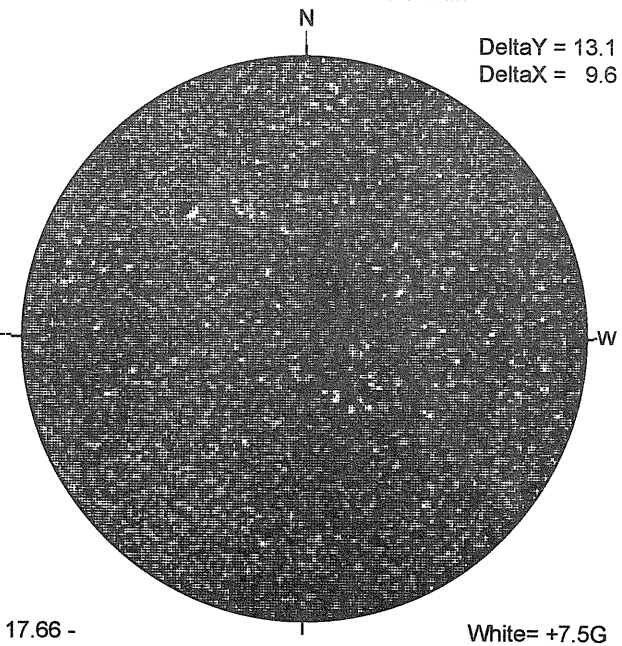
Solid = +
Dashed = -



2008 UT

MT. WILSON MAGNETOGRAM

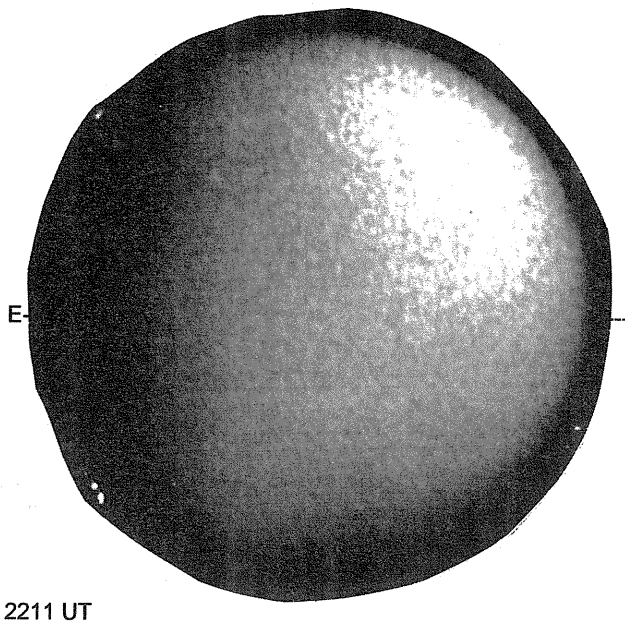
DeltaY = 13.1
DeltaX = 9.6



17.66 -
18.58 UT

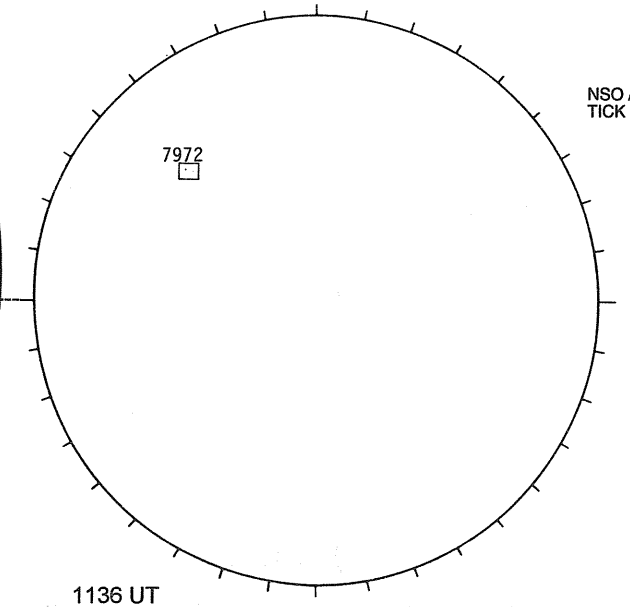
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



2211 UT
1806 UT Prom S

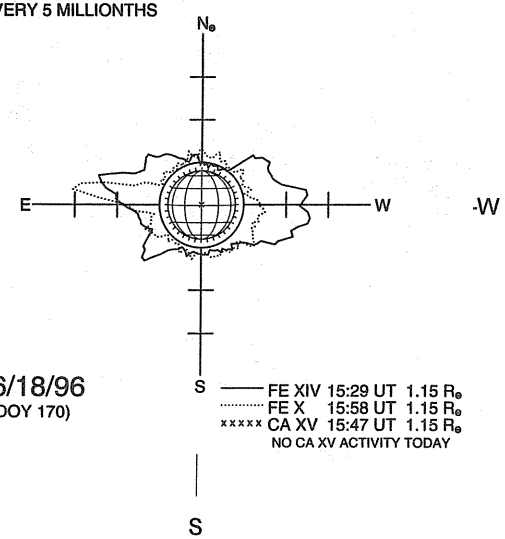
RAMEY SUNSPOT



1136 UT
0618 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS

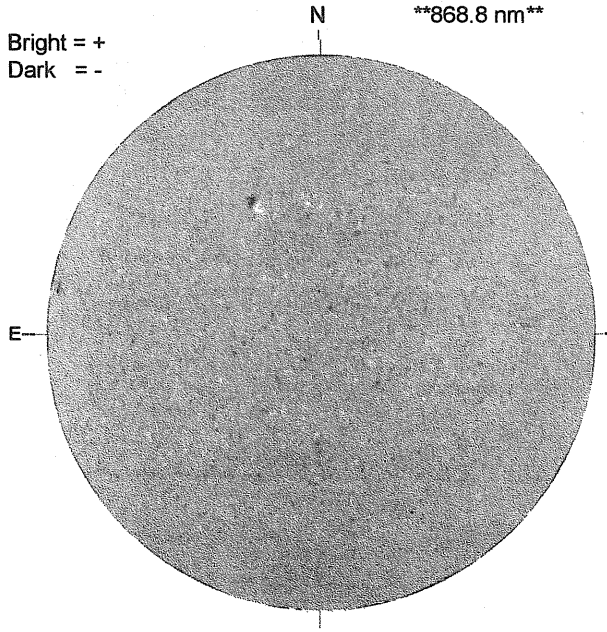


06/18/96
(DOY 170)

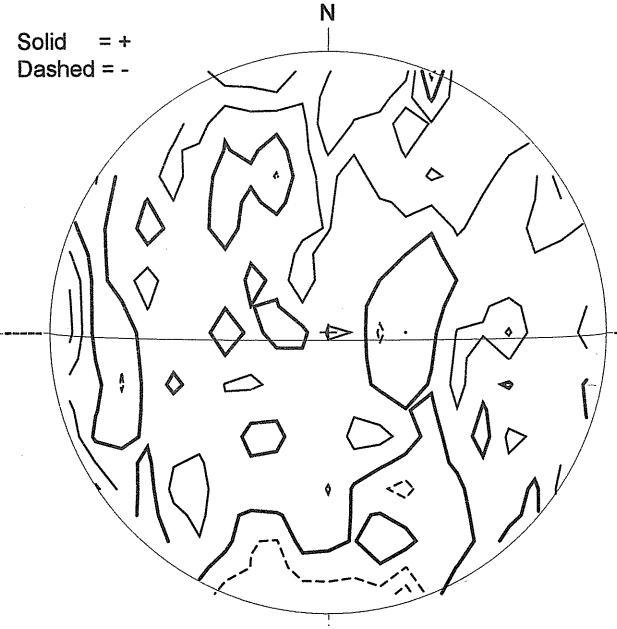
S

JUNE 19, 1996 (P= - 7.94, Bo = 1.53, Lo = 128.35)

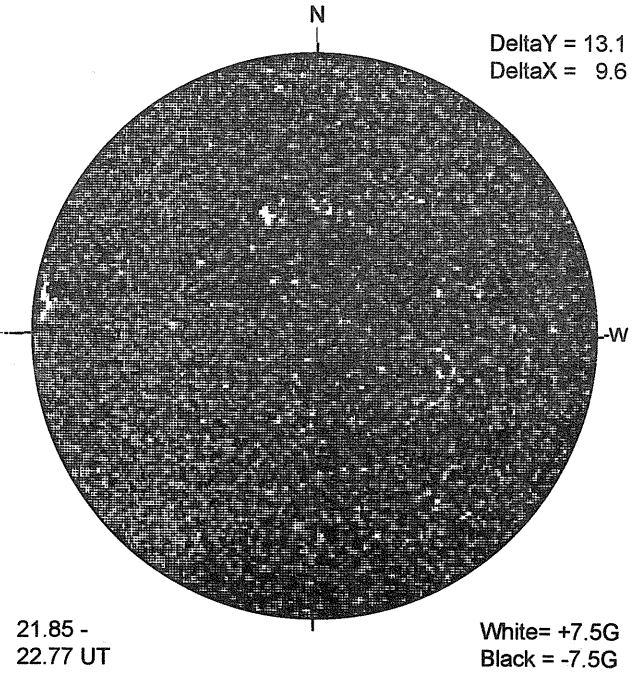
KITT PEAK MAGNETOGRAM



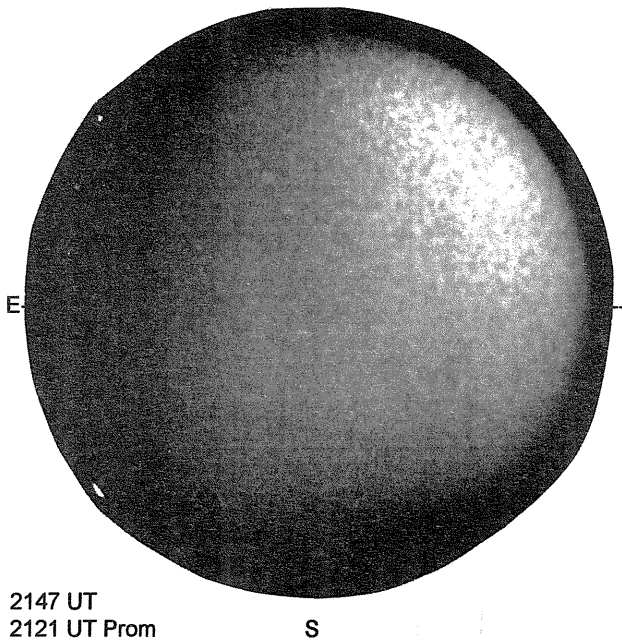
STANFORD MAGNETOGRAM



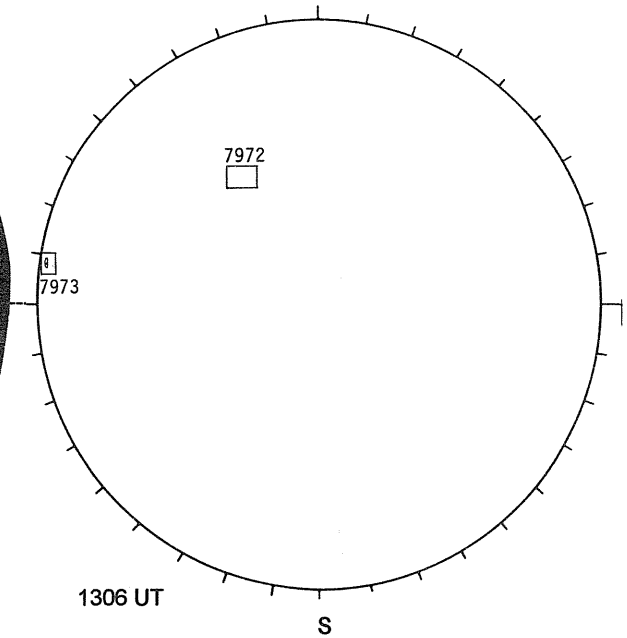
MT. WILSON MAGNETOGRAM



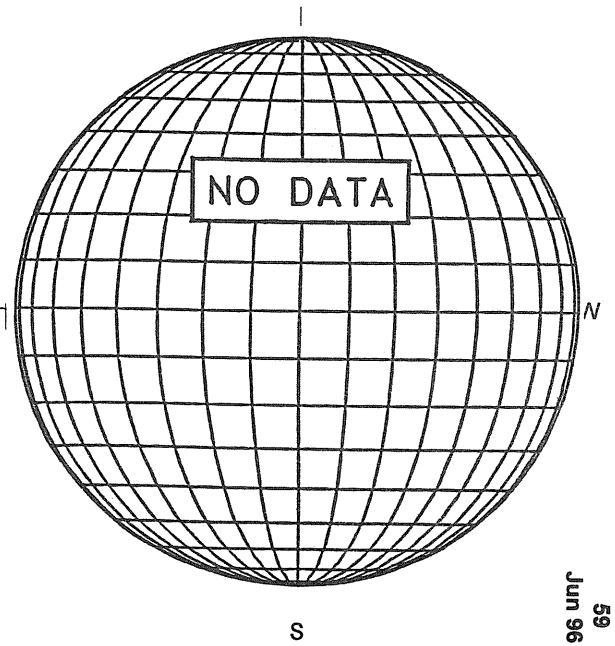
MAUNA LOA H-ALPHA



RAMEY SUNSPOT

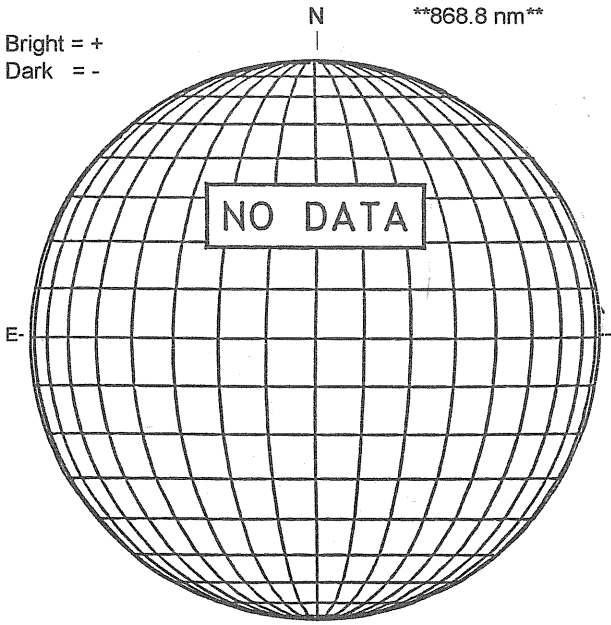


SACRAMENTO PEAK CORONA (1.15 Radii)

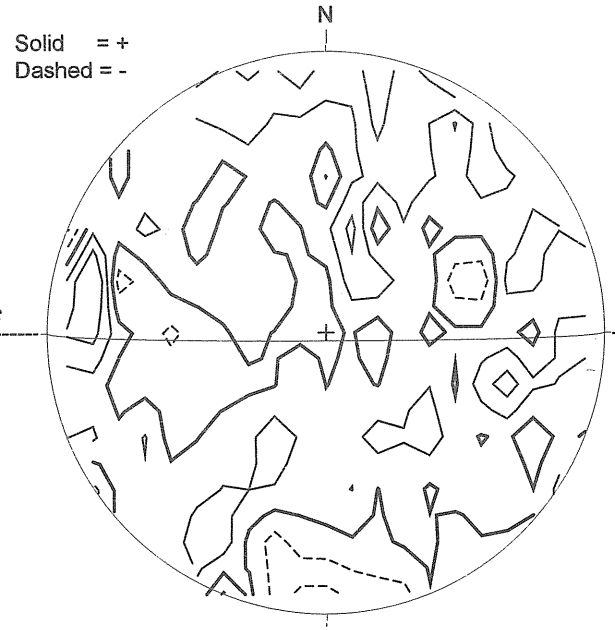


JUNE 20, 1996 (P= - 7.50, Bo = 1.65, Lo = 115.12)

KITT PEAK MAGNETOGRAM

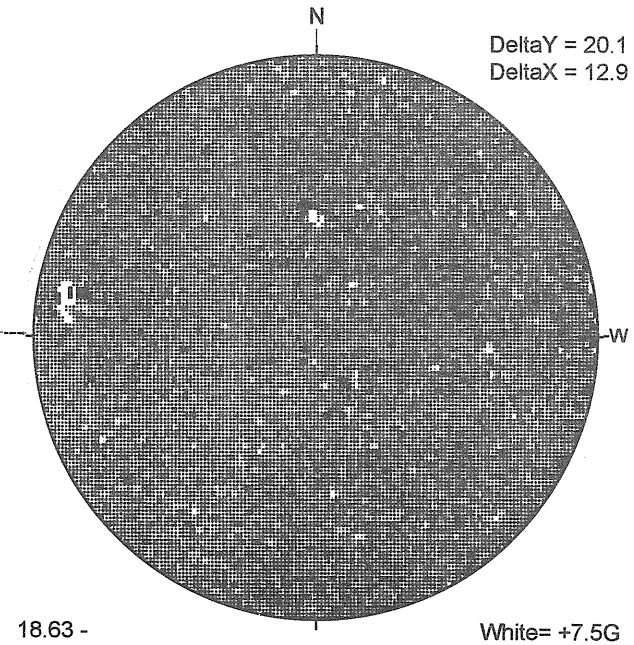


STANFORD MAGNETOGRAM



2205 UT

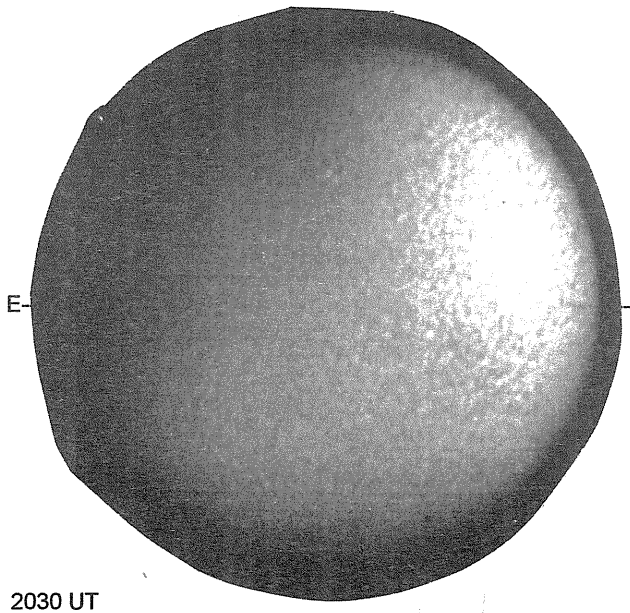
MT. WILSON MAGNETOGRAM



18.63 -
19.03 UT

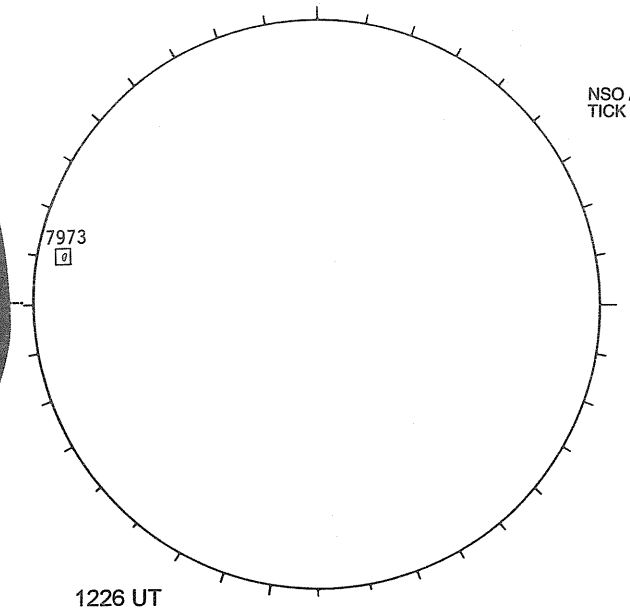
White= +7.5G
Black = -7.5G

---- MAUNA LOA H-ALPHA



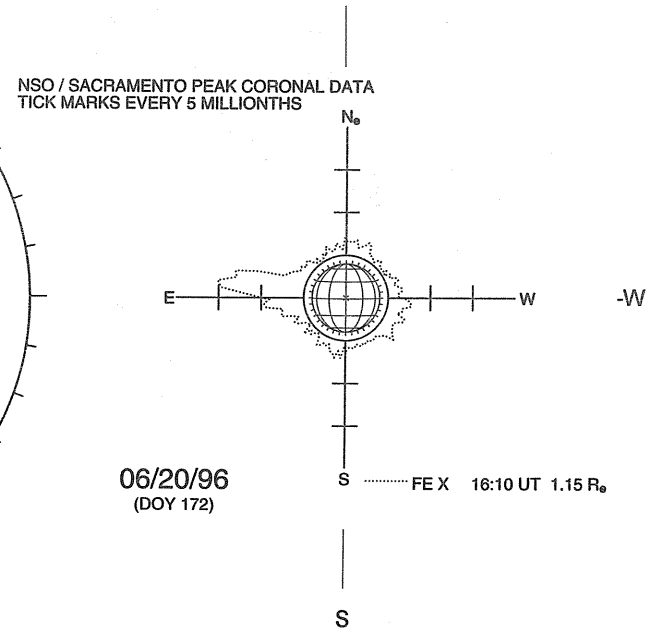
2030 UT
1814 UT Prom S

RAMEY SUNSPOT



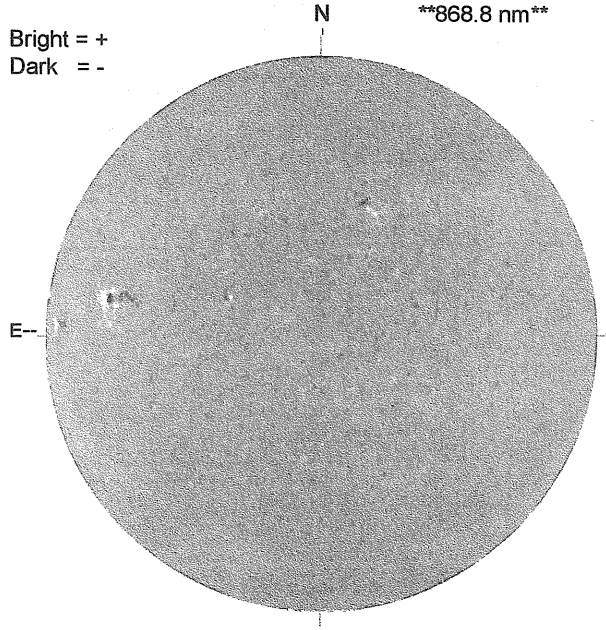
1226 UT
1143 UT LOMN Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)----



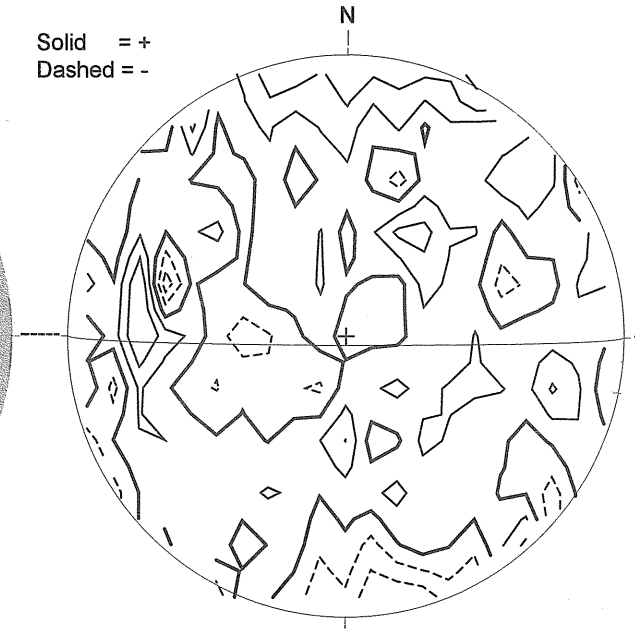
JUNE 21, 1996 (P= - 7.06, Bo = 1.77, Lo = 101.88)

KITT PEAK MAGNETOGRAM



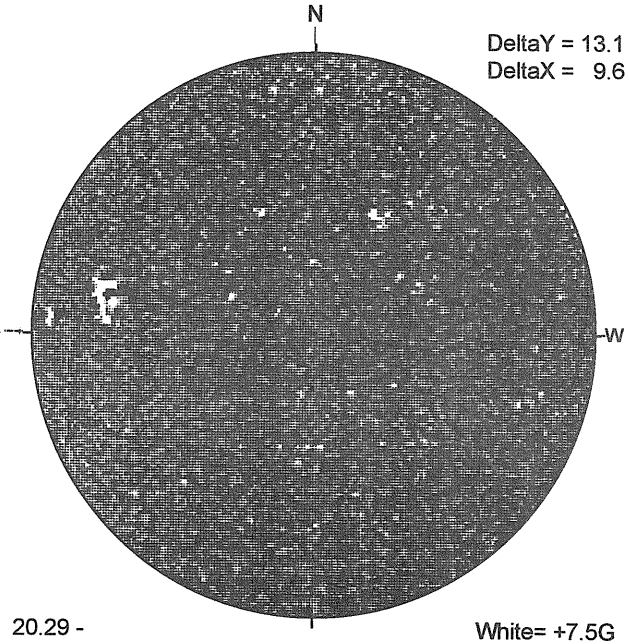
1614 UT

STANFORD MAGNETOGRAM



1851 UT

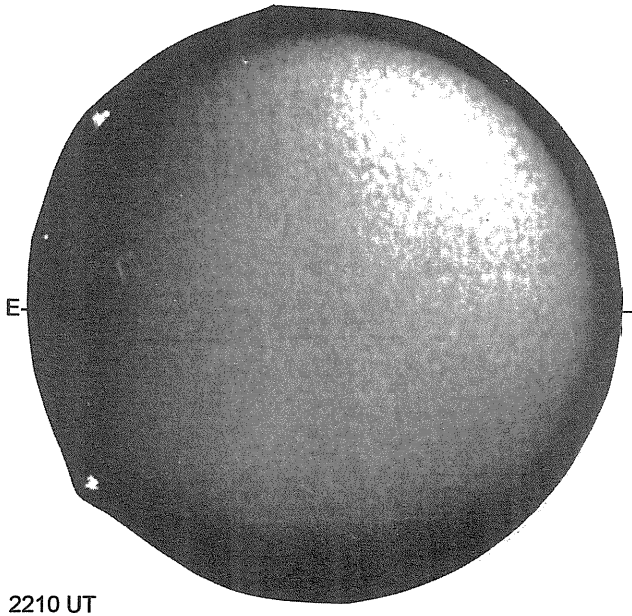
MT. WILSON MAGNETOGRAM



20.29 -
21.21 UT

White= +7.5G
Black = -7.5G

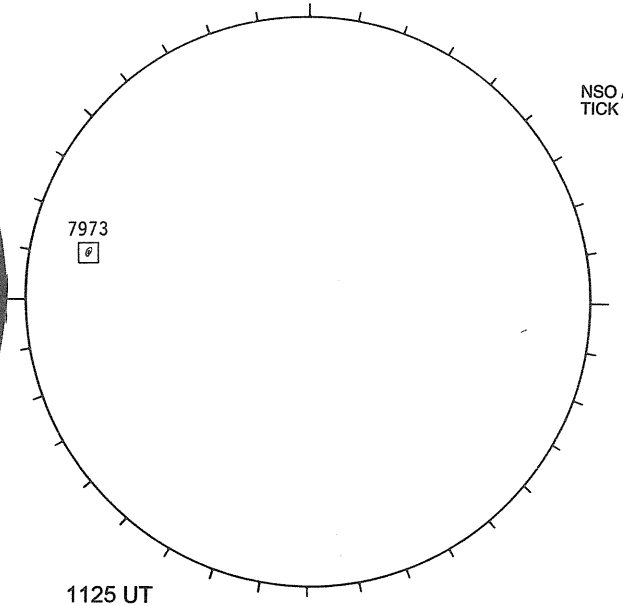
MAUNA LOA H-ALPHA



2210 UT
1729 UT Prom

S

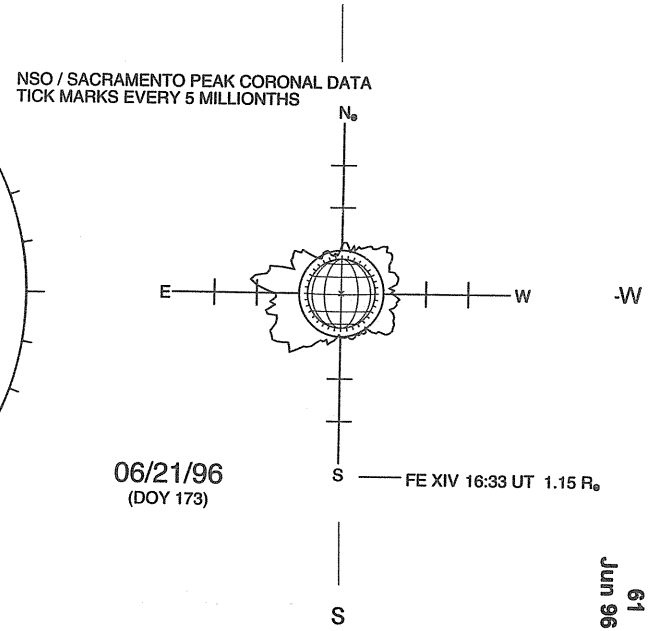
RAMEY SUNSPOT



1125 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



06/21/96
(DOY 173)

S

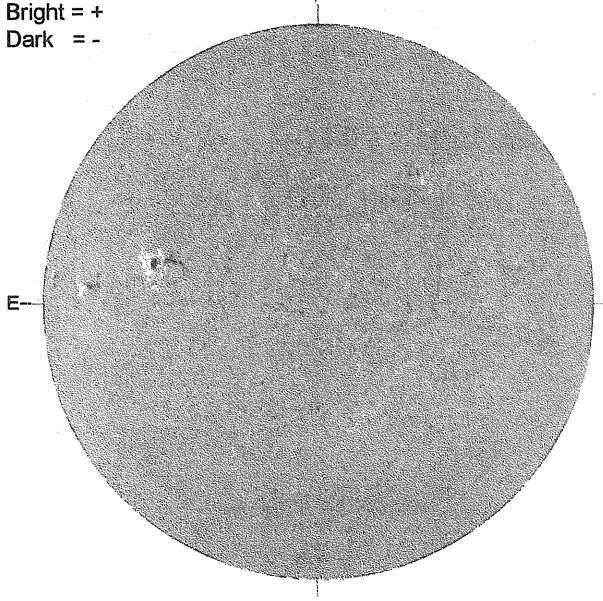
61
Jun 96

JUNE 22, 1996 (P= -6.61, Bo = 1.88, Lo = 88.64)

KITT PEAK MAGNETOGRAM

868.8 nm

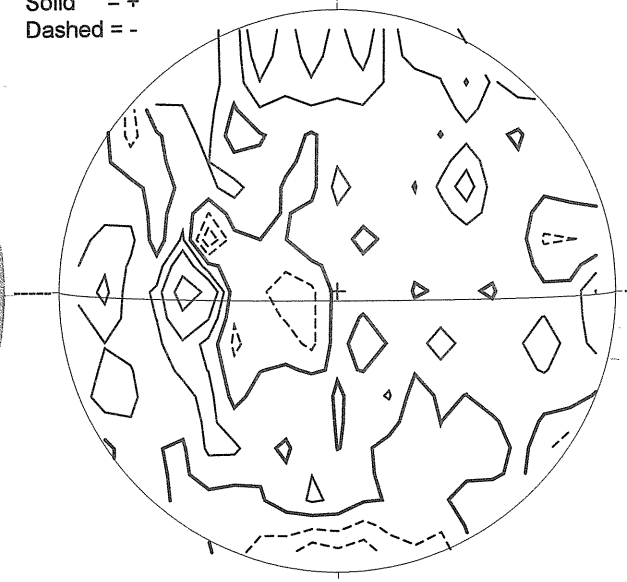
Bright = +
Dark = -



1624 UT

STANFORD MAGNETOGRAM

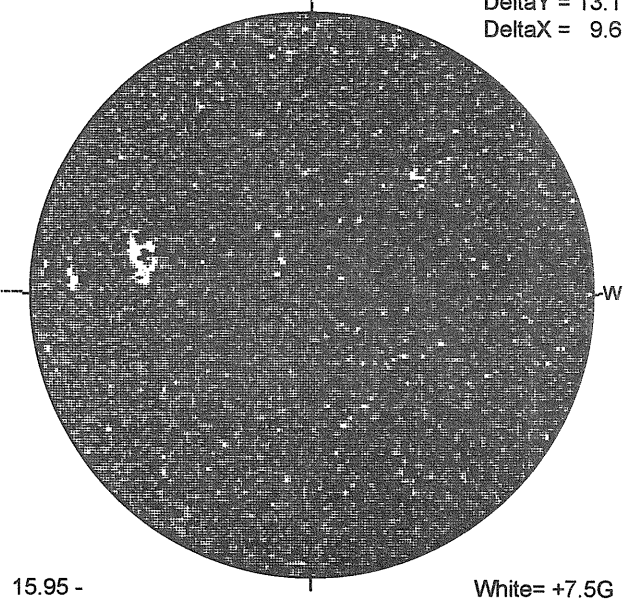
Solid = +
Dashed = -



2149 UT

MT. WILSON MAGNETOGRAM

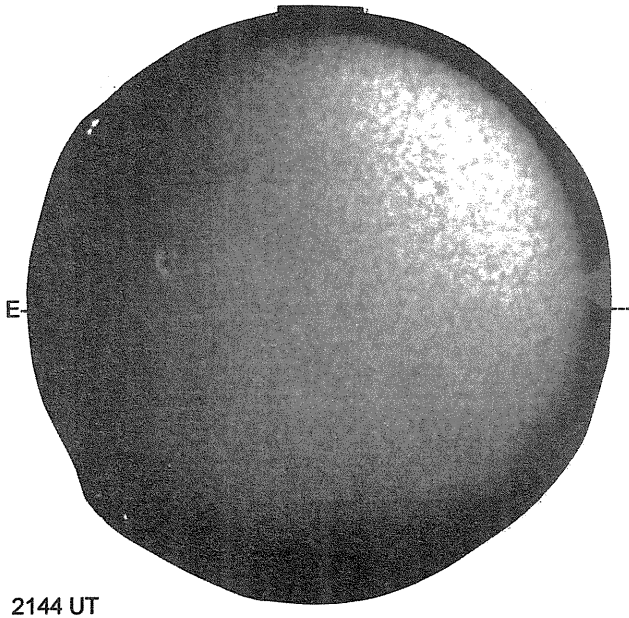
DeltaY = 13.1
DeltaX = 9.6



15.95 -
16.87 UT

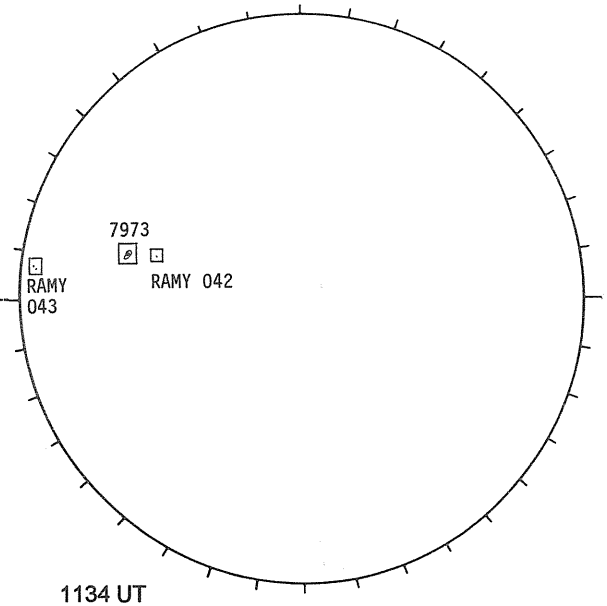
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



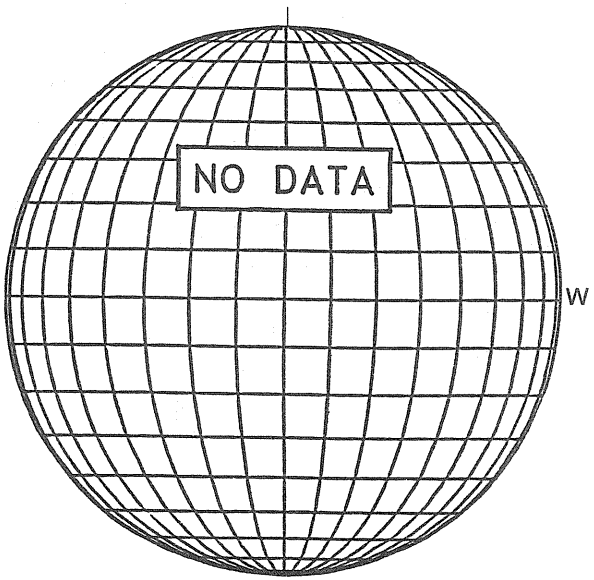
2144 UT
1924 UT Prom

RAMEY SUNSPOT



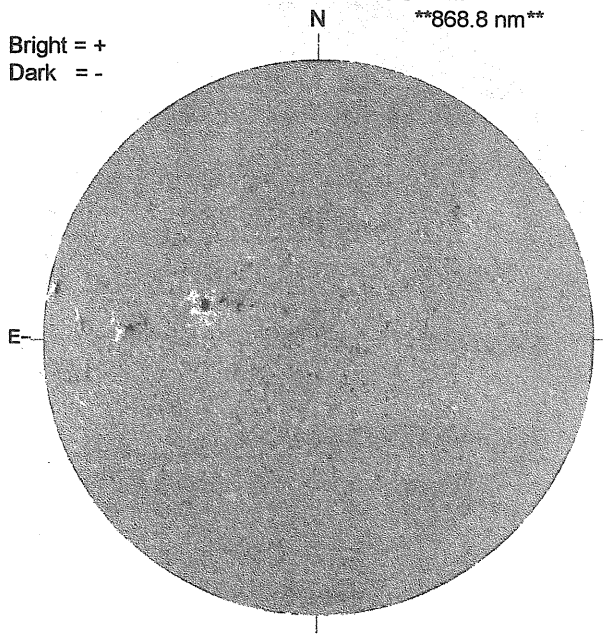
1134 UT

SACRAMENTO PEAK CORONA (1.15 Radii)----



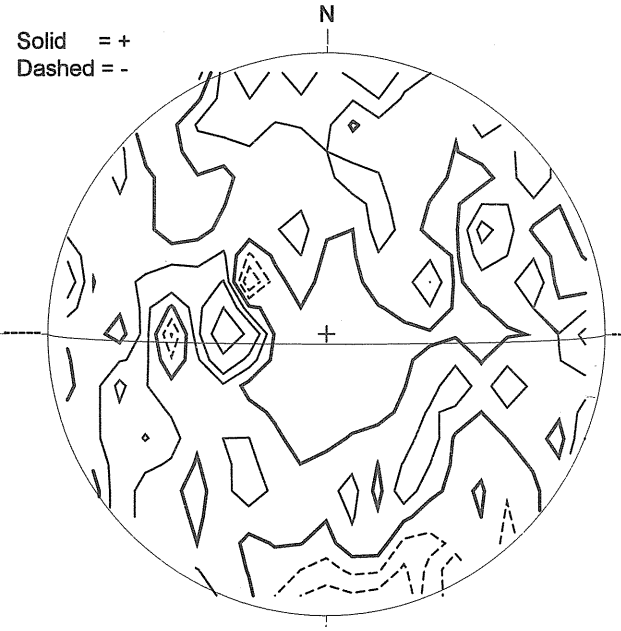
JUNE 23, 1996 (P= - 6.17, Bo = 2.00, Lo = 75.41)

