

## **U.S. DEPARTMENT OF COMMERCE**

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### **NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION**

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### **NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE**

Thomas N. Pyke, Jr., Assistant Administrator

NOVEMBER 1991 NUMBER 567 - Part I

# **Solar-Geophysical Data prompt reports**

Data for October, September 1991 and Late Data

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## **NATIONAL GEOPHYSICAL DATA CENTER**

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Boulder, Colorado

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NUMBER 567

(Issued in Two Parts)

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The entry "561A 56" under Mar 1991, for example, means that the sunspot drawings for Mar 1991 appear in SOLAR-GEOPHYSICAL DATA No. 561, Part I, and that they begin on page 56. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

C O N T E N T S

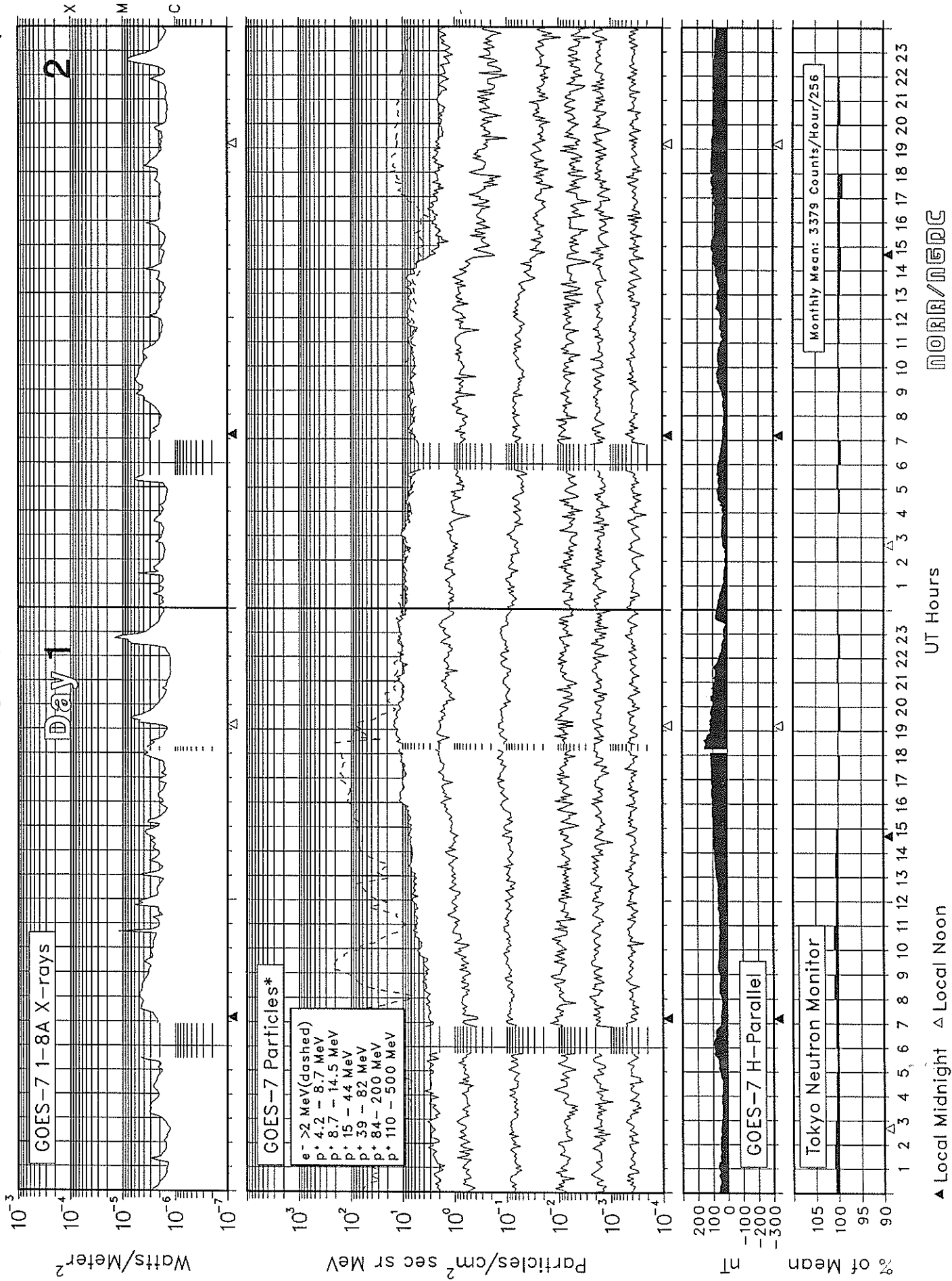
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# SOLAR-TERRESTRIAL ENVIRONMENT

October 1991

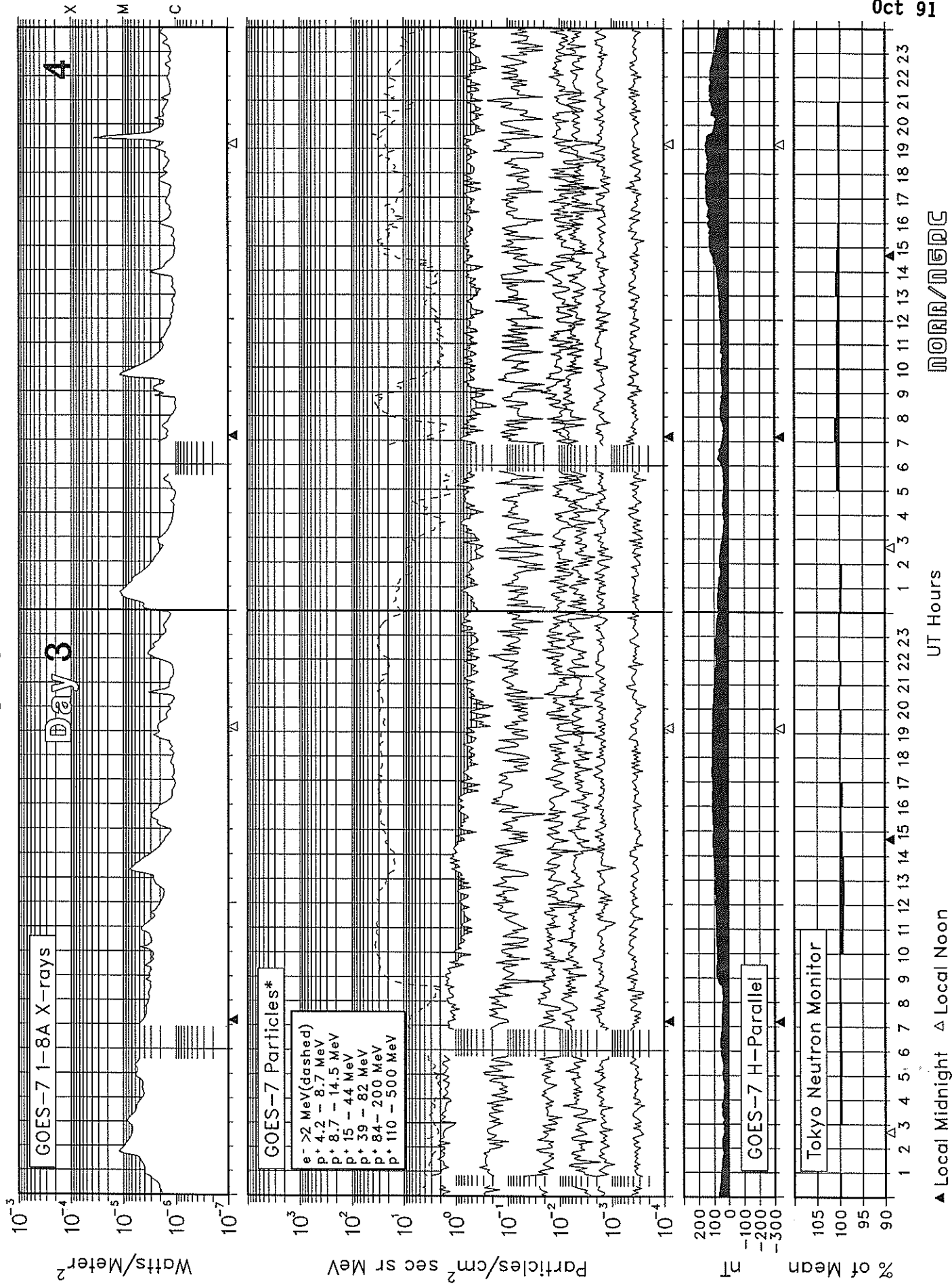
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October 1991

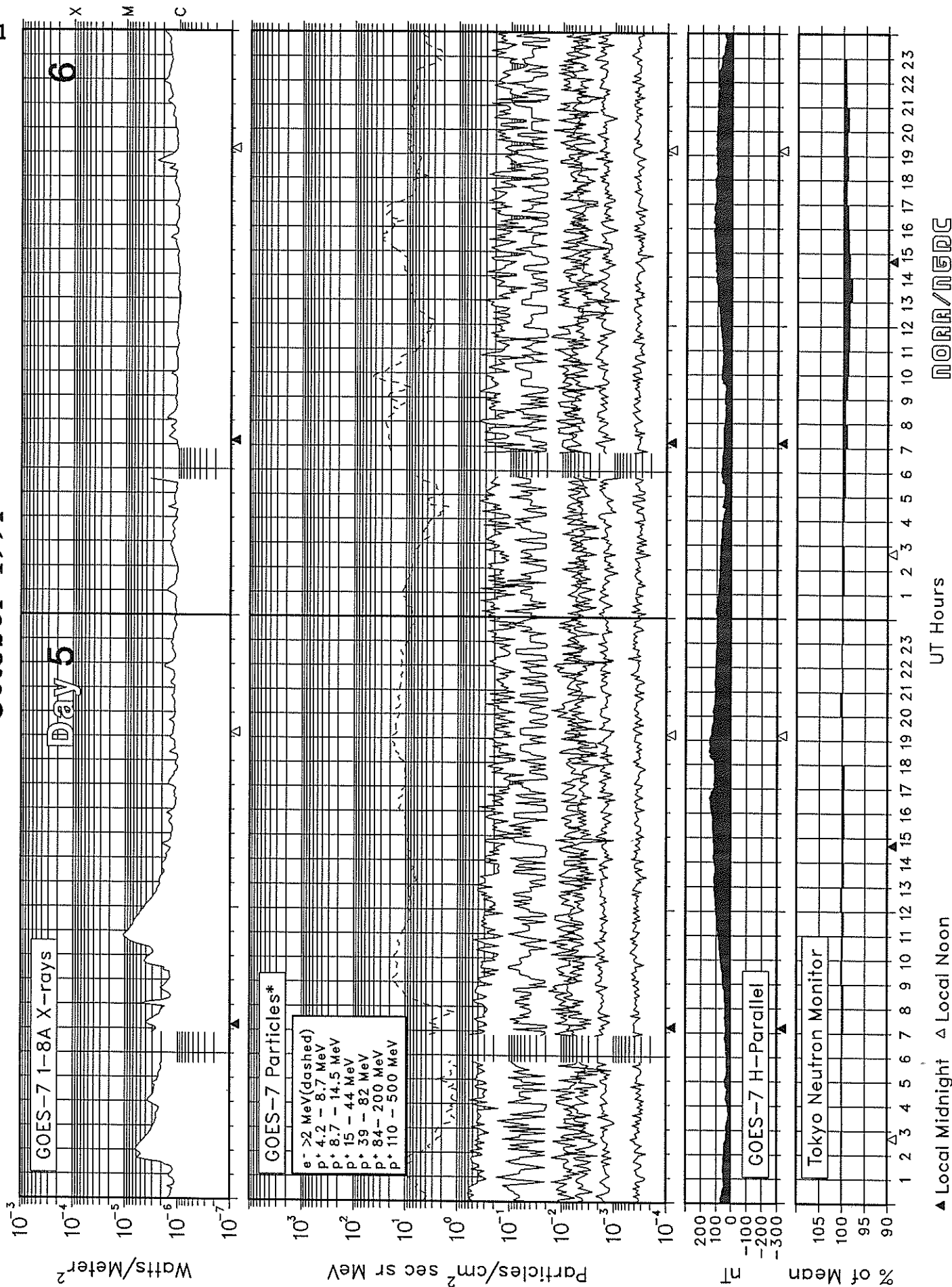


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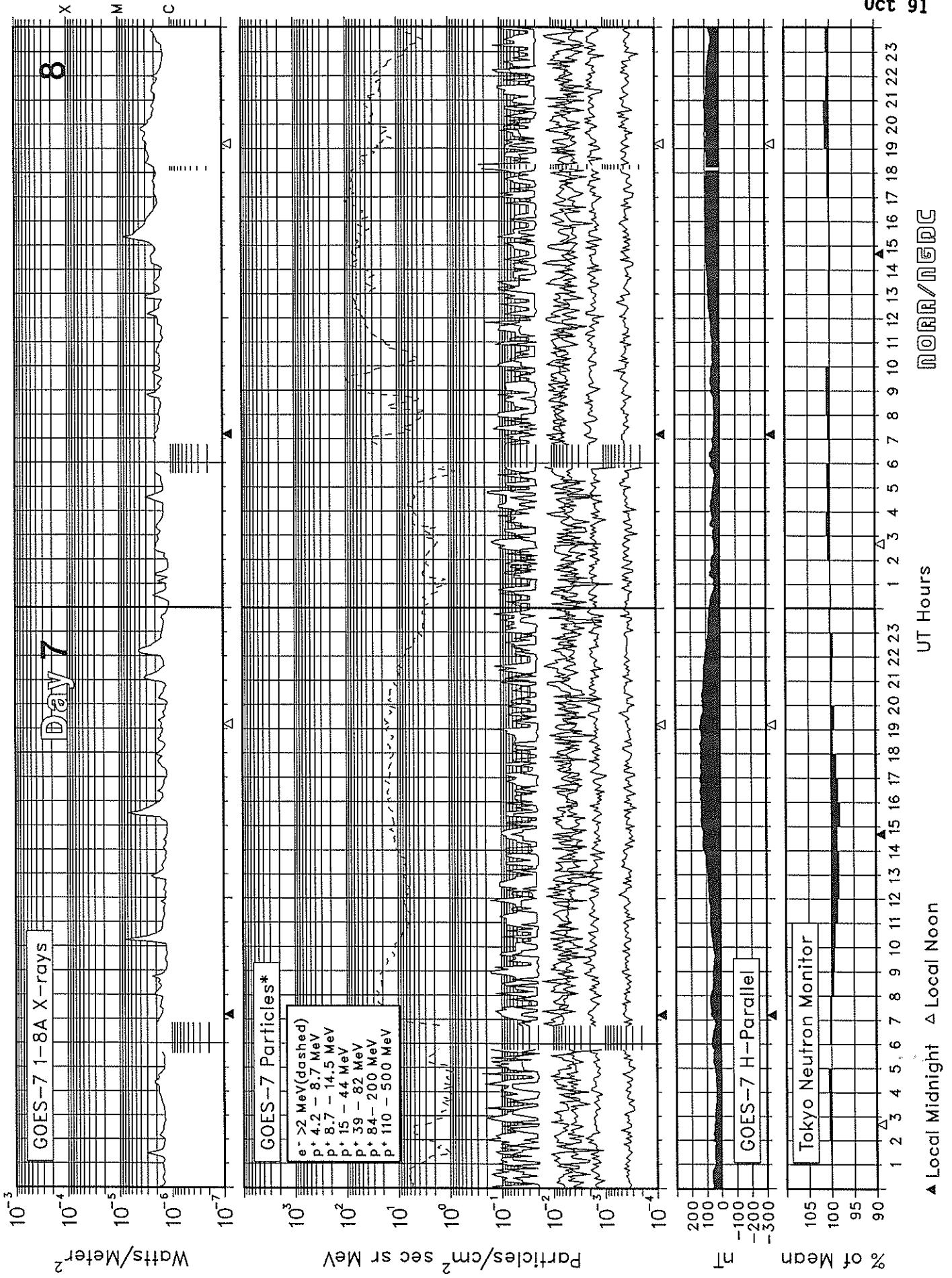
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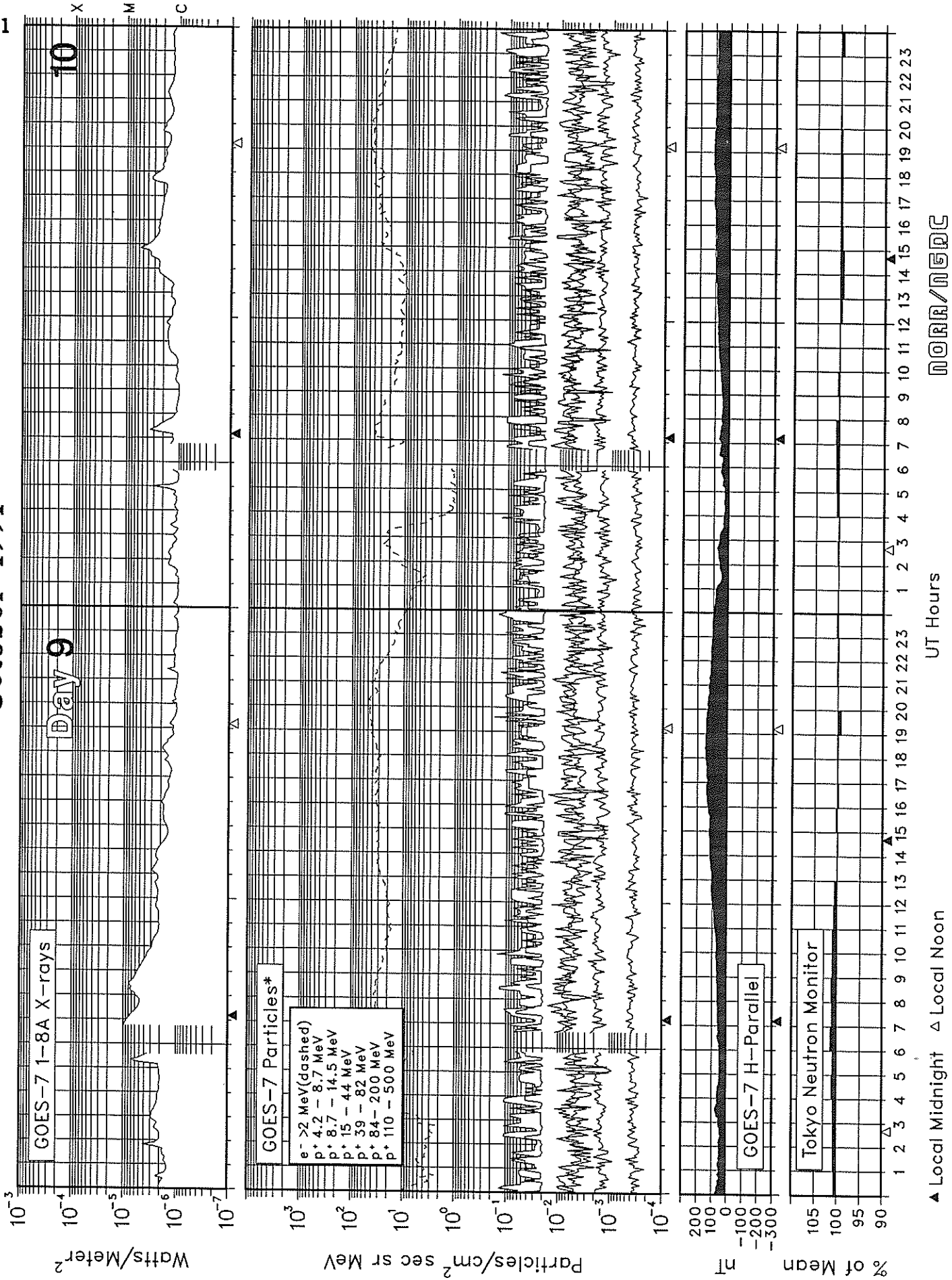




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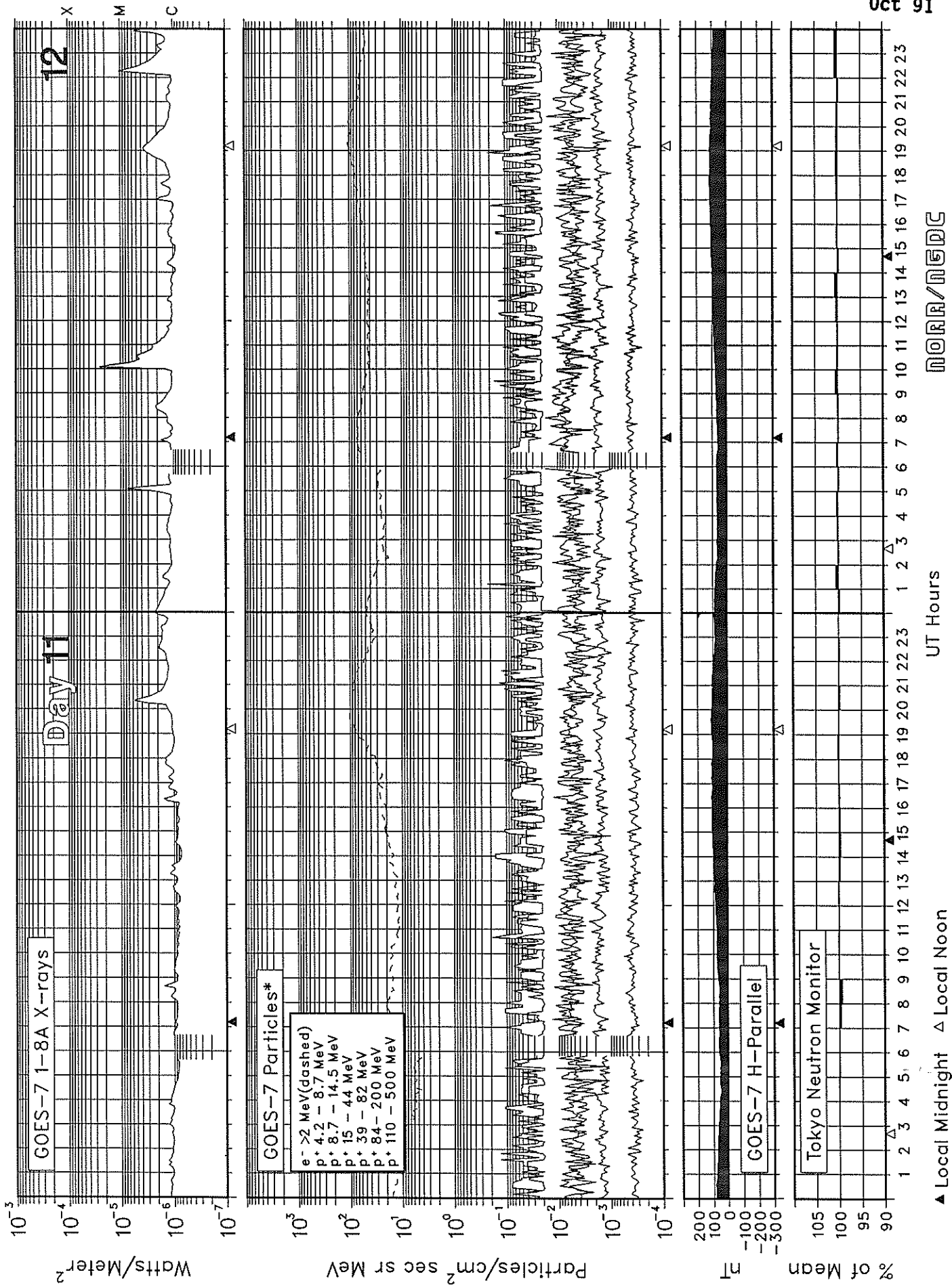
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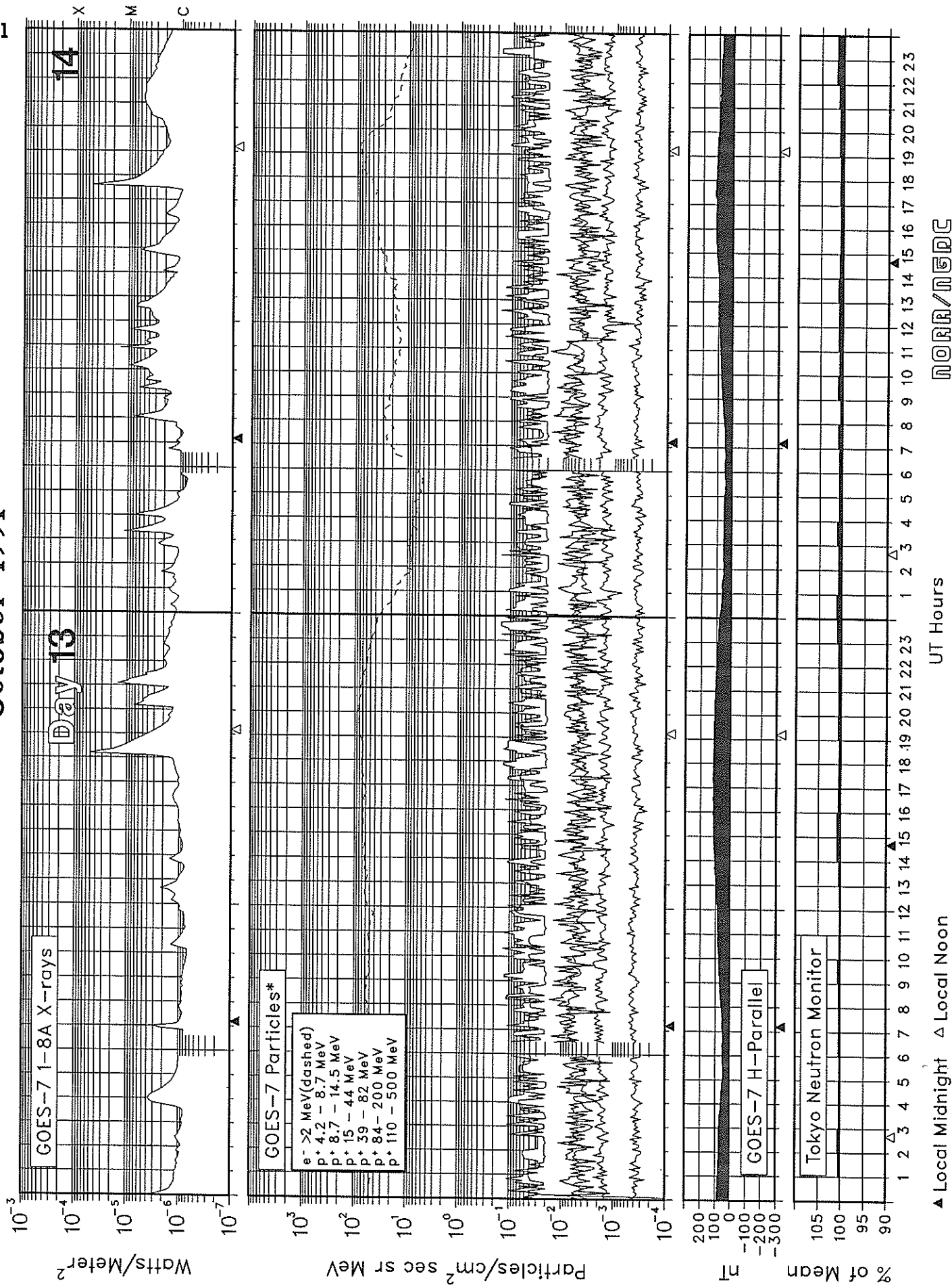


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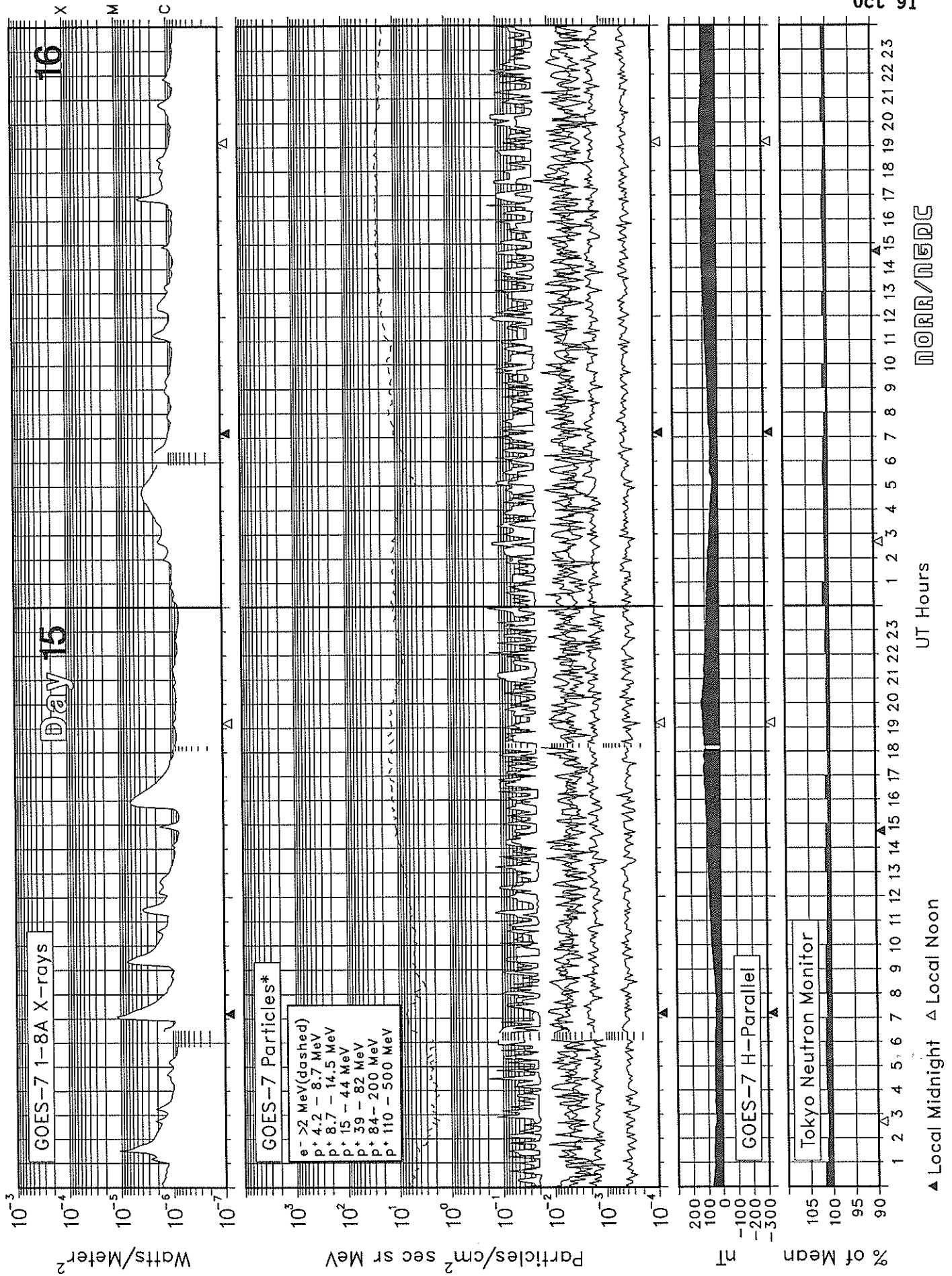
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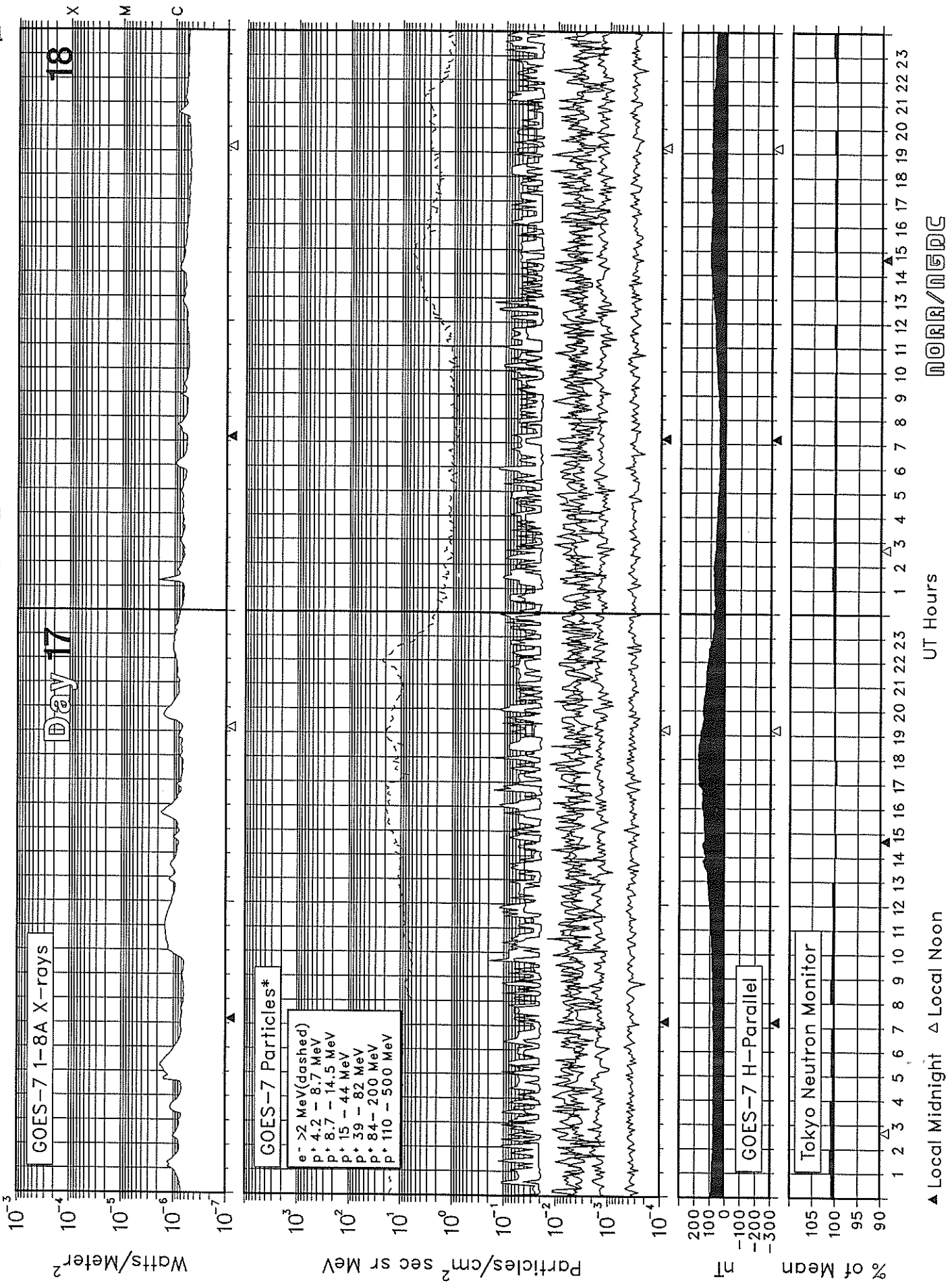
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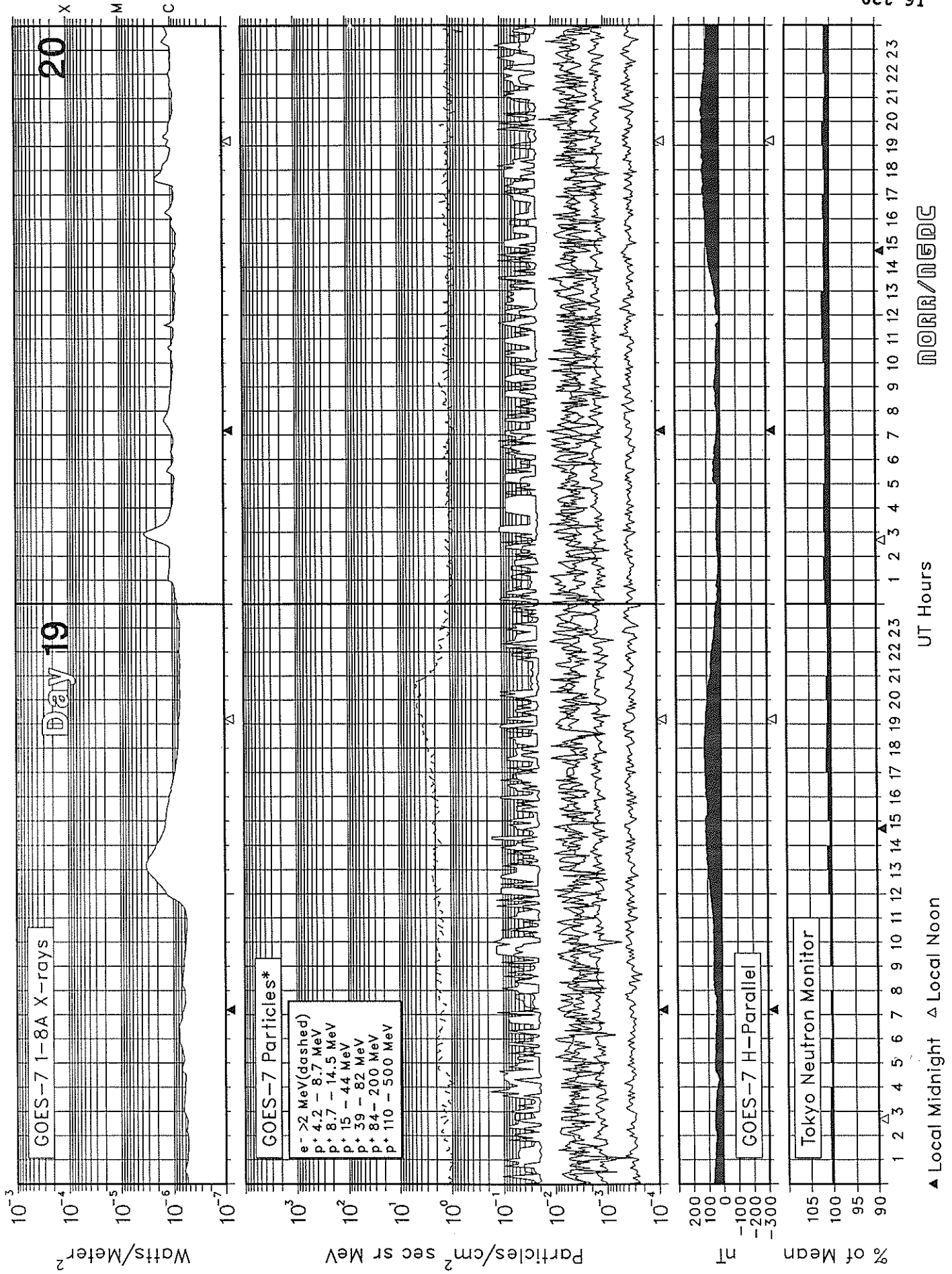
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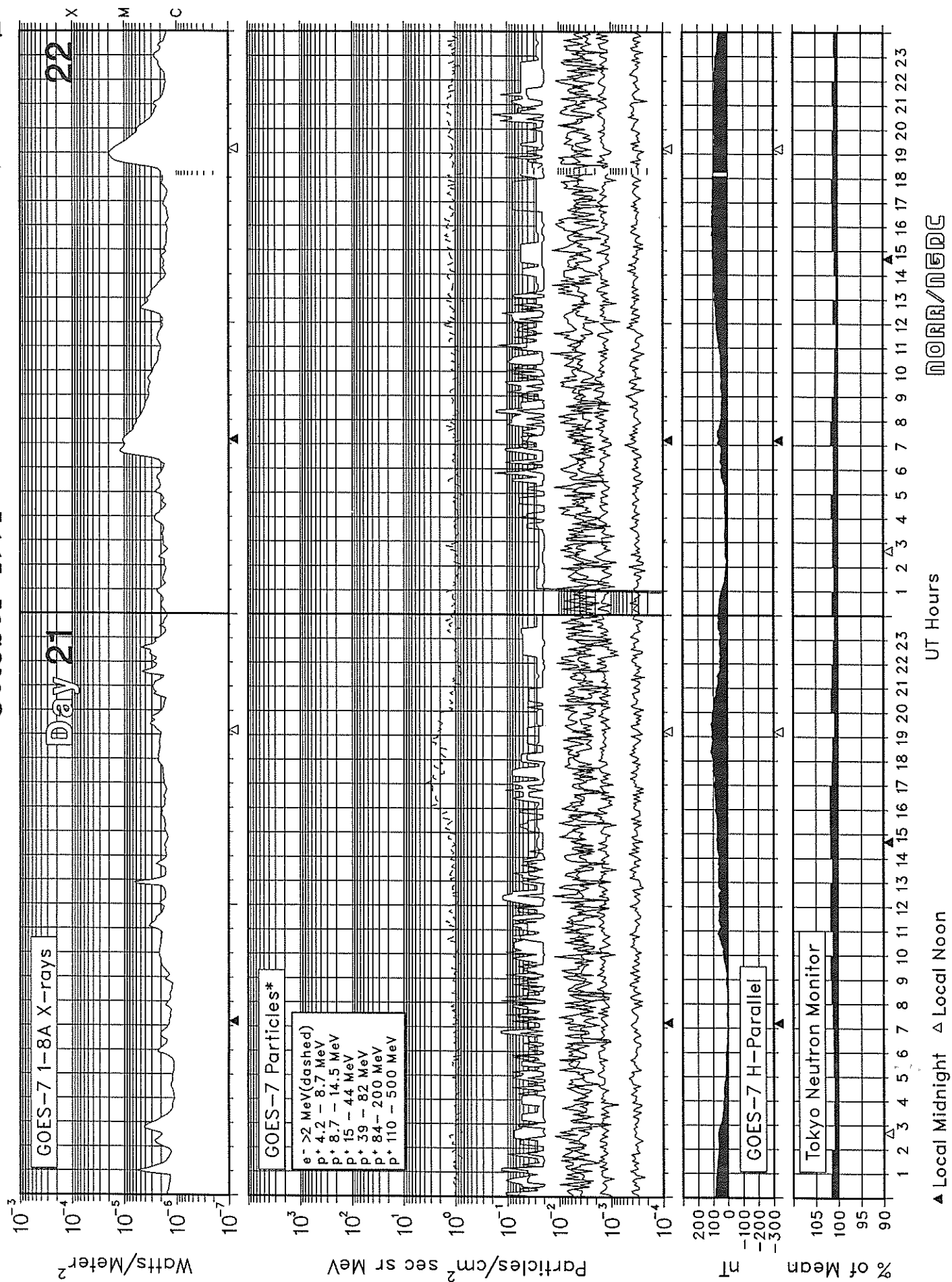
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October 1991



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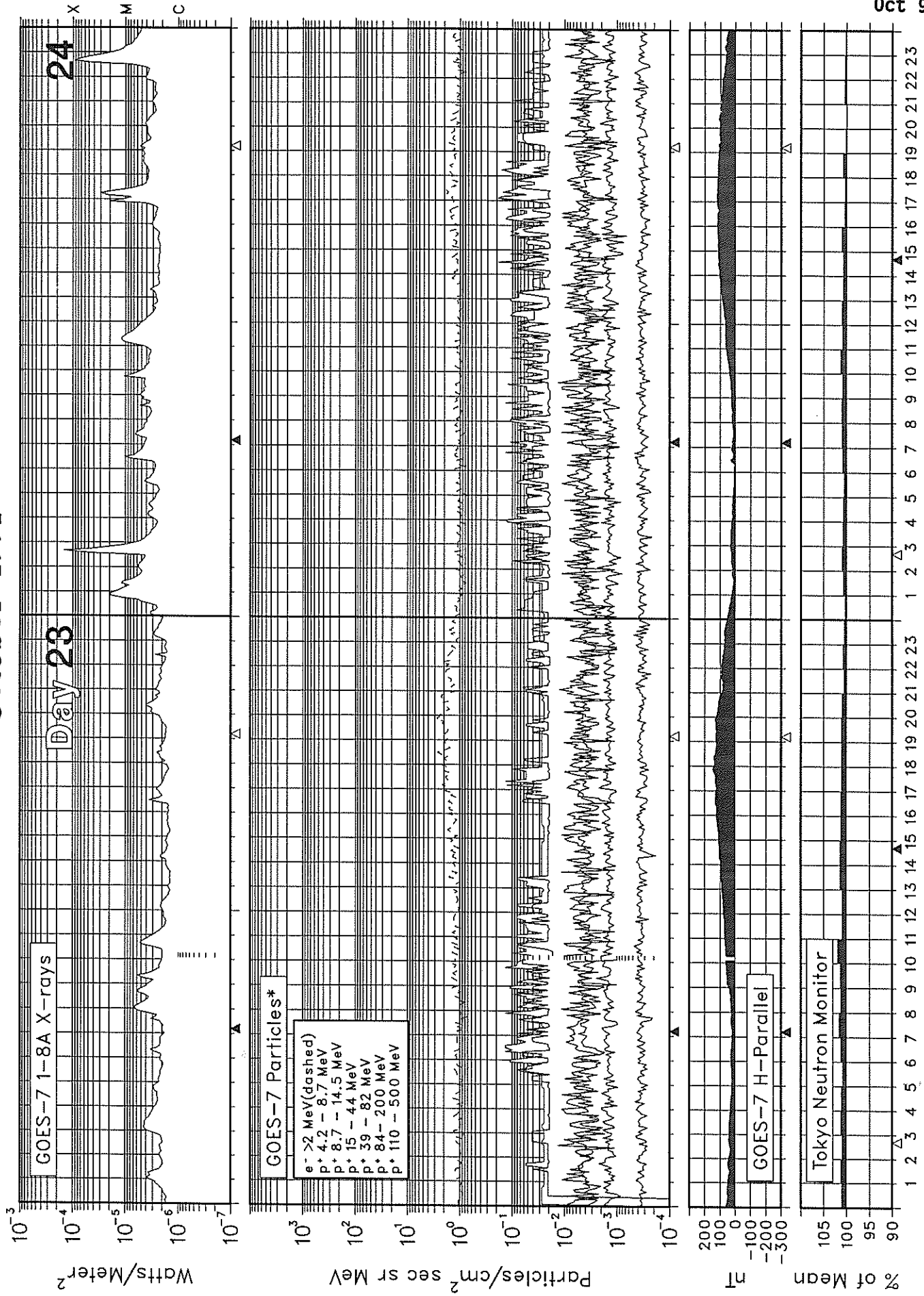
## October 1991



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## October 1991

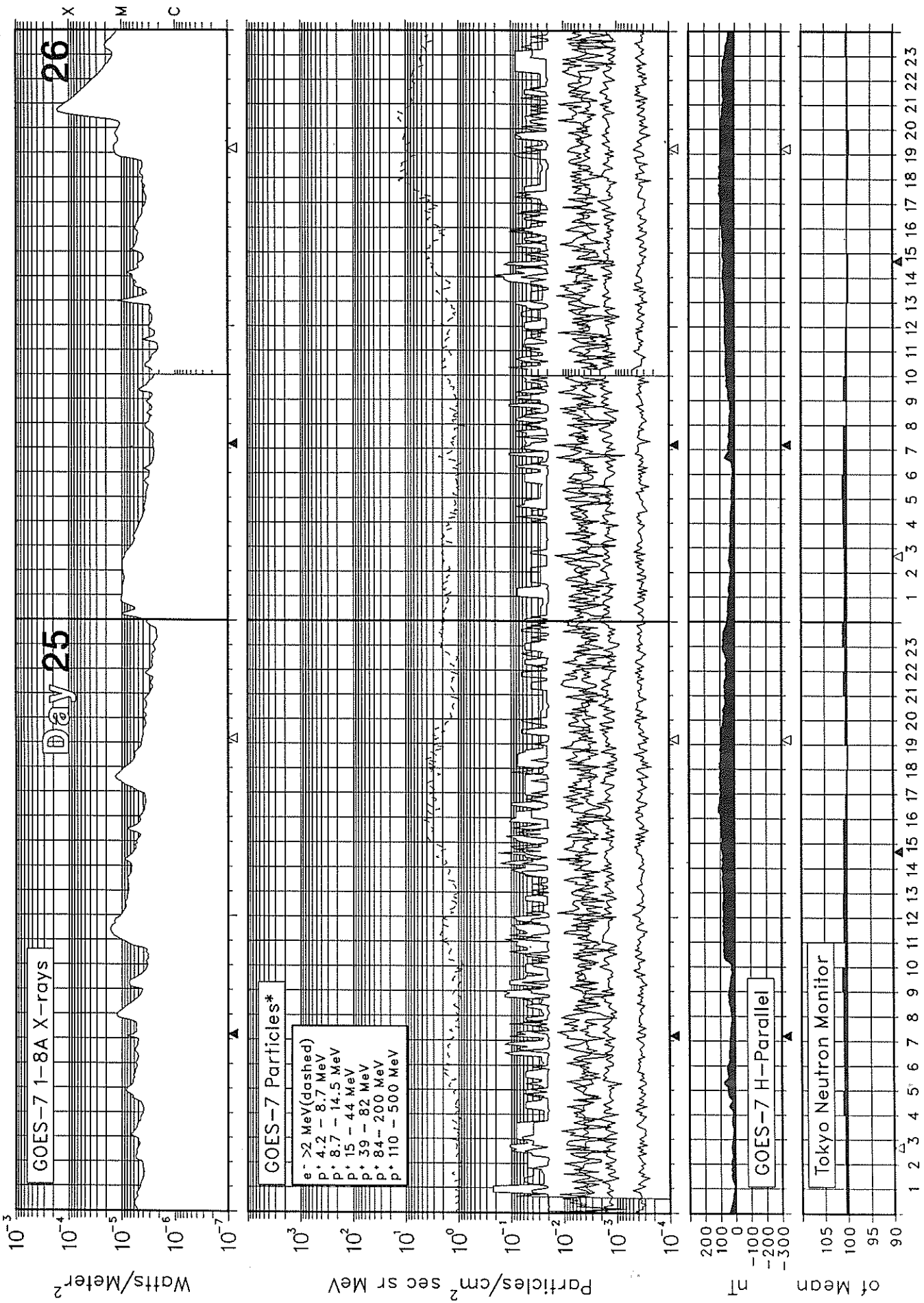




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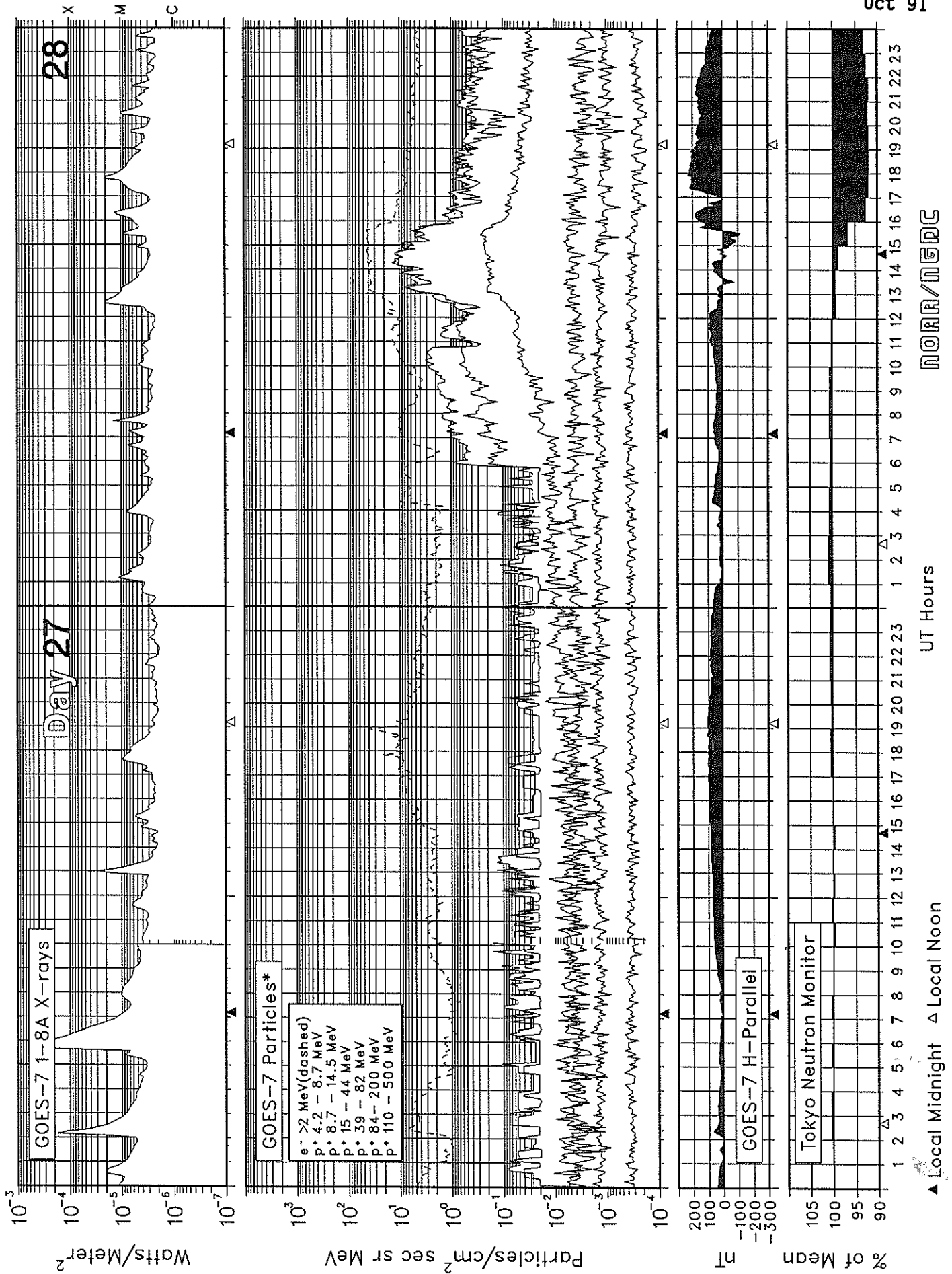
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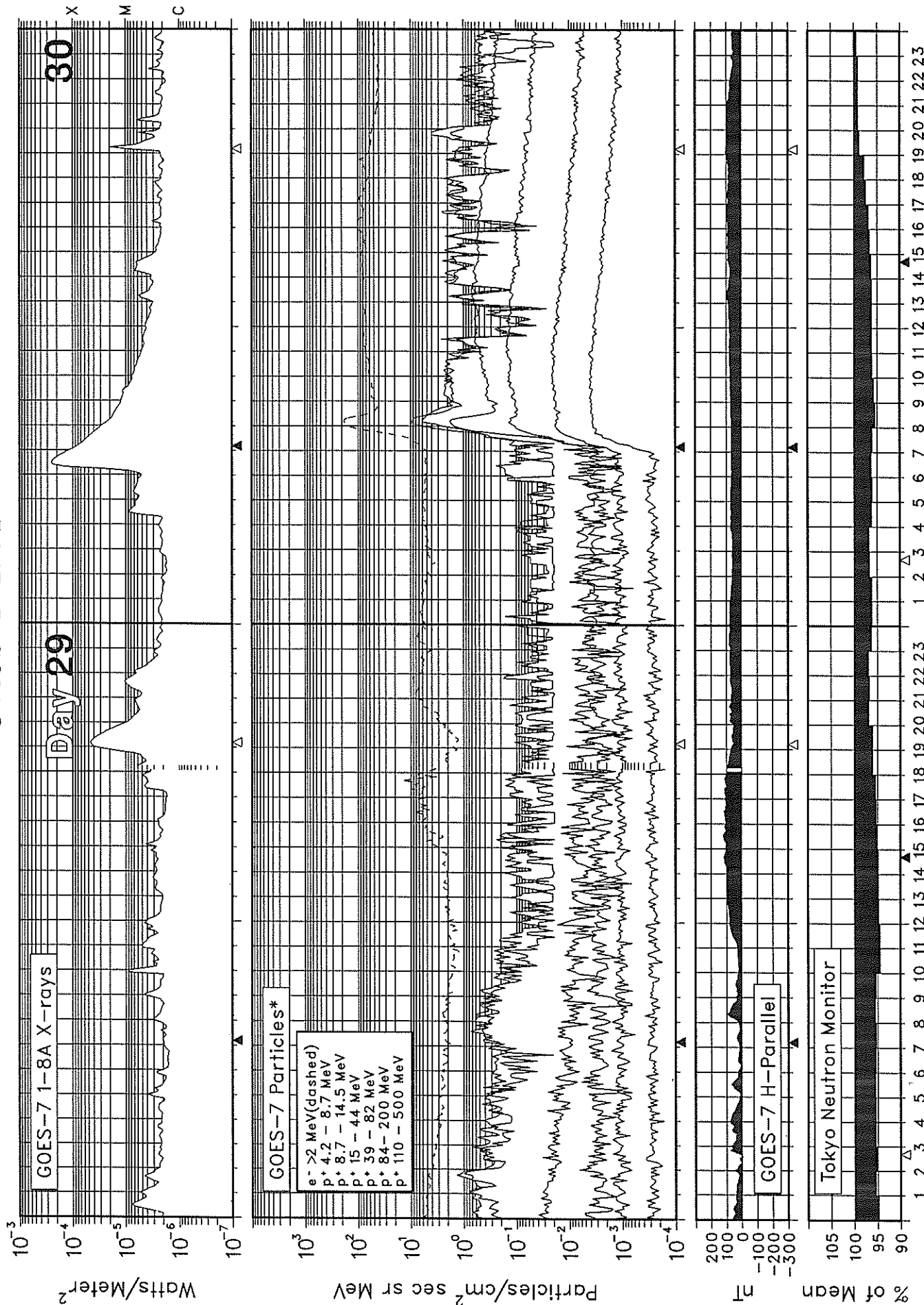
# SOLAR-TERRESTRIAL ENVIRONMENT

## October 1991



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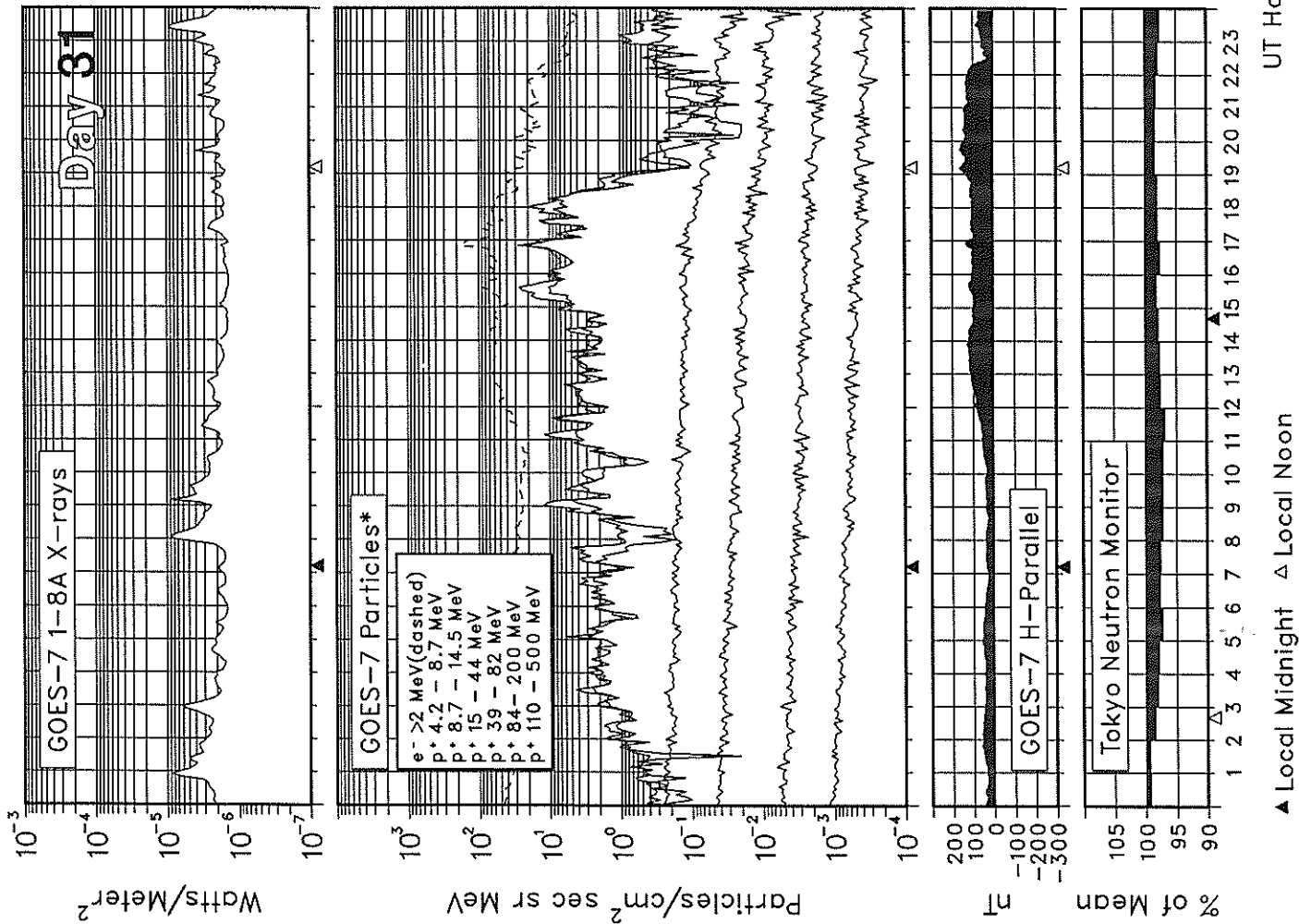
## October 1991



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# SOLAR-TERRESTRIAL ENVIRONMENT

## October 1991



\* The units for the integral electron flux are Particles/cm<sup>2</sup> sec. The plotted electron values have been divided by 10. The proton fluxes have not been corrected for high-energy contamination.