KITT PEAK MAGNETOGRAM



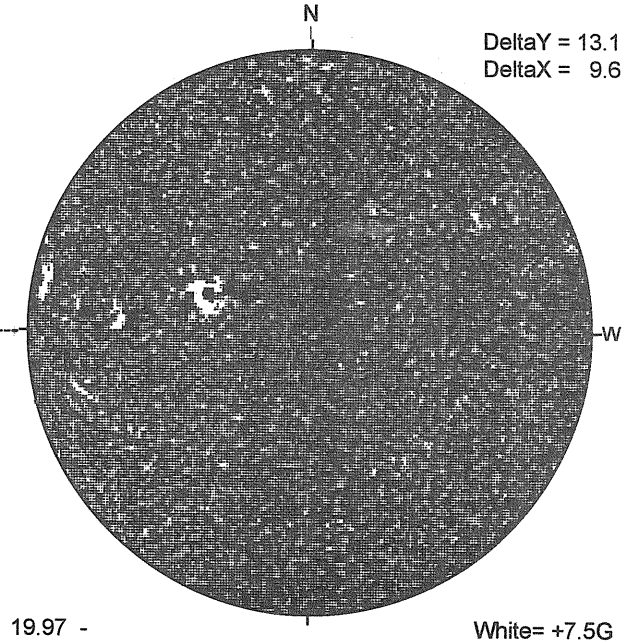
1618 UT

STANFORD MAGNETOGRAM



1925 UT

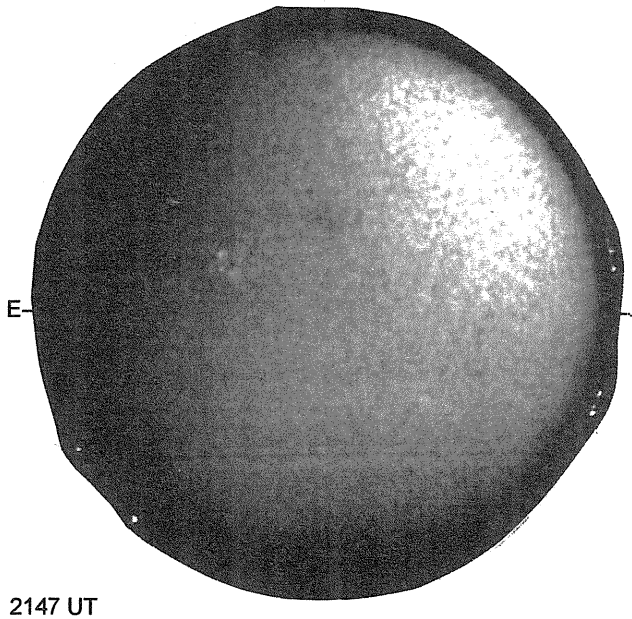
MT. WILSON MAGNETOGRAM



19.97 -
20.89 UT

White= +7.5G
Black = -7.5G

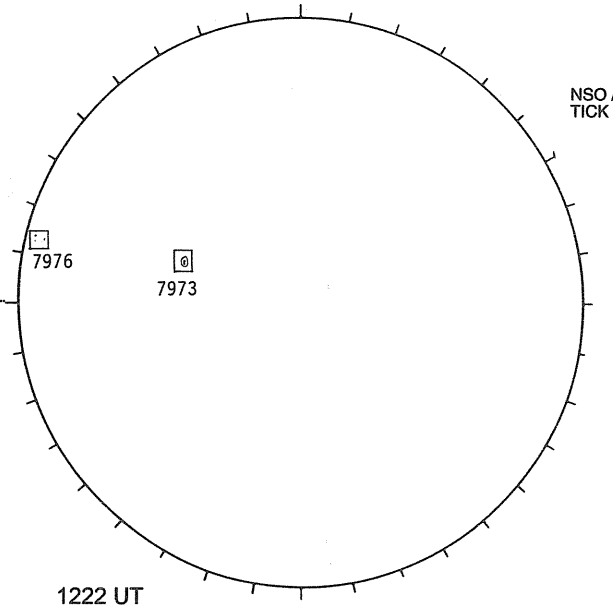
MAUNA LOA H-ALPHA



2147 UT
1853 UT Prom

S

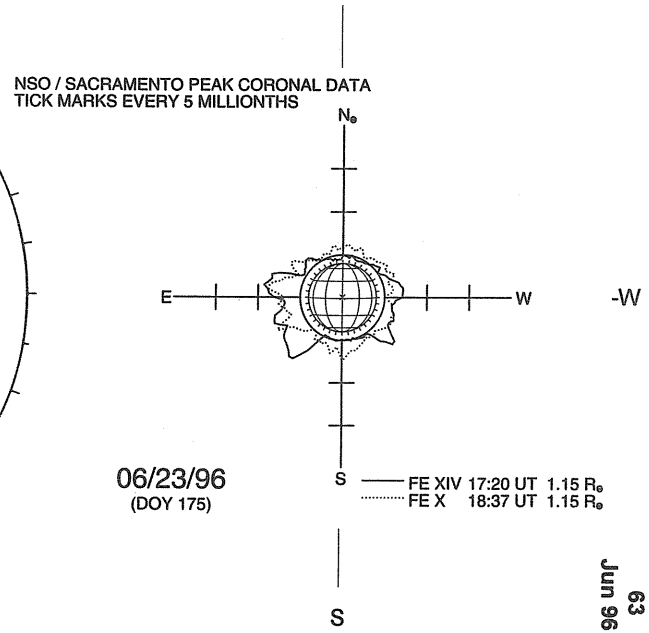
RAMEY SUNSPOT



1222 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----



06/23/96
(DOY 175)

S

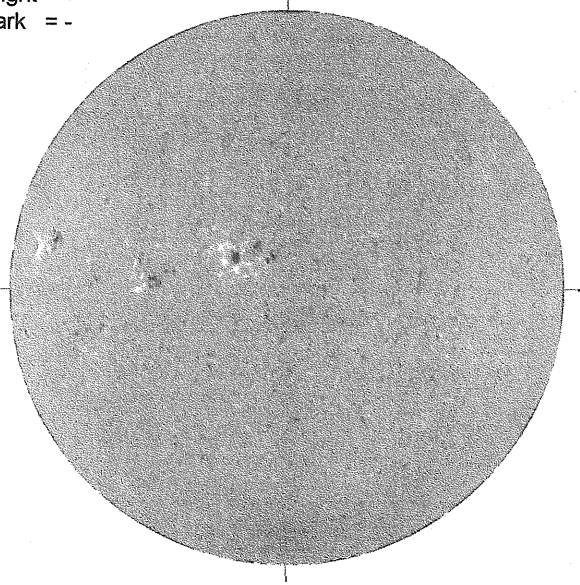
63
Jun 96

JUNE 24, 1996 (P= -5.72, Bo = 2.11 Lo = 62.17)

KITT PEAK MAGNETOGRAM

N **868.8 nm**

Bright = +
Dark = -



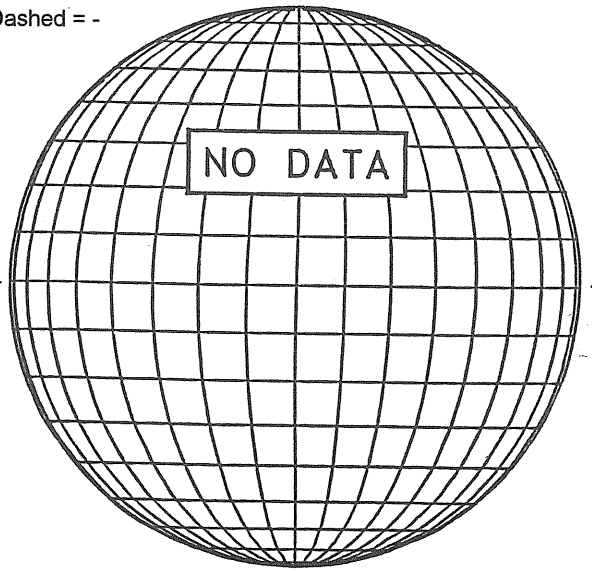
E-

1531 UT

STANFORD MAGNETOGRAM

N

Solid = +
Dashed = -

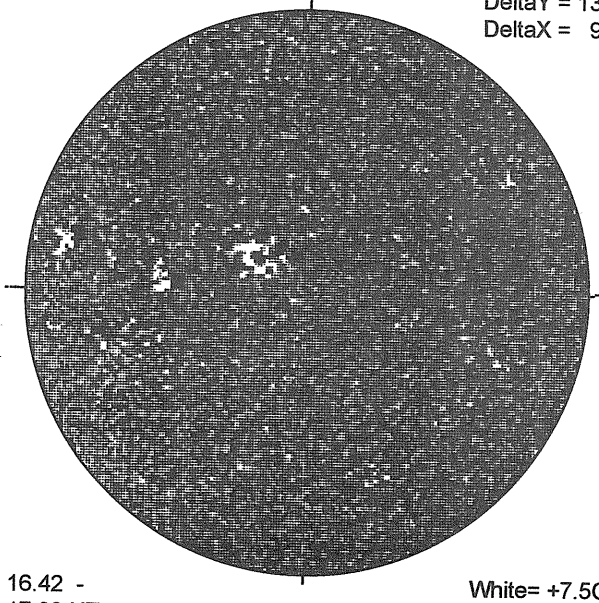


16.42 -
17.33 UT

MT. WILSON MAGNETOGRAM

N

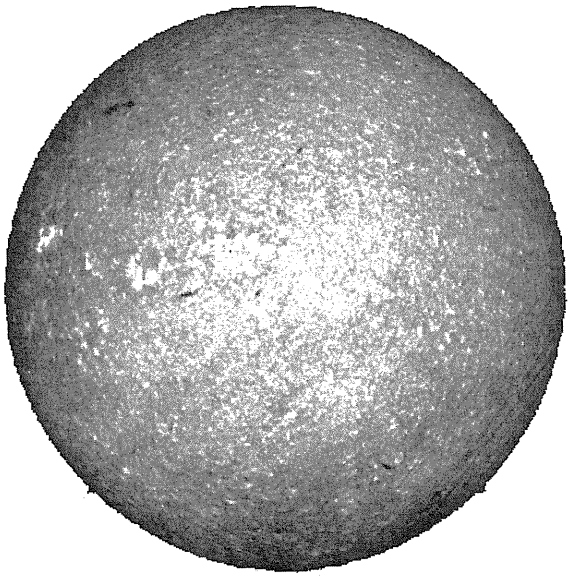
DeltaY = 13.1
DeltaX = 9.6



-W

White= +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

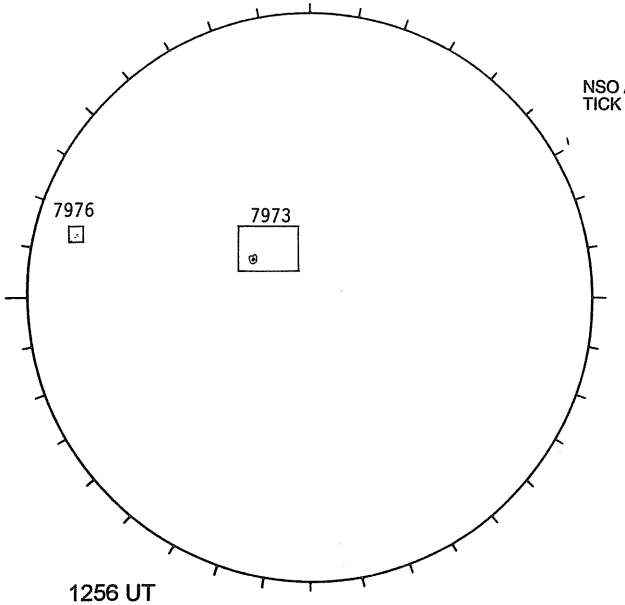


E-

1347 UT
Time uncertain.

S

RAMEY SUNSPOT

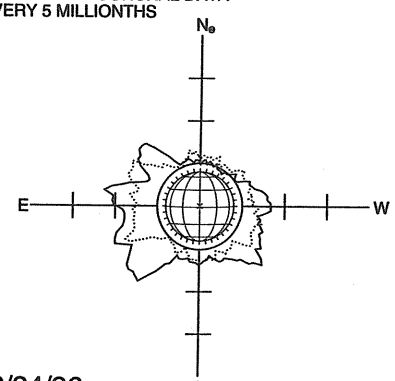


1256 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS



--W

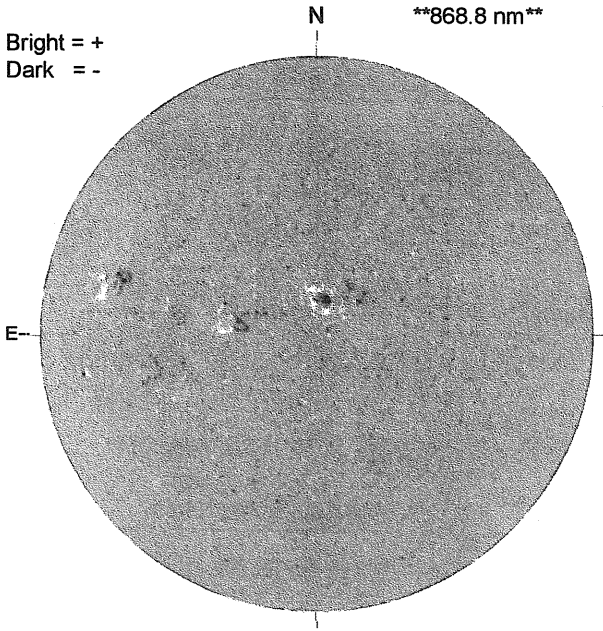
06/24/96
(DOY 176)

—— FE XIV 15:35 UT 1.15 $R_\odot$
..... FE X 14:33 UT 1.15 $R_\odot$
xxxxx CA XV 15:52 UT 1.15 $R_\odot$
NO CA XV ACTIVITY TODAY

S

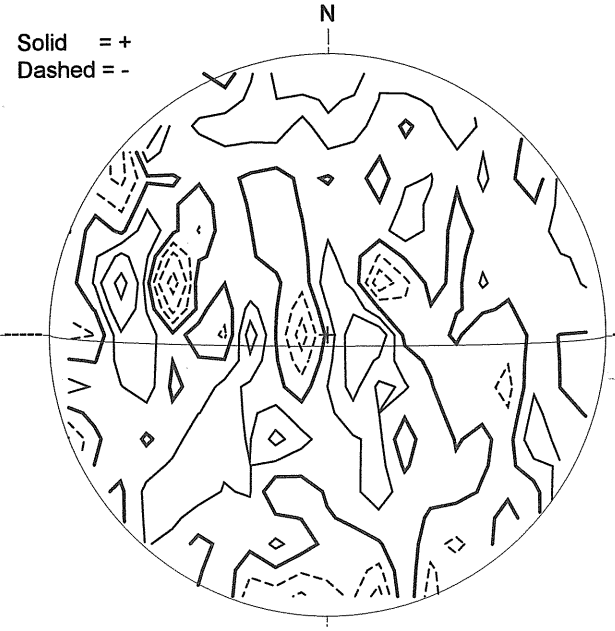
JUNE 25, 1996 (P= -5.27, Bo = 2.23, Lo = 48.93)

KITT PEAK MAGNETOGRAM



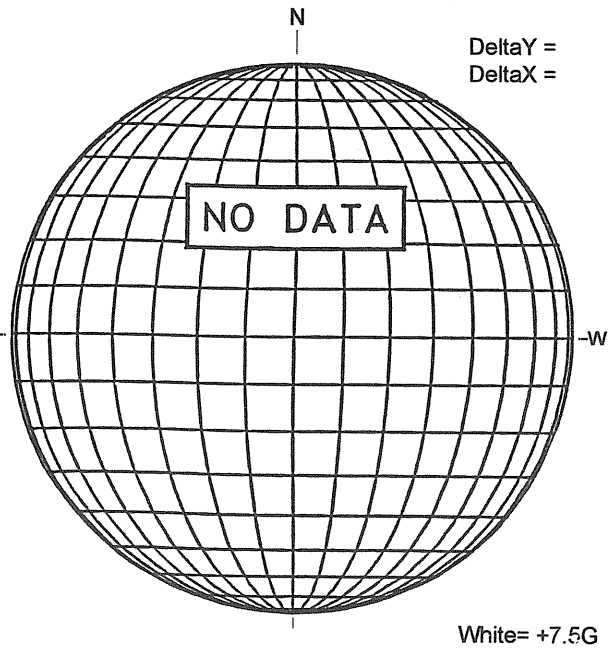
1533 UT

STANFORD MAGNETOGRAM



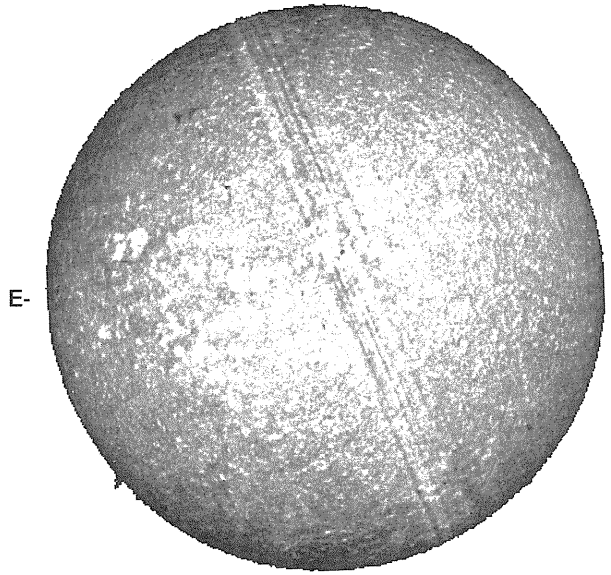
2203 UT

MT. WILSON MAGNETOGRAM



White= +7.5G
Black = -7.5G

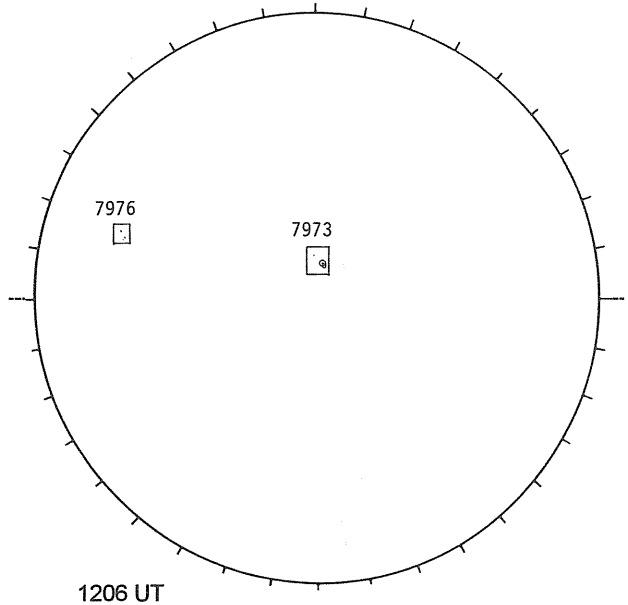
----- SACRAMENTO PEAK H-ALPHA



1554 UT
Time uncertain.

S

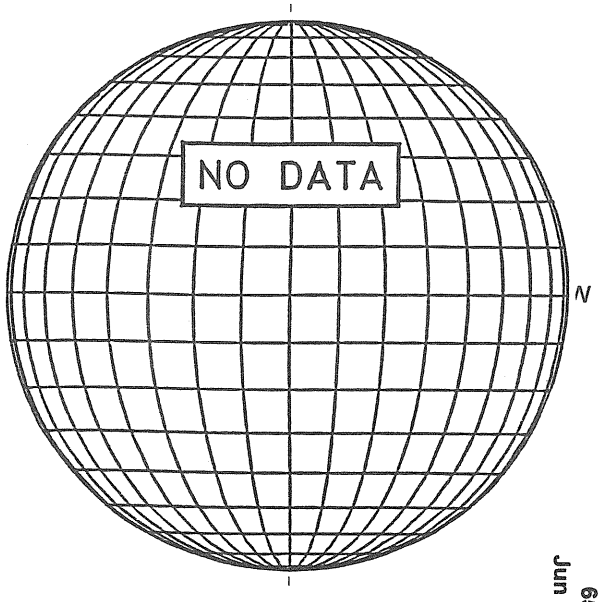
RAMEY SUNSPOT



1206 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

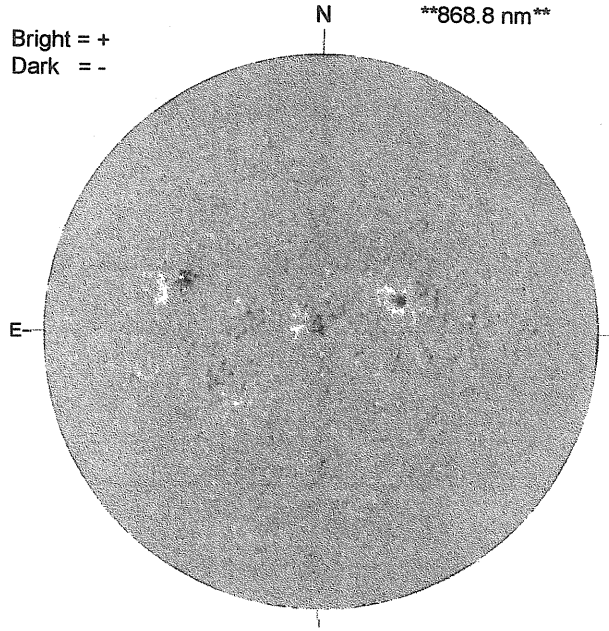


S

JUNE 26, 1996 (P= -4.82, Bo = 2.34, Lo = 35.70)

KITT PEAK MAGNETOGRAM

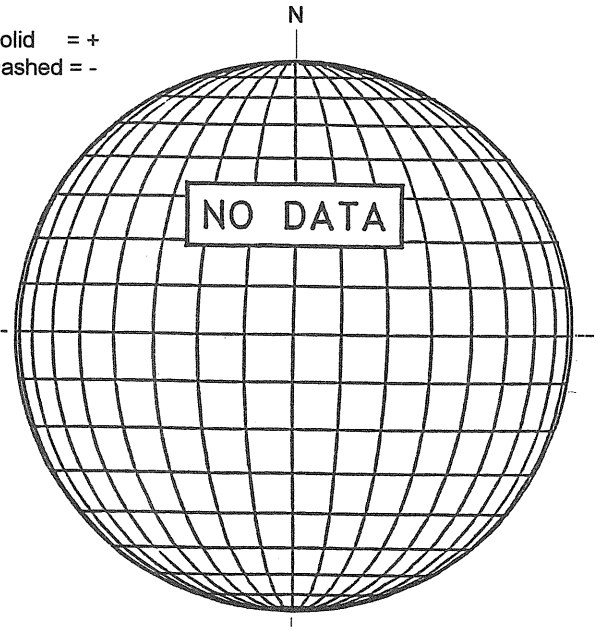
Bright = +
Dark = -



1619 UT

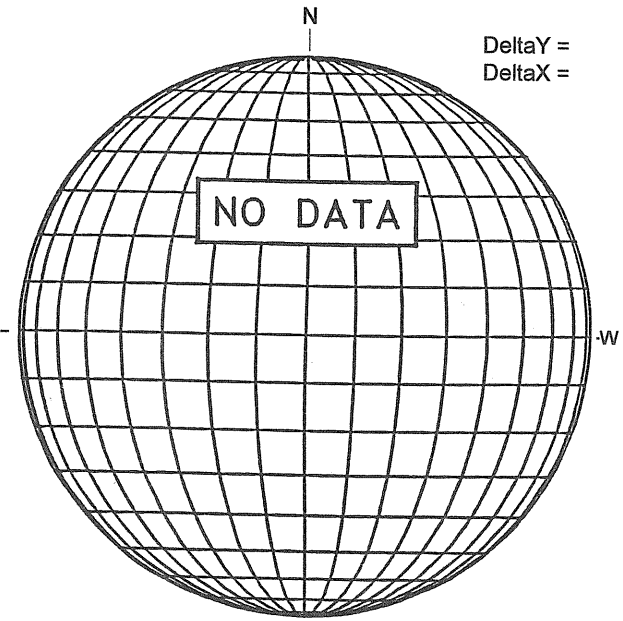
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



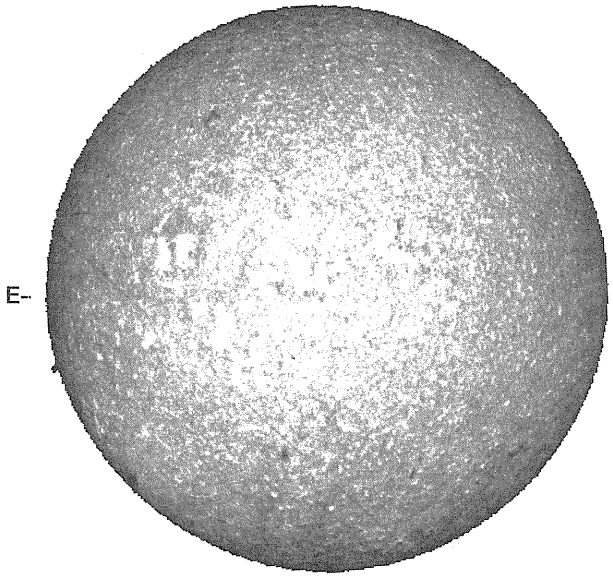
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



White= +7.5G
Black = -7.5G

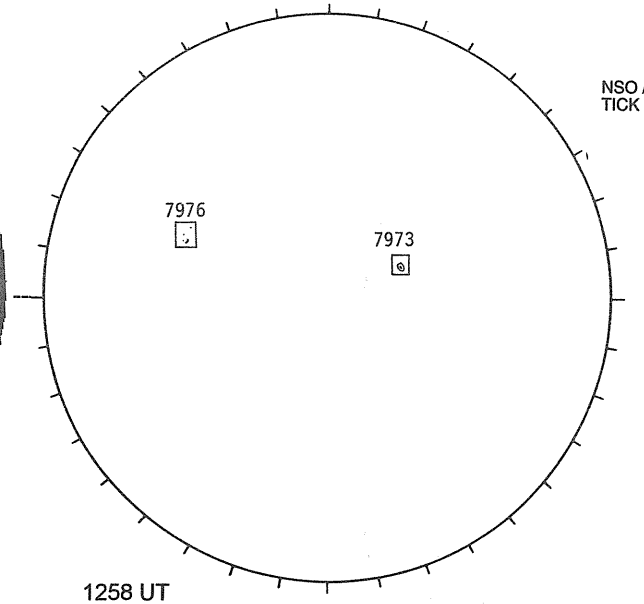
SACRAMENTO PEAK H-ALPHA



1419 UT
Time uncertain.

S

RAMEY SUNSPOT

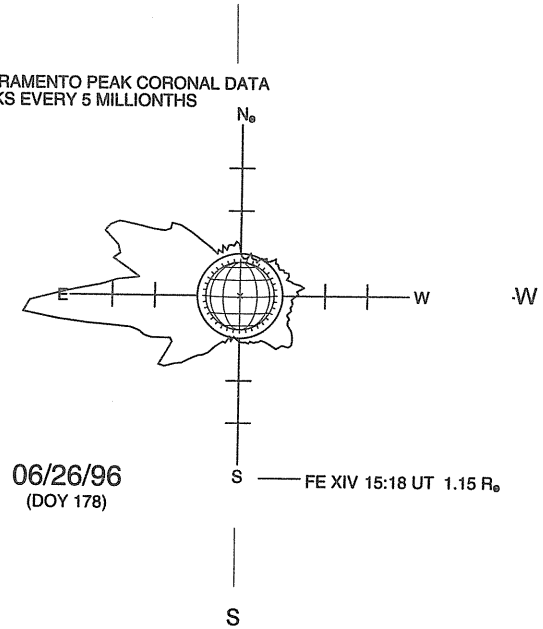


1258 UT
0531 UT LOMN Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)----

NSO / SACRAMENTO PEAK CORONAL DATA
TICK MARKS EVERY 5 MILLIONTHS

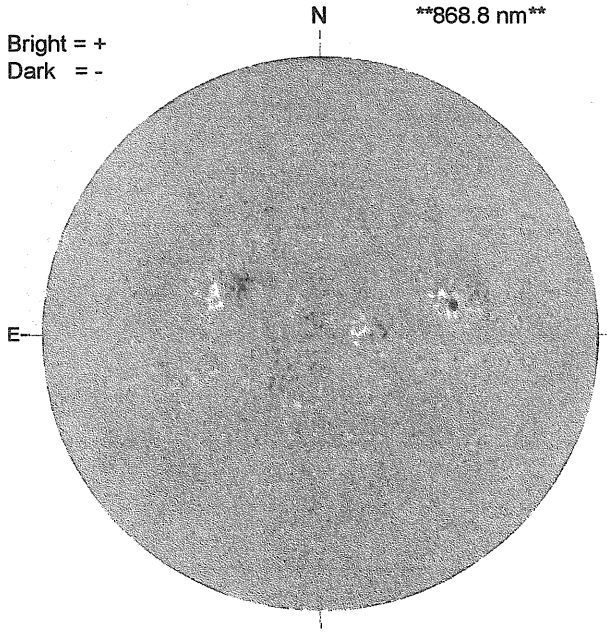


06/26/96
(DOY 178)

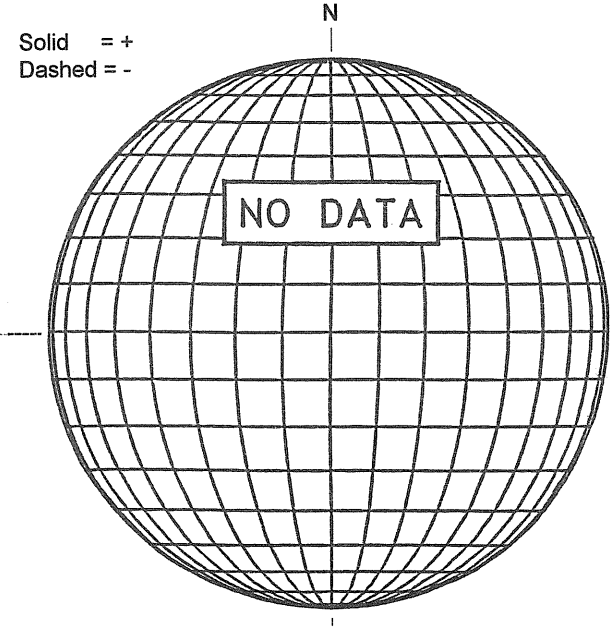
S

JUNE 27, 1996 (P= -4.37, Bo = 2.46, Lo = 22.46)

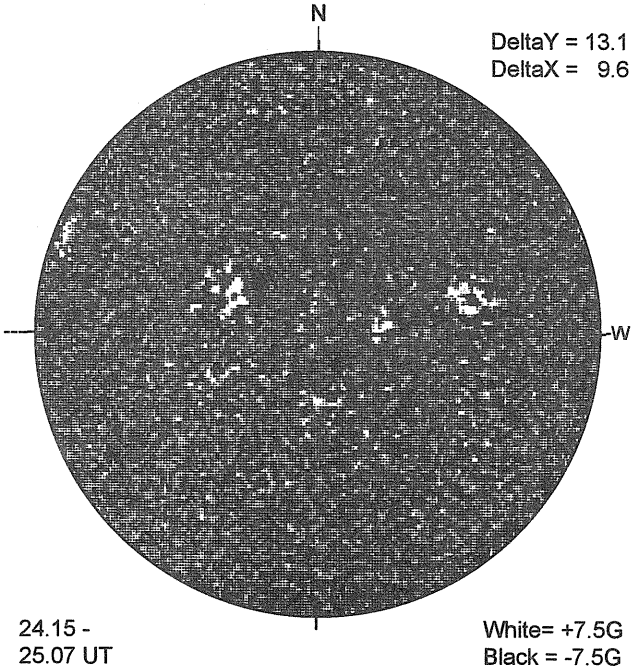
KITT PEAK MAGNETOGRAM



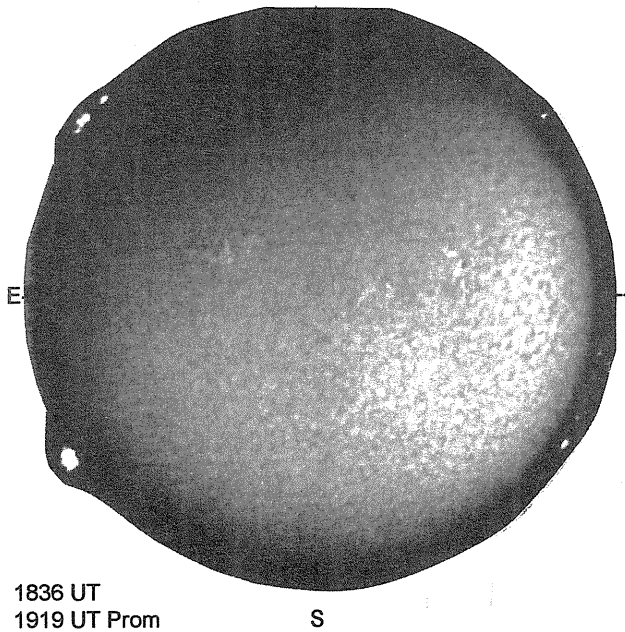
STANFORD MAGNETOGRAM



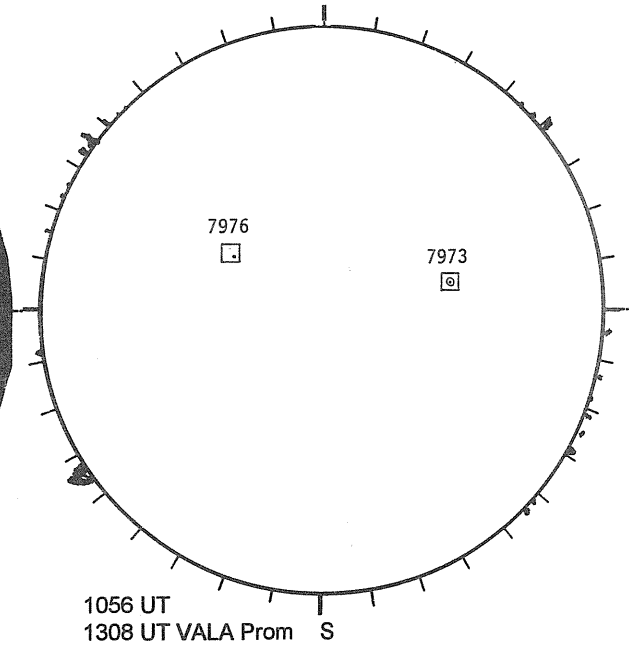
MT. WILSON MAGNETOGRAM



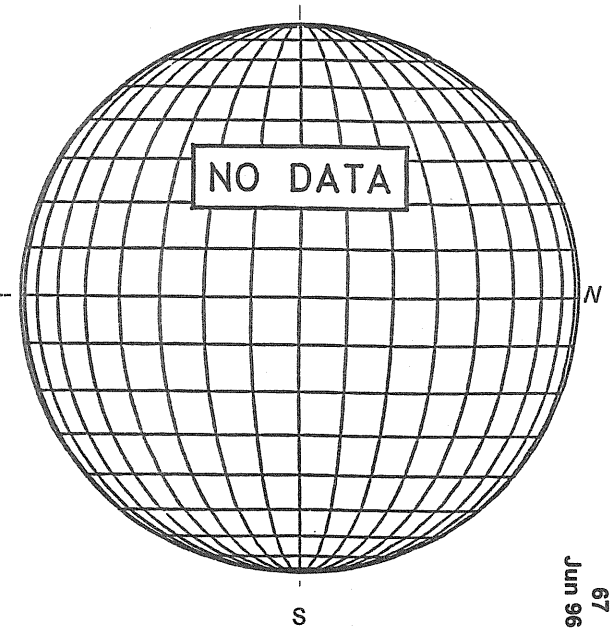
MAUNA LOA H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)----



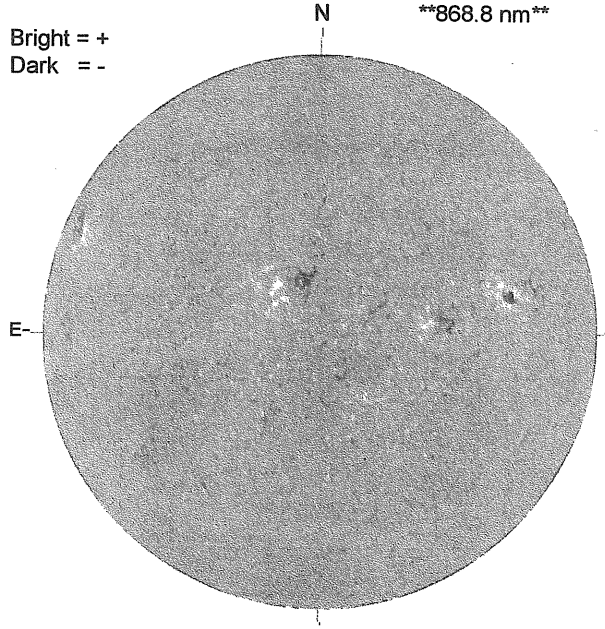
Jun 96

67

JUNE 28, 1996 (P= -3.92, Bo = 2.57, Lo = 9.22)

KITT PEAK MAGNETOGRAM

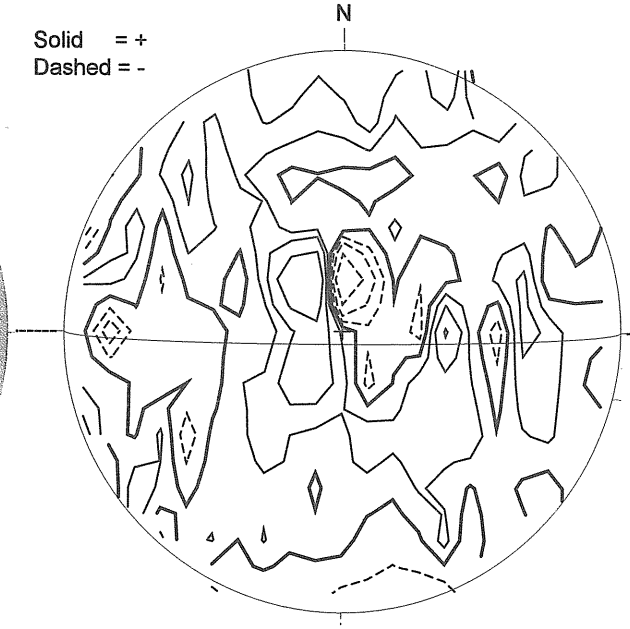
Bright = +
Dark = -



1421 UT

STANFORD MAGNETOGRAM

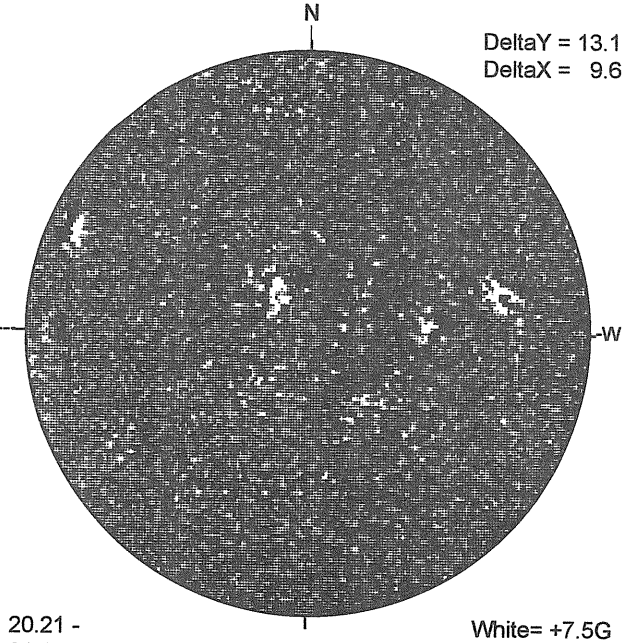
Solid = +
Dashed = -



2128 UT

MT. WILSON MAGNETOGRAM

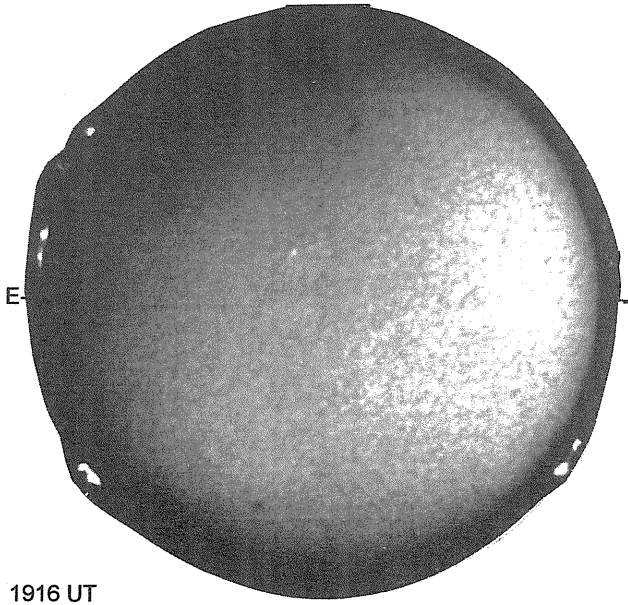
DeltaY = 13.1
DeltaX = 9.6



20.21 -
21.13 UT

White= +7.5G
Black = -7.5G

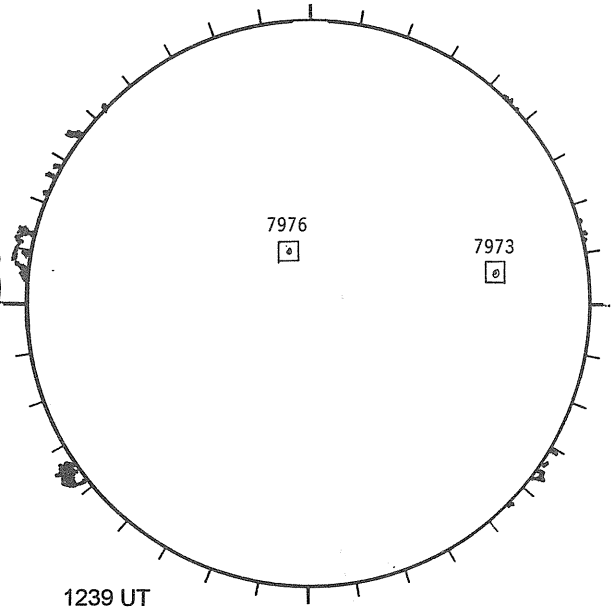
MAUNA LOA H-ALPHA



1916 UT
1817 UT Prom

S

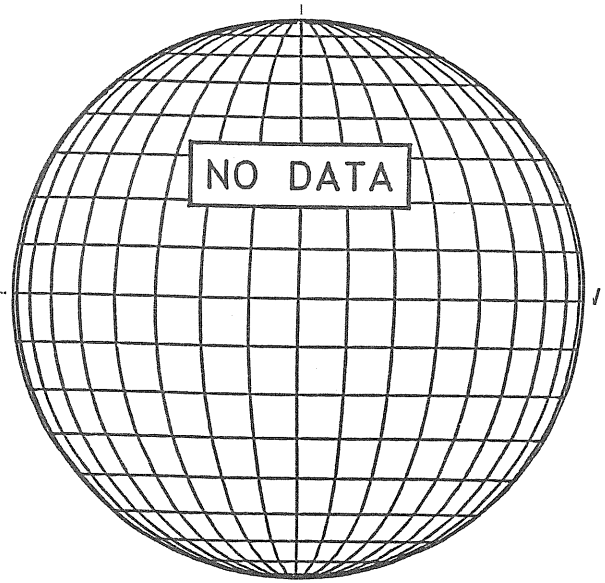
RAMEY SUNSPOT



1239 UT
1342 UT VALA Prom

S

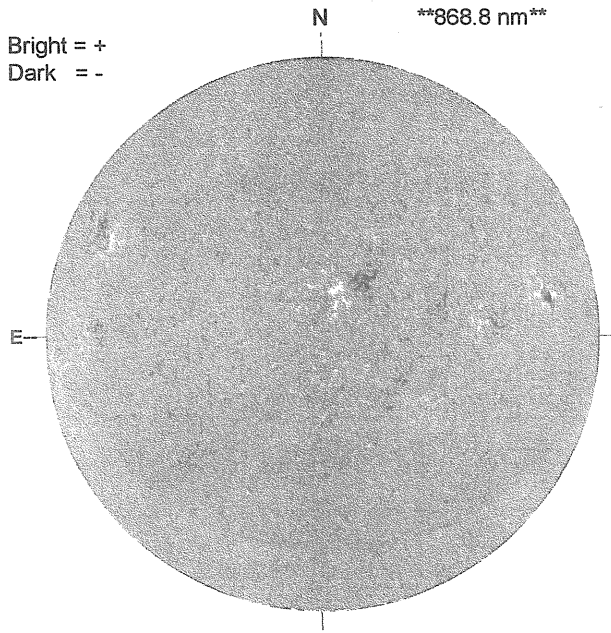
SACRAMENTO PEAK CORONA (1.15 Radii)



S

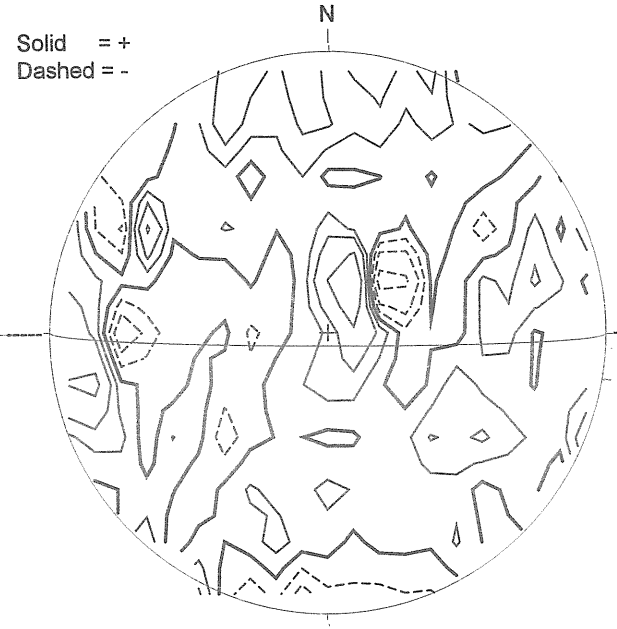
JUNE 29, 1996 (P= -3.47, Bo = 2.68, Lo = 355.99)

KITT PEAK MAGNETOGRAM



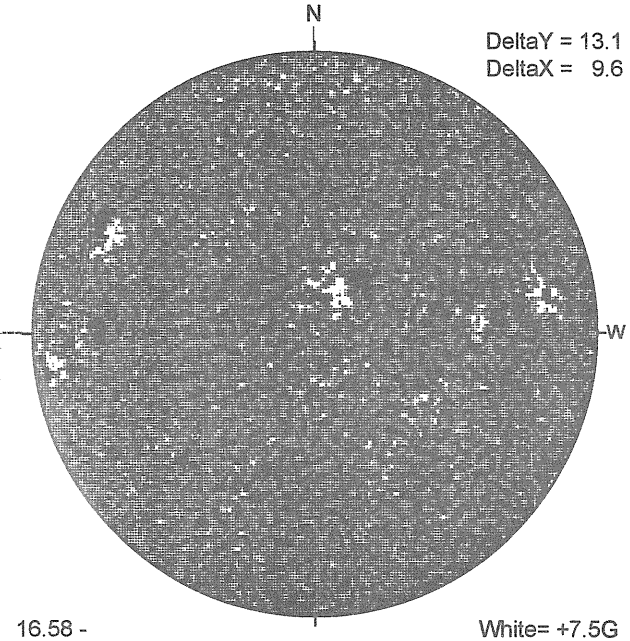
1407 UT

STANFORD MAGNETOGRAM



1959 UT

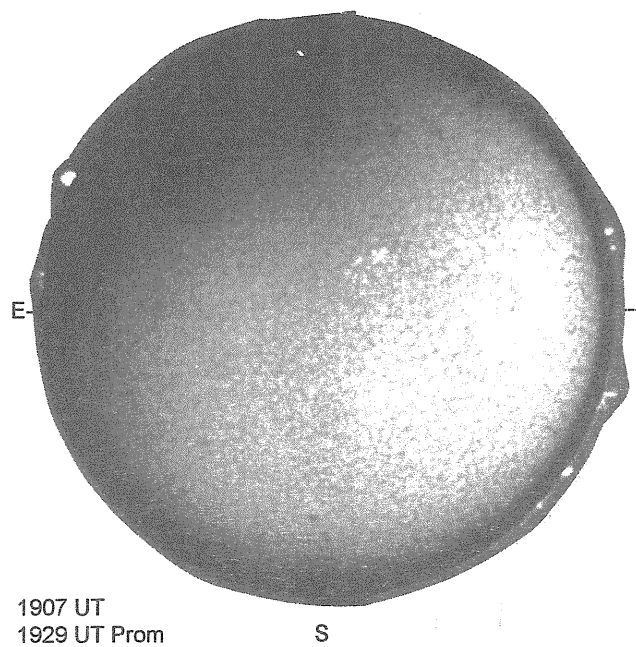
MT. WILSON MAGNETOGRAM



16.58 -
17.49 UT

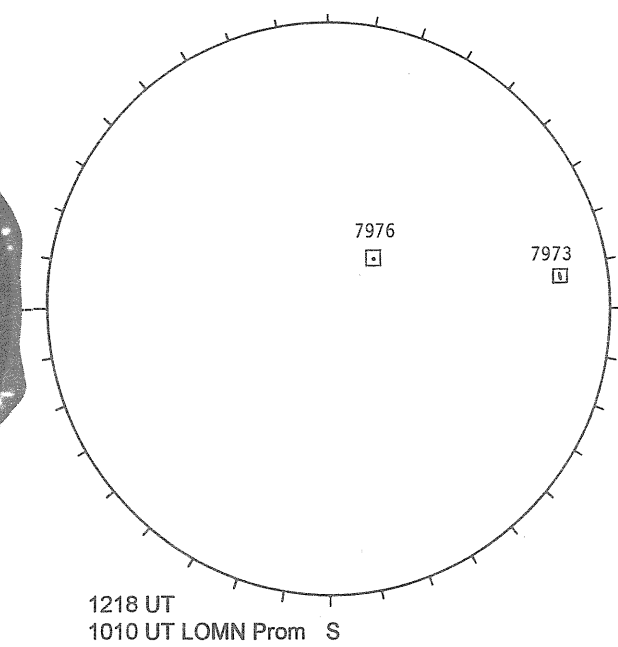
White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA



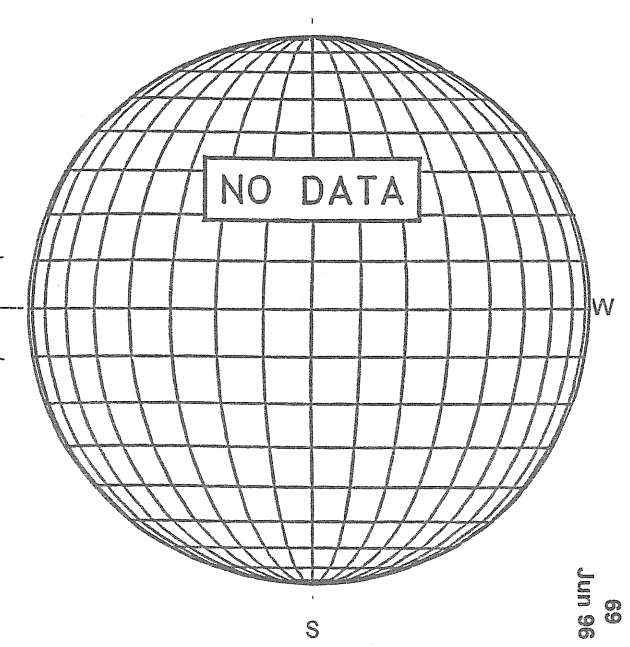
1907 UT
1929 UT Prom

RAMEY SUNSPOT



1218 UT
1010 UT LOMN Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



Jun 96
69

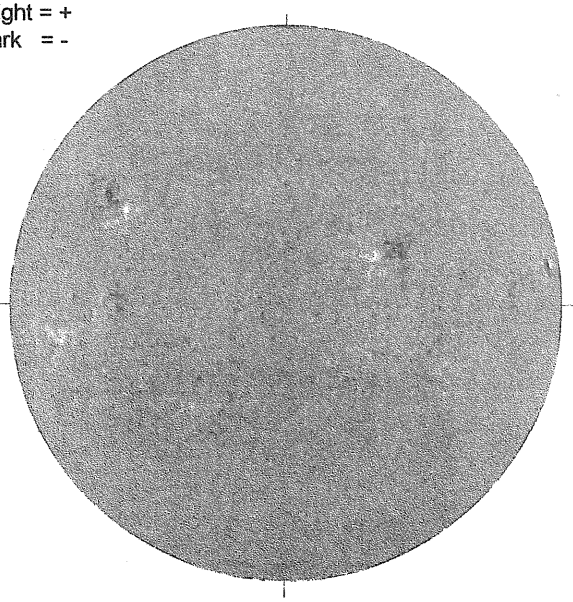
JUNE 30, 1996 (P= -3.01, Bo = 2.79, Lo = 342.75)

KITT PEAK MAGNETOGRAM

N

868.8 nm

Bright = +
Dark = -



E

1634 UT

STANFORD MAGNETOGRAM

N

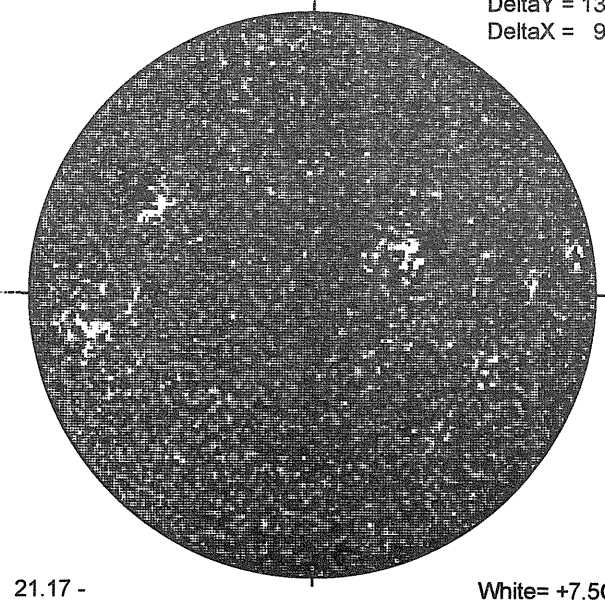
Solid = +
Dashed = -

1909 UT

MT. WILSON MAGNETOGRAM

N

DeltaY = 13.1
DeltaX = 9.6

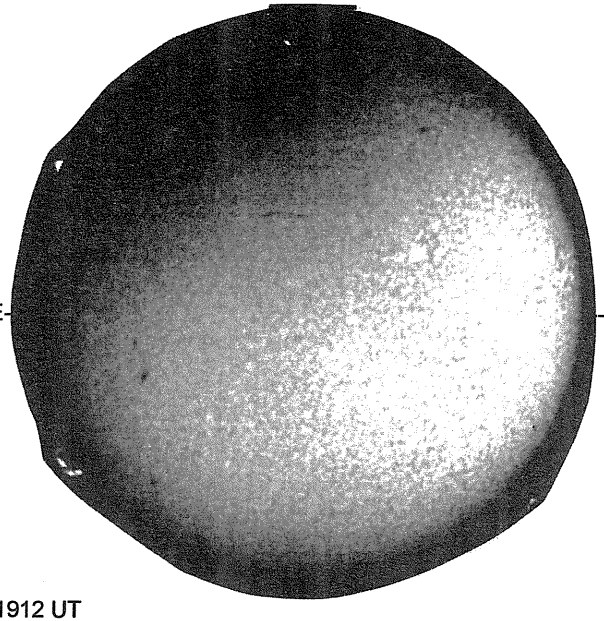


W

21.17 -
22.09 UT

White= +7.5G
Black = -7.5G

MAUNA LOA H-ALPHA

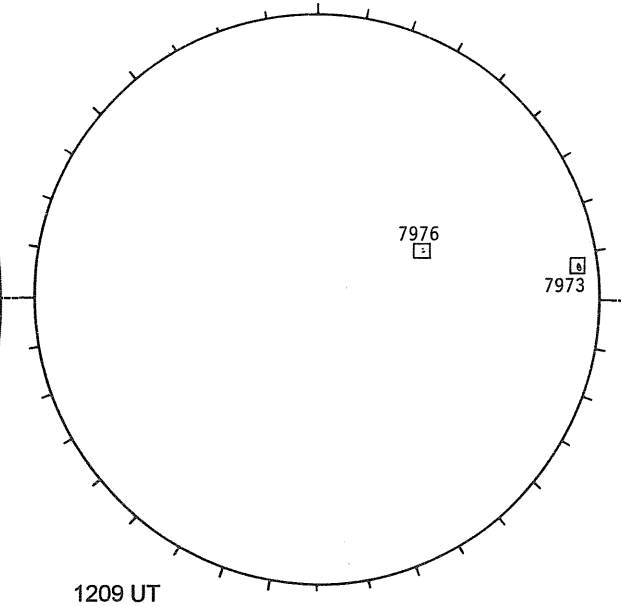


E

1912 UT
1831 UT Prom

S

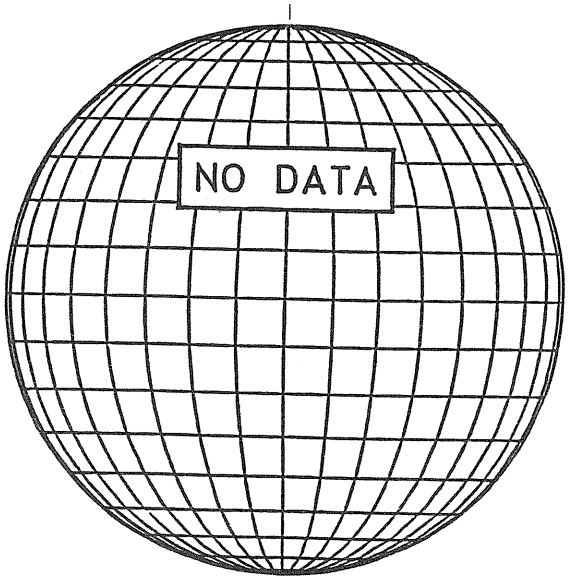
RAMEY SUNSPOT



1209 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)



N

S

DAILY SOFT X-RAY IMAGES FROM YOHKOH

SXT daily images are on-line via ftp at the Hiraiso Communications Research Laboratory in Japan and at the Solar Data Analysis Center at GSFC. The following document explains everything.

Daily YOHKOH/SXT Images by FTP

This document explains the service which provides access to the daily Yohkoh Soft X-ray Telescope (SXT) full-disk images stored at Hiraiso Solar Terrestrial Research Center, C.R.L. Before using this service, please read this document.

1. Purpose and Rules

This service is provided by CRL under the following agreement with the Yohkoh Team (Project Manager: Yoshiaki Ogawara, ISAS; Project Scientist: Yutaka Uchida, Univ. Tokyo). Those who wish to use the data in a way not explicitly permitted below are requested to contact the Yohkoh Team.

i) The main purpose of this data service is to encourage broad scientific use of the Yohkoh data and observing capability through collaboration with the Yohkoh Team. Both observational and theoretical collaborations are welcome. Scientists outside the Yohkoh Team are requested to obtain specific permission when they write scientific papers based upon data from this service.

ii) Solar images from this service may b published or presented for purposes of illustration without special permission. In such cases the following acknowledgment is appropriate:

The solar X-ray image is from the Yohkoh mission of ISAS, Japan. The X-ray telescope was prepared by the Lockheed Palo Alto Research Laboratory, the National As tronomical Observatory of Japan, and the University of Tokyo with the support of NASA and ISAS.

iii) This data service is also intended to contribute to improving solar activity prediction, to assist other solar observers in their choice of targets, and for public education and information. Use of the images for these purposes is unrestricted.

2. Instrument

A full description of the SXT may be found in the book "The YOHKOH (SOLAR-A) Mission" (Z. Svestka and Y. Uchida, eds.), Kluwer Academic Publishers, 1991; or in the paper, "The Soft X-ray Telescope for the Solar-A Mission" (Tsuneta, et al. Solar Physics, vol. 136, pp. 37-67, 1991.

3. Description of Data

The stored SXT images data are taken through an Al/Mg composite filter with a mean wavelength of about 20 A for normal coronal temperatures. The images are composites of a short and a long exposure with a pixel size of 4.9 arcsec. Background has been removed and all images are normalized to an

exposure time of one second. The 8-bit numbers give the logarithm of the signal byte- scaled so that an actual signal of 10^6 equals 255. To recover the actual signal in data numbers, use the relation

data_number = 10^((6*NN)/255)

where NN is the datum in the stored image. Conversion to intensity depends upon temperature but is of the order of 5 x 10^20 ergs, at the Sun, per data_number.

The file format is the usual FITS format. The file names are in the style

sf_fits930515.151807,

where sf means SXT FFI image ,"930515" means 15-May-93, and "151807" means 15:18:07 UT.

4. How to connect and transfer data

Those who wish to access these data are requested to send an application to the manager of this data service via e-mail. At least, the following items should be included in an application;

* Full name
* Institution
* Postal Address
* e-mail address
* your host machine and OS
* software for SXT data processing and display
* expected frequency of data transfer

The format of the application is free. This information is necessary to deliver additional information and service in future, and helpful to update data service for more convenience. The application should be sent to the following address via e-mail;

akioka@planet.crl.go.jp
or akioka@planet.hi.crl.go.jp.

The data server is the usual anonymous ftp server program of UNIX. The IP address is 133.243.32.7. Therefore, a typical example for data access is ...

```
% ftp 133.243.32.7
name: anonymous
password : (your e-mail address)
ftp> cd sxt
ftp> binary
ftp> get <file name>
%
```

When you have logged in with the anonymous ftp account, you will find a directory named sxt. In this directory, you will find available sxt images and some documents which all users should read.

5. Practical Limitations

The domestic network in Japan is very crowded. Therefore, to assure continuation of this service we request potential users to follow the following limitations;

i) Please avoid to access during office hours in Japan (23:30 - 08:00 UT). Our advice is to access between 13:00 UT and 24:00 UT.

ii) Please do not try to transfer more than two images at once. We request the users not to obatain more than a few images per day. If you need more images, please contact the manager for special arrangements.

If the above rules are consistently violated, there is a possibility that we will have to terminate this service or apply more severe limitations, so please cooperate fully until we have more experience with the effect of this service upon the network.

If you have some request or comment, please feel free to send e-mail to one of the following persons:

Yutaka Uchida, Project Scientist, Yohkoh
Department of Astronomy, University of Tokyo
e-mail: uchida@dept.astron.s.u-tokyo.ac.jp

Maki Akioka, Manager, CRL Data Service
Hiraiso Solar Terrestrial Research Center
Communications Research Laboratory
e-mail: akioka@planet.hi.crl.go.jp

Received Aug. 25, 1993 from acton@sxt4.oscs.montana.edu

Submitted by L. Acton for the Yohkoh Team

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Solar DAC Node Name Changes

The NASA Goddard Solar Data Analysis Center (SDAC) nodes most familiar to the community will be undergoing some major changes in August and September, 1993. Nodes NEWMAX (newmax.gsfc.nasa.gov) and ISIS (isis.gsfc.nasa.gov) are being retired, and their functions combined on a single server, which will be known as SDAC (sdac.gsfc.nasa.gov). SDAC's IP (Internet) address will be 128.183.57.156, and its NSI/DECnet address will be 15.526.

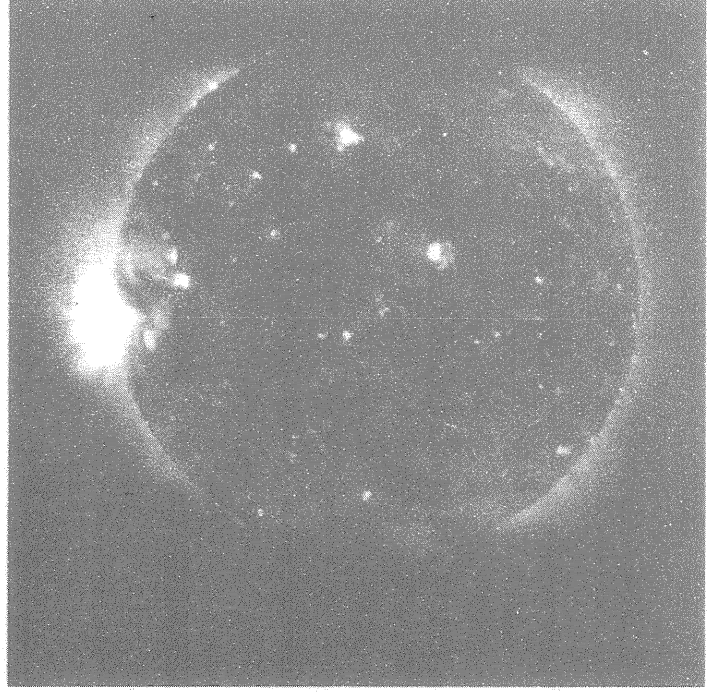
Users of the BATSE solar flare database and other services of ISIS and NEWMAX should watch for messages warning of the actual changeover dates. (SDAC is a DEC 4000 Model 610 AXP, so users should see noticeable improvements in response.)