**ALERT PERIODS**  
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

**Summary of the Geoalert Messages** **OCTOBER 1991**

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast <sup>1</sup>	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
274	01	30	196	200	15	S10	W68	1	0	0	01	S10	W68	Q	Solalert 01/XX, Magalert 01/02.
						S07	W12	0	0	0		S07	W12	E	
						S12	E07	8	1	0		S12	E07	E	
						S20	E15	7	0	0		S20	E15	A	
						N18	E34	0	0	0		N18	E34	E	
						S22	E07	0	0	0		S22	E07	Q	
						N01	E73	0	0	0		N01	E73	Q	
275	02	01	259	208	31	S10	W81	0	0	0	02	S10	W81	Q	Solalert 02/XX, Magalert 02/03.
						S07	W25	0	0	0		S07	W25	E	
						S11	W07	20	2	0		S11	W07	A	
						S20	W33	0	0	0		S20	W33	Q	
						N14	W55	1	0	0		N14	W55	Q	
						S19	E02	7	1	0		S19	E02	A	
						N17	E21	0	0	0		N17	E21	E	
						N10	W77	0	0	0		N10	W77	Q	
						S23	W08	0	0	0		S23	W08	Q	
						N01	E61	0	0	0		N01	E61	Q	
						S27	E20	0	0	0		S27	E20	Q	
						N13	E51	0	0	0		N13	E51	Q	
						Presto: <sup>2</sup>			Boulder	Proton event began 01/1740 UT.					
			Sydney	Storm sudden commencement at 01/1813 UT.											
			Toyokawa	Tenflare 170 flux units 01/2228 UT duration 3 minutes.											
276	03	02	252	221	30	S08	W37	0	0	0	03	S08	W37	Q	Solalert 03/XX, Magalert 03.
						S11	W20	14	0	0		S11	W20	A	
						S20	W12	4	1	0		S20	W12	A	
						N18	E08	9	0	0		N18	E08	E	
						S21	W24	0	0	0		S21	W24	Q	
						N01	E48	0	0	0		N01	E48	Q	
						S26	E06	1	0	0		S26	E06	Q	
						N12	E35	1	0	0		N12	E35	Q	
S16	E54	0	0	0	S16	E54	Q								
277	04	03	233	212	21	S08	W52	0	0	0	04	S08	W52	Q	Solalert 04/XX, Maglaert 04/06.
						S12	W31	15	1	0		S12	W31	A	
						S20	W24	4	2	0		S20	W24	A	
						N18	W06	5	0	0		N18	W06	E	
						N01	E34	0	0	0		N01	E34	Q	
						S25	W06	1	0	0		S25	W06	Q	
						N09	E20	3	0	0		N09	E20	Q	
						S15	E43	0	0	0		S15	E43	Q	
S17	E66	1	0	0	S17	E66	Q								
278	05	04	194	213	25	S08	W65	0	0	0	05	S08	W65	Q	Solalert 05/XX, Magalert 05/XX.
						S12	W43	11	0	0		S12	W43	A	
						S21	W38	2	1	0		S21	W38	A	
						N18	W19	0	0	0		N18	W19	E	
						N01	E21	0	0	0		N01	E21	Q	
						S27	W20	0	0	0		S27	W20	Q	
						N09	E06	2	1	0		N09	E06	E	
S16	E54	0	0	0	S16	E54	Q								

**ALERT PERIODS**  
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

## Summary of the Geolert Messages

OCTOBER 1991

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast <sup>1</sup>	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
279	06	05	247	193	12	S08	W79	0	0	0	06	S08	W79	Q	Solalert 06/XX, Magalert 06/XX.
						S12	W57	9	1	0		S12	W57	A	
						S20	W52	1	0	0		S20	W52	E	
						N18	W32	0	0	0		N18	W32	Q	
						N00	E07	0	0	0		N00	E07	Q	
						S26	W33	0	0	0		S26	W33	Q	
						N08	W07	6	0	0		N08	W07	E	
						S16	E41	1	0	0		S16	E41	Q	
						S02	E12	0	0	0		S02	E12	Q	
						S03	E59	0	0	0	S03	E59	Q		
280	07	06	188	182	22	S12	W70	6	0	0	07	S12	W70	E	Solalert 07/XX, Magalert 07/XX.
						S20	W69	1	0	0		S20	W69	E	
						N18	W45	2	0	0		N18	W45	Q	
						S02	W06	0	0	0		S02	W06	Q	
						S27	W46	0	0	0		S27	W46	Q	
						N08	W19	4	0	0		N08	W19	E	
						S17	E29	0	0	0		S17	E29	Q	
						S04	W00	0	0	0		S04	W00	Q	
						S15	E16	0	0	0		S15	E16	Q	
281	08	07	163	180	25	S11	W82	5	0	0	08	S11	W82	E	Solalert, Magalert.
						S19	W82	0	0	0		S19	W82	E	
						N18	W59	1	0	0		N18	W59	Q	
						S02	W19	0	0	0		S02	W19	Q	
						S26	W60	0	0	0		S26	W60	Q	
						N07	W34	8	0	0		N07	W34	E	
						S17	E17	0	0	0		S17	E17	Q	
						S15	E03	0	0	0		S15	E03	Q	
						N19	W05	0	0	0		N19	W05	Q	
						S33	W57	0	0	0	S33	W57	Q		
282	09	08	188	179	30	S12	W95	2	0	0	09	S12	W95	Q	Solalert 09/09, Magalert 09/09.
						N18	W71	1	0	0		N18	W71	Q	
						S27	W72	0	0	0		S27	W72	Q	
						N07	W47	4	0	0		N07	W47	E	
						S15	W09	0	0	0		S15	W09	Q	
						N19	W19	3	0	0		N19	W19	Q	
						S32	W71	0	0	0		S32	W71	Q	
						S09	E12	1	0	0		S09	E12	Q	
						N12	E17	1	0	0		N12	E17	E	
						S11	E63	3	0	0		S11	E63	Q	
						N07	E73	0	0	0		N07	E73	Q	
						S23	E74	0	0	0	S23	E74	E		
283	10	09	211	184	11	N18	W83	1	0	0	10	N18	W83	Q	Solalert, Magnil.
						N08	W61	4	0	0		N08	W61	E	
						S17	W05	1	0	0		S17	W05	Q	
						N19	W32	1	0	0		N19	W32	E	
						S10	W02	0	0	0		S10	W02	Q	
						N13	E04	0	0	0		N13	E04	Q	
						S10	E49	1	0	0		S10	E49	Q	
						N07	E65	0	0	0		N07	E65	Q	
						S24	E62	2	0	0		S24	E62	E	
						N01	E67	0	0	0		N01	E67	Q	
						N15	E68	0	0	0		N15	E68	Q	
						S14	W56	1	0	0	S14	W56	Q		

**ALERT PERIODS**  
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages OCTOBER 1991

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast <sup>1</sup>	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
284	11	10	230	180	21	N16	W94	0	0	0	11	N16	W94	Q	Solnil, Magquiet.
						N07	W73	1	0	0		N07	W73	Q	
						S17	W19	1	0	0		S17	W19	Q	
						S08	W53	0	0	0		S08	W53	Q	
						N18	W47	2	0	0		N18	W47	Q	
						S10	W16	1	0	0		S10	W16	Q	
						N12	W10	0	0	0		N12	W10	Q	
						S10	E37	2	0	0		S10	E37	Q	
						N07	E47	0	0	0		N07	E47	Q	
						S24	E49	4	0	0		S24	E49	E	
						N02	E53	0	0	0		N02	E53	Q	
						N16	E54	0	0	0		N16	E54	Q	
						S14	W70	1	0	0		S14	W70	Q	
						N07	E59	0	0	0		N07	E59	Q	
285	12	11	229	179	9	N07	W88	1	0	0	12	N07	W88	Q	Solquiet, Magquiet.
						S17	W34	0	0	0		S17	W34	Q	
						N18	W63	1	0	0		N18	W63	Q	
						S10	W30	0	0	0		S10	W30	Q	
						N12	W22	0	0	0		N12	W22	Q	
						S12	E24	2	0	0		S12	E24	Q	
						N07	E31	0	0	0		N07	E31	Q	
						S24	E37	4	0	0		S24	E37	E	
						N01	E39	0	0	0		N01	E39	Q	
						N16	E42	0	0	0		N16	E42	Q	
						S14	W86	0	0	0		S14	W86	Q	
						N07	E47	1	0	0		N07	E47	Q	
						S20	E68	0	0	0		S20	E68	Q	
						286	13	12	195	188		4	S17	W49	
N17	W80	0	0	0	N17						W80		Q		
S10	W46	0	0	0	S10						W46		Q		
S12	E09	1	0	0	S12						E09		Q		
N07	E20	1	0	0	N07						E20		Q		
S24	E22	4	0	0	S24						E22		E		
N01	E27	0	0	0	N01						E27		Q		
N17	E29	0	0	0	N17						E29		Q		
N06	E33	0	0	0	N06						E33		Q		
S21	E54	1	0	0	S21						E54		Q		
287	14	13	190	183	6						N18		W91	0	0
						S09	W60	0	0	0	S09	W60	Q		
						S12	W03	0	0	0	S12	W03	Q		
						N07	E06	0	0	0	N07	E06	Q		
						S23	E08	4	0	0	S23	E08	E		
						N02	E13	0	0	0	N02	E13	Q		
						N17	E16	1	0	0	N17	E16	Q		
						N06	E19	0	0	0	N06	E19	Q		
						S21	E43	2	0	0	S21	E43	E		
						N23	E77	4	3	0	N23	E77	E		
						S36	W04	0	0	0	S36	W04	Q		

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OCT 91

**Summary of the Geoalert Messages                      OCTOBER 1991**

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast <sup>1</sup>	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
288	15	14	182	187	6	S09	W73	0	0	0	15	S09	W73	Q	Solalert 15/XX, Magquiet.
						S12	W17	1	0	0		S12	W17	Q	
						N07	W08	4	0	0		N07	W08	Q	
						S23	W06	0	0	0		S23	W06	E	
						N02	W00	0	0	0		N02	W00	Q	
						N17	W00	2	0	0		N17	W00	Q	
						N06	E07	1	0	0		N06	E07	Q	
						S21	E29	3	1	0		S21	E29	A	
						N22	E63	11	1	0		N22	E63	A	
						S35	W16	0	0	0		S35	W16	Q	
289	16	15	193	179	4	S10	W86	0	0	0	16	S10	W86	Q	Solalert 16/XX, Magquiet.
						S11	W30	0	0	0		S11	W30	Q	
						N09	W23	1	0	0		N09	W23	Q	
						S23	W19	2	0	0		S23	W19	E	
						N02	W13	0	0	0		N02	W13	Q	
						N17	W14	0	0	0		N17	W14	Q	
						N06	W07	0	0	0		N06	W07	Q	
						S21	E16	7	2	0		S21	E16	E	
						N22	E50	6	0	0		N22	E50	E	
						S37	W27	0	0	0		S37	W27	Q	
S03	E10	0	0	0	S03	E10	Q								
290	17	16	213	181	4	N07	W37	1	0	0	17	N07	W37	Q	Solalert 17/XX, Magquiet.
						S23	W32	7	0	0		S23	W32	E	
						N02	W27	0	0	0		N02	W27	Q	
						N16	W27	0	0	0		N16	W27	Q	
						N08	W17	0	0	0		N08	W17	Q	
						S21	E03	0	0	0		S21	E03	E	
						N22	E38	6	0	0		N22	E38	E	
						S37	W39	0	0	0		S37	W39	Q	
						S03	W04	0	0	0		S03	W04	Q	
						N18	W16	0	0	0		N18	W16	Q	
S28	W09	0	0	0	S28	W09	Q								
291	18	17	166	169	5	N06	W52	1	0	0	18	N06	W52	Q	Solalert 18/XX, Magquiet.
						S23	W45	8	0	0		S23	W45	E	
						N01	W39	0	0	0		N01	W39	Q	
						N15	W39	0	0	0		N15	W39	Q	
						N06	W32	0	0	0		N06	W32	Q	
						S21	W09	1	0	0		S21	W09	Q	
						N22	E24	4	0	0		N22	E24	E	
S03	W17	0	0	0	S03	W17	Q								
292	19	18	159	15	13	N06	W67	0	0	0	19	N06	W67	Q	Solnil, Magquiet.
						S22	W59	2	0	0		S22	W59	E	
						N02	W54	1	0	0		N02	W54	Q	
						N16	W53	1	0	0		N16	W53	Q	
						S22	W23	0	0	0		S22	W23	Q	
						N22	E11	2	0	0		N22	E11	E	
						S02	W31	0	0	0		S02	W31	Q	
S13	E05	0	0	0	S13	E05	Q								





# ALERT PERIODS

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### Summary of the Geolert Messages                      OCTOBER 1991

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location			Flares			Date of Forecast	Location			Region Forecast <sup>1</sup>	Geolerts						
						°Lat	°Long	Total	M	X	°Lat		°Long	Forecast									
299	26	25	249	240	22	N22	W83	0	0	0	26	N22	W83	Q	Solalert 26/XX, Magalert 26/26.								
						S12	W88	0	0	0		S12	W88	Q									
						N10	W26	1	0	0		N10	W26	E									
						N18	E18	1	0	0		N18	E18	Q									
						S16	W19	0	0	0		S16	W19	Q									
						S12	E32	8	2	0		S12	E32	A									
						S21	E34	9	1	0		S21	E34	E									
						N17	E57	5	0	0		N17	E57	E									
					N11	E26	0	0	0		N11	E26	Q										
300	27	26	270	251	22	N10	W39	1	0	0	27	N10	W39	E	Solalert 27/28, Magalert 27/28.								
						N21	E08	0	0	0		N21	E08	Q									
						S17	W28	0	0	0		S17	W28	Q									
						S12	E21	5	2	1		S12	E21	A									
						S20	E21	3	0	0		S20	E21	E									
						N16	E43	5	0	0		N16	E43	E									
						N12	E14	0	0	0		N12	E14	Q									
						N24	W31	0	0	0		N24	W31	Q									
												S03	E63	2		0	0		S03	E63	E		
												Presto: <sup>2</sup> Boulder Tenflare 1200 flux units 26/2030 UT duration 34 minutes. Boulder X-ray event X1/2B S11 E20 26/1846 UT duration 237 minutes.											
301	28	27	339	249	37	N10	W53	0	0	0	28	N10	W53	Q	Solalert 28/XX, Magalert 28/30.								
						N21	W06	3	0	0		N21	W06	Q									
						S11	E07	11	2	2		S11	E07	P									
						S20	E08	5	0	0		S20	E08	E									
						N17	E31	3	0	0		N17	E31	E									
						N24	W44	0	0	0		N24	W44	Q									
						S02	E49	0	0	0		S02	E49	Q									
												S18	W21	0		0	0		S18	W21	Q		
												Presto: Boulder X-ray event X1/2B S11 E20 27/0206 UT duration 34 minutes. Boulder X-ray event X6/3B S13 E15 27/0537 UT duration 23 minutes. Boulder Tenflare 3800 flux units 27/0539 UT in progress. Boulder Tenflare 410 flux units 27/1255 UT duration 4 minutes.											
						302	29	28	307	271		98	N10	W66		0	0	0	29	N10	W66	Q	Major Flare Alert 29/XX 30612, Magalert Minor 29/30.
N20	W22	0	0	0	N20						W22		Q										
S12	W06	18	6	0	S12						W06		P										
S20	W06	8	0	0	S20						W06		E										
N17	E17	6	0	0	N17						E17		E										
N25	W57	0	0	0	N25						W57		Q										
S07	W26	1	0	0	S07						W26		E										
					S12						E40		0	0	0		S12	E40		Q			
					Presto: Boulder Tenflare 260 flux units 28/1230 UT in progress. Boulder Proton event began 28/1300 UT. Boulder Strong magstorm in progress 28/1540 UT.																		
303	30	29	379	272	100						N10		W81	0	0	0	30	N10		W81	Q	Solalert 30/XX, Magalert.	
						N21	W35	0	0	0	N21	W35	Q										
						S12	W18	8	2	0	S12	W18	A										
						S19	W19	3	0	0	S19	W19	Q										
						N17	E03	2	0	0	N17	E03	E										
						S02	E20	0	0	0	S02	E20	E										
						S06	W41	1	0	0	S06	W41	Q										
						S13	E26	1	0	0	S13	E26	Q										
						S09	E52	2	0	0	S09	E52	Q										
						S14	E01	4	0	0	S14	E01	Q										
						N10	E43	0	0	0	N10	E43	Q										
											S14	E66	0	0	0			S14	E66	Q			

**ALERT PERIODS**  
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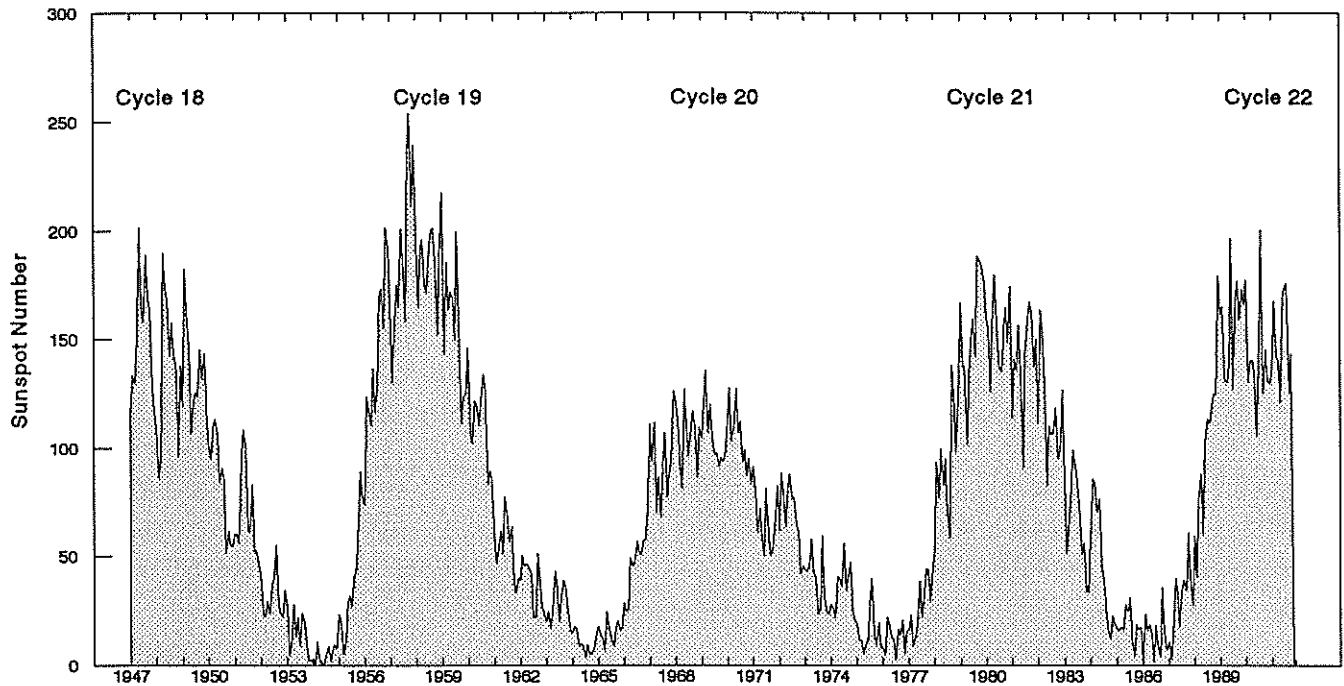
**Summary of the Geoalert Messages**                      **OCTOBER 1991**

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast <sup>1</sup>	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
304	31	30	342	262	16	S12	W31	15	1	1	31	S12	W31	A	Solalert 31/XX, Magalert 31/01, Proton Flare Alert 31/XX.
						S19	W32	2	0	0		S19	W32	E	
						N17	W11	1	0	0		N17	W11	E	
						S02	E06	0	0	0		S02	E06	Q	
						S06	W54	1	0	0		S06	W54	Q	
						S12	E13	0	0	0		S12	E13	Q	
						S08	E39	1	0	0		S08	E39	Q	
						S14	W12	0	0	0		S14	W12	Q	
						N09	E29	0	0	0		N09	E29	Q	
						S14	E53	0	0	0		S14	E53	Q	
		Presto: <sup>2</sup>	Boulder			X-ray event X2/3B S08 W25 30/0610 UT duration 50 minutes.									
			Boulder			Proton event began 30/0745 UT, maximum of 94 particles-cm <sup>-2</sup> -s-ster at greater than 10 MeV 30/0810 UT, in progress.									
			Boulder			Tenflare 5200 flux units 30/0615 UT duration 31 minutes.									

<sup>1</sup>Q = quiet, E = eruptive, A = active, P = proton.

<sup>2</sup>Presto message is a rapid report of a major event.

Monthly Mean Sunspot Numbers Jan 1947 – Oct 1991



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1947	115.7	133.4	129.8	149.8	201.3	163.9	157.9	188.8	169.4	163.6	128.0	116.5	151.6 M
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.0	136.3
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6	134.7
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	112.3
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
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	174.1	175.5	125.3	143.6			149.6

Monthly values are preliminary since July 1991. For the yearly means, each "M" marks a sunspot cycle maximum and each "m" a minimum.

INTERNATIONAL RELATIVE SUNSPOT NUMBERS

Day	Nov 90	Dec	Jan 91	Feb	Mar	Apr	May	Jun	Jul <sup>†</sup>	Aug <sup>†</sup>	Sep <sup>†</sup>	Oct <sup>†</sup>
01	77	127	139	205	95	89	93	177	188	132	170	165
02	81	160	89	209	93	92	86	175	213	138	153	147
03	108	180	93	176	71	118	106	171	238	143	147	159
04	146	186	95	144	55	139	95	179	250	136	147	158
05	154	167	104	127	74	160	89	180	217	148	132	165
06	197	169	119	117	88	159	96	167	204	119	137	129
07	209	182	105	119	131	164	99	171	209	120	111	115
08	208	177	99	118	146	146	125	210	203	106	135	116
09	188	176	94	134	156	172	140	240	179	89	122	137
10	163	175	97	136	159	167	134	241	181	75	127	140
11	167	157	116	140	167	195	145	250	170	86	123	141
12	151	138	122	153	163	227	133	219	138	98	130	129
13	118	117	145	166	152	197	116	175	146	126	143	125
14	119	95	119	163	161	211	134	177	132	122	147	138
15	113	88	114	173	182	227	119	154	117	164	123	145
16	102	104	133	159	202	188	113	165	98	212	101	126
17	110	112	154	136	167	172	113	149	91	257	103	111
18	97	121	127	191	168	171	125	142	89	279	101	105
19	109	134	119	206	155	173	116	143	114	280	84	82
20	98	114	91	198	173	161	121	113	132	291	80	83
21	102	117	107	223	167	115	97	147	171	300	115	77
22	125	99	106	214	179	79	117	135	184	294	124	81
23	114	91	127	200	179	72	120	124	212	275	129	107
24	118	95	135	192	154	33	117	135	205	250	112	138
25	110	101	149	194	146	39	121	137	207	215	111	152
26	117	104	179	187	153	73	139	150	199	177	117	171
27	109	104	220	175	137	82	156	143	183	147	120	217
28	134	111	237	134	129	119	158	162	183	157	133	234
29	144	109	248		140	132	150	177	182	171	144	248
30	153	103	239		141	129	141	183	197	166	138	223
31		108	224		115		145		165	167		188
Mean	131.4	129.7	136.9	167.5	141.9	140.0	121.3	169.7	174.1	175.5	125.3	143.6

<sup>†</sup> = preliminary. The yearly mean sunspot number equals 142.6 for 1990.

Algonquin Radio Observatory                      OTTAWA 2800 MHz (10.7 cm) SOLAR FLUX                      Adjusted to 1 AU

Day	Nov 90	Dec	Jan 91	Feb	Mar	Apr	May	Jun <sup>†</sup>	Jul <sup>†</sup>	Aug <sup>†</sup>	Sep <sup>†</sup>	Oct <sup>†</sup>
01	141.6*	172.6	180.6	307.3	216.5	192.8	163.6	224.9	250.3	232.0	179.1	208.0
02	138.5	178.0	175.8	289.3	207.5	189.1	159.6	243.1	251.8	213.2	184.3	220.9
03	150.2	187.6	170.0	258.4	206.4	195.9	159.5	226.8	257.3	219.4	178.1	211.8
04	154.7	199.3	170.2	239.2	218.9J	195.1	165.8	245.6	255.4	198.8	173.8	212.6
05	169.7	207.0*	172.9	216.5	208.1	196.7	183.2	258.1	259.5	179.4	166.2	193.4
06	196.4	221.0	179.7*	198.7	206.7	199.9	207.2*	241.3	240.8	171.4	179.0	181.9
07	214.3	222.0	199.6	192.7	214.5	192.6	215.3	236.6	226.1	170.0	177.1	180.0
08	211.8	223.6	207.9	192.7	209.1	182.8	235.6	250.7	211.2	163.5	199.0	178.7
09	201.2	230.3	209.1	174.0	215.7	204.2	230.1	245.3	200.6	154.6	183.3	183.7
10	191.1	233.4	214.6	169.5	222.8	223.6	237.0	246.2	200.2	145.7	187.2	179.2
11	195.0	233.4	209.4	176.5	221.9	231.5	234.5	242.8	202.3	142.4	179.9	178.2
12	191.0	228.0	201.6	181.6	228.7	254.4	253.7	242.8	209.9	150.7	185.4	187.2
13	181.5	219.5	190.5	182.2	239.1	242.6	219.7	224.7	202.3	159.6	187.1	182.5
14	198.0	195.3	184.5	184.0	241.6	269.3	212.8	207.2	194.8	179.6	183.4	186.1
15	207.3	193.2	184.6	191.9	242.2	263.1	197.7	203.1	192.0	220.5	182.2	177.7
16	207.3	186.2	181.8	200.4	258.5	269.1	193.4	190.5	172.6	270.7	176.1	180.3
17	217.1	192.5	202.0	210.2	245.4	254.2	176.2	182.1	163.9	277.7	178.7	168.2
18	198.9	201.6	196.8	259.6	274.8	239.1	174.2	178.7	194.8	290.5	182.9	156.5
19	191.2	191.2	192.3	269.8	264.9	232.0	162.7*	180.7	184.1	296.6	173.9	153.0
20	186.8	181.6	197.5	283.8	254.2	235.3	151.8	171.7	205.3	293.2	171.1	155.5
21	177.6	185.8	195.9	299.2	253.1	181.6	153.0	175.1	221.6	291.8	178.0	166.8
22	177.4	178.1	217.5*	302.6	257.7	168.7	151.9	175.4	230.2	291.5	189.0	182.7
23	171.7	185.6	216.0	311.5	233.4	149.0	158.6	166.6	234.0	277.0	186.1	192.0
24	167.2	184.9	236.8	313.1*	260.5	137.4	162.8	173.9	240.8	255.4	180.9	228.0
25	162.3	185.0	260.9	288.4*	235.2	138.1	178.8	178.8	237.5	243.4	181.9	237.4
26	153.2	188.1	276.9	271.8	229.4	138.3*	191.4	191.3	226.6	214.7	201.6	248.1
27	155.0	191.9	293.8J	248.7	203.0	144.6	202.9	206.3	219.5	200.4	178.7	246.3
28	167.1	192.4	313.8	228.0	197.7	158.4	221.4	217.5	219.4	193.7	176.3	267.5
29	163.2	195.5	344.5		192.9	161.0	231.1	234.4	226.6	199.2	195.4	268.8
30	169.6	189.6	359.2		201.3	161.7	213.5	243.6	228.4	199.4	200.4	258.0
31		180.6	348.6		194.7		230.7		225.9	185.2		228.1
Mean	180.3	198.5	222.1	237.2	227.6	200.1	194.5	213.3	218.9	215.5	182.5	200.0

<sup>†</sup> = Penticton; \* = corrected for burst in progress; J = no calibration due to burst.

## DAILY SOLAR INDICES

October 1991

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers		Obs Flux Penticton (2800)	Solar Flux Adjusted to 1 Astronomical Unit								
			Int	Amer		SGMR (15400)	SGMR (8800)	SGMR (4995)	Pentic (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
01	274	17	165	150	207.5	609	351	272	208.0	207	126	58	32	27
02	275	18	147	159	220.5	607	342	274	220.9	211	131	57	35	27
03	276	19	159	160	211.5	518	328	261	211.8	210	121	41	26	21
04	277	20	158	147	212.5	598	328	266	212.6	216	128	50	36	43
05	278	21	165	158	193.4	582	300	238	193.4	188	114	53	33	44
06	279	22	129	131	182.0	499	296	234	181.9	181	115	--	--	34
07	280	23	115	118	180.2	598	300	230	180.0	181	118	58	40	51
08	281	24	116	114	179.0	597	291	219	178.7	174	118	58	35	31
09	282	25	137	139	184.1	597	294	223	183.7	182	124	58	37	22
10	283	26	140	144	179.7	607	292	223	179.2	178	121	60	34	23
11	284	27	141	143	178.9	581	289	221	178.2	172	118	57	33	21
12	285	1	129	130	188.0	586	292	226	187.2	182	127	59	34	22
13	286	2	125	137	183.3	577	279	217	182.5	178	128	63	35	20
14	287	3	138	128	187.1	601	283	216	186.1	175	128	64	52	18
15	288	4	145	128	178.7	580	285	222	177.7	181	130	64	35	18
16	289	5	126	133	181.4	557	276	213	180.3	179	130	55	30	19
17	290	6	111	110	169.4	547	273	220	168.2	166	126	60	33	20
18	291	7	105	108	157.7	558	262	189	156.5	152	115	56	31	19
19	292	8	82	88	154.3	565	259	186	153.0	153	113	56	34	22
20	293	9	83	88	156.9	571	266	185	155.5	152	109	56	33	20
21	294	10	77	86	168.4	583	281	204	166.8	157	107	56	35	20
22	295	11	81	92	184.5	598	305	229	182.7	170	113	57	33	18
23	296	12	107	111	194.0	609	335	262	192.0	186	116	57	32	17
24	297	13	138	144	230.5	629	397	325	228.0	230	133	75	61	31
25	298	14	152	168	240.1	635	449	386	237.4	262	140	69	70	--
26	299	15	171	183	251.1	615	426	366	248.1	259	141	--	40	67
27	300	16	217	213	249.4	615	407	359	246.3	255	139	--	--	--
28	301	17	234	236	271.0	709	459	415	267.5	280	144	--	33	34
29	302	18	248	247	272.5	616	374	359	268.8	267	147	66	41	51
30	303	19	223	222	261.7	557	348	344	258.0	261	144	75	46	37
31	304	20	188	215	231.5	452	305	284	228.1	238	136	40	23	18
Mean			143.6	146.1	201.3	586	322	260	200.0	199	126	58	37	28

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

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

Equipment problems produced any gaps in the Air Weather Service's Sagamore Hill (SGMR) observations.

SMOOTHED (OBSERVED AND PREDICTED) SUNSPOT NUMBERS: CYCLES 21 AND 22

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1981	140	142	143	143	143	142	140	141	143	142	139	138
1982	137	133	129	124	120	117	115	109	101	96	95	95
1983	93	90	86	82	77	70	66	66	68	68	67	64
1984	60	56	53	50	48	46	44	40	34	29	25	22
1985	20	20	19	18	18	18	17	17	17	17	17	15
1986	14	13	13	14	14	14	14	13	12*	13	15	16
1987	18	20	22	24	26	28	31	35	39	44	47	51
1988	58	65	71	78	84	94	104	114	121	125	130	138
1989	142	145	150	154	157	158	159*	158	157	157	158	154
1990	151	153	152	149	147	144	141	141	142	142	142	144
1991	148	148	147	147	147 ( 4)	142 ( 9)	136 (12)	131 (13)	126 (11)	123 (11)	123 (14)	123 (16)
1992	122 (16)	116 (14)	110 (11)	104 ( 2)	101 ( 8)	100 ( 3)	97 ( 8)	94 (12)	91 (13)	87 (15)	80 (21)	70 (28)
1993	60 (35)	56 (37)	55 (34)	52 (32)	49 (31)	47 (31)	43 (32)	38 (34)	34 (36)	32 (35)	33 (31)	34 (24)

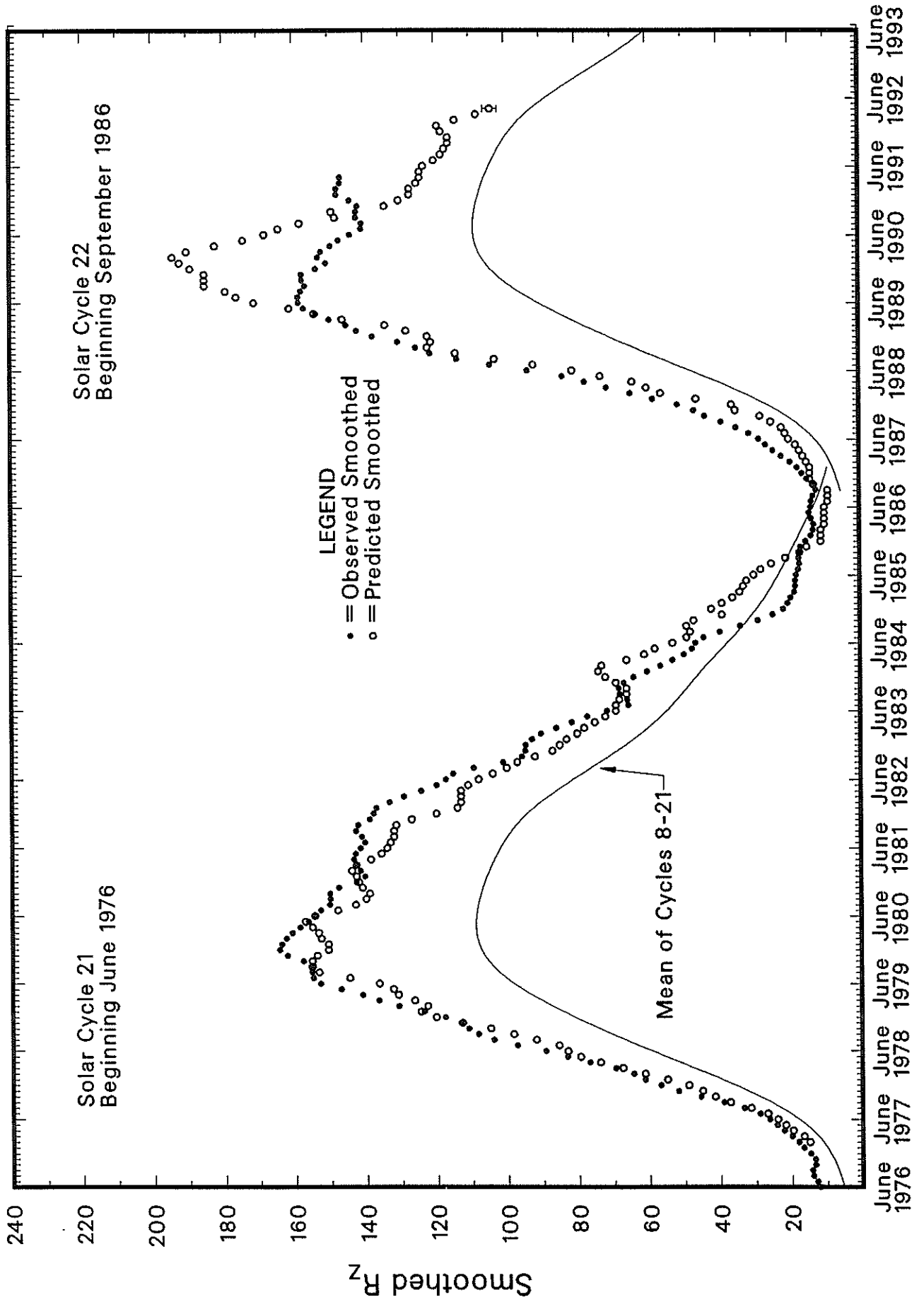
\*Sep 1986 marks the minimum of Cycle 21 and the onset of Cycle 22; Cycle 22 reached a maximum in Jul 1989.

For the end of Solar Cycle 21, and the beginning of 22, the table gives observed smoothed sunspot numbers up to the one calculated from the most recently available monthly mean. These smoothed observed values are based on final, monthly means through June 1991 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 July 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 April 1992 prediction. There exists a 90% chance that in April 1992 the actual smoothed sunspot number will fall somewhere between 102 and 106.

THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED, MONTHLY MEAN SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles used in the computation. Moreover, the method is very sensitive to the data defined as the beginning of the current sunspot 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 September 1986.

# OBSERVED AND ONE-YEAR-AHEAD PREDICTED SUNSPOT NUMBERS







H $\alpha$  SOLAR FLARES

OCTOBER 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/ USAF			Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
					Lat	CMD	Region						Mo	Day	Time (UT)		Apparent (10-6 Disk)
HOLL	02	1455	1455	1501	N11	E21	10	4.2	6	SF	3	E	12				
RAMY		1532	1535	1539	N18	E15	6855	10	3.8	7	SF	3	E	31		F	
HOLL		1534	1535	1542	N19	E15	6855	10	3.8	8	SF	3	E	40		FE	
GOES		1555	1558	1600					5		C 4.1						
HOLL		1723	1723	1729	N10	E39	6861	10	5.6	6	SF	3	E	14			
HOLL		1740	1741	1743	S15	W08	6850	10	2.1	3	SF	3	E	15			
RAMY		1810	1823	1827	S11	W16	6850	10	1.5	17	SF	3	E	33		F	
HOLL		1815	1817	1842	S18	W10	6853	10	2.0	27	SN	C 4.5	3	E	72		FE
PALE		1816E	1819	1824D	S21	W10	6853	10	2.0	8D	SF		2	E	20		
HOLL		1912	1913	1916	N19	E13	6855	10	3.8	4	SF		3	E	15		
PALE		1933	1935U	1949D	S12	W18	6850	10	1.4	16D	SF		2	E	30		
HOLL		1942	1943	2004	N16	E14	6855	10	3.9	22	SF		3	E	34		FE
PALE		1949E	1954	2010D	N12	E19	6855	10	4.2	21D	SF		2	E	72		F
HOLL		2110	2113	2116	S12	W16	6850	10	1.7	6	SF		3	E	14		F
HOLL		2142	2154	2201	S13	W13	6850	10	1.9	19	SF	C 3.1	3	E	16		FE
HOLL		2219	2236	2316	S12	W14	6850	10	1.9	57	SN	C 8.4	3	E	63		FE
LEAR	03	0048	0048	0059	S11	W19	6850	10	1.6	11	SF		3	E	14		F
LEAR		0111	0147	0232	S28	W26	6858	10	1.0	81	SF		3	E	54		F
LEAR		0141	0143	0207	S11	W20	6850	10	1.6	26	SN		3	E	93		FE
LEAR		0141	0143	0233	S20	W09	6853	10	2.4	52	1N	M 1.2	3	E	127		FE
PALE		0143	0145	0224	S21	W10	6853	10	2.3	41	1F		3	E	102		F
PALE		0143	0147	0150	S28	W27	6858	10	1.0	7	SF		3	E	14		
PALE		0144	0147	0209	S18	W17	6850	10	1.8	25	SF		3	E	93		
LEAR		0233	0234	0238	N08	E34	6861	10	5.6	5	SF		3	E	14		
LEAR		0252	0255	0319	S15	W17	6850	10	1.8	27	SF		3	E	34		
LEAR		0423	0426	0429	S13	W18	6850	10	1.8	6	SF		3	E	18		
LEAR		0544	0545	0552	N18	E04	6855	10	3.5	8	SF		3	E	36		
SVTO		0603	0606	0626	N09	E33	6861	10	5.7	23	SN		3	E	52		
LEAR		0604	0606	0614	N09	E33	6861	10	5.7	10	SN		3	E	79		
LEAR		0607	0607	0614	S11	W22	6850	10	1.6	7	SF		3	E	14		
SVTO		0608	0628	0706	S15	W18	6850	10	1.9	58	SF		3	E	46		F
LEAR		0610	0613	0617	N14	E11	6855	10	4.1	7	SF		3	E	33		H
LEAR		0620	0623	0644	S11	W22	6850	10	1.6	24	SF	M 1.1	3	E	25		F
LEAR		0848	0853	0901	S11	W24	6850	10	1.6	13	SF		3	E	32		F
SVTO		0852	0852	0900	S13	W19	6850	10	1.9	8	SF		3	E	22		
SVTO		0927	0931	0934	S12	W28	6850	10	1.3	7	SF	C 4.1	3	E	14		F
SVTO		0956	1002	1012	S18	W21	6853	10	1.8	16	SF		3	E	23		
SVTO		1004	1009	1027	S13	W20	6850	10	1.9	23	SF	C 5.8	3	E	38		
SVTO		1043	1107	1126	S13	W20	6850	10	1.9	43	SF	C 4.7	3	E	29		F
SVTO		1235	1317	1428	S14	W21	6850	10	1.9	113	SF		3	E	66		F
SVTO		1314	1319	1413	S17	W18	6853	10	2.2	59	SF	C 7.9	3	E	34		F
SVTO		1314	1328	1413	S17	W18	6853			59	SF			E	85		K
RAMY		1330E	1340	1409	S19	W20	6853			39D	SF			E	51		K
RAMY		1330E	1348	1409	S19	W20	6853	10	2.0	39D	SF		3	E	47		F
SVTO		1525	1526	1536	S17	W37	6850	09	30.8	11	SF		3	E	27		F
RAMY		1527	1528	1535	S13	W26	6850	10	1.7	8	SF	C 3.1	3	E	28		FE
HOLL		1537	1540	1551	N18	E00	6855	10	3.6	14	SF		3	E	49		
SVTO		1538	1539	1547	N18	E02	6855	10	3.8	9	SF		3	E	23		
HOLL		1707	1713	1715	S27	W02	6860	10	3.5	8	SF		3	E	13		
HOLL		1752	1754	1759	S19	W20	6853	10	2.2	7	SF		3	E	10		
HOLL		1812	1815	1824	N19	E02	6855	10	3.9	12	SF		3	E	22		
RAMY		1813	1814	1822	N18	E00	6855	10	3.7	9	SF		3	E	18		F
PALE		1841	1843	1848	S12	W30	6850	10	1.5	7	SF	C 3.0	3	E	18		F
PALE		1903	1904	1906	S12	W30	6850	10	1.5	3	SF		3	E	10		
HOLL		2031	2039	2110	N09	E25	6861	10	5.7	39	1N	C 3.9	3	E	135		FE
PALE		2034	2036	2046	N09	E23	6861	10	5.6	12	SF		3	E	73		F
HOLL		2058	2059	2104	S15	E68	6863	10	9.0	6	SF		3	E	29		F
HOLL		2158	2236	2249	S13	W26	6850	10	1.9	51	SN		3	E	33		FE
HOLL		2316	2321	2335	N18	W03	6855	10	3.7	19	SF		3	E	24		
HOLL		2358	2402	2439D	S14	W27	6850	10	1.9	41D	SN		3	E	33		FE
LEAR		2358	2444	2546	S12	W33	6850	10	1.5	108	1N		3	E	177		F
GOES		2359	2447	2533					94		M 1.1						
LEAR	04	0021	0035	0142	S13	W31	6853			81	1N			E	104		K
LEAR		0021	0045	0142	S13	W31	6853	10	1.7	81	1N		3	E	238		F
PALE		0025E	0100U	0100D	S19	W26	6853	10	2.0	35D	1F		3	E	132		F
LEAR		0243	0247	0330	S13	W34	6850	10	1.5	47	SF	C 2.3	3	E	56		F

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Oct 91

H $\alpha$  S O L A R F L A R E S  
OCTOBER 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF		CMP	Dur (Min)	Imp		Obs	Time (UT)	Area Measurement		Remarks	
							Region	Mo Day			Opt	Xray			Apparent (10-6 Disk)	Corr (Sq Deg)		
LEAR	04	0422	0432	0444	S12	W35	6850	10	1.5	22	SF		3	E		42		
[LEAR		0654	0656	0707	S14	W35	6850	10	1.6	13	SF		3	E		38		
[SVTO		0655	0656	0703	S15	W34	6850	10	1.7	8	SF	C 2.4	3	E		21		
SVTO		0850	0850	0859	N10	E18	6861	10	5.7	9	SF	C 2.9	3	E		14		
SVTO		0858	0914	0924	S15	W36	6850	10	1.6	26	SN	C 2.7	3	E		70	FH	
SVTO		0933	0944	1004	S18	W30	6853	10	2.1	31	SN	M 1.2	3	E		60	F	
LEAR		0935E	0945U	1004D	S16	W33	6850	10	1.9	29D	1F		2	E		131		
[RAMY		1349	1354	1423	S12	W37	6850	10	1.8	34	SF	C 3.3	4	E		32	FE	
[HOLL		1351E	1401U	1421	S14	W39	6850	10	1.6	30D	SN		2	E		67	FE	
HOLL		1554	1557	1609	S13	W38	6850	10	1.8	15	SN	C 2.2	3	E		55	FE	
HOLL		1738	1742	1835	S12	W38	6850	10	1.9	57	SF	C 2.2	3	E		23	F	
GOES		1857	1902	1905						8	C 2.9							
[HOLL		1923	1931	2006	N10	E12	6861	10	5.7	43	SB		3	E		74	F	
[RAMY		1924	1927U	1927D	N09	E12	6861	10	5.7	3D	SB	M 5.2	3	E		62	F	
GOES		2014	2017	2019						5	C 3.5							
HOLL		2108	2108	2114	S11	W41	6850	10	1.8	6	SF	C 1.9	3	E		19	F	
HOLL		2228	2233	2256	S11	W46	6850	10	1.5	28	SN		3	E		14	E	
GOES		2321	2325	2328						7	C 2.1							
GOES	05	0031	0035	0037						6	C 1.9							
PALE		0134	0139	0152	S17	W40	6850	10	2.0	18	1F		3	E		124	UF	
PALE		0136	0143	0227	S19	W41	6853	10	1.9	51	1F		3	E		102	F	
LEAR		0140E	0140	0206	S13	W44	6850	10	1.7	26D	1F		3	E		165	FK	
LEAR		0140E	0218	0243	S19	W41	6853	10	1.9	63D	1F	C 6.3	3	E		214	F	
LEAR		0331	0331	0341	S13	W43	6850	10	1.9	10	SF		3	E		23		
GOES		0351	0408	0416						25	C 3.8							
SVTO		0558	0609	0649	N07	E05	6861	10	5.6	51	SF	C 4.1	3	E		74	F	
GOES		0705	0715	0723						18	C 4.2							
SVTO		0800	0804	0814	N10	E05	6861	10	5.7	14	SF	C 6.1	3	E		39		
SVTO		0835	0840	0845	S16	E51	6863	10	9.2	10	SF		3	E		20		
SVTO		0928	0937	1016	S13	W49	6750	10	1.7	48	SF	C 2.4	3	E		52	F	
GOES		0935	0948	1007						32	C 4.7							
SVTO		1024	1048	1137	S13	W48	6850	10	1.8	73	SN	M 1.1	3	E		95	F	
RAMY		1202	1207	1211	S12	W48	6850	10	1.9	9	SF		3	E		27	F	
RAMY		1206	1218	1228	N09	E04	6861	10	5.8	22	SF		3	E		25	F	
[SVTO		1434	1436	1440	S14	W46	6850	10	2.1	6	SN		3	E		39		
[HOLL		1436	1437	1440	S11	W45	6850	10	2.2	4	SN		2	E		31	E	
HOLL		1527	1529	1541	N11	E01	6861	10	5.7	14	SF		3	E		39	F	
HOLL		1657	1731	1734	S12	W52	6850	10	1.8	37	SF		3	E		25		
HOLL		1721	1721	1732	S15	E46	6863	10	9.2	11	SF		3	E		25		
PALE		1859	1901	1912D	S13	W47	6850	10	2.2	13D	SF		3	E		20		
HOLL		1917	1919	1921	S12	W52	6850	10	1.9	4	SF		3	E		15		
RAMY		1939	1940	1945	S12	W53	6850	10	1.8	6	SF		3	E		14	F	
HOLL		2111	2117	2132	N10	W02	6861	10	5.7	21	SF		3	E		18	FE	
HOLL		2148	2152	2206	N10	W02	6861	10	5.7	18	SF		3	E		32	F	
GOES	06	0052	0102	0110						18	C 1.7							
LEAR		0231	0302	0307	S10	W58	6850	10	1.7	36	SF		3	E		38		
LEAR		0314	0325	0332	S11	W60	6850	10	1.6	18	SF		3	E		25		
GOES		0424	0427	0429						5	C 1.9							
SVTO		0532	0534	0555	N08	W06	6861	10	5.8	23	SN	C 3.7	3	E		47	F	
LEAR		0620	0624	0705	N17	W33	6855	10	3.7	45	SF		3	E		33	F	
GOES		0715	0720	0725						10	C 1.6							
GOES		0741	0743	0748						7	C 1.5							
[SVTO		0800	0818	0829	N09	W08	6861	10	5.7	29	SF	C 1.7	4	E		32	F	
[LEAR		0802	0816	0826	N09	W07	6861	10	5.8	24	SF		3	E		20	F	
GOES		0953	0957	0959						6	C 2.0							
SVTO		1349	1352	1357	S21	W62	6853	10	1.8	8	SF		3	E		19		
RAMY		1518	1519	1522	N09	W11	6861	10	5.8	4	SF		3	E		18	F	
HOLL		1531	1533	1538	S08	W74	6850	10	1.1	7	SN	C 1.5	4	E		43	FH	
HOLL		1559	1601	1612	N09	W12	6861	10	5.8	13	SF		4	E		31	F	
GOES		1820	1823	1827						7	C 1.7							
[RAMY		1836	1837	1849	S12	W66	6850	10	1.8	13	SF	C 2.8	3	E		19	FE	
[HOLL		1836	1838	1848	S12	W66	6850	10	1.8	12	SF	C 2.8	3	E		25	F	
[PALE		1838	1838	1854	S13	W64	6850	10	1.9	16	SF		3	E		22	F	
GOES		2104	2107	2112						8	C 1.8							
HOLL		2151	2154	2159	S13	W64	6850	10	2.1	8	SF	C 2.1	3	E		19		
HOLL		2333	2334	2339	N17	W44	6855	10	3.6	6	SF		3	E		14		



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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	NOAA/ USAF		CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks	
						Region	Cmd					Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
SVTO	10	0558	0609	0650	S23	W10	6863	10	9.5	52	1N	3	E	163		FH
LEAR		0715	0734	0758	N08	W65	6861	10	5.4	43	SF C 3.6	3	E	74		F
SVTO		1035	1053	1106	S20	W65	6876	10	5.5	31	SF	3	E	87		F
GOES		1448	1454	1459						11	C 5.7					
SVTO		1542	1544	1546	S20	E52	6873	10	14.6	4	SF	2	E	48		
HOLL		1544	1545	1548	S25	E59	6873	10	15.2	4	SF C 2.9	3	E	25		
GOES		1735	1746	1758						23	C 3.8					
HOLL		1750	1752	1913	S11	E40	6871	10	13.7	83	SF	3	E	32		
RAMY		1751	1756	1801	S12	E41	6871	10	13.8	10	SF	3	E	16		F
HOLL		1831	1832	1841	N20	W42	6867	10	7.5	10	SF	3	E	26		
HOLL		1939	1939	1952	S21	E53	6873	10	14.9	13	SF C 2.1	3	E	21		F
HOLL		2119	2126	2144	N17	W46	6867	10	7.4	25	SF	3	E	25		F
LEAR	11	0113	0117	0151	N19	W46	6867	10	7.5	38	SF	2	E	25		
LEAR		0240	0241	0247	N09	W72	6861	10	5.7	7	SF	2	E	15		F
GOES		0555	0600	0606						11	C 1.6					
GOES		0838	0843	0847						9	C 1.6					
SVTO		1154	1201	1212	N11	E57	6877	10	15.8	18	SF	3	E	27		F
SVTO		1310	1321	1335	S11	E31	6871	10	13.9	25	SF	3	E	41		
HOLL		1433	1433	1441	S12	E57		10	15.9	8	SF	3	E	20		F
HOLL		1515	1516	1530	S12	E28	6871	10	13.7	15	SF	3	E	21		F
HOLL		1621	1645	1731	S24	E35	6873	10	14.4	70	SF C 2.0	3	E	22		F
HOLL		1741	1747	1756	S21	E36	6873	10	14.5	15	SF	3	E	15		F
HOLL		1757	1801	1819	S24	E38	6873	10	14.7	22	SF	3	E	23		
HOLL		2015	2018	2046	S25	E34	6873	10	14.5	31	SB C 5.9	3	E	94		
PALE		2017	2019	2034	S24	E35	6873	10	14.5	17	SF	3	E	78		F
LEAR	12	0125	0133	0148	S26	E39	6873	10	15.1	23	SF C 1.7	3	E	19		F
LEAR		0457	0503	0514	S27	E31	6873	10	14.6	17	SF C 9.2	3	E	26		F
LEAR		0503	0505	0511	N07	W95	6861	10	5.1	8	SF	3	E	72		
LEAR		0632	0705	0718	S26	E29	6873	10	14.5	46	SF C 1.8	3	E	48		
LEAR		0745	0755	0805	N04	E29	6872	10	14.5	20	SF	3	E	16		
GOES		1002	1008	1025						23	M 2.9					
GOES		1659	1705	1709						10	C 2.4					
GOES		1735	1739	1750						15	C 1.8					
GOES		1834	1908	1927						53	C 3.7					
HOLL		1838	1842	1847	S30	E28	6873	10	15.0	9	SF	3	E	12		F
HOLL		1843	1844	1903	S17	E18	6871	10	14.1	20	SF	3	E	23		F
HOLL		1927	1927	1937	S21	E61	6878	10	17.5	10	SF	3	E	21		
GOES		2209	2218	2230						21	M 1.1					
GOES		2352	2358	2403						11	C 5.8					
LEAR	13	0044	0044	0054	S24	E25	6873	10	15.0	10	SF	3	E	17		F
LEAR		0342	0350	0430	S27	E19	6873	10	14.6	48	SF C 3.7	3	E	45		F
LEAR		0657	0659	0712	N21	E86		10	19.9	15	1N C 7.3	3	E	179		E
LEAR		0846	0848	0856	N17	E22	6875	10	15.0	10	SF	3	E	29		
GOES		1015	1023	1037						22	C 1.3					
GOES		1202	1212	1224						22	C 1.4					
GOES		1231	1242	1249						18	C 2.3					
GOES		1345	1352	1359						14	C 1.6					
HOLL		1525	1526	1532	S26	E12	6873	10	14.6	7	SF	4	E	20		
GOES		1810E	1816	1941D						91D	M 6.0					
HOLL		1945	1947	1952	S22	E44	6878	10	17.2	7	SF	3	E	41		F
HOLL		2010	2013	2112	N23	E79	6879	10	19.9	62	1N M 1.1	3	E	130		FE
PALE		2029	2030U	2054D	N23	E77	6879	10	19.8	25D	SF	2	E	13		
HOLL		2112	2113	2127	N22	E80	6879	10	20.0	15	SF M 1.6	3	E	22		
HOLL		2122	2124	2139	S21	E41	6878	10	17.0	17	SF	3	E	52		
HOLL		2242	2244	2320	S16	E08	6873	10	14.5	38	SF	3	E	30		F
LEAR	14	0125	0127	0133	N15	E15	6875	10	15.2	8	SF	3	E	29		
GOES		0139	0144	0148						9	C 2.6					
LEAR		0247	0248	0255	N21	E76	6879	10	19.9	8	SF C 3.1	3	E	37		
LEAR		0302	0306	0319	N08	E10	6872	10	14.9	17	SF	3	E	21		F
LEAR		0318	0320	0356	N21	E76	6879	10	20.0	38	SF M 1.3	3	E	44		F
LEAR		0402	0403	0415	N21	E77	6879	10	20.1	13	SF C 8.9	3	E	28		F
GOES		0643	0646	0650						7	C 1.9					
LEAR		0651	0706	0721	N08	E08	6872	10	14.9	30	SF	3	E	25		F
LEAR		0734	0757	0824	S25	E42	6878	10	17.6	50	SF C 8.8	3	E	53		F





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Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/ USAF		CMP Mo	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks	
					Region	Region							Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
HOLL	22	1853	1857	1927	S24	E74	10	28.5	34	SF	3	E		92			
HOLL		1959	2002	2014	S13	W46	6884	10	19.4	15	SF	3	E		25		
HOLL		2259	2300U	2325	S16	W45	6884	10	19.5	26	SF C	2.8	3	E		37	
LEAR	23	0053	0105	0136	N19	E60	6888	10	27.6	43	SF C	5.0	3	E		23	
LEAR		0224	0225	0234	S16	W46	6884	10	19.6	10	SF		3	E		26	
GOES		0244	0311	0348						64		C 4.5					
LEAR		0600	0643	0709	N22	W45	6879	10	19.8	69	SF		3	E		67	F
LEAR		0610	0619	0626	S17	E70	6891	10	28.6	16	SF C	4.3	3	E		52	F
LEAR		0726	0744	0747	S13	E70	6891	10	28.6	21	SF C	3.3	3	E		84	F
GOES		0750	0805	0819						29		C 6.7					
GOES		0915	0921	0926						11		C 6.6					
GOES		1031	1045	1057						26		C 5.4					
HOLL		1418E	1419U	1427D	S11	W58	6884	10	19.2	9D	SF		2	E		26	
GOES		1625	1631	1635						10		C 4.2					
GOES		1758	1801	1805						7		C 2.3					
GOES		2045	2048	2050						5		C 3.3					
GOES		2223	2225	2227						4		C 5.2					
LEAR	24	0001E	0238	0316	S13	E56	6891	10	28.2	195D	2B		3	E		461	FE
PALE		0003	0007	0018	S07	E53	6891	10	28.0	15	SF		3	E		47	F
PALE		0038E	0100U	0137	S12	E61	6891	10	28.6	59D	1N M	1.9	3	E		189	F
LEAR		0121	0128	0139	S20	E62	6892	10	28.8	18	SF M	1.4	3	E		26	
GOES		0237E	0241	0315D						38D		X 2.1					
LEAR		0432	0433	0454	N22	W56	6879	10	19.9	22	SF		3	E		46	F
LEAR		0525	0633U	0710	S09	E56	6891	10	28.4	105	1F		3	E		133	F
LEAR		0530	0533	0541	N10	W04	6886	10	23.9	11	SF C	4.8	3	E		97	F
SVTO		0628E	0633U	0742	S12	E56	6891	10	28.5	74D	1F M	1.2	3	E		159	
SVTO		0640	0713	0732	N18	E84				52	SF			E		53	K
SVTO		0640	0724	0732	N18	E84		10	30.7	52	SF C	6.9	3	E		24	
LEAR		0721	0731	0746	S13	E55	6891	10	28.4	25	SF		3	E		33	F
LEAR		0824	0837	0848	S13	E53	6891	10	28.3	24	SF		3	E		41	F
SVTO		0825	0837	0847	S12	E54	6891	10	28.4	22	SF C	5.8	4	E		50	
SVTO		0946	0947	1002	S15	E63	6891	10	29.2	16	SN M	1.3	4	E		31	
SVTO		1023	1035U	1039	S21	E57	6892	10	28.8	16	SF		4	E		91	
SVTO		1107	1108	1113	S12	E53	6891	10	28.4	6	SF M	1.2	4	E		20	
SVTO		1109	1112	1132	N08	W05	6886	10	24.1	23	SF		4	E		13	E
GOES		1241	1244	1246						5		C 4.2					
GOES		1319	1321	1324						5		C 3.7					
RAMY		1548	1554	1609	S18	E48	6891	10	28.3	21	SF		3	E		29	F
HOLL		1648	1650	1659	S20	E54	6892	10	28.8	11	SF M	2.5	3	E		41	
PALE		1653	1712	1741	S15	E50	6891	10	28.5	48	1N M	3.2	3	E		141	FE
HOLL		1654	1655	1749	S15	E51	6891			55	1B			E		146	K
RAMY		1654	1655	1759	S16	E51	6891	10	28.6	65	1N		3	E		130	FE
HOLL		1654	1714	1749	S15	E51	6891	10	28.6	55	1B		3	E		234	F
PALE		2039	2043	2049	S12	E50	6891	10	28.6	10	SF		3	E		11	
PALE		2103	2105	2113	S09	E53	6891	10	28.8	10	SF C	4.0	3	E		30	F
PALE		2156	2236	2415	S12	E46	6891	10	28.4	139	1N M	9.8	3	E		195	F
PALE		2228	2239	2302	S20	E50	6892	10	28.8	34	SF		3	E		79	
LEAR		2233	2241	2244D	S12	E48	6891	10	28.5	11D	1N		2	E		195	ZF
PALE	25	0014	0019	0047	S20	E49	6892	10	28.7	33	SF		3	E		16	
LEAR		0036	0043	0050	N16	E68	6893	10	30.2	14	SF		3	E		36	
PALE		0042	0043	0048	N17	E73	6893	10	30.6	6	SF		3	E		16	
LEAR		0220	0226	0243	S12	E45	6891	10	28.5	23	SF		3	E		33	F
GOES		0257	0306	0317						20		C 7.0					
LEAR		0316	0326	0340	N19	E33	6888	10	27.6	24	SF		3	E		53	F
LEAR		0321	0326	0333	S20	E46	6892	10	28.6	12	SF		3	E		43	F
LEAR		0446	0448	0452	S12	E44	6891	10	28.5	6	SF C	8.7	3	E		59	F
LEAR		0456	0521	0530	S20	E46	6892	10	28.7	34	SF		3	E		37	
LEAR		0557	0601	0615	N10	W16	6886	10	24.0	18	SF		3	E		17	
LEAR		0601	0604	0610	N16	E65	6893	10	30.2	9	SF		3	E		44	F
LEAR		0704	0705	0715	S13	E44	6891	10	28.6	11	SF C	8.4	3	E		53	
LEAR		0744	0753	0814	S20	E41	6892	10	28.4	30	SF M	1.3	3	E		51	F
SVTO		0907E	0908U	0928D	S12	E43	6891	10	28.6	21D	SF C	7.8	2	E		27	F
SVTO		1004E	1010U	1022	S13	E40	6891	10	28.4	18D	SF		2	E		14	
SVTO		1044	1059	1341	S09	E37	6891	10	28.2	177	1B M	1.7	4	E		133	F
RAMY		1049E	1108	1238	S10	E38	6891	10	28.3	109D	SN		4	E		91	F



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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Time (UT)	Area Measurement Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
SVTO	25	1123	1126	1139	S20	E41	6892	10 28.6	16	SF	4	E	42		E
SVTO		1146	1150	1200	S23	E43	6892	10 28.8	14	SF	4	E	46		
SVTO		1206	1207	1215	N15	E68	6893	10 30.6	9	SF	4	E	24		
RAMY		1228	1228	1243	S20	E38	6892	10 28.4	15	SF	3	E	34		F
SVTO		1253	1320	1327	N18	E68	6893	10 30.7	34	SF	4	E	37		
SVTO		1330	1438U	1500	S22	E43	6892	10 28.9	90	SF	2	E	72		F
RAMY		1355	1356	1411	S22	E44	6892	10 29.0	16	SF	3	E	14		F
RAMY		1407	1409	1414	N15	E66	6893	10 30.6	7	SF C 9.1	3	E	28		F
GOES		1527	1530	1534					7	C 9.9					
RAMY		1708	1735	1805	S11	E35	6891	10 28.3	57	SF M 1.4	3	E	97		F
PALE		1714	1723	1804	S10	E35	6891	10 28.3	50	SN	3	E	89		F
HOLL		1719E	1719U	1737D	S12	E39	6891	10 28.6	18D	SF	1	E	67		F
HOLL		2043	2044	2055	N18	E61	6893	10 30.5	12	SF	3	E	21		F
HOLL		2146	2147	2204	S09	E28	6891	10 28.0	18	SF	4	E	26		F
HOLL		2150	2151	2201	S19	E39	6892	10 28.9	11	SF C 3.8	3	E	17		F
HOLL		2205	2217	2225	S14	E35	6891	10 28.6	20	SF	3	E	29		F
LEAR	26	0010	0010	0038	N17	E60	6893	10 30.6	28	SF	3	E	26		
PALE		0015E	0016	0304D	S11	E34	6891	10 28.6	169D	SF M 1.1	3	E	85		
SVTO		0845	0855	0912	N17	E53	6893	10 30.4	27	SF	4	E	22		
SVTO		0916	0921	0943	S11	E20	6891	10 27.9	27	SF C 5.0	4	E	80		F
LEAR		0918	0922	0930	S11	E19	6891	10 27.8	12	SF	3	E	50		
SVTO		1012	1022	1049	S22	E31	6892	10 28.8	37	SF	4	E	42		
GOES		1102E	1307	1401D					179D	M 1.2					
RAMY		1123	1124	1137	S15	E27	6891	10 28.5	14	SF C 4.3	2	E	27		F
RAMY		1227	1230	1241	N17	E55	6893	10 30.7	14	SF	3	E	16		F
RAMY		1256	1258	1312	S14	E27	6891	10 28.6	16	SF	3	E	50		F
SVTO		1306	1412	1452	S03	E69		10 31.7	106	2N C 8.9	4	E	268		
SVTO		1331	1331	1336	N17	E51	6893	10 30.4	5	SF	4	E	18		
SVTO		1333	1337	1348	S20	E28	6892	10 28.7	15	SF	4	E	17		F
SVTO		1334	1334	1344	N06	W35	6886	10 23.9	10	SF	4	E	13		
HOLL		1348E	1413U	1530	S03	E67		10 31.6	102D	1B	2	E	122		UF
RAMY		1351	1416U	1425	S04	E65		10 31.4	34	1N	2	E	148		FS
SVTO		1501	1505	1513	S02	E66		10 31.5	12	SF	3	E	43		
HOLL		1555	1559	1609	N19	E50	6893	10 30.5	14	SF	3	E	29		F
HOLL		1847	1852	2356D	S11	E20	6891		309D	1N		E	170		KT
HOLL		1847	2040	2356D	S11	E20	6891	10 28.3	309D	2B	3	E	426		YFT
RAMY		1848	1850	2003	S12	E22	6891	10 28.4	75	SF	2	E	93		F
PALE		1853E	1858	1910	S09	E20	6891	10 28.3	17D	1N	3	E	191		UF
HOLL		1853	2040	2100	S21	E25	6892	10 28.7	127	SF	3	E	26		F
RAMY		1918	1923	2029	S21	E26	6892	10 28.8	71	SF	2	E	40		
PALE		1929	1938	2003	S20	E24	6892	10 28.6	34	SF	3	E	43		
RAMY		2019	2108U	2108D	S09	E20	6891	10 28.3	49D	2N	3	E	385		F
PALE		2045E	2051	2325D	S09	E20	6891	10 28.4	160D	2N X 1.7	3	E	506		UF
LEAR	27	0024	0031	0059	S14	E19	6891	10 28.4	35	1N M 2.3	3	E	144		F
LEAR		0153	0209U	0330D	S20	E20	6892	10 28.6	97D	1B	3	E	163		F
LEAR		0206	0210	0257	S11	E20	6891	10 28.6	51	2B X 1.9	3	E	460		F
LEAR		0524	0527	0533	S15	E17	6891	10 28.5	9	SF C 9.8	3	E	25		
LEAR		0538	0549	0658	S13	E15	6891	10 28.4	80	3B X 6.1	3	E	602		F
SVTO		0539E	0544	0700	S10	E18	6891	10 28.6	81D	3B	2	E			FH
LEAR		0542	0553	0703	S22	E21	6892	10 28.8	81	SN	3	E	83		F
SVTO		0550	0553	0621	S21	E24	6892	10 29.1	31	SF	2	E	40		F
SVTO		0747	0747	0756	S19	E28	6892	10 29.5	9	SF	2	E	40		F
SVTO		0802	0812	0839	S18	E29	6892	10 29.5	37	SF	3	E	53		F
SVTO		1056	1057	1112	S22	E19	6892	10 28.9	16	SF	3	E	13		F
SVTO		1058	1058	1105	S10	E13	6891	10 28.4	7	SF	3	E	15		F
SVTO		1115	1135	1220	N17	E37	6893	10 30.3	65	SF C 6.5	4	E	60		
RAMY		1135	1135	1220	N16	E39	6893	10 30.4	45	SF	3	E	42		F
SVTO		1233	1304	1328	S14	E14	6891	10 28.6	55	1N M 3.3	4	E	101		F
RAMY		1257	1258	1316	S14	E13	6891	10 28.5	19	SN	3	E	85		F
RAMY		1429	1430	1433	S14	E10	6891	10 28.3	4	SF C 3.7	3	E	11		
HOLL		1453	1453	1502	S14	E12	6891	10 28.5	9	SF C 4.5	3	E	25		F
HOLL		1508	1523	1542	N19	E02	6888	10 27.8	34	SF C 5.8	3	E	13		F
HOLL		1510	1521	1537	S14	E12	6891	10 28.5	27	SF	3	E	30		F
HOLL		1710	1710	1720	S14	E12	6891	10 28.6	10	SF C 4.3	3	E	27		FE
HOLL		1718	1737	1832	N16	E33	6893	10 30.2	74	1N C 9.7	3	E	162		FE
HOLL		1803	1810	1822	S14	E09	6891	10 28.4	19	SF	3	E	26		FE



H $\alpha$  SOLAR FLARES

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks	
												Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)		
RAMY	29	1719	1729	1745	S15	E05	6901	10 30.1	26	SF	3	E		21		F
RAMY		1740	1811	2031D	S10	W23	6891		171D	1N		E		101		K
RAMY		1740	1855	2031D	S10	W23	6891	10 28.0	171D	2N M 4.7	3	E		334		F
HOLL		1744	1856	2017	S09	W20	6891	10 28.2	153	2B	3	E		394		F
RAMY		1850	1854	1925	S05	W39	6898	10 26.9	35	SF	3	E		42		F
RAMY		1942	1942	1958	N15	E07	6893	10 30.3	16	SF	3	E		20		F
PALE		1951E	1951U	2022D	S10	W22	6891	10 28.2	31D	SF	2	E		65		UF
HOLL		2032	2043	2118	S17	W14	6892	10 28.8	46	SF	3	E		66		F
HOLL		2119	2126	2214	S07	W20	6891	10 28.4	55	SN M 1.1	3	E		88		FE
PALE		2155E	2155U	2208D	S07	W20	6891	10 28.4	13D	SF	3	E		21		
HOLL		2250	2257	2310	S21	W14	6892	10 28.9	20	SF	3	E		28		
LEAR		2313	2324	2341	S15	E02	6901	10 30.1	28	SF	3	E		56		
PALE	30	0026	0027	0037	S10	W14	6891	10 29.0	11	SF	3	E		46		F
LEAR		0421	0430	0516	S22	W11	6892	10 29.3	55	2F C 9.0	3	E		277		F
LEAR		0426	0427	0455	N16	E00	6893	10 30.2	29	SF	3	E		67		F
LEAR		0451	0456	0511	S16	W22	6891	10 28.5	20	SF C 7.2	3	E		28		
GOES		0515E		0522D					7D	C 7.7						
LEAR		0518	0523	0525	S14	W16	6891	10 29.0	7	SF	3	E		12		F
LEAR		0528	0528	0540	S13	W32	6891	10 27.8	12	SF C 7.0	3	E		15		
LEAR		0611	0621	0903	S08	W25	6891	10 28.4	172	3B X 2.5	3	E		670		UF
LEAR		0616	0625	0649	S11	W38	6898	10 27.4	33	SF	3	E		89		F
LEAR		0916	0920	0923	S13	W26	6891	10 28.4	7	SF	3	E		18		F
RAMY		1315E	1315	1341	S13	W27	6891	10 28.5	26D	SF C 5.7	3	E		33		F
HOLL		1415E	1416U	1458	S14	W36	6891	10 27.9	43D	SN C 6.9	2	E		81		F
HOLL		1614	1617	1626	S10	W35	6891	10 28.0	12	SN C 4.0	2	E		53		E
HOLL		1735	1749	1800	S13	W33	6891	10 28.2	25	SF	3	E		68		F
RAMY		1736	1749	1758	S12	W33	6891	10 28.2	22	SF	3	E		42		F
PALE		1913	1915	1927	S08	W33	6891	10 28.3	14	SF	3	E		42		F
HOLL		1913	1916	1930	S10	W35	6891	10 28.2	17	1B M 4.3	3	E		155		F
HOLL		1948	1949	1957	S12	W23	6891	10 29.1	9	SN C 7.1	3	E		96		
RAMY		2019	2021	2033	S13	W40	6891	10 27.8	14	SF C 6.8	3	E		38		F
HOLL		2019	2021	2035	S12	W40	6891	10 27.8	16	SN C 6.8	3	E		64		F
HOLL		2052	2059	2111	S07	E41	6900	11 2.9	19	SF	3	E		20		
LEAR		2223	2226	2229	S12	W31	6891	10 28.6	6	SF C 5.3	3	E		41		F
HOLL		2247E	2248U	2335D	S12	W40	6891	10 27.9	48D	SF C 3.2	3	E		31		F
LEAR		2338	2339	2403	S16	W27	6892	10 28.9	25	SF C 3.2	3	E		23		F
LEAR	31	0045	0056	0131	S20	W30	6892	10 28.7	46	1F C 9.0	3	E		192		F
PALE		0046E	0052U	0128D	S19	W29	6892	10 28.8	42D	SF	3	E		81		F
LEAR		0110	0124	0144	S13	W34	6891	10 28.5	34	SN C 5.7	3	E		47		F
LEAR		0245	0250	0250D	S12	W36	6891	10 28.4	5D	SF	3	E		27		
GOES		0257	0301	0303					6	C 7.5						
LEAR		0758	0807	0818	S15	W38	6891	10 28.4	20	SF C 8.9	3	E		47		
LEAR		0802	0805	0818	N17	W18	6893	10 30.0	16	SF	3	E		31		
GOES		0906	0912	0918					12	M 1.0						
RAMY		1356	1357	1408	S13	W41	6891	10 28.5	12	SF C 2.2	3	E		18		F
RAMY		1414	1415	1421	S11	W40	6891	10 28.6	7	SF	3	E		10		F
RAMY		1506	1506	1521	S11	W34	6891	10 29.1	15	SF C 1.9	3	E		14		F
HOLL		1622	1625	1629	S22	W32	6892	10 29.2	7	SF	3	E		21		
HOLL		1717	1723	1755	S20	W37	6892	10 28.9	38	SF C 3.1	3	E		79		F
RAMY		1718	1721	1745	S20	W38	6892	10 28.8	27	SF C 3.1	3	E		24		F
HOLL		1809	1829	1853	N18	W17	6893	10 30.5	44	SF C 3.0	3	E		30		
HOLL		1941	1945	1949	S18	W48	6892	10 28.2	8	SF C 5.3	3	E		16		
PALE		2118	2118	2125	S12	W42	6891	10 28.7	7	SF C 3.9	3	E		42		
HOLL		2118	2119	2129	S14	W44	6891	10 28.6	11	SN	2	E		73		FE
HOLL		2130	2131	2145	N16	W21	6893	10 30.3	15	SF	2	E		56		F
HOLL		2140	2140	2144	S12	W44	6891	10 28.6	4	SF C 3.1	3	E		35		F
HOLL		2235	2238	2301	N15	W22	6893	10 30.3	26	SF C 3.1	3	E		54		F
LEAR		2259	2320	2352	S12	W43	6891	10 28.7	53	SN	3	E		49		FE
HOLL		2259	2321	2354D	S11	W50	6891	10 28.2	55D	SN C 4.5	3	E		44		F
PALE		2304	2305	2331	S13	W45	6891	10 28.6	27	SF	3	E		27		
PALE		2317	2322	2347	N16	W24	6893	10 30.1	30	SF C 9.5	3	E		17		
HOLL		2321	2321	2330	N15	W23	6893	10 30.2	9	SF C 9.5	3	E		16		F
PALE		2336	2338	2351	S13	W45	6891	10 28.6	15	SF	3	E		32		
PALE		2337	2340	2401	S07	W66	6898	10 27.0	24	SF	3	E		26		



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Selected Fixed Frequency Events