Received Aug. 10, 1993 from gurman@uvsp.gsfc.nasa.gov
--Joe Gurman

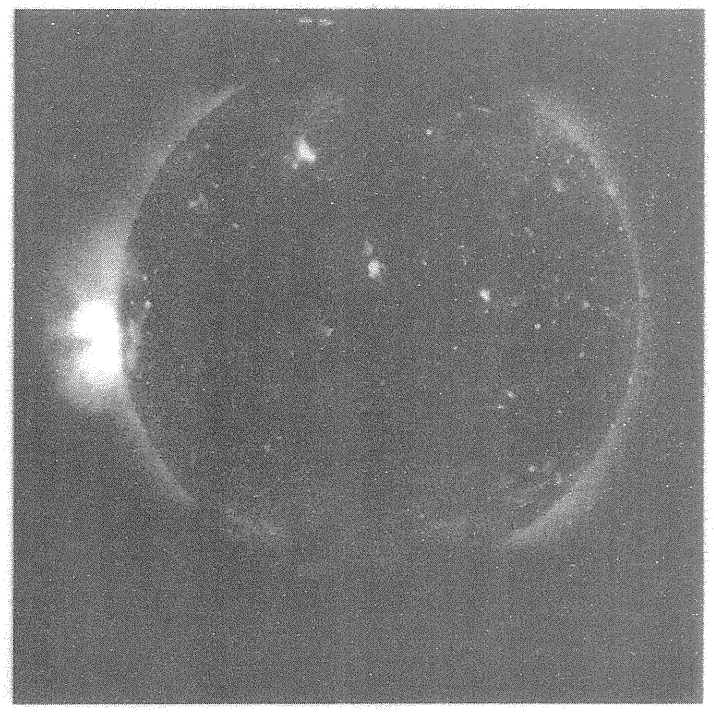
YOHKOH SOFT X-RAY TELESCOPE IMAGES

June
1996

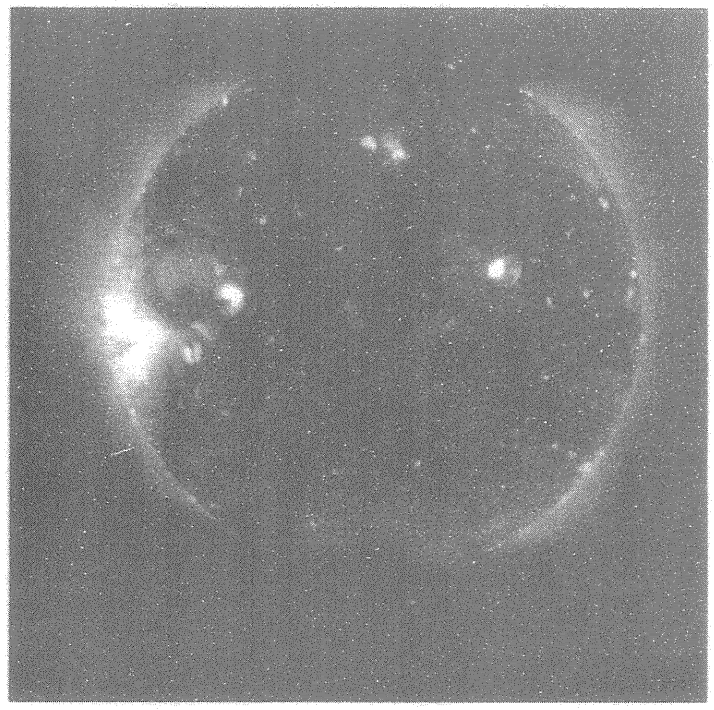
Day 1



Day 3
13:35



Day 2
13:53

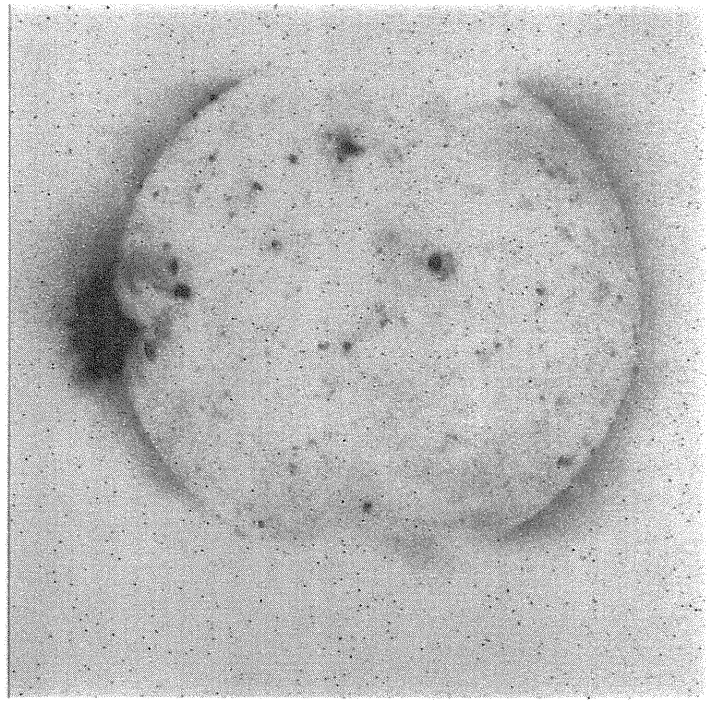


Day 4
13:54

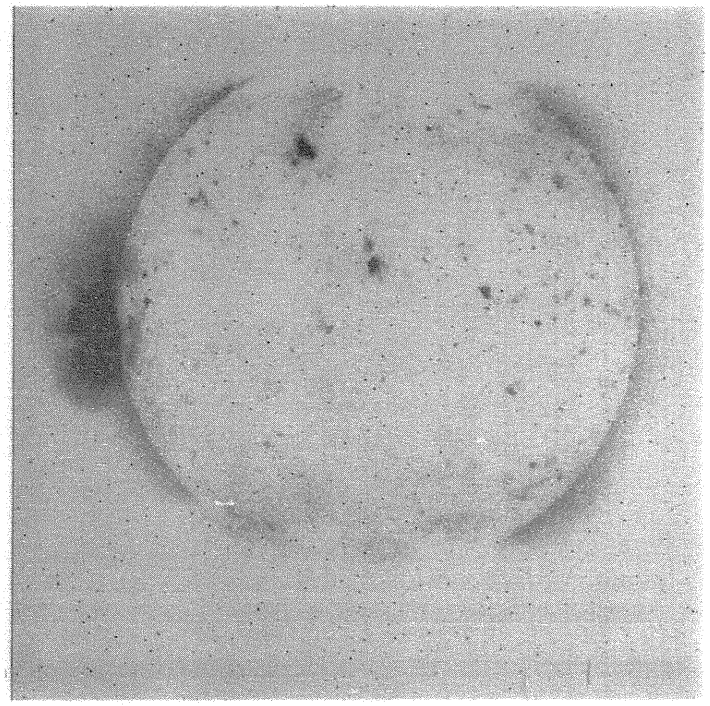
YOHKOH SOFT X-RAY TELESCOPE IMAGES

June 1996

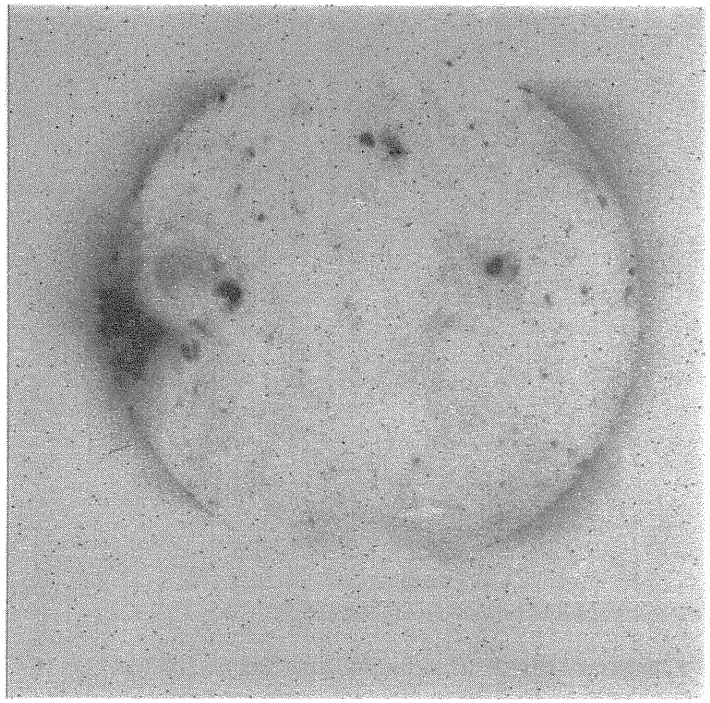
Day 1



Day 3
13:35



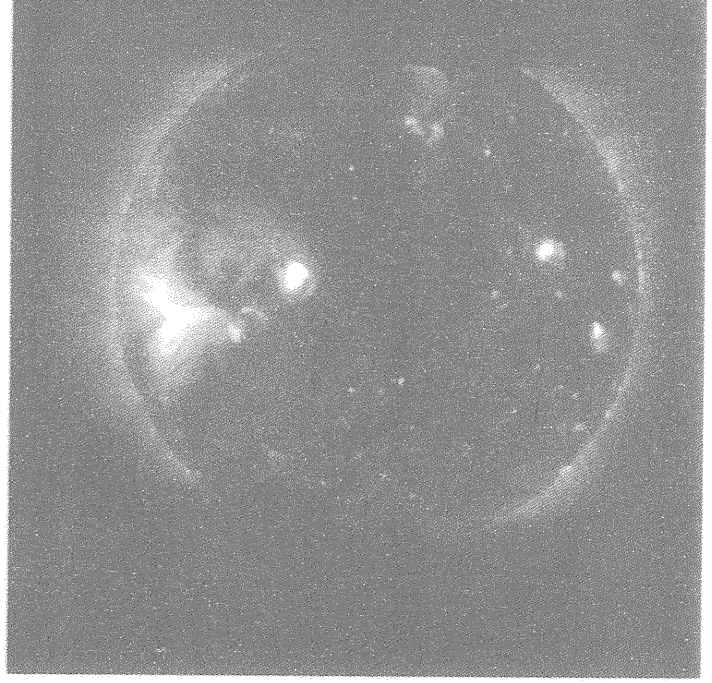
Day 2
13:53



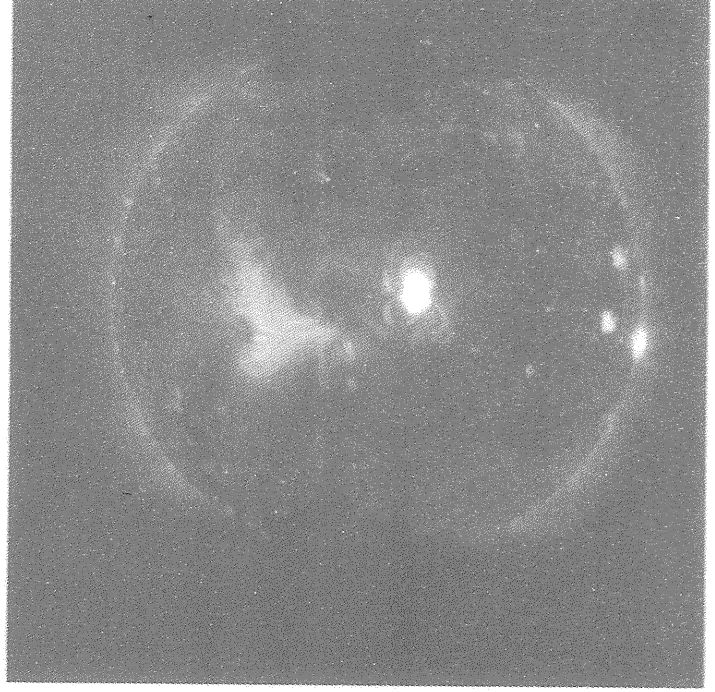
Day 4
13:54

YOHKOH SOFT X-RAY TELESCOPE IMAGES

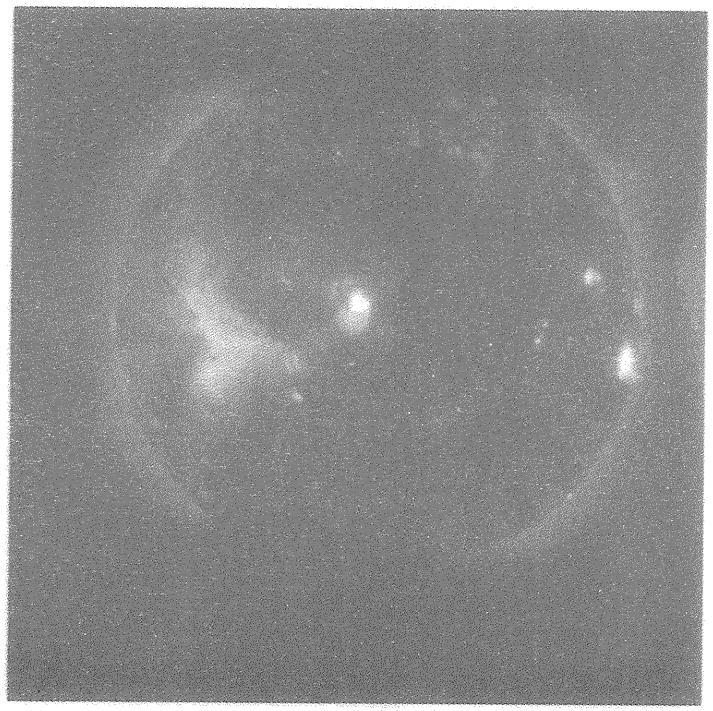
June 1996



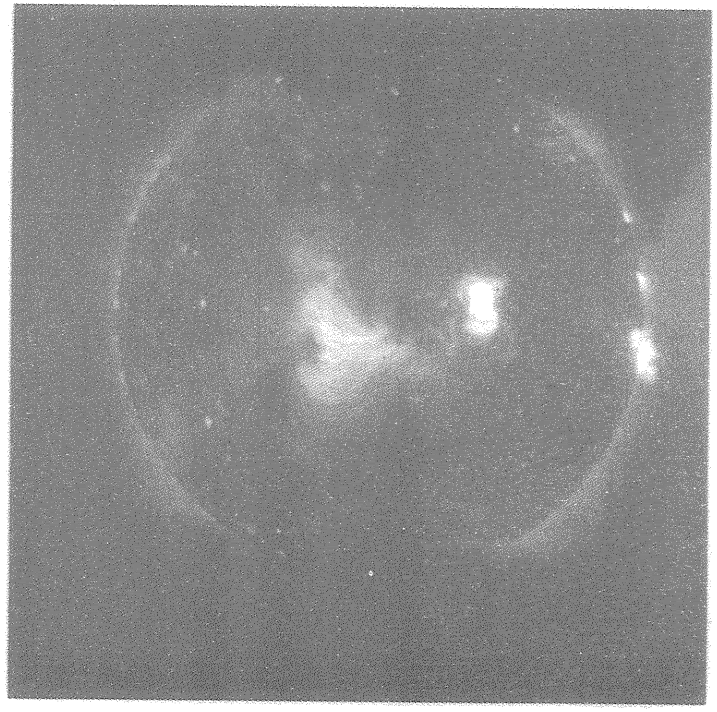
Day 5
13:11



Day 7
11:15



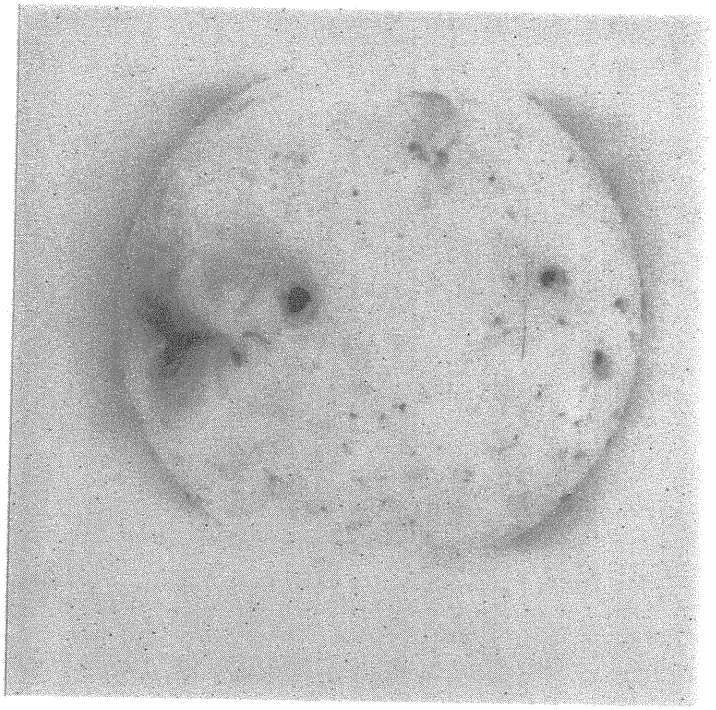
Day 6
13:28



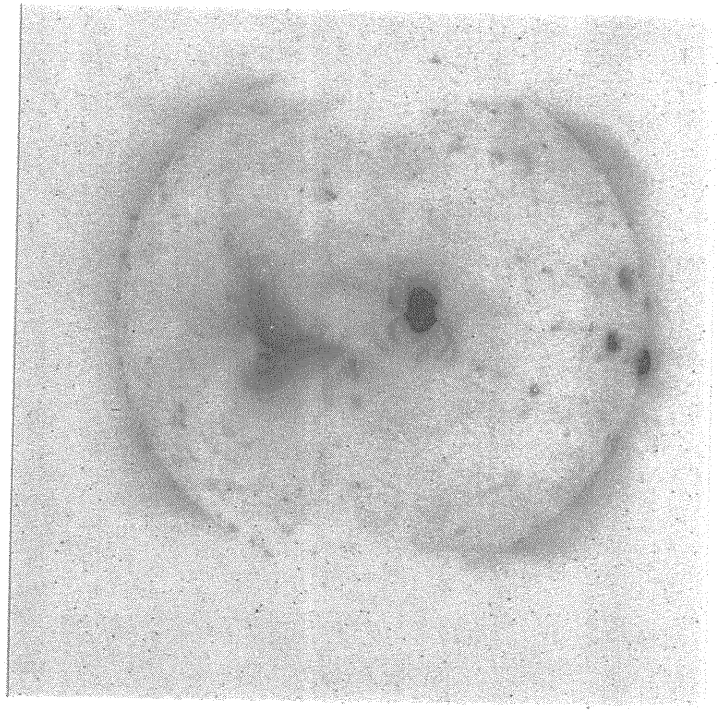
Day 8
12:27

YOHKOH SOFT X-RAY TELESCOPE IMAGES

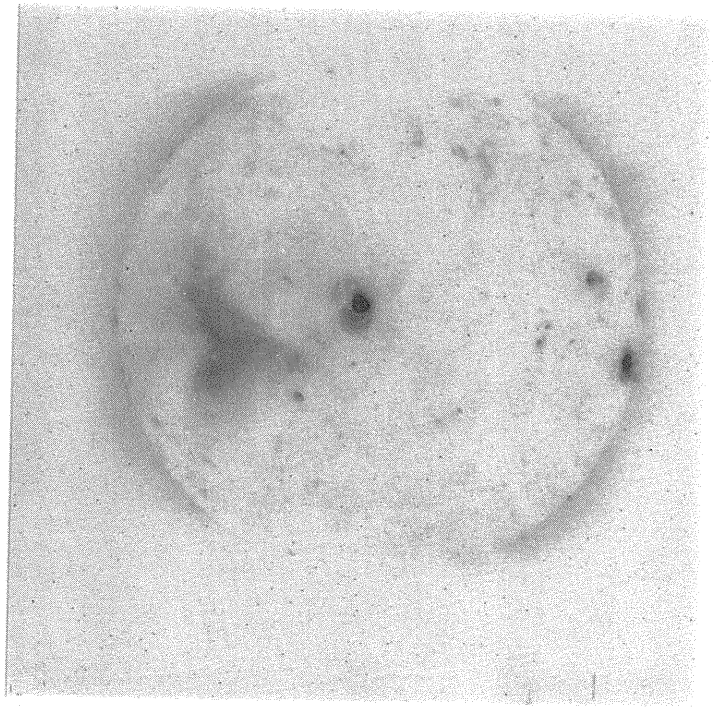
June 1996



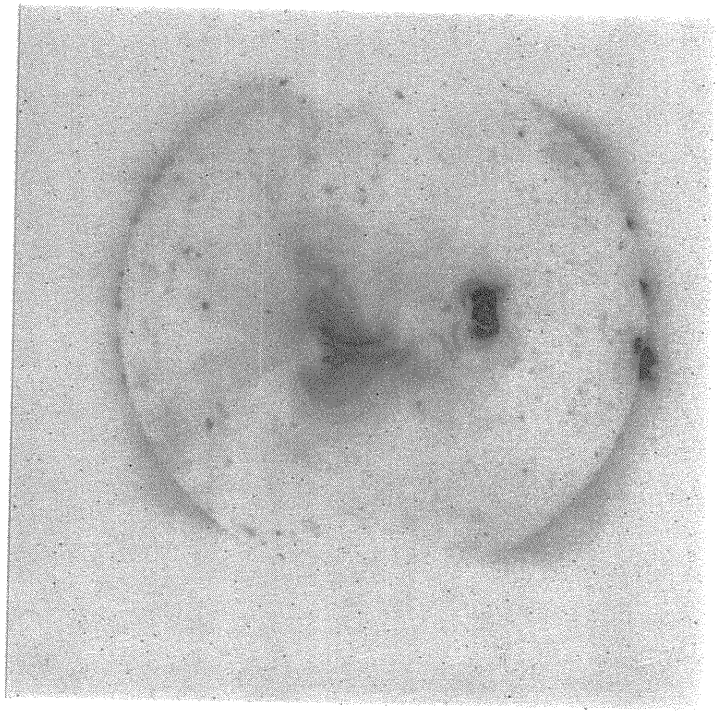
Day 5
13:11



Day 7
11:15



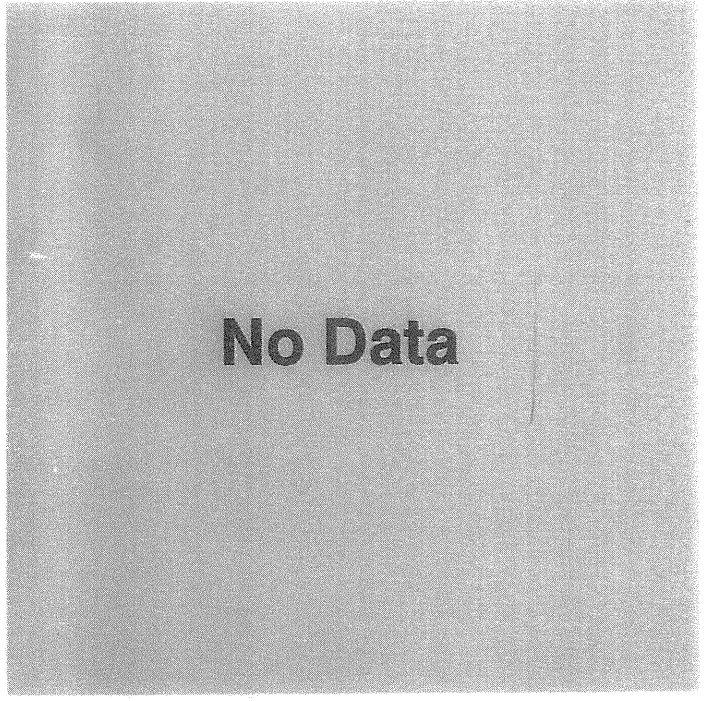
Day 6
13:28



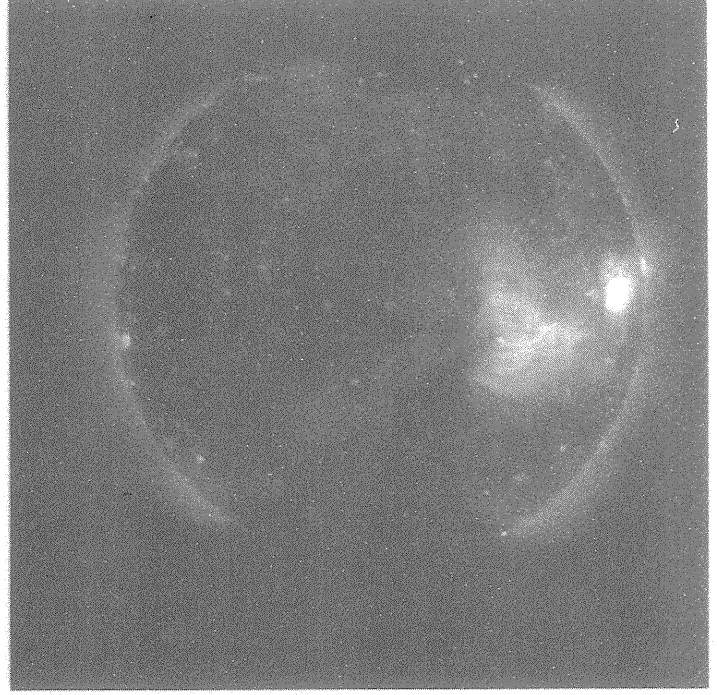
Day 8
12:27

YOHKOH SOFT X-RAY TELESCOPE IMAGES

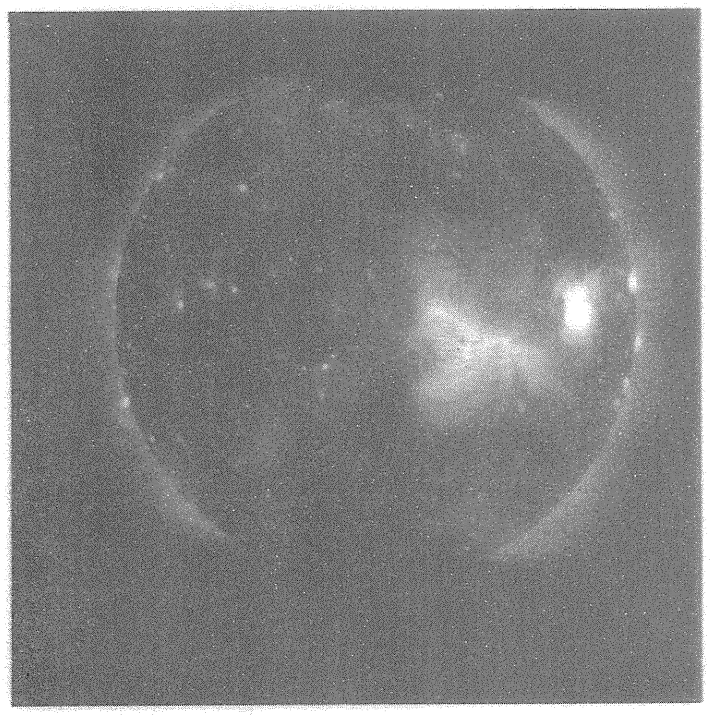
June
1996



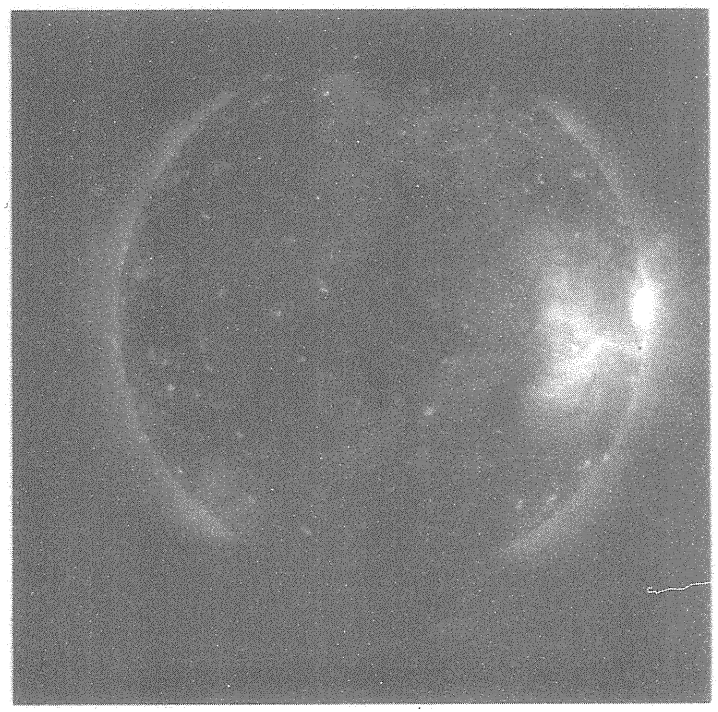
Day 9



Day 11
09:55



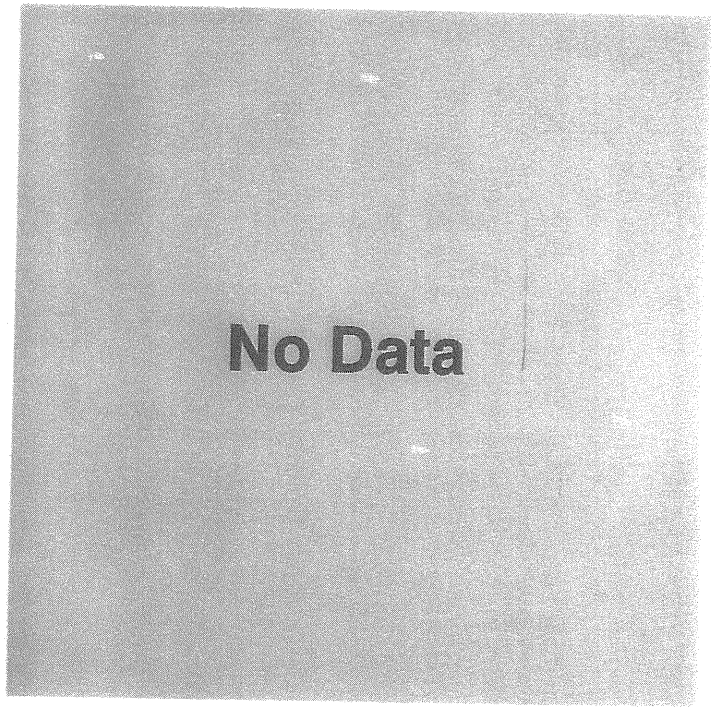
Day 10
11:36



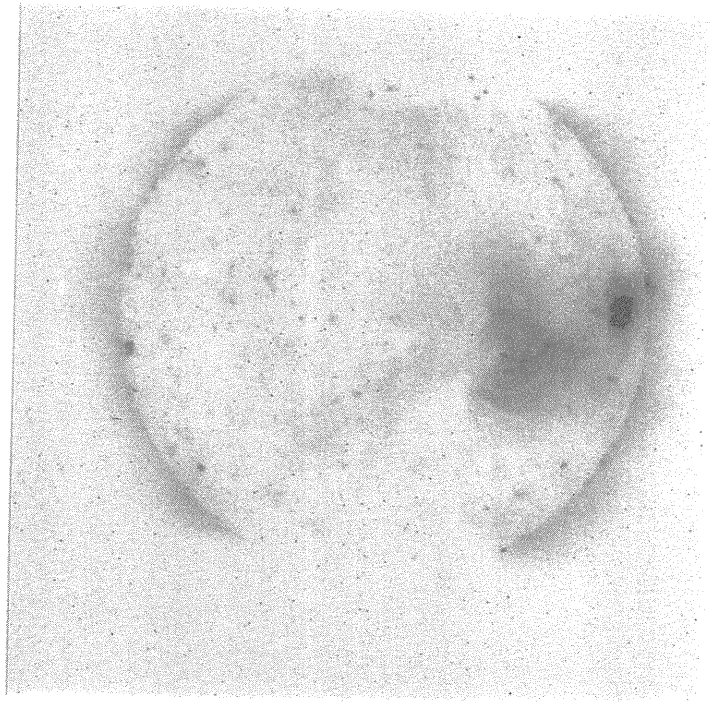
Day 12
10:12

YOHKOH SOFT X-RAY TELESCOPE IMAGES

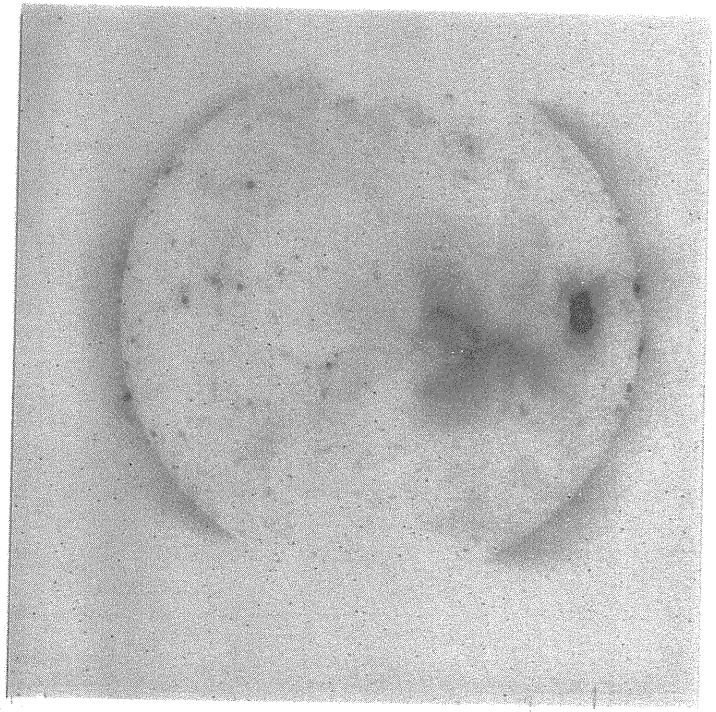
June 1996



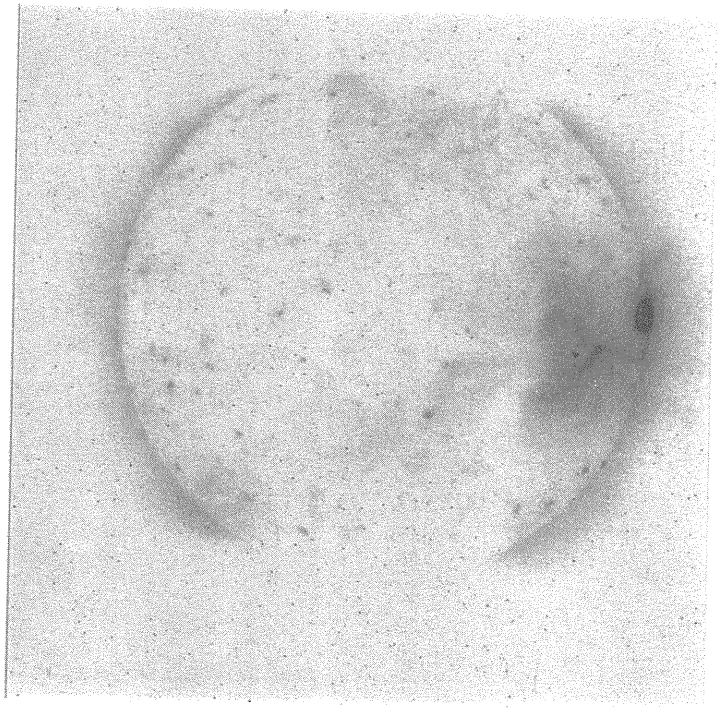
Day 9



Day 11
09:55



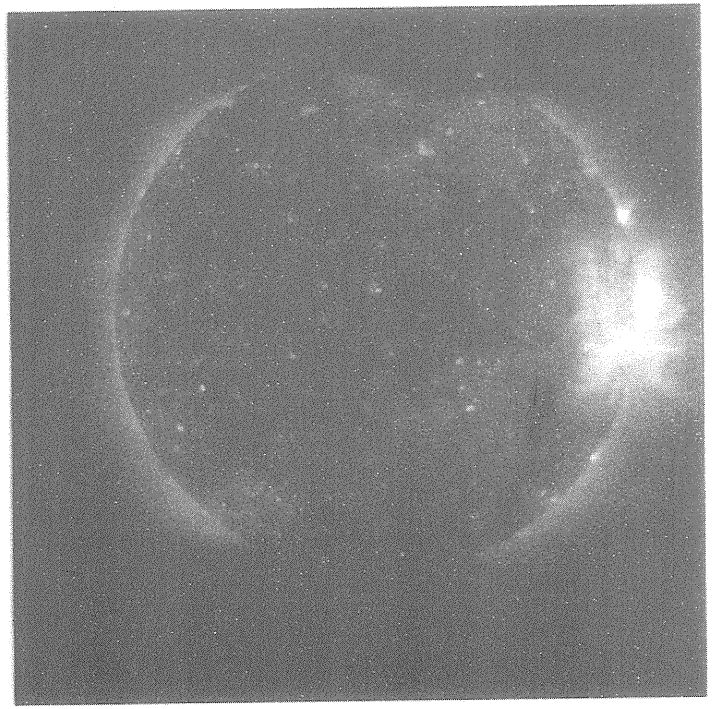
Day 10
11:36



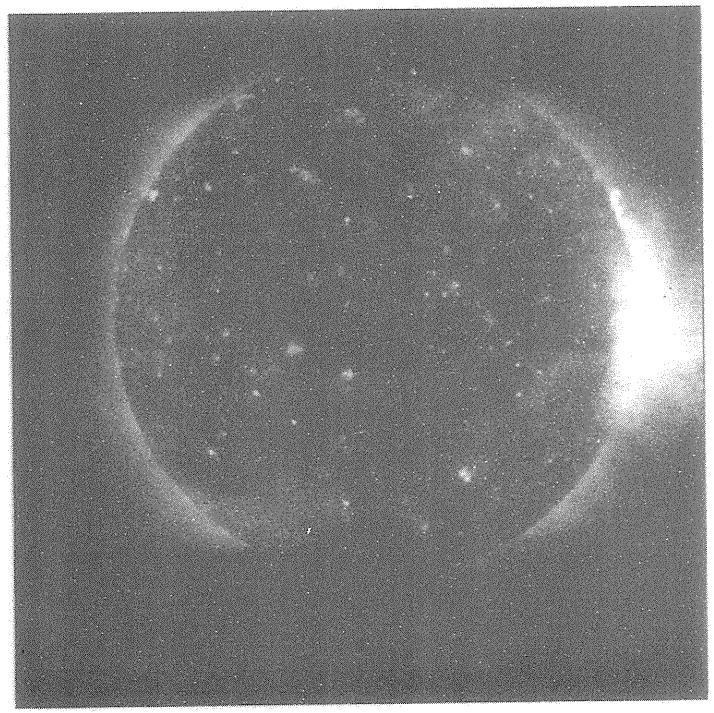
Day 12
10:12

YOHKOH SOFT X-RAY TELESCOPE IMAGES

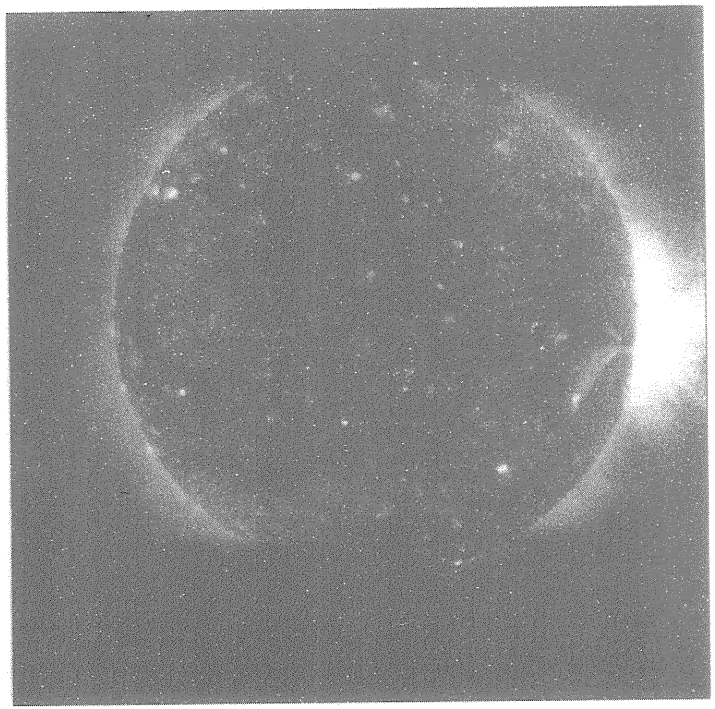
June 1996



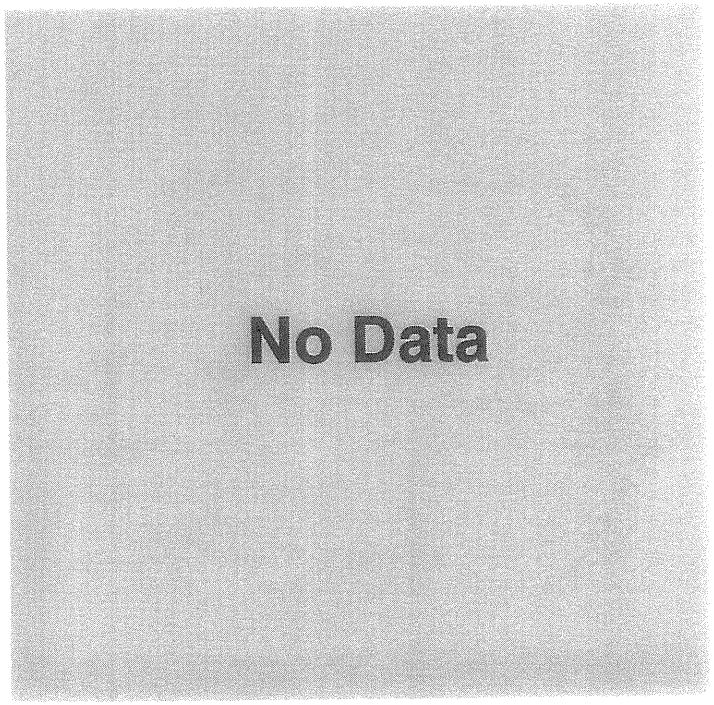
Day 13
07:28



Day 14
09:30



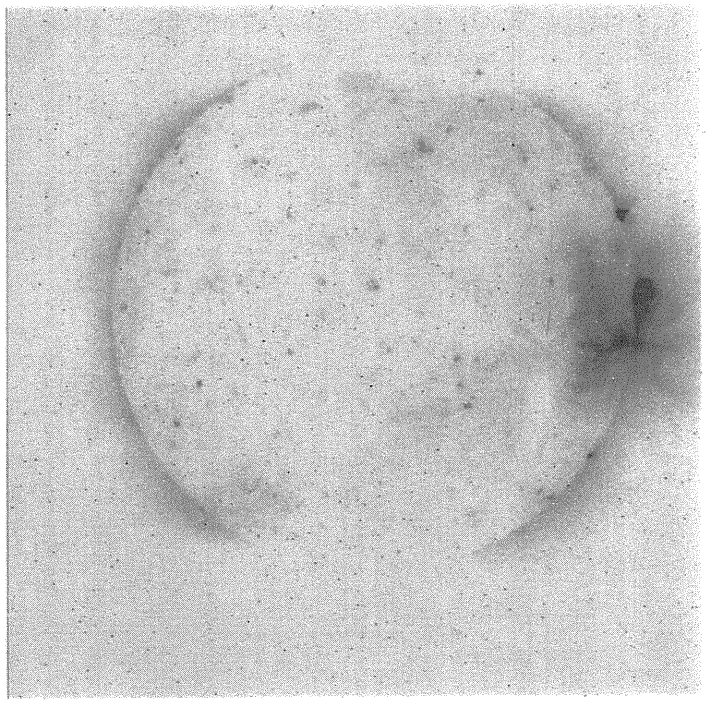
Day 15
08:00



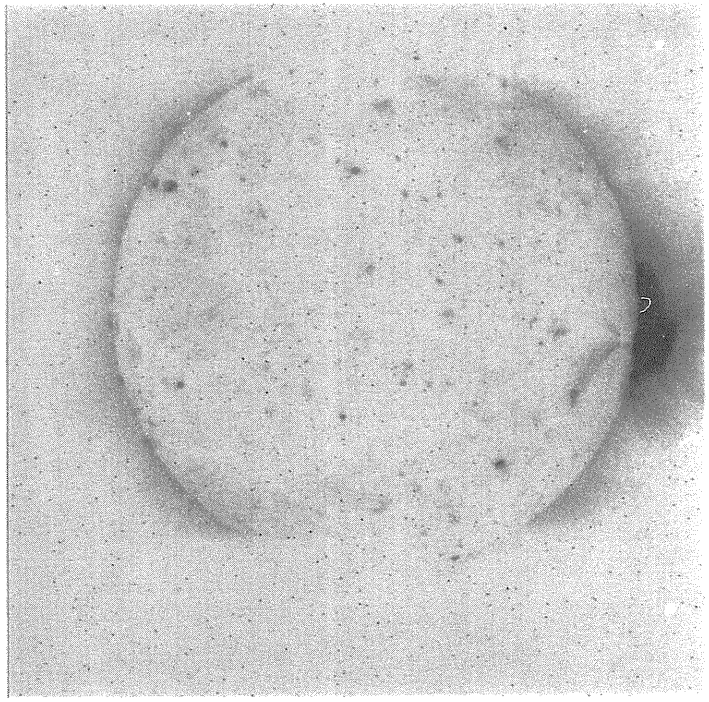
Day 16

YOHKOH SOFT X-RAY TELESCOPE IMAGES

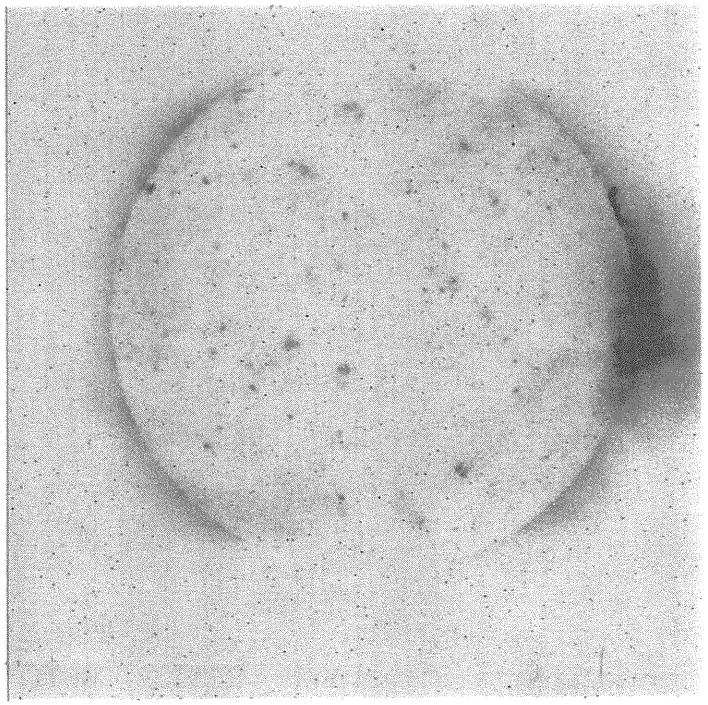
June 1996



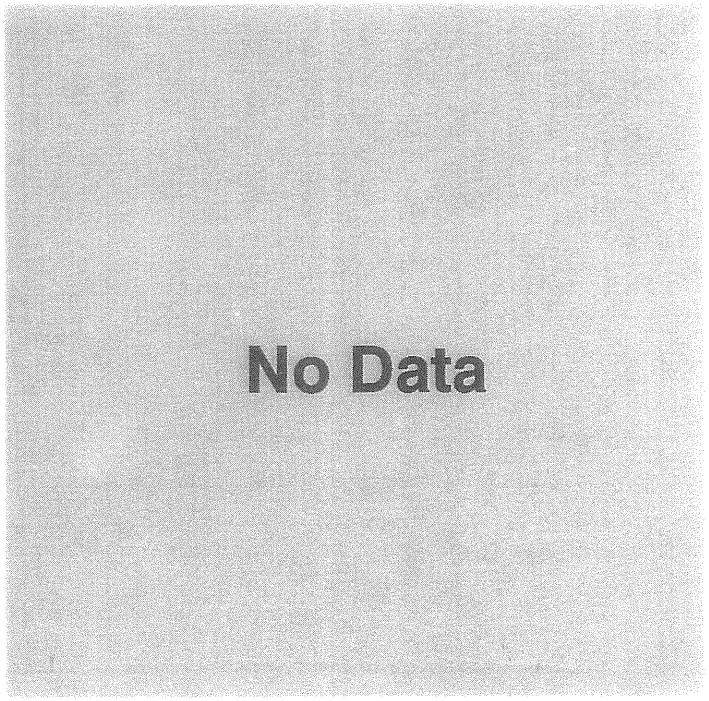
Day 13
07:28



Day 15
08:00



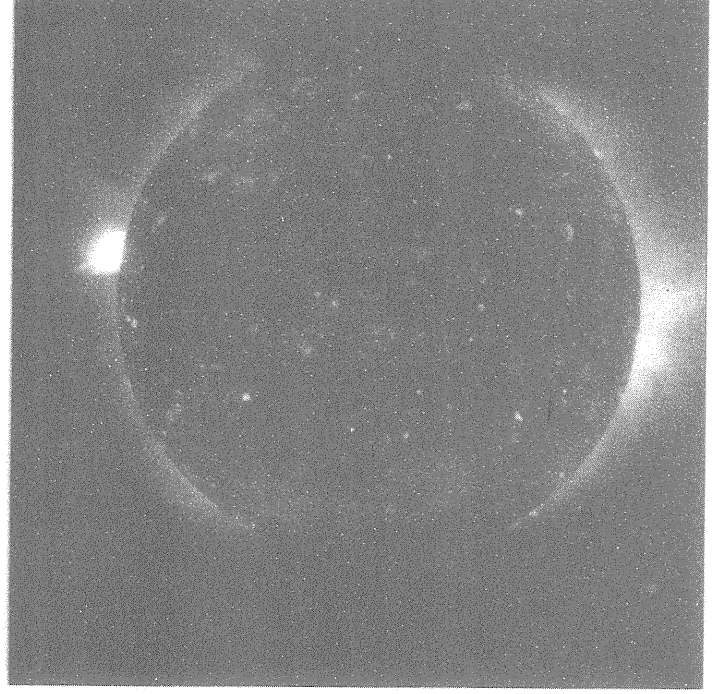
Day 14
09:30



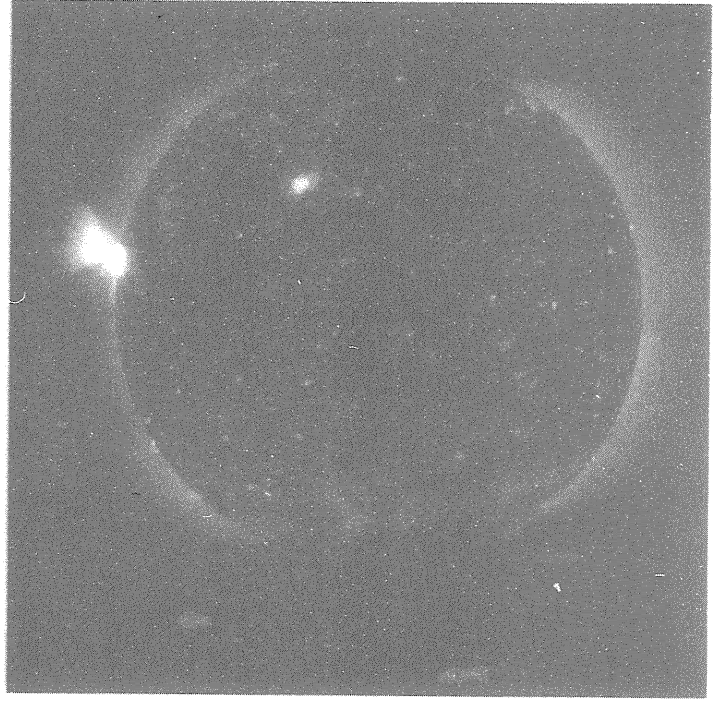
Day 16

YOHKOH SOFT X-RAY TELESCOPE IMAGES

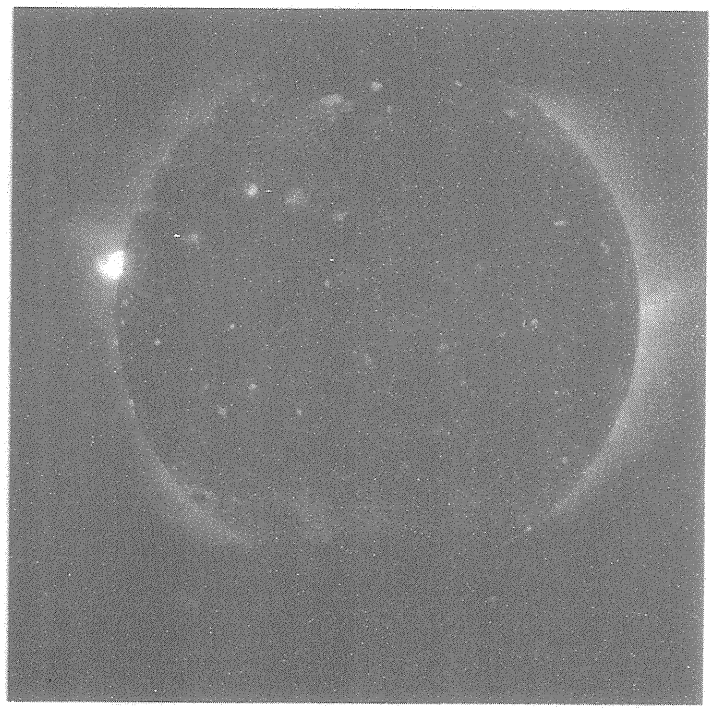
June 1996



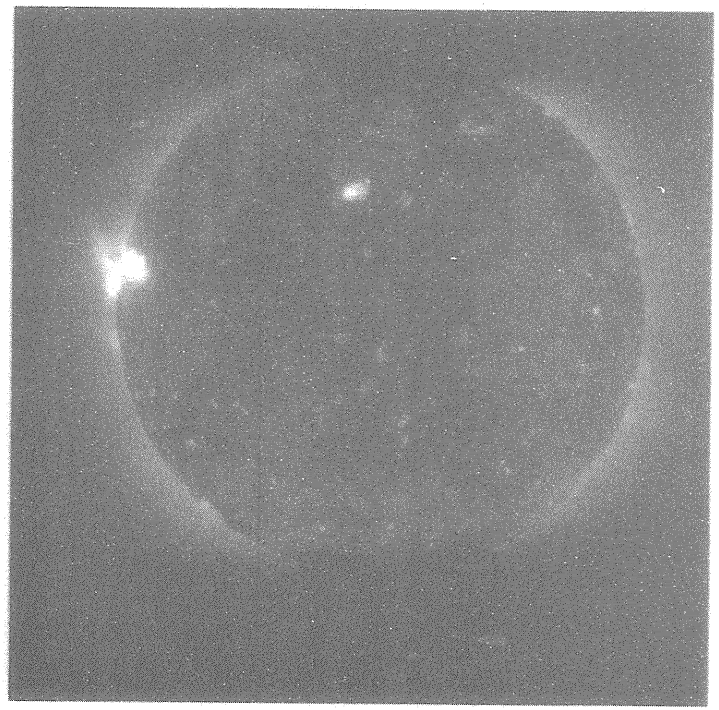
Day 17
06:42



Day 19
07:37



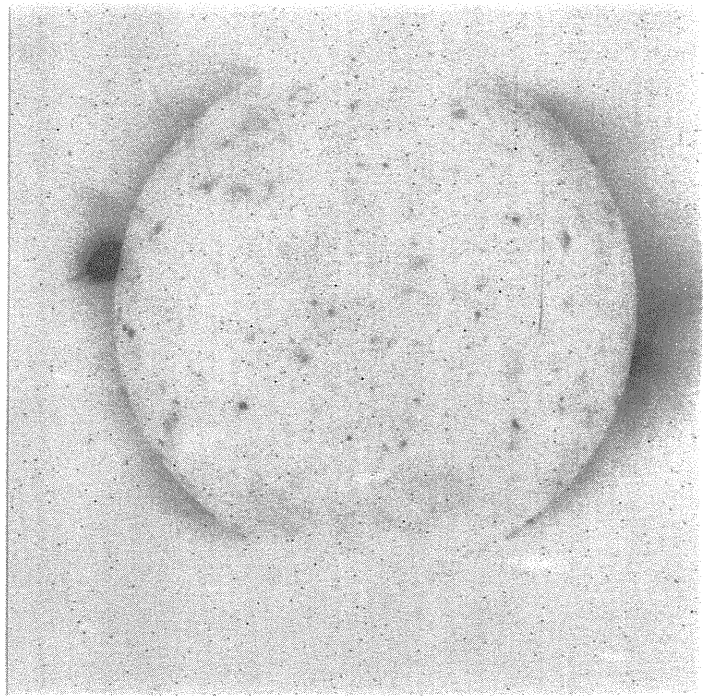
Day 18
07:16



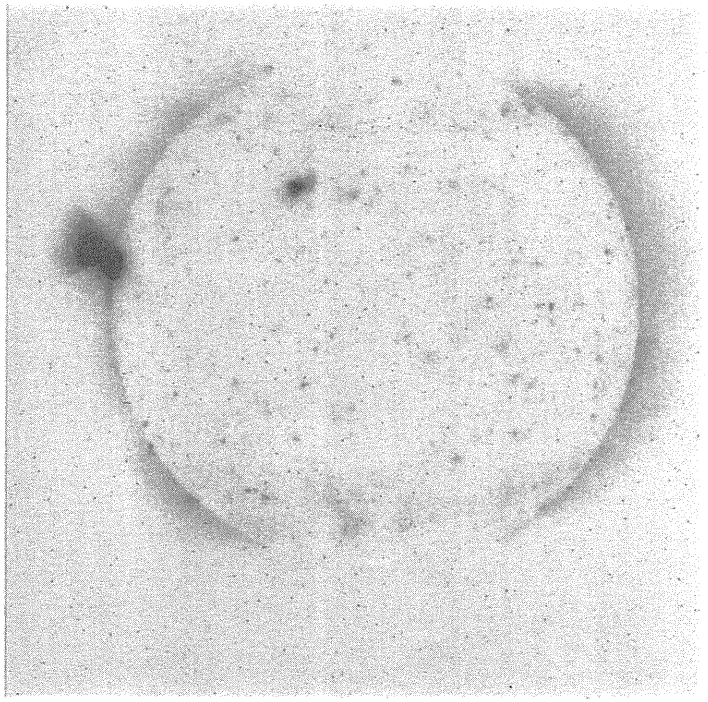
Day 20
05:56

YOHKOH SOFT X-RAY TELESCOPE IMAGES

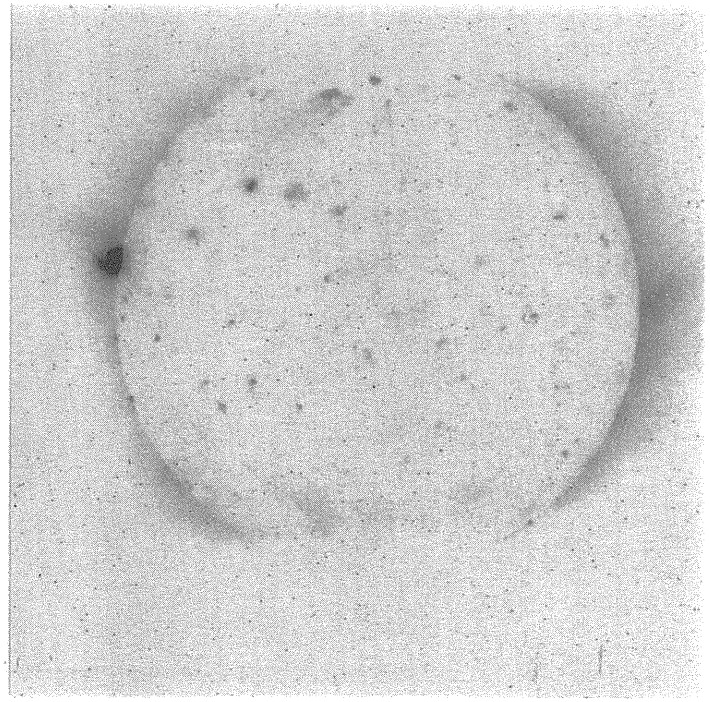
June 1996



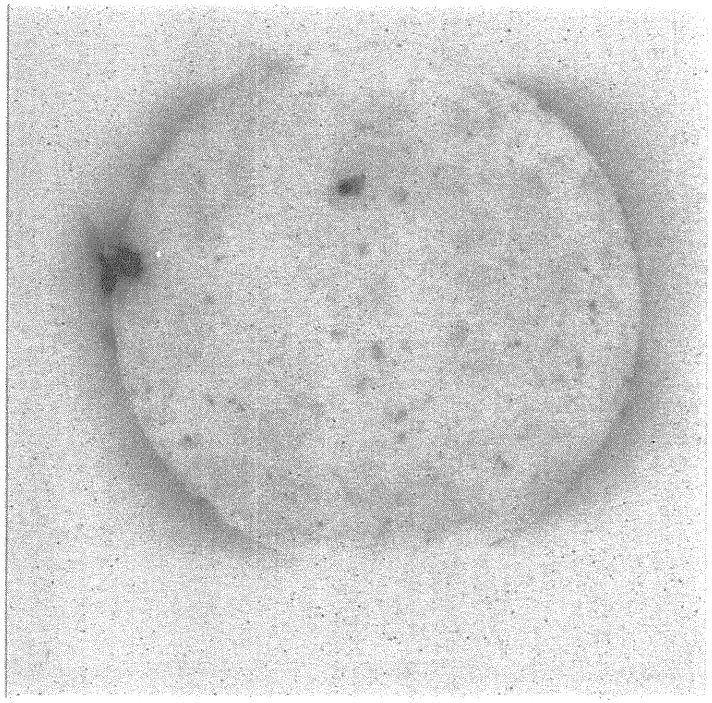
Day 17
06:42



Day 19
07:37



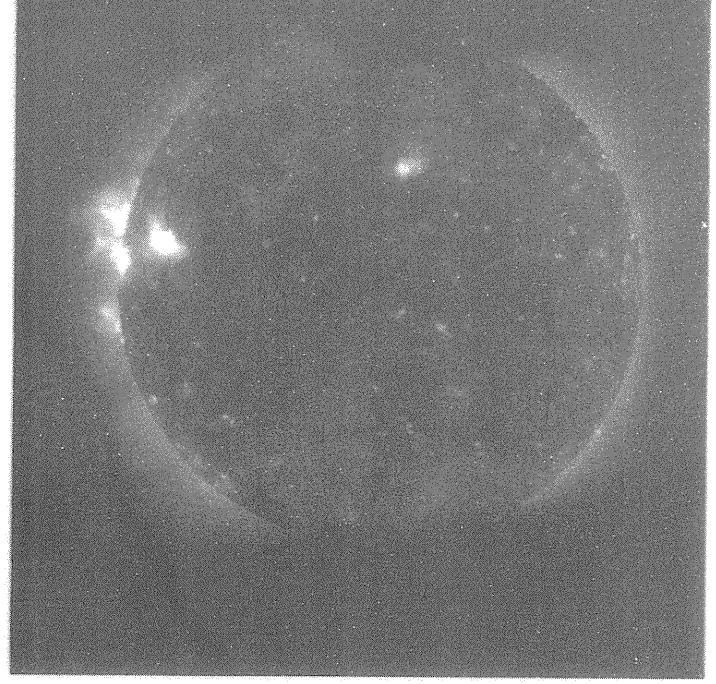
Day 18
07:16



Day 20
05:56

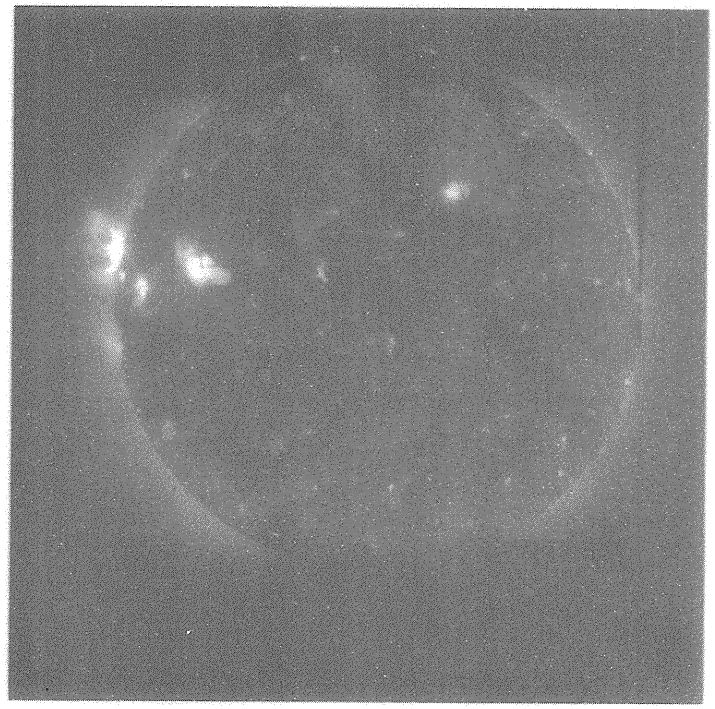
YOHKOH SOFT X-RAY TELESCOPE IMAGES

June 1996

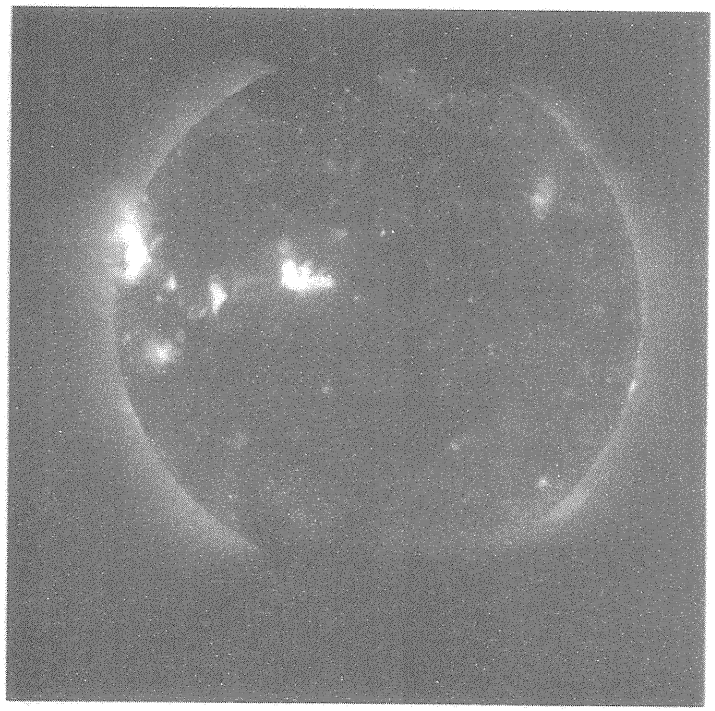


Day 21
06:13

Day 23



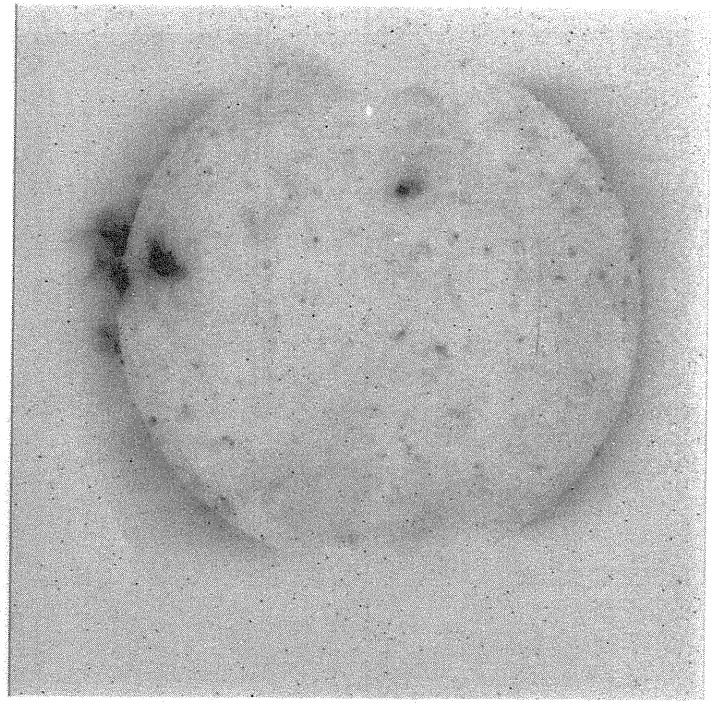
Day 22
04:48



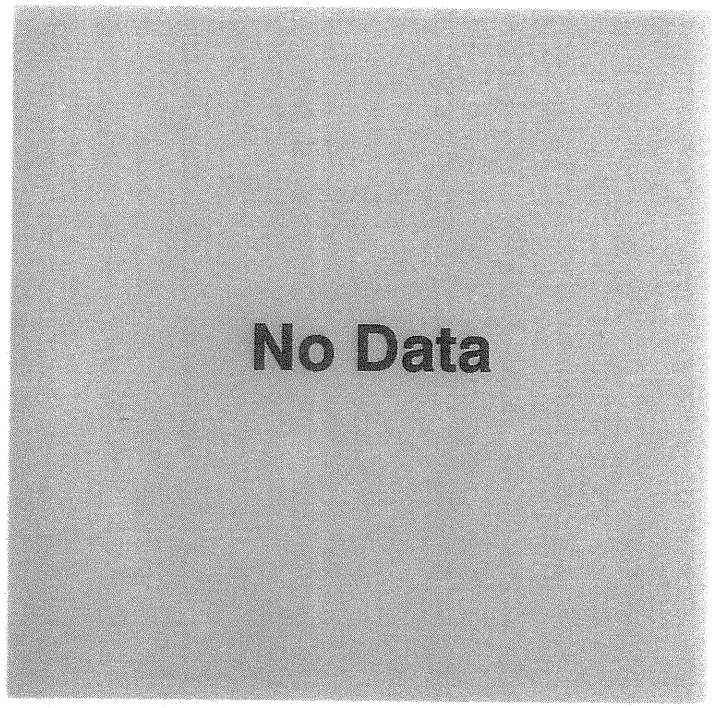
Day 24
02:22

YOHKOH SOFT X-RAY TELESCOPE IMAGES

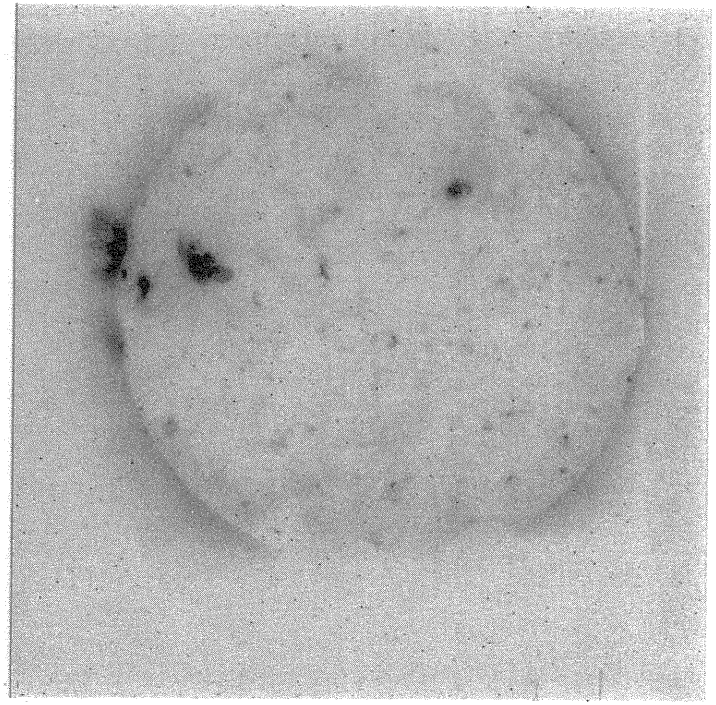
June 1996



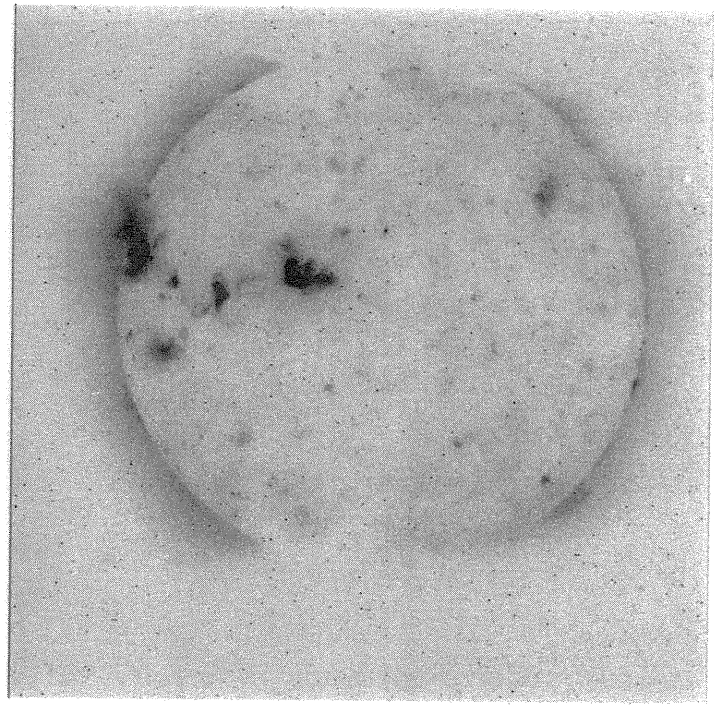
Day 21
06:13



Day 23



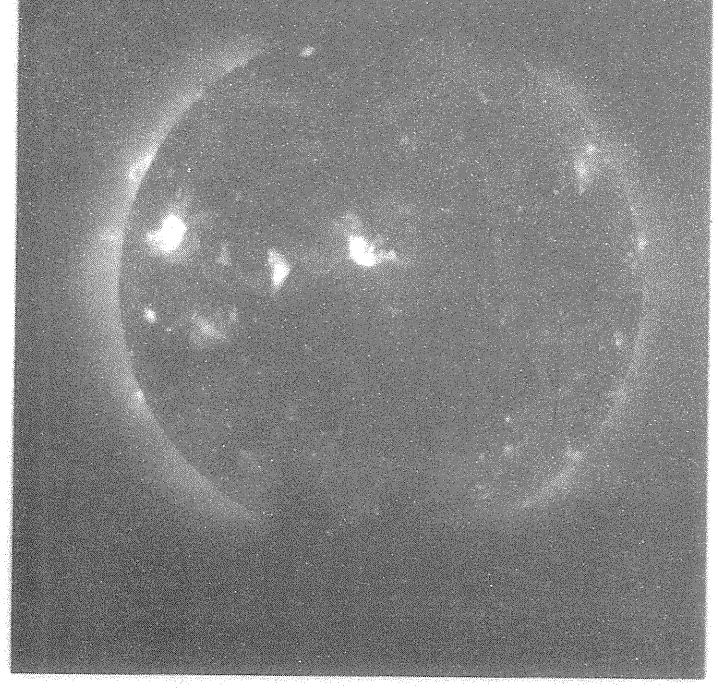
Day 22
04:48



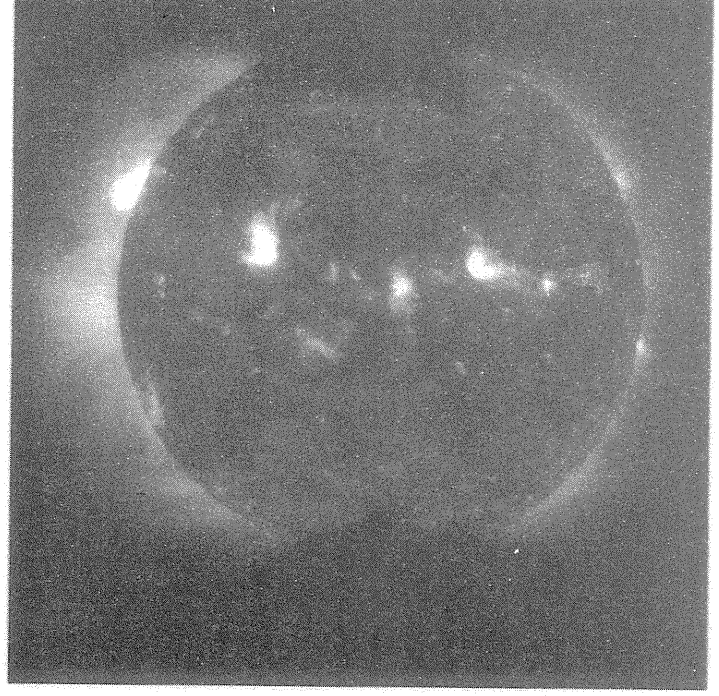
Day 24
02:22

YOHKOH SOFT X-RAY TELESCOPE IMAGES

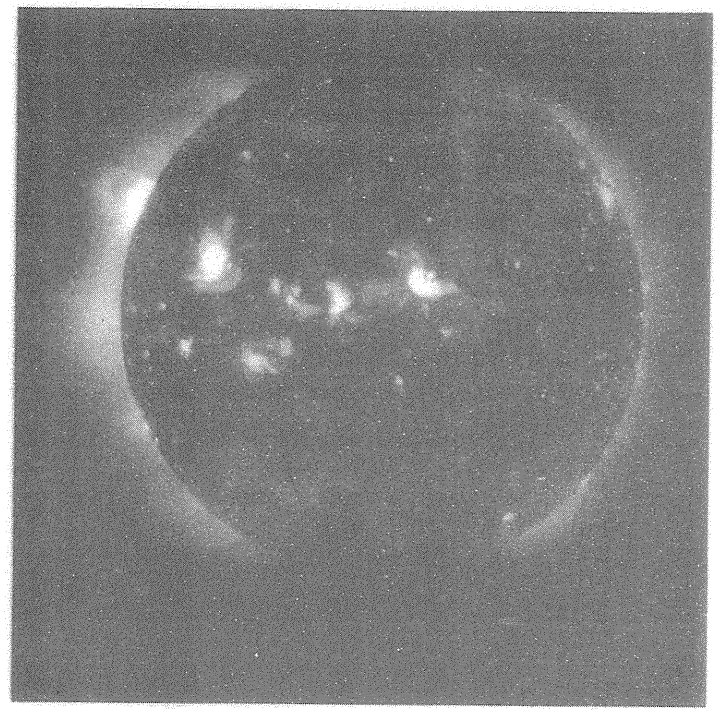
June 1996



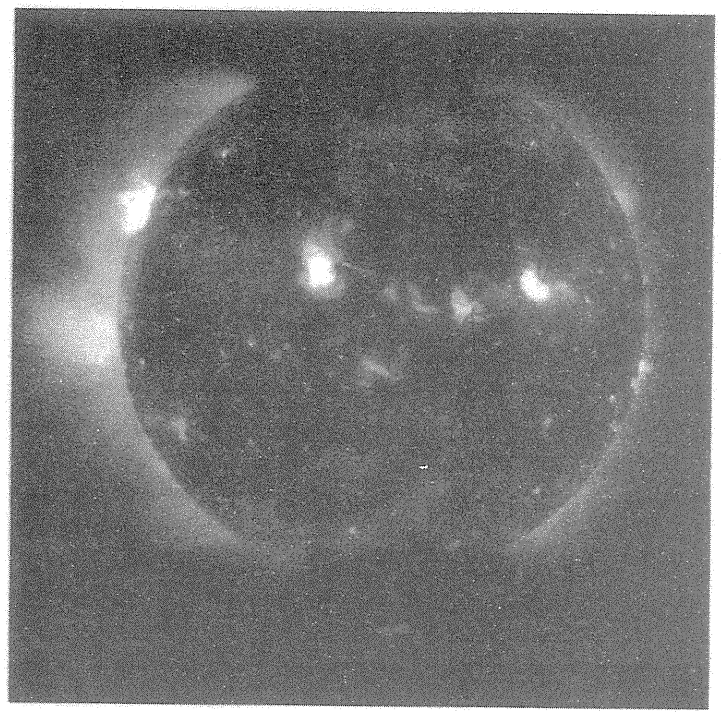
Day 25
04:06



Day 27
03:13



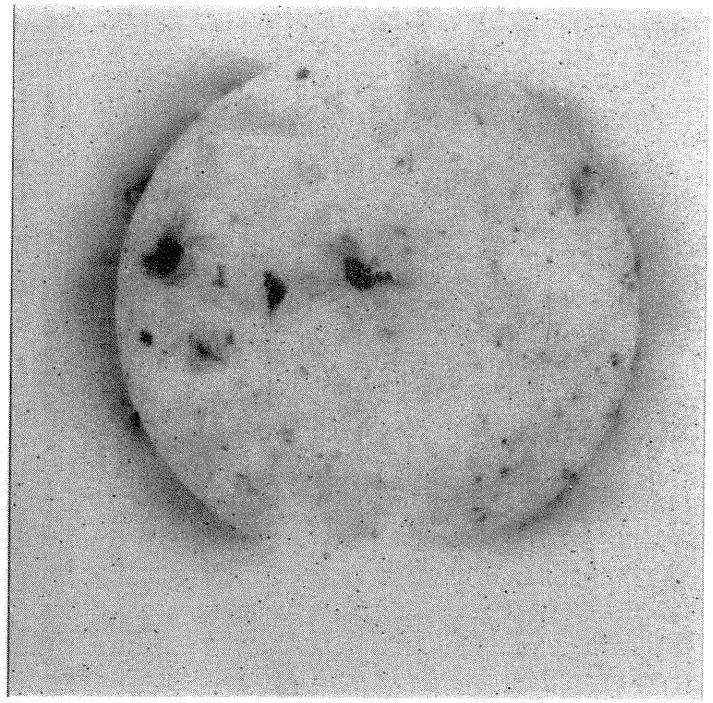
Day 26
03:02



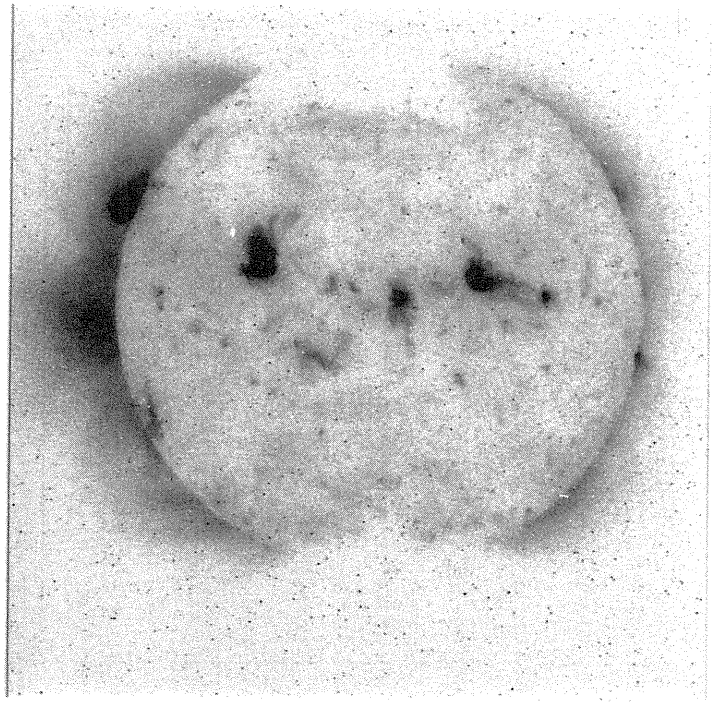
Day 28
02:01

YOHKOH SOFT X-RAY TELESCOPE IMAGES

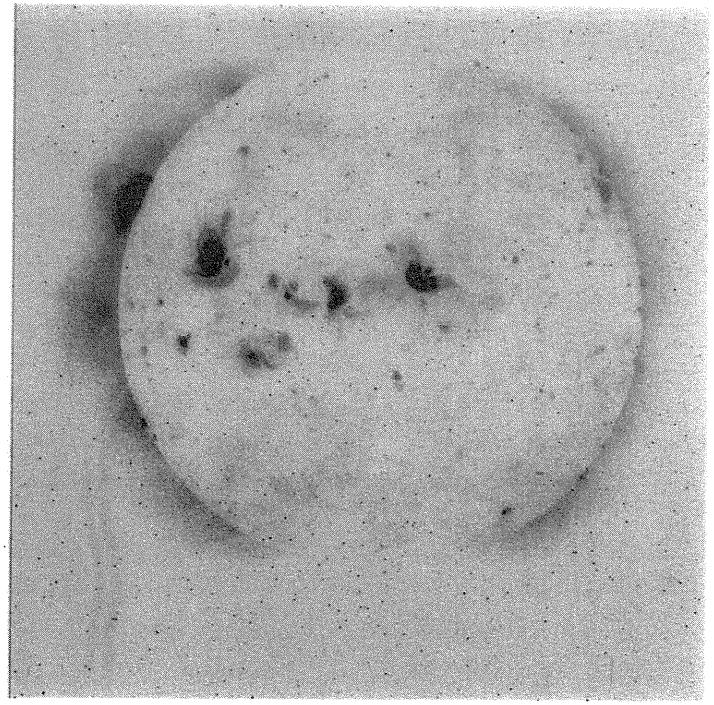
June 1996



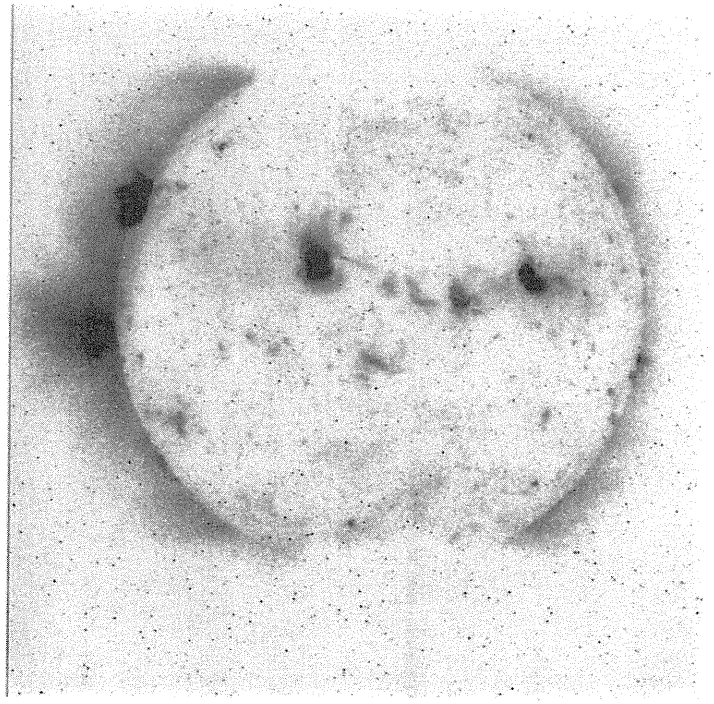
Day 25
04:06



Day 27
03:13



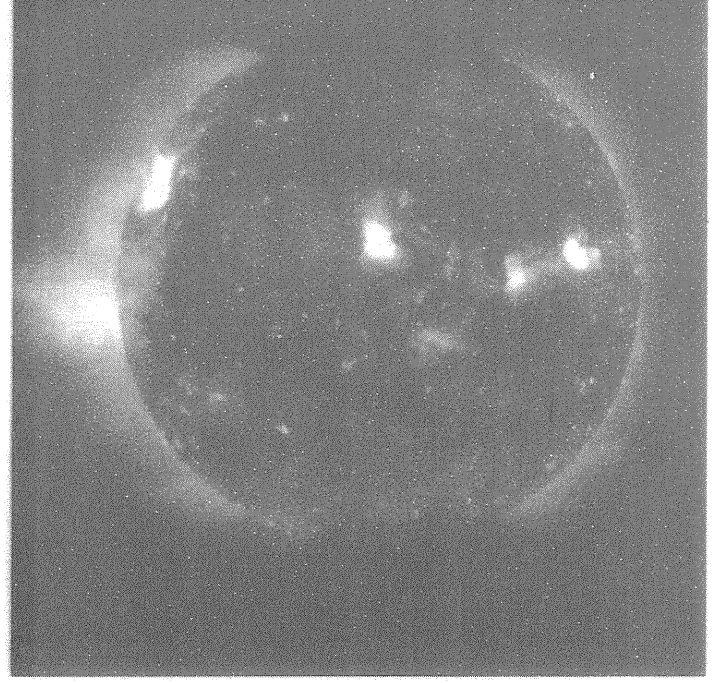
Day 26
03:02



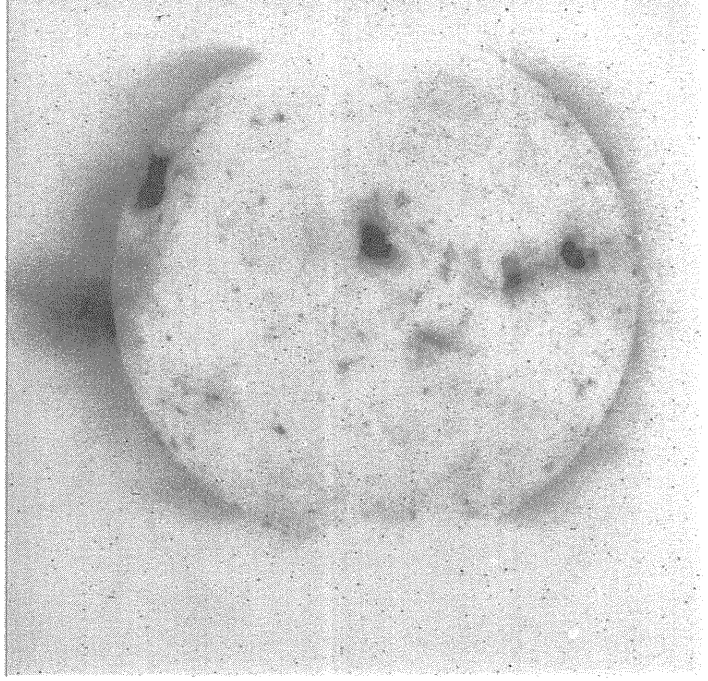
Day 28
02:01

YOHKOH SOFT X-RAY TELESCOPE IMAGES

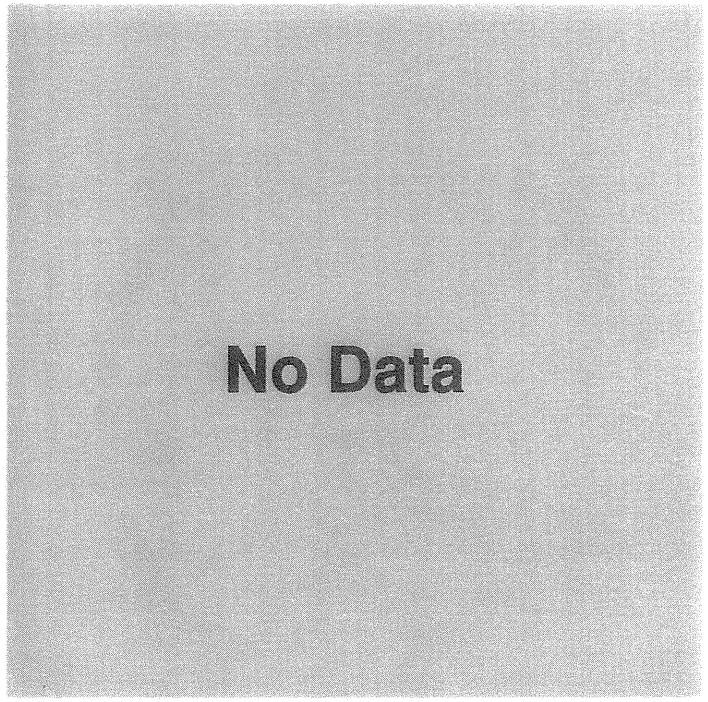
June 1996



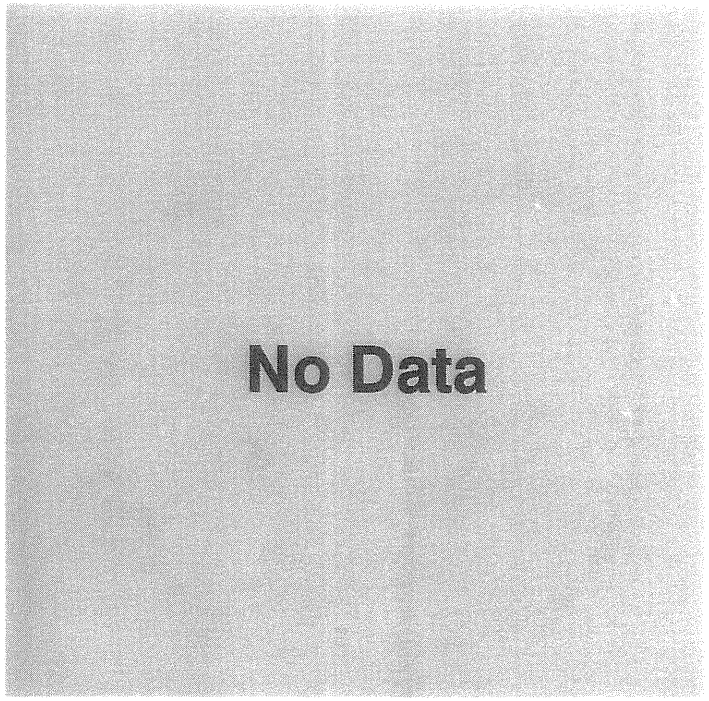
Day 29
02:13



Day 29
02:13



Day 30



Day 30

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

JUNE 1996

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7970		SVTO	06	06	0935	S07	W68	06	1.3		A	AX	10	2	1	1
7970		HOLL	06	06	1422	S09	W71	06	1.3		A	AX		2	1	3
7970	28358	MWIL	06	06	1430	S08	W71	06	1.3	3	(B)					
7970		LEAR	06	07	0157	S10	W79	06	1.1		A	AX	10	1	1	4
7969A		HOLL	06	04	1435	N09	W28	06	2.5		A	AX		1		3
7969A		RAMY	06	05	1319	N08	W37	06	2.8		B	BXO	10	4	2	4
7969A		HOLL	06	05	1331	N09	W39	06	2.6		B	BXO	20	3	2	2
7969A	28357	MWIL	06	05	1415	N09	W39	06	2.7	4	(B)					
7969B	28359	MWIL	06	07	1430	S03	W63	06	2.9	3	(AP)					
7969B		HOLL	06	07	1629	S04	W64	06	2.9		A	AX		1		3
7967		RAMY	06	01	1135	N35	E33	06	4.1		A	AX		1		3
7967		HOLL	06	01	1645	N36	E30	06	4.1		A	AX		1		3
7967		PALE	06	01	1710	N33	E32	06	4.2		A	AX		1		3
7967		LEAR	06	02	0107	N36	E25	06	4.0		A	AX		1		3
7967		SVTO	06	02	0701	N37	E22	06	4.1		A	AX		1		3
7967A		RAMY	06	09	1120	N08	W66	06	4.5		A	AX		1		4
7967A	28360	MWIL	06	09	1415	N08	W68	06	4.5	3	(AP)					
7968	28356	MWIL	06	03	1415	N02	E46	06	7.0	4	(B)					
7968		HOLL	06	03	1440	N02	E46	06	7.0		B	BXO		3		3
7968		LEAR	06	04	0150	N02	E40	06	7.1		B	CSO	10	2	3	3
7968		KAND	06	04	0715	N02	E37	06	7.1			BXO		2	4	3
7968		SVTO	06	04	0729	N02	E37	06	7.1		B	CRO	10	3	3	3
7968	28356	MWIL	06	04	1430	N02	E32	06	7.0	4	(B)					
7968		HOLL	06	04	1435	N03	E32	06	7.0		B	BXO	10	2	5	3
7968		RAMY	06	04	1758	N03	E31	06	7.1		B	BXO	10	3	5	2
7968		PALE	06	04	2035	N01	E30	06	7.1		A	AX	10	1		2
7968		LEAR	06	05	0112	N02	E26	06	7.0		B	BXO	10	2	4	3
7968		KAND	06	05	0810	N02	E21	06	6.9			BXO		2	5	3
7968		RAMY	06	05	1319	N03	E18	06	6.9		B	CRO	30	6	6	4
7968		HOLL	06	05	1331	N03	E17	06	6.8		B	CRO	30	5	5	2
7968	28356	MWIL	06	05	1415	N02	E18	06	6.9	4	(B)					
7968		SVTO	06	06	0935	N03	E07	06	6.9		B	DSO	30	6	5	1
7968		RAMY	06	06	1211	N02	E04	06	6.8		B	DSO	60	12	6	4
7968		KAND	06	06	1300	N02	E04	06	6.8			DSO		7	6	2
7968		HOLL	06	06	1422	N03	E04	06	6.9		B	DSO	50	6	6	3
7968	28356	MWIL	06	06	1430	N02	E03	06	6.8	4	(BP)					
7968		LEAR	06	07	0157	N02	W03	06	6.8		B	DSI	70	15	5	4
7968		SVTO	06	07	0510	N02	W04	06	6.9		B	DAI	50	11	6	3
7968		KAND	06	07	0615	N02	W05	06	6.9			DSO		9	6	4
7968		RAMY	06	07	1222	N03	W09	06	6.8		B	DSO	90	25	7	4
7968	28356	MWIL	06	07	1430	N02	W10	06	6.8	4	(BP)					
7968		HOLL	06	07	1629	N02	W11	06	6.9		B	CAO	120	14	7	3
7968		LEAR	06	08	0008	N03	W16	06	6.8		B	DAO	100	21	8	4
7968		SVTO	06	08	0604	N03	W18	06	6.9		B	DAI	100	23	8	3
7968		KAND	06	08	0635	N02	W19	06	6.8			DAO		9	8	2
7968		RAMY	06	08	1235	N02	W22	06	6.9		B	CAO	90	19	7	4
7968	28356	MWIL	06	08	1400	N02	W24	06	6.8	5	(BP)					
7968		PALE	06	08	1717	N03	W25	06	6.8		B	DHO	60	14	7	3
7968		HOLL	06	08	1800	N03	W26	06	6.8		B	CSO	100	15	7	2
7968		SVTO	06	09	0531	N03	W32	06	6.8		B	DSO	90	15	8	3
7968		KAND	06	09	0840	N02	W34	06	6.8			CAO		14	8	3
7968		RAMY	06	09	1120	N02	W35	06	6.8		B	CAO	90	15	7	4
7968	28356	MWIL	06	09	1415	N02	W37	06	6.8	5	(B)					
7968		HOLL	06	09	1543	N02	W37	06	6.9		B	CAO	100	9	7	4
7968		PALE	06	09	1754	N03	W38	06	6.9		B	CAO	60	9	8	2
7968		SVTO	06	10	0510	N03	W45	06	6.8		B	CAO	60	9	7	4
7968		KAND	06	10	0800	N02	W47	06	6.8			CAO		3	6	4
7968		RAMY	06	10	1059	N02	W49	06	6.8		B	CAO	70	8	7	4
7968	28356	MWIL	06	10	1415	N02	W51	06	6.8	4	(BP)					
7968		HOLL	06	10	1603	N01	W54	06	6.6		B	CAO	30	2	7	3
7968		LEAR	06	11	0500	N03	W62	06	6.6		A	HS	30	1	1	2
7968		SVTO	06	11	0600	N04	W54	06	7.2		A	HA	40	1	2	3
7968		KAND	06	11	0705	N03	W63	06	6.6			HA		1	3	2
7968		RAMY	06	11	1149	N02	W63	06	6.8		B	CAO	50	2	6	4

S U N S P O T G R O U P S
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JUNE 1996

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Mo	Day	Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
7968		HOLL	06	11	1425	N02	W67	06	6.6		A	HS	40	1	1	3
7968	28356	MWIL	06	11	1445	N03	W67	06	6.6	4	(BP)					
7968		PALE	06	11	1858	N03	W68	06	6.7		A	HS	30	1	1	3
7968		LEAR	06	12	0500	N03	W78	06	6.4		A	AX	10	1	1	3
7968		SVTO	06	12	0600	N03	W75	06	6.6		A	AX		1		3
7968		KAND	06	12	0755	N02	W78	06	6.5			HS		1	1	2
7968		RAMY	06	12	1230	N02	W79	06	6.6		A	HS	20	1	1	3
7968	28356	MWIL	06	12	1445	N03	W80	06	6.6	3	AP					
7968		HOLL	06	12	1518	N03	W82	06	6.5		A	AX	10	1	1	3
7968A		KAND	06	06	0600	N35	E23	06	8.1			AX		1		3
7971		SVTO	06	09	0531	S07	W03	06	9.0		B	BXO	10	2	3	3
7971		KAND	06	09	0840	S07	W06	06	8.9			AX		1		3
7971		RAMY	06	09	1120	S07	W07	06	8.9		B	BX	10	2	3	4
7971	28361	MWIL	06	09	1415	S07	W10	06	8.8	3	(AP)					
7971		HOLL	06	09	1543	S07	W11	06	8.8		A	AX		1		4
7971		PALE	06	09	1754	S06	W12	06	8.8		A	AX		1		2
7971	28361	MWIL	06	10	1415	S05	W28	06	8.5	3	(AP)					
7971A	28362	MWIL	06	11	1445	S05	W24	06	9.8	3	(AF)					
7971B		KAND	06	19	0700	S10	W12	06	18.4			AX		1		5
7972		SVTO	06	18	1110	N27	E32	06	20.9		B	BXO		2	2	3
7972		RAMY	06	18	1136	N28	E30	06	20.8		B	BXO		2	2	4
7972	28363	MWIL	06	18	1430	N29	E29	06	20.9	3	(B)					
7972		HOLL	06	18	1442	N28	E29	06	20.9		B	BXO	10	3	2	4
7972		PALE	06	18	1755	N28	E28	06	20.9		B	BXO	10	3	3	3
7972		LEAR	06	19	0118	N29	E24	06	20.9		B	BXO	100	3	3	2
7972		SVTO	06	19	0505	N28	E21	06	20.8		B	BXO		2	3	3
7972		KAND	06	19	0700	N27	E20	06	20.8			CAO		2	3	5
7972		RAMY	06	19	1306	N28	E17	06	20.9		B	BXO	10	3	3	4
7972	28363	MWIL	06	19	1430	N27	E14	06	20.7	4	(B)					
7972		HOLL	06	19	1450	N28	E14	06	20.7		A	AX	10	1		3
7972		PALE	06	19	1715	N27	E15	06	20.9		A	AX	10	1	1	3
7972		LEAR	06	20	0320	N27	E08	06	20.8		A	AX		1	1	4
7972		LEAR	06	21	0136	N28	W04	06	20.7		A	AX		1		3
7972A	28365	MWIL	06	21	1430	N10	E20	06	23.1	3	(AF)					
7972A		HOLL	06	21	1450	N09	E21	06	23.2		A	AX		1		4
7972B		RAMY	06	22	1134	N10	E31	06	24.8		A	AX		1		5
7973		SVTO	06	19	0505	N11	E80	06	25.2		A	HS	60	1	5	3
7973		KAND	06	19	0700	N10	E81	06	25.4			HS		1	3	5
7973		RAMY	06	19	1306	N08	E74	06	25.1		B	CSO	70	2	6	4
7973	28364	MWIL	06	19	1430	N11	E77	06	25.4	5	(AP)					
7973		HOLL	06	19	1450	N10	E77	06	25.4		A	HS	120	1	2	3
7973		PALE	06	19	1715	N07	E74	06	25.3		A	HS	600	1	2	3
7973		LEAR	06	20	0320	N10	E70	06	25.4		A	HS	110	1	2	4
7973		SVTO	06	20	0520	N11	E68	06	25.3		A	HS	90	1	2	3
7973		KAND	06	20	0705	N09	E69	06	25.5			HS		1	2	3
7973		RAMY	06	20	1226	N10	E64	06	25.3		A	HS	70	1	2	4
7973	28364	MWIL	06	20	1430	N09	E65	06	25.5	5	(AP)					
7973		HOLL	06	20	1503	N09	E65	06	25.5		A	HS	130	1	2	3
7973		PALE	06	20	1734	N08	E62	06	25.4		A	HS	80	1	3	3
7973		LEAR	06	21	0136	N11	E57	06	25.3		A	HS	80	2	2	3
7973		SVTO	06	21	0545	N11	E55	06	25.4		A	HS	100	1	2	3
7973		KAND	06	21	0700	N09	E56	06	25.5			HS		1	2	4
7973		RAMY	06	21	1125	N11	E52	06	25.4		A	HS	80	1	2	3
7973	28364	MWIL	06	21	1430	N10	E51	06	25.4	5	(AP)					
7973		HOLL	06	21	1450	N09	E52	06	25.5		A	HS	100	1	2	4
7973		PALE	06	21	1945	N11	E46	06	25.3		B	CSO	750	2	4	3
7973		LEAR	06	22	0118	N10	E44	06	25.4		A	HS	100	1	2	4
7973		KAND	06	22	0705	N10	E41	06	25.4			HS		1	2	3
7973		SVTO	06	22	0905	N10	E40	06	25.4		A	HS	100	1	2	2
7973		RAMY	06	22	1134	N10	E38	06	25.3		A	HS	90	1	2	5
7973	28364	MWIL	06	22	1415	N10	E37	06	25.4	5	(AP)					

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7973		HOLL	06	22	1425	N09	E38	06	25.4		A	HS	100	1	2	4
7973		PALE	06	22	1925	N10	E35	06	25.4		A	HS	70	1	3	2
7973		SVTO	06	23	0620	N10	E28	06	25.4		A	HS	100	1	2	3
7973		KAND	06	23	0830	N09	E28	06	25.4			HS		1	2	4
7973	28364	MWIL	06	23	1430	N10	E24	06	25.4	5	(AP)					
7973		LEAR	06	24	0028	N10	E18	06	25.4		A	HS	70	1	2	3
7973		SVTO	06	24	0450	N09	E17	06	25.5		B	CSO	70	3	4	4
7973		KAND	06	24	0730	N09	E15	06	25.4			HS		1	2	4
7973		RAMY	06	24	1256	N09	E07	06	25.1		A	HS	80	3	9	4
7973	28364	MWIL	06	24	1415	N09	E12	06	25.5	5	(AP)					
7973		HOLL	06	24	1450	N09	E11	06	25.4		A	HS	100	1	2	3
7973		PALE	06	24	1725	N09	E10	06	25.5		A	HS	10	2	2	3
7973		LEAR	06	25	0415	N10	E04	06	25.5		A	HS	80	1	2	4
7973		KAND	06	25	0705	N09	E01	06	25.4			HS		1	2	2
7973		SVTO	06	25	0813	N09	E01	06	25.4		A	HS	70	1	2	1
7973	28364	MWIL	06	25	1430	N09	W02	06	25.4	5	(AP)					
7973		HOLL	06	25	1445	N09	W02	06	25.5		A	HS	90	1	2	3
7973		LEAR	06	26	0040	N09	W08	06	25.4		A	HS	70	1	2	3