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Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak	Mean		
							(10 -22 W/m <sup>2</sup> Hz)			
01	8800	SVTO	8 S	0540.0E	0540.0	1.0D	150.0			QL=2 ST=2 TYP=3
	2695	SVTO	8 S	0540.0E	0540.0	1.0D	39.0			QL=2 ST=2 TYP=3
	2695	LEAR	4 S/F	0611.0E	0614.0	5.0D	99.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0611.0E	0612.0	6.0D	130.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	0611.0E	0614.0	5.0D	110.0			QL=2 ST=2 TYP=3
	8800	SVTO	4 S/F	0611.0E	0612.0	4.0D	140.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0918.0E	0919.0	1.0D	14.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0923.0E	0923.0	U	17.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0932.0E	0932.0	U	12.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0953.0E	0953.0	U	41.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0953.0E	0953.0	U	18.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0953.0E	0953.0	U	67.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1254.0E	1255.0	1.0D	36.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1301.0E	1302.0	2.0D	58.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1301.0E	1302.0	2.0D	67.0			QL=2 ST=2 TYP=3
	8800	SGMR	8 S	1302.0E	1302.0	U	32.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1412.0E	1412.0	1.0D	33.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1412.0E	1412.0	1.0D	63.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1412.0E	1412.0	1.0D	45.0			QL=2 ST=2 TYP=3
	8800	SVTO	8 S	1412.0E	1412.0	1.0D	35.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1509.0E	1509.0	U	38.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	1509.0E	1509.0	U	33.0			QL=2 ST=2 TYP=3
	8800	SGMR	4 S/F	1558.0E	1559.0	5.0D	230.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	1558.0E	1559.0	3.0D	210.0			QL=2 ST=2 TYP=3
	2695	SVTO	8 S	1559.0E	1559.0	U	30.0			QL=2 ST=2 TYP=3
	8800	SGMR	4 S/F	1638.0E	1638.0	5.0D	49.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1805.0E	1805.0	1.0D	58.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	2228.0E	2228.0	2.0D	390.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	2228.0E	2228.0	1.0D	130.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	2248.0E	2248.0	1.0D	42.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	2248.0E	2248.0	1.0D	37.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	2248.0E	2248.0	1.0D	47.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2248.0E	2248.0	1.0D	45.0			QL=4 ST=2 TYP=3
8800	LEAR	8 S	2353.0E	2353.0	1.0D	12.0			QL=4 ST=2 TYP=3	
02	2695	LEAR	8 S	0022.0E	0022.0	U	27.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0124.0E	0125.0	3.0D	99.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0124.0E	0125.0	4.0D	140.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0849.0E	0849.0	U	45.0			QL=2 ST=2 TYP=3
	2695	LEAR	8 S	0926.0E	0927.0	1.0D	13.0			QL=4 ST=2 TYP=3
03	2695	LEAR	4 S/F	0141.0E	0141.0	3.0D	50.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0141.0E	0141.0	5.0D	62.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0141.0E	0141.0	13.0D	32.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0620.0E	0620.0	U	17.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	2034.0E	2036.0	6.0D	51.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	2034.0E	2036.0	7.0D	25.0			QL=4 ST=2 TYP=3
04	8800	PALE	8 S	0009.0E	0009.0	1.0D	21.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0044.0E	0044.0	2.0D	80.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0044.0E	0045.0	2.0D	140.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0850.0E	0850.0	1.0D	29.0			QL=4 ST=2 TYP=3
	2695	SVTO	4 S/F	0942.0E	0944.0	10.0D	43.0			QL=2 ST=2 TYP=3
	8800	SVTO	4 S/F	0946.0E	0947.0	6.0D	21.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1859.0E	1900.0	2.0D	36.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	1914.0E	1916.0	3.0D	7.0			QL=4 ST=2 TYP=3
	8800	PALE	4 S/F	1921.0E	1926.0	11.0D	98.0			QL=4 ST=2 TYP=5
	8800	SGMR	4 S/F	1922.0E	1926.0	10.0D	86.0			QL=4 ST=2 TYP=5
05	2695	LEAR	4 S/F	0031.0E	0031.0	5.0D	61.0			QL=4 ST=2 TYP=3
	8800	LEAR	4 S/F	0031.0E	0031.0	4.0D	43.0			QL=4 ST=2 TYP=3
	2695	PALE	8 S	0031.0E	0031.0	1.0D	54.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	0031.0E	0031.0	U	36.0			QL=4 ST=2 TYP=3
	2695	LEAR	4 S/F	0443.0E	0445.0	4.0D	58.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0444.0E	0445.0	2.0D	44.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0650.0E	0651.0	2.0D	47.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0800.0E	0800.0	1.0D	55.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0800.0E	0800.0	1.0D	42.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0800.0E	0800.0	1.0D	46.0			QL=2 ST=2 TYP=3

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Selected Fixed Frequency Events

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Oct 91

OCTOBER    1991

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak Mean (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Int	Remarks
05	8800 SVTO	8 S	0800.0E	0800.0	1.0D	34.0		QL=4 ST=2 TYP=3
06	8800 LEAR	4 S/F	0423.0E	0425.0	4.0D	17.0		QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0425.0E	0425.0	U	16.0		QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0533.0E	0533.0	U	22.0		QL=2 ST=2 TYP=3
07	2695 LEAR	8 S	0118.0E	0119.0	1.0D	1.0		QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0124.0E	0125.0	1.0D	11.0		QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0124.0E	0125.0	1.0D	20.0		QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0253.0E	0253.0	U	14.0		QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0651.0E	0651.0	1.0D	71.0		QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0651.0E	0651.0	1.0D	15.0		QL=2 ST=2 TYP=3
	2695 SVTO	8 S	0651.0E	0651.0	1.0D	61.0		QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0729.0E	0729.0	U	50.0		QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0729.0E	0729.0	U	29.0		QL=2 ST=2 TYP=3
	8800 LEAR	8 S	0839.0E	0840.0	2.0D	24.0		QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0840.0E	0840.0	2.0D	32.0		QL=4 ST=2 TYP=3
	2695 SVTO	4 S/F	0844.0E	0845.0	3.0D	25.0		QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0845.0E	0845.0	1.0D	35.0		QL=4 ST=2 TYP=3
	2695 SVTO	4 S/F	1014.0E	1018.0	6.0D	44.0		QL=2 ST=2 TYP=3
	8800 SVTO	4 S/F	1014.0E	1014.0	6.0D	32.0		QL=4 ST=2 TYP=3
09	8800 LEAR	8 S	0147.0E	0148.0	2.0D	55.0		QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	0147.0E	0148.0	3.0D	88.0		QL=4 ST=2 TYP=3
	2695 SVTO	4 S/F	0531.0E	0532.0	1109.0D	37.0		QL=4 ST=1 TYP=3
10	2695 SVTO	4 S/F	0625.0E	0626.0	6.0D	40.0		QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	0626.0E	0626.0	3.0D	33.0		QL=4 ST=2 TYP=3
	2695 SGMR	8 S	1344.0E	1344.0	U	32.0		QL=4 ST=2 TYP=3
	2695 PALE	8 S	1957.0E	1957.0	1.0D	39.0		QL=4 ST=2 TYP=3
	2695 SGMR	8 S	1957.0E	1957.0	1.0D	38.0		QL=4 ST=3 TYP=3
11	8800 PALE	4 S/F	2017.0E	2018.0	4.0D	56.0		QL=4 ST=2 TYP=3
	8800 SGMR	8 S	2018.0E	2018.0	1.0D	46.0		QL=4 ST=2 TYP=3
12	2695 SVTO	8 S	1004.0E	1005.0	2.0D	67.0		QL=2 ST=2 TYP=3
	8800 SVTO	8 S	1005.0E	1005.0	1.0D	100.0		QL=4 ST=2 TYP=3
13	2695 PALE	8 S	1809.0E	1810.0	1.0D	34.0		QL=4 ST=2 TYP=3
	8800 PALE	8 S	1809.0E	1810.0	1.0D	41.0		QL=4 ST=2 TYP=3
	8800 SGMR	8 S	1809.0E	1810.0	1.0D	45.0		QL=4 ST=2 TYP=3
	2695 SGMR	8 S	1809.0E	1810.0	1.0D	41.0		QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	2219.0E	2224.0	7.0D	23.0		QL=2 ST=2 TYP=3
	8800 LEAR	4 S/F	2219.0E	2224.0	5.0D	37.0		QL=2 ST=2 TYP=3
14	2695 LEAR	8 S	0950.0E	0950.0	U	39.0		QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0950.0E	0950.0	2.0D	52.0		QL=4 ST=3 TYP=3
	2695 LEAR	8 S	1003.0E	1003.0	1.0D	28.0		QL=4 ST=2 TYP=3
	2695 SVTO	8 S	1003.0E	1003.0	1.0D	45.0		QL=2 ST=2 TYP=3
	2695 SVTO	8 S	1023.0E	1023.0	1.0D	36.0		QL=2 ST=2 TYP=3
	2695 SVTO	8 S	1057.0E	1057.0	1.0D	79.0		QL=2 ST=2 TYP=3
	2695 SVTO	8 S	1245.0E	1246.0	1.0D	43.0		QL=2 ST=2 TYP=3
	2695 SGMR	8 S	1449.0E	1449.0	2.0D	130.0		QL=4 ST=2 TYP=3
	2695 SVTO	8 S	1449.0E	1449.0	2.0D	160.0		QL=2 ST=2 TYP=3
	8800 SVTO	8 S	1449.0E	1449.0	1.0D	49.0		QL=2 ST=2 TYP=3
	8800 SGMR	4 S/F	1449.0E	1449.0	551.0D	49.0		QL=4 ST=1 TYP=3
	2695 PALE	4 S/F	1734.0E	1735.0	3.0D	87.0		QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	1734.0E	1735.0	7.0D	93.0		QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1734.0E	1734.0	7.0D	170.0		QL=4 ST=2 TYP=3
15	2695 LEAR	4 S/F	0128.0E	0129.0	3.0D	110.0		QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0128.0E	0129.0	3.0D	80.0		QL=4 ST=2 TYP=3
	2695 PALE	8 S	0129.0E	0129.0	1.0D	90.0		QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0144.0E	0144.0	U	26.0		QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	0612.0E	0613.0	D	40.0		QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0612.0E	0613.0	3.0D	280.0		QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0612.0E	0613.0	2.0D	58.0		QL=2 ST=2 TYP=3
	8800 SVTO	8 S	0612.0E	0613.0	2.0D	230.0		QL=2 ST=2 TYP=3
	8800 LEAR	8 S	0700.0E	0701.0	2.0D	190.0		QL=4 ST=2 TYP=3

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

OCTOBER 1991

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Flux Density Mean	Int	Remarks
15	8800	SVTO	8 S	0700.0E	0701.0	2.0D	170.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0701.0E	0701.0	1.0D	36.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0701.0E	0701.0	1.0D	44.0			QL=2 ST=2 TYP=3
	2695	LEAR	8 S	0914.0E	0914.0	2.0D	49.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0914.0E	0915.0	2.0D	74.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0914.0E	0914.0	1.0D	42.0			QL=2 ST=2 TYP=3
	8800	SVTO	8 S	0914.0E	0915.0	1.0D	70.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1549.0E	1549.0	U	38.0			QL=4 ST=2 TYP=3
18	8800	LEAR	8 S	0113.0E	0113.0	1.0D	16.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0113.0E	0113.0	1.0D	19.0			QL=4 ST=2 TYP=3
21	2695	LEAR	4 S/F	0057.0E	0058.0	4.0D	61.0			QL=4 ST=2 TYP=3
	8800	LEAR	8 S	0057.0E	0058.0	2.0D	65.0			QL=4 ST=2 TYP=3
	2695	PALE	4 S/F	0057.0E	0058.0	4.0D	56.0			QL=4 ST=2 TYP=3
	8800	PALE	4 S/F	0057.0E	0058.0	4.0D	73.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0610.0E	0610.0	1.0D	56.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	2036.0E	2036.0	1.0D	32.0			QL=4 ST=2 TYP=3
22	2695	PALE	4 S/F	1828.0E	1829.0	3.0D	38.0			QL=4 ST=2 TYP=3
	2695	SGMR	4 S/F	1828.0E	1829.0	4.0D	40.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	1831.0E	1832.0	1.0D	21.0			QL=4 ST=2 TYP=3
	2695	SGMR	8 S	1837.0E	1837.0	1.0D	22.0			QL=4 ST=2 TYP=3
	8800	SGMR	4 S/F	1837.0E	1839.0	34.0D	60.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	1839.0E	1839.0	U	31.0			QL=4 ST=2 TYP=3
23	8800	LEAR	8 S	0733.0E	0733.0	1.0D	61.0			QL=4 ST=2 TYP=3
	8800	SVTO	8 S	0733.0E	0733.0	1.0D	65.0			QL=2 ST=2 TYP=3
	8800	SVTO	8 S	0841.0E	0842.0	2.0D	79.0			QL=2 ST=2 TYP=3
	8800	SVTO	4 S/F	0915.0E	0916.0	4.0D	66.0			QL=2 ST=2 TYP=3
	8800	SVTO	8 S	1004.0E	1004.0	U	250.0			QL=2 ST=2 TYP=3
	2695	SVTO	8 S	1032.0E	1033.0	2.0D	35.0			QL=2 ST=2 TYP=3
	8800	SVTO	8 S	1032.0E	1033.0	2.0D	49.0			QL=2 ST=2 TYP=3
	8800	SGMR	4 S/F	1626.0E	1627.0	3.0D	150.0			QL=4 ST=2 TYP=3
	8800	PALE	8 S	2056.0E	2057.0	2.0D	67.0			QL=4 ST=2 TYP=3
	8800	SGMR	8 S	2056.0E	2057.0	2.0D	91.0			QL=2 ST=2 TYP=3
	24	8800	PALE	4 S/F	0042.0E	0046.0	29.0D	96.0		
8800		LEAR	4 S/F	0043.0E	0046.0	20.0D	73.0			QL=4 ST=2 TYP=3
2695		PALE	4 S/F	0044.0E	0044.0	5.0D	52.0			QL=4 ST=2 TYP=3
2695		LEAR	4 S/F	0044.0E	0044.0	32.0D	51.0			QL=4 ST=2 TYP=3
8800		LEAR	4 S/F	0120.0E	0121.0	6.0D	93.0			QL=4 ST=2 TYP=3
8800		PALE	4 S/F	0120.0E	0121.0	3.0D	100.0			QL=4 ST=3 TYP=3
2695		LEAR	4 S/F	0121.0E	0130.0	11.0D	33.0			QL=4 ST=2 TYP=5
8800		LEAR	49 GB	0236.0E	0238.0	12.0D	4600.0			QL=4 ST=2 TYP=7
8800		PALE	49 GB	0236.0E	0238.0	25.0D	3800.0			QL=4 ST=3 TYP=6
2695		PALE	8 S	0237.0E	0238.0	2.0D	84.0			QL=4 ST=3 TYP=3
2695		LEAR	49 GB	0238.0E	0238.0	U	79.0			QL=4 ST=2 TYP=7
8800		LEAR	8 S	0529.0E	0529.0	1.0D	68.0			QL=4 ST=2 TYP=3
8800		SVTO	8 S	0624.0E	0624.0	U	48.0			QL=2 ST=2 TYP=3
8800		LEAR	4 S/F	0625.0E	0628.0	8.0D	75.0			QL=4 ST=2 TYP=3
8800		SVTO	4 S/F	0626.0E	0628.0	4.0D	90.0			QL=2 ST=2 TYP=3
8800		LEAR	4 S/F	0833.0E	0834.0	4.0D	180.0			QL=4 ST=2 TYP=3
8800		SVTO	8 S	0944.0E	0945.0	2.0D	100.0			QL=2 ST=2 TYP=3
8800		SGMR	8 S	1242.0E	1242.0	1.0D	90.0			QL=4 ST=2 TYP=3
8800		SVTO	8 S	1242.0E	1242.0	1.0D	90.0			QL=2 ST=2 TYP=3
8800		SGMR	4 S/F	1654.0E	1654.0	9.0D	420.0			QL=4 ST=2 TYP=3
8800		PALE	8 S	1700.0	1701.0U	1.0D	37.0			QL=2 ST=2 TYP=3
2695		PALE	8 S	1700.0	1700.0U	U	57.0			QL=2 ST=2 TYP=3
2695		PALE	8 S	1706.0E	1706.0	U	28.0			QL=4 ST=2 TYP=3
8800		SGMR	4 S/F	1707.0E	1712.0	7.0D	100.0			QL=4 ST=2 TYP=3
8800		PALE	4 S/F	1710.0E	1711.0	7.0D	76.0			QL=4 ST=2 TYP=3
2695		PALE	8 S	1711.0E	1712.0	1.0D	28.0			QL=4 ST=2 TYP=3
2695		PALE	8 S	1720.0E	1721.0	2.0D	34.0			QL=4 ST=2 TYP=3
8800		PALE	4 S/F	1733.0E	1736.0	4.0D	42.0			QL=4 ST=2 TYP=3
2695		PALE	8 S	1736.0E	1737.0	1.0D	23.0			QL=4 ST=2 TYP=3
8800		SGMR	8 S	1857.0E	1857.0	U	82.0			QL=4 ST=2 TYP=3
8800		LEAR	4 S/F	2230.0E	2236.0	8.0D	490.0			QL=4 ST=2 TYP=3
2695	LEAR	4 S/F	2232.0E	2236.0	6.0D	210.0			QL=4 ST=2 TYP=3	

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

47  
Oct 91

OCTOBER 1991

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 <sup>-22</sup> W/m <sup>2</sup> Hz)	Mean		
24	8800 PALE	4 S/F	2237.0	2239.0U	19.0D	110.0			QL=2 ST=2 TYP=3
	8800 LEAR	4 S/F	2314.0E	2317.0	5.0D	75.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	2317.0E	2317.0	U	59.0			QL=2 ST=2 TYP=3
25	2695 LEAR	8 S	0119.0E	0119.0	U	37.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0133.0E	0134.0	1.0D	52.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0444.0E	0446.0	4.0D	50.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0703.0E	0703.0	7.0D	76.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	0703.0E	0703.0	1.0D	66.0			QL=2 ST=2 TYP=3
	2695 LEAR	8 S	0743.0E	0743.0	1.0D	61.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0743.0E	0743.0	U	30.0			QL=4 ST=2 TYP=3
	2695 SVTO	4 S/F	1041.0E	1045.0	8.0D	50.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	1527.0E	1527.0	2.0D	210.0			QL=2 ST=2 TYP=3
8800 SVTO	8 S	1531.0E	1531.0	U	58.0			QL=2 ST=2 TYP=3	
26	2695 LEAR	4 S/F	0024.0E	0038.0	45.0D	120.0			QL=4 ST=2 TYP=5
	8800 LEAR	4 S/F	0030.0E	0038.0	20.0D	80.0			QL=4 ST=2 TYP=5
	2695 PALE	20 GRF	0031.0E	0038.0	10.0D	110.0			QL=4 ST=2 TYP=2
	8800 PALE	4 S/F	0032.0E	0038.0	7.0D	93.0			QL=4 ST=2 TYP=5
	8800 SVTO	8 S	1149.0E	1150.0	2.0D	110.0			QL=2 ST=2 TYP=3
	8800 SGMR	4 S/F	1257.0E	1257.0	7.0D	57.0			QL=2 ST=2 TYP=3
	8800 SVTO	4 S/F	1257.0E	1257.0	4.0D	100.0			QL=2 ST=2 TYP=3
	8800 SGMR	4 S/F	1847.0E	1848.0	17.0D	130.0			QL=4 ST=2 TYP=3
	8800 PALE	4 S/F	1848.0E	1848.0	4.0D	90.0			QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	1848.0E	1848.0	16.0D	38.0			QL=4 ST=2 TYP=3
	2695 PALE	4 S/F	1848.0E	1848.0	21.0D	43.0			QL=4 ST=2 TYP=3
	2695 PALE	49 GB	2024.0E	2045.0	66.0D	1200.0			QL=4 ST=2 TYP=7
	8800 SGMR	49 GB	2029.0E	2036.0	35.0D	1600.0			QL=4 ST=3 TYP=7
	2695 SGMR	49 GB	2030.0E	2045.0	34.0D	1200.0			QL=4 ST=3 TYP=7
	8800 PALE	49 GB	2030.0E	2036.0	41.0D	1100.0			QL=4 ST=2 TYP=7
2695 LEAR	20 GRF	2208.0E	2221.0	43.0D	49.0			QL=4 ST=2 TYP=2	
8800 LEAR	4 S/F	2219.0E	2219.0	20.0D	65.0			QL=2 ST=3 TYP=3	
27	8800 LEAR	8 S	0022.0E	0023.0	1.0D	34.0			QL=4 ST=2 TYP=3
	2695 PALE	8 S	0022.0E	0023.0	1.0D	31.0			QL=4 ST=2 TYP=3
	8800 PALE	4 S/F	0022.0E	0042.0	22.0D	99.0			QL=4 ST=2 TYP=5
	8800 LEAR	4 S/F	0039.0E	0044.0	7.0D	70.0			QL=4 ST=3 TYP=3
	8800 LEAR	49 GB	0205.0E	0208.0	8.0D	750.0			QL=4 ST=2 TYP=6
	8800 PALE	49 GB	0205.0E	0208.0	7.0D	890.0			QL=4 ST=2 TYP=6
	2695 LEAR	8 S	0208.0E	0209.0	2.0D	190.0			QL=4 ST=2 TYP=3
	2695 PALE	8 S	0208.0E	0209.0	2.0D	180.0			QL=4 ST=2 TYP=3
	8800 LEAR	49 GB	0536.0E	0540.0	43.0D	13000.0			QL=4 ST=2 TYP=6
	2695 SVTO	49 GB	0539.0E	0542.0	19.0D	3800.0			QL=2 ST=2 TYP=6
	2695 LEAR	49 GB	0539.0E	0542.0	25.0D	3800.0			QL=4 ST=2 TYP=6
	8800 SVTO	49 GB	0539.0E	0540.0	21.0D	8600.0			QL=2 ST=2 TYP=6
	8800 SGMR	49 GB	1255.0E	1256.0	4.0D	950.0			QL=4 ST=2 TYP=6
	2695 SVTO	4 S/F	1256.0E	1256.0	4.0D	470.0			QL=2 ST=2 TYP=3
	8800 SVTO	49 GB	1256.0E	1256.0	8.0D	1100.0			QL=2 ST=2 TYP=6
	2695 SGMR	4 S/F	1256.0E	1256.0	664.0D	400.0			QL=4 ST=1 TYP=3
	8800 LEAR	8 S	2323.0E	2324.0	1.0D	32.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	2323.0E	2324.0	1.0D	30.0			QL=4 ST=2 TYP=3
28	8800 LEAR	8 S	0130.0E	0131.0	2.0D	41.0			QL=4 ST=2 TYP=3
	8800 PALE	4 S/F	0130.0E	0131.0	3.0D	52.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0632.0E	0632.0	4.0D	160.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0632.0E	0632.0	1.0D	18.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0632.0E	0632.0	1.0D	34.0			QL=2 ST=2 TYP=3
	8800 SVTO	8 S	0632.0E	0632.0	1.0D	170.0			QL=2 ST=2 TYP=3
	8800 LEAR	8 S	0654.0E	0655.0	1.0D	39.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	0654.0E	0655.0	2.0D	68.0			QL=2 ST=2 TYP=3
	8800 SVTO	4 S/F	0712.0E	0715.0	7.0D	74.0			QL=2 ST=2 TYP=3
	8800 LEAR	20 GRF	0737.0E	0738.0	5.0D	55.0			QL=4 ST=2 TYP=2
	8800 SVTO	4 S/F	0737.0E	0738.0	9.0D	90.0			QL=2 ST=2 TYP=3
	2695 SGMR	4 S/F	1230.0E	1236.0	18.0D	260.0			QL=4 ST=2 TYP=5
	2695 SVTO	4 S/F	1230.0E	1236.0	18.0D	280.0			QL=2 ST=2 TYP=5
	8800 SVTO	4 S/F	1230.0E	1236.0	25.0D	310.0			QL=2 ST=2 TYP=5
	8800 SGMR	4 S/F	1230.0E	1230.0	690.0D	86.0			QL=4 ST=1 TYP=3
8800 SGMR	4 S/F	1524.0E	1525.0	7.0D	160.0			QL=4 ST=2 TYP=3	
2695 PALE	4 S/F	1737.0E	1739.0	5.0D	50.0			QL=4 ST=2 TYP=3	



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

OCTOBER 1991

Day	Freq	Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
							Peak	Mean		
							(10 -22 W/m 2 Hz)			
28	8800	PALE	4 S/F	1737.0E	1739.0	10.0D	120.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	1942.0E	1942.0	3.0D	43.0		QL=4	ST=2 TYP=3
		SGMR	4 S/F	1942.0E	1943.0	4.0D	63.0		QL=4	ST=2 TYP=3
		PALE	8 S	2056.0E	2056.0	U	27.0		QL=4	ST=2 TYP=3
		LEAR	4 S/F	2301.0E	2302.0	4.0D	56.0		QL=4	ST=2 TYP=3
		PALE	8 S	2302.0E	2302.0	1.0D	64.0		QL=4	ST=2 TYP=3
29	8800	LEAR	4 S/F	0128.0E	0129.0	3.0D	190.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0129.0E	0129.0	1.0D	38.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	0129.0E	0129.0	4.0D	180.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	0129.0E	0129.0	4.0D	43.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0139.0E	0140.0	2.0D	82.0		QL=4	ST=2 TYP=3
		PALE	8 S	0139.0E	0140.0	2.0D	72.0		QL=4	ST=2 TYP=3
		SVTO	4 S/F	0731.0E	0733.0	4.0D	18.0		QL=4	ST=3 TYP=3
		LEAR	8 S	0733.0E	0733.0	1.0D	18.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0957.0E	0958.0	1.0D	65.0		QL=4	ST=2 TYP=3
		SVTO	8 S	0957.0E	0958.0	2.0D	110.0		QL=2	ST=2 TYP=3
		SVTO	8 S	1056.0E	1056.0	1.0D	130.0		QL=2	ST=2 TYP=3
		PALE	8 S	1718.0E	1719.0	1.0D	84.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	1850.0E	1854.0	15.0D	250.0		QL=2	ST=2 TYP=3
		SGMR	4 S/F	1850.0E	1853.0	23.0D	140.0		QL=4	ST=2 TYP=5
		SGMR	4 S/F	1851.0E	1854.0	18.0D	240.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	1851.0E	1853.0	25.0D	130.0		QL=2	ST=2 TYP=3
		SGMR	8 S	1941.0E	1941.0	U	61.0		QL=4	ST=2 TYP=3
		PALE	8 S	2054.0E	2055.0	2.0D	80.0		QL=4	ST=2 TYP=3
		SGMR	8 S	2055.0E	2055.0	1.0D	81.0		QL=2	ST=2 TYP=3
		LEAR	8 S	2349.0E	2349.0	2.0D	45.0		QL=4	ST=2 TYP=3
		LEAR	8 S	2349.0E	2350.0	2.0D	25.0		QL=4	ST=2 TYP=3
PALE	4 S/F	2349.0E	2350.0	3.0D	50.0		QL=4	ST=2 TYP=3		
PALE	8 S	2349.0E	2350.0	2.0D	30.0		QL=4	ST=2 TYP=3		
30	8800	LEAR	4 S/F	0425.0E	0426.0	5.0D	110.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0429.0E	0429.0	1.0D	23.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0516.0E	0516.0	1.0D	35.0		QL=4	ST=2 TYP=3
		LEAR	49 GB	0615.0E	0619.0	31.0D	5200.0		QL=4	ST=2 TYP=6
		LEAR	49 GB	0615.0E	0621.0	61.0D	990.0		QL=4	ST=2 TYP=6
		SVTO	49 GB	0615.0E	0621.0	78.0D	1200.0		QL=2	ST=2 TYP=6
		SVTO	49 GB	0615.0E	0619.0	1065.0D	5300.0		QL=2	ST=1 TYP=6
		PALE	4 S/F	1912.0E	1913.0	7.0D	160.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	1912.0E	1915.0	7.0D	48.0		QL=4	ST=2 TYP=3
		SGMR	4 S/F	1912.0E	1913.0	5.0D	41.0		QL=4	ST=2 TYP=3
		SGMR	4 S/F	1912.0E	1913.0	6.0D	150.0		QL=2	ST=2 TYP=3
		PALE	8 S	1948.0E	1949.0	1.0D	68.0		QL=4	ST=3 TYP=3
		SGMR	8 S	1948.0E	1949.0	2.0D	81.0		QL=2	ST=2 TYP=3
		PALE	8 S	2020.0E	2020.0	U	28.0		QL=4	ST=2 TYP=3
31	2695	LEAR	8 S	0710.0E	0711.0	1.0D	87.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0756.0E	0757.0	2.0D	38.0		QL=4	ST=2 TYP=3
		LEAR	8 S	0909.0E	0909.0	1.0D	43.0		QL=4	ST=2 TYP=3
		PALE	8 S	1819.0E	1820.0	1.0D	42.0		QL=4	ST=2 TYP=3
		PALE	4 S/F	2117.0E	2118.0	3.0D	200.0		QL=4	ST=2 TYP=3
		PALE	8 S	2139.0E	2139.0	1.0D	55.0		QL=4	ST=2 TYP=3

Reports are received routinely from the following observatories:

BERN = Berne                      LEAR = Learmonth                      PALE = Palehua                      SGMR = Sagamore Hill  
 OTTA = Ottawa                      PENT = Penticton                      SVTO = San Vito

Explanation of Type Code:

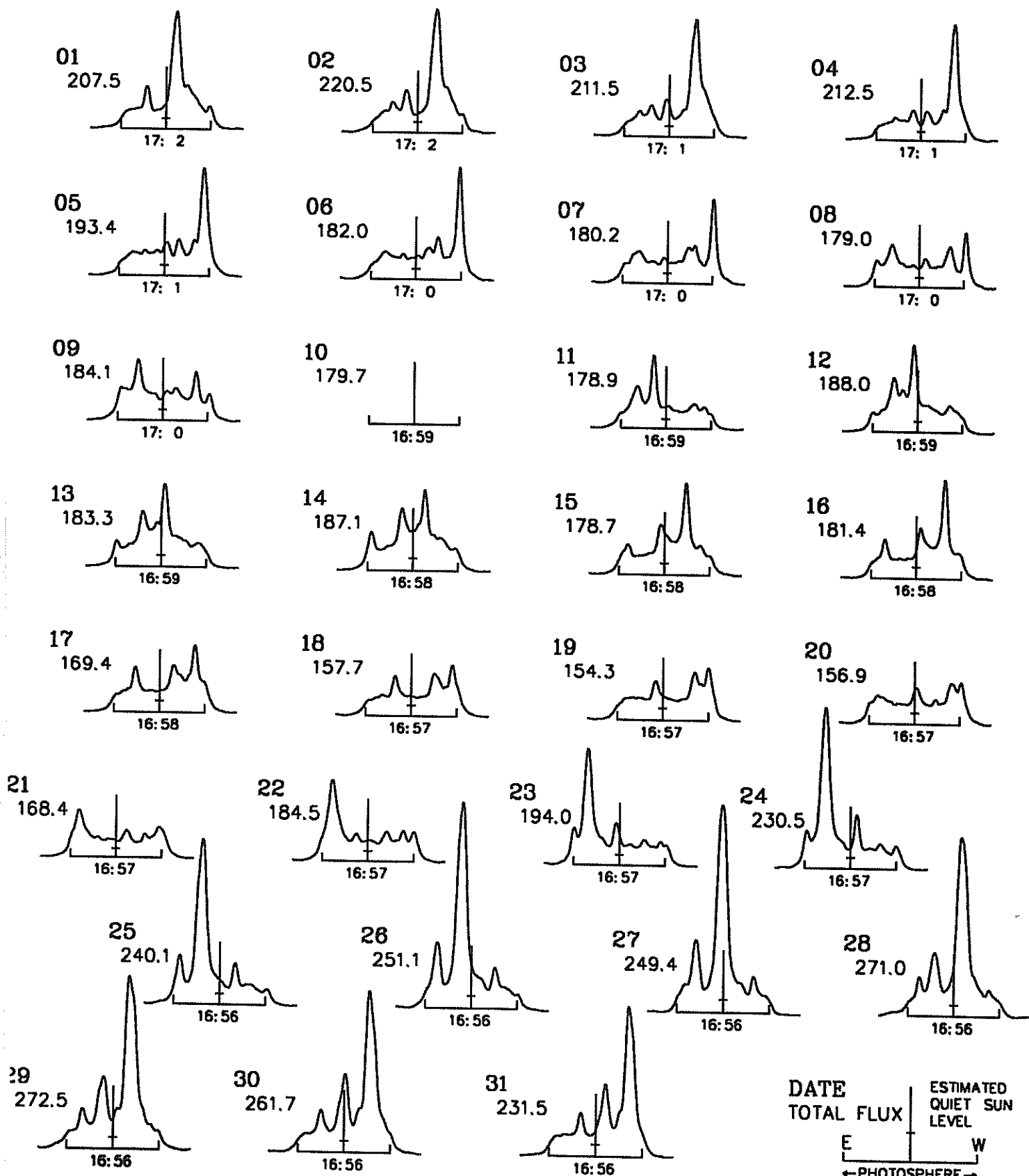
1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple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

# EAST - WEST SOLAR SCANS OCTOBER 1991

49  
Oct 91

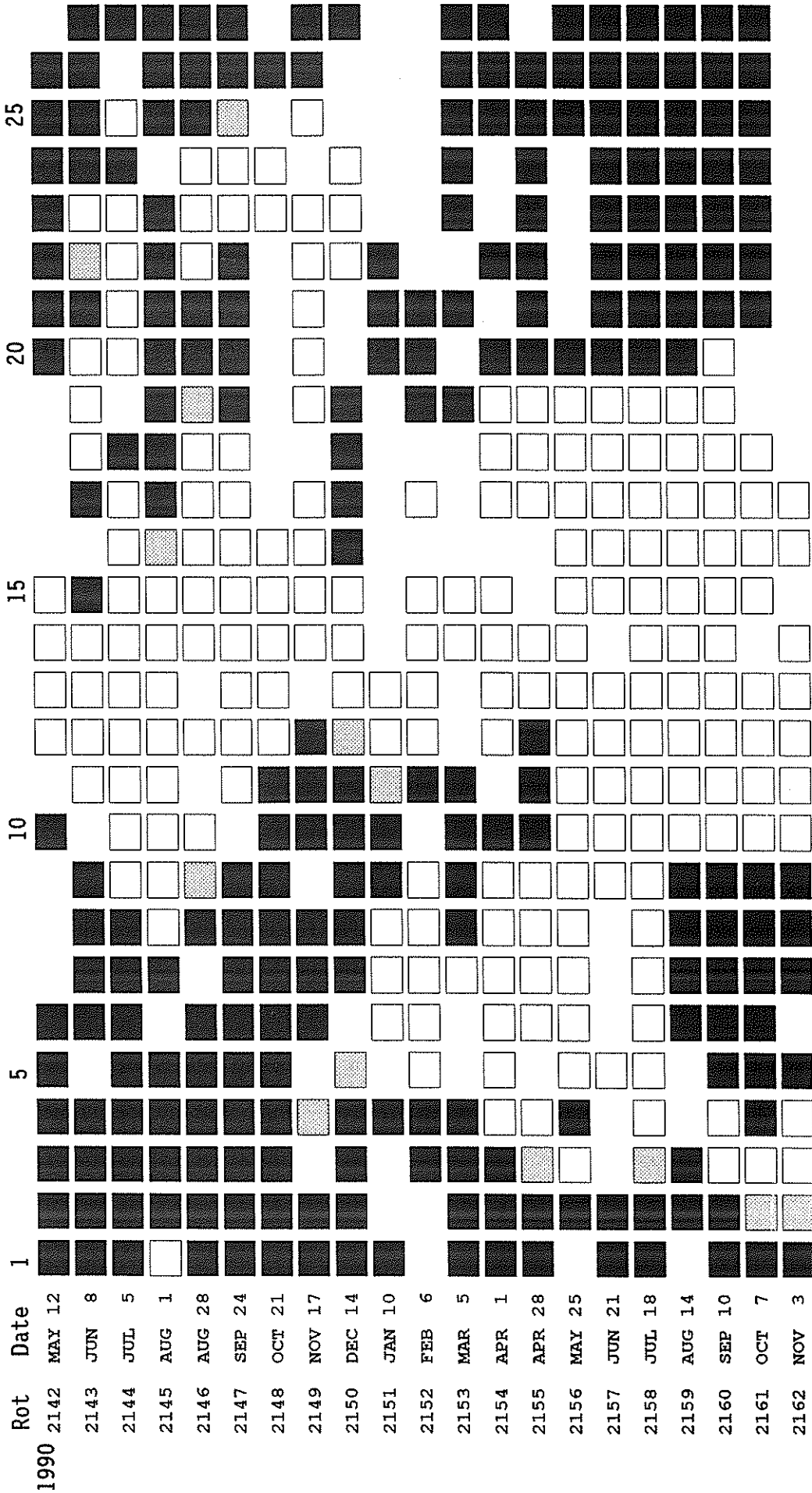
ALGONQUIN RADIO OBSERVATORY  
CANADA

10.7 cm  
Fan Beam with 1.5 minutes of arc  
E - W Resolution



DATE TOTAL FLUX | ESTIMATED QUIET SUN LEVEL  
 E | W  
 ←-PHOTOSPHERE→  
 TIME U.T.

STANFORD MEAN SOLAR MAGNETIC FIELD



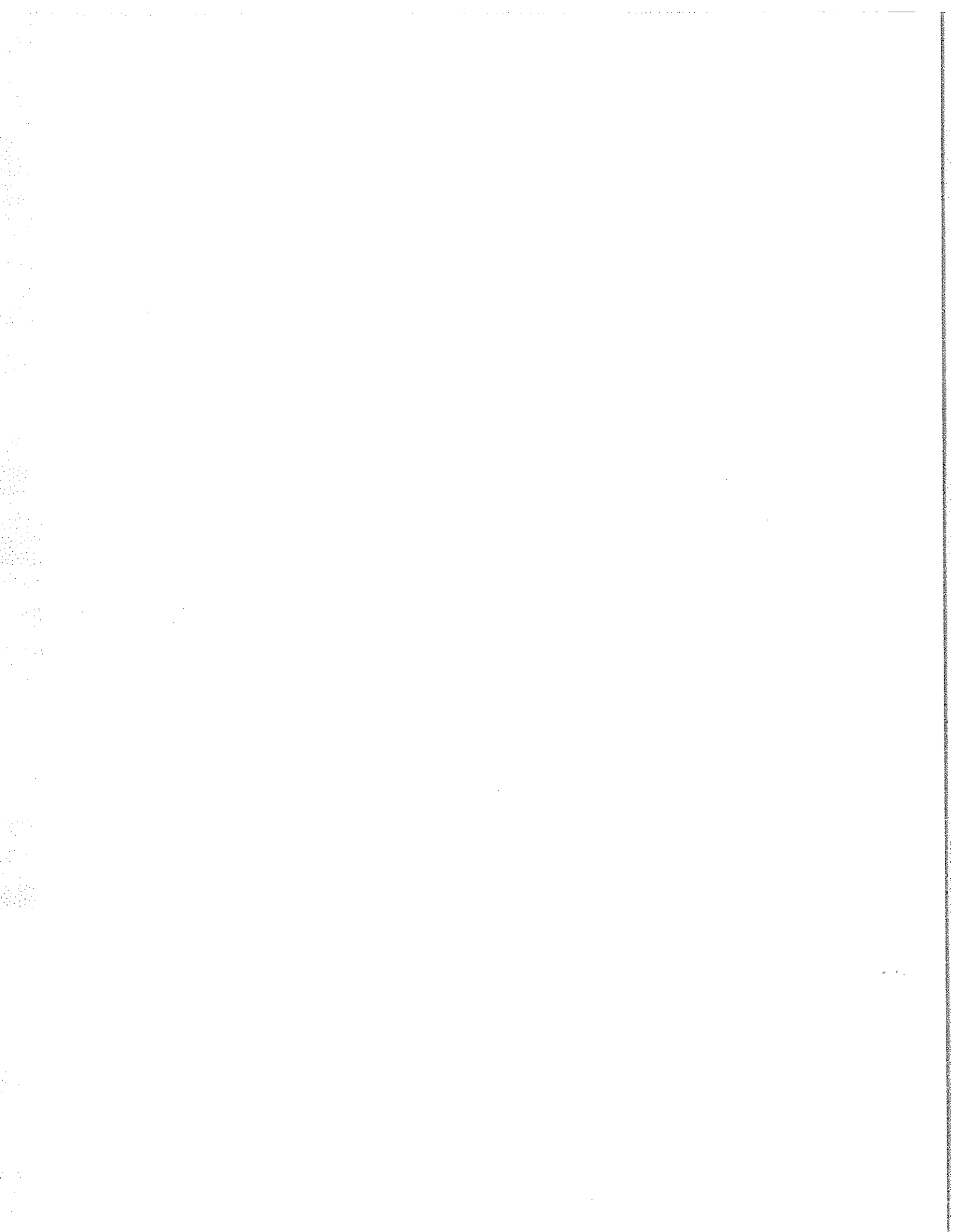
Mean Solar Magnetic Field Polarity:  = field > 2 microT;  = -2 microT ≤ field ≤ 2 microT  
 = field < -2 microT; No box = no data available

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

## STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	1990		1991									
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
1	3	57	-55	.	.	-75	10	38	54	123	54	-89
2	25	58	.	.	.	-47	.	21	90	116	-8	-78
3	45	34	.	.	.	-8	68	17	106	119	-37	-91
4	45	.	26	.	.	11	80	31	.	87	-67	-88
5	29	11	74	.	-100	55	63	44	132	49	-75	-75
6	.	7	94	.	-88	69	5	52	156	-23	-89	-50
7	.	47	.	.	-36	73	-40	89	154	-60	-104	-22
8	.	58	.	-99	-6	74	-51	116	89	-93	-104	-1
9	.	82	-108	-54	.	43	-23	157	32	-105	-157	19
10	.	.	-168	7	.	-27	36	153	-19	-129	-55	-8
11	.	46	.	72	45	.	101	115	-60	-131	-15	-47
12	68	-7	.	97	-39	19	.	64	-123	-136	4	-66
13	52	-83	-27	73	-63	79	.	-11	-144	-113	11	-90
14	.	-126	.	27	-112	144	209	.	-170	.	-35	-88
15	-4	-62	58	.	-70	148	127	.	-168	-54	-52	-65
16	.	-51	46	-6	.	.	42	.	-139	-36	-91	18
17	-46	-20	35	26	.	116	-30	.	-118	.	-64	65
18	-8	0	-7	89	131	60	-157	-130	-101	.	-55	103
19	.	.	-21	142	137	16	-198	-94	-41	-23	11	99
20	-1	-9	0	175	.	-38	-203	-94	0	-44	106	.
21	.	-23	23	.	.	.	-165	-74	18	-69	102	142
22	-24	-41	60	85	.	-208	-102	-24	45	-37	93	133
23	-47	-55	.	.	-52	.	-80	.	84	16	102	109
24	-50	-37	.	-11	.	.	.	.	88	41	126	79
25	.	-1	.	-93	-163	-98	.	12	56	53	132	.
26	-69	36	.	-134	.	-80	-6	.	37	89	115	.
27	-56	45	.	.	-113	-71	2	.	54	100	91	-68
28	-11	31	.	.	-79	-61	-8	.	67	119	72	-95
29	.	-18	-69	.	-75	-29	6	34	101	111	49	-121
30	48	-59	-53	.	-79	-2	32	40	111	99	-47	-116
31	.	-48	-15	.	-87	.	46	.	115	71	.	-108

Dot symbol indicates no data available for the day.



C O N T E N T S

Prompt Reports

DATA FOR SEPTEMBER 1991

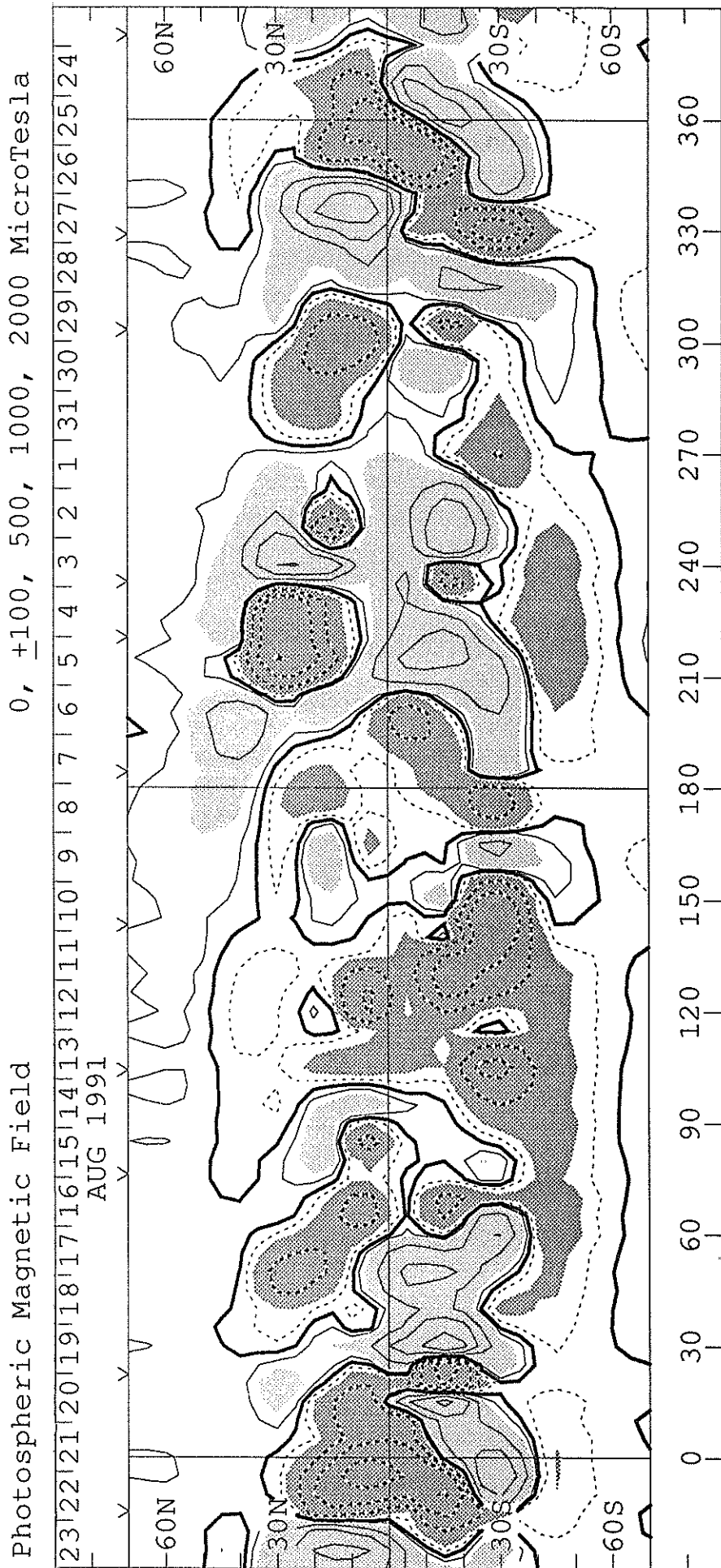
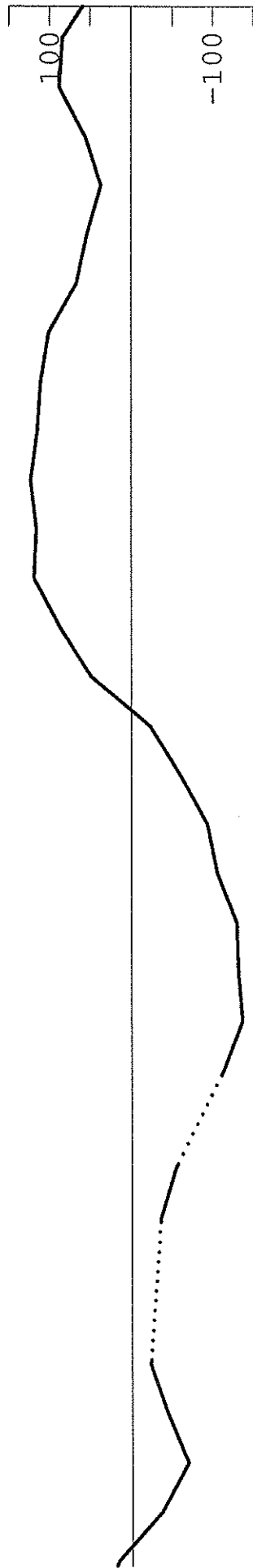
Number 567 Part I

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SOLAR MAGNETIC FIELD SYNOPSIS CHART  
CARRINGTON ROTATION NUMBER 1845  
(25 July to 21 August 1991)

WILCOX SOLAR OBSERVATORY

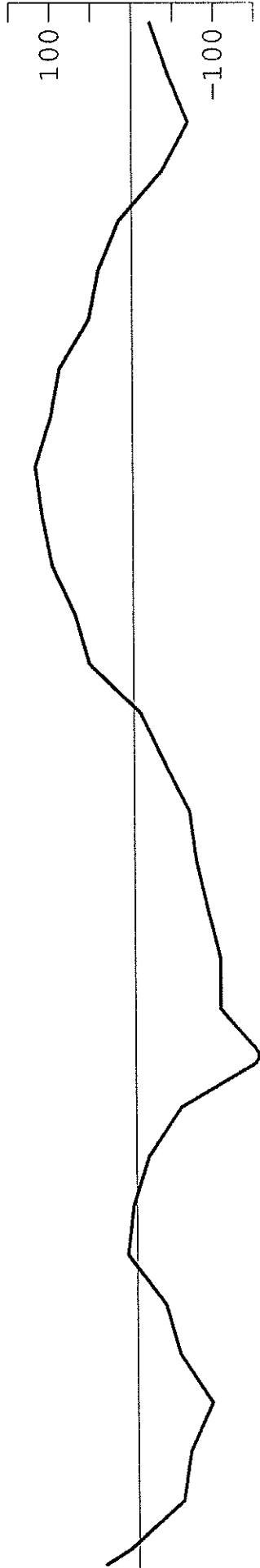
Mean Field



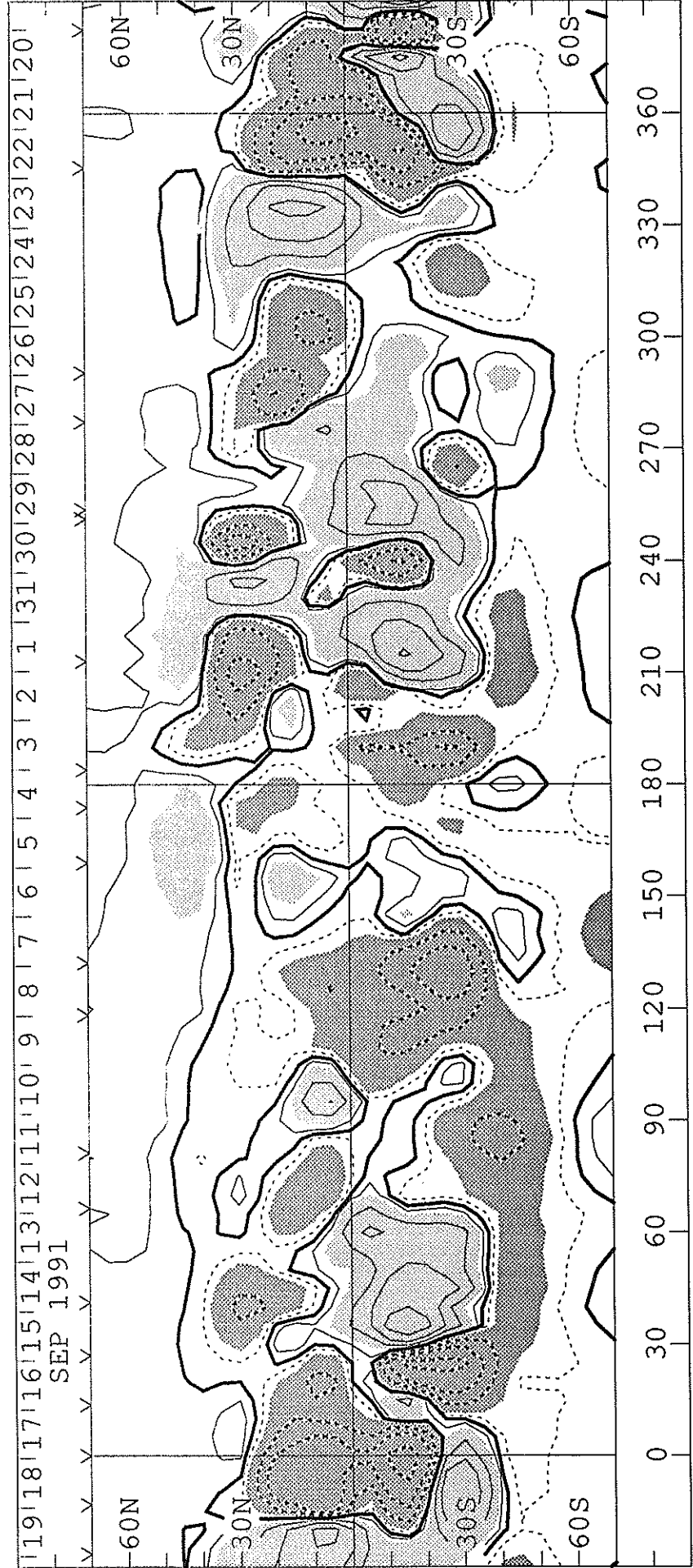
SOLAR MAGNETIC FIELD SYNOPTIC CHART  
 CARRINGTON ROTATION NUMBER 1846  
 (21 August to 17 September 1991)

WILCOX SOLAR OBSERVATORY

Mean Field



Photospheric Magnetic Field 0, +100, 500, 1000, 2000 MicroTesla

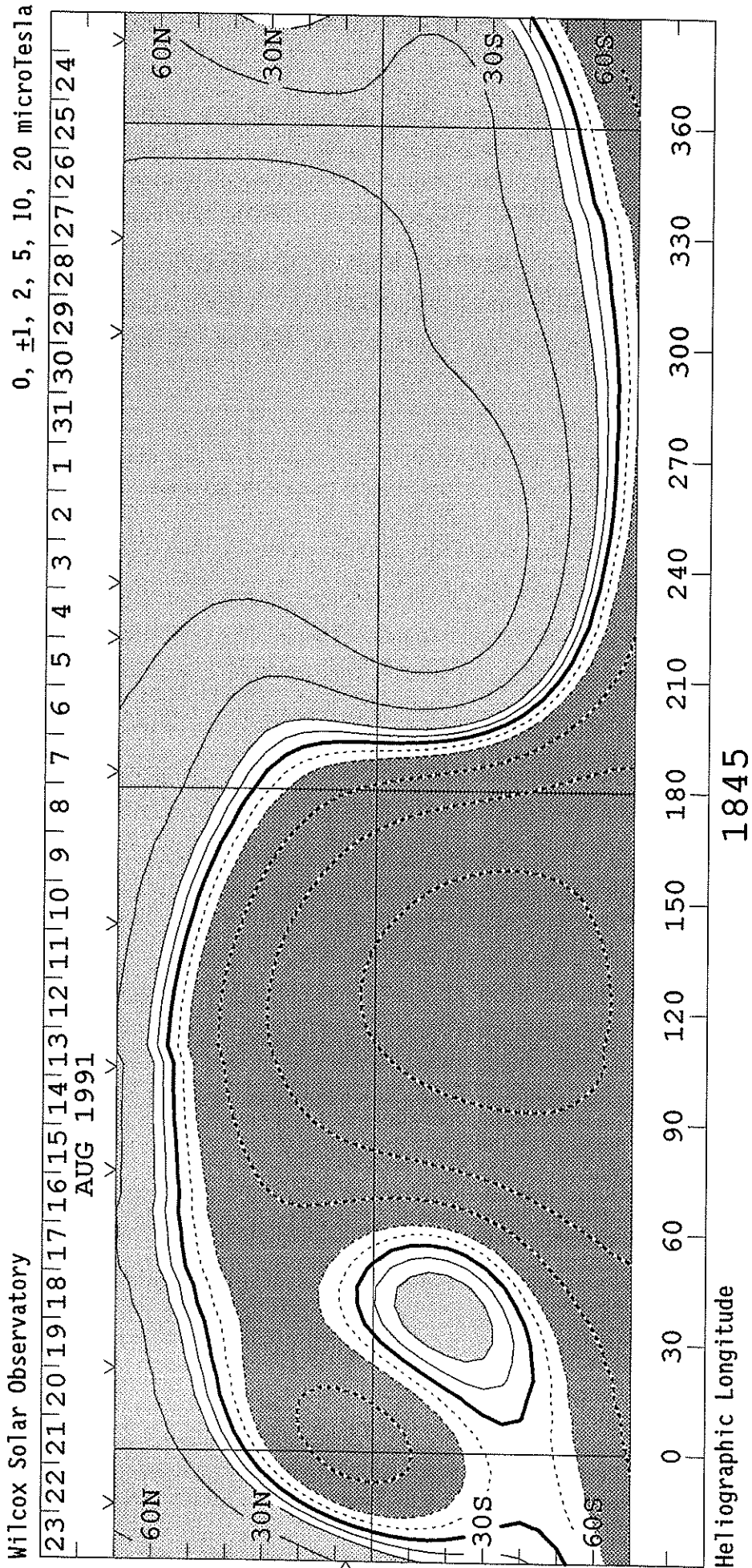


Heliographic Longitude

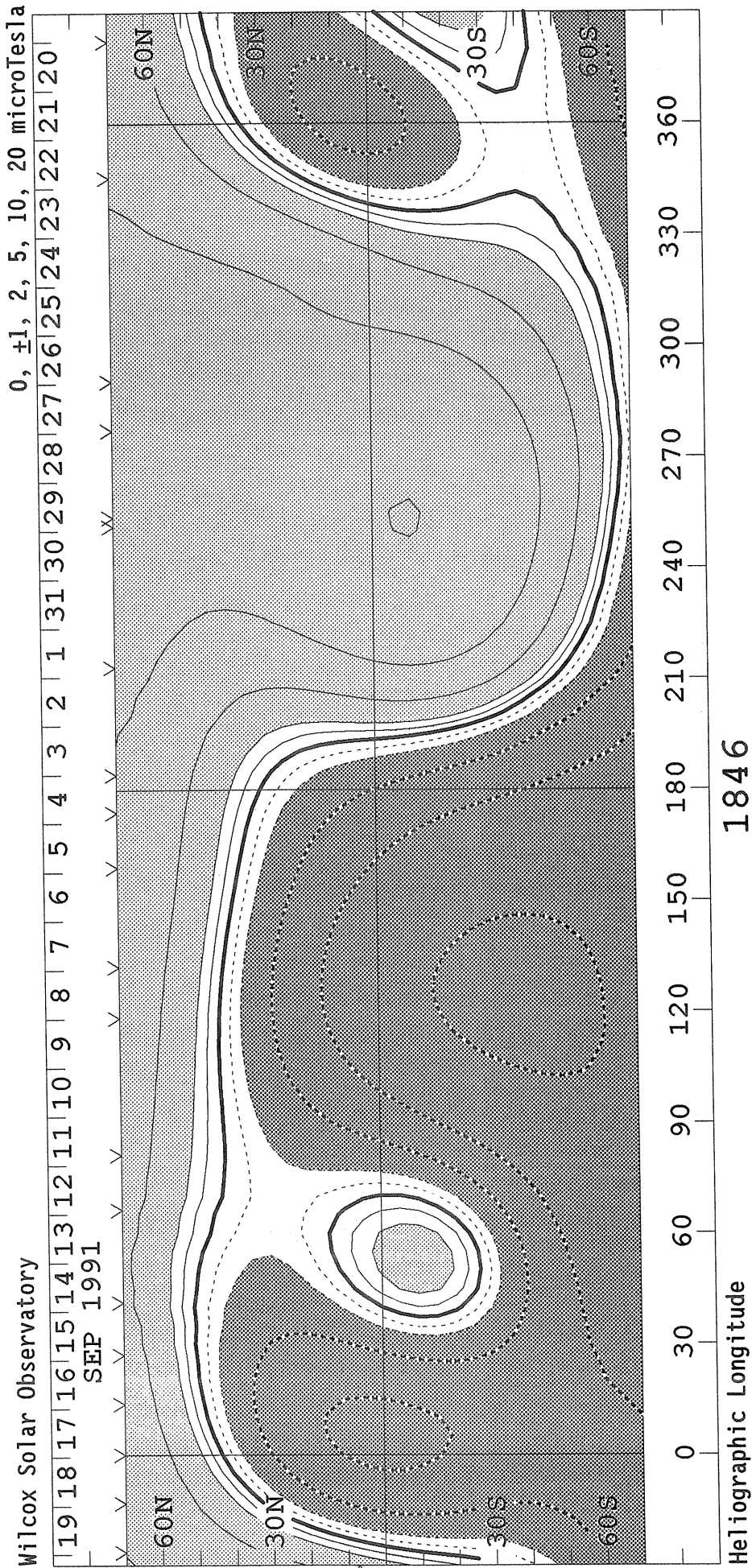
1846



SOLAR MAGNETIC FIELD SYNOPTIC CHART  
SOURCE SURFACE FIELD  
CARRINGTON ROTATION NUMBER 1845  
(25 July to 21 August 1991)



**S O L A R   M A G N E T I C   F I E L D   S Y N O P T I C   C H A R T**  
**S O U R C E   S U R F A C E   F I E L D**  
 CARRINGTON ROTATION NUMBER 1846  
 (21 August to 17 September 1991)



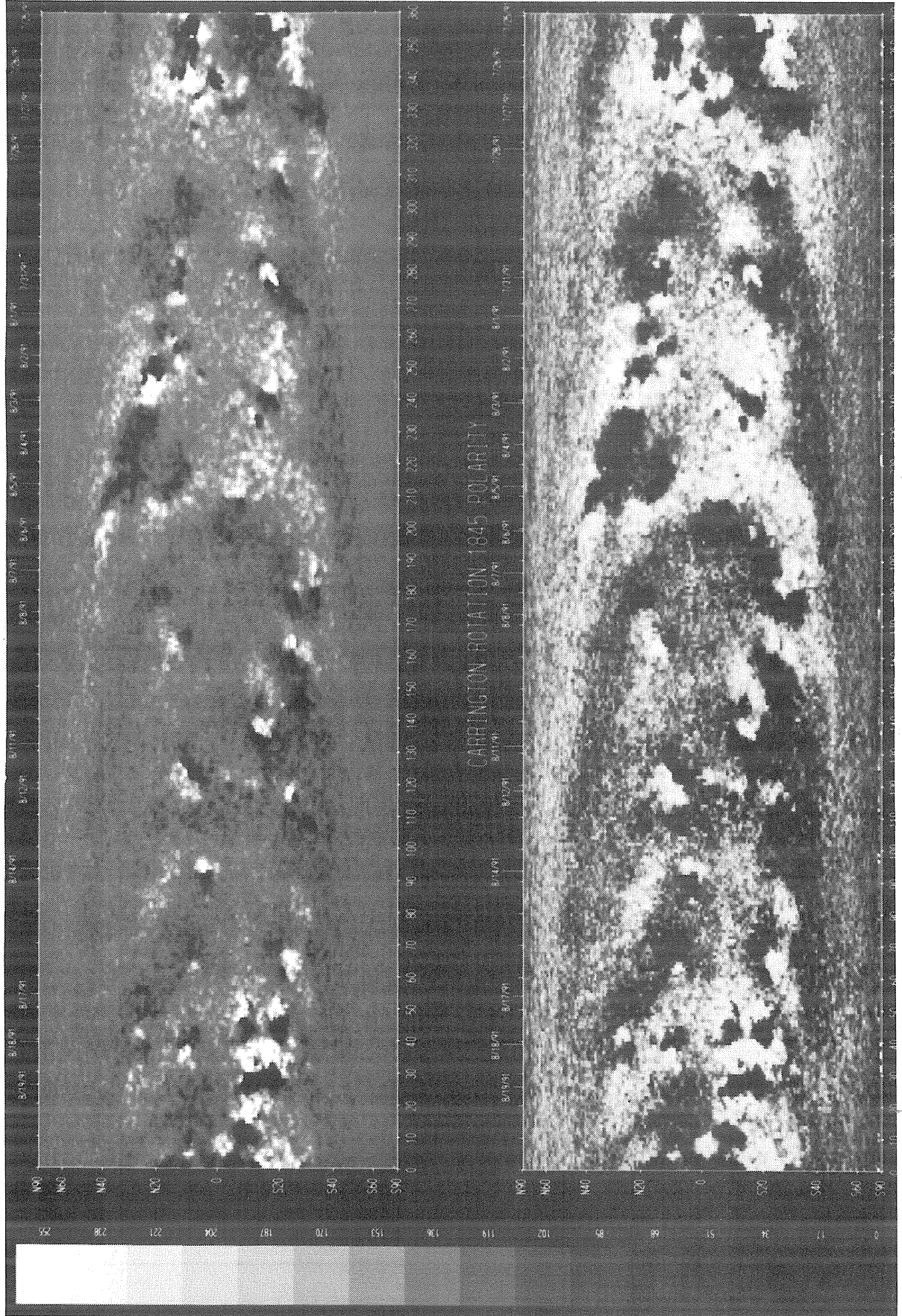
1846

Heliographic Longitude

SOLAR MAGNETIC FIELD SYNOPSIS CHART  
CARRINGTON ROTATION NUMBER 1845  
(25 July to 21 August 1991)