7973		KAND	06	26	0625	N08	W11	06	25.4			HS		1	2	3
7973		SVTO	06	26	0650	N09	W12	06	25.4		A	HS	80	1	2	2
7973		RAMY	06	26	1258	N08	W15	06	25.4		A	HS	60	1	2	4
7973		HOLL	06	26	1703	N09	W17	06	25.4		A	HS	60	1	2	3
7973		PALE	06	27	0100	N09	W22	06	25.4		A	HS	60	1	2	2
7973		LEAR	06	27	0450	N09	W24	06	25.4		A	HS	70	1	2	2
7973		SVTO	06	27	0515	N08	W25	06	25.3		A	HS	60	1	2	3
7973		KAND	06	27	0730	N09	W24	06	25.5			HS		1	2	2
7973		RAMY	06	27	1056	N08	W27	06	25.4		A	HS	70	1	2	4
7973		PALE	06	27	1746	N09	W31	06	25.4		A	HS	50	1	2	3
7973		SVTO	06	28	0540	N09	W38	06	25.4		A	HS	40	1	2	3
7973		KAND	06	28	1125	N09	W41	06	25.4			HA		1	2	3
7973		RAMY	06	28	1239	N08	W42	06	25.4		A	HS	80	1	2	5
7973	28364	MWIL	06	28	1430	N10	W43	06	25.4	4	(AP)					
7973		HOLL	06	28	1515	N09	W43	06	25.4		A	HS	700	1	2	4
7973		PALE	06	28	2025	N09	W46	06	25.4		A	HS	80	1	2	3
7973		LEAR	06	29	0029	N09	W50	06	25.3		A	HS	30	1	1	3
7973		SVTO	06	29	0545	N09	W52	06	25.3		A	HS	10	1	2	3
7973		KAND	06	29	0655	N09	W52	06	25.4			HS		1	2	3
7973		RAMY	06	29	1218	N08	W56	06	25.3		A	HS	40	1	2	5
7973	28364	MWIL	06	29	1430	N09	W56	06	25.4	5	(AP)					
7973		HOLL	06	29	1510	N10	W57	06	25.3		A	B	110	1	2	3
7973		PALE	06	29	1721	N09	W58	06	25.4		A	HS	60	1	2	2
7973		SVTO	06	30	0515	N08	W65	06	25.3		A	HS	90	1	2	3
7973		KAND	06	30	0900	N08	W65	06	25.5			HA		1	1	2
7973		RAMY	06	30	1209	N07	W69	06	25.3		A	HS	50	1	2	4
7973	28364	MWIL	06	30	1430	N08	W69	06	25.4	5	(AP)					
7973		HOLL	06	30	1607	N10	W72	06	25.3		A	HS	60	1	2	3
7973		SVTO	07	01	0530	N07	W78	06	25.5		A	HS	60	1	2	3
7973		LEAR	07	01	0535	N11	W78	06	25.5		A	HS	30	1	1	2
7973		KAND	07	01	0615	N08	W78	06	25.5			HS		1	2	3
7973		RAMY	07	01	1336	N08	W82	06	25.5		A	HS	50	1	4	3
7973	28364	MWIL	07	01	1430	N08	W84	06	25.4	5	(AP)					
7973		HOLL	07	01	1605	N09	W86	06	25.3		A	HS	70	1	2	4
7973		PALE	07	01	1855	N08	W89	06	25.2		A	HS	30	1	2	3
7973A		RAMY	06	22	1134	N07	E72	06	27.9		A	AX	10	2	1	5
7976		SVTO	06	23	0620	N12	E73	06	28.8		B	BXO	20	2	2	3
7976		KAND	06	23	0830	N12	E75	06	29.0			AX		2	3	4
7976	28366	MWIL	06	23	1430	N12	E70	06	28.9	4	(AP)					
7976		LEAR	06	24	0028	N13	E64	06	28.8		A	AX	10	2	2	3
7976		SVTO	06	24	0450	N13	E62	06	28.9		B	BXO	20	3	2	4
7976		KAND	06	24	0730	N12	E60	06	28.8			AX		2	1	4
7976		RAMY	06	24	1256	N13	E57	06	28.8		A	AX	10	3	2	4
7976	28366	MWIL	06	24	1415	N13	E57	06	28.9	4	(AP)					
7976		HOLL	06	24	1450	N12	E58	06	29.0		A	AX	40	3	2	3
7976		PALE	06	24	1725	N13	E56	06	28.9		B	BXO	70	3	2	3
7976		LEAR	06	25	0415	N13	E49	06	28.9		B	BXO	10	2	2	4
7976		KAND	06	25	0705	N12	E48	06	28.9			AX		2	2	2
7976		SVTO	06	25	0813	N13	E46	06	28.8		B	BXO	20	2	2	1

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7976	28366	MWIL	06	25	1430	N13	E43	06	28.8	4	(AP)					
7976		HOLL	06	25	1445	N12	E43	06	28.8		A	AX	20	2	2	3
7976		LEAR	06	26	0040	N13	E38	06	28.9		A	AX	10	2	1	3
7976		KAND	06	26	0625	N12	E30	06	28.5			AX		2	1	3
7976		SVTO	06	26	0650	N13	E35	06	28.9		A	HR	20	3	2	2
7976		RAMY	06	26	1258	N14	E31	06	28.9		A	AX	10	5	2	4
7976		HOLL	06	26	1703	N13	E30	06	29.0		A	AX	20	4	2	3
7976		LEAR	06	27	0450	N13	E22	06	28.9		A	AR	30	6	2	2
7976		SVTO	06	27	0515	N13	E22	06	28.9		A	HR	20	3	2	3
7976		KAND	06	27	0730	N12	E21	06	28.9			HR		2	1	2
7976		RAMY	06	27	1056	N13	E18	06	28.8		A	HR	10	5	1	4
7976		PALE	06	27	1746	N14	E15	06	28.9		A	AXO	10	3	2	3
7976		SVTO	06	28	0540	N12	E08	06	28.8		A	HR	10	2	1	3
7976		KAND	06	28	1125	N13	E05	06	28.8			HR		4	2	3
7976		RAMY	06	28	1239	N14	E05	06	28.9		A	HR	20	5	2	5
7976	28366	MWIL	06	28	1430	N14	E03	06	28.8	4	(AP)					
7976		HOLL	06	28	1515	N13	E03	06	28.9		A	HR	100	4	2	4
7976		PALE	06	28	2025	N14	E01	06	28.9		A	HR	10	3	1	3
7976		LEAR	06	29	0029	N13	W04	06	28.7		A	HS	10	1	1	3
7976		SVTO	06	29	0545	N13	W06	06	28.8		A	HA	10	1	1	3
7976		KAND	06	29	0655	N13	W06	06	28.8			HR		2	1	3
7976		RAMY	06	29	1218	N13	W09	06	28.8		A	HR	10	3	1	5
7976	28366	MWIL	06	29	1430	N13	W11	06	28.8	4	(AP)					
7976		HOLL	06	29	1510	N14	W11	06	28.8		A	HR	20	2	1	3
7976		PALE	06	29	1721	N14	W12	06	28.8		A	HR	10	1	1	2
7976		SVTO	06	30	0515	N13	W18	06	28.9		A	HR	10	2	1	3
7976		KAND	06	30	0900	N12	W19	06	28.9			AX		2	1	2
7976		RAMY	06	30	1209	N12	W23	06	28.8		A	AX	10	3		4
7976	28366	MWIL	06	30	1430	N13	W24	06	28.8	4	(AP)					
7976		HOLL	06	30	1607	N11	W26	06	28.7		A	AX	10	2	1	3

Stations reporting:

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

SUDDEN IONOSPHERIC DISTURBANCES

JUNE 1996

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
02	1459	1529	1617	2+	1		1				No flare		
03	1015	1022	1039	1	1		1				No flare		
04	0621	0646	0724	1	3		2				No flare		
04	1529	1551	1604	1	3		2				No flare		
06	1102	1112U	1210	1	1		1				No flare		
06	1655	1705	1721	1	1		1				No flare		
07	0957	1007	1040	1	1		1				0926	B2.3	7968
09	0905	1008	1043	2	1		1				0907	B6.7	7968
09	1448	1449	1455	1-	1					1	1451	B1.7	7968
10	1323	1334	1401	1+	3		2				No flare		
20	1133	1136	1159	1	3		2				No flare		
20	1552	1618	1725	2	1		1				No flare		
21	1150	1214	1235	1	1		1				No flare		
23	1344	1357	1418	1	1		1				1358	B4.1	
23	1423	1426	1451	1	1		1				No flare		
23	1503	1510	1540	1	1		1				No flare		
23	1657	1708	1719	1	1		1				No flare		
23	2211	2214	2230	1	1					1	2211	C1.2	7976
28	1228	1249	1316	1	1		1				No flare		
28	1438	1443	1500	1	1		1				No flare		

* = no flare patrol.

OBSERVATORIES REPORTING FOR JUNE 1996

Brazilian Antarctic Station	SPA	Koniz, Switzerland	SES
Cambridge, England, UK	SES	LaCrescenta, California, USA	SES
Cranford, New Jersey, USA	SES	Nerja, Spain	SES
Dodgeville, Wisconsin, USA	SES	Rimavska Sobota, Slovakia	SEA
Fort Wayne, Indiana, USA	SES	Rochester, New Hampshire, USA	SES
Gettysburg, Pennsylvania, USA	SES	Spring Green, Wisconsin, USA	SES
Hiraiso, Japan	SWF	Tucson, Arizona, USA	SES
Houston, Texas, USA	SES	Uccle, Belgium	SEA
Hudson, Ohio, USA	SES	Upice, Czech Republic	SEA
Indianapolis, Indiana, USA	SES	Wellington, Ohio, USA	SES
Inubo, Japan	SPA	Windsor Locks, Connecticut, USA	SES
Itapetinga, Brazil	SPA	Zilina, Slovakia	SEA

Observations are not necessarily continuous.