National Solar Observatory/Kitt Peak

Dates of Observation



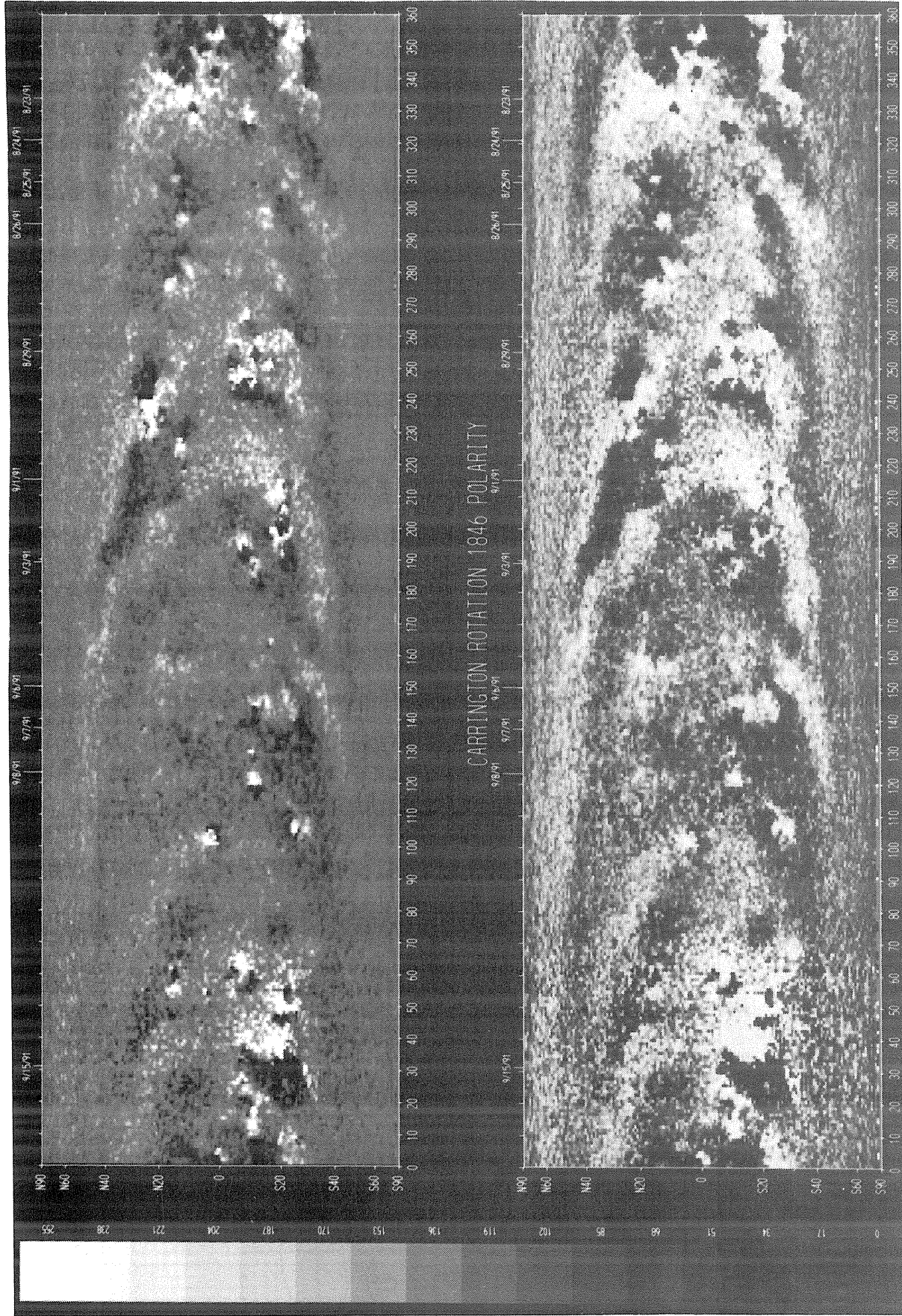
Heliographic Longitude

# SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1846  
(21 August to 17 September 1991)

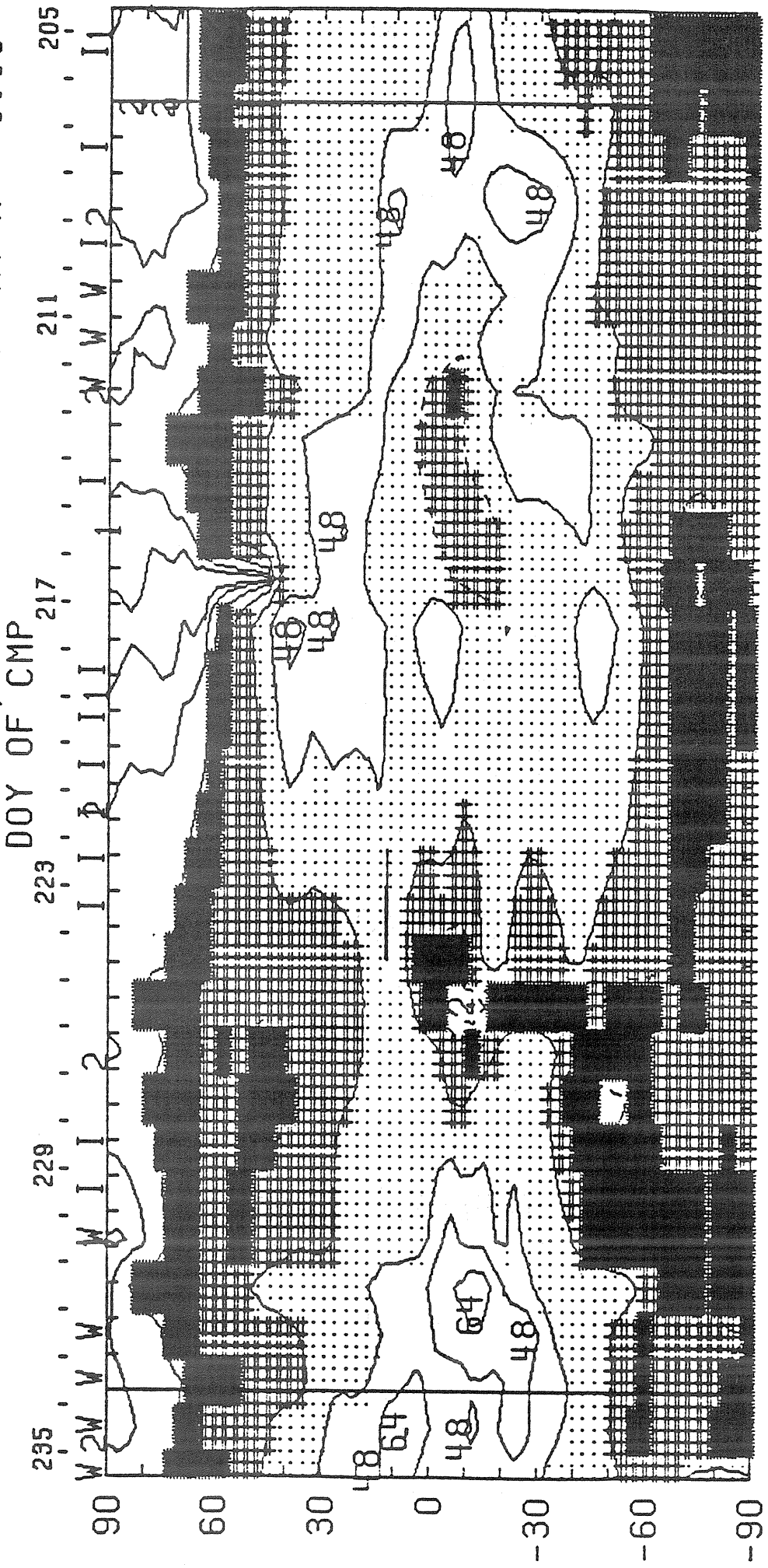
Dates of Observation

National Solar Observatory/Kitt Peak



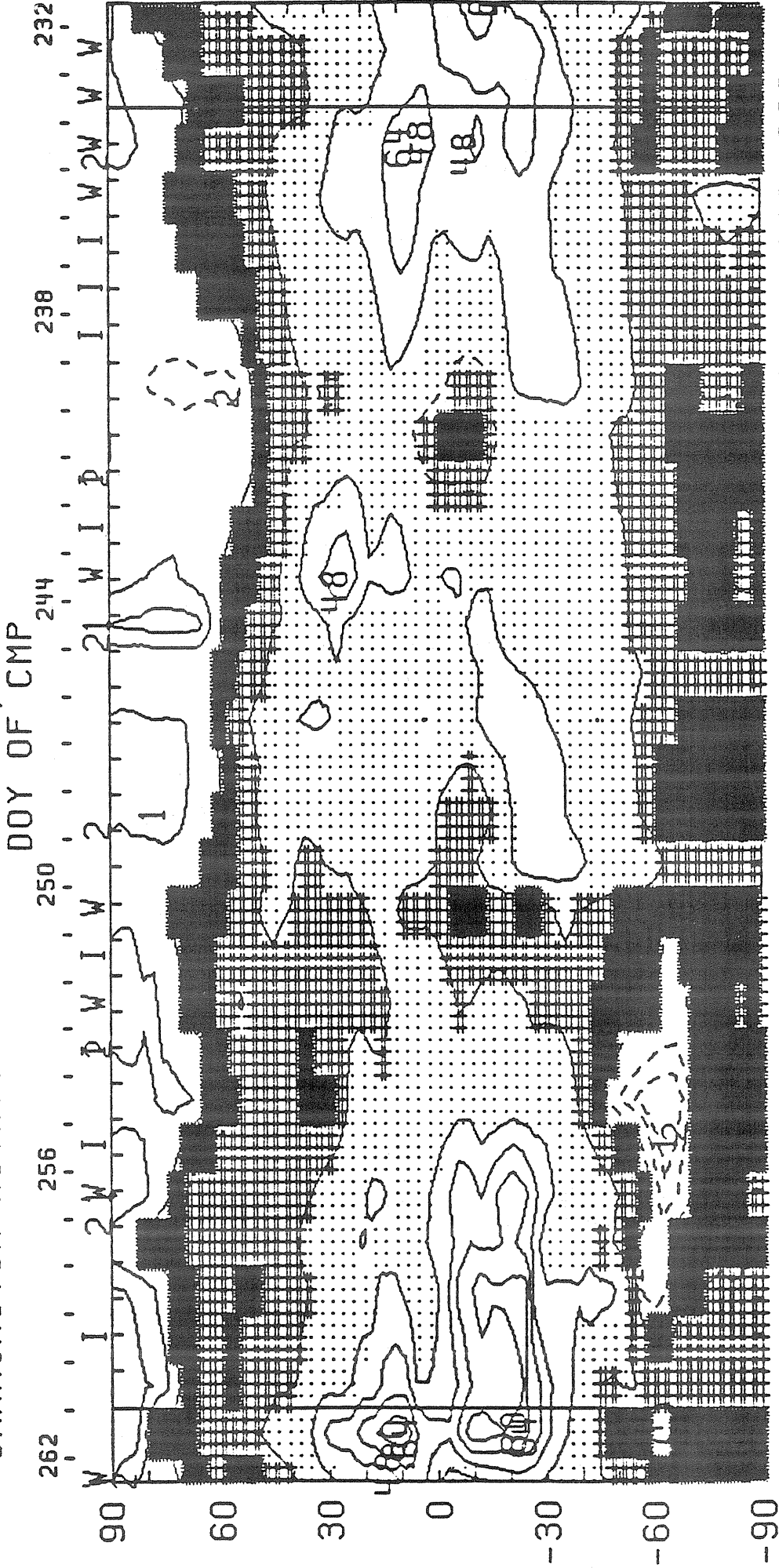
Heliographic Longitude

CARRINGTON ROTATION NUMBER 1845 ; SAC. PEAK FE XIV AT R = 1.15



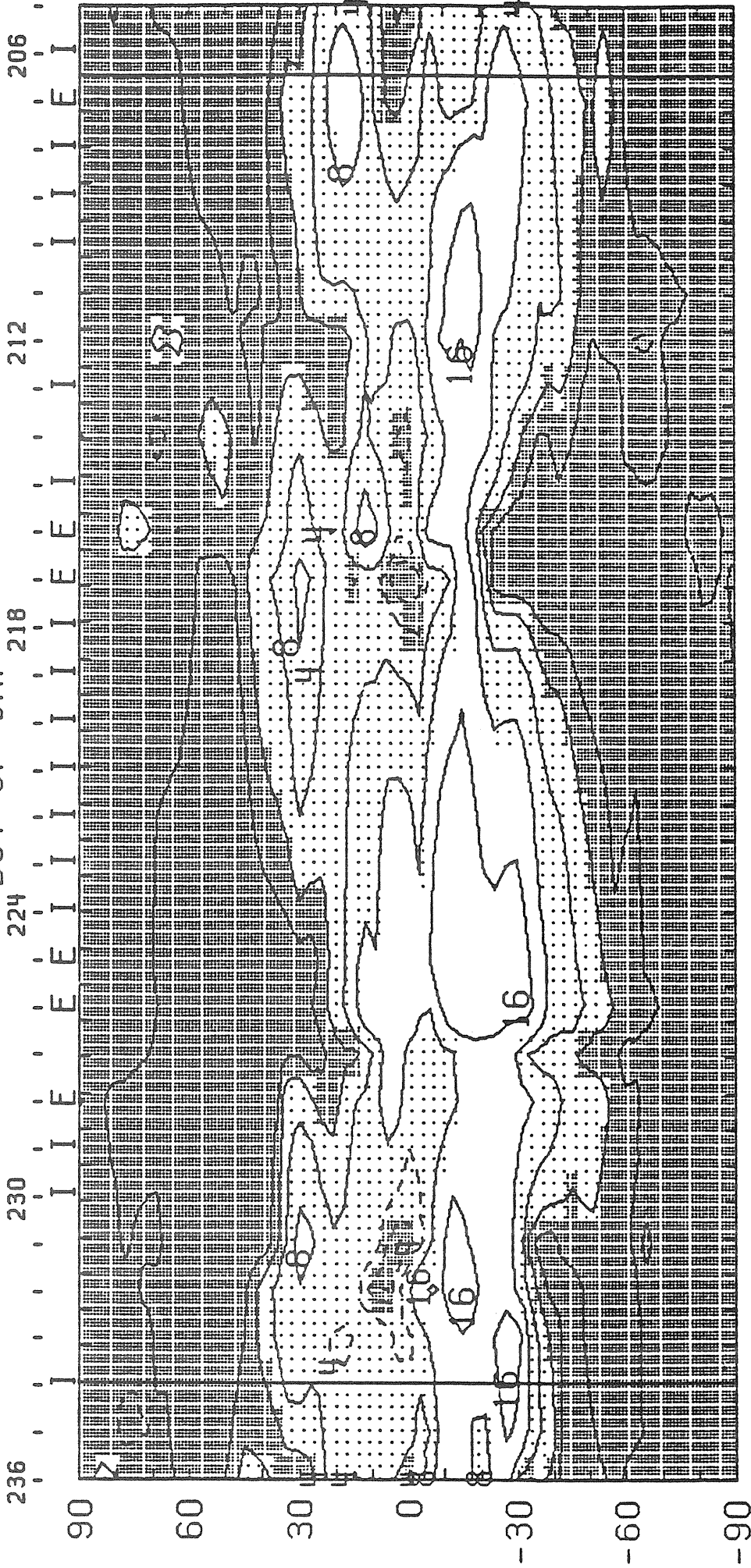
E HELIOGRAPHIC LONGITUDE  $I_{\text{ove}} = 17.23\mu$  W  
1991 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF  $I_0$   
( 8-Nov-91) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

CARRINGTON ROTATION NUMBER 1846 ; SAC. PEAK FE XIV AT R = 1.15



E HELIOGRAPHIC LONGITUDE Iave = 18.39 $\mu$  W  
1991 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF I<sub>o</sub>  
( 8-Nov-91) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

CARRINGTON ROTATION NUMBER 1845 ; SAC. PEAK FE X AT R = 1.15  
DOY OF CMP 218



236 230 224 218 212 206  
90 60 30 0 -30 -60 -90  
0 30 60 90 120 150 180 210 240 270 300 330 360  
E HELIOGRAPHIC LONGITUDE I<sub>ove</sub> = 3.47 μ W  
1991 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF I<sub>o</sub>  
( 8-Nov-91)

CARRINGTON ROTATION NUMBER 1846 ; SAC. PEAK FE X AT R = 1.15

DOY OF CMP 244

232

238

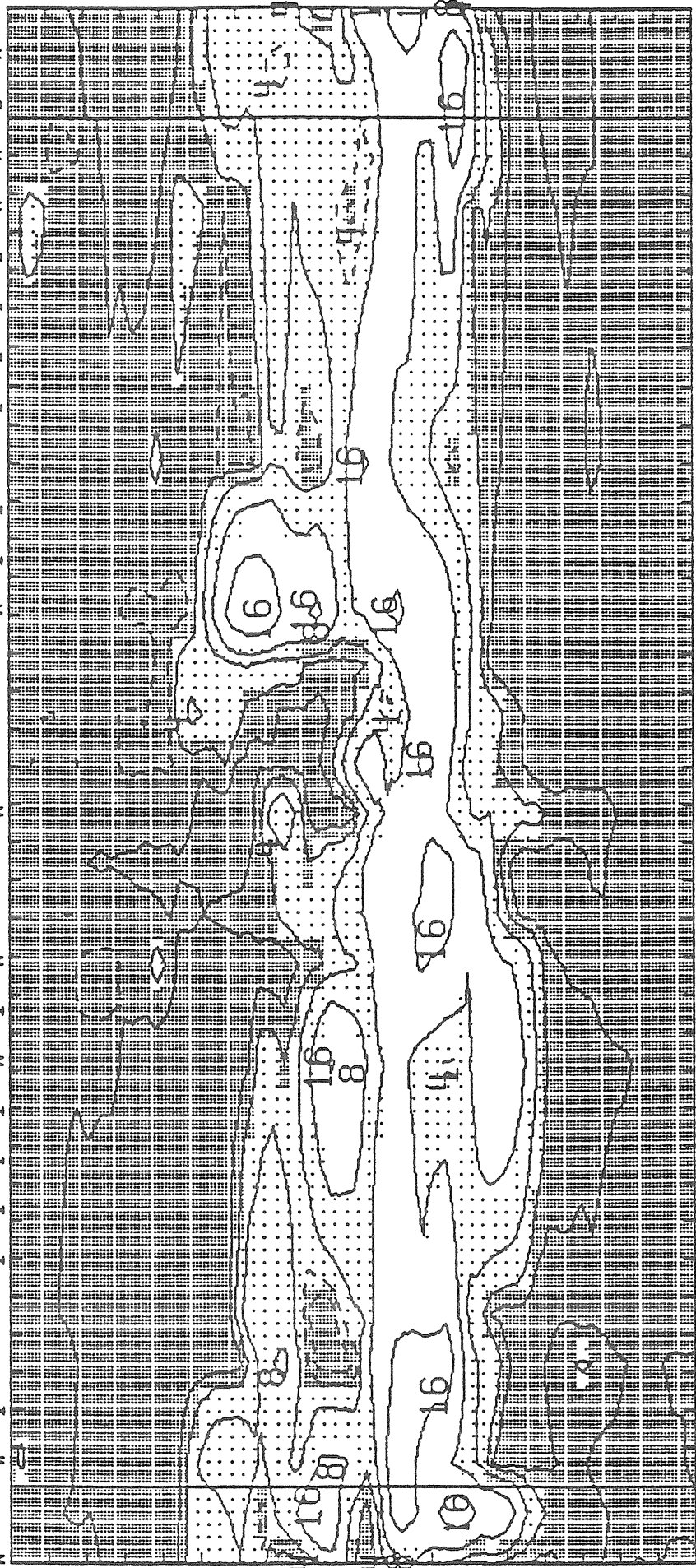
244

250

256

262

W I I I I I W I W I I I I I I I I W I W I W



0 30 60 90 120 150 180 210 240 270 300 330 360

E HELIOGRAPHIC LONGITUDE I<sub>ove</sub> = 3.37 μ W

1991 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF I<sub>o</sub>

( 8-Nov-91)



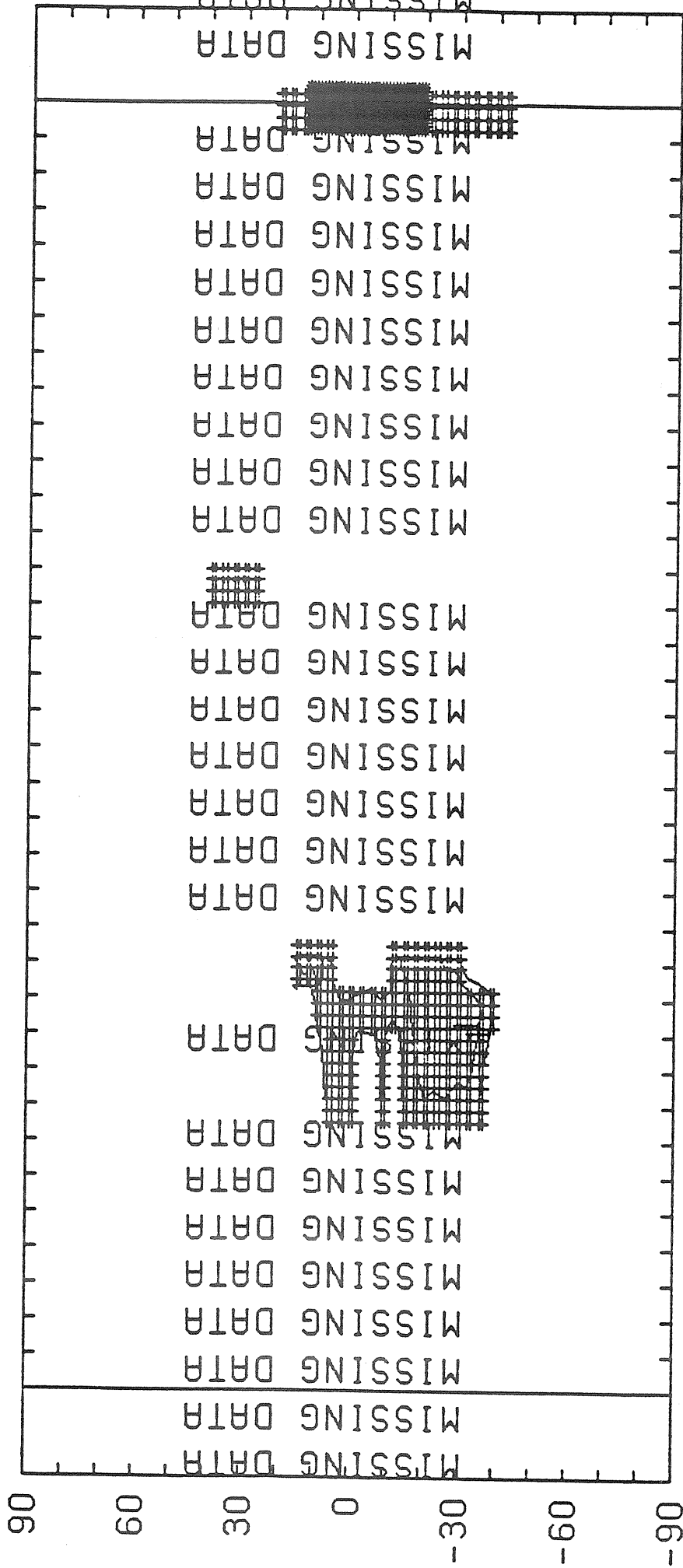
CARRINGTON ROTATION NUMBER 1845 ; SAC. PEAK CA XV at R = 1.13

223 DOY OF CMP<sub>217</sub>

211

229

205



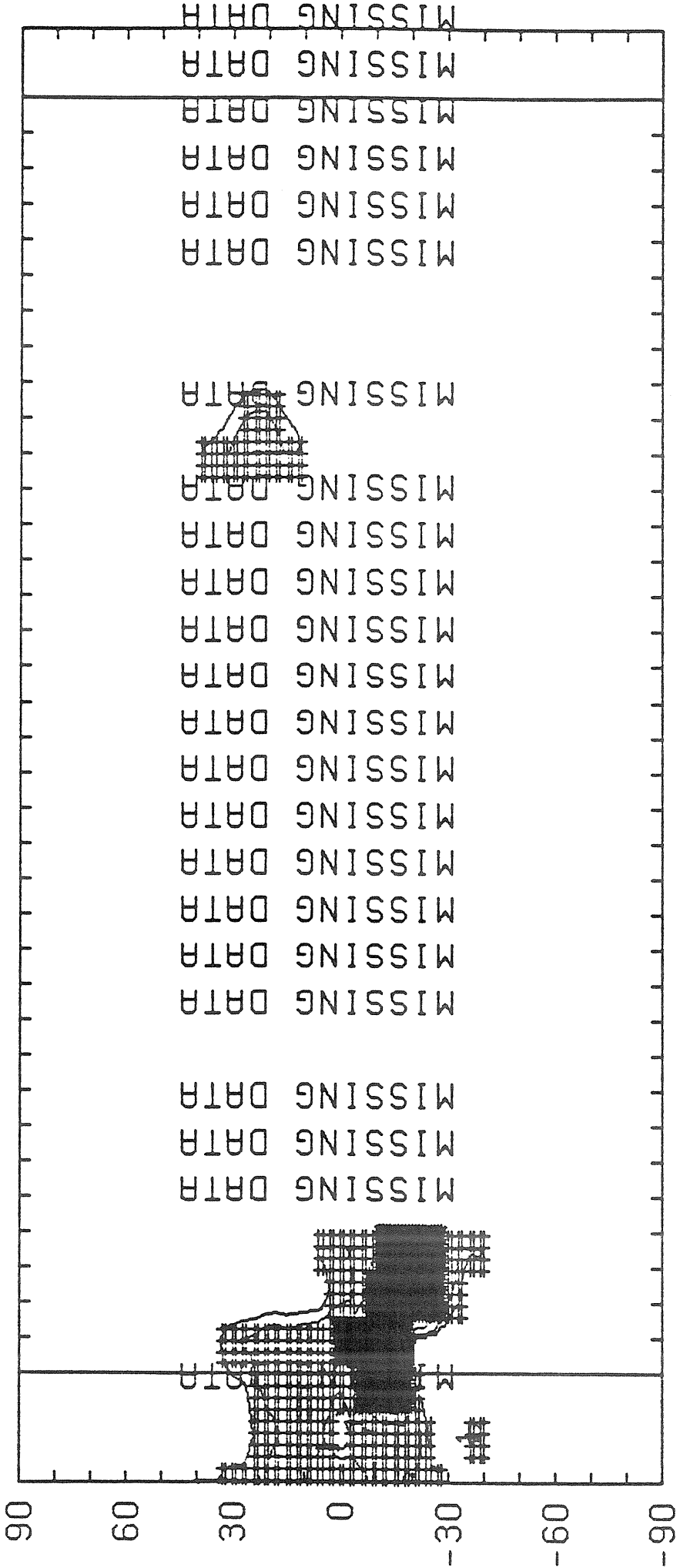
E HELIOGRAPHIC LONGITUDE W

1991 EAST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF I<sub>o</sub>  
( 6-Nov-91)

CARRINGTON ROTATION NUMBER 1845 ; SAC. PEAK CA XV at R = 1.13

DOY OF CMP

236 . . . . . 230 . . . . . 224 . . . . . 212 . . . . . 206



E HELIOGRAPHIC LONGITUDE W

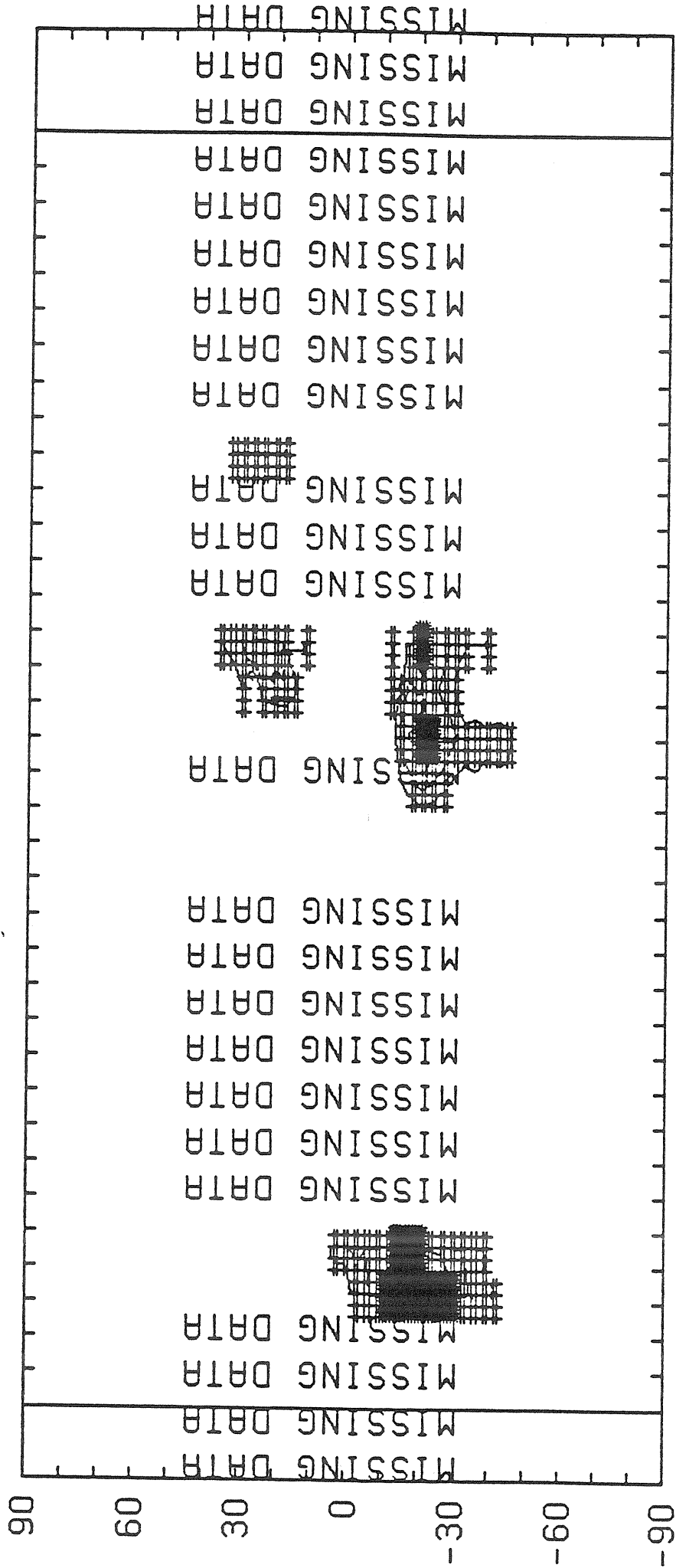
1991 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io

( 8-Nov-91)

CARRINGTON ROTATION NUMBER 1846 ; SAC. PEAK CA XV at R = 1.13

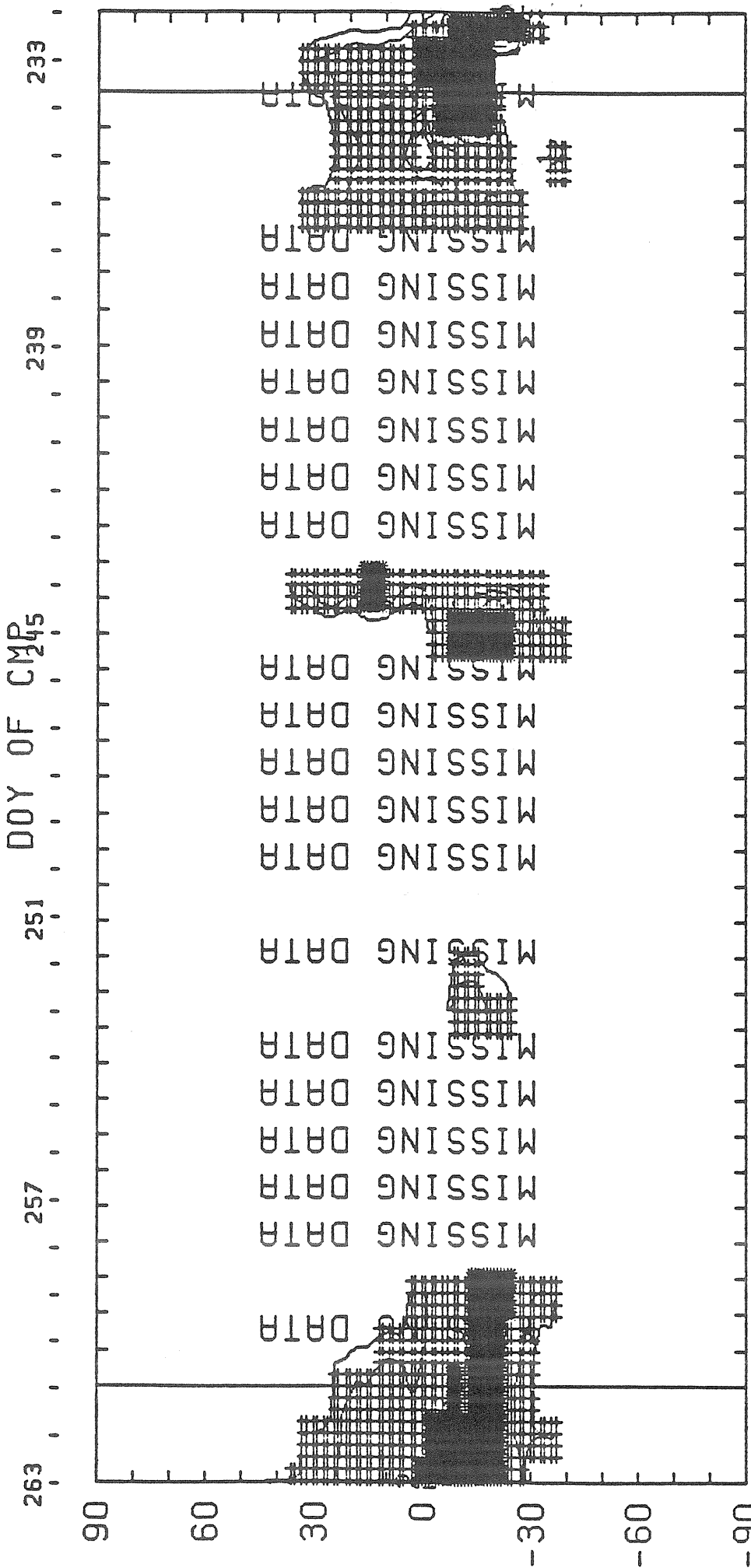
DOY OF CMP<sub>244</sub>

262 . . . . . 256 . . . . . 250 . . . . . 238 . . . . . 232



E  
HELIOGRAPHIC LONGITUDE  
W  
1991 EAST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF I<sub>o</sub>  
( 8-Nov-91)

CARRINGTON ROTATION NUMBER 1846 ; SAC. PEAK CA XV at R = 1.13



263 . . . . . 257 . . . . . 251 . . . . . 239 . . . . . 233

90  
60  
30  
0  
-30  
-60  
-90

0 30 60 90 120 150 180 210 240 270 300 330 360

E HELIOGRAPHIC LONGITUDE W

1991 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1,2,4,8 MILLIONTHS OF Io

( 8-Nov-91)

P R E L I M I N A R Y   H - A L P H A   S O L A R   S Y N O P T I C   C H A R T  
CARRINGTON ROTATION NUMBER 1845  
(25 July to 21 August 1991)

Dates of Observations Below

Days of Year:

EDITOR'S NOTE: This program is being threatened. Please direct any letters  
of support to:

Dr. Ernie Hildner, Director  
NOAA Space Environment Lab  
R/E/SE  
325 Broadway  
Boulder, CO 80303-3328

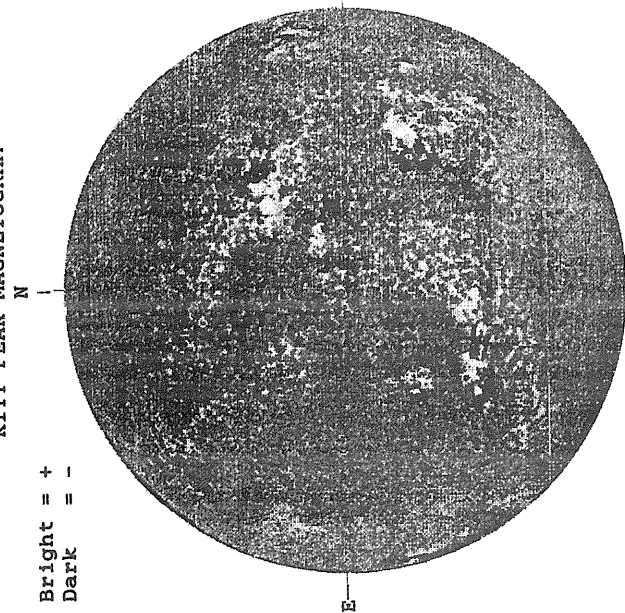
Fax 303-497-3645

Heliographic Longitude

SEPTEMBER 1, 1991 ( P= 20.95, B<sub>0</sub> = 7.17, I<sub>0</sub> = 223.79 )

KITT PEAK MAGNETOGRAM

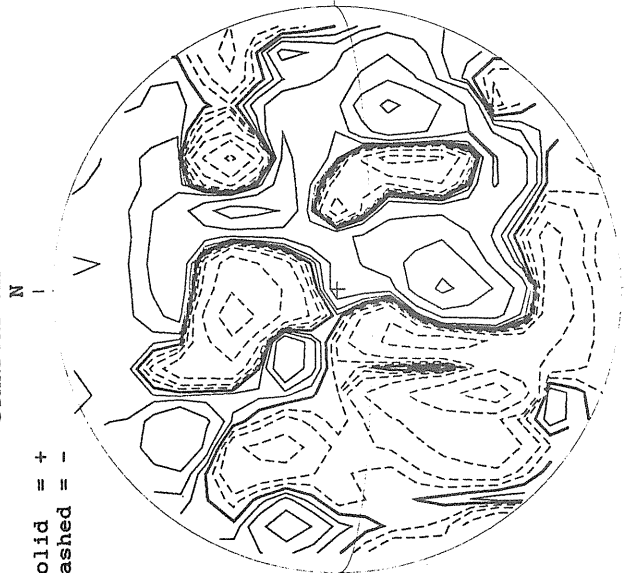
Bright = +  
Dark = -



1549 UT

STANFORD MAGNETOGRAM

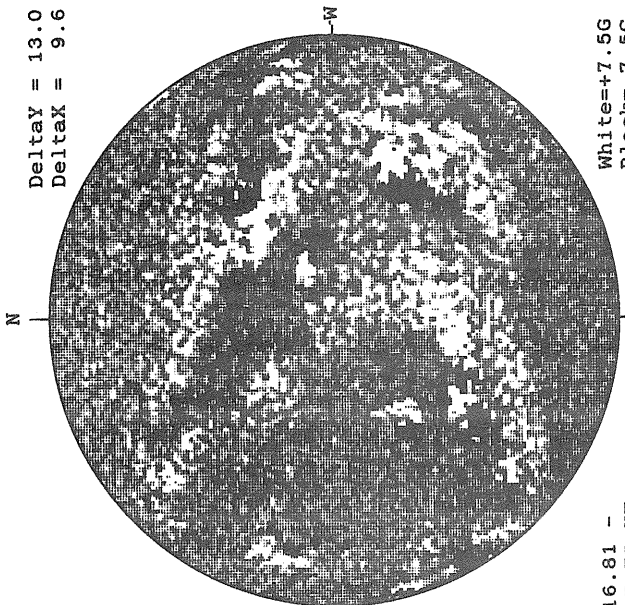
Solid = +  
Dashed = -



1925 UT

MT. WILSON MAGNETOGRAM

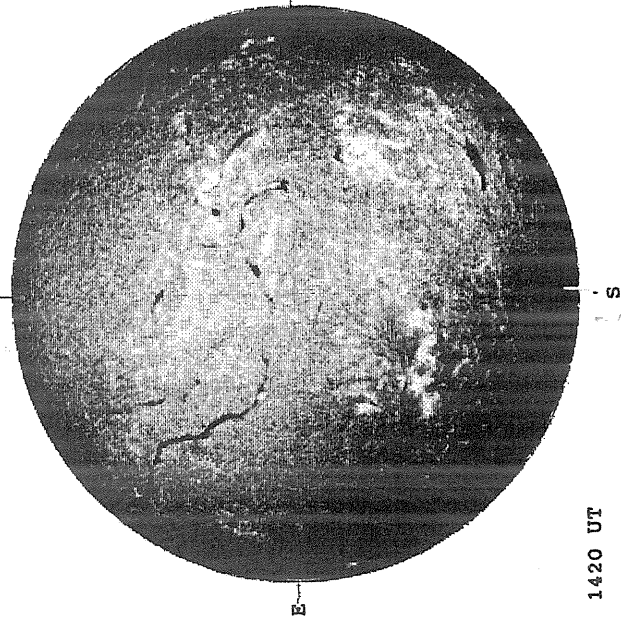
Deltaγ = 13.0  
DeltaX = 9.6



16.81 -  
17.75 UT

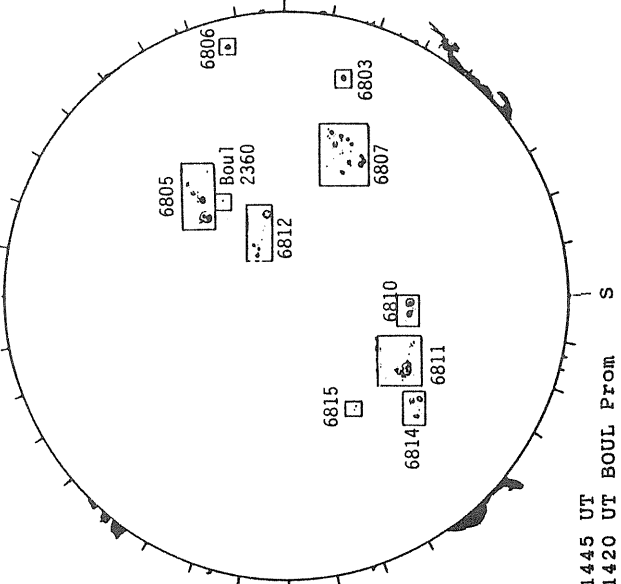
White=+7.5G  
Black=-7.5G

BOULDER H-ALPHA



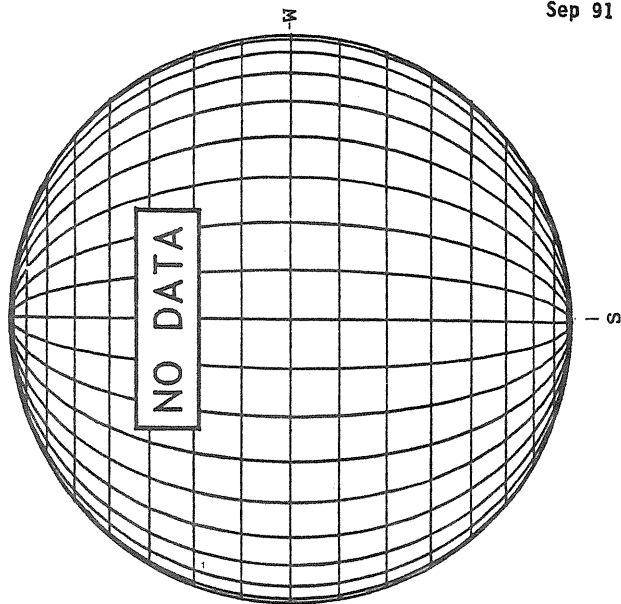
1420 UT

BOULDER SUNSPOT



1445 UT  
1420 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

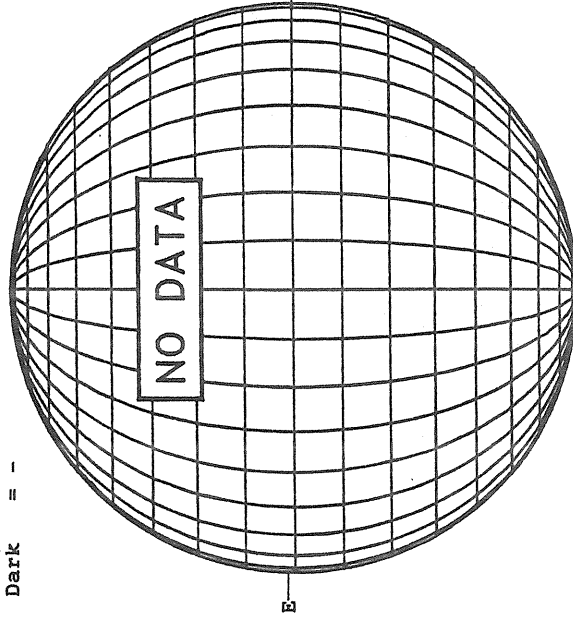


1420 UT

SEPTEMBER 2, 1991 ( P= 21.20, B<sub>0</sub> = 7.19, L<sub>0</sub> = 210.58 )

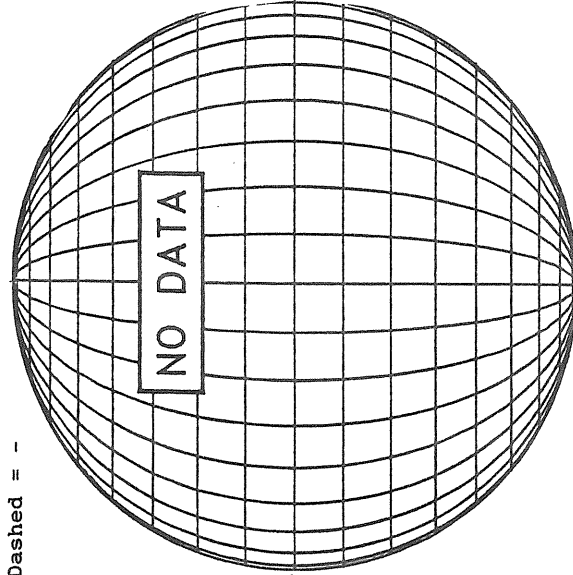
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



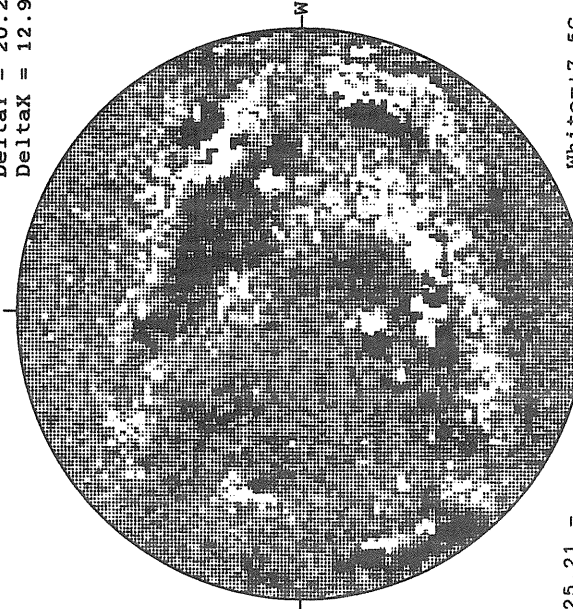
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

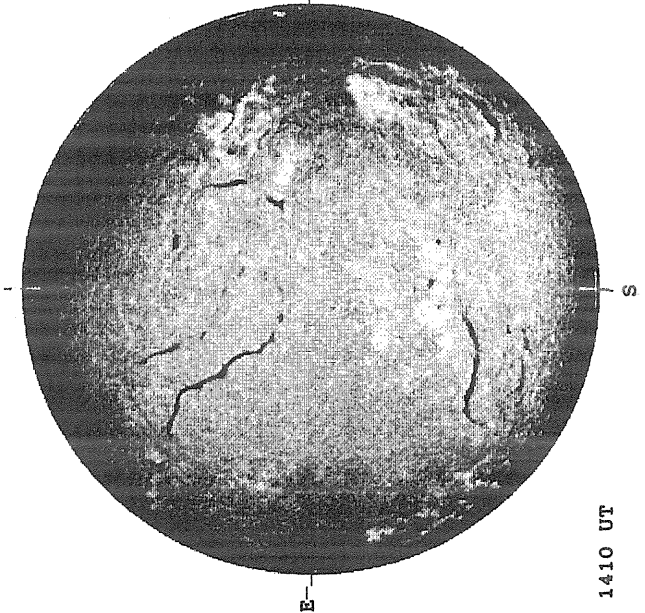
DeltaY = 20.2  
DeltaX = 12.9



25.21 -  
25.62 UT

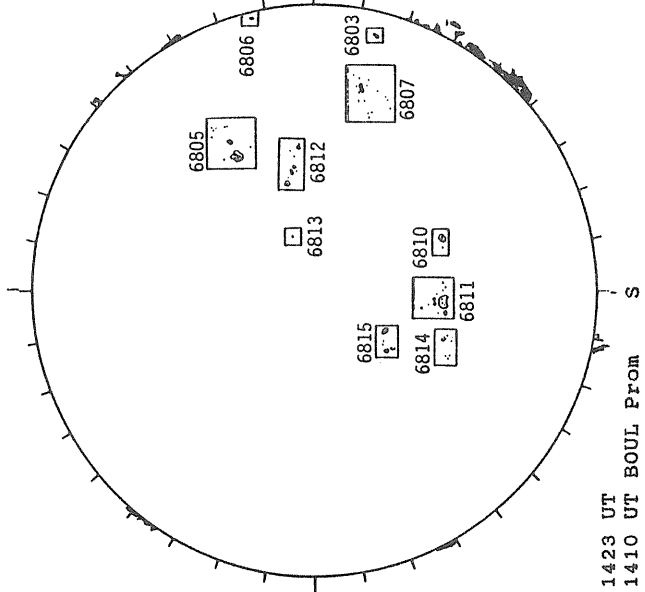
White=+7.5G  
Black=-7.5G

BOULDER H-ALPHA



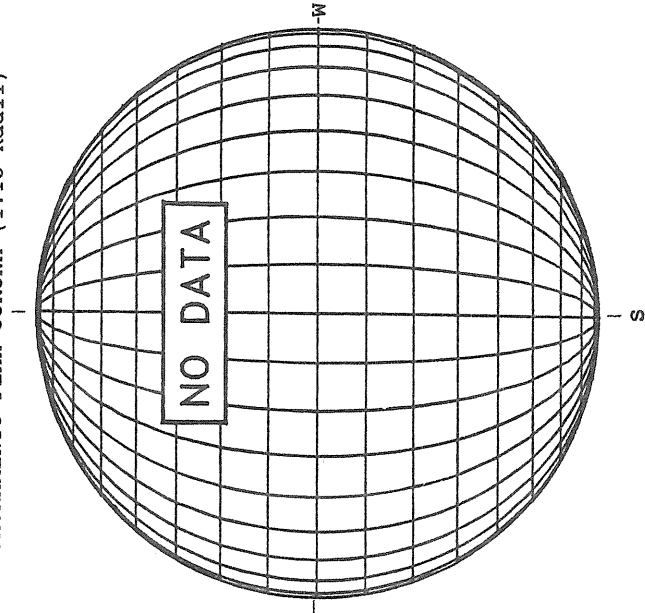
1410 UT

BOULDER SUNSPOT



1423 UT  
1410 UT BOUL Prom

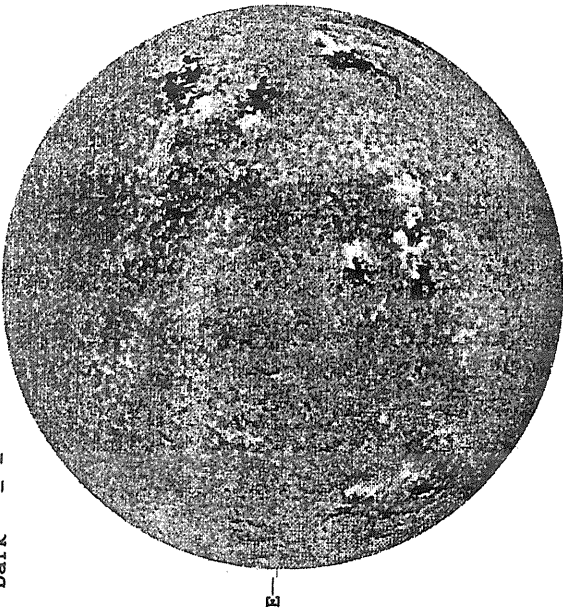
SACRAMENTO PEAK CORONA ( 1.15 Radii )



SEPTEMBER 3, 1991 ( P = 21.45, B<sub>0</sub> = 7.20, L<sub>0</sub> = 197.37 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1549 UT

STANFORD MAGNETOGRAM

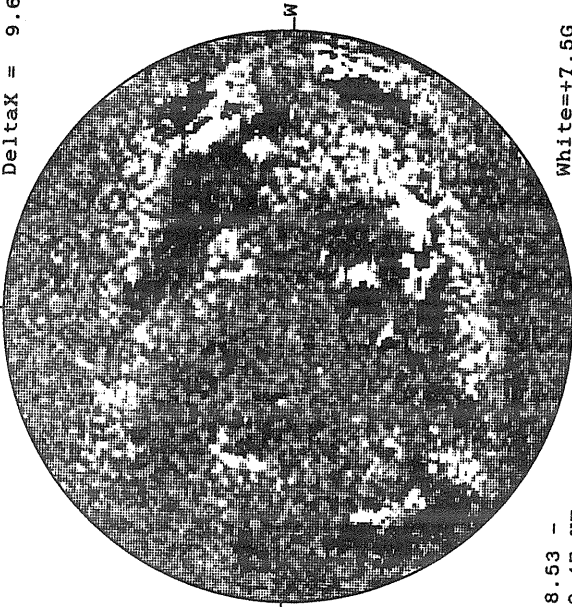
Solid = +  
Dashed = -



0020 UT  
Sep 4

MT. WILSON MAGNETOGRAM

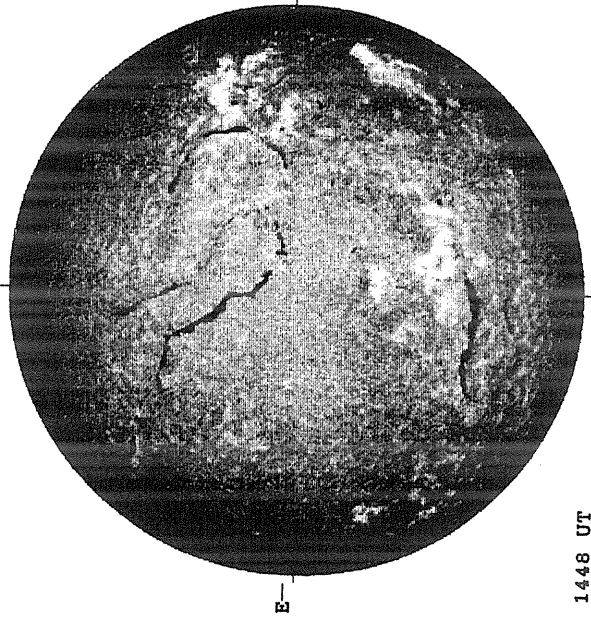
Delta<sub>Y</sub> = 12.9  
Delta<sub>X</sub> = 9.6



18.53 -  
19.47 UT

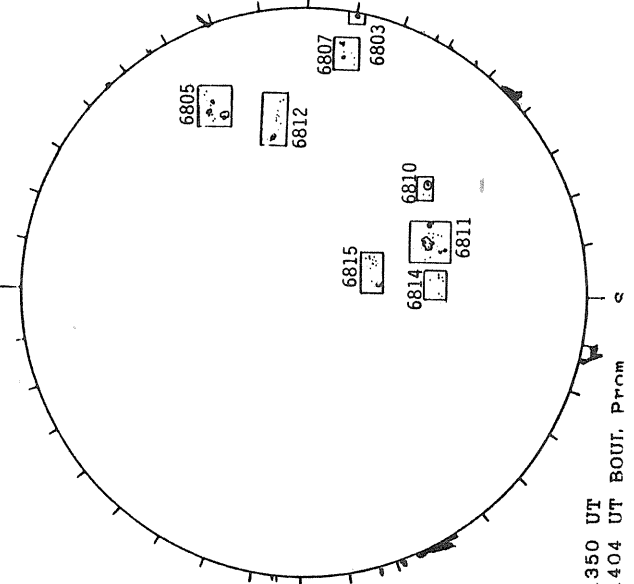
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



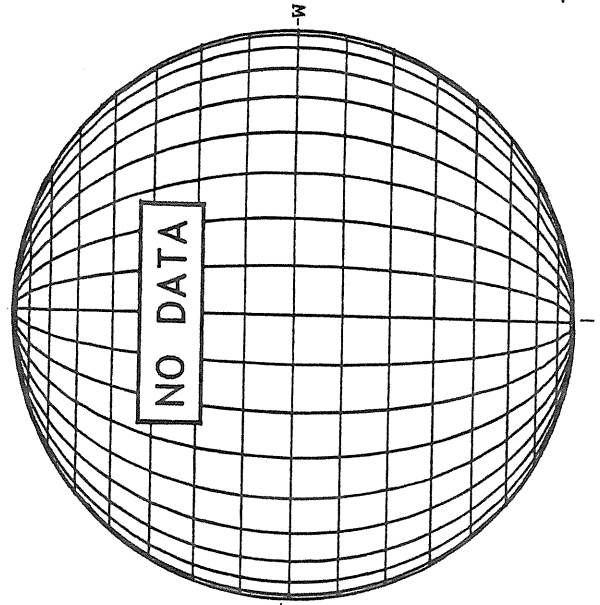
1448 UT

BOULDER SUNSPOT



1350 UT  
1404 UT BOUT. Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

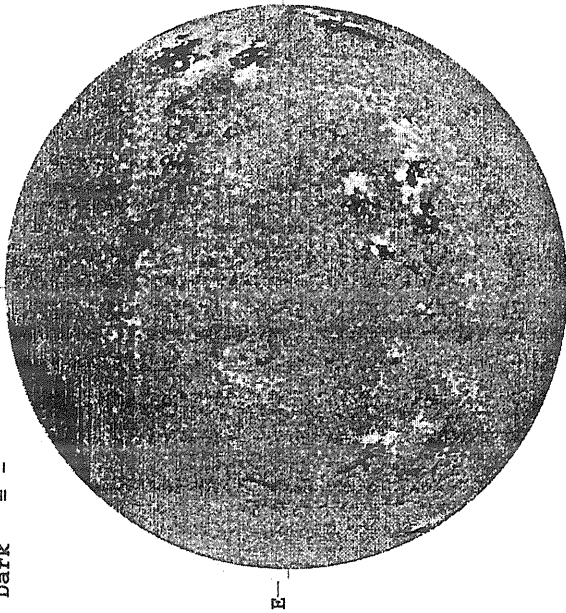




SEPTEMBER 4, 1991 ( P= 21.69, B<sub>0</sub> = 7.21, L<sub>0</sub> = 184.16 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1601 UT

STANFORD MAGNETOGRAM

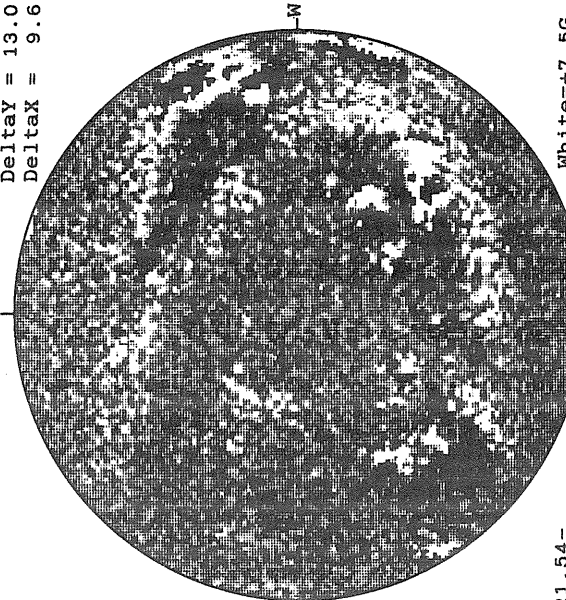
Solid = +  
Dashed = -



1858 UT

MT. WILSON MAGNETOGRAM

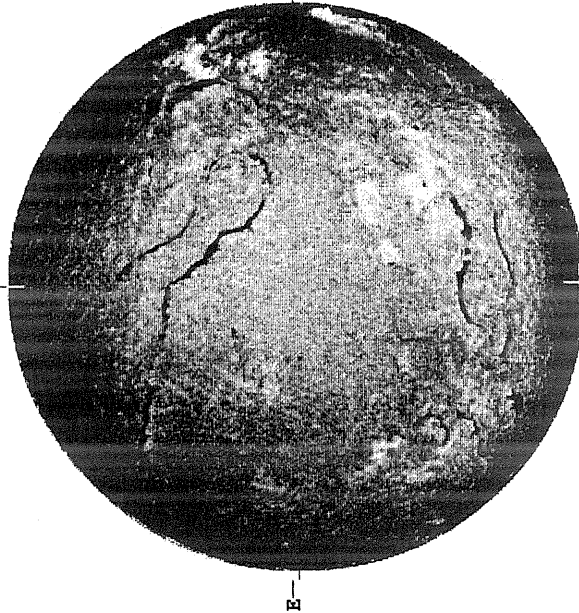
Delta $\gamma$  = 13.0  
Delta $\alpha$  = 9.6



21.54-  
22.48 UT

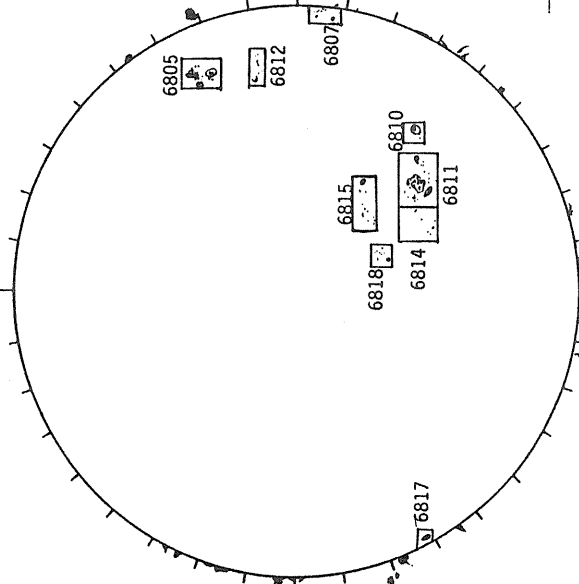
White=+7.5G  
Black=-7.5G

BOULDER H-ALPHA



1448 UT

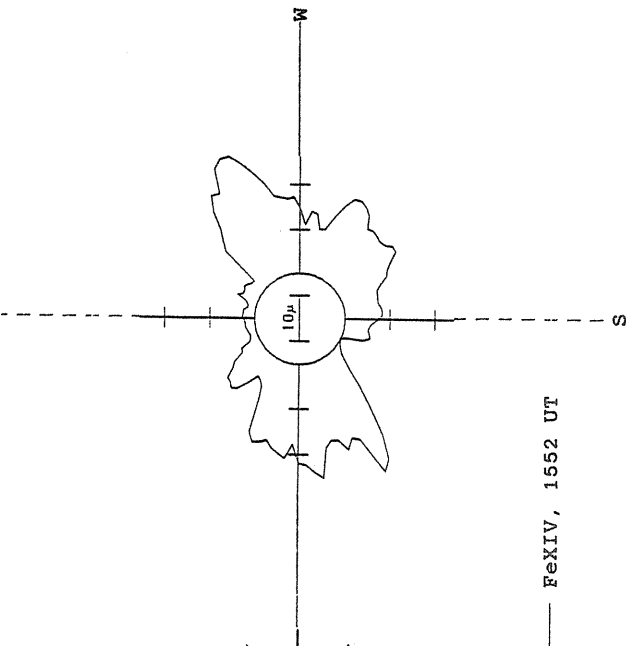
BOULDER SUNSPOT



1435 UT

1448 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

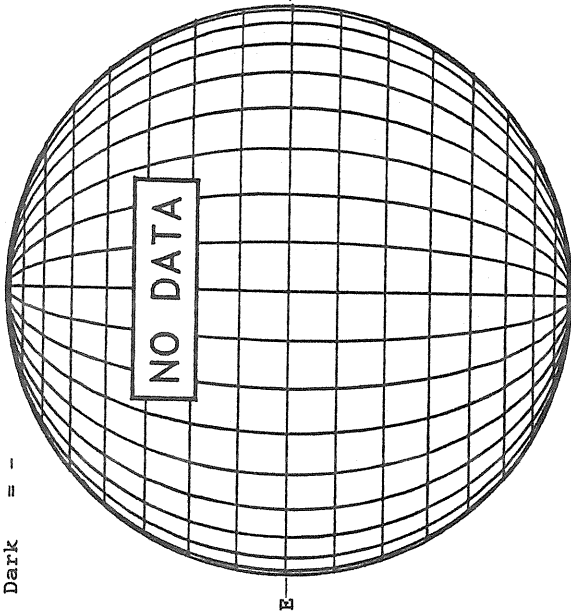


— FeXIV, 1552 UT

SEPTEMBER 5, 1991 ( P= 21.93, B<sub>0</sub> = 7.22, L<sub>0</sub> = 170.95 )

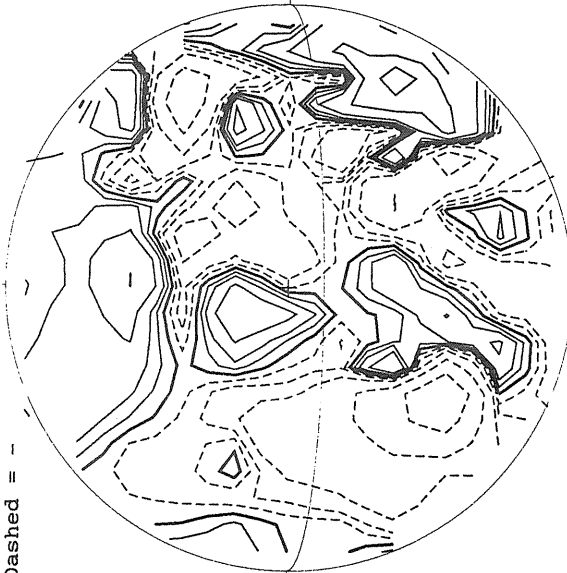
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



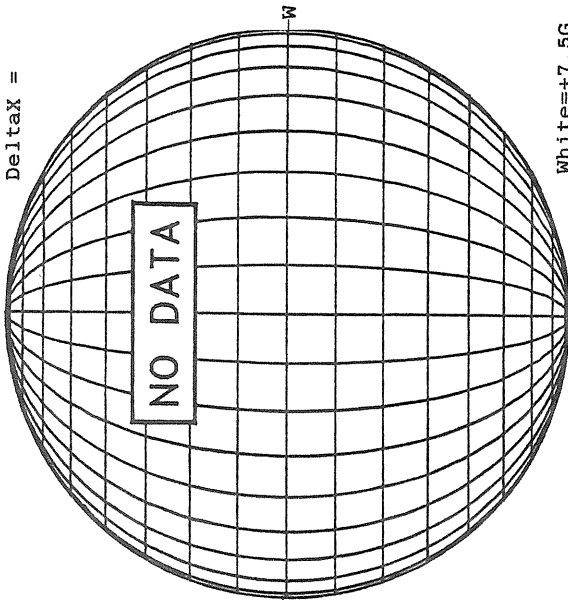
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



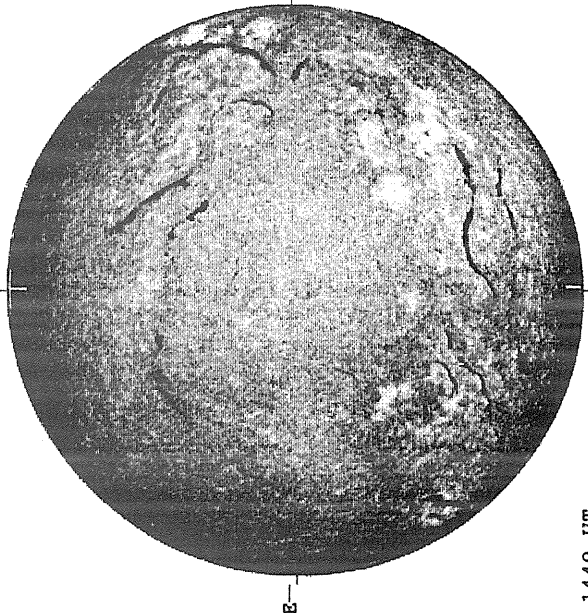
MT. WILSON MAGNETOGRAM

Delta Y =  
Delta X =



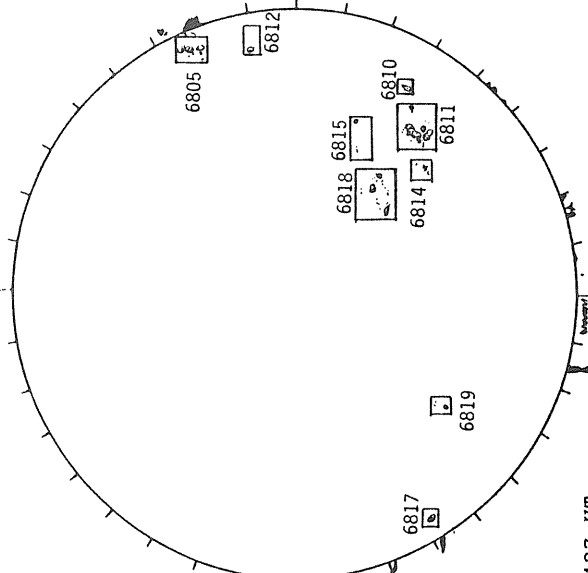
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



1449 UT

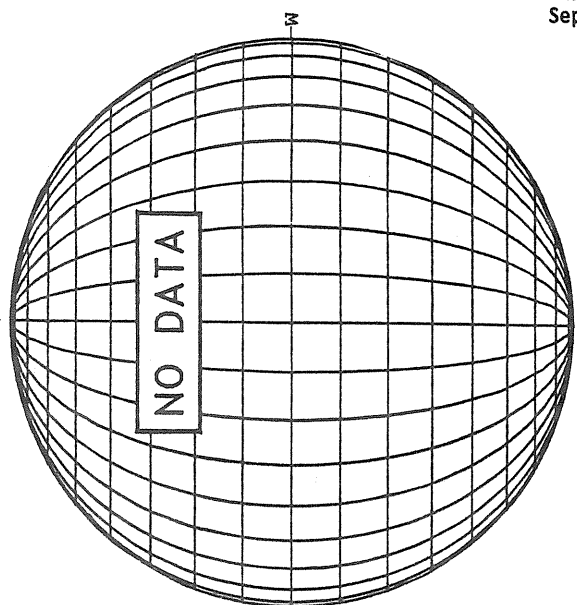
BOULDER SUNSPOT



1437 UT

1449 UT BOUL Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)



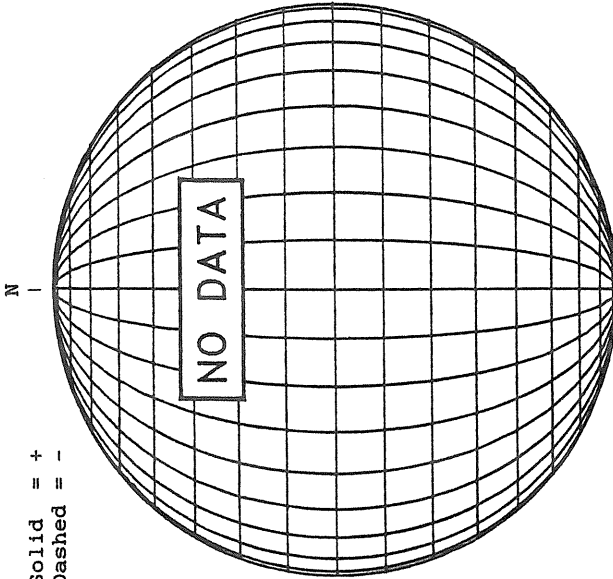
SEPTEMBER 6, 1991 ( P= 22.16, B<sub>0</sub> = 7.23, L<sub>0</sub> = 157.75 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -

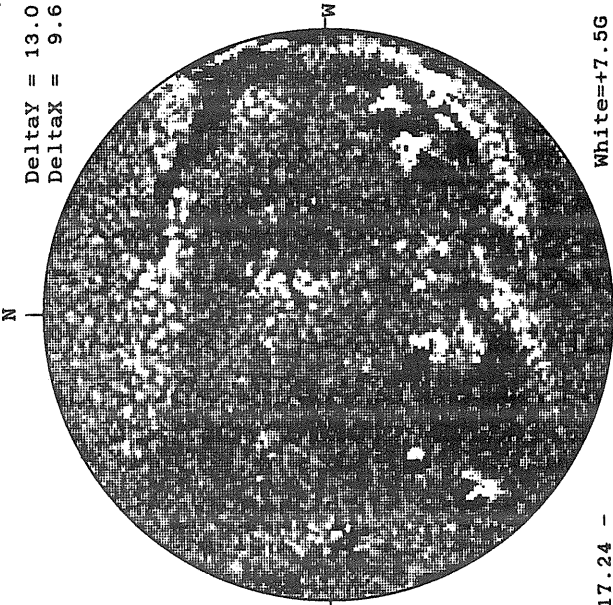
Solid = +  
Dashed = -

STANFORD MAGNETOGRAM



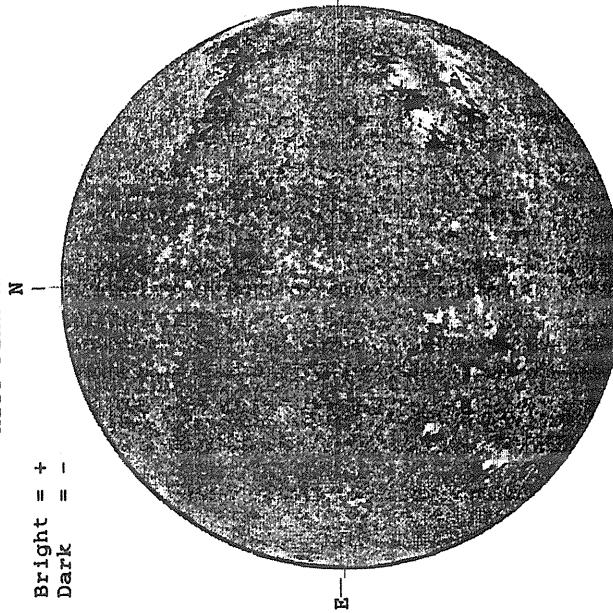
MT. WILSON MAGNETOGRAM

DeltaY = 13.0  
DeltaX = 9.6



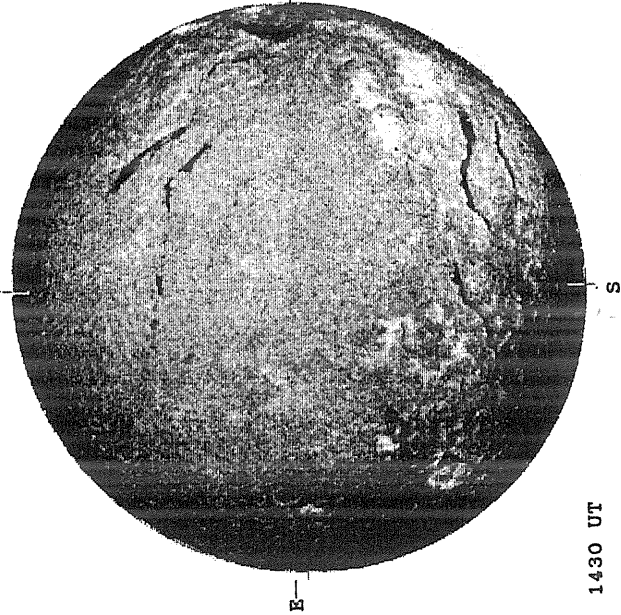
17.24 -  
18.18 UT

White=+7.5G  
Black=-7.5G



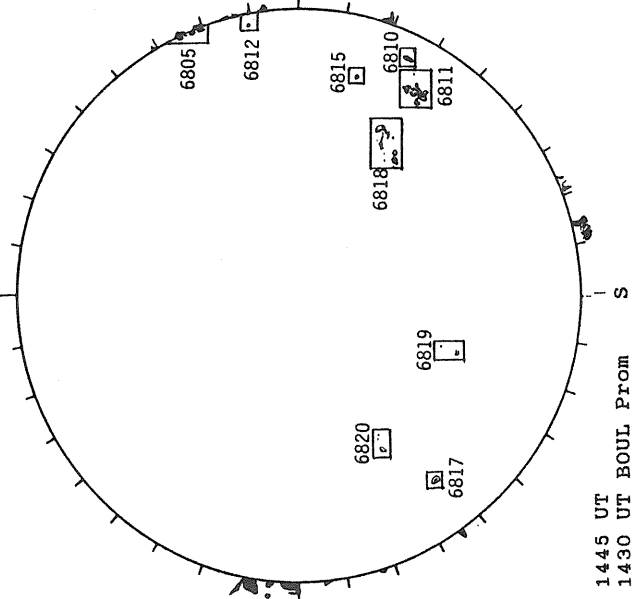
1412 UT

BOULDER H-ALPHA



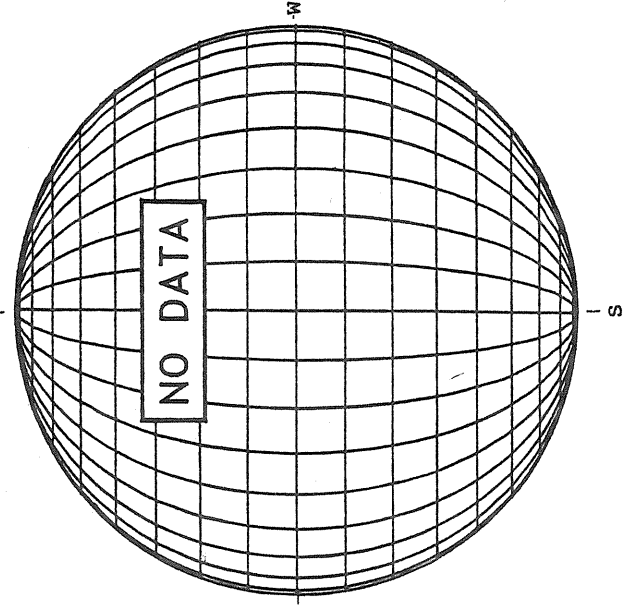
1430 UT

BOULDER SUNSPOT



1445 UT  
1430 UT BOUL Prom

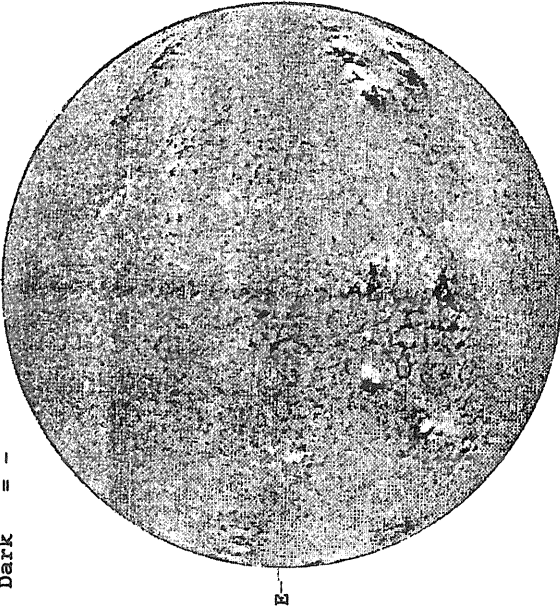
SACRAMENTO PEAK CORONA (1.15 Radii)



SEPTEMBER 7, 1991 ( P= 22.39, B<sub>0</sub> = 7.23, L<sub>0</sub> = 144.54 )

KITT PEAK MAGNETOGRAM

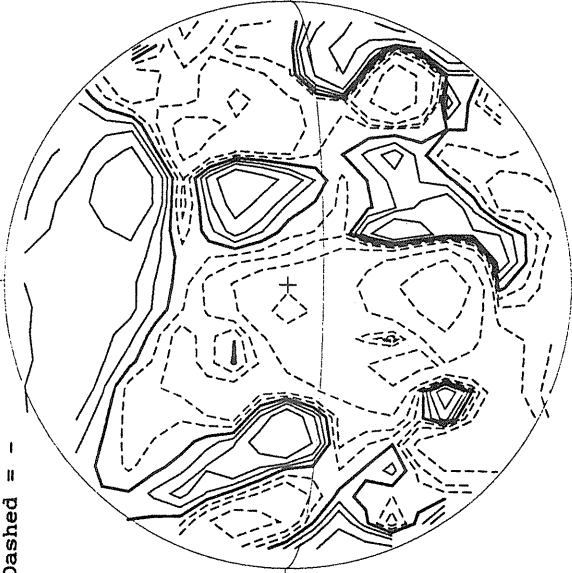
Bright = +  
Dark = -



1416 UT

STANFORD MAGNETOGRAM

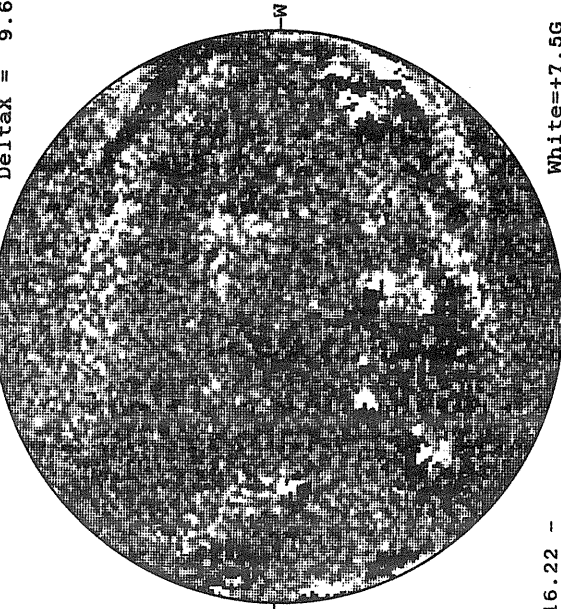
Solid = +  
Dashed = -



2237 UT

MT. WILSON MAGNETOGRAM

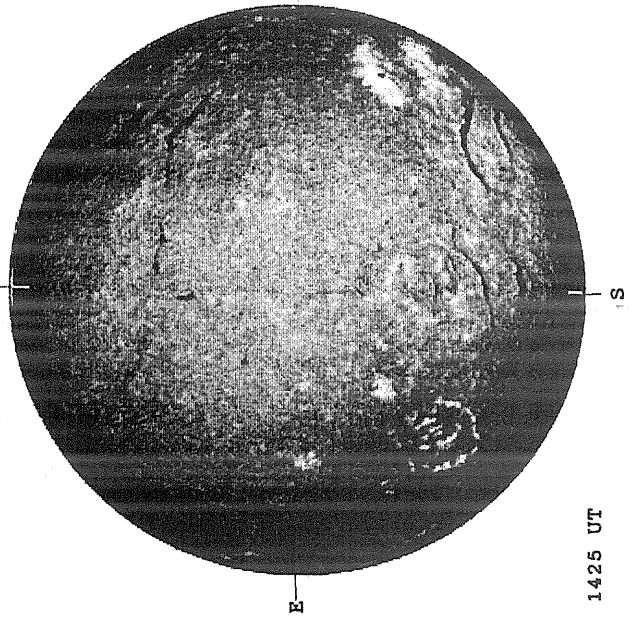
Delta<sub>γ</sub> = 12.9  
Delta<sub>α</sub> = 9.6



16.22 -  
17.16 UT

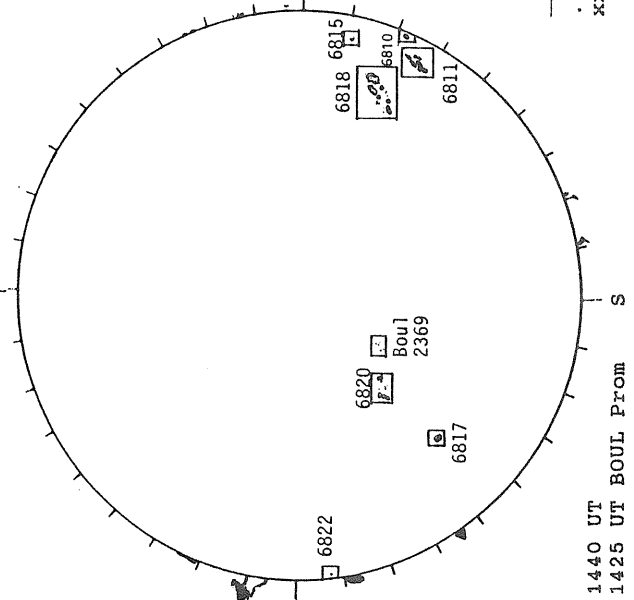
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



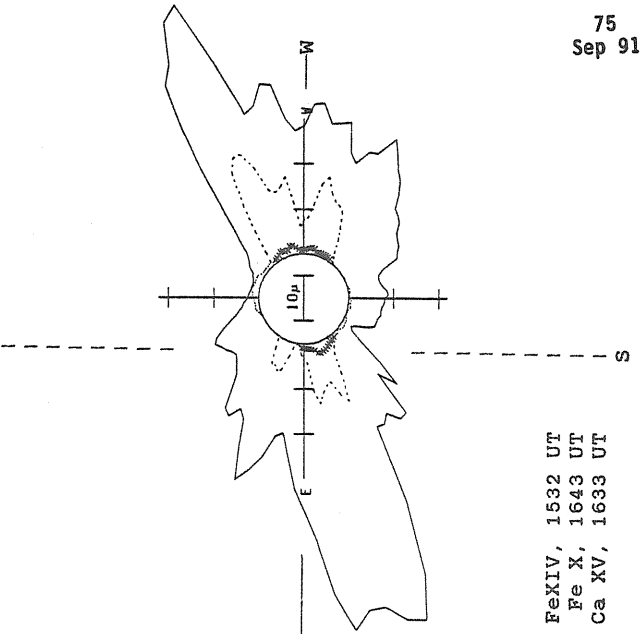
1425 UT

BOULDER SUNSPOT



1440 UT  
1425 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

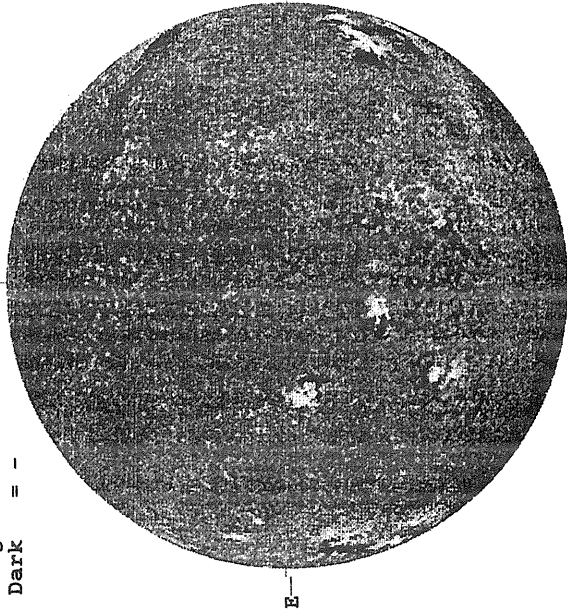


— Fe XIV, 1532 UT  
.... Fe X, 1643 UT  
xxxxx Ca XV, 1633 UT

SEPTEMBER 8, 1991 ( P = 22.61, B<sub>0</sub> = 7.23, L<sub>0</sub> = 131.33 )

KITT PEAK MAGNETOGRAM

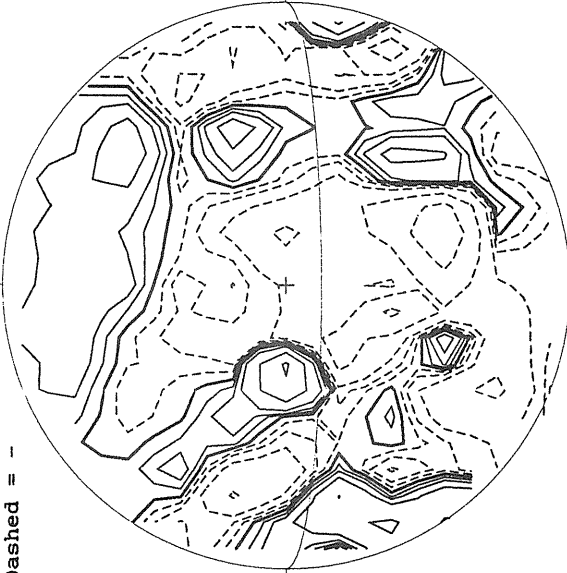
Bright = +  
Dark = -



1421 UT

STANFORD MAGNETOGRAM

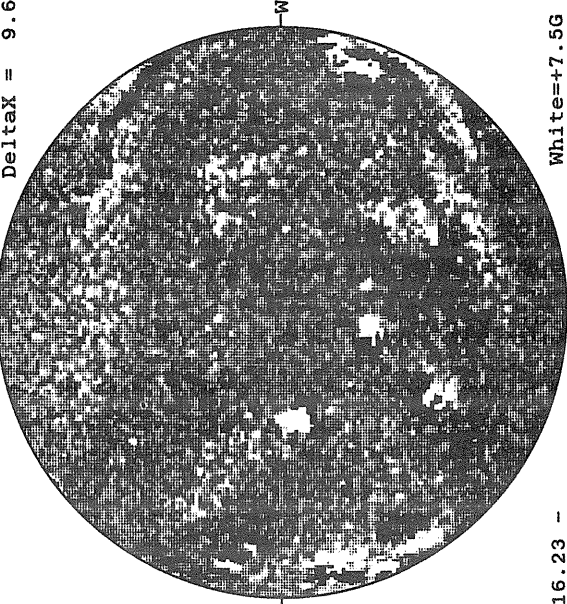
Solid = +  
Dashed = -



2342 UT

MT. WILSON MAGNETOGRAM

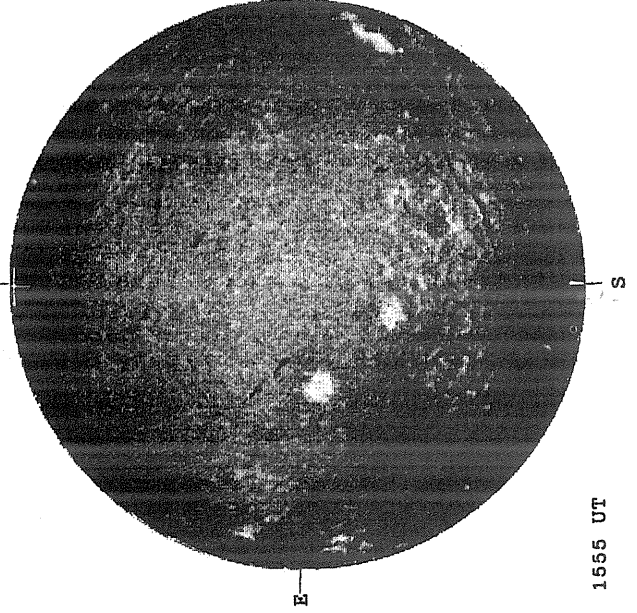
DeltaY = 12.9  
DeltaX = 9.6



16.23 -  
17.17 UT

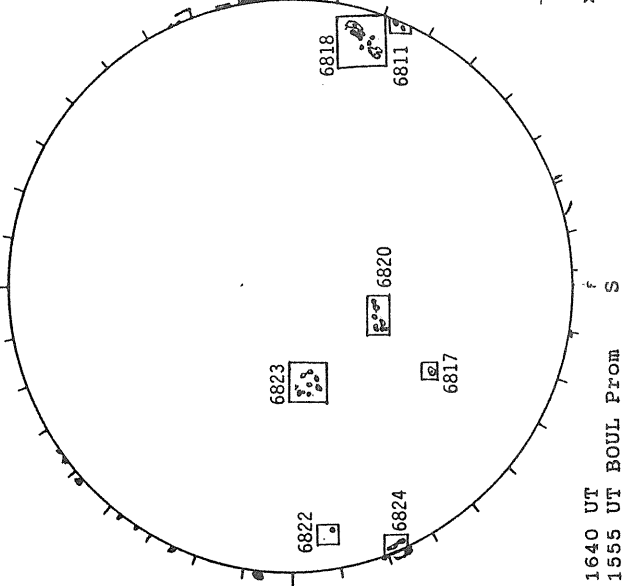
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



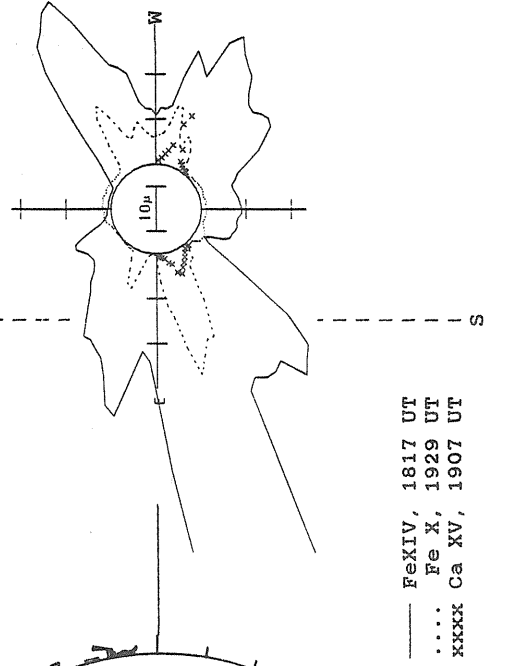
1555 UT

BOULDER SUNSPOT



1640 UT  
1555 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

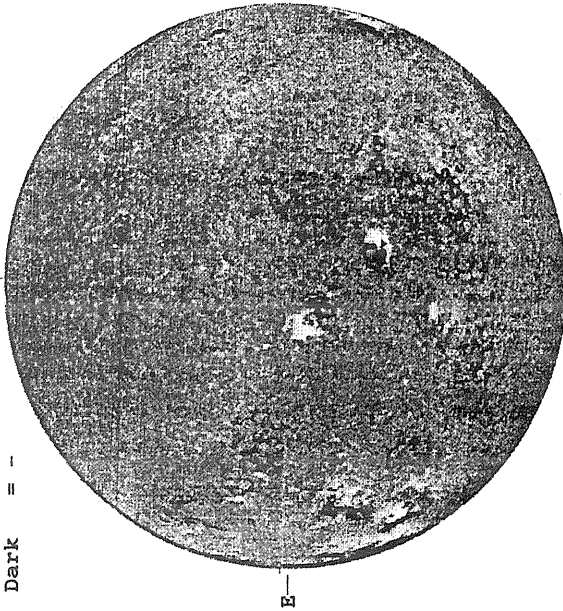


— FeXIV, 1817 UT  
..... Fe X, 1929 UT  
xxxxx Ca XV, 1907 UT

SEPTEMBER 9, 1991 ( P= 22.82, B<sub>0</sub> = 7.24, I<sub>0</sub> = 118.13 )

KITT PEAK MAGNETOGRAM

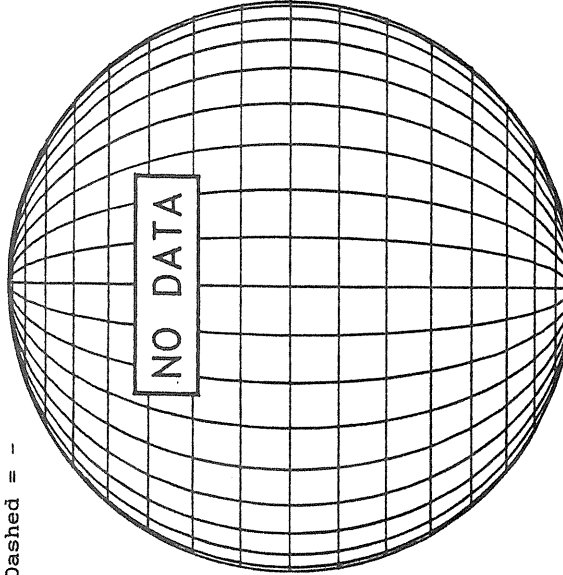
Bright = +  
Dark = -



1541 UT

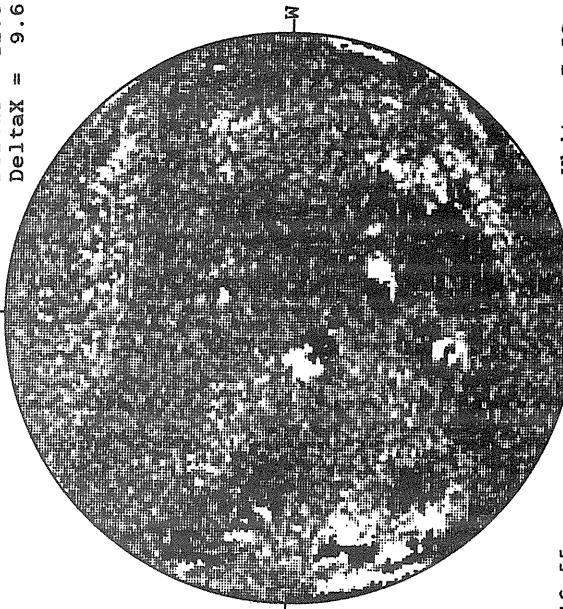
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

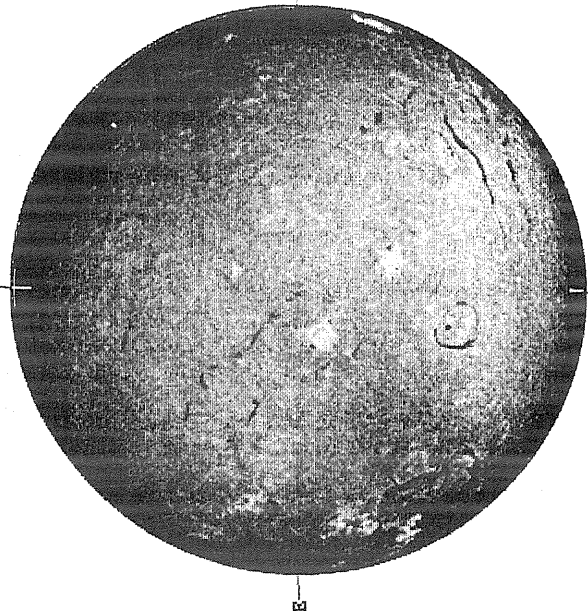
Delta<sub>y</sub> = 12.9  
Delta<sub>x</sub> = 9.6



16.55 -  
17.49 UT

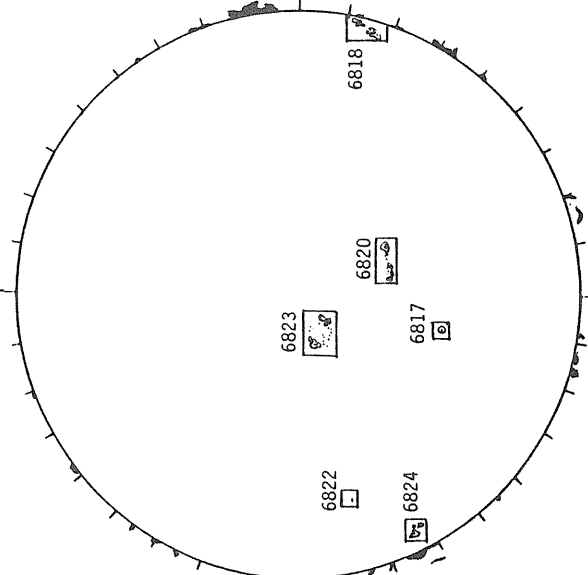
White=+7.5G  
Black=-7.5G

BOULDER H-ALPHA



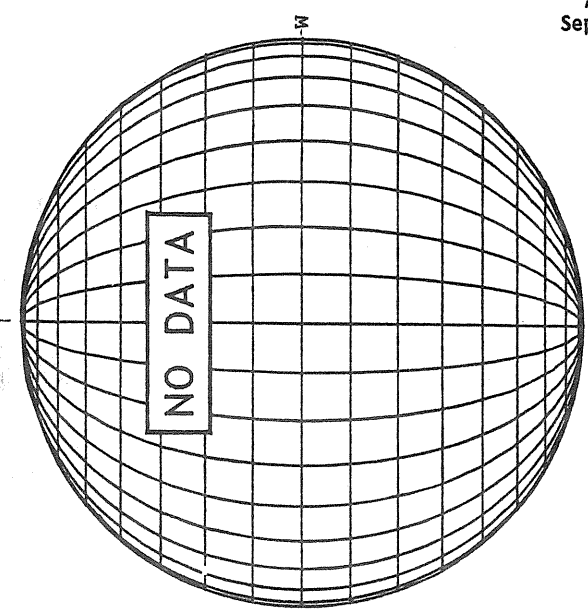
1400 UT

BOULDER SUNSPOT



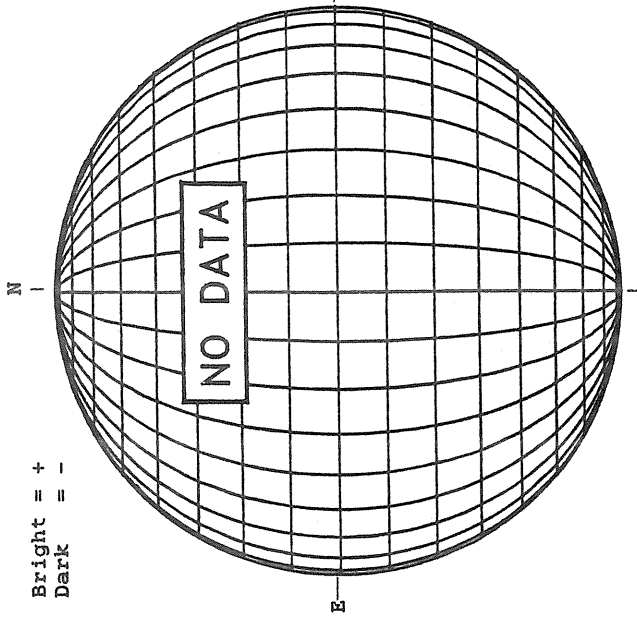
1504 UT  
1400 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)

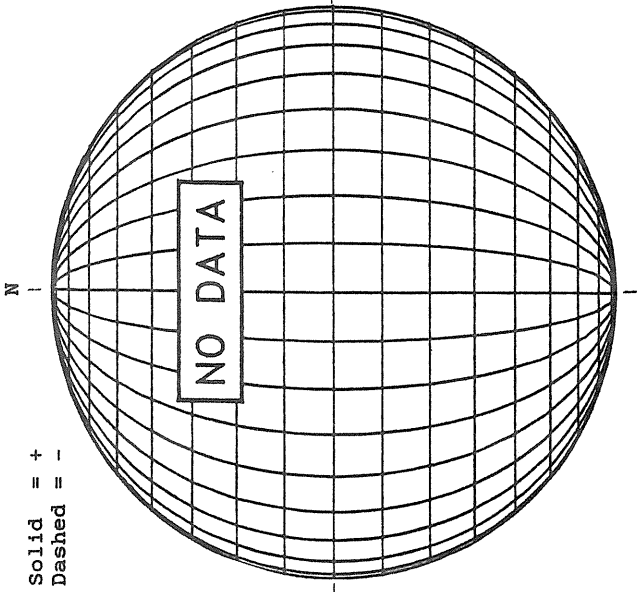


SEPTEMBER 10, 1991 ( P = 23.03, B<sub>O</sub> = 7.23, L<sub>O</sub> = 104.92 )

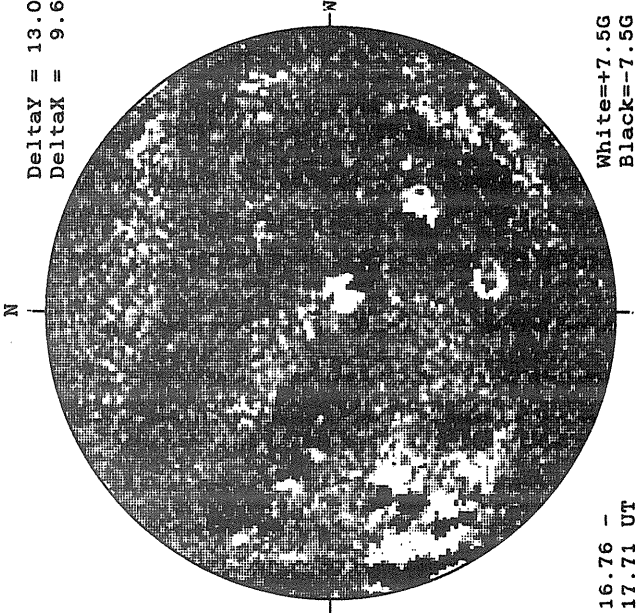
KITT PEAK MAGNETOGRAM



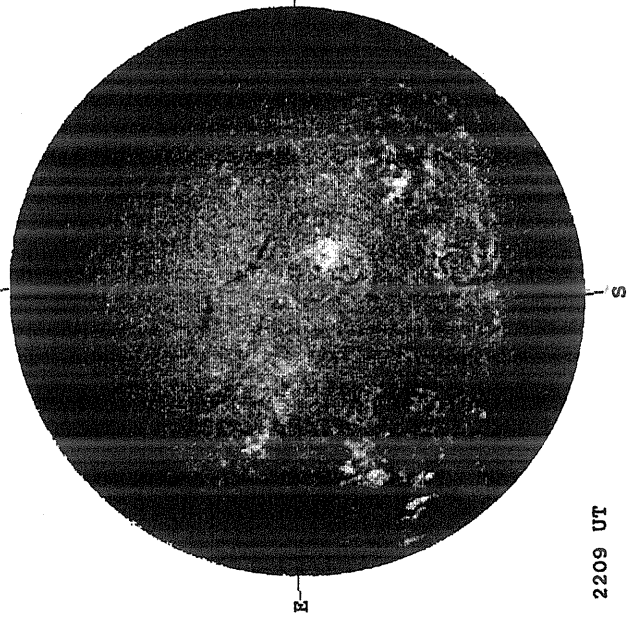
STANFORD MAGNETOGRAM



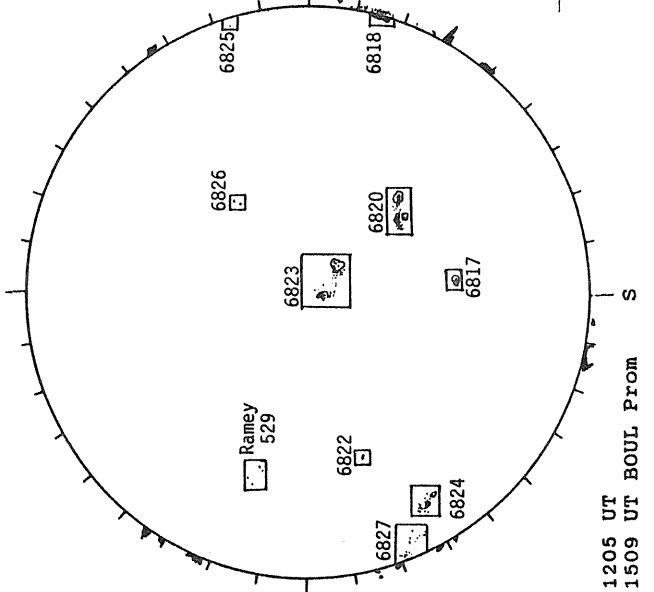
MT. WILSON MAGNETOGRAM



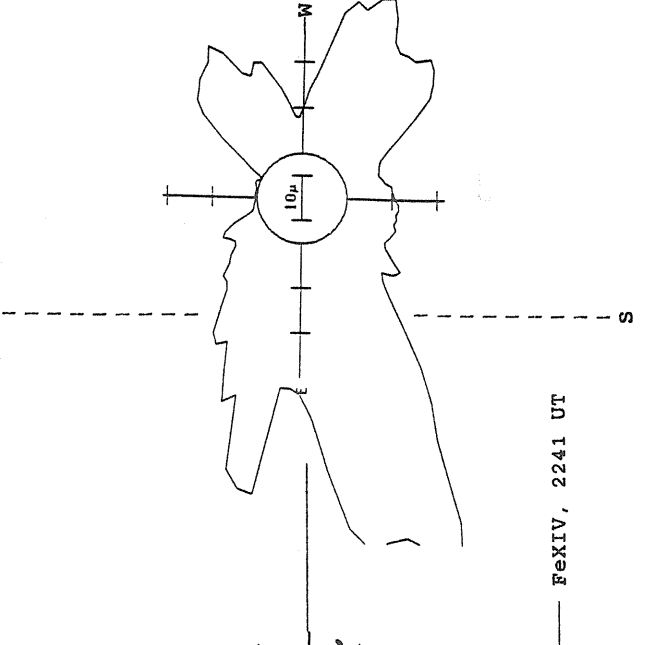
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



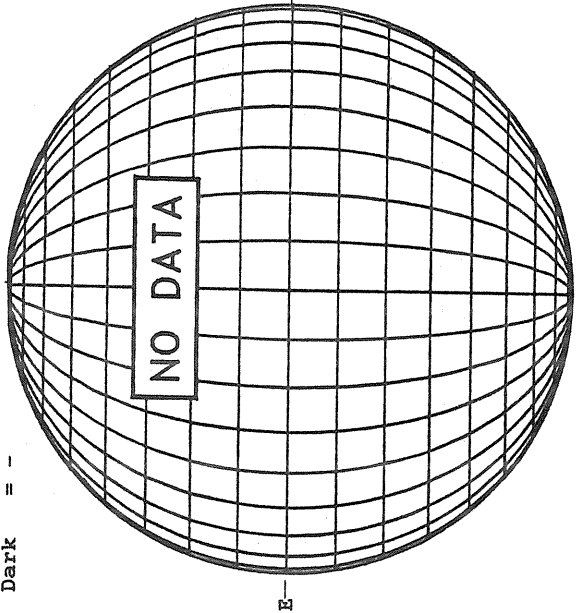
SACRAMENTO PEAK CORONA (1.15 Radii)



SEPTEMBER 11, 1991 ( P = 23.23, B<sub>0</sub> = 7.23, L<sub>0</sub> = 91.72 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



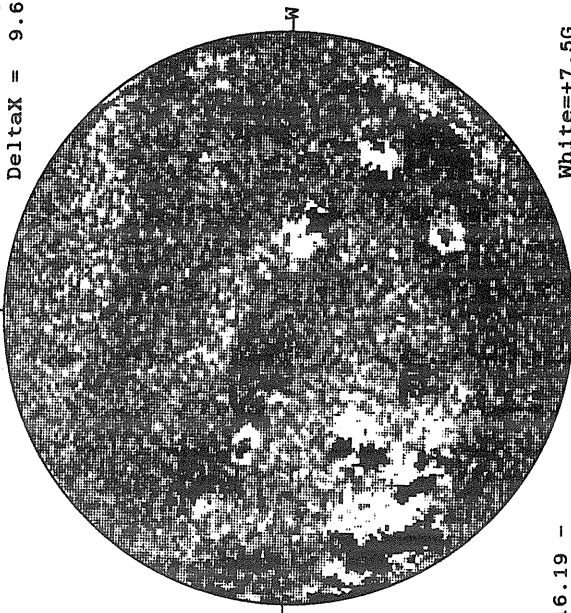
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

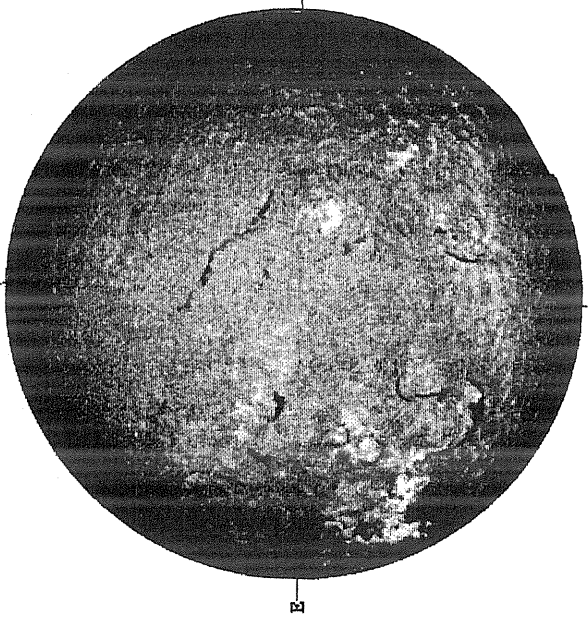
DeltaY = 13.0  
DeltaX = 9.6



16.19 -  
17.14 UT

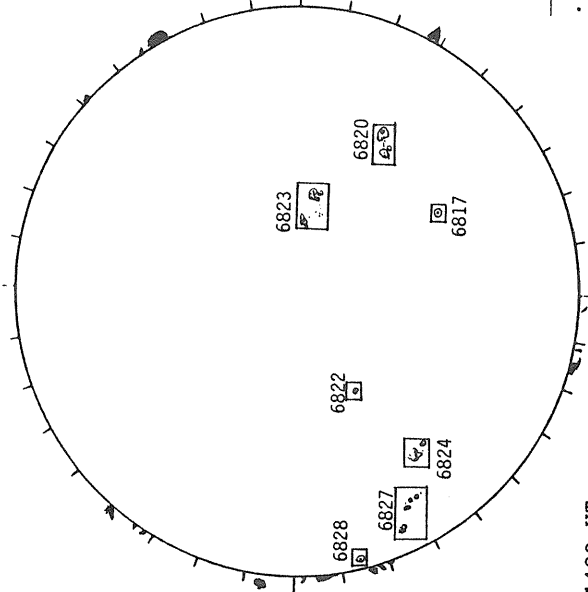
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



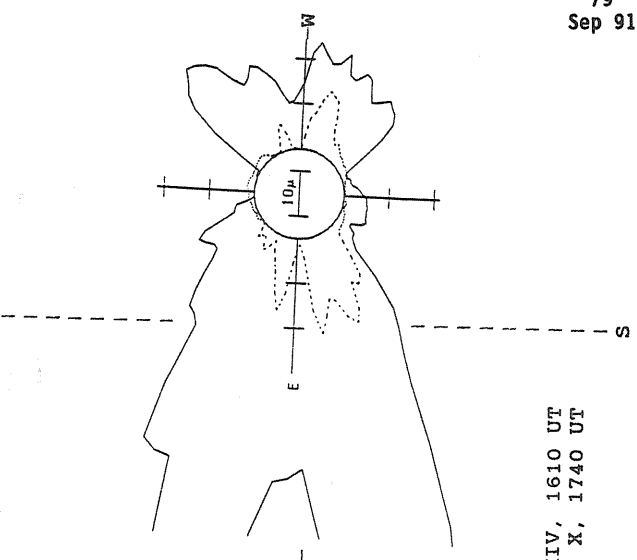
1610 UT

BOULDER SUNSPOT



1430 UT  
1535 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



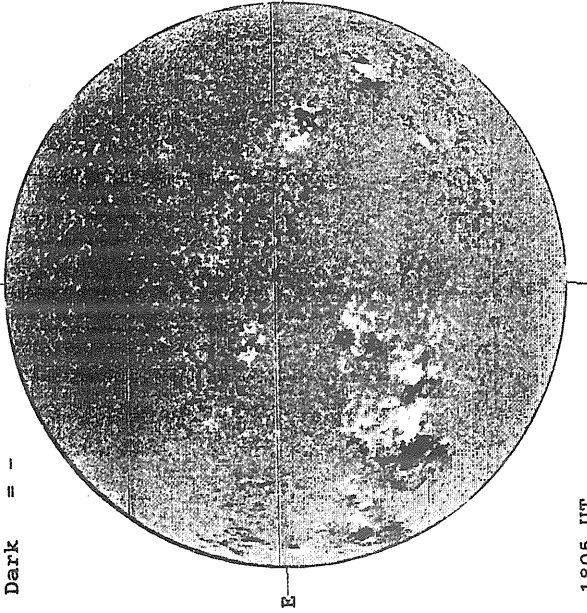
— Fe XIV, 1610 UT  
... Fe X, 1740 UT



SEPTEMBER 12, 1991 ( P= 23.43, B<sub>0</sub> = 7.22, I<sub>0</sub> = 78.51 )

KITT PEAK MAGNETOGRAM

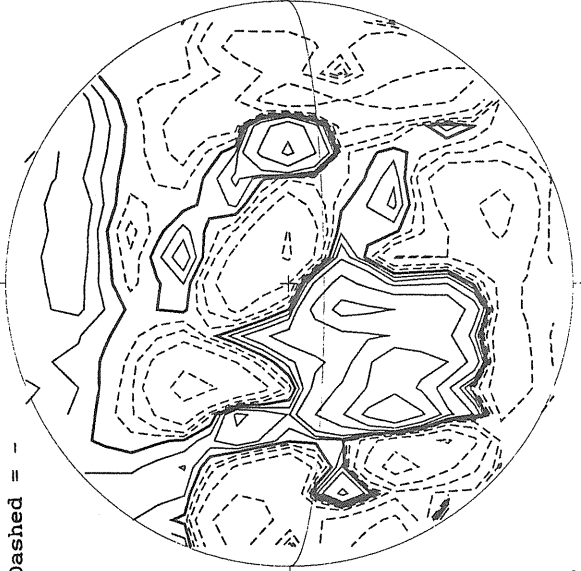
Bright = +  
Dark = -



1805 UT

STANFORD MAGNETOGRAM

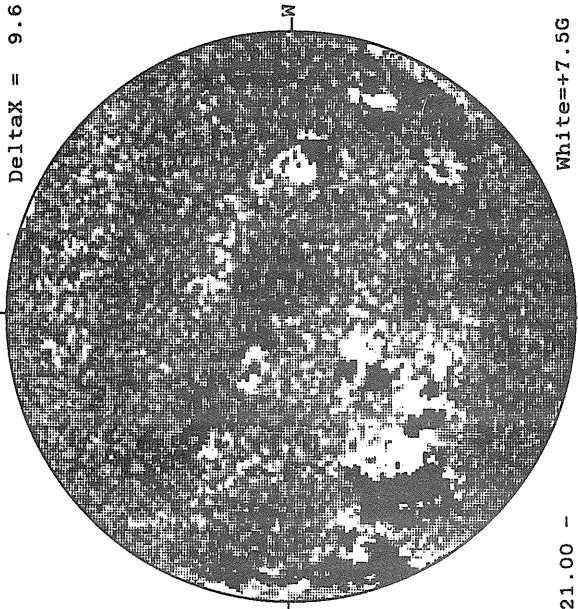
Solid = +  
Dashed = -



2202 UT

MT. WILSON MAGNETOGRAM

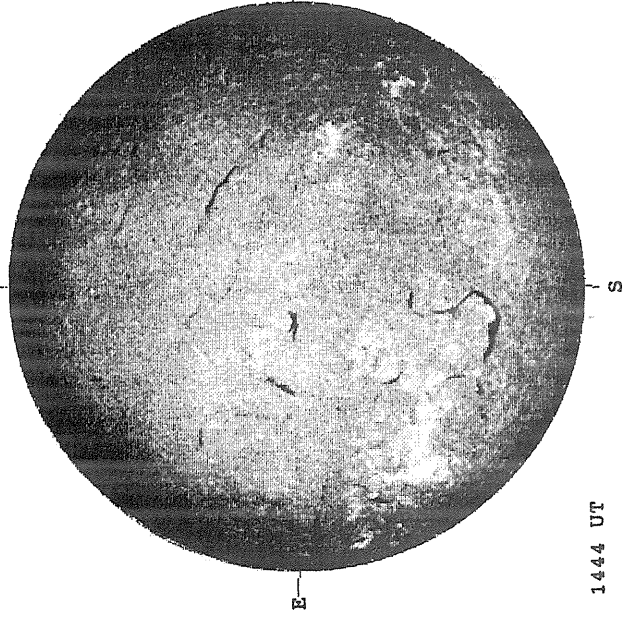
DeltaY = 13.0  
DeltaX = 9.6



21.00 -  
21.94 UT

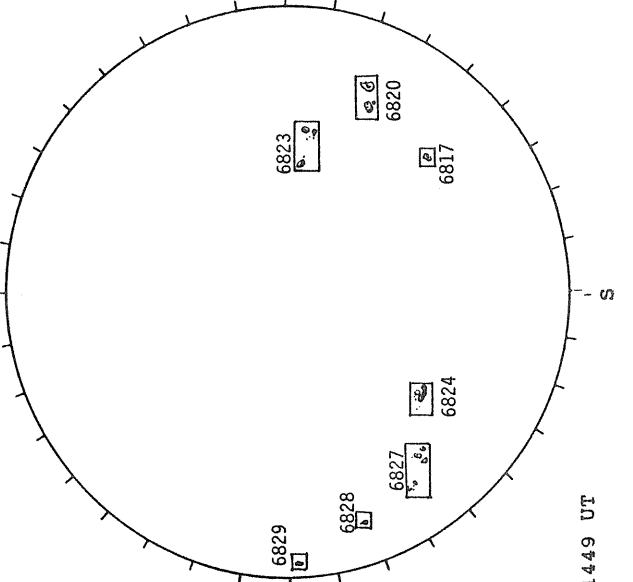
White=+7.5G  
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



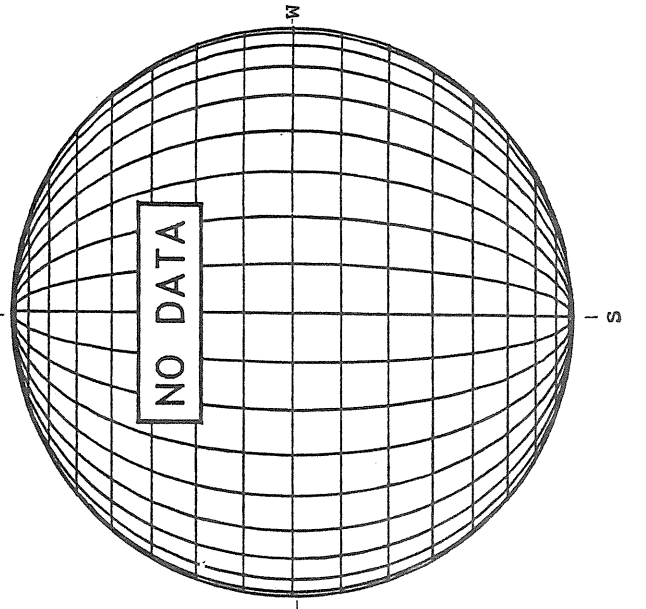
1444 UT

BOULDER SUNSPOT



1449 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



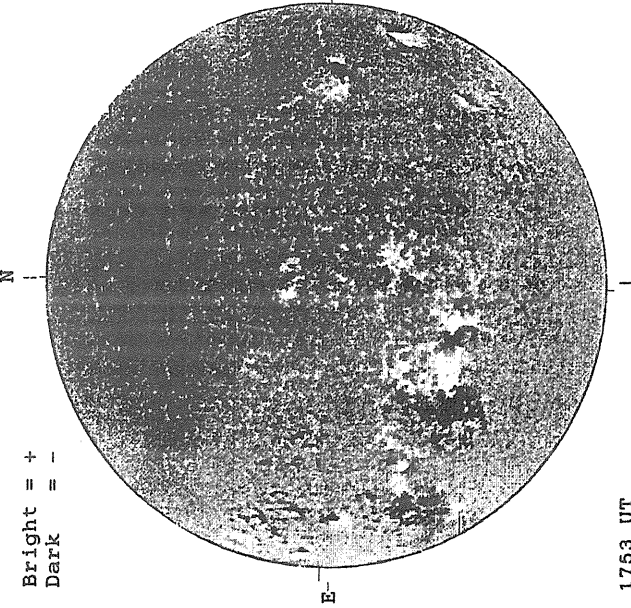
NO DATA

SEPTEMBER 13, 1991 ( P = 23.62, B<sub>0</sub> = 7.22, L<sub>0</sub> = 65.31 )

81  
Sep 91

KITT PEAK MAGNETOGRAM

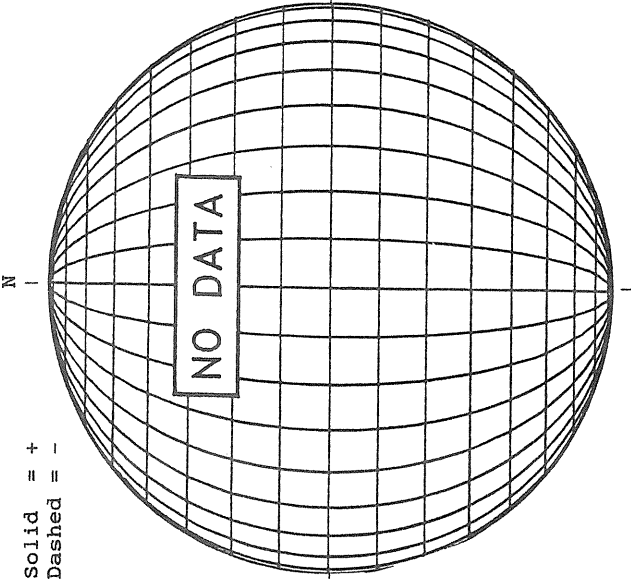
Bright = +  
Dark = -



1753 UT

STANFORD MAGNETOGRAM

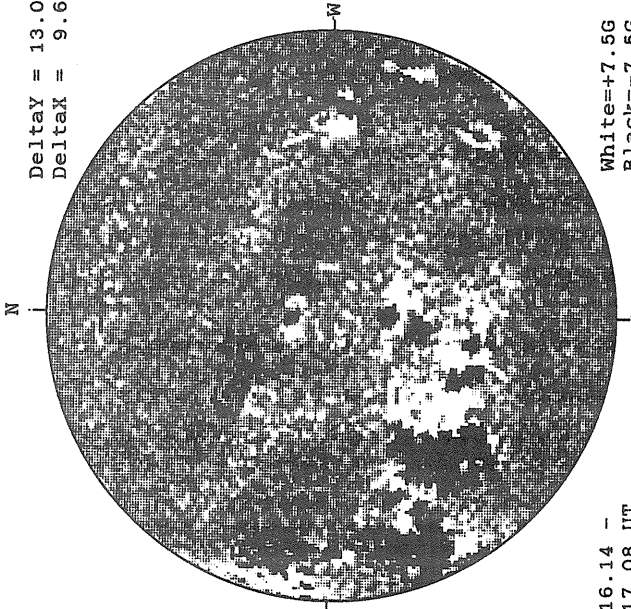
Solid = +  
Dashed = -



16.14 -  
17.08 UT

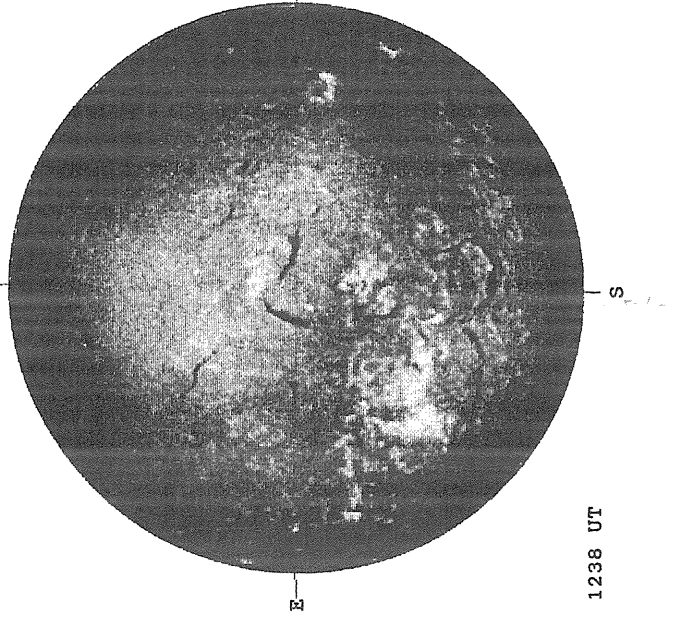
MT. WILSON MAGNETOGRAM

Delta<sub>Y</sub> = 13.0  
Delta<sub>X</sub> = 9.6



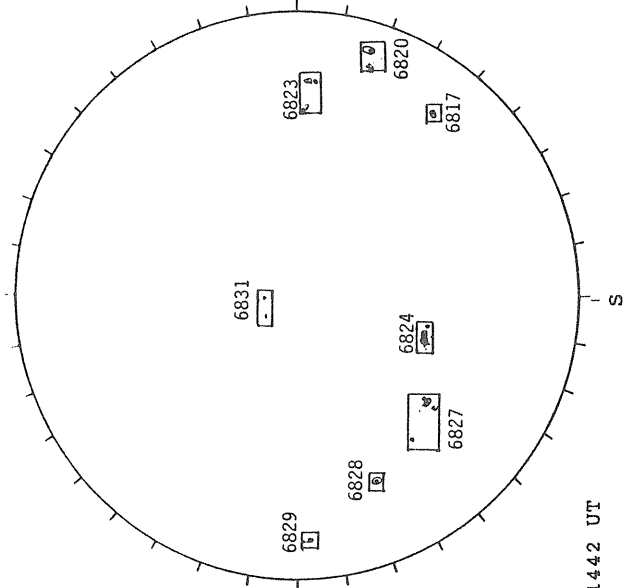
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



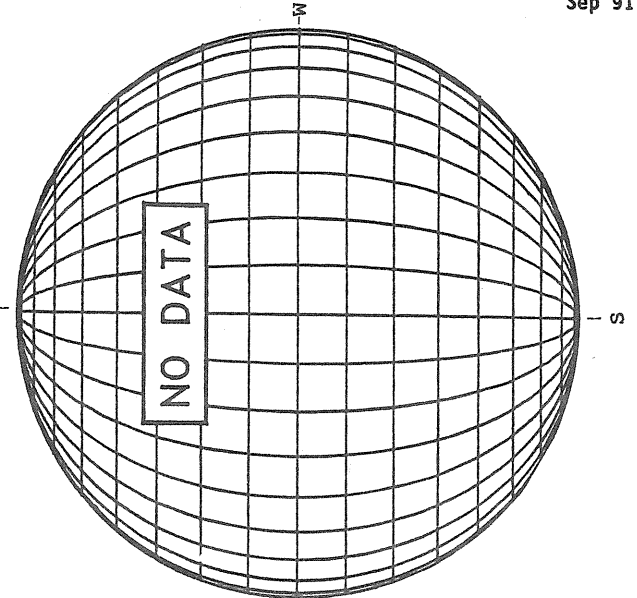
1238 UT

BOULDER SUNSPOT



1442 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

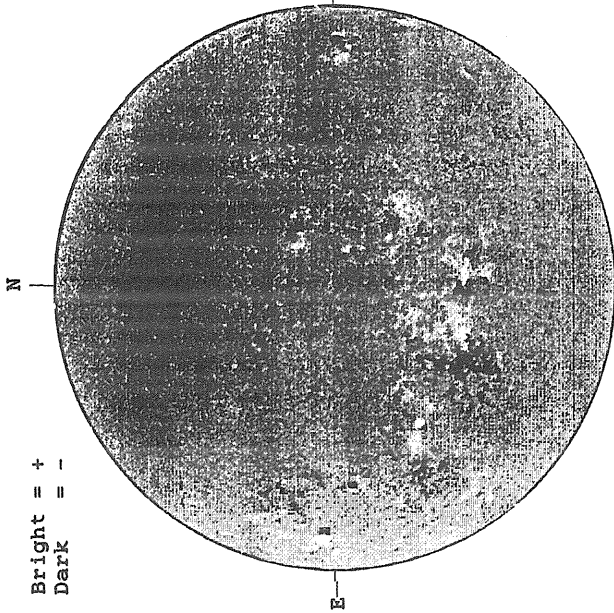


1238 UT

SEPTEMBER 14, 1991 ( P= 23.80, B<sub>0</sub> = 7.21, L<sub>0</sub> = 52.11 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1505 UT

STANFORD MAGNETOGRAM

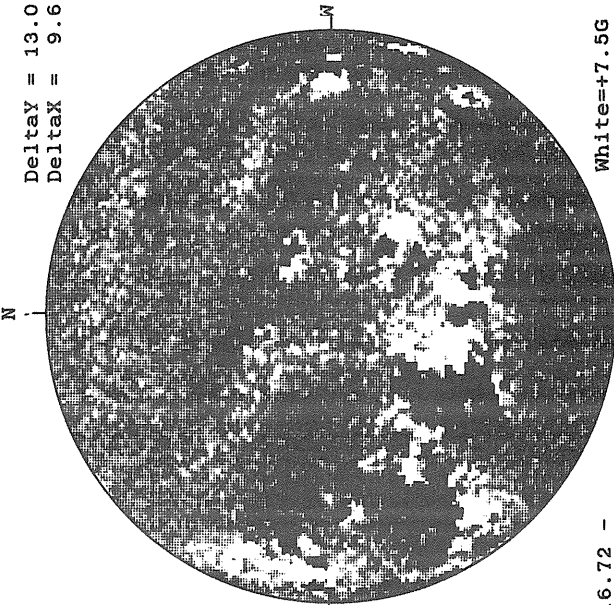
Solid = +  
Dashed = -



1946 UT

MT. WILSON MAGNETOGRAM

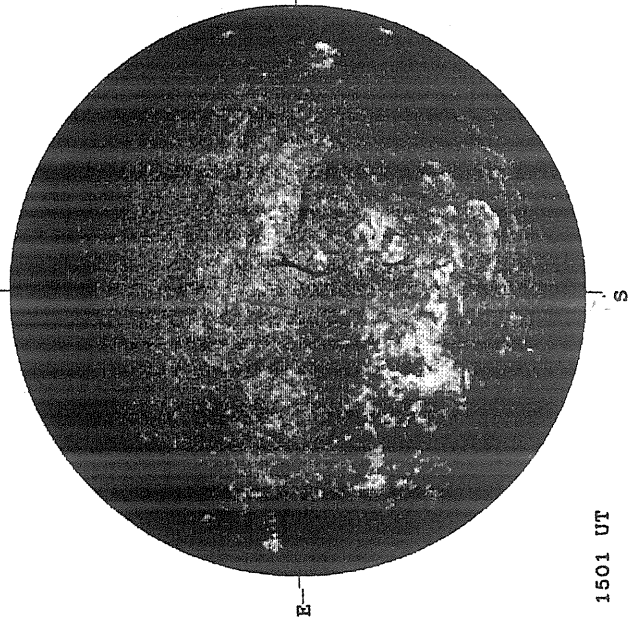
DeltaY = 13.0  
DeltaX = 9.6



16.72 -  
17.66 UT

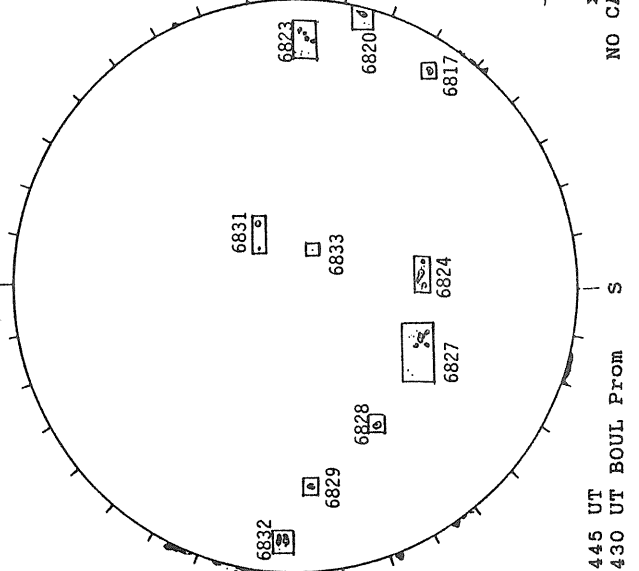
White=+7.5G  
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



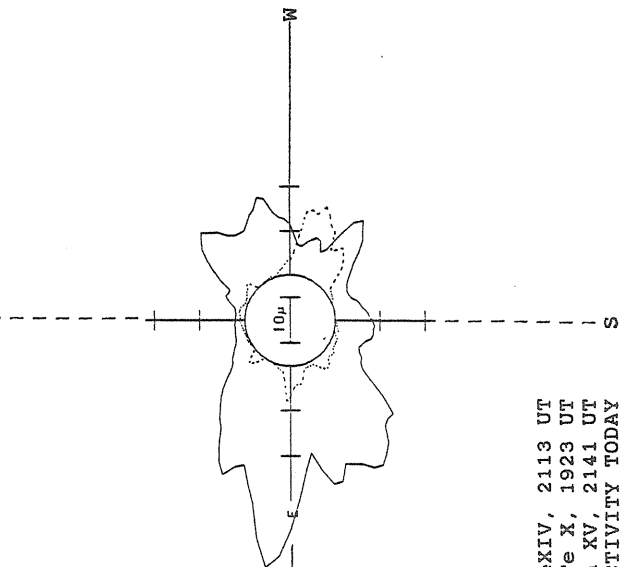
1501 UT

BOULDER SUNSPOT



1445 UT BOUL Prom  
1430 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

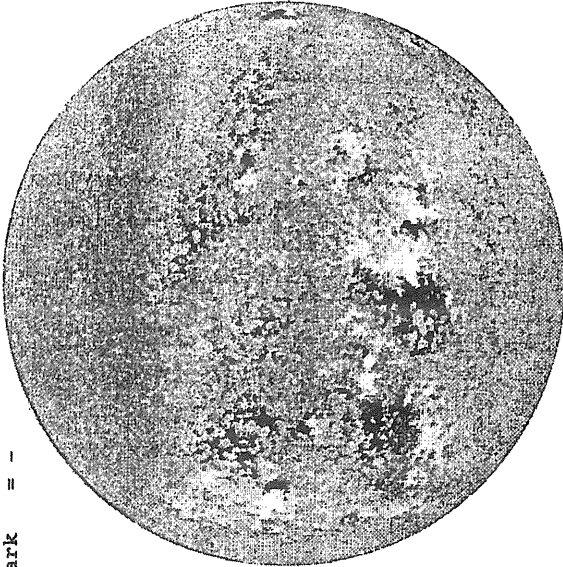


— FeXIV, 2113 UT  
... Fe X, 1923 UT  
XXXX Ca XV, 2141 UT  
NO CA XV ACTIVITY TODAY

SEPTEMBER 15, 1991 ( P= 23.98, B<sub>0</sub> = 7.20, L<sub>0</sub> = 38.91 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1417 UT

STANFORD MAGNETOGRAM

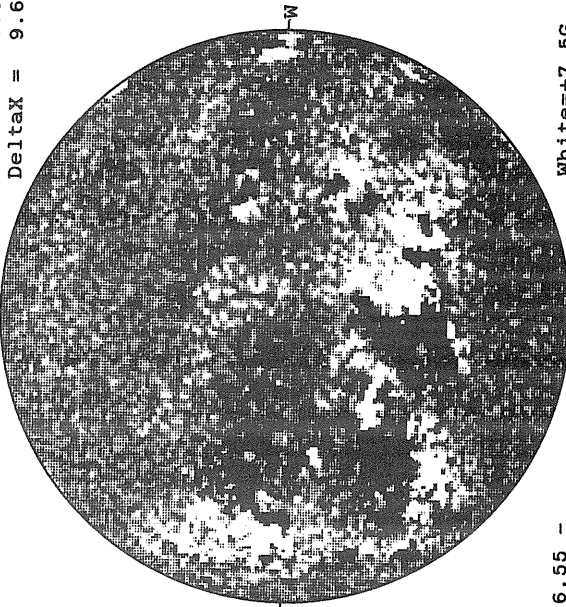
Solid = +  
Dashed = -



2143 UT

MT. WILSON MAGNETOGRAM

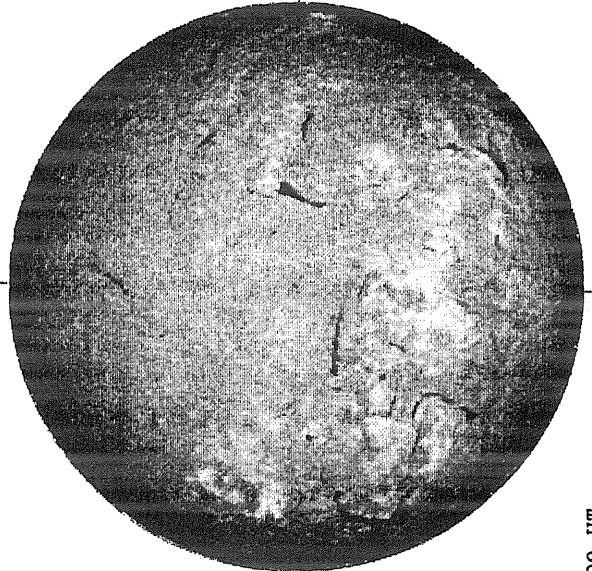
Delta<sub>Y</sub> = 13.0  
Delta<sub>X</sub> = 9.6



16.55 -  
17.50 UT

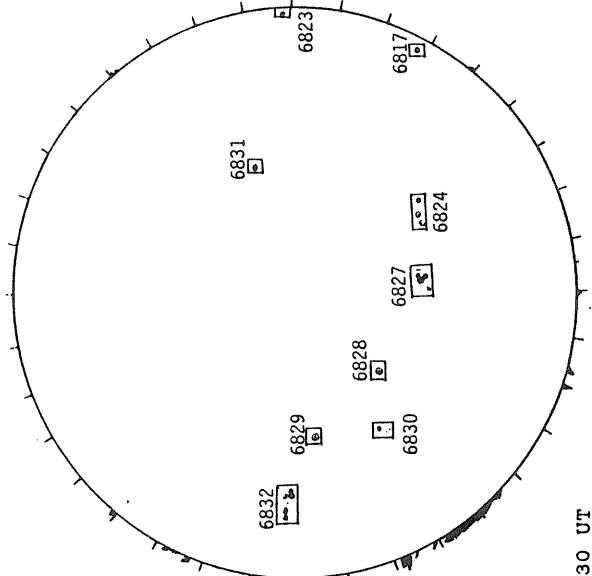
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