SOLAR RADIO EMISSION
Spectral Observations

JUNE 1996

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
01	0000	0704	CULG								
	0000	0913	HIRA								
	0415	1740	ONDR								
	0600	1200	IZMI								
	2124	2400	CULG								
02	0000	0704	CULG								
	0422	1742	ONDR								
	0600	1200	IZMI								
	0048	0950	HIRA	0807.7	0807.7	III	B	2	120	320	
	2057	2400	CULG								
	2354	2400	HIRA								
03	0000	0703	CULG								
	0000	0951	HIRA								
	0421	1746	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	0742.5	0743.7	III	GG	1	110U	170U	40-90 MHz unavail
	2057	2400	CULG								
04	0000	0703	CULG								
	0008	0958	HIRA	0052.4	0052.4	III	B	1	140	440	
	0414	1743	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	0918.8	0918.9	III	B	1	110U	170U	
	1918	2400	HIRA								
	2057	2400	CULG								
05	0000	0703	CULG								
	0000	0958	HIRA								
	0413	1745	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	2057	2400	CULG								
06	0000	0703	CULG								
	0413	1743	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	2057	2400	CULG								
07	0000	0703	CULG								
	0101	1000	HIRA								
	0412	1746	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	0916	1300 U	I	S	1	200U	400	
	2059	2400	CULG								
08	0000	0702	CULG								
	0412	1747	ONDR								
	0600	1200	IZMI								
	2059	2400	CULG								
09	0000	0702	CULG								
	0600	1200	IZMI								
	0412	1747	ONDR	0906.4	0912.0	III	G	2	1000X	1920X	
			ONDR	0906.5	0909.5	III	G	1	2245X	4395X	
	2059	2400	CULG								
	2342	2400	HIRA								
10	0000	0702	CULG								
	0412	1748	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	0836.5	0837.6	III	G	2	110U	400	
	0000	1000	HIRA	0836.9	0836.9	III	B	1	100	150	
	1917	2400	HIRA								
	2059	2400	CULG								
11	0000	0702	CULG								

SOLAR RADIO EMISSION
Spectral Observations

JUNE 1996

Day	OBSERVATION Start (UT)	End (UT)	Sta	EVENT Start (UT)	End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	Upper (MHz)	Remarks
11	0000	1002	HIRA								
	0412	1748	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	1918	2400	HIRA								
	2245	2400	CULG								
12	0000	0702	CULG								
	0000	1002	HIRA								
	0411	1748	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	1917	2400	HIRA								
	2059	2400	CULG								
13	0000	0702	CULG								
	0000	1003	HIRA								
	0600	1200	IZMI								
	0601	1748	ONDR								
	0700	1500	POTS								
	1917	2400	HIRA								
	2059	2400	CULG								
14	0000	0702	CULG								
	0000	1003	HIRA								
	0411	1750	ONDR								
	0600	1200	IZMI								
	0700	1444	POTS								
	1917	2400	HIRA								
	2100	2400	CULG								
15	0000	0700	CULG								
	0000	1003	HIRA								
	0411	1751	ONDR								
	0600	1200	IZMI								
	1917	2400	HIRA								
	2100	2400	CULG								
16	0000	0700	CULG								
	0000	1004	HIRA								
	0411	1751	ONDR								
			SGMR	1149.0	1150.0	III		1	36	73	
			SVTO	1149.0	1150.0	III		2	37	61	
	0600	1200	IZMI	1149.3	1149.9	III	G, RS	2	45X	80U	
	0600	1200	IZMI	1155.0	1155.1	III	B	2	45X	80U	
			SGMR	1258.0	1300.0	V		1	31	71	
			SVTO	1258.0	1300.0	V		3	35U	72U	
			SVTO	1524.0	1525.0	III		1	40U	80U	
			SGMR	1525.0	1525.0	III		1	32	75	
			PALE	1754.0	1754.0	III		1	25	45	
			SGMR	1754.0	1754.0	V		1	30	57	
	1917	2400	HIRA								
	2100	2400	CULG								
17	0000	0700	CULG								
	0000	1004	HIRA	0219.3	0219.3	III	B	1	130	340	
	0411	1749	ONDR								
	0600	1200	IZMI								
			HIRA	0841.7	0841.7	III	B	1	170	300	
			HIRA	0914.6	0914.6	III	B	1	140	300	
			HIRA	0915.7	0915.7	III	B	1	60	300	
	0700	1500	POTS	1109.9	1112.2	III	GG	1	110U	170U	
			PALE	1850.0	1852.0	V		1	25	55	
			SGMR	1850.0	1851.0	III		1	30	72	
	1917	2400	HIRA								
			PALE	1952.0	1953.0	V		1	25	54	
			SGMR	1952.0	1954.0	V		1	30	57	
	2100	2400	CULG								

SOLAR RADIO EMISSION
Spectral Observations

JUNE 1996

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
18	0000	0701	CULG								
	0000	1004	HIRA								
	0411	1752	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	1917	2400	HIRA								
	2100	2400	CULG								
19	0000	0944	HIRA								
			LEAR	0044.0	0045.0	III		1	30	43	
			PALE	0044.0	0045.0	V		1	25	55	
	0000	0701	CULG	0044.0	0045.0	III	B	1	20U	75U	
	0411	1752	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	0808.9	0809.1	III	G	1	110U	160	
			POTS	1110.9	1111.0	III	B	1	60	170U	
			POTS	1130.2	1131.5	III	G,C	1	110U	250	
			POTS	1130.5	1134 U	DCIM		2	550	750	
	2100	2400	CULG								
20	0000	0701	CULG								
	0018	0945	HIRA								
	0412	1752	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	1303.2	1304.1	III	G	2	40X	400	
			POTS	1312.3	1312.5	III	B	1	65	250	
	2100	2400	CULG								
21	0000	0701	CULG								
	0412	1752	ONDR								
	0012	1005	HIRA	0828.7	0828.7	III	B	1	50	240	
	0700	1500	POTS	0828.7	0828.9	III	G	2	40X	250	
	0600	1200	IZMI	0828.8	0828.9	III	G	2	55	90U	
	1918	2400	HIRA								
	2100	2400	CULG								
22	0000	0701	CULG								
	0000	0950	HIRA								
	0420	1751	ONDR								
	0600	1200	IZMI								
	2100	2400	CULG								
23	0000	0705	CULG								
	0412	1750	ONDR								
	0600	1200	IZMI								
	2100	2400	CULG								
24	0000	0705	CULG								
	0000	1005	HIRA	0019.3	0019.3	III	B	1	190	500	
			HIRA	0047.3	0047.3	III	B	1	200	420	
	0413	1751	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	1338.6	1338.7	III	B	1	110U	170U	
	1919	2400	HIRA								
	2100	2400	CULG								
25	0000	0705	CULG								
	0000	1006	HIRA								
	0413	1752	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	1302.3	1302.5	III	G	1	110U	170U	
	1918	2400	HIRA								
	2100	2400	CULG								
26	0000	0705	CULG								
	0000	1006	HIRA								
	0413	1751	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								

SOLAR RADIO EMISSION
Spectral Observations

JUNE 1996

Day	OBSERVATION Start (UT)	OBSERVATION End (UT)	Sta	EVENT Start (UT)	EVENT End (UT)	Spectral Class	Event Remarks	Int (1-3)	FREQUENCY Lower (MHz)	FREQUENCY Upper (MHz)	Remarks
26	1920	2400	HIRA								
	2100	2400	CULG								
27	0000	0705	CULG								
	0000	1006	HIRA								
	0414	1752	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS	1025.1	1025.2	III	B	1	110U	250	
			POTS	1030.5	1046	I	S	1	300	400	
			POTS	1045.0	1045.1	III	G	1	110U	140	
			POTS	1328.5	1328.7	UNCLF		1	130	250	
			POTS	1355	1359	I	S	1	130	160	
	1920	2400	HIRA								
	2104	2400	CULG								
28	0000	0705	CULG								
	0414	1753	ONDR								
	0600	1200	IZMI								
	0700	1500	POTS								
	0000	1003	HIRA	0947.7	0947.7	III	B	1	110	480	
	1921	2400	HIRA								
	2104	2400	CULG								
29	0000	0705	CULG								
	0000	0905	HIRA								
	0417	1751	ONDR								
	0600	1200	IZMI								
	1921	2400	HIRA								
	2104	2400	CULG								
30	0000	0707	CULG								
	0000	1006	HIRA								
	0415	1753	ONDR								
	0600	1200	IZMI								
	1921	2400	HIRA								
	2105	2400	CULG								

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

Frequency qualifiers:
- X = Extends beyond instrument range
- U = Uncertain frequency

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

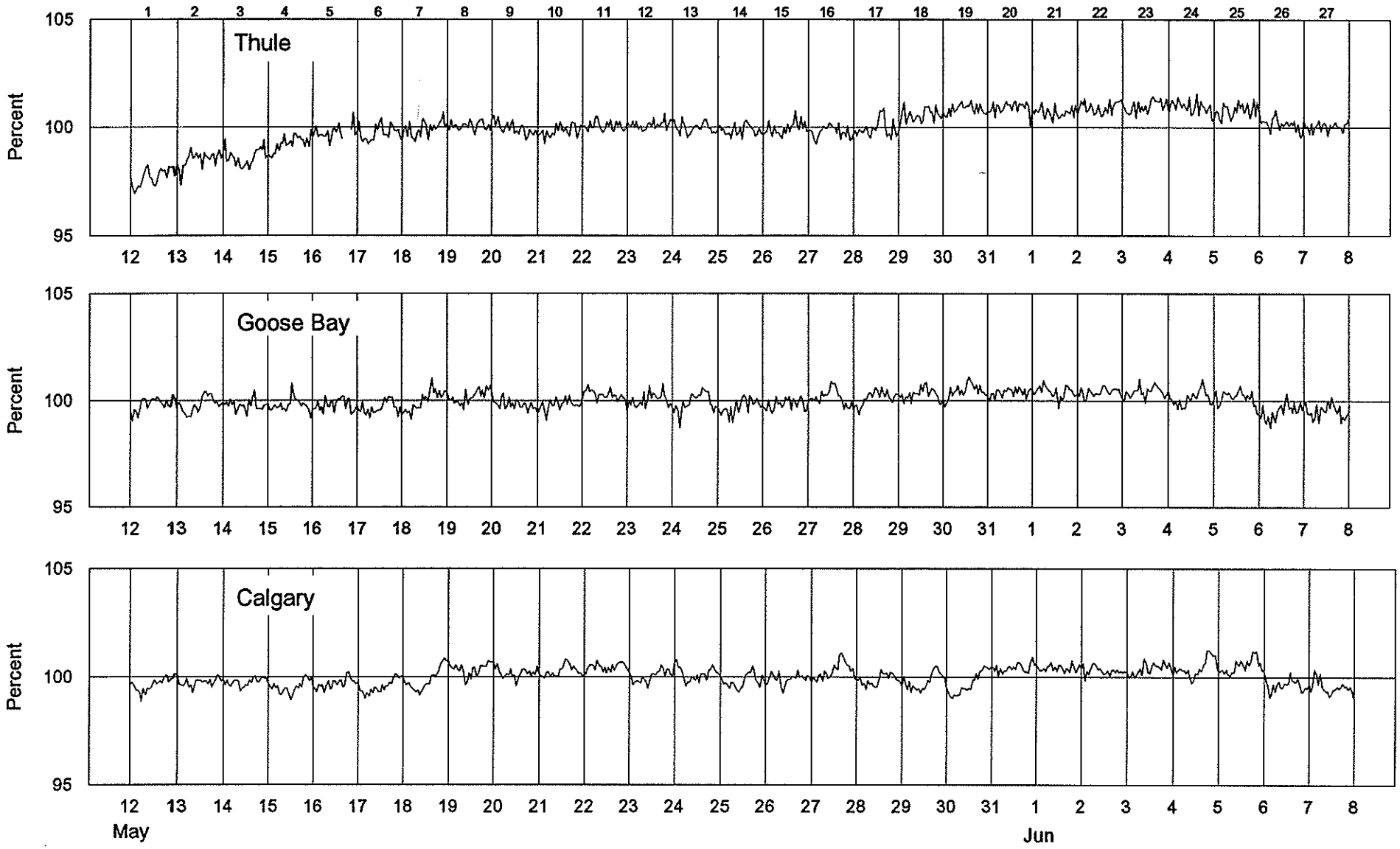
Stations Reporting: CULG = Culgoora HIRA = Hiraiso IZMI = Izmiran LEAR = Learmonth
ONDR = Ondrejov PALE = Palehua POTS = Potsdam SGMR = Sagamore Hill SVTO = San Vito

COSMIC RAY INDICES
(Neutron Monitor)
JUNE 1996

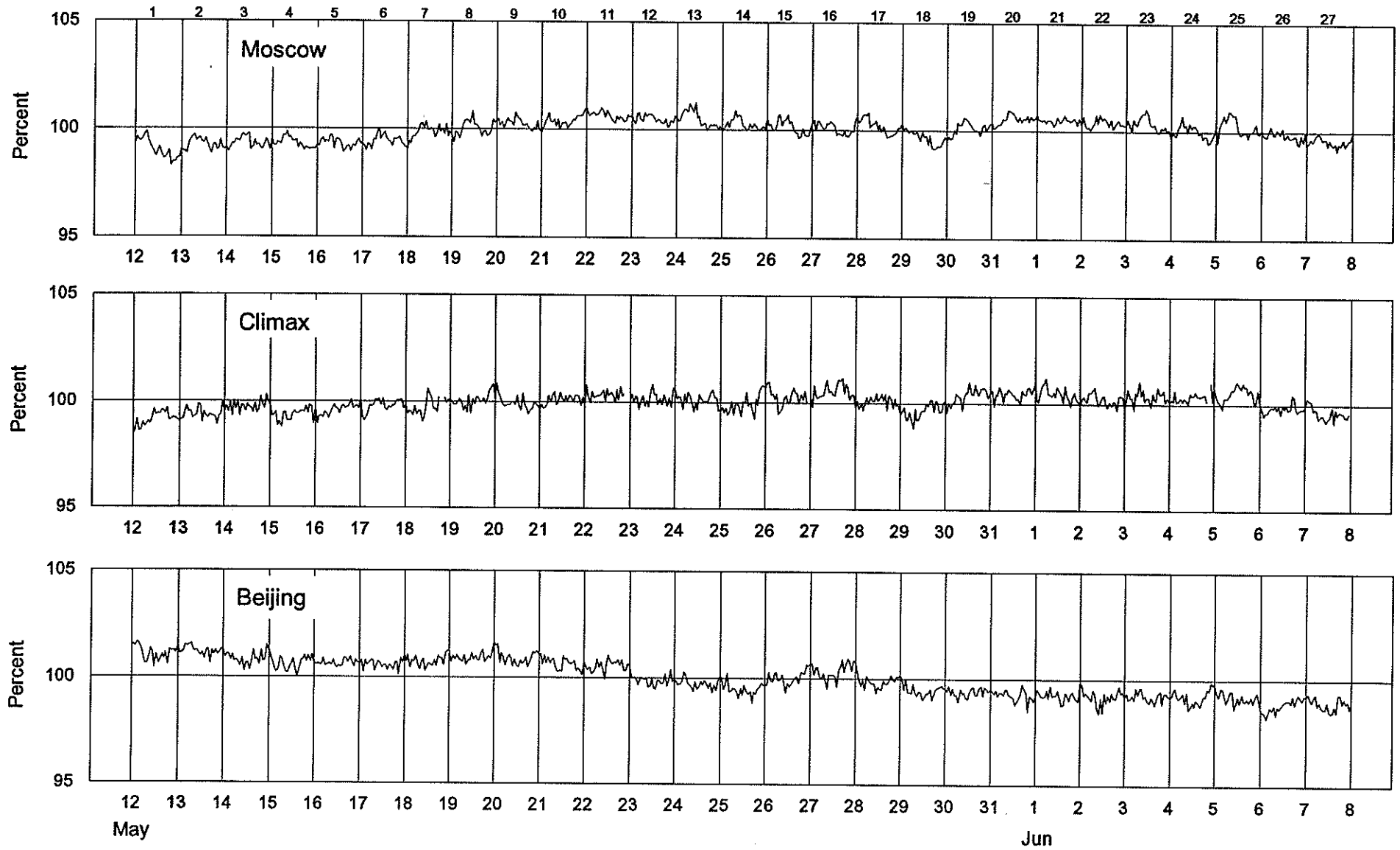
Day	THULE Average (cts/h)/100	GOOSE BAY Average (cts/h)/100	CALGARY Average (cts/h)/300	MOSCOW Average (cts/h)/64	CLIMAX Average (cts/h)/100	BEIJING Average (cts/h)/256	TOKYO Average (cts/h)/256	HALEAKALA Average (cts/h)/1000
1	4556	7416.5	4003.0	9338.7	4216.5	1963.3	No data	3582.9
2	4565	7415.7	3998.3	9328.5	4206.3	1963.0	at time of	3584.4
3	4569	7416.5	4001.5	9326.4	4211.2	1963.2	publication	3583.7
4	4567	7395.4	4003.7	9292.3	4210.6	1962.8	---	3584.4
5	4559	7397.6	4007.3	9315.1	4218.9	1962.8	---	3589.2
6	4532	7348.5	3972.0	9277.8	4190.1	1955.5	---	3571.6
7	4526	7350.7	3968.8	9250.9	4181.1	1957.1	---	3571.2
8	4528	7343.5	3955.8	9271.9	4171.3	1952.1	---	3565.0
9	4527	7338.0	3962.0	9252.3	4172.8	1951.4	---	3558.8
10	4527	7329.5	3967.8	9240.8	4177.9	1951.8	---	3552.8
11	4530	7357.6	3978.2	9224.5	4178.8	1955.2	---	3557.2
12	4544	7372.3	3993.0	9257.2	4190.9	1953.3	---	3567.7
13	4550	7371.0	3995.0	9255.3	4176.1	1945.7	---	3572.0
14	4558	7373.6	4010.8	9294.6 (19)	4208.7	1939.5	---	3575.1
15	4551	7386.5	4000.8	9341.3 (18)	4213.6	1938.8	---	3570.5
16	4557	7391.2	3983.7	9342.3	4195.9	1944.8	---	3564.3
17	4560	7393.7	3984.7	9339.6	4199.3	1943.0	---	3568.0
18	4551	7388.1	3968.3	9346.0	4202.9	1938.3	---	3566.0
19	4536	7367.6	3978.0	9335.7	4204.6	1943.0	---	3565.3
20	4542	7382.6	3981.3	9309.8	4197.1	1944.3	---	3564.4
21	4541	7395.5	3985.3	9309.9	4196.2	1941.8	---	3566.8
22	4548	7395.2	3973.8	9305.0	4208.0	1939.4	---	3571.9
23	4546	7391.9	3962.5	9281.7	4210.6	1941.7	---	3570.9
24	4553	7401.5	3978.7	9306.0	4221.1	1944.8	---	3576.2
25	4560	7393.5	3970.3	9300.4	4212.8	1934.7	---	3567.0
26	4561	7402.7	3991.3	9331.8	4212.4	1930.7	---	3573.5
27	4577	7396.2	3991.8	9353.7	4214.9	1935.0	---	3575.5
28	4539	7374.0	3977.5	9320.7	4201.8	1935.3	---	3571.7
29	4511	7335.4	3964.5	9295.3	4184.6	1937.5	---	3567.3
30	4524	7328.1	3972.7	9307.1	4188.0	1941.4	---	3570.3
Mean	4547	7378.3	3982.7	9301.8	4199.2	1947.0	---	3544.1

For less than 24-hour coverage, parentheses enclose the number of hours for which data are available. For Climax, parentheses enclose the number of section hours whenever the sum of both sections falls below 40 hours, and for Haleakala, whenever the sum of all three sections falls below 60 hours.

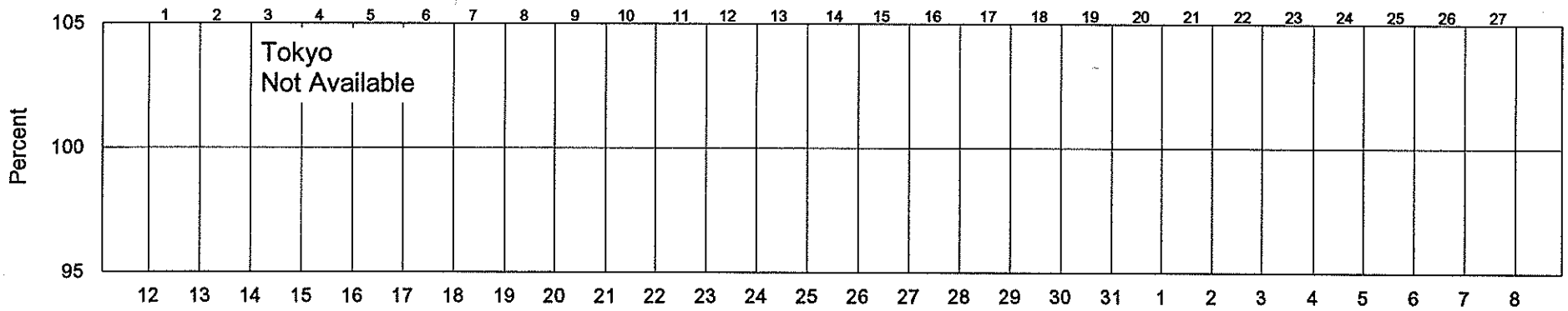
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2223 - Beginning 12 May 96

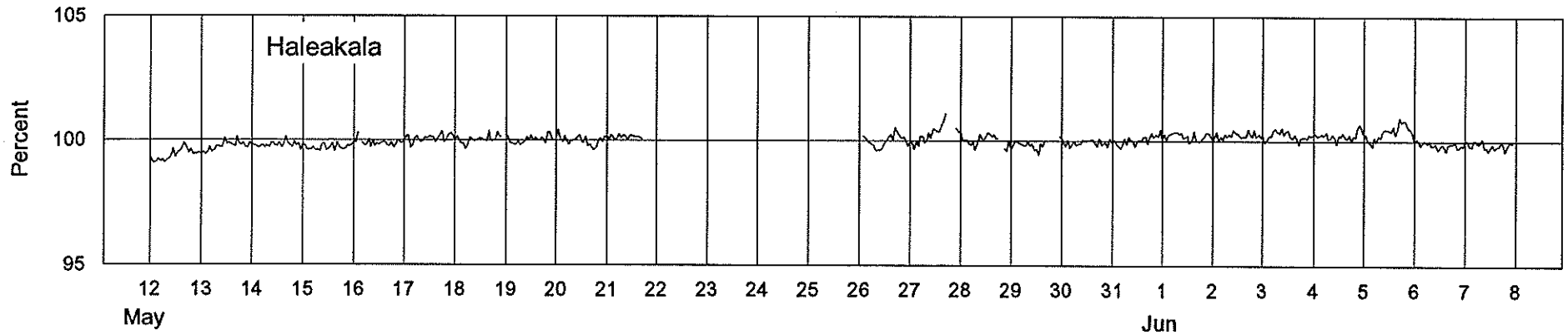


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2223 - Beginning 12 May 96

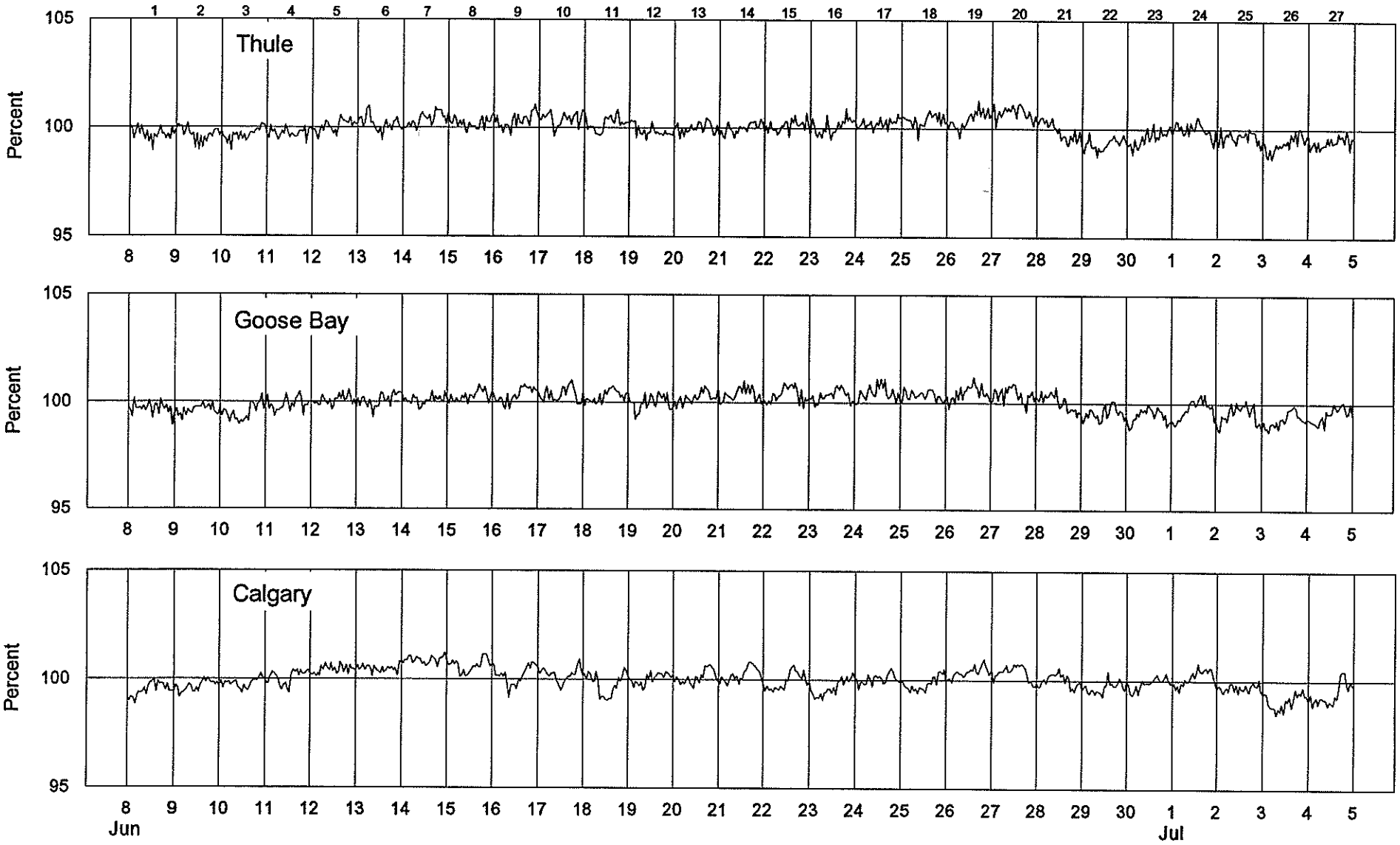


COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2223 - Beginning 12 May 96

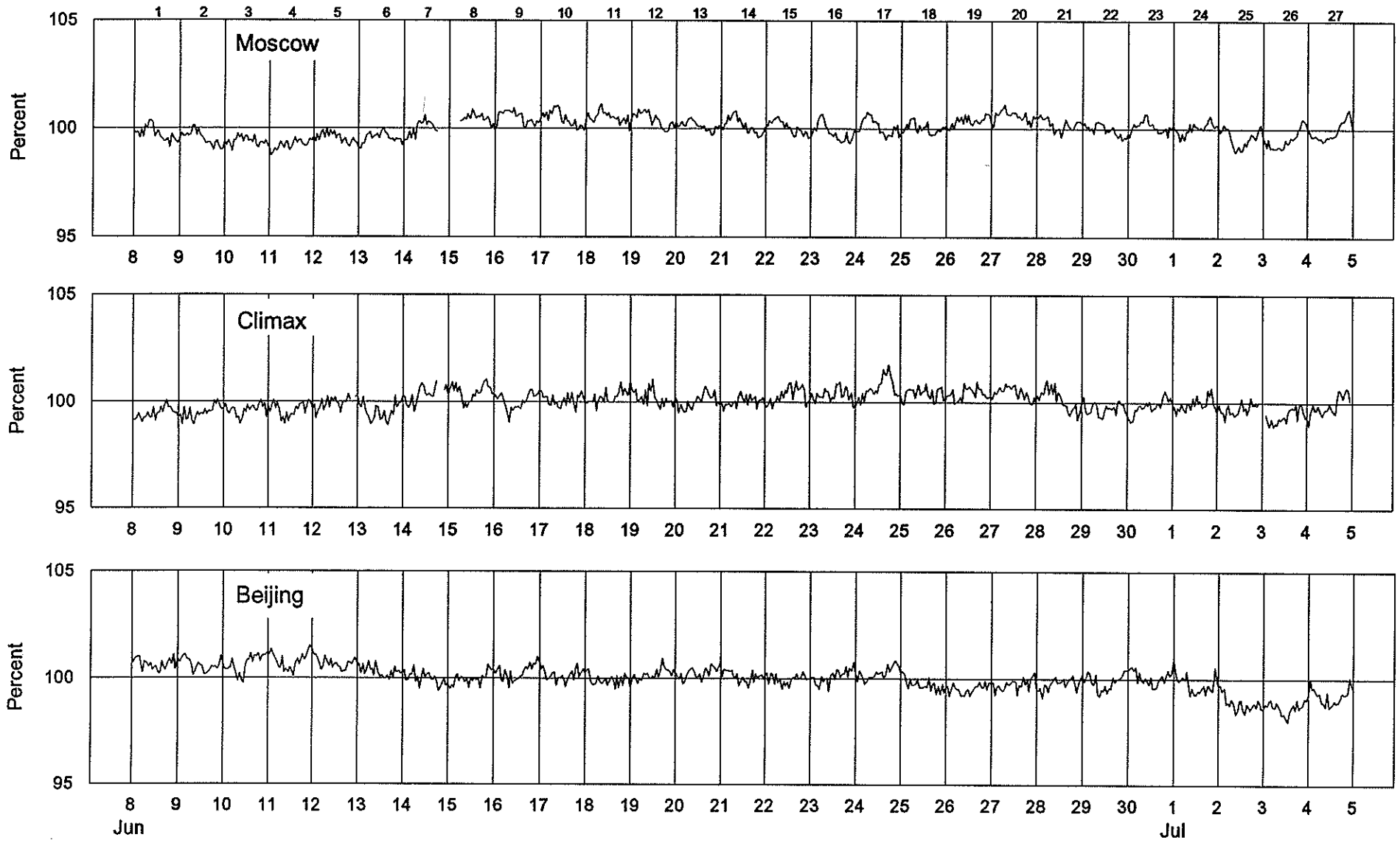




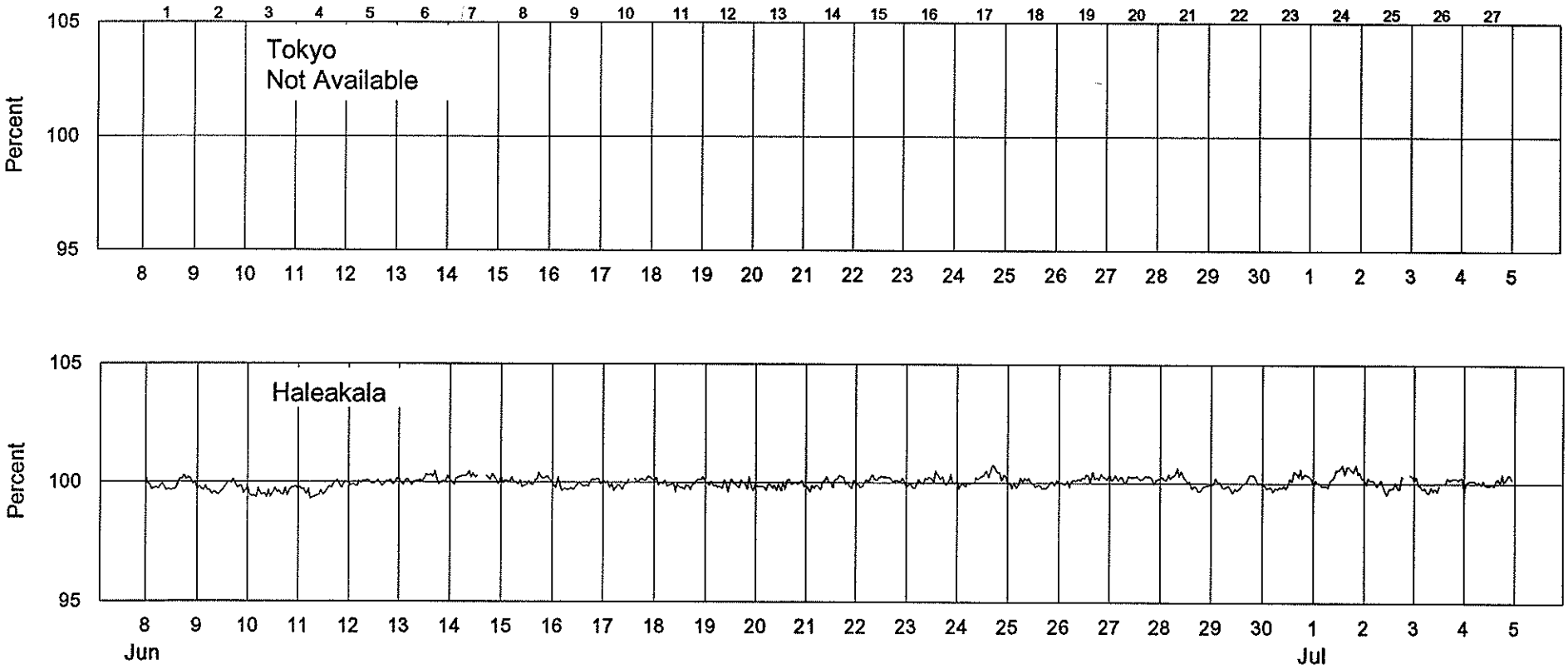
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2224 - Beginning 8 Jun 96



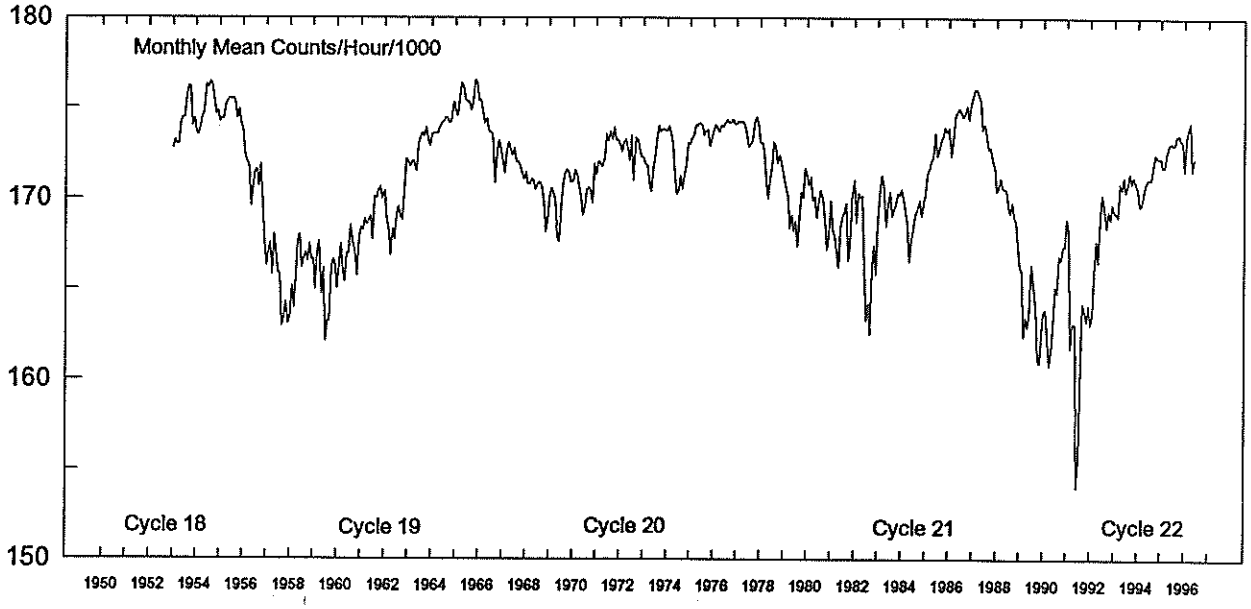
COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2224 - Beginning 8 Jun 96



COSMIC RAY INDICES
(Neutron Monitor)
Bartels Rotation 2224 - Beginning 8 Jun 96



Huancayo* Neutron Monitor Pressure-Corrected/Adjusted Values
Jan 1953 - Jun 1996



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1953	1727	1732	1730	1729	1742	1744	1744	1756	1762	1761	1740	1744	1743
1954	1737	1735	1738	1744	1747	1763	1761	1764	1762	1754	1746	1748	1750
1955	1742	1744	1744	1751	1754	1755	1754	1755	1753	1744	1749	1741	1749
1956	1738	1724	1719	1718	1696	1707	1715	1716	1706	1719	1697	1675	1711
1957	1663	1671	1675	1658	1680	1670	1659	1658	1630	1633	1643	1630	1656
1958	1635	1652	1639	1657	1677	1680	1661	1667	1670	1665	1675	1666	1662
1959	1666	1649	1671	1676	1647	1661	1621	1632	1632	1661	1666	1663	1654
1960	1650	1663	1675	1660	1654	1669	1669	1685	1674	1670	1657	1677	1667
1961	1684	1682	1688	1685	1688	1690	1677	1701	1700	1704	1706	1699	1692
1962	1704	1687	1683	1668	1683	1677	1690	1695	1690	1688	1703	1721	1691
1963	1720	1718	1720	1720	1715	1729	1734	1736	1734	1739	1732	1729	1727
1964	1735	1736	1736	1736	1739	1741	1742	1744	1744	1741	1743	1753	1741
1965	1748	1745	1756	1764	1762	1754	1753	1753	1748	1754	1765	1764	1755
1966	1754	1754	1747	1741	1744	1737	1736	1736	1708	1725	1732	1727	1737
1967	1721	1714	1726	1731	1727	1724	1727	1720	1720	1718	1713	1710	1721
1968	1714	1708	1708	1710	1710	1705	1708	1709	1706	1698	1681	1689	1704
1969	1702	1706	1702	1698	1678	1676	1695	1708	1714	1716	1714	1709	1701
1970	1709	1715	1712	1707	1701	1691	1695	1705	1706	1705	1697	1719	1705
1971	1712	1720	1720	1718	1722	1735	1732	1737	1732	1739	1732	1732	1728
1972	1730	1726	1731	1732	1728	1721	1734	1710	1733	1733	1726	1723	1727
1973	1723	1719	1718	1709	1704	1716	1723	1733	1740	1737	1738	1738	1725
1974	1737	1740	1736	1729	1713	1703	1704	1712	1705	1713	1718	1731	1720
1975	1730	1733	1734	1740	1740	1742	1740	1735	1737	1738	1729	1733	1736
1976	1738	1741	1739	1737	1740	1740	1742	1743	1742	1742	1744	1741	1741
1977	1741	1743	1742	1742	1740	1735	1729	1730	1732	1742	1745	1741	1739
1978	1731	1731	1726	1710	1700	1710	1717	1731	1729	1719	1724	1720	1721
1979	1711	1707	1702	1684	1691	1682	1688	1674	1689	1703	1700	1717	1696
1980	1713	1708	1712	1699	1701	1690	1698	1705	1699	1688	1672	1680	1697
1981	1699	1682	1680	1671	1662	1685	1690	1693	1697	1666	1675	1700	1683
1982	1710	1687	1703	1700	1702	1662	1632	1643	1625	1662	1674	1658	1671
1983	1688	1703	1713	1709	1685	1697	1704	1690	1694	1697	1703	1702	1699
1984	1705	1699	1693	1685	1665	1677	1684	1691	1695	1699	1691	1698	1690
1985	1703	1714	1716	1721	1723	1736	1724	1727	1732	1734	1739	1737	1725
1986	1739	1724	1734	1746	1748	1750	1748	1745	1747	1751	1744	1752	1744
1987	1757	1760	1760	1757	1754	1738	1741	1735	1728	1728	1721	1718	1741
1988	1704	1706	1711	1706	1705	1705	1696	1692	1698	1690	1688	1674	1698
1989	1663	1660	1624	1635	1629	1638	1664	1650	1640	1611	1609	1627	1637
1990	1638	1638	1623	1608	1616	1630	1651	1648	1668	1666	1673	1673	1644
1991	1689	1682	1617	1631	1630	1540	1555	1611	1642	1638	1632	1641	1626
1992	1630	1635	1659	1677	1665	1689	1702	1696	1684	1693	1688	1697	1676
1993	1692	1692	1690	1708	1705	1711	1704	1707	1714	1709	1712	1709	1705
1994	1705	1696	1697	1703	1708	1711	1711	1711	1718	1724	1723	1722	1711
1995	1723	1718	1718	1725	1730	1731	1730	1731	1735	1735	1732	1731	1728
1996	1716	1734	1738	1742	1716	1722							1728

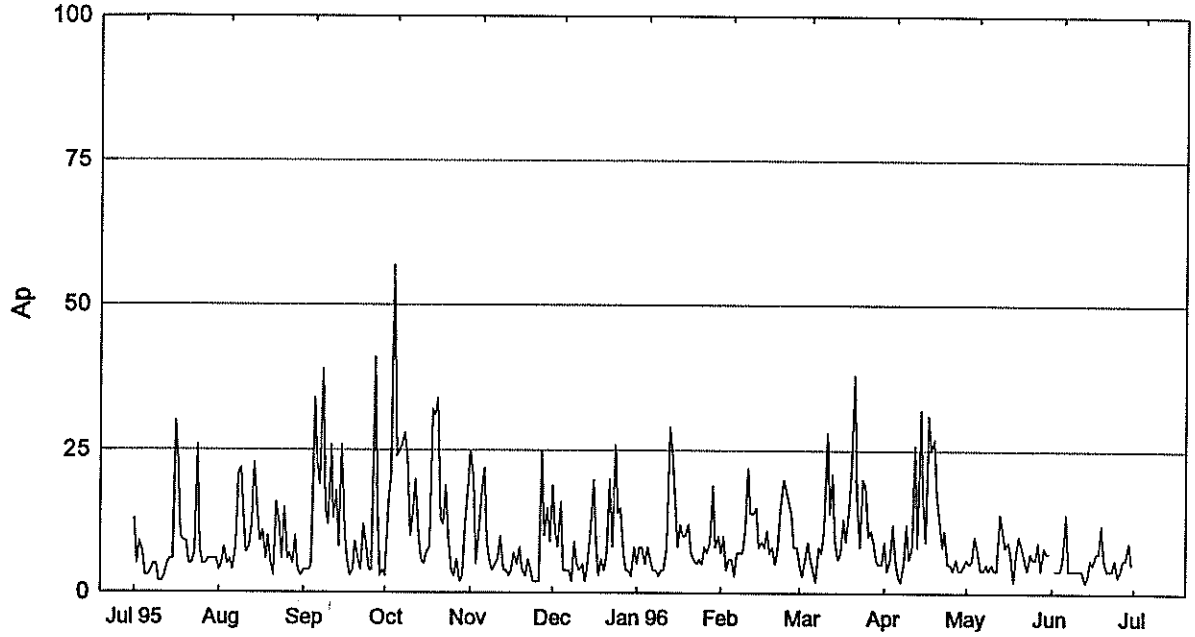
Multiply table entries by 100 to obtain hourly counting rate for Huancayo, Peru: S12 W75, Alt=3400m, Cutoff Rigidity=12.92GV (1980). NOTE: Secular changes in the Earth's magnetic field resulted in a slow lowering of the geomagnetic cutoff rigidity at Huancayo over the 40 year period. This dataset was adjusted by applying a linear time-correction based on the calculated change in response to the change in the vertical cutoff. * Data from Jan 92 on are from the 18-NM64 at Haleakala, Hawaii: N20 W156, Alt=3030m, Cutoff Rigitity=12.91GV (1980). Multiply table entries by 2057.6 to obtain equivalent Haleakala counting rate.