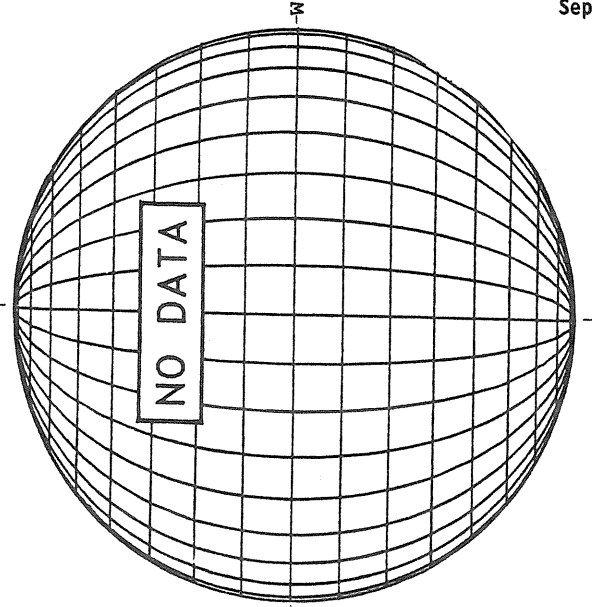
1509 UT

BOULDER SUNSPOT



1430 UT  
1420 UT BOUL Prom

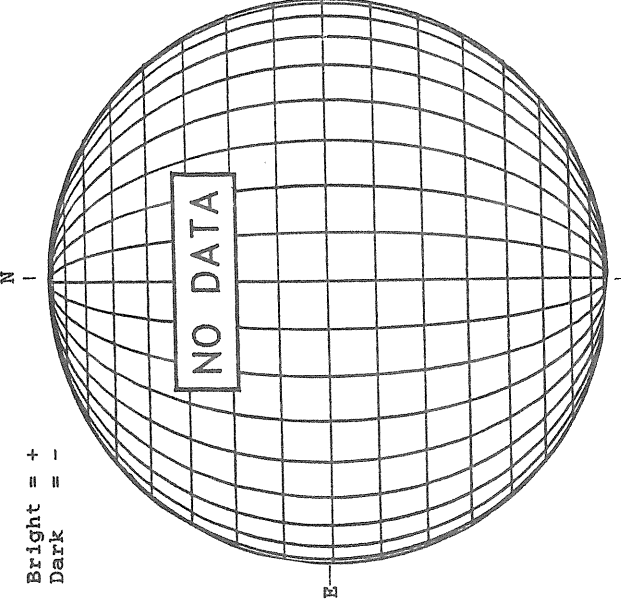
SACRAMENTO PEAK CORONA (1.15 Radii)



SEPTEMBER 16, 1991 ( P = 24.15, E<sub>0</sub> = 7.18, L<sub>0</sub> = 25.70 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



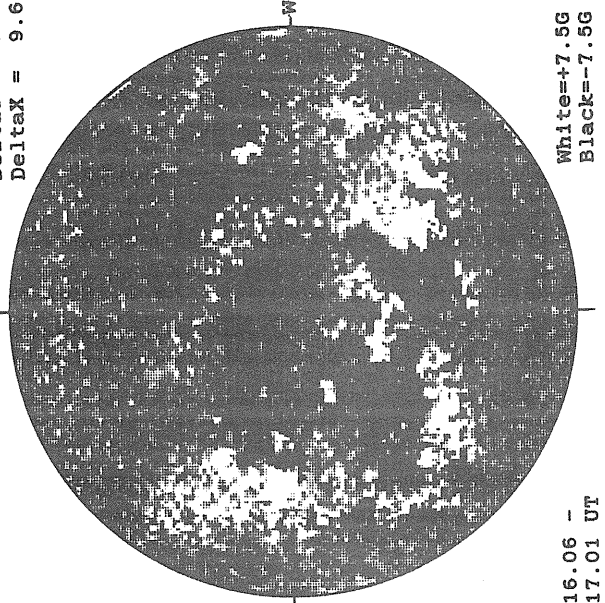
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

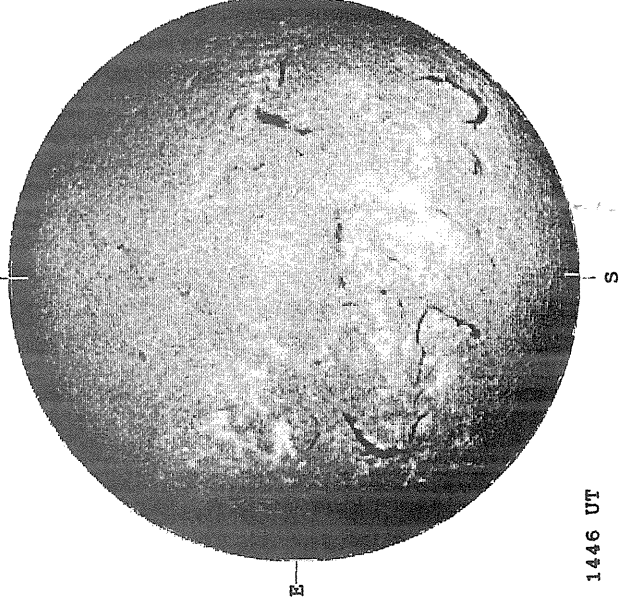
Delta<sub>Y</sub> = 12.9  
Delta<sub>X</sub> = 9.6



White = +7.5G  
Black = -7.5G

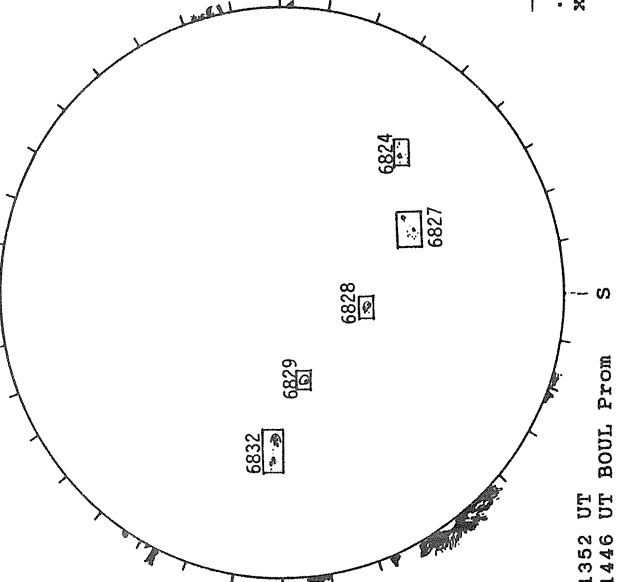
16.06 -  
17.01 UT

BOULDER H-ALPHA



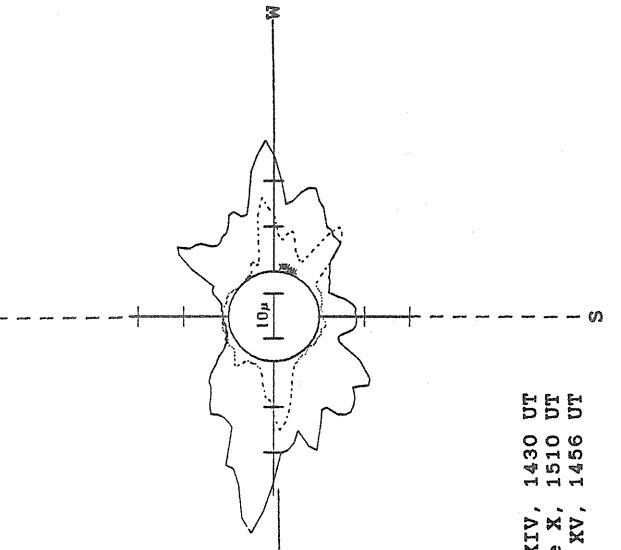
1446 UT

BOULDER SUNSPOT



1352 UT  
1446 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)

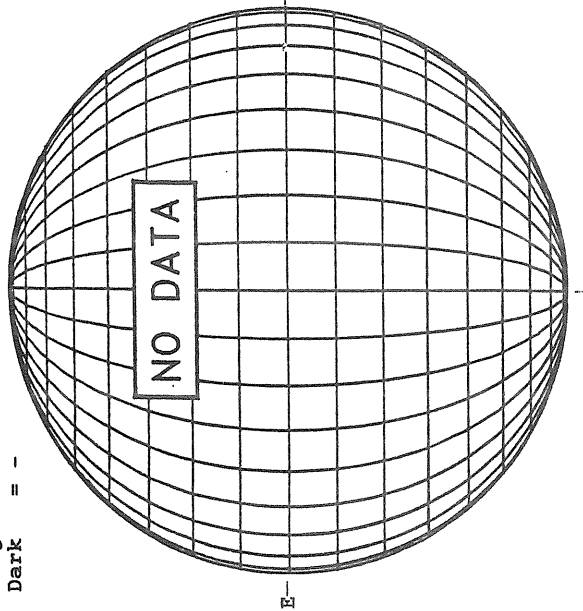


— Fe XIV, 1430 UT  
... Fe X, 1510 UT  
xxxxx Ca XV, 1456 UT

SEPTEMBER 17, 1991 ( P = 24.32, B<sub>0</sub> = 7.17, L<sub>0</sub> = 12.50 )

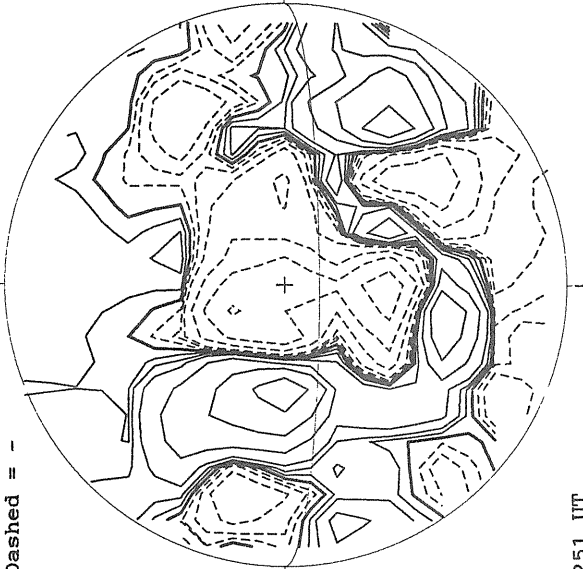
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



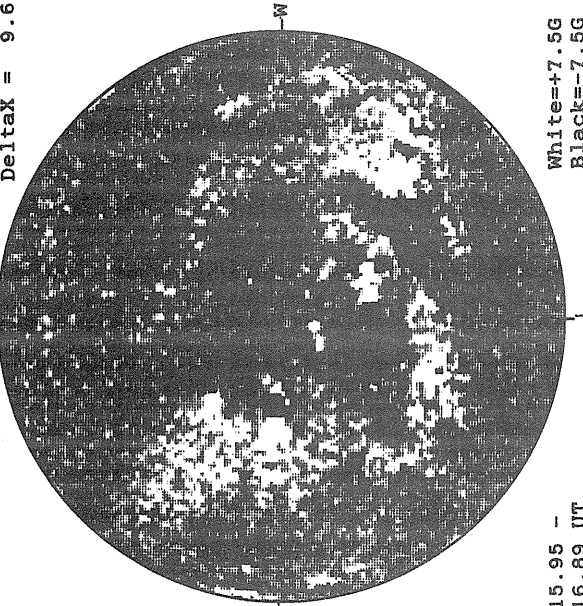
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

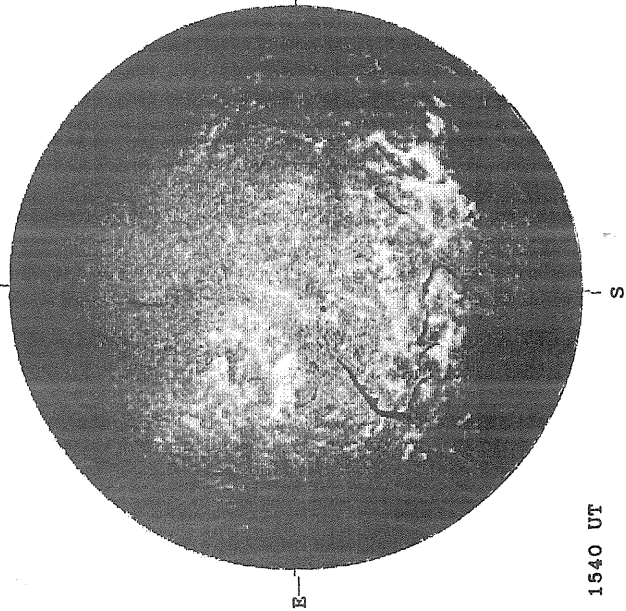
Delta $\gamma$  = 12.9  
Delta $\alpha$  = 9.6



15.95 -  
16.89 UT

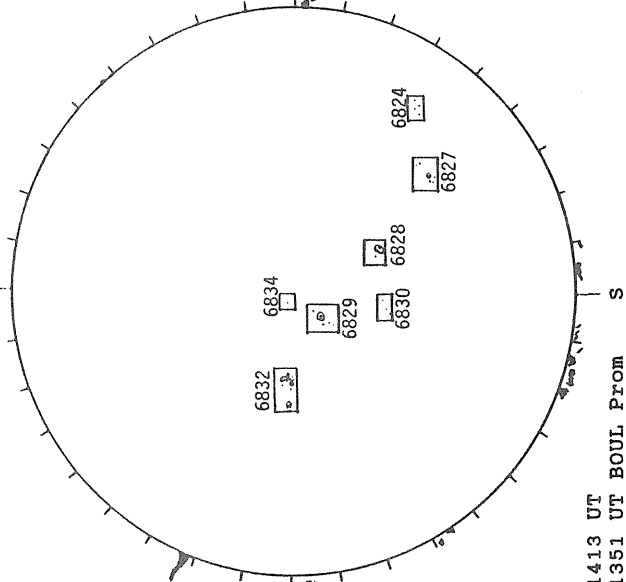
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



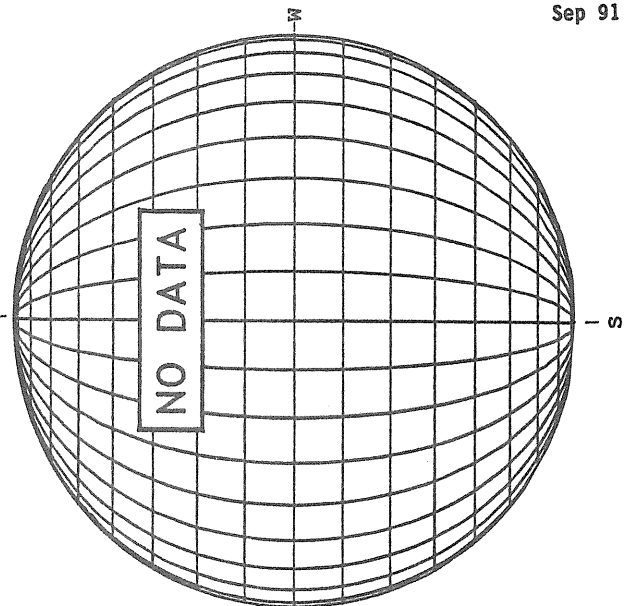
1540 UT

BOULDER SUNSPOT



1413 UT  
1351 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

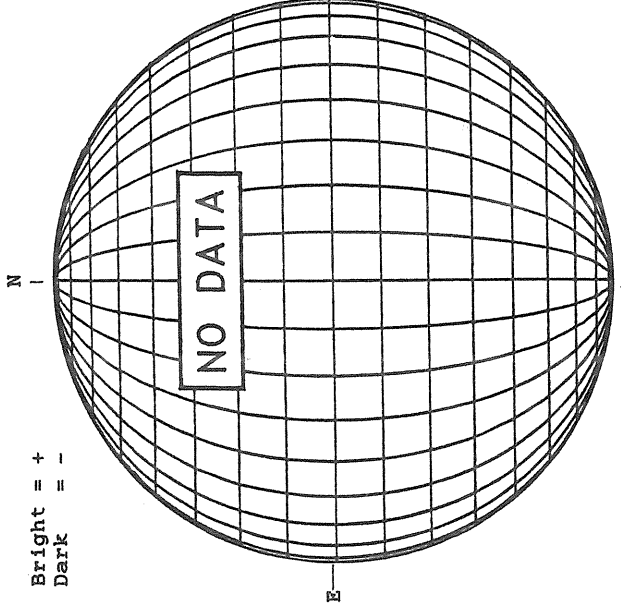


86  
Sep 91

SEPTEMBER 18, 1991 ( P= 24.48, B<sub>0</sub> = 7.15, L<sub>0</sub> = 359.30 )

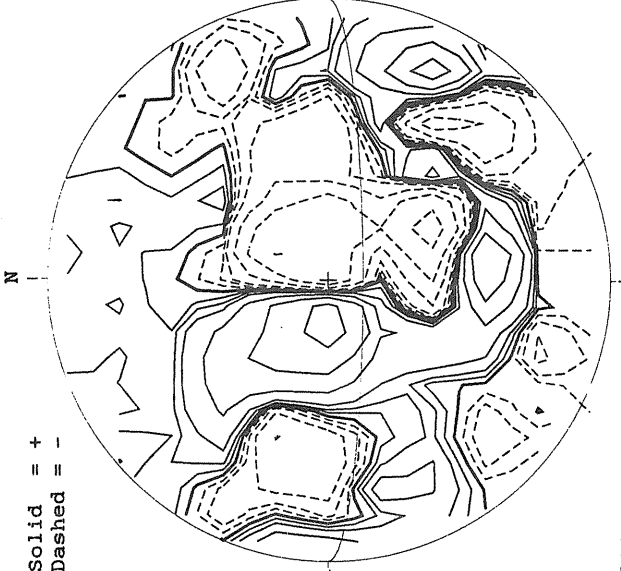
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



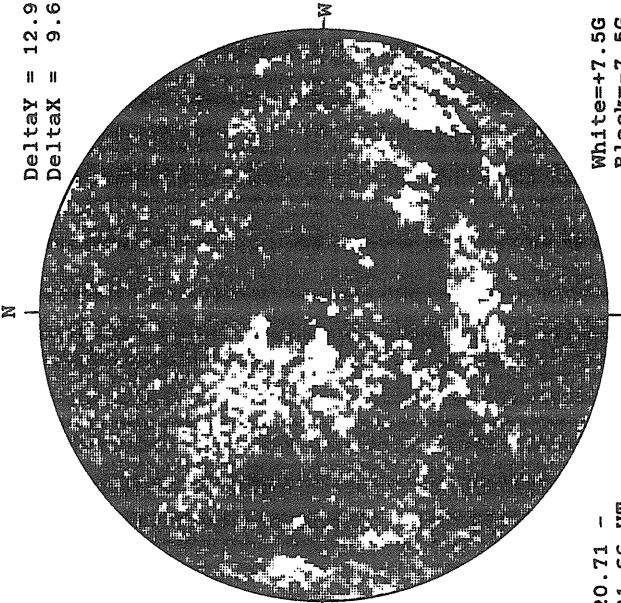
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

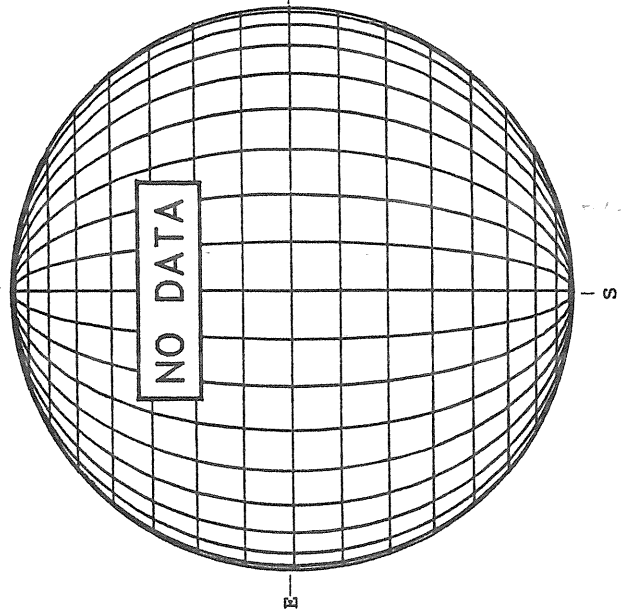
DeltaY = 12.9  
DeltaX = 9.6



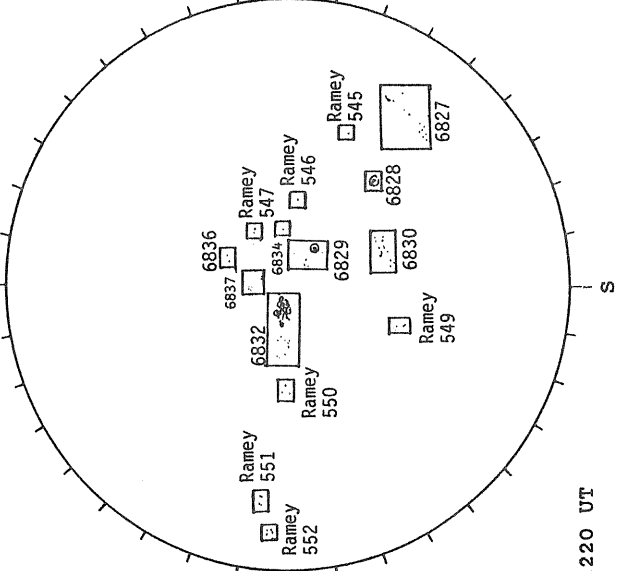
White=+7.5G  
Black=-7.5G

20.71 -  
21.66 UT

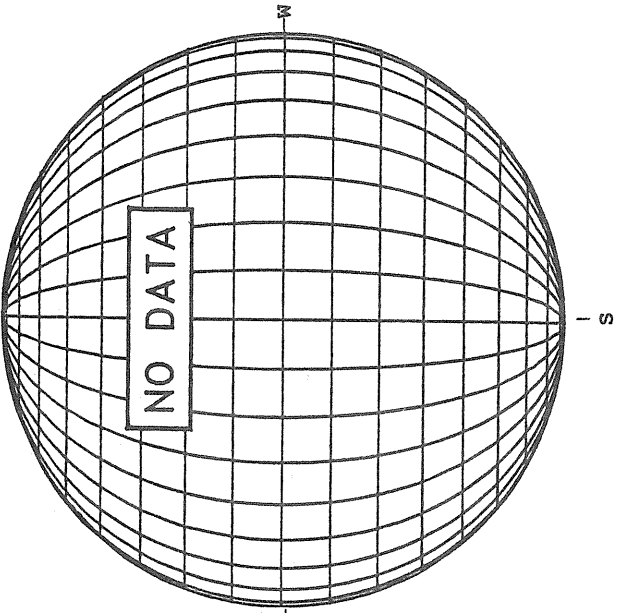
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Rad11)



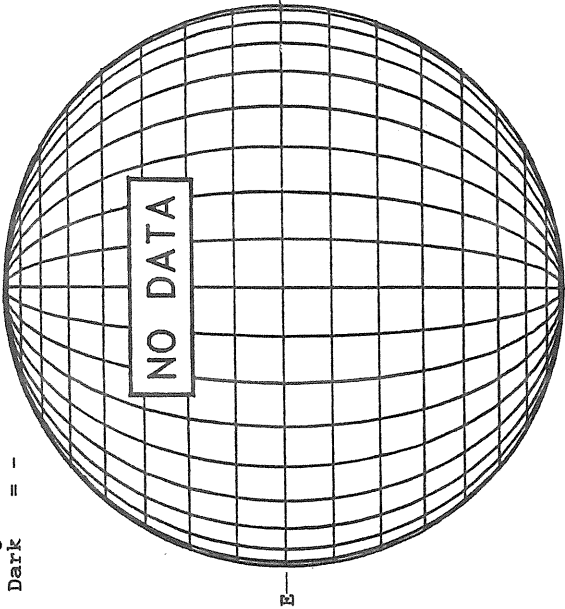
1220 UT

SEPTEMBER 19, 1991 ( P = 24.63, B<sub>0</sub> = 7.13, L<sub>0</sub> = 346.10 )

87  
Sep 91

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



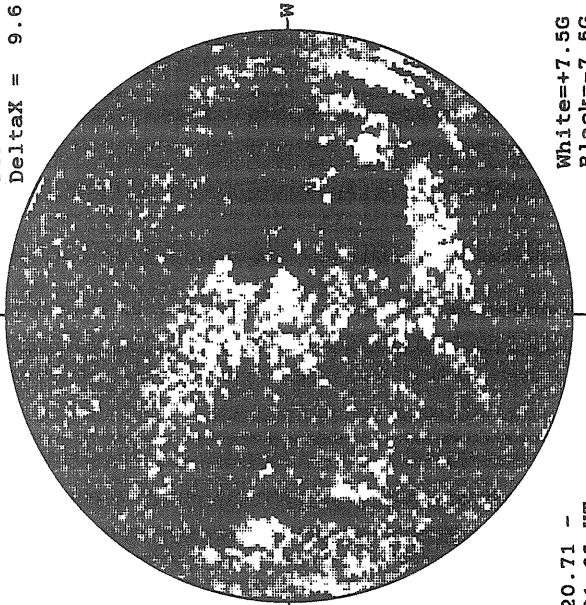
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

Deltaγ = 12.9  
DeltaX = 9.6

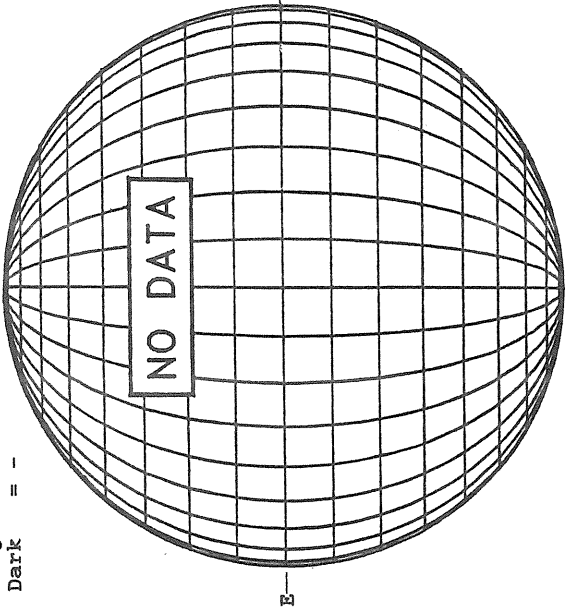


20.71 -  
21.65 UT

White=+7.5G  
Black=-7.5G

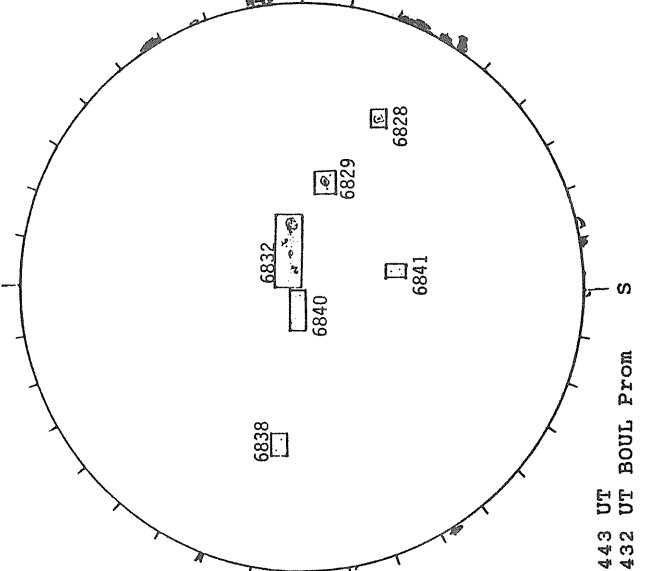
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



BOULDER SUNSPOT

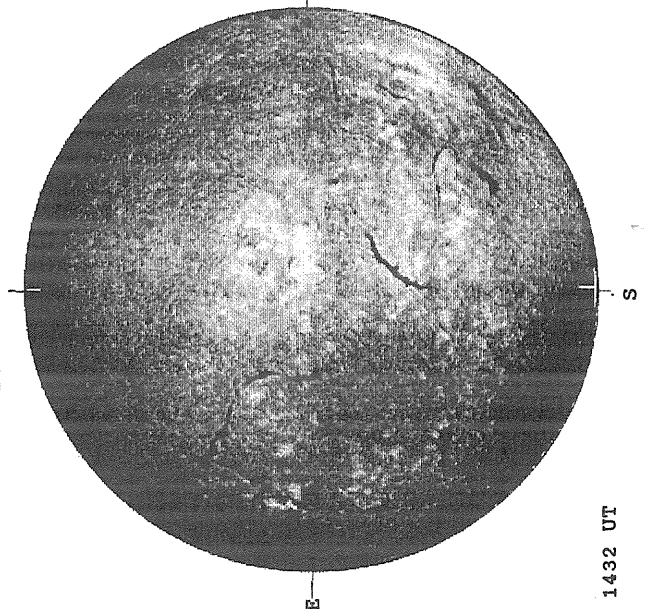
2257 UT



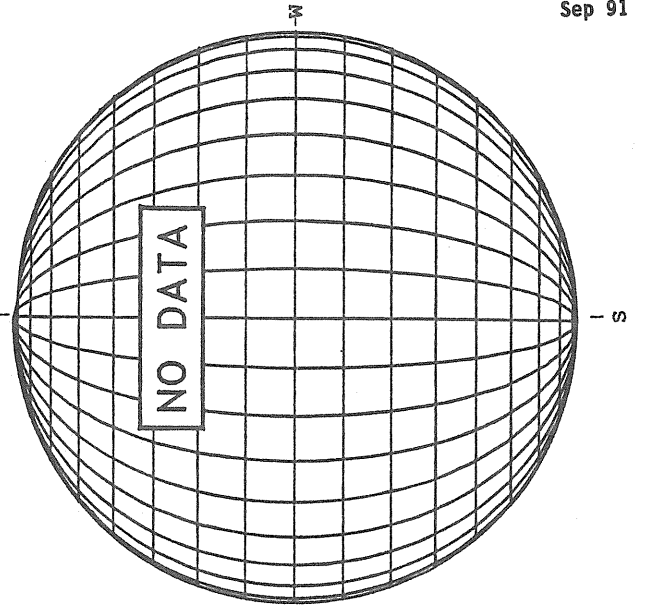
1443 UT  
1432 UT BOUL FROM

BOULDER H-ALPHA

1432 UT



SACRAMENTO PEAK CORONA (1.15 Radii)



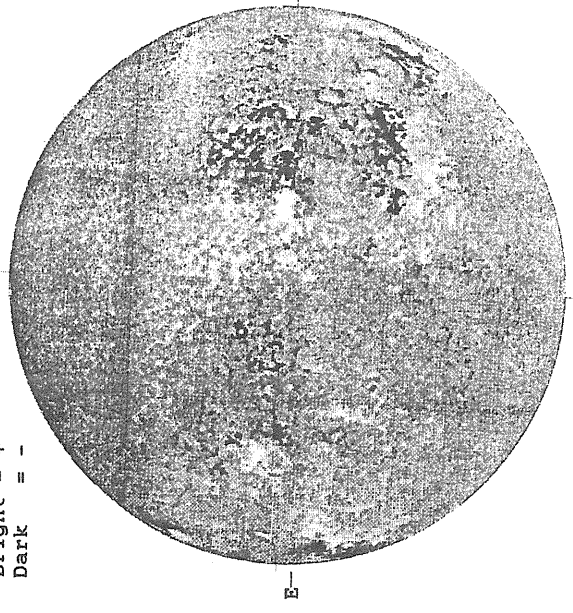


SEPTEMBER 20, 1991 ( P= 24.77, Bo = 7.10, Lo = 332.90 )

88  
sep 91

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1624 UT

STANFORD MAGNETOGRAM

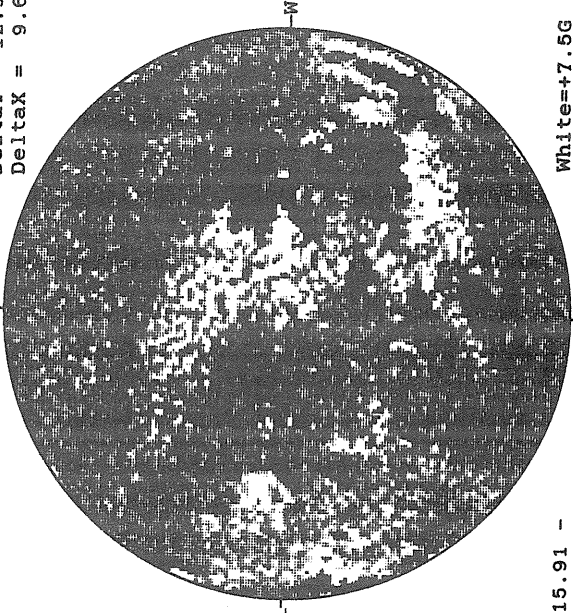
Solid = +  
Dashed = -



2256 UT

MT. WILSON MAGNETOGRAM

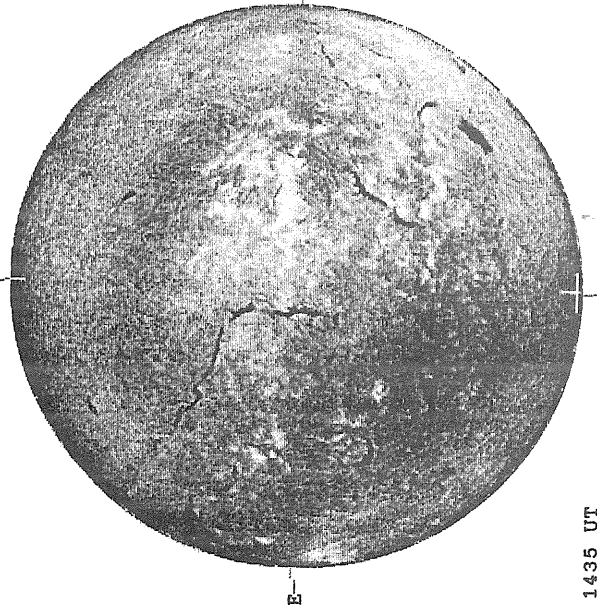
DeltaY = 12.9  
DeltaX = 9.6



15.91 -  
16.86 UT

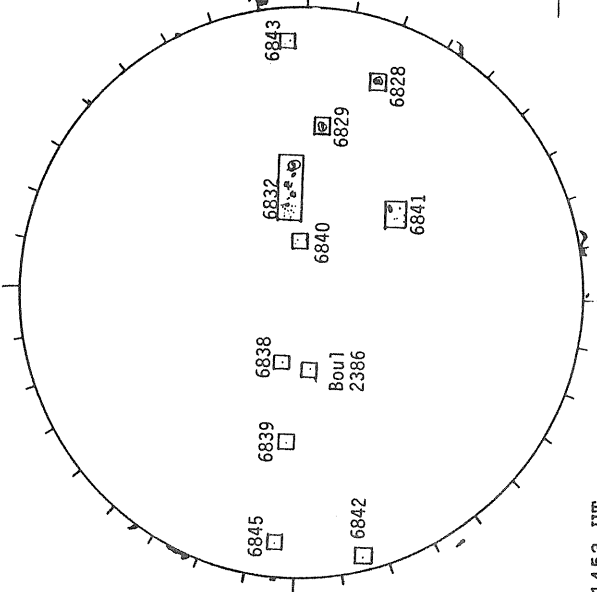
White=+7.5G  
Black=-7.5G

BOULDER H-ALPHA



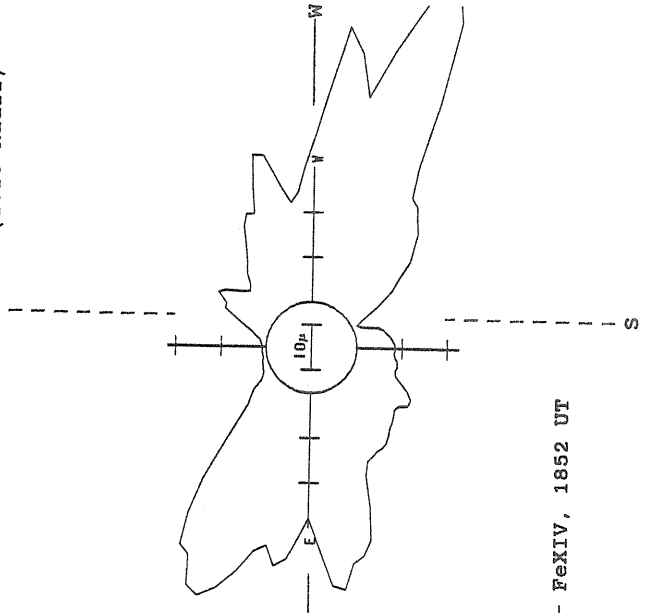
1435 UT

BOULDER SUNSPOT



1453 UT  
1435 UT BOUL Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)



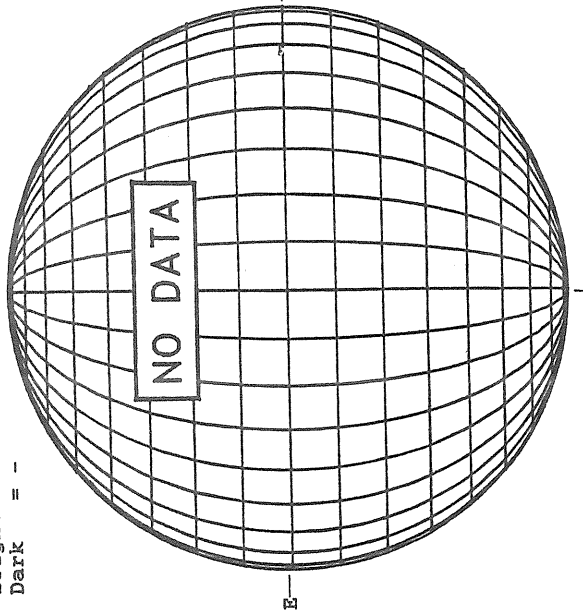
FeXIV, 1852 UT

SEPTEMBER 21, 1991 ( P = 24.91, B<sub>0</sub> = 7.08 L<sub>0</sub> = 319.70 )

89  
Sep 91

KITT PEAK MAGNETOGRAM

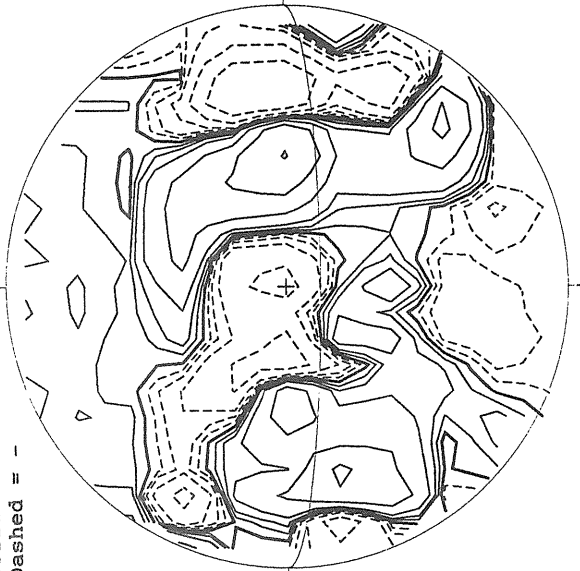
Bright = +  
Dark = -



1425 UT

STANFORD MAGNETOGRAM

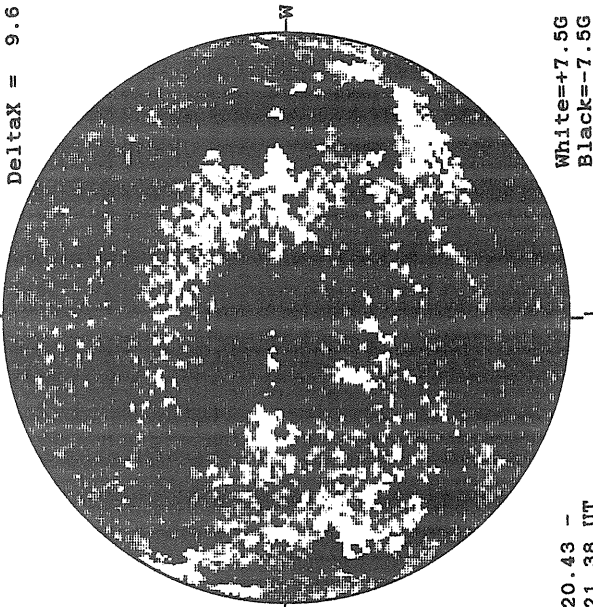
Solid = +  
Dashed = -



2227 UT

MT. WILSON MAGNETOGRAM

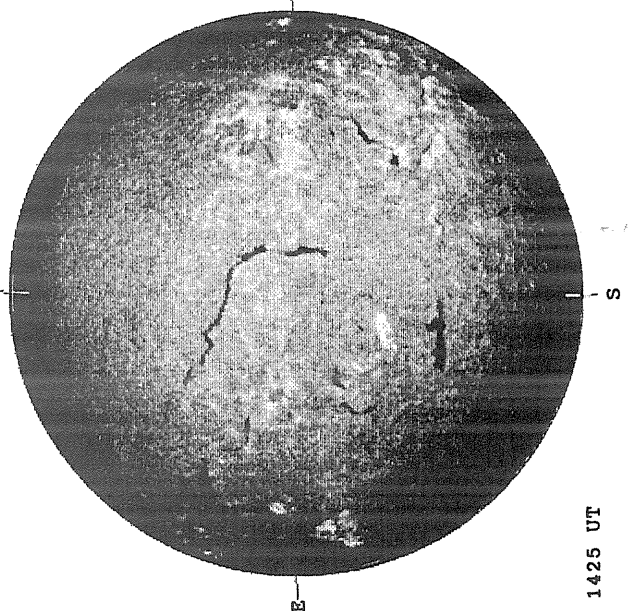
Delta $\gamma$  = 12.9  
Delta $\alpha$  = 9.6



20.43 -  
21.38 UT

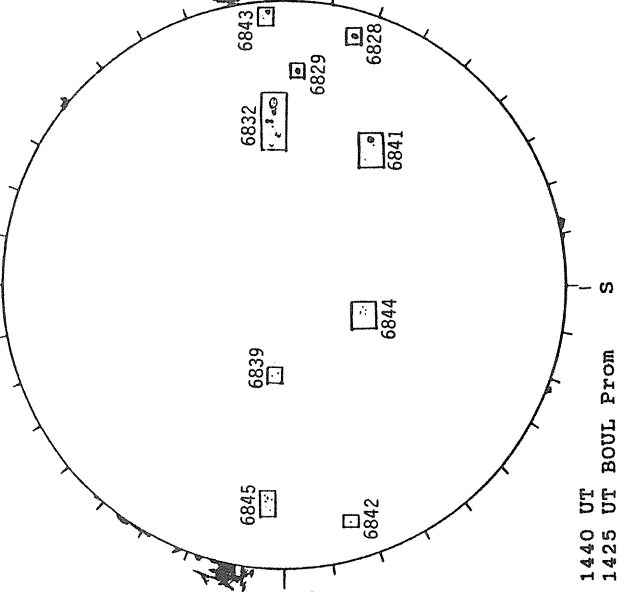
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



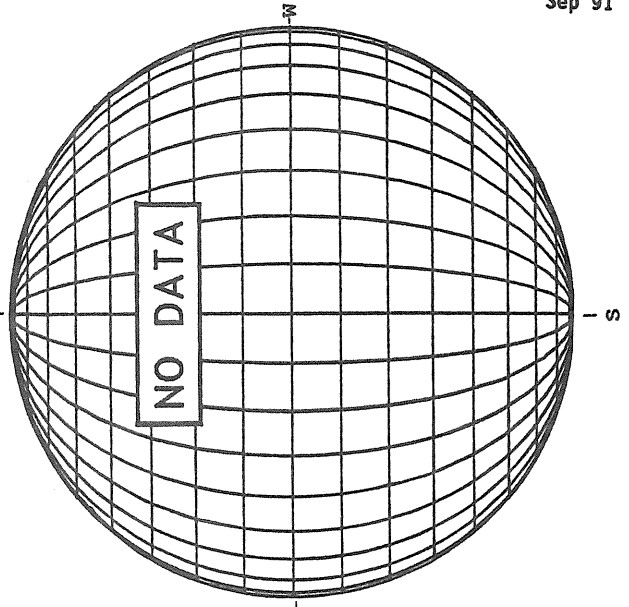
1425 UT

BOULDER SUNSPOT



1440 UT  
1425 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



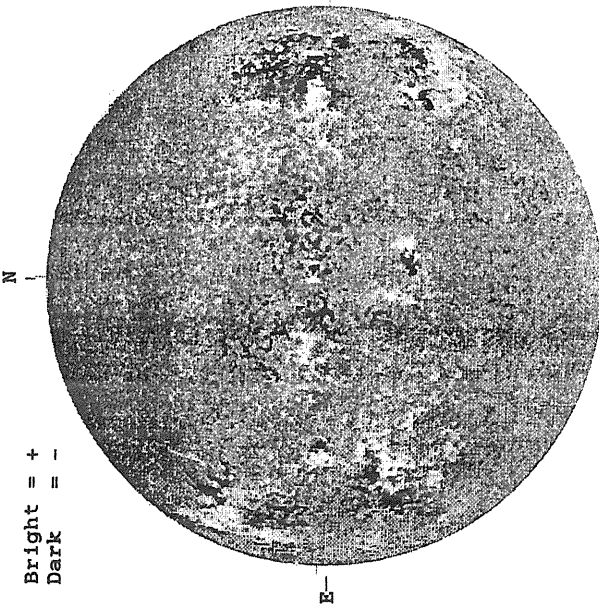
NO DATA

90  
Sep 91

SEPTEMBER 22, 1991 ( P= 25.05, B<sub>0</sub> = 7.05, I<sub>0</sub> = 306.50 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1442 UT

STANFORD MAGNETOGRAM

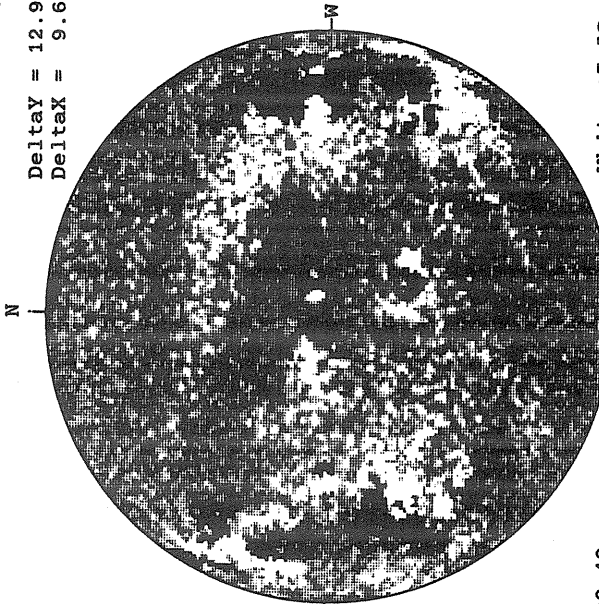
Solid = +  
Dashed = -



1919 UT

MT. WILSON MAGNETOGRAM

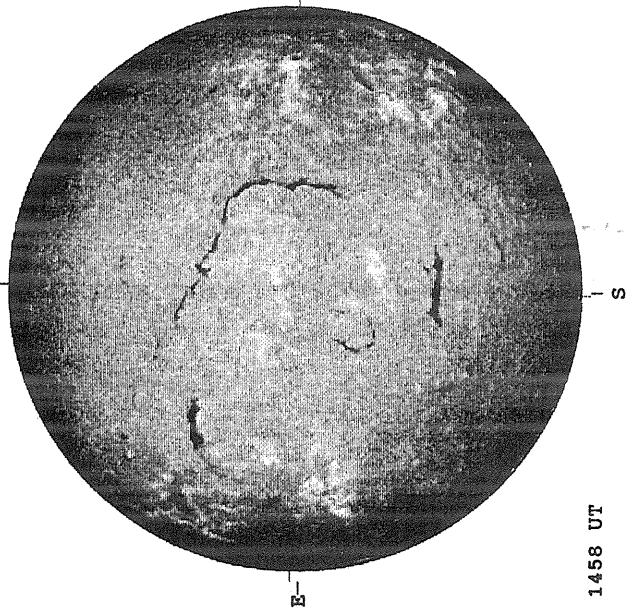
Delta<sub>Y</sub> = 12.9  
Delta<sub>X</sub> = 9.6



20.49 -  
21.44 UT

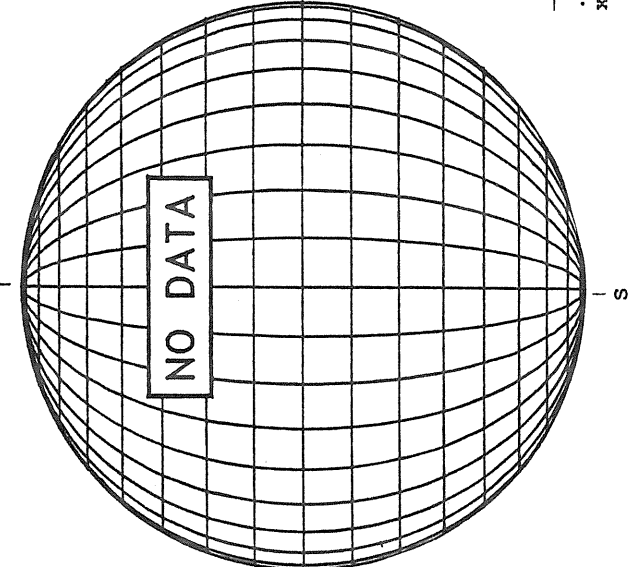
White=+7.5G  
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

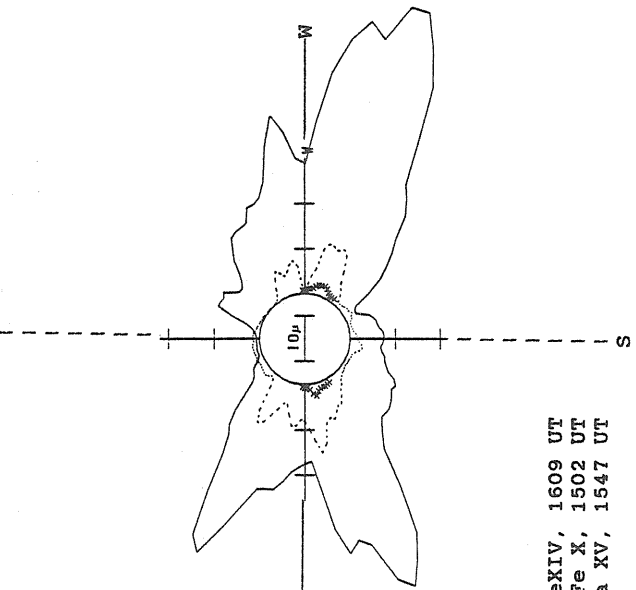


1458 UT

BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

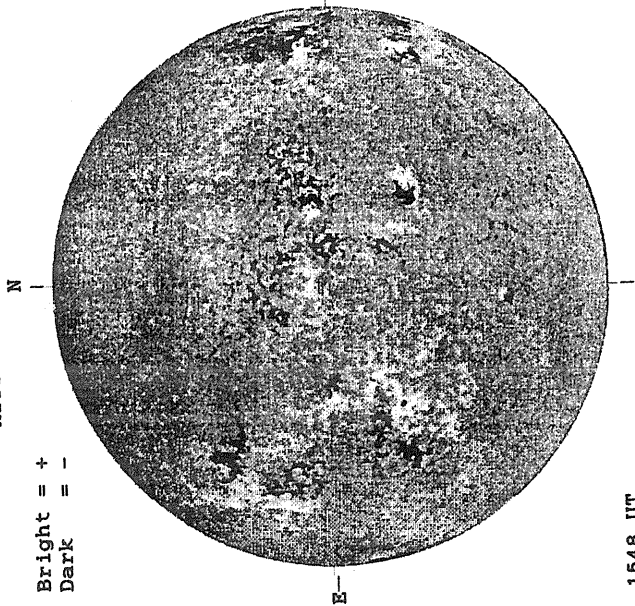


— Fe XIV, 1609 UT  
.... Fe X, 1502 UT  
xxxxx Ca XV, 1547 UT

SEPTEMBER 23, 1991 ( P = 25.18, B<sub>0</sub> = 7.02, L<sub>0</sub> = 293.30 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -

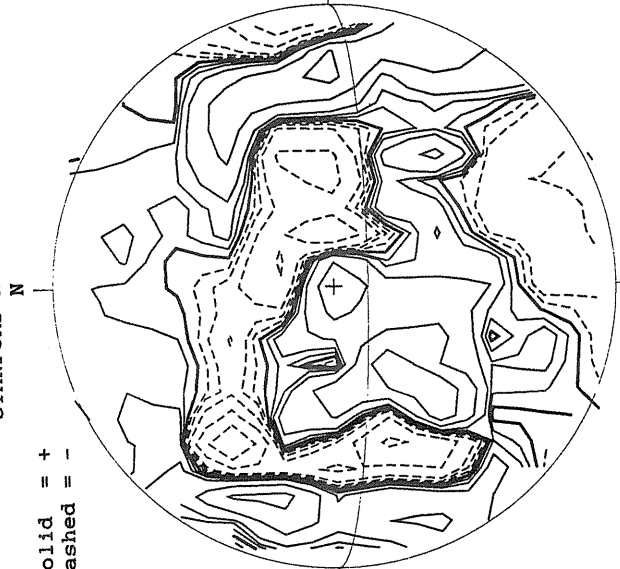


1548 UT

1604 UT

STANFORD MAGNETOGRAM

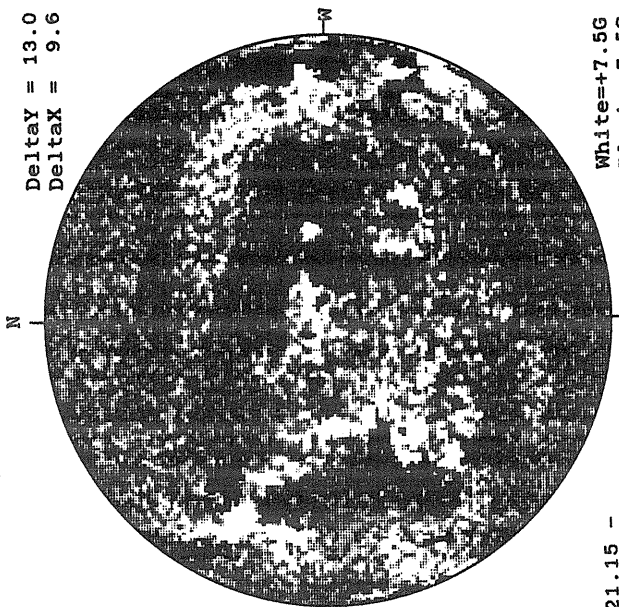
Solid = +  
Dashed = -



2121 UT

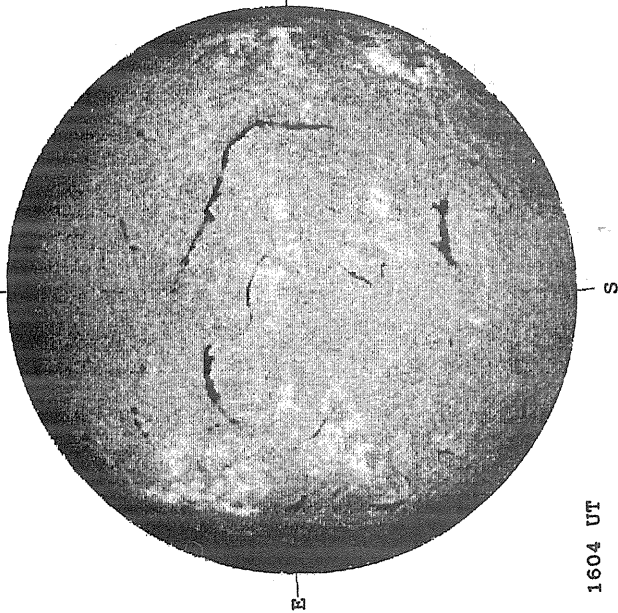
MT. WILSON MAGNETOGRAM

DeltaY = 13.0  
DeltaX = 9.6

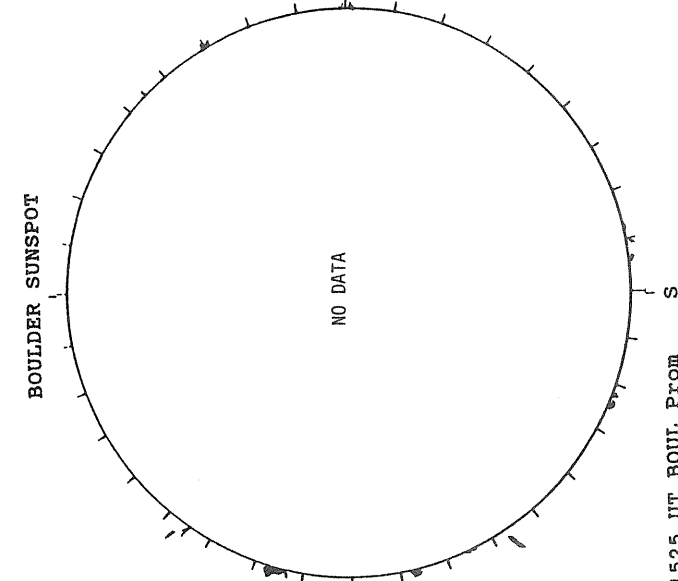


21.15 -  
22.10 UT

SACRAMENTO PEAK H-ALPHA

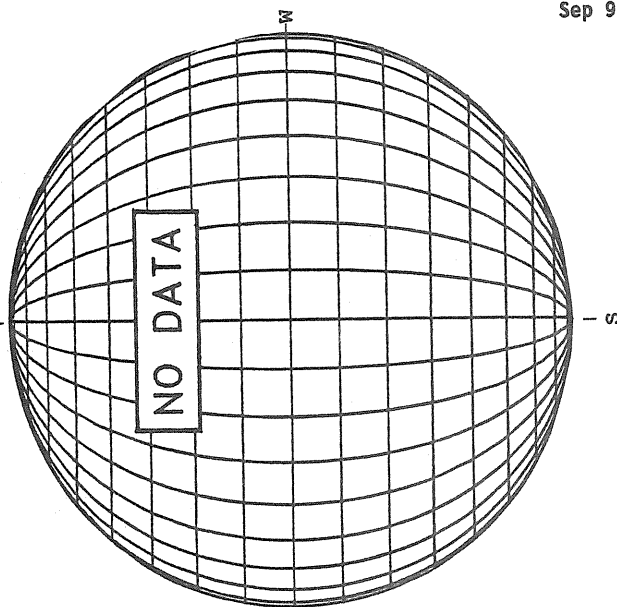


BOULDER SUNSPOT



1525 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

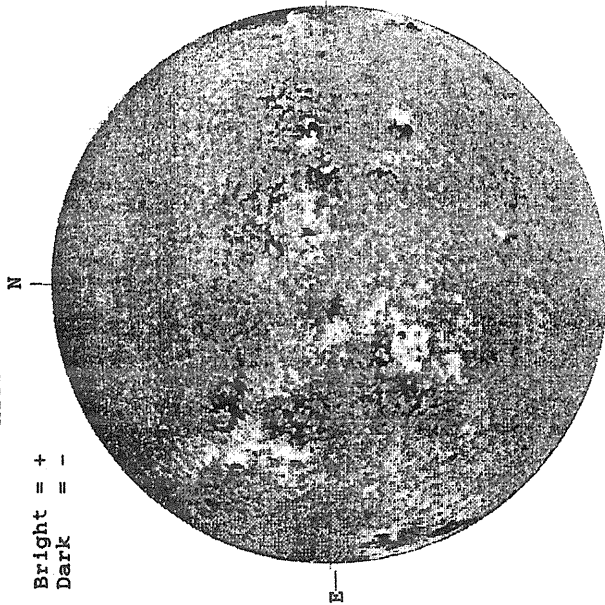


92  
Sep 91

SEPTEMBER 24, 1991 ( P = 25.30 B<sub>0</sub> = 6.99, L<sub>0</sub> = 280.10 )

KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



1801 UT

STANFORD MAGNETOGRAM

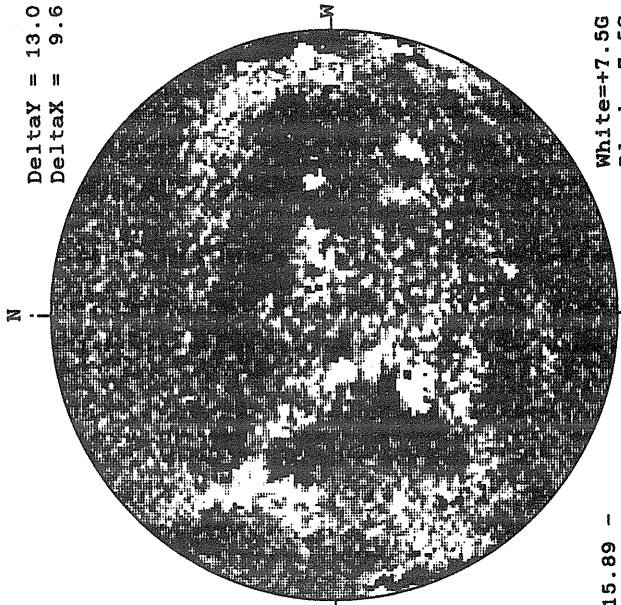
Solid = +  
Dashed = -



2147 UT

MT. WILSON MAGNETOGRAM

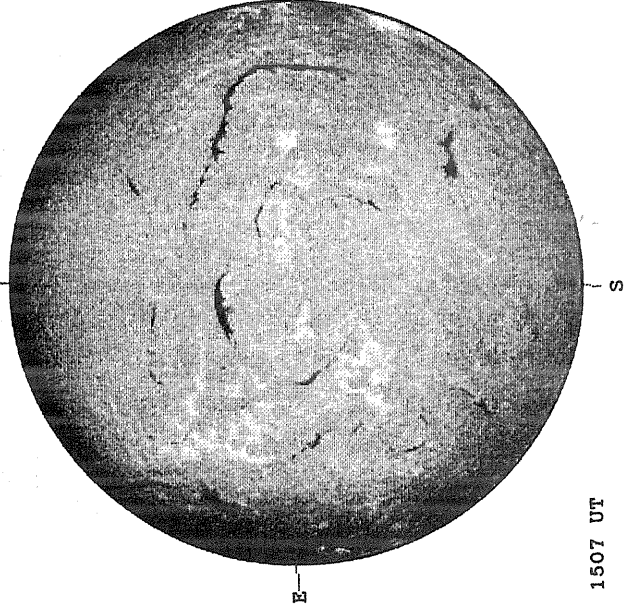
DeltaY = 13.0  
DeltaX = 9.6



15.89 -  
16.84 UT

White = +7.5G  
Black = -7.5G

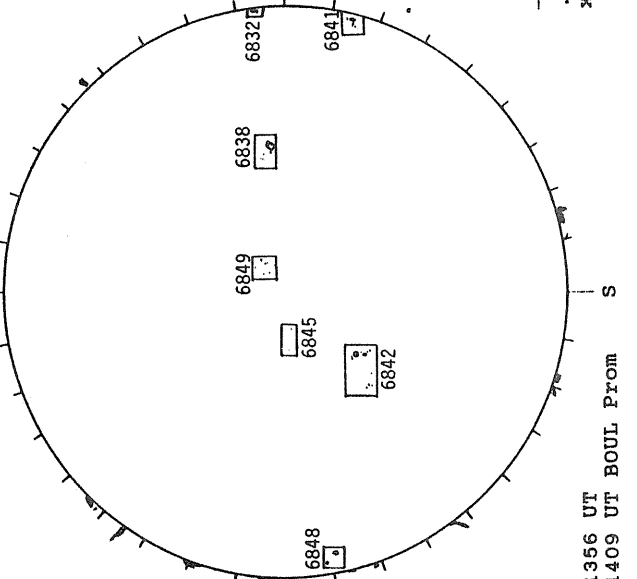
SACRAMENTO PEAK H-ALPHA



1507 UT

BOULDER SUNSPOT

SACRAMENTO PEAK CORONA (1.15 Radii)



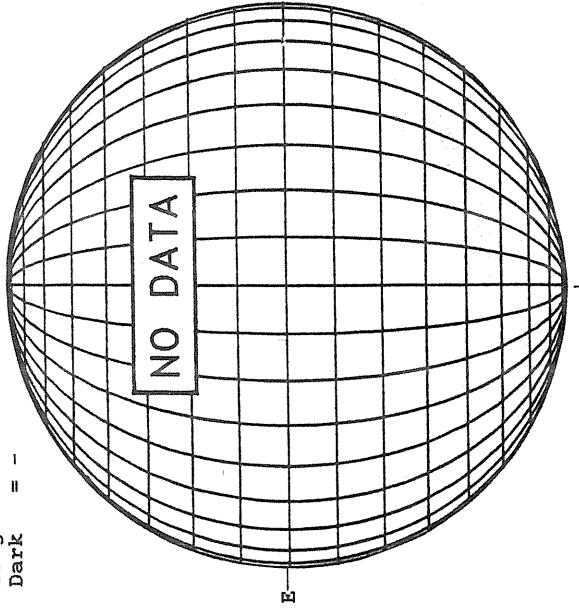
1356 UT  
1409 UT BOUL Prom

— Fe XIV, 1526 UT  
.... Fe X, 1610 UT  
xxxx Ca XV, 1601 UT

SEPTEMBER 25, 1991 ( P = 25.41, B<sub>0</sub> = 6.96, L<sub>0</sub> = 266.90 )

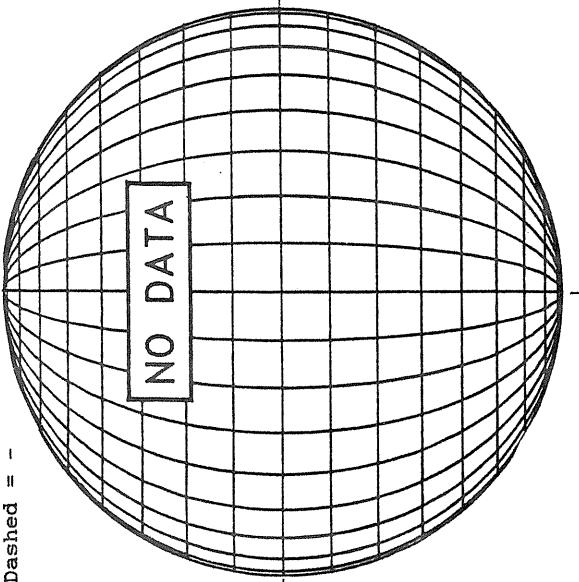
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



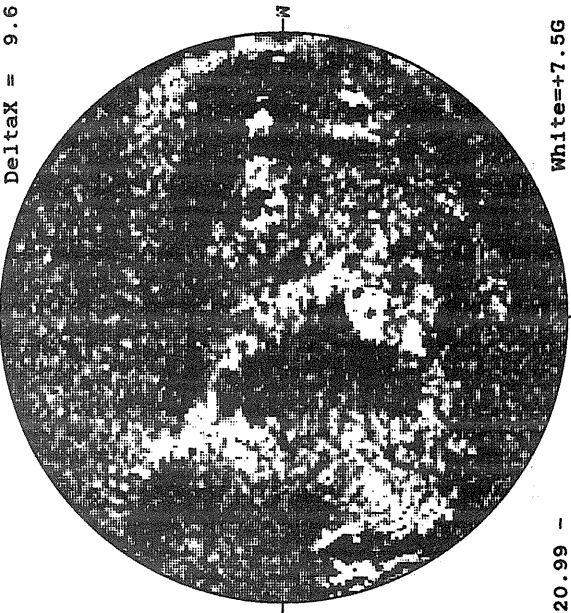
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



MT. WILSON MAGNETOGRAM

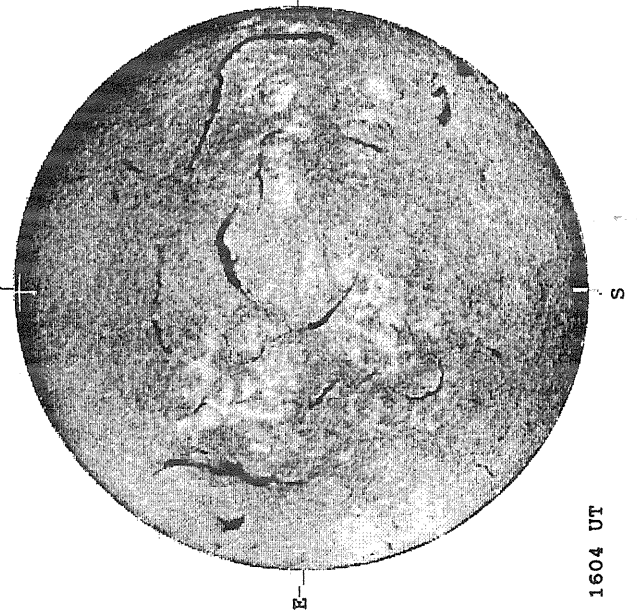
DeltaY = 13.0  
DeltaX = 9.6



20.99 -  
21.95 UT

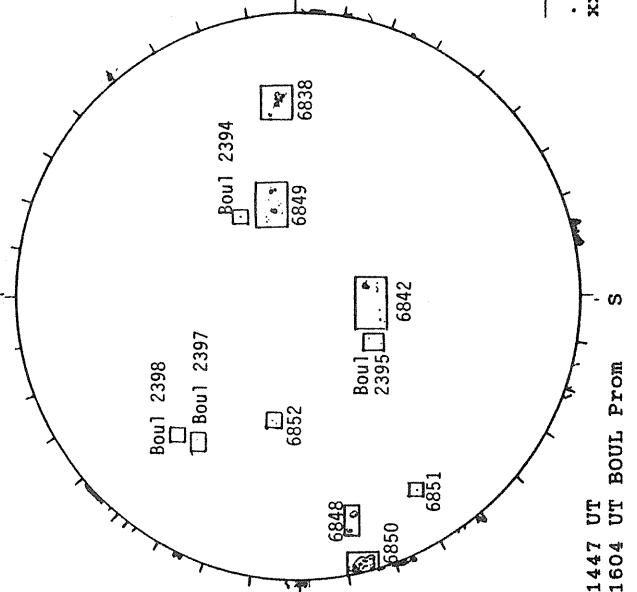
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



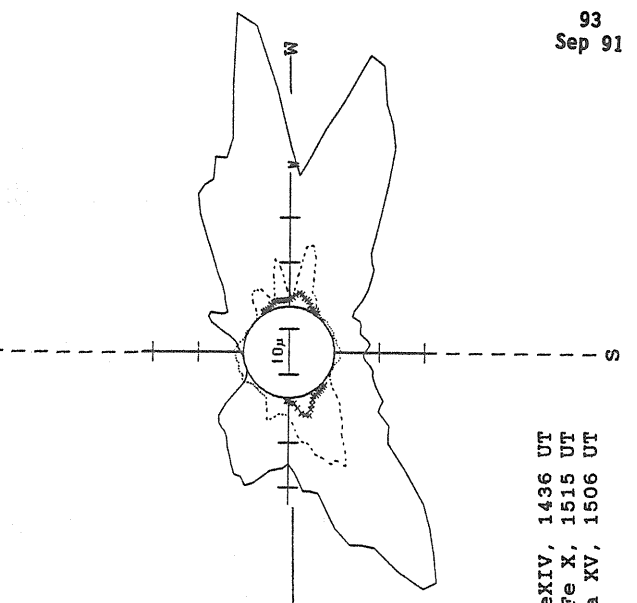
1604 UT

BOULDER SUNSPOT



1447 UT  
1604 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

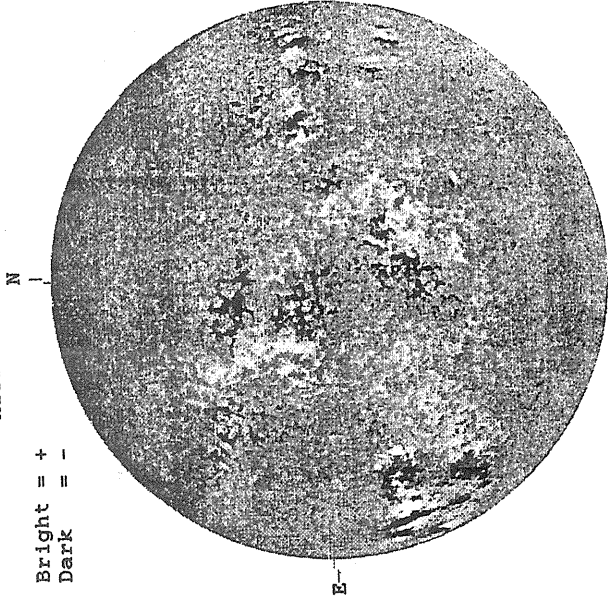


— FeXIV, 1436 UT  
..... Fe X, 1515 UT  
xxxxx Ca XV, 1506 UT

SEPTEMBER 26, 1991 ( P = 25.52, B<sub>0</sub> = 6.93, I<sub>0</sub> = 253.70 )

KITT PEAK MAGNETOGRAM

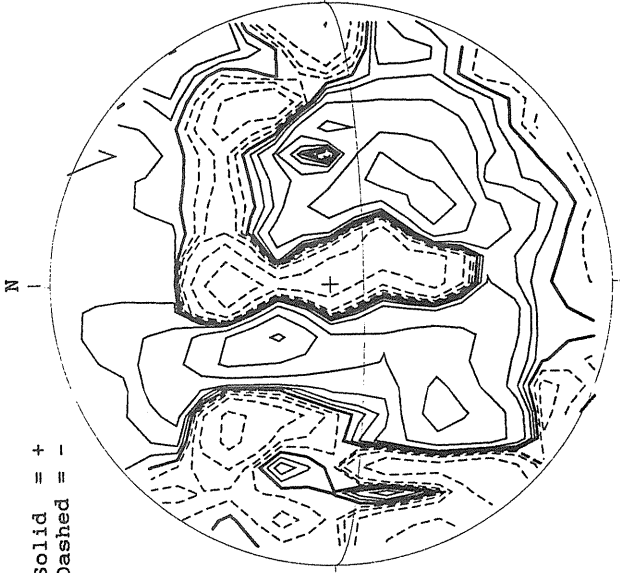
Bright = +  
Dark = -



1416 UT

STANFORD MAGNETOGRAM

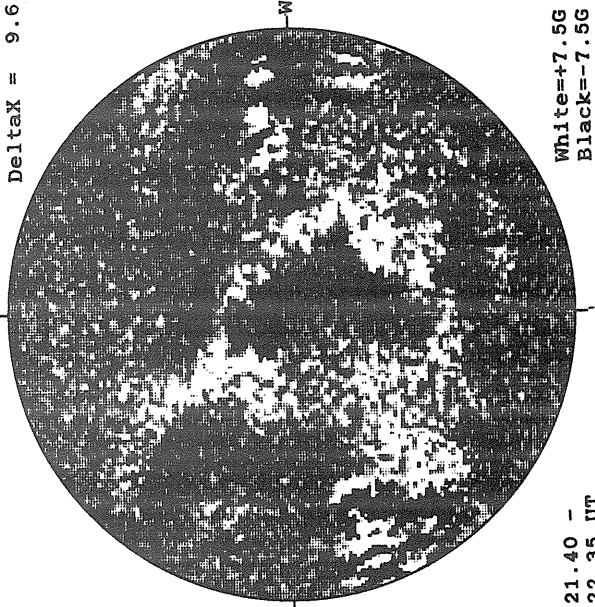
Solid = +  
Dashed = -



2344 UT

MT. WILSON MAGNETOGRAM

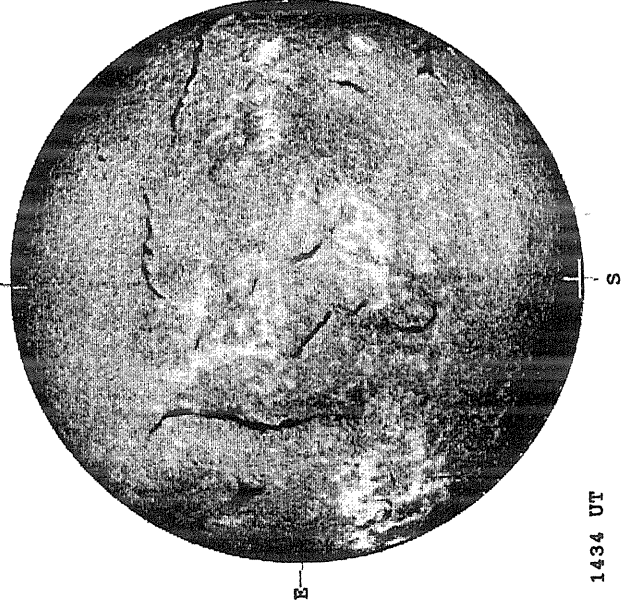
DeltaY = 12.9  
DeltaX = 9.6



21.40 -  
22.35 UT

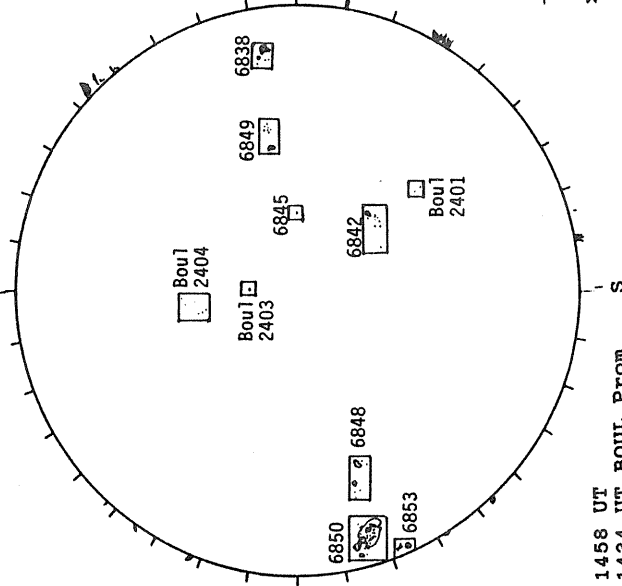
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



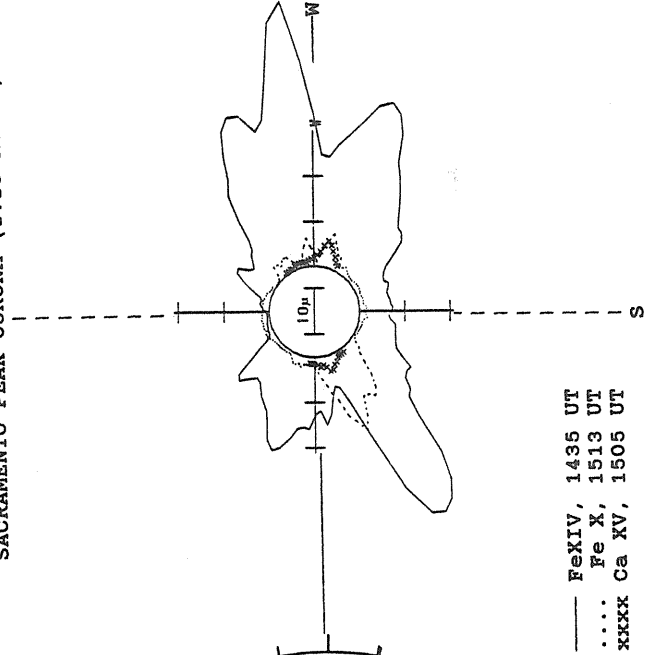
1434 UT

BOULDER SUNSPOT



1458 UT BOUL Prom  
1434 UT BOUL Prom

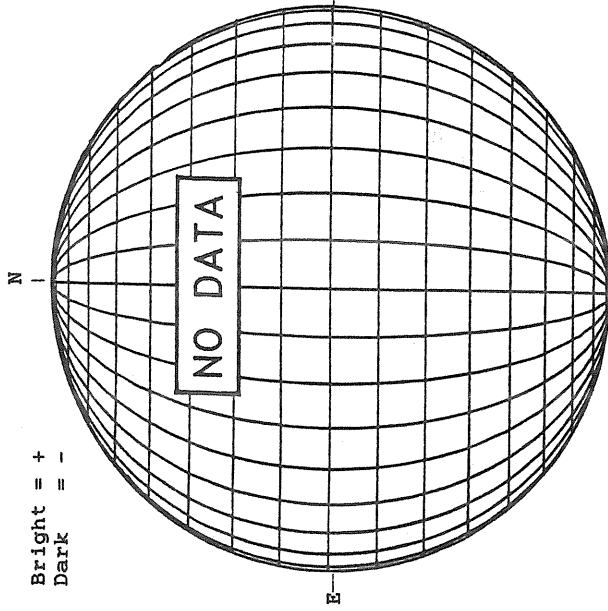
SACRAMENTO PEAK CORONA (1.15 Radii)



— Fe XIV, 1435 UT  
.... Fe X, 1513 UT  
xxxx Ca XV, 1505 UT

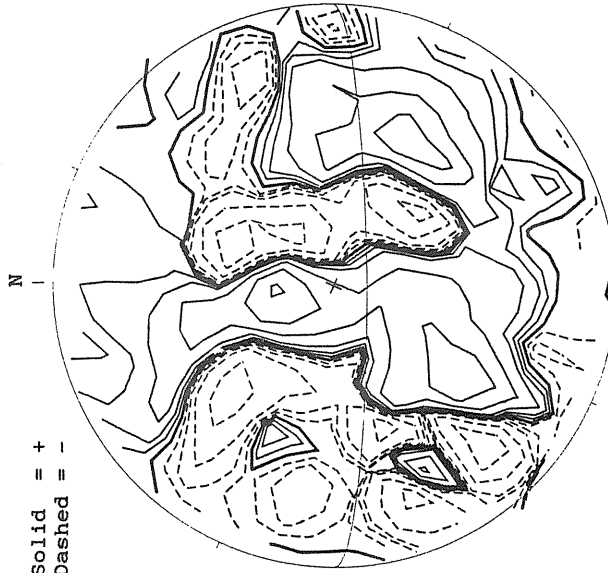
SEPTEMBER 27, 1991 ( P = 25.62, B<sub>0</sub> = 6.89, L<sub>0</sub> = 240.50 )

KITT PEAK MAGNETOGRAM



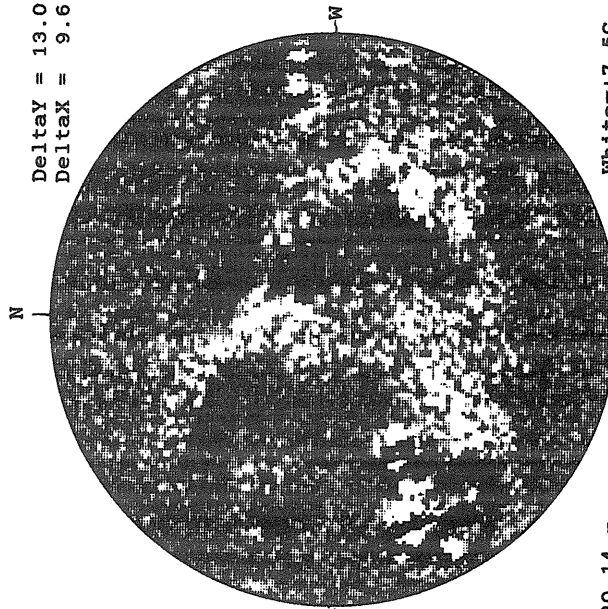
Bright = +  
Dark = -

STANFORD MAGNETOGRAM



Solid = +  
Dashed = -

MT. WILSON MAGNETOGRAM

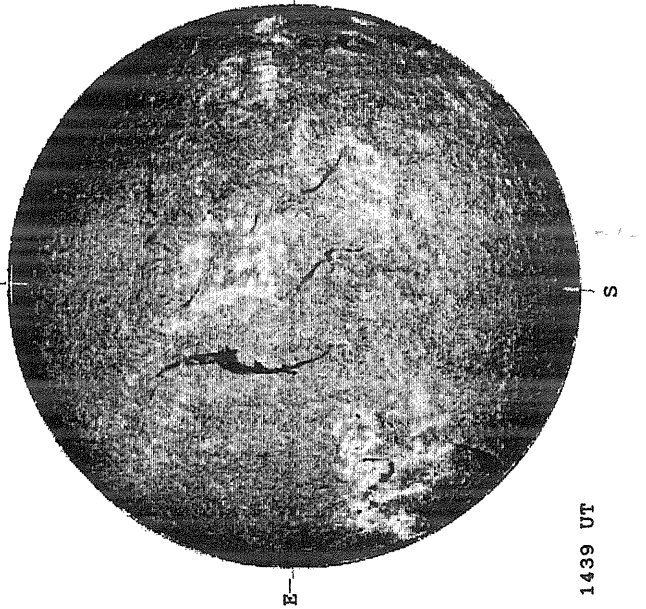


DeltaY = 13.0  
DeltaX = 9.6

20.14 --  
21.10 UT

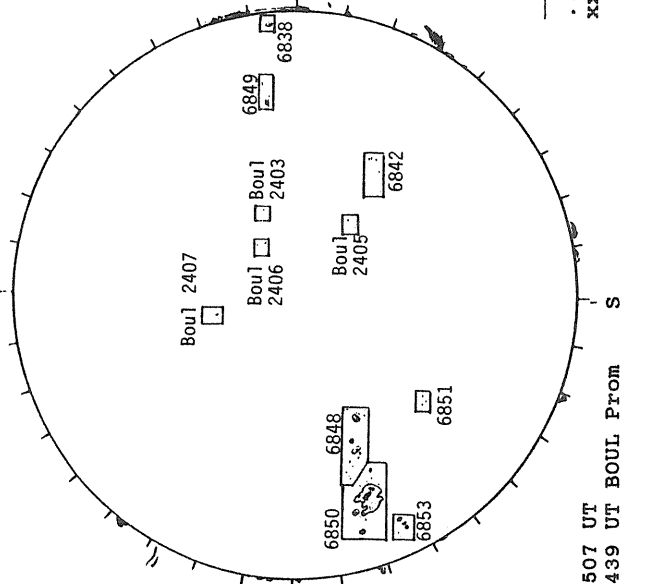
White = +7.5G  
Black = -7.5G

BOULDER H-ALPHA



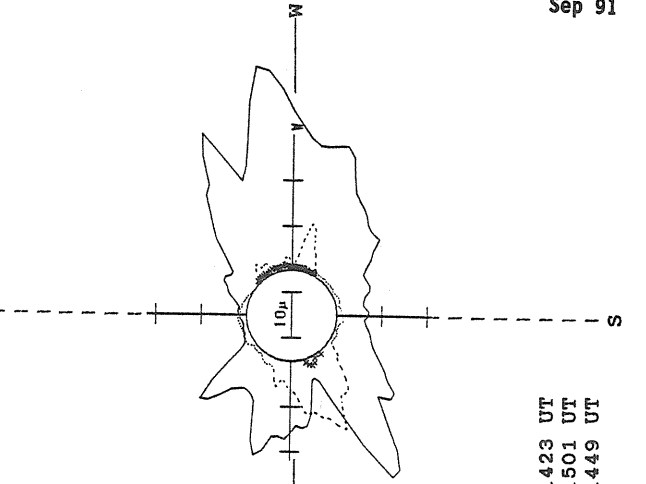
1439 UT

BOULDER SUNSPOT



1507 UT  
1439 UT BOUL PROM

SACRAMENTO PEAK CORONA (1.15 Rad11)

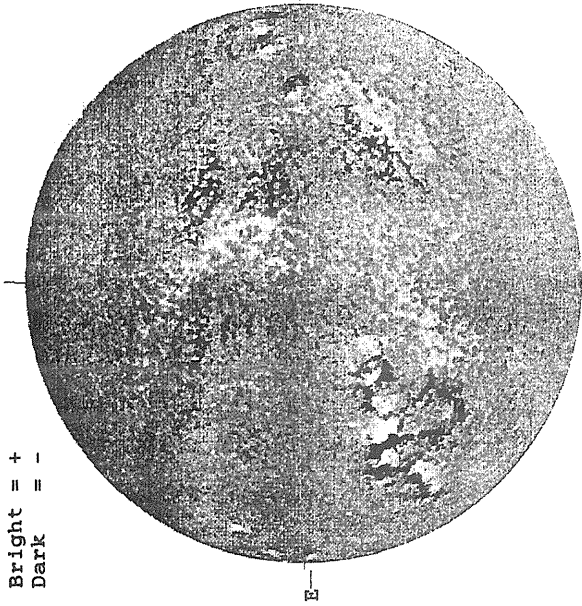


— Fe XIV, 1423 UT  
.... Fe X, 1501 UT  
xxxxx Ca XV, 1449 UT



SEPTEMBER 28, 1991 ( P = 25.71 B<sub>0</sub> = 6.85, L<sub>0</sub> = 227.31 )

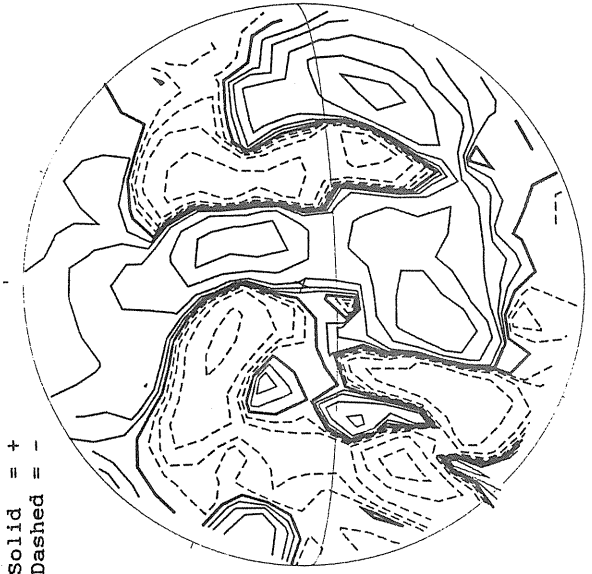
KITT PEAK MAGNETOGRAM



Bright = +  
Dark = -

1421 UT

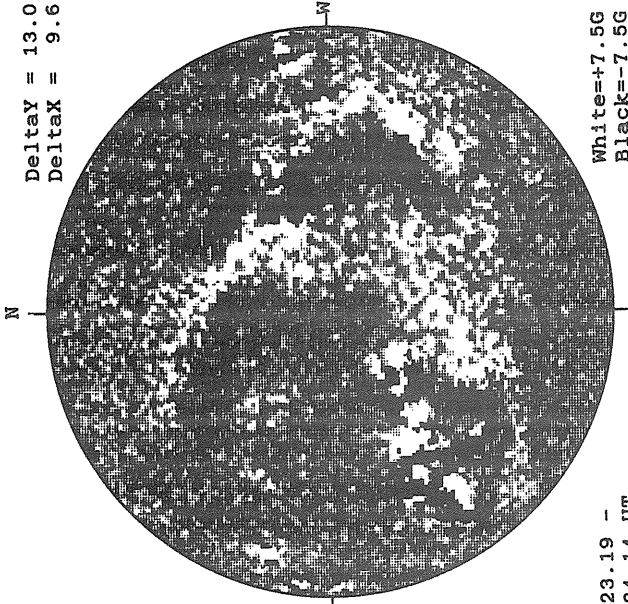
STANFORD MAGNETOGRAM



Solid = +  
Dashed = -

1909 UT

MT. WILSON MAGNETOGRAM

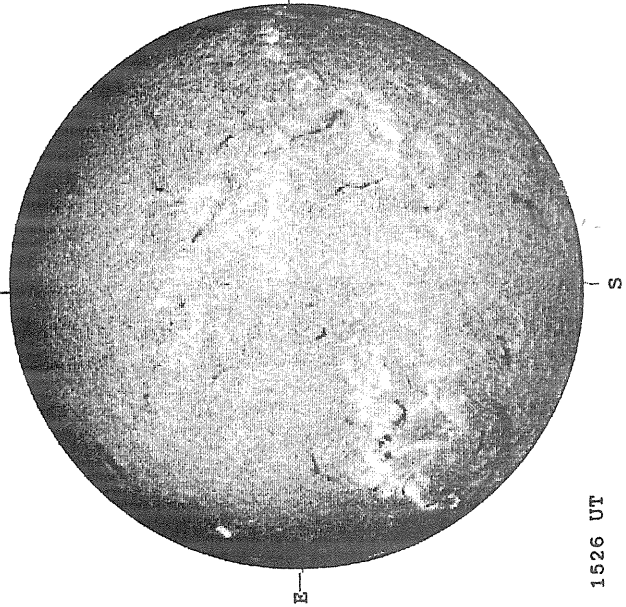


DeltaY = 13.0  
DeltaX = 9.6

White = +7.5G  
Black = -7.5G

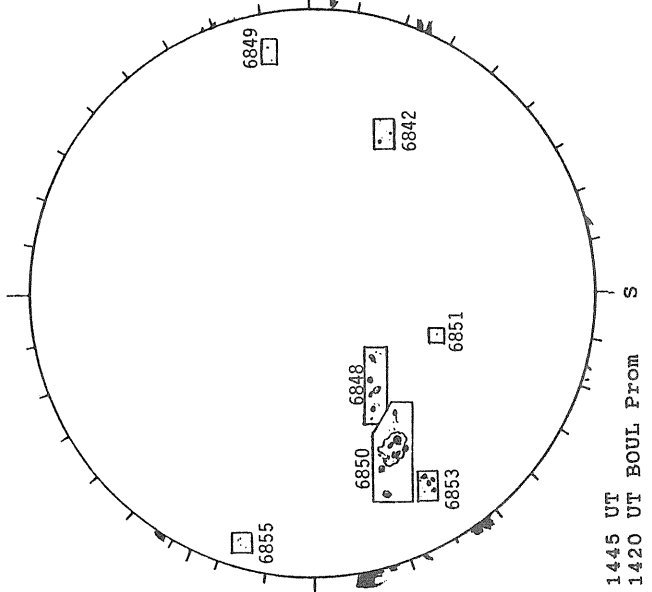
23.19 -  
24.14 UT

SACRAMENTO PEAK H-ALPHA



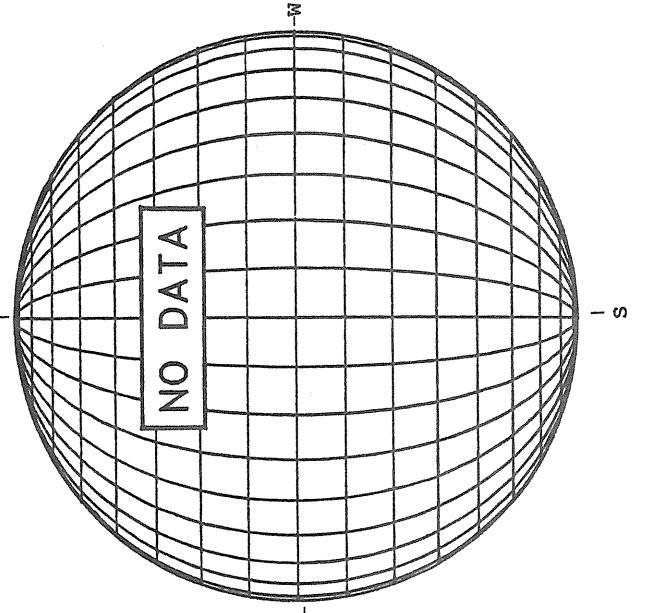
1526 UT

BOULDER SUNSPOT



1445 UT  
1420 UT BOUL FROM

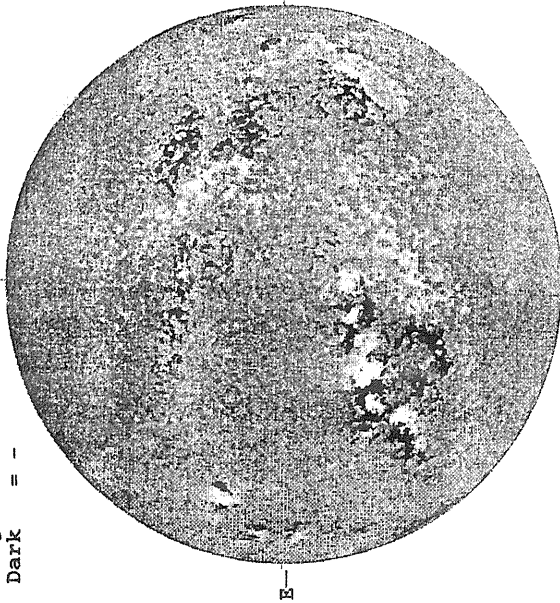
SACRAMENTO PEAK CORONA (1.15 Radii)



SEPTEMBER 29, 1991 ( P= 25.80, B<sub>0</sub> = 6.81, L<sub>0</sub> = 214.11 )

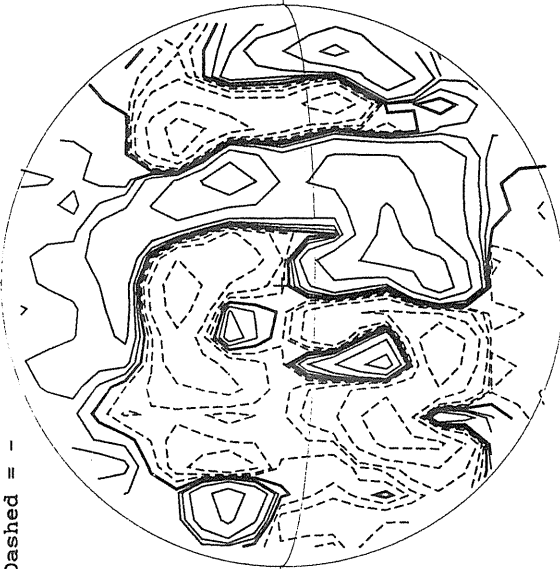
KITT PEAK MAGNETOGRAM

Bright = +  
Dark = -



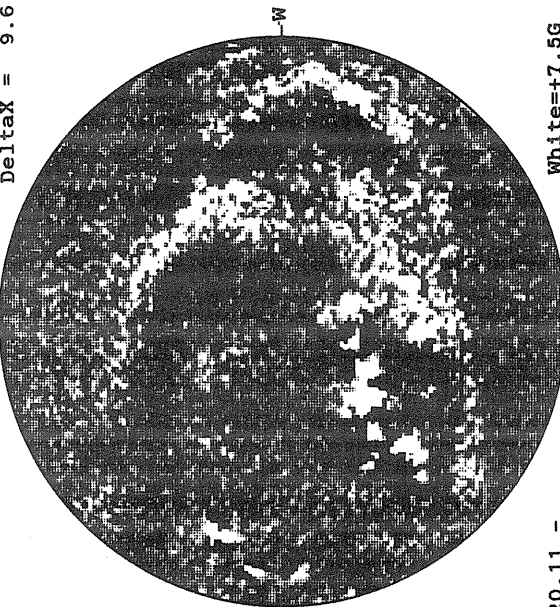
STANFORD MAGNETOGRAM

Solid = +  
Dashed = -



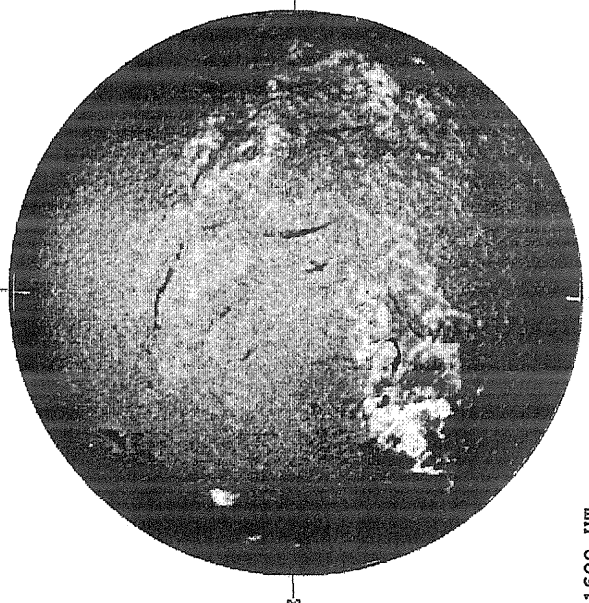
MT. WILSON MAGNETOGRAM

DeltaY = 13.0  
DeltaX = 9.6

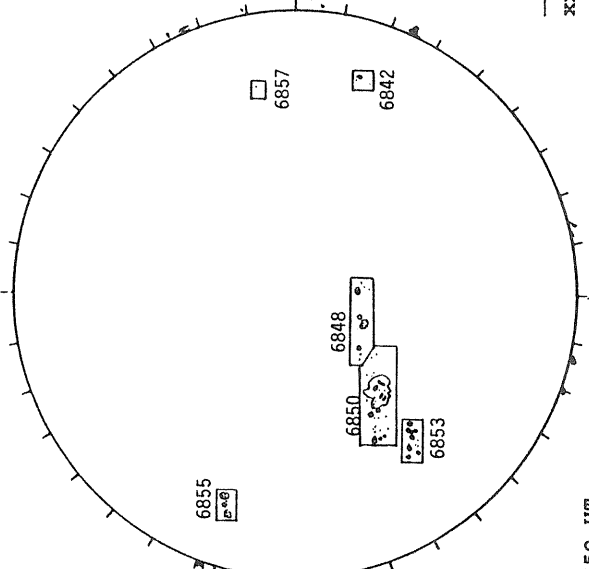


White = +7.5G  
Black = -7.5G

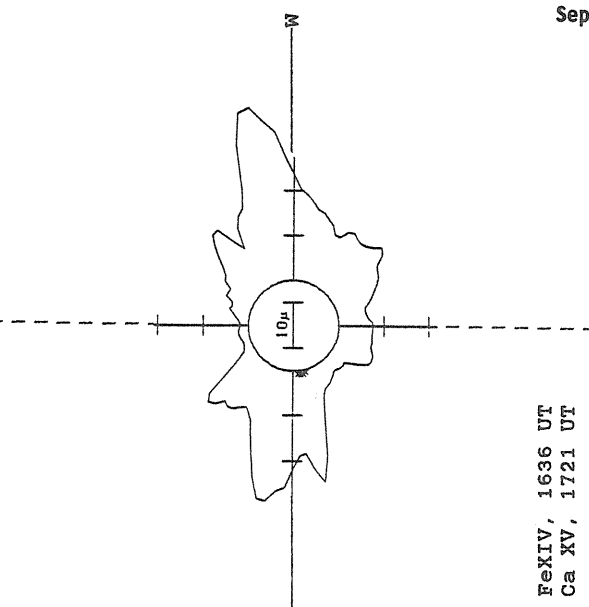
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

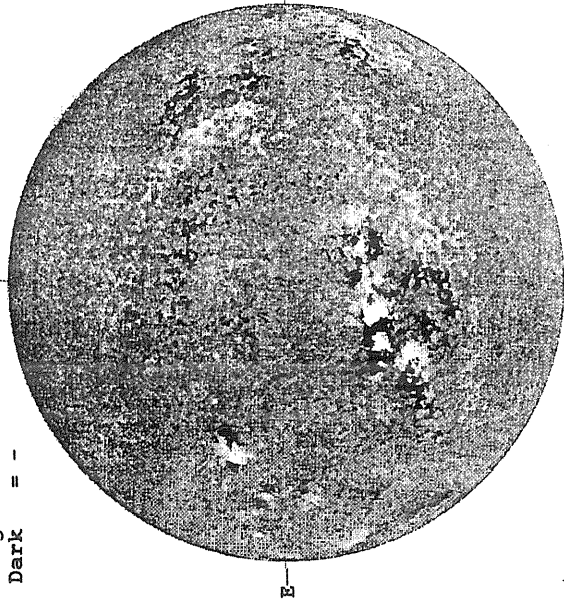


— FeXIV, 1636 UT  
XXXX Ca XV, 1721 UT

SEPTEMBER 30, 1991 ( P = 25.88, B<sub>0</sub> = 6.77, I<sub>0</sub> = 200.91 )

KITT PEAK MAGNETOGRAM

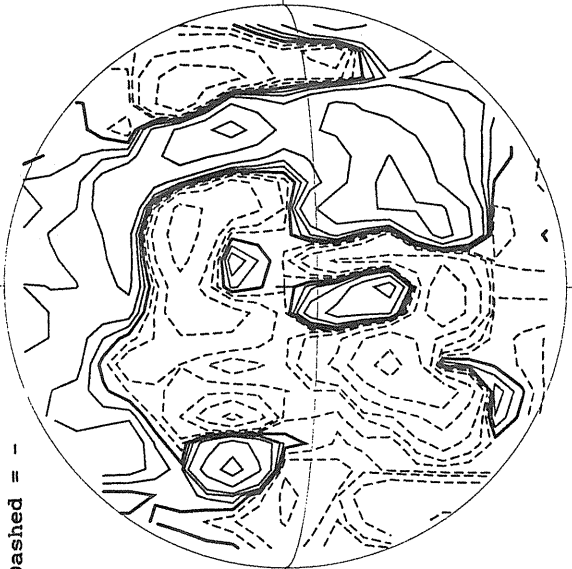
Bright = +  
Dark = -



1421 UT

STANFORD MAGNETOGRAM

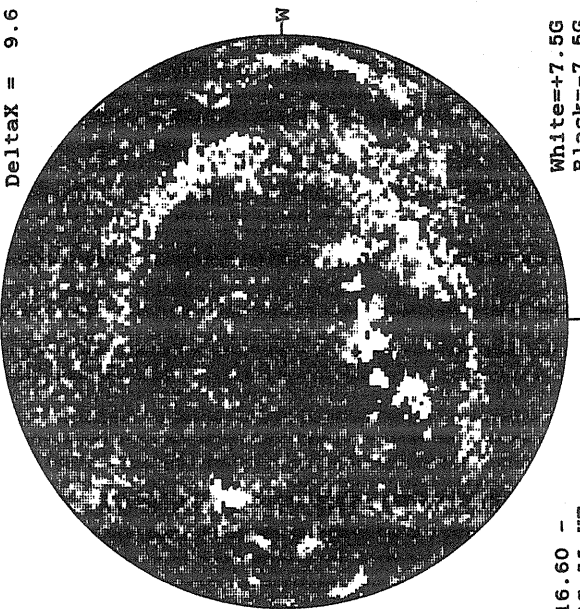
Solid = +  
Dashed = -



1916 UT

MT. WILSON MAGNETOGRAM

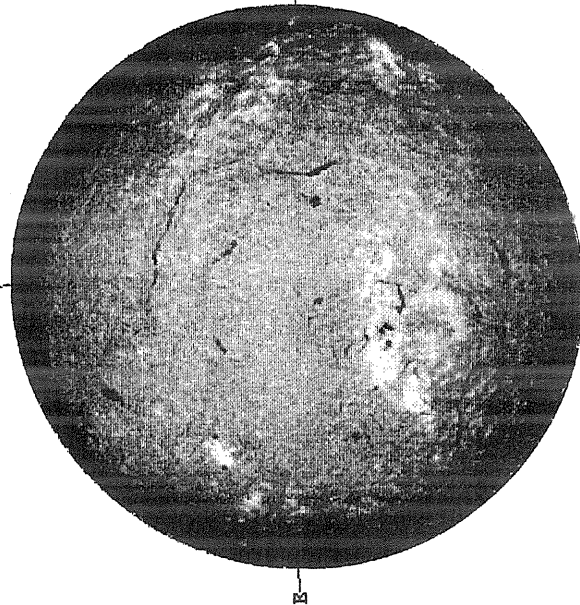
Delta<sub>Y</sub> = 13.0  
Delta<sub>X</sub> = 9.6



16.60 -  
17.55 UT

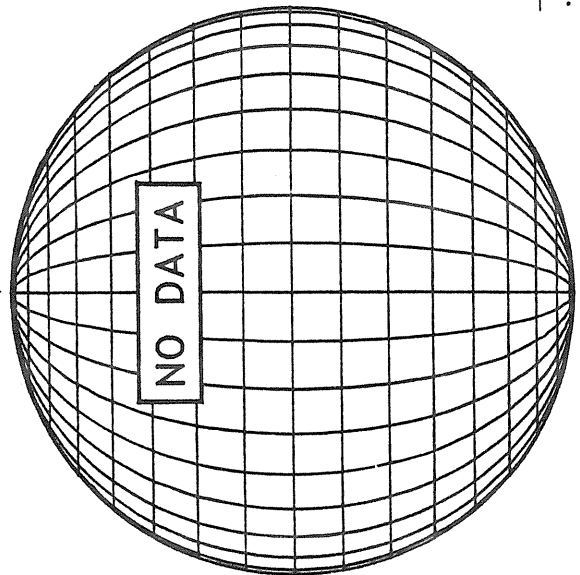
White = +7.5G  
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

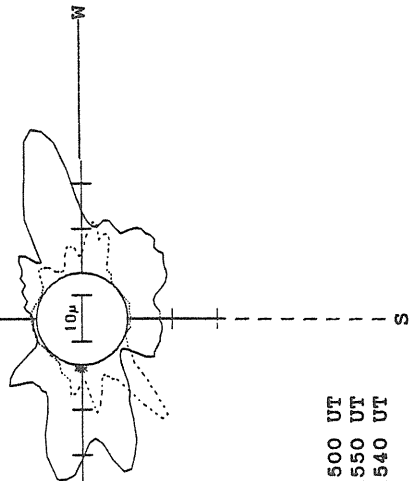


1529 UT

BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



— FeXIV, 1500 UT  
.... Fe X, 1550 UT  
xxxx Ca XV, 1540 UT

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

SEPTEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6812A		SVTO	09 03	0735	N04 W31	09	1.0					
6812A	27040	MWIL	09 03	1530	N04 W34	09	1.1	3	(AP)	AX	1	3
6813		SVTO	08 31	0720	N11 E16	09	1.5					
6813		RAMY	08 31	1320	N11 E12	09	1.4			A	AX	
6813		BOUL	08 31	1445	N12 E10	09	1.4			B	BXO	10
6813		HOLL	08 31	1545	N12 E11	09	1.5			B	BXO	10
6813		PALE	08 31	1830	N11 E09	09	1.4			A	AX	10
6813	27036	MWIL	08 31	2145	N12 E06	09	1.3	4	(AP)		1	1
6813		RAMY	09 01	1240	N12 W02	09	1.4			A	AX	10
6813		SVTO	09 02	0740	N12 W08	09	1.7			B	BXO	10
6813		RAMY	09 02	1345	N13 W10	09	1.8			A	AX	10
6813		BOUL	09 02	1423	N12 W11	09	1.8			A	AX	10
6813		HOLL	09 02	1500	N12 W12	09	1.7			A	AX	10
6813	27036	MWIL	09 02	1515	N12 W12	09	1.7	4	(AF)		2	1
6810		RAMY	08 26	1248	S19 E87	09	2.2			A	HA	70
6810		HOLL	08 26	1440	S19 E83	09	1.9			A	HS	120
6810		PALE	08 26	1830	S19 E85	09	2.2			A	HA	80
6810	27028	MWIL	08 26	2445	S20 E77	09	1.9	5		BP		
6810		CULG	08 27	0045	S18 E80	09	2.1			A	HA	120
6810		SVTO	08 27	0835	S19 E70	09	1.7			B	DAO	90
6810		RAMY	08 27	1310	S20 E68	09	1.7			B	CAO	180
6810		BOUL	08 27	1333	S19 E69	09	1.8			B	CSO	180
6810		HOLL	08 27	1515	S19 E73	09	2.2			B	EKO	210
6810	27028	MWIL	08 27	1515	S21 E70	09	2.0	5	(B )		3	13
6810		PALE	08 27	2045	S20 E71	09	2.3			B	EAO	170
6810		CULG	08 27	2130	S17 E68	09	2.1			B	DSO	150
6810		LEAR	08 28	0006	S19 E62	09	1.7			B	CAO	130
6810		SVTO	08 28	0725	S20 E60	09	1.9			B	DAO	150
6810		BOUL	08 28	1352	S19 E56	09	1.8			B	DAO	150
6810	27028	MWIL	08 28	1500	S20 E56	09	1.9	5	(AP)		5	4
6810		HOLL	08 28	1520	S20 E58	09	2.1			B	DSO	170
6810		PALE	08 28	1935	S19 E55	09	2.0			B	DAO	140
6810		LEAR	08 29	0015	S20 E52	09	2.0			B	DSO	110
6810		CULG	08 29	0045	S19 E52	09	2.0			B	DSO	130
6810		SVTO	08 29	0804	S20 E48	09	2.0			B	DAO	190
6810		RAMY	08 29	1410	S20 E44	09	1.9			B	DAO	190
6810		BOUL	08 29	1425	S19 E41	09	1.7			B	CAO	140
6810	27028	MWIL	08 29	1500	S20 E42	09	1.8	5	(BG)		4	4
6810		HOLL	08 29	2040	S21 E41	09	2.0			B	CSO	160
6810		LEAR	08 30	0054	S20 E37	09	1.9			B	CAO	110
6810		CULG	08 30	0110	S21 E38	09	2.0			B	DSO	110
6810		PALE	08 30	0216	S20 E35	09	1.8			B	EAO	130
6810		SVTO	08 30	0750	S20 E33	09	1.8			B	DSO	180
6810		RAMY	08 30	1321	S20 E30	09	1.8			B	DAO	160
6810		HOLL	08 30	1440	S20 E30	09	1.9			B	CSO	120
6810		BOUL	08 30	1445	S19 E28	09	1.7			B	DAO	140
6810		PALE	08 30	1720	S20 E29	09	1.9			B	DAO	170
6810		LEAR	08 31	0009	S20 E23	09	1.8			B	DSO	110
6810		CULG	08 31	0050	S21 E24	09	1.9			B	DAO	120
6810		SVTO	08 31	0720	S20 E21	09	1.9			B	DSO	110
6810		RAMY	08 31	1320	S20 E17	09	1.8			B	DSO	140
6810		BOUL	08 31	1445	S20 E17	09	1.9			B	DSO	130
6810		HOLL	08 31	1545	S21 E17	09	1.9			A	HA	170
6810		PALE	08 31	1830	S20 E15	09	1.9			B	DSO	130
6810	27028	MWIL	08 31	2145	S20 E13	09	1.9	5	(BP)		5	5
6810		LEAR	09 01	0027	S20 E11	09	1.9			B	DSO	120
6810		CULG	09 01	0030	S18 E13	09	2.0			B	DSO	110
6810		SVTO	09 01	0615	S20 E09	09	1.9			B	DSO	120
6810		RAMY	09 01	1240	S20 E06	09	2.0			B	DSO	110
6810		BOUL	09 01	1445	S19 E03	09	1.8			B	DSI	120
6810	27028	MWIL	09 01	1515	S20 E03	09	1.9	5	(BG)		6	5
6810		HOLL	09 01	1520	S20 E04	09	1.9			A	HS	130
6810		PALE	09 01	1715	S20 E03	09	1.9			B	DSO	130
6810		LEAR	09 02	0009	S20 W02	09	1.8			B	DAO	80
6810		CULG	09 02	0030	S20 W01	09	1.9			B	CSO	120
6810		SVTO	09 02	0740	S21 W06	09	1.8			B	CSO	70
6810		RAMY	09 02	1345	S20 W08	09	2.0			B	CSO	110

100  
Sep 91

SUNSPOT GROUPS  
(Ordered by Central Meridian Passage Date)

SEPTEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6810		BOUL	09 02 1423	S20 W10	09 1.8		B	CSO	100	2	5	1
6810		HOLL	09 02 1500	S20 W10	09 1.9		B	DSO	130	5	4	4
6810	27028	MWIL	09 02 1515	S20 W10	09 1.9	5	(AP)					
6810		CULG	09 03 0040	S21 W15	09 1.9		B	DSO	120	4	4	4
6810		LEAR	09 03 0051	S19 W14	09 2.0		B	CHO	70	2	4	3
6810		PALE	09 03 0300	S20 W14	09 2.0		B	CAO	100	6	4	2
6810		SVTO	09 03 0735	S19 W18	09 1.9		B	CSO	120	3	4	3
6810		RAMY	09 03 1205	S20 W21	09 1.9		B	CSO	150	12	3	3
6810		BOUL	09 03 1350	S19 W23	09 1.8		B	CSO	230	3	4	1
6810		HOLL	09 03 1510	S20 W22	09 1.9		B	CSO	140	2	4	3
6810	27028	MWIL	09 03 1530	S20 W22	09 2.0	5	(AP)					
6810		PALE	09 03 2100	S20 W25	09 2.0		B	CAO	80	3	3	3
6810		CULG	09 04 0100	S20 W29	09 1.8		B	CAO	110	3	5	3
6810		SVTO	09 04 0728	S20 W31	09 1.9		B	CSO	80	2	4	3
6810		RAMY	09 04 1305	S20 W34	09 1.9		B	CSO	140	4	3	4
6810		BOUL	09 04 1435	S19 W36	09 1.9		B	CAO	110	3	3	2
6810		HOLL	09 04 1720	S20 W37	09 1.9		B	CSO	120	5	3	3
6810		PALE	09 04 1720	S21 W37	09 1.9		B	CSO	110	2	4	3
6810	27028	MWIL	09 04 1800	S20 W37	09 1.9	5	(AP)					
6810		CULG	09 05 0055	S20 W41	09 1.9		B	DAO	100	8	6	3
6810		SVTO	09 05 0650	S20 W45	09 1.8		B	CSO	100	3	4	3
6810		RAMY	09 05 1310	S20 W48	09 1.9		A	HA	110	2	2	4
6810		BOUL	09 05 1437	S19 W49	09 1.9		A	HA	100	3	2	2
6810		HOLL	09 05 1750	S20 W51	09 1.8		A	HS	140	2	2	2
6810		PALE	09 05 1905	S21 W52	09 1.8		A	HA	80	1	2	4
6810	27028	MWIL	09 05 2345	S20 W55	09 1.8	4	(AP)					
6810		CULG	09 06 0045	S20 W52	09 2.0		B	CSO	110	4	8	3
6810		SVTO	09 06 0731	S19 W58	09 1.9		A	HA	120	2	2	4
6810		RAMY	09 06 1329	S20 W61	09 1.9		A	HA	140	1	2	3
6810		BOUL	09 06 1445	S20 W62	09 1.9		A	HA	140	3	2	2
6810		PALE	09 06 1830	S21 W65	09 1.8		A	HS	100	1	2	4
6810		HOLL	09 06 2359	S21 W68	09 1.8		A	HS	80	1	1	1
6810		CULG	09 07 0050	S20 W68	09 1.8		A	HS	90	1	2	3
6810		SVTO	09 07 0845	S20 W71	09 1.9		A	HA	120	2	2	3
6810	27028	MWIL	09 07 1440	S20 W75	09 1.9	4	AP					
6810		BOUL	09 07 1440	S20 W76	09 1.8		A	HS	30	1	3	3
6810		HOLL	09 07 1535	S21 W77	09 1.7		A	HS	70	1	2	4
6810		PALE	09 07 2030	S21 W79	09 1.8		A	HS	30	1	1	3
6811	27029	MWIL	08 27 1515	S20 E80	09 2.7	5	AF					
6811		LEAR	08 28 0006	S19 E75	09 2.7		B	DAO	240	5	10	3
6811		SVTO	08 28 0725	S19 E77	09 3.2		B	DAO	180	3	9	3
6811		BOUL	08 28 1352	S19 E69	09 2.8		B	DKO	310	6	5	2
6811	27029	MWIL	08 28 1500	S20 E69	09 2.9	5	(B +					
6811		HOLL	08 28 1520	S20 E70	09 3.0		B	DSI	310	4	8	3
6811		PALE	08 28 1935	S21 E68	09 3.0		B	DAO	200	7	7	3
6811		LEAR	08 29 0015	S19 E66	09 3.0		B	DSO	190	3	8	2
6811		CULG	08 29 0045	S18 E65	09 3.0		B	DAO	240	5	7	3
6811		SVTO	08 29 0804	S20 E60	09 2.9		B	DAO	240	6	7	3
6811		RAMY	08 29 1410	S19 E57	09 2.9		B	DAO	380	6	5	3
6811		BOUL	08 29 1425	S21 E55	09 2.8		B	DAO	230	7	9	3
6811	27029	MWIL	08 29 1500	S20 E55	09 2.8	5	(BG)					
6811		HOLL	08 29 2040	S19 E52	09 2.8		B	DAO	300	8	10	4
6811		LEAR	08 30 0054	S20 E51	09 2.9		B	DAO	260	5	7	2
6811		CULG	08 30 0110	S20 E50	09 2.9		B	DAO	220	7	6	3
6811		PALE	08 30 0216	S20 E50	09 2.9		B	DKO	270	11	10	2
6811		SVTO	08 30 0750	S20 E46	09 2.8		B	DAI	420	13	8	3
6811		RAMY	08 30 1321	S20 E42	09 2.8		BGD	EKO	500	16	13	4
6811		HOLL	08 30 1440	S20 E45	09 3.0		BGD	EKI	360	22	13	4
6811		BOUL	08 30 1445	S19 E43	09 2.9		BG	EKI	460	33	15	3
6811		PALE	08 30 1720	S21 E43	09 3.0		B	EKI	390	27	14	4
6811		LEAR	08 31 0009	S20 E38	09 2.9		BD	EKI	340	20	13	3
6811		CULG	08 31 0050	S20 E38	09 2.9		BG	EKO	220	22	13	3
6811		SVTO	08 31 0720	S20 E36	09 3.0		BG	FAI	210	19	17	3
6811		RAMY	08 31 1320	S21 E33	09 3.1		BGD	FKI	360	32	17	3
6811		BOUL	08 31 1445	S19 E31	09 3.0		BG	FAI	400	28	19	3
6811		HOLL	08 31 1545	S20 E32	09 3.1		BGD	FKI	530	33	18	4
6811		PALE	08 31 1830	S20 E30	09 3.1		BGD	FKI	350	31	18	3
6811	27029	MWIL	08 31 2145	S20 E24	09 2.7	6	(BG)					

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual			
			Mo	Day	(UT)									Lat	CMD	
6811		LEAR	09	01	0027	S20	E26	09	3.0	BGD	FKO	290	28	17	3	
6811		CULG	09	01	0030	S19	E28	09	3.1	BGD	FKI	350	23	18	3	
6811		SVTO	09	01	0615	S20	E22	09	2.9	BG	FAI	320	33	19	4	
6811		RAMY	09	01	1240	S20	E20	09	3.0	BG	FKI	260	38	18	3	
6811		BOUL	09	01	1445	S17	E14	09	2.7	B	DAI	250	17	9	4	
6811	27029	MWIL	09	01	1515	S19	E14	09	2.7	5	(BG)					
6811		HOLL	09	01	1520	S18	E15	09	2.8	BG	DAI	370	31	10	4	
6811		PALE	09	01	1715	S20	E13	09	2.7	BG	DAO	210	23	9	4	
6811		LEAR	09	02	0009	S18	E11	09	2.8	BG	DKO	190	14	6	3	
6811		CULG	09	02	0030	S18	E09	09	2.7	BG	DAO	220	10	6	2	
6811		SVTO	09	02	0740	S19	E07	09	2.8	B	DSO	150	10	7	2	
6811		RAMY	09	02	1345	S17	E05	09	2.9	BG	EKI	340	18	10	3	
6811		BOUL	09	02	1423	S17	E01	09	2.7	BG	DAI	230	15	7	1	
6811		HOLL	09	02	1500	S18	E03	09	2.8	B	DKI	260	29	9	4	
6811	27029	MWIL	09	02	1515	S19	E02	09	2.8	5	(BG)					
6811		CULG	09	03	0040	S19	W02	09	2.9	BG	DKI	250	22	7	4	
6811		LEAR	09	03	0051	S18	W02	09	2.9	BG	DKI	360	17	9	3	
6811		PALE	09	03	0300	S20	E02	09	3.3	B	DSO	120	23	7	2	
6811		SVTO	09	03	0735	S20	W07	09	2.8	BG	DAO	200	29	8	3	
6811		RAMY	09	03	1205	S20	W08	09	2.9	BG	DKI	300	46	8	3	
6811		BOUL	09	03	1350	S19	W11	09	2.7	BG	DKI	300	23	8	1	
6811		HOLL	09	03	1510	S20	W11	09	2.8	BG	DKC	330	48	7	3	
6811	27029	MWIL	09	03	1530	S20	W10	09	2.9	5	(D)					
6811		PALE	09	03	2100	S22	W12	09	2.9	BG	DKI	280	32	9	3	
6811		CULG	09	04	0100	S20	W15	09	2.9	BG	DKI	280	40	9	3	
6811		SVTO	09	04	0728	S20	W20	09	2.8	BG	DKO	260	25	10	3	
6811		RAMY	09	04	1305	S20	W22	09	2.9	BG	EKI	430	55	12	4	
6811		BOUL	09	04	1435	S19	W24	09	2.8	B	EKC	480	54	11	2	
6811		HOLL	09	04	1720	S20	W24	09	2.9	BGD	EKC	360	45	12	3	
6811		PALE	09	04	1720	S21	W25	09	2.8	BG	EKI	380	37	12	3	
6811	27029	MWIL	09	04	1800	S20	W26	09	2.8	5	(D)					
6811		CULG	09	05	0055	S20	W30	09	2.7	BG	EKI	370	33	14	3	
6811		SVTO	09	05	0650	S20	W32	09	2.8	BG	EKI	220	28	12	3	
6811		RAMY	09	05	1310	S20	W34	09	2.9	BG	EKI	380	32	12	4	
6811		BOUL	09	05	1437	S20	W39	09	2.6	B	DKI	460	43	9	2	
6811		HOLL	09	05	1750	S20	W40	09	2.7	BGD	EKI	440	27	12	2	
6811		PALE	09	05	1905	S21	W40	09	2.7	BG	DKI	270	20	8	4	
6811	27029	MWIL	09	05	2345	S20	W41	09	2.8	5	(BF)					
6811		CULG	09	06	0045	S19	W42	09	2.8	BG	DKI	330	26	7	3	
6811		SVTO	09	06	0731	S20	W47	09	2.7	BG	EKI	350	22	11	4	
6811		RAMY	09	06	1329	S21	W51	09	2.6	BG	EKI	310	27	12	3	
6811		BOUL	09	06	1445	S20	W51	09	2.7	B	DKI	500	29	10	2	
6811		PALE	09	06	1830	S22	W51	09	2.8	B	EAI	340	21	15	4	
6811		HOLL	09	06	2359	S20	W55	09	2.8	B	DAI	230	13	8	1	
6811		CULG	09	07	0050	S20	W55	09	2.8	BG	DKO	320	9	9	3	
6811		SVTO	09	07	0845	S20	W58	09	2.9	BG	EKI	510	13	14	3	
6811	27029	MWIL	09	07	1440	S20	W61	09	2.9	5	(D)					
6811		BOUL	09	07	1440	S21	W61	09	2.9	B	DKI	310	13	8	3	
6811		HOLL	09	07	1535	S21	W63	09	2.8	B	DKI	400	19	10	4	
6811		PALE	09	07	2030	S21	W63	09	3.0	B	DKI	250	16	8	3	
6811		CULG	09	08	0025	S20	W68	09	2.8	B	DKO	360	5	9	2	
6811		SVTO	09	08	0845	S20	W72	09	2.8	B	DSO	120	8	10	2	
6811		RAMY	09	08	1214	S20	W71	09	3.1	B	DAO	170	12	10	4	
6811	27029	MWIL	09	08	1445	S20	W73	09	3.0	5	B					
6811		HOLL	09	08	1535	S21	W75	09	2.9	B	DAI	120	7	6	3	
6811		BOUL	09	08	1640	S22	W76	09	2.8	B	DAO	120	4	7	2	
6811		PALE	09	08	1945	S21	W75	09	3.1	B	DAO	110	4	3	3	
6811		CULG	09	09	0145	S19	W82	09	2.8	B	DAO	60	2	2	2	
6811		SVTO	09	09	0620	S20	W81	09	3.1	A	HS	30	1	3	4	
6810A		CULG	08	27	2130	S15	E79	09	2.9		A	HA	60	1	2	1
6815	27034	MWIL	08	29	1500	S08	E67	09	3.6	4	(B)					
6815		RAMY	09	01	1240	S07	E26	09	3.5	A	AX	10	3	1	3	
6815		BOUL	09	01	1445	S07	E24	09	3.4	A	AX	10	2	1	4	
6815	27034	MWIL	09	01	1515	S07	E24	09	3.4	4	(AF)					
6815		HOLL	09	01	1520	S07	E23	09	3.4	A	AX	10	3	2	4	
6815		PALE	09	01	1715	S09	E22	09	3.4	B	BXO	10	5	4	4	
6815		LEAR	09	02	0009	S08	E18	09	3.3	B	CAO	30	8	5	3	

SUNSPOT GROUPS  
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6815		CULG	09 02 0030	S08 E18	09 3.4		B	CAO	20	5	3	2
6815		SVTO	09 02 0740	S08 E14	09 3.4		B	DSO	60	6	4	2
6815		RAMY	09 02 1345	S08 E11	09 3.4		B	DAO	70	7	5	3
6815		BOUL	09 02 1423	S07 E11	09 3.4		B	DAO	70	8	4	1
6815	27034	HOLL	09 02 1500	S08 E10	09 3.4		B	DAO	80	11	5	4
6815		MWIL	09 02 1515	S07 E10	09 3.4	5	(B )					
6815		CULG	09 03 0040	S06 E05	09 3.4		B	DAO	50	7	6	4
6815		LEAR	09 03 0051	S08 E06	09 3.5		B	DSO	100	3	9	3
6815		PALE	09 03 0300	S07 E07	09 3.6		B	DSO	30	3	6	2
6815		SVTO	09 03 0735	S08 E00	09 3.3		B	DAO	30	11	7	3
6815		RAMY	09 03 1205	S08 W02	09 3.3		B	DAO	60	28	6	3
6815		BOUL	09 03 1350	S07 W04	09 3.3		B	CSI	60	16	7	1
6815	27034	HOLL	09 03 1510	S09 W05	09 3.2		B	CAO	90	24	7	3
6815		MWIL	09 03 1530	S08 W04	09 3.3	5	(B )					
6815		PALE	09 03 2100	S08 W03	09 3.6		B	DAO	100	21	7	3
6815		CULG	09 04 0100	S08 W09	09 3.4		B	DAO	60	14	8	3
6815		SVTO	09 04 0728	S08 W14	09 3.3		B	DAO	50	9	8	3
6815		RAMY	09 04 1305	S09 W16	09 3.3		B	DAO	50	22	10	4
6815		BOUL	09 04 1435	S07 W18	09 3.2		B	CAO	50	12	9	2
6815		HOLL	09 04 1720	S08 W19	09 3.3		B	DAO	30	8	10	3
6815	27034	PALE	09 04 1720	S09 W19	09 3.3		B	DAO	40	9	9	3
6815		MWIL	09 04 1800	S08 W20	09 3.2	5	(B )					
6815		CULG	09 05 0055	S08 W24	09 3.2		B	DAO	60	11	9	3
6815		SVTO	09 05 0650	S08 W27	09 3.3		B	DAO	30	8	9	3
6815		RAMY	09 05 1310	S08 W29	09 3.4		B	CAO	40	13	10	4
6815		BOUL	09 05 1437	S08 W33	09 3.1		B	CSO	50	7	9	2
6815		HOLL	09 05 1750	S07 W32	09 3.3		B	CSO	70	8	10	2
6815	27034	PALE	09 05 1905	S09 W35	09 3.2		B	CAO	30	5	10	4
6815		MWIL	09 05 2345	S08 W40	09 3.0	5	(B )					
6815		CULG	09 06 0045	S08 W37	09 3.2		B	CSO	40	5	9	3
6815		SVTO	09 06 0731	S07 W48	09 2.7		A	HA	30	1	1	4
6815		RAMY	09 06 1329	S07 W47	09 3.0		B	CAO	30	3	8	3
6815		BOUL	09 06 1445	S08 W50	09 2.9		A	HS	30	1	1	2
6815		PALE	09 06 1830	S08 W47	09 3.2		B	CSO	50	1	1	4
6815		HOLL	09 06 2359	S08 W57	09 2.7		A	HS	30	1	1	1
6815		CULG	09 07 0050	S10 W55	09 2.9		A	HS	40	1	1	3
6815		SVTO	09 07 0845	S08 W63	09 2.6		A	HR	20	2	1	3
6815	27034	BOUL	09 07 1440	S07 W64	09 2.8		A	HS	20	1	1	3
6815		MWIL	09 07 1440	S08 W65	09 2.7	4	(AP)					
6815		HOLL	09 07 1535	S08 W66	09 2.7		A	HR	30	1	2	4
6815		PALE	09 07 2030	S08 W65	09 3.0		A	HS	20	1	1	3
6815		CULG	09 08 0025	S08 W70	09 2.8		A	AX		1		2
6815		SVTO	09 08 0845	S07 W75	09 2.7		B	BXO	20	2	6	2
6815	27034	RAMY	09 08 1214	S07 W76	09 2.8		A	AX	10	1	1	4
6815		MWIL	09 08 1445	S07 W80	09 2.6	4	AP					
6815		HOLL	09 08 1535	S09 W80	09 2.6		A	HS	30	1	1	3
6815		PALE	09 08 1945	S11 W79	09 2.9		A	HS	20	1	1	3
6814	27037	MWIL	08 31 2145	S22 E34	09 3.5	5	(BG)					
6814		RAMY	09 01 1240	S22 E26	09 3.5		B	DAO	50	12	5	3
6814	27037	BOUL	09 01 1445	S21 E25	09 3.5		B	DAI	90	14	5	4
6814		MWIL	09 01 1515	S22 E25	09 3.5	5	(D )					
6814		HOLL	09 01 1520	S22 E25	09 3.6		B	DAI	80	23	6	4
6814		PALE	09 01 1715	S22 E24	09 3.6		B	DAO	70	18	5	4
6814		LEAR	09 02 0009	S22 E20	09 3.5		B	DAO	50	7	6	3
6814		CULG	09 02 0030	S22 E20	09 3.5		B	DAO	50	6	5	2
6814		SVTO	09 02 0740	S22 E16	09 3.5		B	DAO	40	9	5	2
6814		RAMY	09 02 1345	S22 E13	09 3.6		B	CSO	40	12	6	3
6814		BOUL	09 02 1423	S21 E12	09 3.5		B	CSO	30	8	4	1
6814	27037	HOLL	09 02 1500	S21 E12	09 3.5		B	BXO	20	17	6	4
6814		MWIL	09 02 1515	S22 E12	09 3.5	5	(BG)					
6814		CULG	09 03 0040	S22 E07	09 3.6		B	CAO	30	9	4	4
6814		LEAR	09 03 0051	S22 E07	09 3.6		B	BXO	40	6	7	3
6814		PALE	09 03 0300	S21 E07	09 3.7		B	DSO	40	8	5	2
6814		SVTO	09 03 0735	S22 E03	09 3.5		B	CSO	20	9	5	3
6814		RAMY	09 03 1205	S21 E00	09 3.5		A	HR	30	15	6	3
6814		BOUL	09 03 1350	S21 W02	09 3.4		B	BXO	10	7	5	1
6814	27037	HOLL	09 03 1510	S22 W02	09 3.5		B	BXO	30	10	5	3
6814		MWIL	09 03 1530	S22 W02	09 3.5	4	(BG)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6814		PALE	09 03 2100	S23 W05	09 3.5		B	BXO	20	5	3	3
6814		CULG	09 04 0100	S22 W07	09 3.5		B	BXO	10	3	2	3
6814		SVTO	09 04 0728	S22 W12	09 3.4		B	BXO	10	5	4	3
6814		RAMY	09 04 1305	S22 W13	09 3.5		B	BXO	10	6	3	4
6814		BOUL	09 04 1435	S20 W16	09 3.4		B	CSO	20	7	5	2
6814		PALE	09 04 1720	S23 W14	09 3.6		B	BXO		3	3	3
6814		HOLL	09 04 1720	S23 W16	09 3.5		A	AX		1		3
6814	27037	MWIL	09 04 1800	S22 W16	09 3.5	4	(B )					
6814		CULG	09 05 0055	S22 W22	09 3.3		B	BXO	10	2	1	3
6814		SVTO	09 05 0650	S23 W24	09 3.4		B	BXO	10	5	4	3
6814		RAMY	09 05 1310	S22 W28	09 3.4		B	CAO	20	4	3	4
6814		BOUL	09 05 1437	S21 W28	09 3.5		B	CAO	30	7	3	2
6814		HOLL	09 05 1750	S23 W31	09 3.3		A	AX	20	7	2	2
6814		PALE	09 05 1905	S23 W31	09 3.4		B	CRO	20	3	3	4
6814	27037	MWIL	09 05 2345	S22 W33	09 3.4	4	(AF)					
6814		CULG	09 06 0045	S22 W34	09 3.4		B	BXO	10	3	4	3
6814		SVTO	09 06 0731	S23 W38	09 3.4		A	HR	10	1	1	4
6814		RAMY	09 06 1329	S24 W42	09 3.3		A	AX	10	3	3	3
6814		PALE	09 06 1830	S24 W44	09 3.4		A	AX		1		4
6814		HOLL	09 06 2359	S23 W47	09 3.4		A	AX	10	2	1	1
6818		RAMY	09 02 1345	S14 E19	09 4.0		A	AX		1		3
6818		RAMY	09 04 1305	S12 W06	09 4.1		BG	CAO	20	4	3	4
6818		BOUL	09 04 1435	S11 W07	09 4.1		B	CSO	20	10	4	2
6818		PALE	09 04 1720	S12 W08	09 4.1		B	DAO	40	14	4	3
6818		HOLL	09 04 1720	S12 W08	09 4.1		BG	DAI	60	15	5	3
6818	27041	MWIL	09 04 1800	S12 W08	09 4.1	5	(BG)					
6818		CULG	09 05 0055	S12 W13	09 4.0		BG	DAO	60	11	5	3
6818		SVTO	09 05 0650	S12 W16	09 4.1		BG	DSO	30	18	7	3
6818		RAMY	09 05 1310	S12 W20	09 4.0		B	DAO	70	32	8	4
6818		BOUL	09 05 1437	S10 W21	09 4.0		B	DAI	170	34	9	2
6818		HOLL	09 05 1750	S12 W22	09 4.1		B	CRI	240	31	8	2
6818		PALE	09 05 1905	S12 W25	09 3.9		B	DAI	170	25	10	4
6818	27041	MWIL	09 05 2345	S12 W26	09 4.0	5	(BG)					
6818		CULG	09 06 0045	S12 W26	09 4.1		B	DAI	150	34	8	3
6818		SVTO	09 06 0731	S13 W30	09 4.0		B	DAI	260	20	9	4
6818		RAMY	09 06 1329	S13 W33	09 4.1		B	DAI	230	51	10	3
6818		BOUL	09 06 1445	S12 W33	09 4.1		B	DAI	290	36	10	2
6818		PALE	09 06 1830	S12 W35	09 4.1		BG	ESI	230	36	11	4
6818		HOLL	09 06 2359	S12 W39	09 4.1		B	EKI	300	30	11	1
6818		CULG	09 07 0050	S12 W39	09 4.1		B	EAO	290	30	12	3
6818		SVTO	09 07 0845	S12 W44	09 4.0		B	EKI	720	18	12	3
6818		BOUL	09 07 1440	S11 W46	09 4.1		B	EKI	500	26	11	3
6818	27041	MWIL	09 07 1440	S11 W49	09 3.9	5	(D )					
6818		HOLL	09 07 1535	S12 W48	09 4.0		BG	EKI	650	46	12	4
6818		PALE	09 07 2030	S12 W48	09 4.2		BG	EKI	380	32	12	3
6818		CULG	09 08 0025	S11 W53	09 4.0		BGD	EKI	510	25	12	2
6818		SVTO	09 08 0845	S12 W58	09 4.0		BGD	FKI	750	28	18	2
6818		RAMY	09 08 1214	S13 W58	09 4.1		BGD	EKI	790	34	13	4
6818	27041	MWIL	09 08 1445	S12 W60	09 4.1	6	(D )					
6818		HOLL	09 08 1535	S12 W60	09 4.1		B	EHI	700	25	14	3
6818		BOUL	09 08 1640	S13 W61	09 4.1		B	EHI	720	18	14	2
6818		PALE	09 08 1945	S13 W60	09 4.3		B	EKI	380	30	13	3
6818		CULG	09 09 0145	S13 W69	09 3.9		BGD	FKI	1000	14	17	2
6818		SVTO	09 09 0620	S13 W67	09 4.2		BGD	FKI	780	15	19	4
6818		RAMY	09 09 1318	S13 W71	09 4.2		BGD	EKO	360	16	12	3
6818		BOUL	09 09 1504	S12 W70	09 4.3		B	EKI	810	10	12	1
6818	27041	MWIL	09 09 1515	S12 W74	09 4.1	6	(B )					
6818		PALE	09 09 2030	S12 W77	09 4.0		B	EKO	660	17	13	3
6818		SVTO	09 10 0720	S13 W82	09 4.1		BGD	EKI	240	5	12	3
6818		RAMY	09 10 1205	S13 W79	09 4.5		A	HK	180	2	3	4
6818	27041	MWIL	09 10 1515	S13 W85	09 4.2	6	AF					
6814A		CULG	09 09 0145	N18 W62	09 4.3		B	BXO	20	2	3	2
6814A		SVTO	09 09 0620	N18 W63	09 4.5		B	BXO	10	3	3	4
6814A		RAMY	09 09 1318	N17 W76	09 3.8		B	BXO	10	2	3	3
6814A	27050	MWIL	09 09 1515	N18 W68	09 4.4	4	(B )					
6825		RAMY	09 10 1205	N19 W79	09 4.5		A	AX		1	1	4