Geomagnetic Activity Indices
June 1996

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	Am	aa Provisional N	S	M	
1	Q5	1+	1+	1-	0+	1	1	0+	1+	7+	4	0.1	1+	1+	1+	1-	1o	1+	0+	1+	7	10	6	6	10 CC
2	Q10	1	1+	1-	0+	0+	1	2-	1+	8-	4	0.1	1o	1+	1+	1-	0+	1o	2-	1o	7	12	5	8	9 CC
3	Q6	0+	1-	1	2-	1	1-	1-	1+	7+	4	0.1	0+	1o	1+	2o	1-	1-	0+	2-	7	8	8	9	7 CC
4		1+	2-	1	1-	1-	1+	1	1+	9	4	0.2	1+	2-	1+	1-	0+	1+	1o	1o	7	14	6	9	11 CC
5		1	2	1+	1	1-	1	2	3-	12-	6	0.3	1-	2o	2-	1o	0+	1o	2-	2+	9	14	8	9	13 C
6	D1*	2+	4+	4-	3+	3-	2+	2	1+	22	14	0.8	2+	4o	4-	4-	2+	2o	2-	1+	27	28	34	42	20
7		1-	1+	1	2-	1	1	1+	0+	8+	4	0.1	1-	1-	1o	1+	1-	1o	1+	0+	6	11	5	7	9 CK
8		1-	1-	1	1+	1	1-	2+	1+	9	4	0.2	1-	1o	1+	2-	1o	0+	2+	1+	9	13	7	8	12 CC
9	Q7	1-	1-	1-	0+	1	2-	1+	1	7+	4	0.1	1-	1-	1+	1-	1o	1+	1+	1-	7	11	4	6	9 CC
10		1	2-	1-	2-	2-	1	1	1-	9+	4	0.2	1o	2o	1o	2-	2-	1-	1-	0+	8	13	8	11	10 CC
11		0+	1	1	1-	2-	1	1	1+	8	4	0.1	0+	1o	1+	1o	1+	1o	1o	2-	7	12	3	5	10 CC
12	Q8	1+	1	1+	1-	1+	1-	1	0+	8-	4	0.1	2-	1+	1+	1o	1o	1-	1-	0+	6	11	3	6	8 CC
13	Q1	0+	1	1-	1-	0+	0	0+	1-	4	2	0.0	0+	1+	1-	1-	0o	0o	0o	1-	3	8	3	6	5 CC
14	Q2	1-	1	1	1	1	0+	1-	1-	6+	3	0.1	1o	1o	1o	1-	1-	0+	1-	1-	5	8	4	6	6 CC
15		1-	1	1-	1+	2-	2-	3-	2-	11+	6	0.3	0+	1+	1+	1+	1+	1+	2+	2o	10	15	7	8	13 CC
16		2-	2	1	1-	1+	1+	1+	1-	10	5	0.2	2o	2+	1+	1o	1+	1+	1+	1o	10	14	10	11	12 CC
17	D4*	2-	2+	1-	2-	2	2	1+	3-	14+	7	0.3	2-	3-	1+	2o	2-	2o	1+	2+	14	21	9	11	19 C
18	D5*	1	1	2-	1	1	1+	2-	4-	12+	7	0.3	1o	1+	1+	1o	0+	1+	2-	4-	12	18	9	8	19 K
19	D2*	4+	3	2+	2+	2	2+	2-	2+	20+	12	0.7	4+	3+	3-	2+	2-	2o	2-	2o	26	25	22	31	16
20		2+	2	2-	2-	2-	1+	1+	1-	13-	6	0.3	2+	2+	2o	2o	2o	1+	1o	1-	13	17	13	17	13
21		1+	0+	1+	1	2	0+	1-	1+	8+	4	0.1	1+	1-	1o	1+	2o	0+	1-	1+	7	10	8	9	9 CC
22	Q4	1+	0+	1-	0+	1	1	1	1+	7	4	0.1	1+	0o	1o	0o	1o	1+	1+	2-	7	9	7	6	10 CC
23		1	1-	0+	1-	2	1+	1	1-	8-	4	0.1	1+	1-	0+	1o	2-	1+	1-	1-	7	13	6	5	13 CC
24		3-	1+	1+	1	1	1+	2+	1	12	6	0.3	3-	2-	1+	1o	1o	1+	2o	1-	11	18	9	12	15 CC
25	Q3	0+	0+	0+	0+	1	1-	1-	2	6-	3	0.1	0+	0+	0+	1-	1-	1-	0+	2o	5	10	4	5	9 CC
26	Q9	1+	1-	1	1	1	1-	1-	2-	8	4	0.1	1o	1-	1o	1+	1o	0+	0+	1+	6	10	5	7	9 CC
27		1	1+	1+	3	2-	1+	2-	1+	13-	6	0.3	1+	1+	2-	3-	1+	1o	1+	2-	12	14	11	14	11 KC
28		3-	2-	1+	1-	1+	1-	1+	2+	12	6	0.3	2+	1+	2o	1-	2-	1o	1+	2o	11	16	8	12	12 CC
29	D3*	3-	1	1-	1	2+	3	3	3-	16+	9	0.5	2+	1-	1o	1+	2o	3o	3-	3-	17	23	13	10	26
30		2-	1+	2-	1	1	0+	1	2-	10-	5	0.2	2-	2-	2+	1+	1-	1-	1o	2-	10	12	6	9	9 CK
Mean											5	0.22									9.8	13.9	8.3	11.1	

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	1+	2-	1+	1-	2-	2-	0+	1+	9	1o	1o	1o	0+	0+	1+	0o	1o	5	70.4	8	7	14	
2	1o	2-	2-	1+	1-	1+	2o	1+	10	1o	1o	1-	0+	0o	0+	1o	1-	4	70.2	8	8	14	
3	0+	1o	1+	2-	1+	1o	0+	2o	8	0+	1-	1o	2o	0+	0o	0o	1o	5	71.2	8	8	15	
4	1+	2o	2-	1o	1-	2-	1+	2-	10	1o	1+	1-	1-	0o	1-	1-	0+	5	71.2	9	10	15	
5	1o	2+	2-	1o	1-	1+	2-	3-	12	0+	1+	1+	1o	0o	0+	1+	2o	7	72.8	11	14	17	
6	2+	4+	4-	4-	3-	2+	2o	2-	31	2-	4-	4-	3+	2-	2-	2-	1o	23	73.8	23	17	18	
7	1+	1+	1o	2-	1o	1+	2-	1-	9	0o	0+	1-	1-	0o	1-	0+	0o	3	75.4	20	19	19	
8	1-	1+	2-	2-	2-	1-	2+	1+	11	0+	1-	1+	2-	0+	0o	2o	1+	7	72.4	20	18	16	
9	1o	1-	1+	1o	2-	2o	1+	1o	9	0+	0+	1o	1-	0+	1o	1+	0+	4	72.0	25	20	16	
10	1+	2o	1+	2o	2o	1+	1o	1o	11	1-	2-	1-	1+	1o	0o	0+	0o	5	71.1	12	13	15	
11	0+	1+	2-	1+	2-	2-	1+	2-	9	0o	0+	1-	1-	1-	0+	1-	1+	4	70.2	9	8	14	
12	2-	2-	2-	1+	1+	1+	1o	1-	9	2-	1-	1+	0+	0+	0+	0o	0o	4	69.5	9	7	13	
13	0+	2-	1o	1-	0+	0+	0+	1o	5	0o	1+	0+	0+	0o	0o	0o	0o	2	70.3	0	0	14	
14	1o	1+	1+	1o	1o	0+	1o	1+	7	1-	0+	1-	0+	0+	0o	0+	0o	3	69.8	0	0	13	
15	1-	2-	1+	2-	2-	2-	3-	2o	12	0o	1-	1o	1-	1-	1o	2-	2o	7	69.5	0	0	13	
16	2o	3-	1+	1+	2-	2-	1+	1o	12	2-	2+	1o	1-	1-	1+	1+	1-	9	69.0	0	0	13	
17	2o	3-	1+	3-	2+	3-	2-	2+	18	1+	2+	1+	1+	1-	1+	1+	2+	11	69.6	0	0	13	
18	1o	1+	2o	2-	1o	2-	2-	3o	13	1-	1o	1o	0+	0o	1-	2-	4o	12	69.9	10	10	13	
19	4o	4-	3-	3-	2o	2+	2o	2+	28	5-	3+	2+	2+	1+	2-	1+	2-	24	70.7	17	16	14	
20	2+	3-	2+	2+	2+	2-	2-	1o	16	2o	2o	2o	2-	2-	1o	1-	0+	10	71.9	8	10	16	
21	1+	1o	1+	1+	3-	1-	1o	1+	9	1o	0o	1o	1+	2-	0+	0+	1o	6	72.6	8	10	16	
22	2-	0o	1o	0o	1+	2-	2-	2o	8	1+	0+	1o	0o	1-	1-	1o	1o	5	72.0	8	11	16	
23	1+	1-	1-	1o	2+	2o	1o	1o	9	1o	0+	0o	1-	1+	1o	1-	0+	5	70.9	17	13	15	
24	3-	2-	2-	1+	1+	2-	2+	1-	13	2+	1+	1+	1-	0+	1o	2-	1-	9	74.7	18	17	19	
25	1-	1-	1-	1o	1+	1o	1-	2+	7	0o	0+	0o	0+	0+	0+	0o	1+	3	74.3	17	19	18	
26	1+	1o	1o	1+	1+	1-	1o	2-	8	1o	0+	1-	1o	0+	0+	0o	1-	4	74.2	18	20	18	
27	1+	2-	2o	3o	1+	2-	2-	2o	14	1o	1+	2-	3-	1+	1-	1-	1o	9	73.8	18	20	18	
28	2+	2-	2+	1-	2-	1+	1+	2+	13	2o	1+	2-	1-	1+	1-	1o	2-	9	73.8	18	20	18	
29	2+	1o	1+	2-	2+	3+	3o	3-	19	3-	1-	1-	1-	2-	2+	3-	3-	14	73.3	17	18	17	
30	2o	2o	3-	2-	1+	1o	2-	2-	13	1+	2-	2o	1+	0o	0o	0o	1+	7	73.1	17	16	17	
Mean									12.1									7.5	71.8	11.8	11.6	15.5	

Daily Average Indices Ap
Jul 1995 - Jun 1996

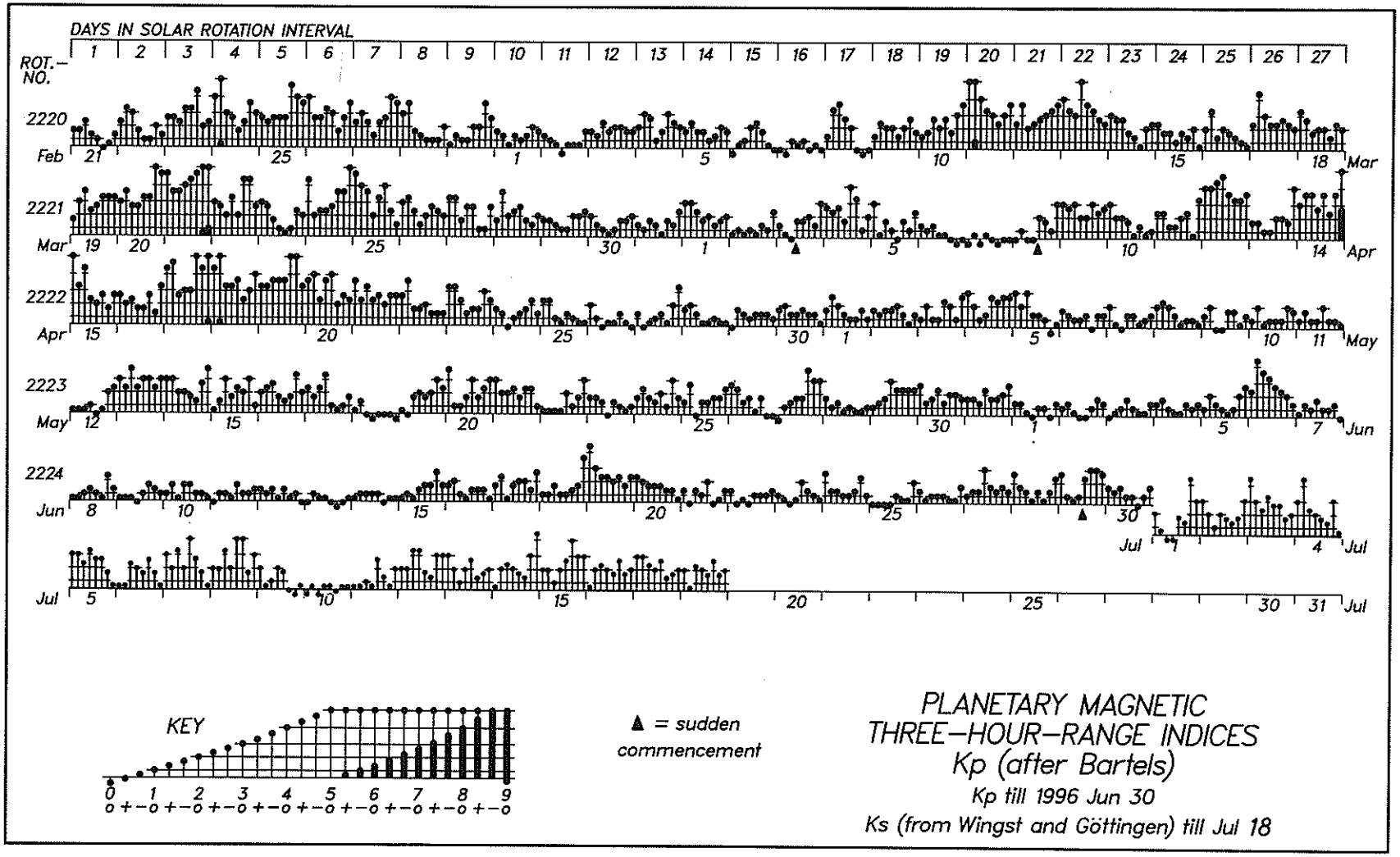


Day	Jul 95	Aug	Sep	Oct	Nov	Dec	Jan 96	Feb	Mar	Apr	May	Jun
1	13	4	4	3	25	19	5	7	5	9	6	4
2	5	5	4	16	20	11	8	10	3	4	5	4
3	9	6	4	21	5	8	8	4	6	6	6	4
4	7	7	5	57	10	16	5	6	9	12	10	4
5	3	8	34	24	18	4	8	6	6	6	7	6
6	3	4	23	25	22	4	6	3	4	3	4	14
7	4	8	19	26	9	4	4	7	2	2	4	4
8	5	21	39	28	6	2	4	7	8	5	5	4
9	5	22	15	24	4	9	3	7	7	12	4	4
10	2	14	12	10	5	5	4	11	11	6	5	4
11	2	7	26	14	6	4	4	22	28	8	4	4
12	3	8	13	20	10	5	8	14	14	26	4	4
13	5	12	18	10	4	2	29	14	21	8	14	2
14	6	23	8	6	4	5	25	15	9	32	11	3
15	6	14	26	5	3	12	16	8	6	18	8	6
16	30	9	11	7	4	20	8	9	7	9	9	5
17	23	11	6	8	7	9	12	8	13	31	7	7
18	10	6	3	32	5	3	10	11	9	25	2	7
19	9	10	4	31	8	6	10	7	15	27	7	12
20	9	5	9	34	4	4	12	8	23	17	10	6
21	5	3	6	13	3	7	7	5	38	13	8	4
22	5	16	4	12	6	20	6	8	17	8	6	4
23	7	12	12	19	4	8	5	15	8	11	4	4
24	26	6	8	10	2	26	6	20	20	5	7	6
25	8	15	4	4	2	14	5	18	19	5	6	3
26	5	6	4	3	2	15	8	16	10	4	6	4
27	5	7	41	6	25	7	7	14	11	6	9	6
28	6	5	15	2	10	4	9	8	9	4	4	6
29	6	10	3	3	15	4	19	8	6	4	8	9
30	6	4	4	12	9	3	8		5	5	7	5
31	6	3		18		8	10		5		7	
Mean	8	9	13	16	9	9	9	10	11	11	7	5

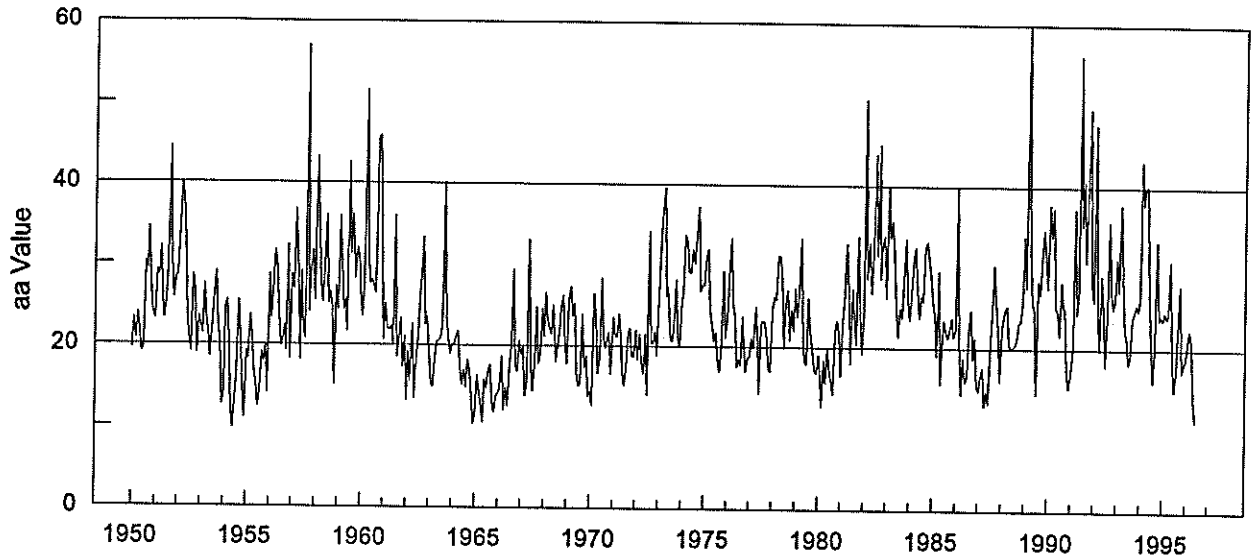
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Gottingen

Kp through June 30, 1996



Monthly Mean aa Index Jan 1950 - May 1996



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	16.0	20.2	33.3	23.6	24.1	29.4
1995	23.6	24.5	23.8	24.2	30.9	19.1	14.9	17.0	22.2	27.9	17.2	18.2	22.0
1996	18.8	20.8	22.3	20.5	14.0	11.1							17.9

PLANETARY GEOMAGNETIC ACTIVITY

3-HOUR-RANGE INDICES Km AND aa BY 27-DAY SOLAR ROTATION INTERVAL

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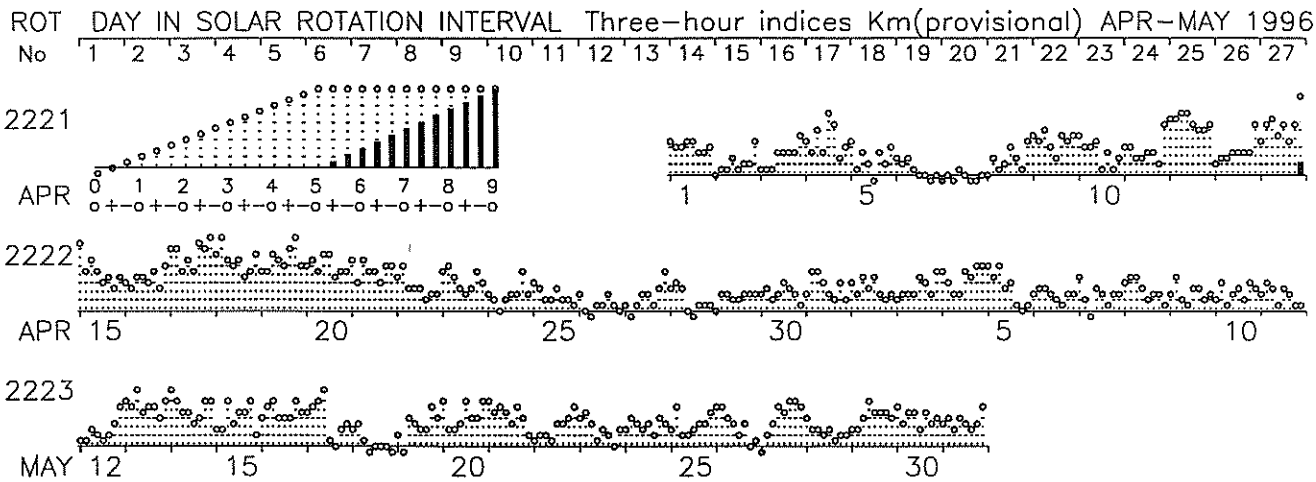
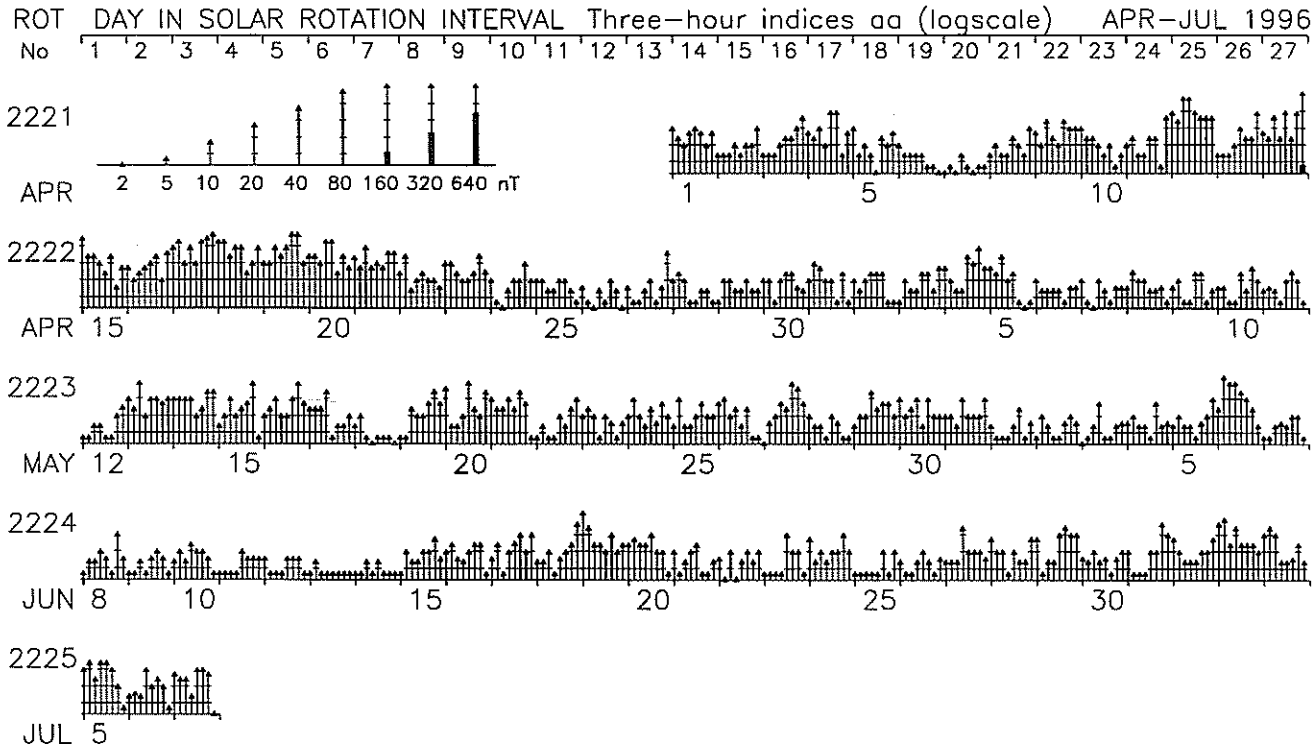
CETP, 4 Avenue de Neptune, F-94107 Saint Maur des Fosses CEDEX - FRANCE



Indices Derivation at Universite Paris Sud; Graph Prepared at ISGI Publication Office.

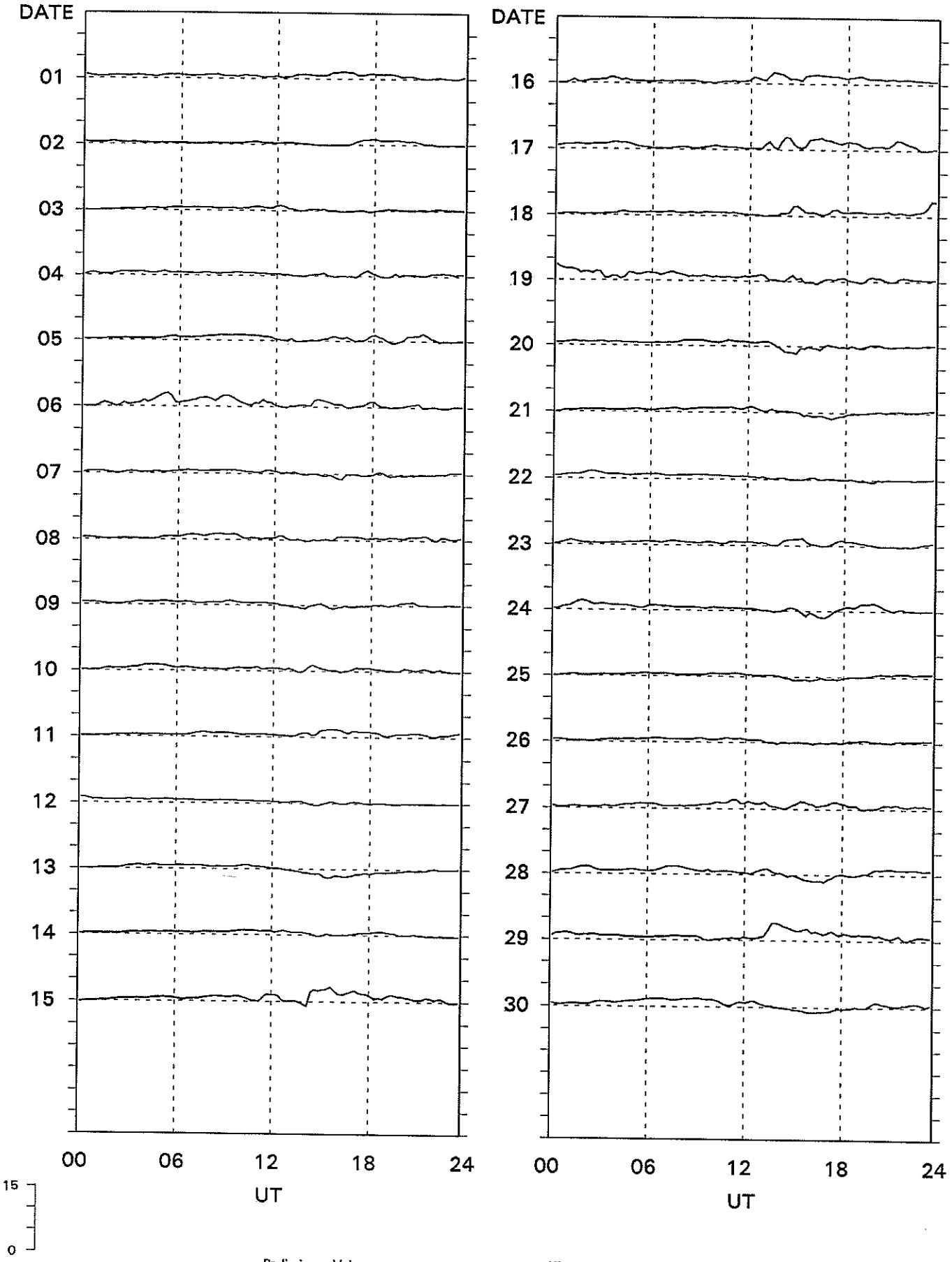


Indices Derivation at Universite Paris Sud; Graph Prepared at ISGI Publication Office.

PC-INDEX

Thule

June, 1996



Preliminary Values.

15-min. Values.

Danish Meteorological Institute

WDC-C2 FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES(PROVISIONAL)

JUNE 1996

UNIT=NT U.T.

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-6	-5	-7	-3	-1	0	2	3	2	3	5	7	10	8	2	2	4	4	4	3	3	0	-2	-3
2	-1	1	5	6	10	10	10	11	9	8	13	16	18	17	18	16	16	16	11	5	-1	-4	-1	0
3	1	2	-1	0	2	5	4	2	-1	-2	2	5	9	10	10	11	14	15	12	11	8	5	9	12
4	14	13	9	3	3	5	9	12	12	11	11	11	12	10	9	5	7	11	12	14	13	12	11	10
5	11	15	14	12	12	9	9	7	1	-2	-2	0	2	1	3	6	7	9	10	12	12	6	7	8
6	10	11	13	15	8	-4	2	5	3	6	9	7	0	0	-1	-7	-8	-8	-8	-5	-4	-5	-1	3
7	2	-2	-5	-5	-5	-3	-2	-3	-1	-2	-1	4	6	5	5	4	3	1	1	5	5	4	5	6
8	5	1	-1	2	6	9	10	8	7	3	6	8	10	7	3	0	-1	-3	-5	-5	-6	-5	-3	0
9	1	0	-2	-3	-1	1	4	7	8	7	6	8	9	14	15	11	10	8	4	4	7	6	6	9
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11	6	8	7	4	7	9	12	16	15	15	14	17	20	18	18	14	13	12	8	7	11	10	9	9
12	9	4	-1	1	3	5	7	6	6	6	7	12	14	12	11	9	9	8	3	1	2	2	3	5
13	6	6	6	8	7	7	7	8	8	9	10	11	11	8	9	10	9	9	10	11	11	11	8	10
14	11	13	15	12	8	6	5	3	3	4	4	5	4	1	2	4	4	2	2	0	2	5	9	11
15	13	20	21	22	20	15	18	20	22	21	19	16	12	11	14	15	13	8	0	-3	-9	-10	-7	-2
16	3	6	7	5	2	5	5	5	6	6	3	3	4	4	5	6	5	0	-2	-1	1	0	-2	-3
17	-5	-6	-7	-8	-3	1	3	6	2	-1	1	3	4	5	2	0	2	0	-4	-6	-7	-9	-13	-8
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22	2	-1	-3	-2	0	2	2	3	3	3	3	5	8	13	12	13	9	10	10	13	14	16	18	18
23	18	9	11	11	14	15	13	12	11	11	12	11	11	16	16	10	14	15	14	11	7	5	9	12
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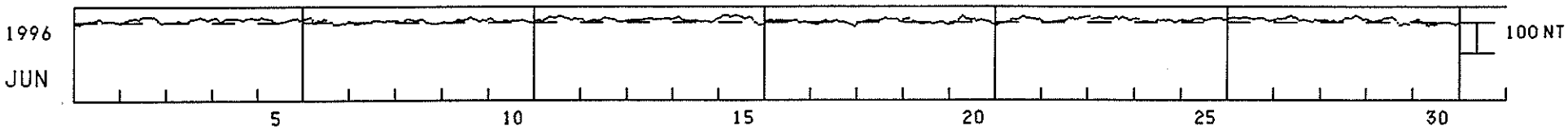
25	7	5	3	3	5	8	10	11	11	11	11	8	6	8	10	11	11	12	14	13	11	7	7	8
26	11	13	14	14	13	11	11	14	16	17	13	11	9	9	11	11	14	13	12	8	5	4	5	7
27	8	11	9	10	11	11	16	18	20	15	15	11	6	5	7	8	6	4	2	2	7	6	6	6
28	5	7	6	5	2	3	5	1	0	3	4	8	14	14	12	12	17	21	20	17	13	7	8	9
29	7	4	3	1	4	5	6	8	11	12	14	13	15	11	7	-1	-9	-10	-6	-6	-6	-7	1	1
30	3	8	7	2	-2	-4	-10	-11	-8	-8	-9	-7	-3	-3	-1	0	0	0	-2	-5	-5	-9	-6	-2



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

JUNE 1996

Sta	Geomag Lat	Commencement Time Day	(UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
UJJ	13.6N	05	1900	..	..	..	..		-	6	59	47	06	20
ABG	09.4N	05	1900	..	..	..	..	06(2)	4	5	82	41	06	20
HYB	07.6N	05	1600	..	..	..	..	06(2)	4	5	88	33	07	04
TRD	01.1S	05	1900	..	..	..	..		-	3	105	83	06	20
GUA	04.3N	06	02--	..	..	..	..	06(2)	5	--	90	10	06	16
KRC	16.4N	18	2325	..	..	..	..	19(1)	5	78	71	33	19	21
UJJ	13.6N	18	1800	..	..	..	..		-	7	67	37	20	12
ABG	09.4N	18	1800	..	..	..	..	18(8) 19(1) 29(7)	-	7	76	45	20	12
HYB	07.6N	18	1800	..	..	..	..	20(1)	5	6	81	24	20	16
GUA	04.3N	18	22--	..	..	..	..	19(1)	5	10	80	10	19	06
ETT	00.7S	18	1800	..	..	..	..		-	--	121	47	20	14
TRD	01.1S	18	1800	..	..	..	..		-		130	80	20	12
HER	33.6S	18	23--	..	..	..	..	18(8)	5	14	47	63	19	04
CZT	51.5S	18	18--	..	..	..	..	18(8) 19(1)	5	25	48	48	19	04

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: AMS DRV PAF

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

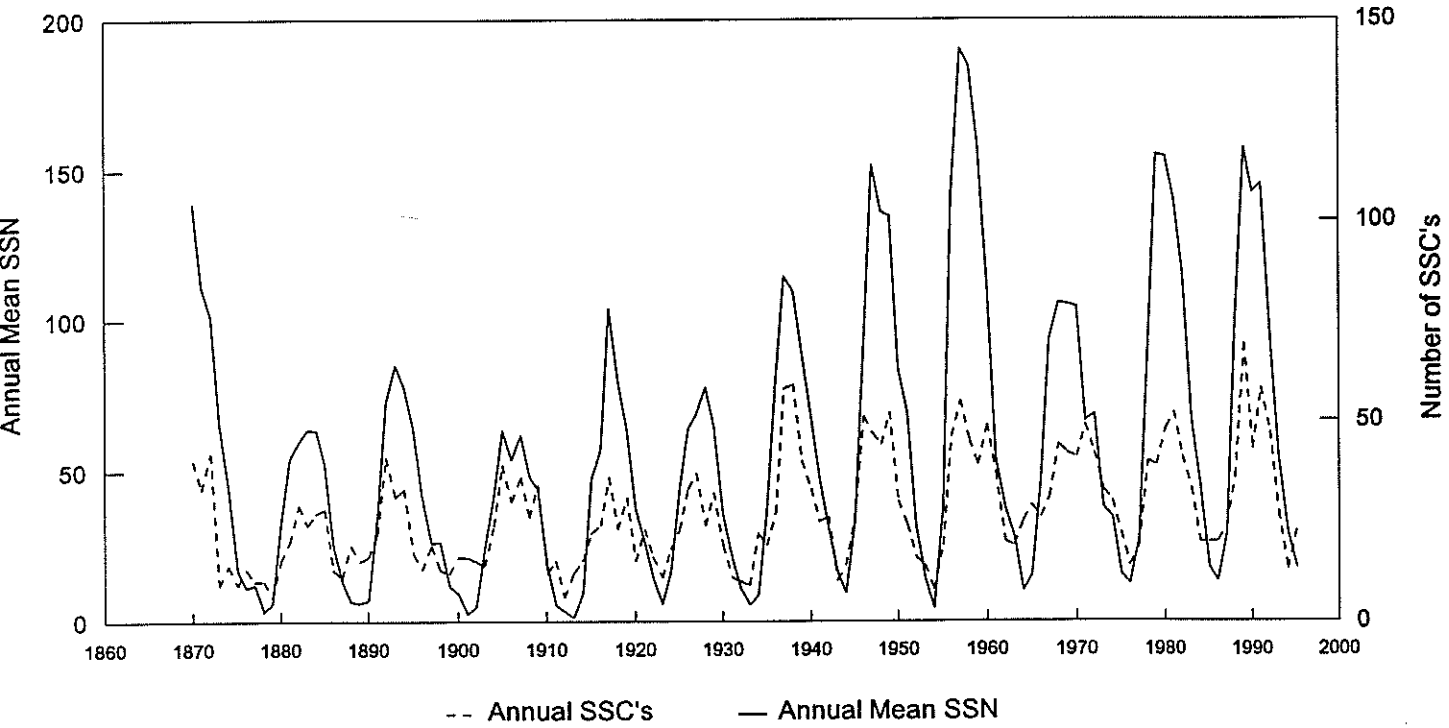
JUNE 1996

Storm Sudden Commencements (SSC)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
19	0245	A: HRB* COI*	06	0227-0236	MPO (ssc: BDV HRB)
		si: DOU SPT MPO	06	0806-0812	MPO
			06	1409-1414	MPO
			18	0632-0638	MPO
			27	0629-0632	MPO (ssc: BDV)
			29	1321-1324	MPO (ssc: WNG* BDV)

REPORTING OBSERVATORIES (up to the 2nd of August 1996):
SOD DOB NUR WNG NGK DOU BDV CLF HRB NAG GCK MMB EBR COI SPT FRD KAK HTY KNY QUE LNP HYB ETT 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 identified with a plus sign (+).

Storm Sudden Commencements (SSC) and Sunspot Numbers (SSN)



*U.S. Government Printing Office: 1996 — 774-021/21011

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."