SUNSPOT GROUPS  
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6816		RAMY	09 01 1240	S10	E75	09 7.2		B	CAO	50	3	3	3
6816	27038	MWIL	09 01 1515	S11	E78	09 7.5	4	AF					
6816		HOLL	09 01 1520	S09	E77	09 7.4		B	BXO	20	4	5	4
6816		PALE	09 01 1715	S10	E78	09 7.6		B	BXO	30	3	4	4
6816		RAMY	09 02 1345	S10	E64	09 7.4		A	AX	10	2	1	3
6816	27038	HOLL	09 02 1500	S10	E65	09 7.5		A	AX	20	2	1	4
6816		MWIL	09 02 1515	S11	E63	09 7.4	4	(AF)					
6816		RAMY	09 03 1205	S11	E50	09 7.3		B	BXO	100	7	5	3
6816		SVTO	09 04 0728	S12	E40	09 7.3		A	AX		1		3
6816		SVTO	09 04 0728	S12	E40	09 7.3		BGD	AX		1		3
6816		RAMY	09 04 1305	S11	E36	09 7.2		B	BXO	20	5	4	4
6816		PALE	09 04 1720	S11	E34	09 7.3		B	BXO	10	3	4	3
6816		RAMY	09 06 1329	S11	E13	09 7.5		A	AX		1		3
6819		SVTO	09 05 0650	S26	E31	09 7.7		A	AX		2		3
6819		RAMY	09 05 1310	S25	E26	09 7.6		B	BXO	20	7	2	4
6819		BOUL	09 05 1437	S25	E26	09 7.6		B	CSO	20	3	2	2
6819		HOLL	09 05 1750	S25	E24	09 7.6		B	CRO	20	5	3	2
6819	27043	PALE	09 05 1905	S25	E24	09 7.6		B	BXO	10	6	3	4
6819		MWIL	09 05 2345	S26	E21	09 7.6	4	(B)					
6819		CULG	09 06 0045	S25	E22	09 7.7		B	CSO	20	2	3	3
6819		SVTO	09 06 0731	S25	E16	09 7.5		B	CRO	10	2	3	4
6819		RAMY	09 06 1329	S25	E12	09 7.5		B	BXO	20	5	5	3
6819		BOUL	09 06 1445	S26	E12	09 7.5		B	CAO	20	2	2	2
6819		PALE	09 06 1830	S27	E12	09 7.7		B	BXO	10	2	2	4
6819A		RAMY	09 06 1329	N00	E14	09 7.6		A	AX		1		3
6821		SVTO	09 07 0845	S11	E12	09 8.3		B	BXO		2	2	3
6821	27045	BOUL	09 07 1440	S10	E10	09 8.4		B	BXO	10	5	2	3
6821		MWIL	09 07 1440	S10	E10	09 8.4	4	(B)					
6821		HOLL	09 07 1535	S11	E11	09 8.5		B	BXO	20	7	3	4
6821		PALE	09 07 2030	S11	E09	09 8.5		B	CAO	20	3	3	3
6821		CULG	09 08 0025	S11	E05	09 8.4		B	BXO	10	2	3	2
6821		PALE	09 08 1945	S08	W07	09 8.3		A	AX	10	2	2	3
6820	27044	MWIL	09 05 2345	S11	E41	09 9.1	4	(AP)					
6820		CULG	09 06 0045	S09	E41	09 9.1		B	BXO	10	2	3	3
6820		SVTO	09 06 0731	S11	E37	09 9.1		B	CSO	20	3	4	4
6820		RAMY	09 06 1329	S11	E34	09 9.1		B	BXO	20	5	4	3
6820		BOUL	09 06 1445	S11	E31	09 8.9		B	CSO	30	3	4	2
6820		PALE	09 06 1830	S12	E33	09 9.2		B	BXO	70	6	6	4
6820		HOLL	09 06 2359	S12	E28	09 9.1		B	DSO	50	9	6	1
6820		CULG	09 07 0050	S11	E28	09 9.1		B	DSO	200	4	4	3
6820		SVTO	09 07 0845	S12	E20	09 8.9		B	CSO	20	8	5	3
6820		BOUL	09 07 1440	S11	E19	09 9.0		B	DSI	70	16	5	3
6820	27044	MWIL	09 07 1440	S12	E20	09 9.1	5	(BF)					
6820		HOLL	09 07 1535	S11	E19	09 9.1		B	DAO	60	24	5	4
6820		PALE	09 07 2030	S12	E18	09 9.2		B	DAO	60	15	7	3
6820		CULG	09 08 0025	S11	E13	09 9.0		B	DAO	90	14	6	2
6820		SVTO	09 08 0845	S12	E10	09 9.1		B	DSI	110	24	7	2
6820		RAMY	09 08 1214	S12	E08	09 9.1		B	DAI	150	28	7	4
6820	27044	MWIL	09 08 1445	S11	E07	09 9.1	5	(B)					
6820		HOLL	09 08 1535	S12	E08	09 9.2		B	DSI	160	30	7	3
6820		BOUL	09 08 1640	S12	E06	09 9.1		B	DAI	170	13	7	2
6820		PALE	09 08 1945	S12	E07	09 9.3		B	DSI	150	23	8	3
6820		CULG	09 09 0145	S12	E01	09 9.1		B	DAI	230	22	8	2
6820		SVTO	09 09 0620	S11	W01	09 9.2		B	DAO	200	21	7	4
6820		RAMY	09 09 1318	S12	W05	09 9.2		B	DAI	310	31	8	3
6820		BOUL	09 09 1504	S11	W06	09 9.2		B	DAI	250	14	7	1
6820	27044	MWIL	09 09 1515	S12	W06	09 9.2	6	(B)					
6820		PALE	09 09 2030	S12	W08	09 9.2		B	DSO	210	20	8	3
6820		SVTO	09 10 0720	S12	W16	09 9.1		B	DAO	270	24	7	3
6820		RAMY	09 10 1205	S11	W18	09 9.1		B	DAO	410	29	8	4
6820	27044	MWIL	09 10 1515	S12	W19	09 9.2	5	(B)					
6820		PALE	09 10 2015	S12	W22	09 9.2		B	DAO	330	10	8	3
6820		SVTO	09 11 0725	S12	W28	09 9.2		B	DAO	300	11	8	3
6820		RAMY	09 11 1155	S11	W30	09 9.2		B	DKO	460	18	8	4

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

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6820		BOUL	09 11 1430	S12 W33	09 9.1		B	DAO	370	10	8	1
6820	27044	MWIL	09 11 1515	S12 W33	09 9.1	5	(B )					
6820		HOLL	09 11 1750	S12 W33	09 9.2		B	DSO	420	14	8	3
6820		PALE	09 11 1825	S09 W35	09 9.1		B	DSO	240	4	8	2
6820		CULG	09 12 0040	S12 W39	09 9.1		B	DSO	250	7	8	1
6820		SVTO	09 12 0750	S11 W41	09 9.2		B	DSO	250	8	8	4
6820		RAMY	09 12 1238	S12 W45	09 9.1		B	DKO	340	8	9	4
6820		BOUL	09 12 1449	S12 W44	09 9.3		B	DAO	300	10	8	1
6820	27044	MWIL	09 12 1500	S12 W46	09 9.1	5	(BG)					
6820		HOLL	09 12 1730	S12 W47	09 9.2		BG	DKI	380	27	9	3
6820		PALE	09 12 1845	S12 W45	09 9.4		B	DSO	270	8	8	3
6820		CULG	09 13 0055	S12 W52	09 9.1		B	DAO	270	7	9	2
6820		SVTO	09 13 0716	S11 W56	09 9.1		B	DSO	220	7	9	3
6820		RAMY	09 13 1308	S12 W58	09 9.2		B	DKO	320	12	8	4
6820		BOUL	09 13 1442	S12 W58	09 9.2		B	DAO	230	6	8	1
6820	27044	MWIL	09 13 1500	S12 W59	09 9.2	5	(B )					
6820		PALE	09 13 2000	S11 W58	09 9.5		B	DAO	170	12	7	3
6820		HOLL	09 13 2030	S12 W62	09 9.2		BG	DSO	310	7	8	2
6820		CULG	09 14 0010	S11 W66	09 9.0		B	DAO	210	10	9	3
6820		SVTO	09 14 1202	S11 W70	09 9.2		B	DSO	80	3	7	2
6820		RAMY	09 14 1205	S10 W70	09 9.2		B	DAO	140	9	8	3
6820		BOUL	09 14 1445	S12 W73	09 9.1		B	CSO	140	5	10	2
6820	27044	MWIL	09 14 1500	S12 W72	09 9.2	6	(BP)					
6820		HOLL	09 14 1650	S12 W75	09 9.0		B	CSO	210	3	8	2
6820		PALE	09 14 1900	S12 W77	09 9.0		B	CAO	140	7	8	2
6820		CULG	09 15 0100	S11 W79	09 9.1		A	HS	120	1	2	2
6821B		RAMY	09 08 1214	N05 E08	09 9.1		A	AX		1		4
6821B	27047	MWIL	09 08 1445	N05 E06	09 9.1	4	(AP)					
6821B		HOLL	09 08 1535	N05 E06	09 9.1		A	AX		1		3
6821B		PALE	09 08 1945	N06 E06	09 9.3		A	AX	10	1	1	3
6821A	27051	MWIL	09 09 1515	S11 W06	09 9.2	5	(AP)					
6826		PALE	09 08 1945	N22 E08	09 9.4		A	AX	10	2	2	3
6826		SVTO	09 09 0620	N20 E00	09 9.3		A	AX		2	2	4
6826		RAMY	09 09 1318	N20 W05	09 9.2		A	AX		1		3
6826		PALE	09 09 2030	N20 W08	09 9.2		A	AX	10	2	2	3
6826		RAMY	09 10 1205	N21 W19	09 9.0		A	AX		2	1	4
6826		RAMY	09 11 1155	N17 W33	09 9.0		A	AX		1	1	4
6826	27058	MWIL	09 14 1500	N21 W71	09 9.2	4	(B )					
6817		CULG	09 04 0100	S26 E86	09 10.7		A	HS	60	1	4	3
6817		SVTO	09 04 0728	S26 E78	09 10.4		A	HS	60	1	2	3
6817		RAMY	09 04 1305	S23 E70	09 9.9		A	HA	120	1	2	4
6817		BOUL	09 04 1435	S26 E71	09 10.1		A	HA	120	1	3	2
6817		HOLL	09 04 1720	S23 E69	09 10.0		A	HS	60	1	2	3
6817		PALE	09 04 1720	S24 E70	09 10.1		A	HA	120	1	3	3
6817	27042	MWIL	09 04 1800	S26 E70	09 10.2	4	AP					
6817		CULG	09 05 0055	S26 E67	09 10.2		A	HS	90	1	2	3
6817		SVTO	09 05 0650	S25 E64	09 10.2		A	HS	100	1	2	3
6817		RAMY	09 05 1310	S24 E60	09 10.2		A	HA	110	1	3	4
6817		BOUL	09 05 1437	S26 E60	09 10.3		A	HA	170	1	2	2
6817		HOLL	09 05 1750	S25 E57	09 10.1		A	HS	150	1	2	2
6817		PALE	09 05 1905	S24 E57	09 10.2		A	HS	130	1	2	4
6817	27042	MWIL	09 05 2345	S26 E55	09 10.3	5	(AP)					
6817		CULG	09 06 0045	S26 E54	09 10.2		A	HS	110	1	2	3
6817		SVTO	09 06 0731	S25 E50	09 10.2		A	HS	110	1	2	4
6817		RAMY	09 06 1329	S26 E48	09 10.3		A	HS	100	2	4	3
6817		BOUL	09 06 1445	S24 E44	09 10.0		A	HS	100	1	2	2
6817		PALE	09 06 1830	S24 E47	09 10.4		A	HS	140	1	3	4
6817		HOLL	09 06 2359	S24 E42	09 10.2		A	HS	130	1	2	1
6817		CULG	09 07 0050	S25 E42	09 10.3		A	HS	110	1	3	3
6817		SVTO	09 07 0845	S23 E37	09 10.2		A	HS	70	1	2	3
6817		BOUL	09 07 1440	S24 E33	09 10.2		A	HS	80	1	2	3
6817	27042	MWIL	09 07 1440	S25 E32	09 10.1	5	(AP)					
6817		HOLL	09 07 1535	S23 E33	09 10.2		A	HS	130	1	2	4
6817		PALE	09 07 2030	S26 E32	09 10.3		A	HS	90	1	2	3
6817		CULG	09 08 0025	S24 E29	09 10.2		A	HS	110	1	2	2

SUNSPOT GROUPS  
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NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6817		SVTO	09	08	0845	S25	E24	09	10.2		A	HS	110	1	2	2
6817		RAMY	09	08	1214	S24	E22	09	10.2		A	HS	100	1	2	4
6817	27042	MWIL	09	08	1445	S25	E20	09	10.2	5	(AP)					
6817		HOLL	09	08	1535	S25	E21	09	10.3		A	HS	120	1	2	3
6817		BOUL	09	08	1640	S23	E19	09	10.1		A	HS	70	1	2	2
6817		PALE	09	08	1945	S24	E20	09	10.4		A	HS	70	1	2	3
6817		CULG	09	09	0145	S24	E15	09	10.2		A	HS	100	1	3	2
6817		SVTO	09	09	0620	S24	E12	09	10.2		A	HS	70	1	2	4
6817		RAMY	09	09	1318	S25	E08	09	10.2		A	HA	90	1	2	3
6817		BOUL	09	09	1504	S23	E07	09	10.2		A	HS	90	1	2	1
6817	27042	MWIL	09	09	1515	S25	E07	09	10.2	6	(AP)					
6817		PALE	09	09	2030	S25	E07	09	10.4		A	HS	70	1	2	3
6817		SVTO	09	10	0720	S24	W02	09	10.1		A	HS	70	1	2	3
6817		RAMY	09	10	1205	S24	W03	09	10.3		A	HS	100	1	2	4
6817	27042	MWIL	09	10	1515	S25	W06	09	10.2	5	(AP)					
6817		PALE	09	10	2015	S25	W08	09	10.2		A	HS	90	1	2	3
6817		SVTO	09	11	0725	S24	W13	09	10.3		A	HS	70	1	2	3
6817		RAMY	09	11	1155	S23	W16	09	10.3		A	HS	120	1	2	4
6817		BOUL	09	11	1430	S23	W18	09	10.2		A	HS	110	1	2	1
6817	27042	MWIL	09	11	1515	S24	W18	09	10.2	5	(AP)					
6817		HOLL	09	11	1750	S24	W18	09	10.3		A	HS	130	1	2	3
6817		PALE	09	11	1825	S22	W22	09	10.1		A	HS	120	1	2	2
6817		CULG	09	12	0040	S25	W24	09	10.2		A	HS	80	1	2	1
6817		SVTO	09	12	0750	S24	W26	09	10.3		A	HS	70	1	2	4
6817		RAMY	09	12	1238	S23	W29	09	10.3		A	HS	100	1	2	4
6817		BOUL	09	12	1449	S24	W31	09	10.2		A	HS	80	1	2	1
6817	27042	MWIL	09	12	1500	S24	W31	09	10.2	5	(AP)					
6817		HOLL	09	12	1730	S23	W31	09	10.3		A	HS	140	1	2	3
6817		PALE	09	12	1845	S24	W32	09	10.3		A	HS	80	1	2	3
6817		CULG	09	13	0055	S24	W37	09	10.2		A	HS	90	1	1	2
6817		SVTO	09	13	0716	S24	W39	09	10.3		A	HS	80	1	2	3
6817		RAMY	09	13	1308	S24	W41	09	10.4		A	HS	90	1	2	4
6817		BOUL	09	13	1442	S24	W44	09	10.2		A	HS	100	1	1	1
6817	27042	MWIL	09	13	1500	S24	W44	09	10.2	5	(AP)					
6817		PALE	09	13	2000	S23	W42	09	10.6		A	HS	30	1	2	3
6817		HOLL	09	13	2030	S25	W45	09	10.4		A	HS	150	1	2	2
6817		CULG	09	14	0010	S24	W49	09	10.2		A	HS	70	1	2	3
6817		SVTO	09	14	1202	S24	W55	09	10.2		A	HS	90	1	2	2
6817		RAMY	09	14	1205	S23	W54	09	10.3		A	HS	110	1	2	3
6817		BOUL	09	14	1445	S24	W56	09	10.3		A	HS	80	1	2	2
6817	27042	MWIL	09	14	1500	S24	W56	09	10.3	5	(AP)					
6817		HOLL	09	14	1650	S26	W56	09	10.3		A	HS	160	1	2	2
6817		PALE	09	14	1900	S25	W58	09	10.3		A	HA	50	1	2	2
6817		CULG	09	15	0100	S24	W62	09	10.2		A	HS	90	1	2	2
6817		RAMY	09	15	1235	S23	W68	09	10.3		A	HS	110	1	2	4
6817		BOUL	09	15	1430	S24	W67	09	10.4		A	HS	80	1	2	1
6817	27042	MWIL	09	15	1500	S24	W68	09	10.4	5	(AP)					
6817		HOLL	09	15	1506	S25	W68	09	10.4		A	HS	120	1	2	2
6817		PALE	09	15	1930	S25	W64	09	10.8		A	HA	50	1	2	3
6817		CULG	09	16	0040	S24	W72	09	10.5		A	HS	90	1	1	3
6817		SVTO	09	16	1020	S24	W80	09	10.2		A	HA	50	1	2	2
6817		RAMY	09	16	1310	S23	W76	09	10.7		A	HS	30	1	2	3
6817	27042	MWIL	09	16	1500	S24	W81	09	10.4	5	(AP)					
6823		RAMY	09	06	1329	N05	E51	09	10.4		A	AX		1		3
6823		PALE	09	07	2030	N03	E37	09	10.6		B	DSO	20	5	4	3
6823		CULG	09	08	0025	N04	E30	09	10.2		B	CAO	20	6	5	2
6823		SVTO	09	08	0845	N03	E25	09	10.2		B	DSO	70	22	5	2
6823	27048	RAMY	09	08	1214	N03	E23	09	10.2		B	DAI	170	48	7	4
6823		MWIL	09	08	1445	N02	E21	09	10.2	5	(D)					
6823		HOLL	09	08	1535	N02	E22	09	10.3		B	DAI	140	44	6	3
6823		BOUL	09	08	1640	N03	E20	09	10.2		B	DAI	190	22	6	2
6823		PALE	09	08	1945	N03	E22	09	10.5		B	DAI	100	22	7	3
6823		CULG	09	09	0145	N04	E15	09	10.2		B	DAI	190	23	6	2
6823		SVTO	09	09	0620	N03	E13	09	10.2		B	DSI	170	37	6	4
6823		RAMY	09	09	1318	N04	E09	09	10.2		B	DAO	320	34	7	3
6823		BOUL	09	09	1504	N03	E07	09	10.1		B	DKI	290	27	7	1
6823	27048	MWIL	09	09	1515	N03	E08	09	10.2	5	(B)					
6823		PALE	09	09	2030	N03	E08	09	10.4		B	DAI	200	29	8	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Long. Extent (Deg)	Qual			
			Mo	Day	Time (UT)					Lat	Cmd			Area (10-6 Hemi)	Spot Count	
6823		SVTO	09	10	0720	N02	W01	09	10.2	B	DAO	230	22	8	3	
6823		RAMY	09	10	1205	N02	W03	09	10.3	B	DAO	410	43	8	4	
6823	27048	MWIL	09	10	1515	N03	W05	09	10.3	5	(B)					
6823		PALE	09	10	2015	N03	W07	09	10.3	B	DSO	230	10	10	3	
6823		SVTO	09	11	0725	N03	W13	09	10.3	B	DAO	230	16	8	3	
6823		RAMY	09	11	1155	N02	W15	09	10.4	B	DAO	260	27	9	4	
6823		BOUL	09	11	1430	N04	W17	09	10.3	B	DAI	240	22	7	1	
6823	27048	MWIL	09	11	1515	N03	W18	09	10.3	5	(B)					
6823		HOLL	09	11	1750	N03	W19	09	10.3	B	EAO	260	27	11	3	
6823		PALE	09	11	1825	N05	W19	09	10.3	B	DSO	200	17	10	2	
6823		CULG	09	12	0040	N04	W25	09	10.1	B	DSO	140	14	8	1	
6823		SVTO	09	12	0750	N03	W26	09	10.4	B	DAO	120	16	9	4	
6823		RAMY	09	12	1238	N02	W30	09	10.3	B	DAO	200	20	10	4	
6823		BOUL	09	12	1449	N02	W31	09	10.3	B	DAO	250	11	9	1	
6823	27048	MWIL	09	12	1500	N03	W32	09	10.2	5	(B)					
6823		HOLL	09	12	1730	N02	W32	09	10.3	B	DAO	150	21	10	3	
6823		PALE	09	12	1845	N02	W32	09	10.4	B	DSO	180	12	10	3	
6823		CULG	09	13	0055	N03	W37	09	10.3	B	DAO	100	10	9	2	
6823		SVTO	09	13	0716	N04	W39	09	10.4	B	DSO	110	12	9	3	
6823		RAMY	09	13	1308	N03	W43	09	10.3	B	DAO	160	18	10	4	
6823		BOUL	09	13	1442	N02	W45	09	10.2	B	DAO	140	5	9	1	
6823	27048	MWIL	09	13	1500	N03	W45	09	10.3	5	(B)					
6823		PALE	09	13	2000	N04	W44	09	10.5	B	DAO	90	10	10	3	
6823		HOLL	09	13	2030	N02	W49	09	10.2	B	DAO	80	6	9	2	
6823		CULG	09	14	0010	N03	W50	09	10.3	B	DAO	90	7	9	3	
6823		SVTO	09	14	1202	N03	W56	09	10.3	B	CSO	80	12	10	2	
6823		RAMY	09	14	1205	N03	W57	09	10.2	B	CAO	110	14	10	3	
6823		BOUL	09	14	1445	N02	W58	09	10.3	B	DSO	110	9	9	2	
6823	27048	MWIL	09	14	1500	N03	W59	09	10.2	5	(B)					
6823		HOLL	09	14	1650	N02	W59	09	10.3	B	DAO	100	9	9	2	
6823		PALE	09	14	1900	N03	W62	09	10.1	B	DSO	70	1	10	2	
6823		CULG	09	15	0100	N03	W64	09	10.2	B	CSO	70	4	6	2	
6823		RAMY	09	15	1235	N02	W76	09	9.8	B	CAO	90	5	6	4	
6823		BOUL	09	15	1430	N04	W77	09	9.8	A	HS	40	1	2	1	
6823	27048	MWIL	09	15	1500	N03	W74	09	10.1	5	(B)					
6823		HOLL	09	15	1506	N00	W75	09	10.0	B	CSO	80	3	4	2	
6823		PALE	09	15	1930	N03	W71	09	10.5	B	CAO	30	2	3	3	
6823		CULG	09	16	0040	N03	W80	09	10.0	B	CSO	70	3	5	3	
6822		SVTO	09	07	0845	S08	E79	09	13.3		A	AX	10	1		3
6822	27046	MWIL	09	07	1440	S06	E73	09	13.1	4	(AP)					
6822		BOUL	09	07	1440	S06	E77	09	13.4		A	AX	10	1	1	3
6822		HOLL	09	07	1535	S05	E75	09	13.2		A	HR	30	1	2	4
6822		PALE	09	07	2030	S08	E75	09	13.5		B	DAO	60	2	4	3
6822		CULG	09	08	0025	S07	E70	09	13.3		B	BXO	10	2	2	2
6822		SVTO	09	08	0845	S06	E67	09	13.4		B	BXO	20	3	5	2
6822		RAMY	09	08	1214	S05	E64	09	13.3		B	DAO	50	5	6	4
6822	27046	MWIL	09	08	1445	S06	E61	09	13.2	4	(B)					
6822		HOLL	09	08	1535	S05	E62	09	13.3		B	CSO	30	3	5	3
6822		BOUL	09	08	1640	S04	E60	09	13.2		B	CSO	30	2	4	2
6822		PALE	09	08	1945	S06	E64	09	13.6		B	CSO	30	2	3	3
6822		CULG	09	09	0145	S05	E55	09	13.2		A	HS	40	1	1	2
6822		SVTO	09	09	0620	S05	E55	09	13.4		B	CRO	30	3	6	4
6822		RAMY	09	09	1318	S04	E49	09	13.2		B	CAO	40	2	5	3
6822		BOUL	09	09	1504	S06	E46	09	13.1		A	AX	10	1		1
6822	27046	MWIL	09	09	1515	S05	E47	09	13.1	5	(AP)					
6822		PALE	09	09	2030	S07	E48	09	13.4		A	HS	20	1	1	3
6822		SVTO	09	10	0720	S05	E38	09	13.1		A	HA	10	1	1	3
6822		RAMY	09	10	1205	S05	E34	09	13.0		A	HA	20	2	1	4
6822	27046	MWIL	09	10	1515	S06	E33	09	13.1	5	(AP)					
6822		PALE	09	10	2015	S06	E31	09	13.2		A	AX	20	1	1	3
6822		SVTO	09	11	0725	S05	E25	09	13.2		A	HA	10	1	1	3
6822		RAMY	09	11	1155	S05	E21	09	13.1		A	HA	10	2	2	4
6822		BOUL	09	11	1430	S06	E20	09	13.1		A	HA	20	1	1	1
6822	27046	MWIL	09	11	1515	S05	E21	09	13.2	5	(AP)					
6822		HOLL	09	11	1750	S05	E20	09	13.2		B	CAO	20	4	3	3
6822		PALE	09	11	1825	S08	E17	09	13.0		A	AX	10	1	1	2
6822		PALE	09	11	1825	S08	E18	09	13.1		A	AX	10	1	1	2
6822		CULG	09	12	0040	S05	E14	09	13.1		A	HA	10	1	1	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6822		SVTO	09 12 0750	S06 E10	09 13.1		A	AX		1		4
6822		RAMY	09 12 1238	S05 E09	09 13.2		A	AX	10	3	3	4
6822	27046	MWIL	09 12 1500	S06 E07	09 13.1	4	(AP)					
6822		HOLL	09 12 1730	S06 E07	09 13.2		B	BXO	10	2	4	3
6822		PALE	09 12 1845	S05 E06	09 13.2		A	AX		1		3
6822		SVTO	09 13 0716	S06 E00	09 13.3		A	AX	10	6	3	3
6822	27046	RAMY	09 13 1308	S06 W03	09 13.3		B	BXO	30	13	5	4
6822		MWIL	09 13 1500	S06 W06	09 13.2	4	(AP)					
6822		PALE	09 13 2000	S05 W03	09 13.6		A	AX	20	2	2	3
6822		RAMY	09 14 1205	S06 W16	09 13.3		B	BXO	10	9	3	3
6822		RAMY	09 15 1235	S05 W34	09 13.0		A	AX	10	3	2	4
6822		PALE	09 16 1815	S10 W43	09 13.5		A	AX	10	1	1	4
6831		RAMY	09 09 1318	N15 E52	09 13.5		A	AX	10	1		3
6831		RAMY	09 10 1205	N16 E41	09 13.6		B	BXO	10	4	5	4
6831		RAMY	09 11 1155	N15 E31	09 13.8		A	AX		2	1	4
6831		CULG	09 13 0055	N15 E10	09 13.8		B	CRO	10	4	3	2
6831		SVTO	09 13 0716	N14 E06	09 13.7		B	BXO	10	7	2	3
6831		RAMY	09 13 1308	N14 E03	09 13.8		B	DAO	60	19	4	4
6831		BOUL	09 13 1442	N14 E02	09 13.8		B	CSO	50	7	5	1
6831	27056	MWIL	09 13 1500	N14 E03	09 13.8	5	(B )					
6831		PALE	09 13 2000	N14 E03	09 14.1		B	DAO	40	4	5	3
6831		HOLL	09 13 2030	N15 E00	09 13.8		B	DSO	40	9	5	2
6831		CULG	09 14 0010	N15 W03	09 13.8		B	DAO	40	9	5	3
6831		SVTO	09 14 1202	N14 W10	09 13.7		B	CRO	20	3	5	2
6831		RAMY	09 14 1205	N15 W09	09 13.8		B	DAO	30	13	8	3
6831		BOUL	09 14 1445	N15 W10	09 13.8		B	DAO	50	5	6	2
6831	27056	MWIL	09 14 1500	N15 W11	09 13.8	5	(B )					
6831		HOLL	09 14 1650	N15 W12	09 13.8		B	DAO	40	7	5	2
6831		PALE	09 14 1900	N13 W13	09 13.8		B	DSO	30	15	7	2
6831		CULG	09 15 0100	N15 W16	09 13.8		B	BXO	10	5	6	2
6831		RAMY	09 15 1235	N14 W26	09 13.5		A	HR	20	5	2	4
6831		BOUL	09 15 1430	N14 W26	09 13.6		A	HA	20	2	1	1
6831	27056	MWIL	09 15 1500	N15 W25	09 13.7	4	(B )					
6831		HOLL	09 15 1506	N13 W28	09 13.5		A	AX	20	3	2	2
6831		PALE	09 15 1930	N14 W28	09 13.7		A	AX	10	2	2	3
6831		CULG	09 16 0040	N15 W32	09 13.6		B	BXO	10	2	2	3
6831A		RAMY	09 11 1155	S07 E33	09 14.0		A	AX	10	3	1	4
6831A		HOLL	09 11 1750	S08 E30	09 14.0		A	AX		1	1	3
6831A		RAMY	09 12 1238	S10 E18	09 13.9		A	AX	10	3	3	4
6833		SVTO	09 14 1202	N04 W06	09 14.0		B	BXO		2		2
6833		RAMY	09 14 1205	N04 W07	09 14.0		B	BXO	10	8	3	3
6833		BOUL	09 14 1445	N04 W07	09 14.1		A	AX		1		2
6833	27059	MWIL	09 14 1500	N03 W07	09 14.1	4	(AP)					
6833		HOLL	09 14 1650	N02 W08	09 14.1		A	AX		1	1	2
6833		PALE	09 14 1900	N04 W07	09 14.3		A	AX	10	2	2	2
6824		SVTO	09 08 0845	S21 E78	09 14.3		B	EHO	120	4	5	2
6824		RAMY	09 08 1214	S21 E78	09 14.5		B	DKO	190	8	5	4
6824	27049	MWIL	09 08 1445	S21 E76	09 14.4	5						
6824		HOLL	09 08 1535	S21 E75	09 14.4		B	DAI	260	10	8	3
6824		BOUL	09 08 1640	S20 E75	09 14.4		B	DAO	210	4	7	2
6824		PALE	09 08 1945	S19 E77	09 14.7		B	DAI	150	8	7	3
6824		CULG	09 09 0145	S19 E68	09 14.3		B	DKO	360	3	6	2
6824		SVTO	09 09 0620	S20 E66	09 14.3		B	DHO	220	7	5	4
6824		RAMY	09 09 1318	S21 E63	09 14.4		B	DKI	330	13	6	3
6824		BOUL	09 09 1504	S21 E62	09 14.4		B	DAO	380	6	7	1
6824	27049	MWIL	09 09 1515	S21 E62	09 14.4	5	(D )					
6824		PALE	09 09 2030	S19 E61	09 14.5		B	DAO	200	8	4	3
6824		SVTO	09 10 0720	S20 E53	09 14.3		B	DAI	220	11	7	3
6824		RAMY	09 10 1205	S20 E50	09 14.3		B	DAO	250	36	8	4
6824	27049	MWIL	09 10 1515	S21 E49	09 14.4	5	(BP)					
6824		PALE	09 10 2015	S20 E47	09 14.4		B	CAO	360	9	5	3
6824		SVTO	09 11 0725	S20 E41	09 14.4		B	DAI	210	13	6	3
6824		RAMY	09 11 1155	S20 E37	09 14.3		B	DAO	320	33	8	4
6824		BOUL	09 11 1430	S20 E36	09 14.3		B	DAO	190	14	4	1
6824	27049	MWIL	09 11 1515	S21 E36	09 14.4	5	(BG)					

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6824		HOLL	09 11 1750	S21 E35	09 14.4		B	DAI	260	12	5	3
6824		PALE	09 11 1825	S22 E32	09 14.2		B	DSO	220	10	7	2
6824		CULG	09 12 0040	S21 E29	09 14.2		B	DAO	210	7	6	1
6824		SVTO	09 12 0750	S20 E26	09 14.3		B	DAO	160	13	6	4
6824		RAMY	09 12 1238	S20 E25	09 14.4		BG	DAI	240	20	7	4
6824		BOUL	09 12 1449	S21 E23	09 14.4		B	DAO	140	14	6	1
6824	27049	MWIL	09 12 1500	S21 E23	09 14.4	5	(BG)					
6824		HOLL	09 12 1730	S19 E22	09 14.4		B	DAI	190	28	7	3
6824		PALE	09 12 1845	S20 E23	09 14.5		B	DSO	180	12	9	3
6824		CULG	09 13 0055	S20 E18	09 14.4		B	DAO	220	19	7	2
6824		SVTO	09 13 0716	S21 E15	09 14.4		B	DSI	140	16	6	3
6824		RAMY	09 13 1308	S20 E12	09 14.5		BG	DAI	190	21	7	4
6824		BOUL	09 13 1442	S20 E09	09 14.3		B	DAO	170	12	6	1
6824	27049	MWIL	09 13 1500	S20 E10	09 14.4	5	(BP)					
6824		PALE	09 13 2000	S20 E11	09 14.7		B	DAO	140	15	6	3
6824		HOLL	09 13 2030	S20 E08	09 14.5		B	DAI	190	13	6	2
6824		CULG	09 14 0010	S20 E05	09 14.4		B	DAO	110	18	8	3
6824		SVTO	09 14 1202	S21 W01	09 14.4		B	DSO	110	14	6	2
6824		RAMY	09 14 1205	S20 W01	09 14.4		BG	DAO	180	31	8	3
6824		BOUL	09 14 1445	S20 W03	09 14.4		B	DAI	130	14	6	2
6824	27049	MWIL	09 14 1500	S20 W04	09 14.3	5	(BG)					
6824		HOLL	09 14 1650	S20 W05	09 14.3		B	DAI	180	12	6	2
6824		PALE	09 14 1900	S22 W05	09 14.4		B	DAI	120	19	7	2
6824		CULG	09 15 0100	S20 W09	09 14.3		B	DSO	140	23	7	2
6824		RAMY	09 15 1235	S20 W16	09 14.3		B	DAO	80	20	6	4
6824		BOUL	09 15 1430	S20 W17	09 14.3		B	DSO	60	4	6	1
6824	27049	MWIL	09 15 1500	S20 W17	09 14.3	5	(AP)					
6824		HOLL	09 15 1506	S21 W16	09 14.4		B	DSO	40	14	6	2
6824		PALE	09 15 1930	S20 W16	09 14.6		B	DSO	50	17	5	3
6824		CULG	09 16 0040	S20 W22	09 14.3		B	DSO	70	1	6	3
6824		SVTO	09 16 1020	S22 W28	09 14.3		B	DSO	40	8	6	2
6824		RAMY	09 16 1310	S20 W29	09 14.3		B	CSO	30	8	5	3
6824		BOUL	09 16 1352	S20 W30	09 14.3		B	CSI	50	9	4	1
6824	27049	MWIL	09 16 1500	S20 W31	09 14.2	5	(BP)					
6824		HOLL	09 16 1600	S21 W32	09 14.2		B	DAO	40	11	6	3
6824		PALE	09 16 1815	S22 W33	09 14.2		B	CSO	50	4	7	4
6824		CULG	09 17 0058	S20 W35	09 14.4		B	CSO	30	5	6	2
6824		SVTO	09 17 1056	S22 W43	09 14.1		B	DSO	30	7	6	2
6824		RAMY	09 17 1220	S20 W41	09 14.4		B	CRO	30	11	6	1
6824		BOUL	09 17 1413	S20 W44	09 14.2		B	BXO	30	4	4	1
6824	27049	MWIL	09 17 1500	S20 W45	09 14.2	4	(BG)					
6824		HOLL	09 17 1625	S19 W45	09 14.2		A	AX		1		1
6824		PALE	09 17 1820	S22 W46	09 14.2		B	BXO	60	7	8	2
6824		PALE	09 18 1840	S25 W55	09 14.5		A	AX		1		4
6827		RAMY	09 09 1318	S21 E76	09 15.4		B	CRO	20	3	3	3
6827	27052	MWIL	09 09 1515	S22 E78	09 15.6	4	AP					
6827		SVTO	09 10 0720	S21 E67	09 15.4		B	BXO	50	4	3	3
6827		RAMY	09 10 1205	S20 E64	09 15.4		B	DRO	60	11	6	4
6827	27052	MWIL	09 10 1515	S20 E67	09 15.8	5	(B )					
6827		PALE	09 10 2015	S20 E65	09 15.8		B	BXO	140	8	14	3
6827		SVTO	09 11 0725	S18 E60	09 15.9		B	EAO	110	8	14	3
6827		RAMY	09 11 1155	S20 E54	09 15.6		B	EAO	150	36	15	4
6827		BOUL	09 11 1430	S20 E55	09 15.8		B	EAO	190	9	12	1
6827	27052	MWIL	09 11 1515	S20 E55	09 15.8	5	(D )					
6827		HOLL	09 11 1750	S20 E54	09 15.9		B	EAO	160	24	12	3
6827		PALE	09 11 1825	S23 E50	09 15.6		B	ESO	200	12	15	2
6827		CULG	09 12 0040	S20 E48	09 15.7		B	EAO	160	14	12	1
6827		SVTO	09 12 0750	S20 E42	09 15.5		B	FSO	130	26	16	4
6827		RAMY	09 12 1238	S20 E40	09 15.6		BG	FAO	180	35	16	4
6827		BOUL	09 12 1449	S21 E43	09 15.9		B	EAO	160	9	12	1
6827	27052	MWIL	09 12 1500	S20 E41	09 15.8	5	(D )					
6827		HOLL	09 12 1730	S20 E38	09 15.6		B	FAO	240	32	17	3
6827		PALE	09 12 1845	S20 E40	09 15.8		B	FSO	200	20	18	3
6827		CULG	09 13 0055	S20 E33	09 15.6		B	FAO	90	23	16	2
6827		SVTO	09 13 0716	S21 E32	09 15.7		B	FAO	160	35	16	3
6827		RAMY	09 13 1308	S21 E29	09 15.8		BG	FAO	290	54	16	4
6827		BOUL	09 13 1442	S21 E28	09 15.7		B	DAO	120	10	9	1
6827	27052	MWIL	09 13 1500	S20 E27	09 15.7	5	(B )					

SUNSPOT GROUPS  
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6827		PALE	09 13 2000	S20	E29	09 16.0		B	EAO	200	29	12	3
6827		HOLL	09 13 2030	S20	E25	09 15.8		B	EAI	210	47	14	2
6827		CULG	09 14 0010	S21	E23	09 15.8		B	CAO	80	24	11	3
6827		SVTO	09 14 1202	S20	E16	09 15.7		B	CAO	90	20	11	2
6827		RAMY	09 14 1205	S21	E15	09 15.6		B	EAO	150	37	13	3
6827		BOUL	09 14 1445	S19	E15	09 15.7		B	DAO	130	13	10	2
6827	27052	MWIL	09 14 1500	S20	E13	09 15.6	5	(BG)					
6827		HOLL	09 14 1650	S19	E13	09 15.7		B	EAI	170	18	11	2
6827		PALE	09 14 1900	S19	E12	09 15.7		B	EAI	140	37	12	2
6827		CULG	09 15 0100	S20	E10	09 15.8		B	EAO	90	15	13	2
6827		RAMY	09 15 1235	S20	W01	09 15.4		B	EAO	130	52	14	4
6827		BOUL	09 15 1430	S20	W02	09 15.4		B	DAO	80	7	4	1
6827	27052	MWIL	09 15 1500	S21	W02	09 15.5	5	(B )					
6827		HOLL	09 15 1506	S22	W05	09 16.0		B	EAI	120	19	13	2
6827		PALE	09 15 1930	S19	W01	09 15.9		B	DAO	80	20	8	3
6827		CULG	09 16 0040	S20	W04	09 15.7		B	ESO	100	20	11	3
6827		SVTO	09 16 1020	S20	W14	09 15.3		B	EAO	50	18	11	2
6827		RAMY	09 16 1310	S22	W12	09 15.6		B	DAO	70	19	7	3
6827		BOUL	09 16 1352	S20	W14	09 15.5		B	DSI	60	15	6	1
6827	27063	MWIL	09 16 1500	S18	W20	09 15.1	4	(AP)					
6827	27052	MWIL	09 16 1500	S22	W14	09 15.5	5	(B )					
6827		HOLL	09 16 1600	S21	W14	09 15.6		B	DAI	70	18	7	3
6827		PALE	09 16 1815	S21	W17	09 15.4		B	CSO	120	20	13	4
6827		CULG	09 17 0058	S20	W18	09 15.7		B	CSO	40	11	4	2
6827		SVTO	09 17 1056	S22	W25	09 15.5		B	CAO	30	15	7	2
6827		RAMY	09 17 1220	S21	W24	09 15.7		B	CAO	40	12	6	1
6827		BOUL	09 17 1413	S21	W26	09 15.6		B	CSO	50	6	5	1
6827	27063	MWIL	09 17 1500	S16	W30	09 15.3	4	(AP)					
6827	27052	MWIL	09 17 1500	S21	W27	09 15.5	4	(B )					
6827		HOLL	09 17 1625	S22	W27	09 15.6		B	CSO	70	9	5	1
6827		PALE	09 17 1820	S23	W27	09 15.7		B	DSO	60	8	6	2
6827		CULG	09 18 0055	S21	W32	09 15.6		B	CSO	30	8	5	2
6827		RAMY	09 18 1220	S20	W40	09 15.4		B	BXO	30	16	9	3
6827	27063	MWIL	09 18 1445	S16	W44	09 15.3	4	(AP)					
6827	27052	MWIL	09 18 1445	S21	W40	09 15.5	5	(B )					
6827		PALE	09 18 1840	S22	W43	09 15.5		B	BXO	30	6	12	4
6827		LEAR	09 19 0619	S23	W47	09 15.6		B	BXO	20	3	3	3
6827		RAMY	09 19 1330	S22	W50	09 15.7		A	AX		3	2	2
6827	27052	MWIL	09 19 1500	S23	W51	09 15.7	2	(AP)					
6827		PALE	09 19 1855	S23	W52	09 15.8		A	AX	20	3	2	3
6827A		RAMY	09 10 1205	S19	E74	09 16.1		B	DAO	60	7	3	4
6843		RAMY	09 20 1310	N05	W60	09 16.1		A	AX	10	1	1	3
6843		BOUL	09 20 1453	N07	W62	09 16.0		B	BXO	20	2	2	3
6843	27071	MWIL	09 20 1500	N07	W61	09 16.0	3	(B )					
6843		PALE	09 20 2000	N06	W60	09 16.3		A	AX	10	2	1	3
6843		CULG	09 21 0030	N07	W66	09 16.1		B	CSO	60	4	4	4
6843		SVTO	09 21 0715	N06	W70	09 16.1		B	CSO	40	3	6	4
6843		RAMY	09 21 1245	N06	W71	09 16.2		B	CAO	40	5	4	3
6843		BOUL	09 21 1440	N06	W72	09 16.2		B	CSO	50	3	6	1
6843	27071	MWIL	09 21 1445	N07	W75	09 16.0	4	(BP)					
6843		HOLL	09 21 1450	N05	W75	09 16.0		B	CSO	80	2	4	1
6843		LEAR	09 22 0007	N06	W79	09 16.1		B	CAO	60	2	6	3
6843A		RAMY	09 18 1220	S06	W31	09 16.2		A	AX		1		3
6828	27053	MWIL	09 10 1515	S11	E85	09 17.0	5	AP					
6828		PALE	09 10 2015	S09	E88	09 17.4		A	HS	120	1	2	3
6828		SVTO	09 11 0725	S08	E75	09 16.9		A	HA	100	2	2	3
6828		RAMY	09 11 1155	S10	E70	09 16.7		A	HS	80	1	2	4
6828		BOUL	09 11 1430	S11	E71	09 16.9		A	HS	120	1	3	1
6828	27053	MWIL	09 11 1515	S12	E69	09 16.8	5	(AP)					
6828		HOLL	09 11 1750	S11	E70	09 17.0		A	CS	100	4	8	3
6828		PALE	09 11 1825	S10	E68	09 16.9		A	HS	100	1	2	2
6828		CULG	09 12 0040	S11	E64	09 16.8		A	HA	50	1	2	1
6828		SVTO	09 12 0750	S11	E60	09 16.8		A	HS	60	1	2	4
6828		RAMY	09 12 1238	S12	E56	09 16.7		B	CSO	140	5	16	4
6828		BOUL	09 12 1449	S11	E54	09 16.7		A	HA	70	1	1	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual	
			Mo	Day	Time (UT)									Lat
6828	27053	MWIL	09	12	1500	S12 E58	09 17.0	5	(AP)					
6828		HOLL	09	12	1730	S10 E55	09 16.9		A	HS	60	2	5	3
6828		PALE	09	12	1845	S12 E52	09 17.4		B	CSO	70	2	12	3
6828		CULG	09	13	0055	S11 E50	09 16.8		A	HS	70	1	1	2
6828		SVTO	09	13	0716	S12 E47	09 16.8		A	HS	100	1	2	3
6828		RAMY	09	13	1308	S11 E43	09 16.8		A	HS	120	1	2	4
6828		BOUL	09	13	1442	S11 E42	09 16.8		A	HS	110	1	2	1
6828	27053	MWIL	09	13	1500	S12 E43	09 16.9	5	(AP)					
6828		PALE	09	13	2000	S09 E44	09 17.1		B	CAO	900	3	4	3
6828		HOLL	09	13	2030	S10 E41	09 16.9		B	CSO	140	4	4	2
6828		CULG	09	14	0010	S11 E39	09 16.9		B	CSO	110	3	4	3
6828		SVTO	09	14	1202	S11 E32	09 16.9		B	CSO	100	2	4	2
6828		RAMY	09	14	1205	S11 E32	09 16.9		B	CSO	120	2	4	3
6828		BOUL	09	14	1445	S11 E29	09 16.8		A	HS	70	1	1	2
6828	27053	MWIL	09	14	1500	S12 E29	09 16.8	5	(AP)					
6828		HOLL	09	14	1650	S10 E28	09 16.8		A	HS	110	1	2	2
6828		PALE	09	14	1900	S11 E28	09 16.9		A	HA	40	1	2	2
6828		CULG	09	15	0100	S11 E25	09 16.9		A	HS	90	1	2	2
6828		RAMY	09	15	1235	S11 E18	09 16.9		A	HS	130	1	2	4
6828		BOUL	09	15	1430	S11 E17	09 16.9		A	HS	70	1	1	1
6828	27053	MWIL	09	15	1500	S12 E16	09 16.8	6	(AP)					
6828		HOLL	09	15	1506	S11 E18	09 17.0		A	HS	110	1	2	2
6828		PALE	09	15	1930	S11 E17	09 17.1		A	HS	80	1	2	3
6828		CULG	09	16	0040	S11 E10	09 16.8		B	CSO	80	3	2	3
6828		SVTO	09	16	1020	S11 E06	09 16.9		A	HS	70	1	2	2
6828		RAMY	09	16	1310	S11 E04	09 16.8		A	HS	80	1	2	3
6828		BOUL	09	16	1352	S11 E08	09 17.2		A	HS	90	5	2	1
6828	27053	MWIL	09	16	1500	S12 E03	09 16.8	6	(AP)					
6828		HOLL	09	16	1600	S12 E01	09 16.7		B	CSO	140	3	6	3
6828		PALE	09	16	1815	S12 W00	09 16.8		A	HS	60	1	2	4
6828		CULG	09	17	0058	S11 W03	09 16.8		A	HS	90	1	2	2
6828		SVTO	09	17	1056	S11 W06	09 17.0		B	CSO	100	5	6	2
6828		RAMY	09	17	1220	S10 W08	09 16.9		B	CSO	120	4	3	1
6828		BOUL	09	17	1413	S10 W08	09 17.0		A	HS	100	4	3	1
6828	27053	MWIL	09	17	1500	S11 W10	09 16.9	6	(BP)					
6828		HOLL	09	17	1625	S11 W09	09 17.0		B	CSO	80	4	3	1
6828		PALE	09	17	1820	S12 W12	09 16.8		A	HS	50	1	1	2
6828		CULG	09	18	0055	S11 W16	09 16.8		A	HS	70	1	2	2
6828		RAMY	09	18	1220	S10 W21	09 16.9		A	HS	120	1	2	3
6828	27053	MWIL	09	18	1445	S11 W24	09 16.8	5	(AP)					
6828		PALE	09	18	1840	S12 W23	09 17.0		A	HS	70	1	2	4
6828		CULG	09	19	0045	S12 W29	09 16.8		A	HS	70	1	2	2
6828		LEAR	09	19	0619	S12 W32	09 16.8		B	CSO	80	4	3	3
6828		SVTO	09	19	0810	S12 W31	09 17.0		B	CSO	100	2	5	2
6828		RAMY	09	19	1330	S11 W36	09 16.8		A	HS	80	1	2	2
6828		BOUL	09	19	1443	S10 W37	09 16.8		A	HA	120	1	2	3
6828	27053	MWIL	09	19	1500	S12 W36	09 16.9	5	(AP)					
6828		PALE	09	19	1855	S12 W38	09 16.9		A	HS	80	1	2	3
6828		LEAR	09	20	0003	S11 W42	09 16.8		A	HS	80	1	2	3
6828		CULG	09	20	0030	S12 W42	09 16.8		A	HS	100	1	2	3
6828		SVTO	09	20	0711	S11 W46	09 16.8		A	HS	120	1	2	3
6828		RAMY	09	20	1310	S11 W49	09 16.9		A	HS	90	1	2	3
6828		BOUL	09	20	1453	S10 W49	09 16.9		A	HS	110	1	2	3
6828	27053	MWIL	09	20	1500	S12 W50	09 16.8	5	(AP)					
6828		PALE	09	20	2000	S11 W50	09 17.1		A	HS	110	1	2	3
6828		CULG	09	21	0030	S12 W58	09 16.6		A	HS	80	1	2	4
6828		SVTO	09	21	0715	S10 W59	09 16.9		A	HS	70	1	2	4
6828		RAMY	09	21	1245	S12 W61	09 16.9		A	HS	80	1	2	3
6828		BOUL	09	21	1440	S12 W63	09 16.9		A	HS	70	1	2	1
6828	27053	MWIL	09	21	1445	S12 W64	09 16.8	5	(AP)					
6828		HOLL	09	21	1450	S12 W63	09 16.9		A	HS	90	1	2	1
6828		SVTO	09	22	1001	S10 W73	09 16.9		A	HS	60	1	2	2
6828		HOLL	09	22	1500	S12 W79	09 16.7		A	HS	60	1	1	5
6828	27053	MWIL	09	22	1730	S11 W79	09 16.8	5	AP					
6828		PALE	09	22	1910	S12 W81	09 16.7		A	HS	60	1	3	4
6828		LEAR	09	23	0013	S12 W83	09 17.1		A	HS	30	1	2	3
6828		CULG	09	23	0125	S12 W87	09 16.5		A	HS	40	1	2	3
6828A		PALE	09	12	1845	S11 E55	09 16.9		B	BXO	20	4	4	3



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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6828B		RAMY	09 18 1220	N05 W16	09 17.3		A	AX		1		3
6835	27060	MWIL	09 15 1500	S25 E24	09 17.5	4	(AP)					
6835		CULG	09 16 0040	S25 E21	09 17.6		A	AX		1		3
6835		SVTO	09 16 1020	S25 E16	09 17.7		A	AX		1		2
6835		RAMY	09 16 1310	S25 E14	09 17.6		A	AX	10	1	1	3
6835	27060	MWIL	09 16 1500	S26 E12	09 17.5	4	(B )					
6835		PALE	09 16 1815	S25 E12	09 17.7		A	AX		1		4
6835		SVTO	09 22 1001	S25 W65	09 17.4		B	BXO	10	2	2	2
6835		HOLL	09 22 1500	S28 W69	09 17.2		B	BXO	40	4	4	5
6835	27076	MWIL	09 22 1730	S24 W70	09 17.3	3	X					
6835	27077	MWIL	09 22 1730	S28 W69	09 17.3	3	X					
6828C		RAMY	09 18 1220	N14 W11	09 17.7		A	AX	10	3	2	3
6834		RAMY	09 15 1235	N09 E31	09 17.8		A	AX	10	3	1	4
6834	27062	MWIL	09 15 1500	N09 E30	09 17.9	4	(AP)					
6834		HOLL	09 15 1506	N09 E30	09 17.9		B	BXO	10	4	3	2
6834	27062	MWIL	09 16 1500	N08 E17	09 17.9	4	(AP)					
6834		PALE	09 16 1815	N08 E15	09 17.9		A	AX		3		4
6834		CULG	09 17 0058	N09 E12	09 17.9		B	BXO	10	3	1	2
6834		SVTO	09 17 1056	N08 E06	09 17.9		A	AX		2	2	2
6834		RAMY	09 17 1220	N09 E04	09 17.8		A	AX	10	3	2	1
6834		BOUL	09 17 1413	N08 E02	09 17.7		A	AX		1		1
6834	27062	MWIL	09 17 1500	N08 E03	09 17.8	4	(AP)					
6834		HOLL	09 17 1625	N08 E02	09 17.8		A	AX		1		1
6834		PALE	09 17 1820	N08 E00	09 17.8		A	AX		1		2
6834		CULG	09 18 0055	N09 W03	09 17.8		A	AX		1		2
6834		RAMY	09 18 1220	N08 W11	09 17.7		A	AX		1		3
6834	27062	MWIL	09 18 1445	N08 W09	09 17.9	4	(AP)					
6834		PALE	09 18 1840	N08 W12	09 17.9		A	AX	10	2	2	4
6830	27055	MWIL	09 12 1500	S16 E70	09 17.9	3	(AF)					
6830		HOLL	09 12 1730	S13 E69	09 17.9		B	BXO	100	5	5	3
6830		PALE	09 12 1845	S12 E68	09 17.9		B	BXO	30	3	3	3
6830		CULG	09 13 0055	S16 E66	09 18.0		A	AX		1		2
6830		SVTO	09 13 0716	S14 E60	09 17.8		B	BXO	10	2	1	3
6830		RAMY	09 13 1308	S13 E58	09 17.9		B	BXO	10	2	4	4
6830		PALE	09 13 2000	S12 E55	09 18.0		A	AX	30	2	2	3
6830		RAMY	09 14 1205	S12 E44	09 17.8		B	BXO	10	4	3	3
6830		PALE	09 14 1900	S10 E41	09 17.9		B	BXO	10	2	3	2
6830		CULG	09 15 0100	S11 E38	09 17.9		B	BXO		2		2
6830		RAMY	09 15 1235	S12 E30	09 17.8		B	CRO	50	19	6	4
6830		BOUL	09 15 1430	S12 E30	09 17.9		B	CSO	20	3	1	1
6830	27061	MWIL	09 15 1500	S13 E28	09 17.7	5	(AF)					
6830		HOLL	09 15 1506	S13 E30	09 17.9		B	BXO	20	9	5	2
6830		PALE	09 15 1930	S14 E30	09 18.1		B	BXO	20	8	4	3
6830		CULG	09 16 0040	S11 E26	09 18.0		A	AX		1		3
6830	27061	MWIL	09 16 1500	S11 E15	09 17.7	4	(AF)					
6830		CULG	09 17 0058	S11 E11	09 17.9		B	BXO	10	4	1	2
6830		SVTO	09 17 1056	S13 E07	09 18.0		A	AX		1		2
6830		RAMY	09 17 1220	S11 E05	09 17.9		B	BXO	20	11	4	1
6830		BOUL	09 17 1413	S12 E03	09 17.8		B	BXO	10	3	3	1
6830	27061	MWIL	09 17 1500	S12 E03	09 17.8	4	(AF)					
6830		PALE	09 17 1820	S12 E02	09 17.9		B	BXO	40	11	5	2
6830		CULG	09 18 0055	S12 W02	09 17.9		B	BXO	10	2	2	2
6830		RAMY	09 18 1220	S12 W08	09 17.9		B	BXO	20	13	7	3
6830		PALE	09 18 1840	S12 W12	09 17.9		B	BXO	20	5	6	4
6830		LEAR	09 19 0619	S13 W17	09 18.0		B	BXO	20	6	4	3
6830		PALE	09 19 1855	S14 W24	09 18.0		B	BXO	10	4	4	3
6830		LEAR	09 20 0003	S15 W24	09 18.2		A	AX	10	1	1	3
6829	27054	MWIL	09 11 1515	N02 E85	09 18.0	5	AP					
6829		HOLL	09 11 1750	N02 E85	09 18.1		A	HS	40	1	1	3
6829		PALE	09 11 1825	N04 E88	09 18.3		A	HA	60	1	2	2
6829		CULG	09 12 0040	N02 E81	09 18.1		A	HS	120	1	5	1
6829		SVTO	09 12 0750	N01 E76	09 18.0		A	HS	80	1	2	4
6829		RAMY	09 12 1238	N02 E70	09 17.7		A	HS	160	1	2	4
6829		BOUL	09 12 1449	N01 E70	09 17.8		A	HS	120	1	2	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6829	27054	MWIL	09 12 1500	N02	E71	09 17.9	5	(AP)					
6829		HOLL	09 12 1730	N02	E68	09 17.8		A	HS	50	1	2	3
6829		PALE	09 12 1845	N03	E70	09 18.0		A	HS	100	1	2	3
6829		CULG	09 13 0055	N02	E65	09 17.9		A	HS	100	1	1	2
6829		SVTO	09 13 0716	N01	E62	09 17.9		A	HS	110	1	2	3
6829		RAMY	09 13 1308	N03	E58	09 17.9		A	HA	100	1	2	4
6829		BOUL	09 13 1442	N02	E59	09 18.0		A	HS	90	1	2	1
6829	27054	MWIL	09 13 1500	N02	E58	09 17.9	6	(AP)					
6829		PALE	09 13 2000	N03	E58	09 18.2		A	HS	70	2	2	3
6829		HOLL	09 13 2030	N03	E55	09 18.0		A	HS	140	1	2	2
6829		CULG	09 14 0010	N02	E53	09 18.0		A	HS	100	1	2	3
6829		SVTO	09 14 1202	N01	E46	09 17.9		A	HS	80	1	2	2
6829		RAMY	09 14 1205	N01	E46	09 17.9		A	HS	140	1	2	3
6829		BOUL	09 14 1445	N02	E44	09 17.9		A	HS	90	1	2	2
6829	27054	MWIL	09 14 1500	N02	E45	09 18.0	5	(AP)					
6829		HOLL	09 14 1650	N02	E42	09 17.8		A	HS	130	1	2	2
6829		PALE	09 14 1900	N03	E43	09 18.0		A	HS	80	1	2	2
6829		CULG	09 15 0100	N02	E39	09 17.9		A	HS	90	1	2	2
6829		RAMY	09 15 1235	N01	E31	09 17.8		B	CSO	140	7	4	4
6829		BOUL	09 15 1430	N02	E31	09 17.9		A	HS	70	1	1	1
6829	27054	MWIL	09 15 1500	N02	E31	09 17.9	5	(AP)					
6829		HOLL	09 15 1506	N02	E31	09 17.9		A	HS	110	1	2	2
6829		PALE	09 15 1930	N03	E32	09 18.2		A	HS	90	1	2	3
6829		CULG	09 16 0040	N02	E26	09 18.0		A	HS	90	1	2	3
6829		SVTO	09 16 1020	N02	E21	09 18.0		A	HA	90	2	2	2
6829		RAMY	09 16 1310	N02	E19	09 18.0		A	HS	100	1	2	3
6829		BOUL	09 16 1352	N02	E18	09 17.9		A	HS	110	1	2	1
6829	27054	MWIL	09 16 1500	N02	E18	09 18.0	6	(AP)					
6829		HOLL	09 16 1600	N02	E17	09 17.9		A	HS	120	1	2	3
6829		PALE	09 16 1815	N02	E17	09 18.0		B	CSO	60	4	3	4
6829		CULG	09 17 0058	N02	E13	09 18.0		B	CSO	90	4	3	2
6829		SVTO	09 17 1056	N01	E08	09 18.0		B	CSO	120	9	4	2
6829		RAMY	09 17 1220	N01	E08	09 18.1		B	CSO	140	11	5	1
6829		BOUL	09 17 1413	N01	E06	09 18.0		B	CSO	100	5	4	1
6829	27054	MWIL	09 17 1500	N02	E05	09 18.0	5	(BG)					
6829		HOLL	09 17 1625	N00	E05	09 18.0		B	CSO	150	5	4	1
6829		PALE	09 17 1820	N00	E05	09 18.1		B	CSO	90	8	5	2
6829		CULG	09 18 0055	N01	E00	09 18.0		B	CSO	90	2	3	2
6829		RAMY	09 18 1220	N02	W06	09 18.1		B	CSO	110	7	5	3
6829	27054	MWIL	09 18 1445	N02	W09	09 17.9	5	(AP)					
6829	27066	MWIL	09 18 1445	N04	W11	09 17.8	4	(AP)					
6829		PALE	09 18 1840	N01	W09	09 18.1		A	HS	60	1	2	4
6829		CULG	09 19 0045	N02	W15	09 17.9		A	HS	100	1	2	2
6829		LEAR	09 19 0619	N01	W17	09 18.0		B	CSO	80	2	3	3
6829		SVTO	09 19 0810	N01	W17	09 18.1		B	CSO	80	2	3	2
6829		RAMY	09 19 1330	N01	W21	09 18.0		A	HS	80	3	2	2
6829		BOUL	09 19 1443	N02	W21	09 18.0		B	CAO	90	5	3	3
6829	27054	MWIL	09 19 1500	N02	W22	09 18.0	5	(AP)					
6829		PALE	09 19 1855	N02	W23	09 18.1		A	HS	80	1	2	3
6829		LEAR	09 20 0003	N00	W29	09 17.8		B	CSO	80	3	5	3
6829		CULG	09 20 0030	N02	W28	09 17.9		A	HS	70	1	2	3
6829		SVTO	09 20 0711	N02	W31	09 18.0		A	HA	90	1	2	3
6829		RAMY	09 20 1310	N01	W35	09 17.9		A	HS	100	1	2	3
6829		BOUL	09 20 1453	N02	W36	09 17.9		A	HA	100	1	2	3
6829	27054	MWIL	09 20 1500	N02	W36	09 17.9	5	(AP)					
6829		PALE	09 20 2000	N02	W36	09 18.1		A	HS	70	1	2	3
6829		CULG	09 21 0030	N02	W42	09 17.9		A	HA	100	1	2	4
6829		SVTO	09 21 0715	N02	W44	09 18.0		A	HS	80	1	2	4
6829		RAMY	09 21 1245	N02	W47	09 18.0		A	HA	60	1	2	3
6829		BOUL	09 21 1440	N02	W49	09 17.9		A	HS	60	1	2	1
6829	27054	MWIL	09 21 1445	N02	W49	09 17.9	5	(AP)					
6829		HOLL	09 21 1450	N00	W50	09 17.9		A	HS	130	1	2	1
6829		LEAR	09 22 0007	N03	W54	09 18.0		A	HA	70	1	3	3
6829		CULG	09 22 0045	N02	W55	09 17.9		A	HS	80	1	2	3
6829		SVTO	09 22 1001	N03	W60	09 17.9		A	HS	50	1	2	2
6829		HOLL	09 22 1500	N01	W62	09 18.0		A	HS	80	1	1	5
6829	27054	MWIL	09 22 1730	N02	W64	09 17.9	5	AP					
6829		PALE	09 22 1910	N01	W66	09 17.9		A	HS	90	1	2	4
6829		LEAR	09 23 0013	N02	W67	09 18.0		A	HS	50	1	2	3

SUNSPOT GROUPS  
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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6829		CULG	09 23 0125	N02 W70	09 17.8		A	HS	110	1	2	3
6829		SVTO	09 23 0933	N02 W75	09 17.8		A	HS	60	1	2	3
6829	27054	MWIL	09 23 1615	N03 W76	09 18.0	5	(AP)					
6829		HOLL	09 23 1750	N01 W79	09 17.8		A	HS	60	1	1	3
6829		PALE	09 23 1810	N00 W80	09 17.8		A	HA	60	1	3	4
6829		LEAR	09 24 0010	N01 W78	09 18.2		A	HS	60	1	2	3
6829		CULG	09 24 0105	N02 W84	09 17.8		A	HS	40	1	1	3
6836		RAMY	09 16 1310	N23 E24	09 18.4		A	AX	10	1	1	3
6836	27064	MWIL	09 16 1500	N23 E21	09 18.2	4	(AP)					
6836		PALE	09 16 1815	N23 E22	09 18.4		A	AX		1		4
6836		RAMY	09 18 1220	N19 W05	09 18.1		A	AX	10	3	1	3
6836A		PALE	09 15 1930	N10 E32	09 18.2		A	AX	10	1	1	3
6837		RAMY	09 16 1310	N14 E27	09 18.6		A	AX	10	3	2	3
6837	27065	MWIL	09 16 1500	N15 E26	09 18.6	4	(AP)					
6837		PALE	09 16 1815	N17 E20	09 18.3		A	AX		1		4
6837		RAMY	09 17 1220	N17 E11	09 18.3		B	BXO	10	5	4	1
6837	27065	MWIL	09 17 1500	N15 E12	09 18.5	4	(AP)					
6837		PALE	09 17 1820	N13 E12	09 18.7		B	BXO	20	3	6	2
6837		CULG	09 18 0055	N16 E06	09 18.5		B	BXO	10	3	2	2
6837		RAMY	09 18 1220	N14 W01	09 18.4		B	BXO	10	7	4	3
6837	27065	MWIL	09 18 1445	N17 W05	09 18.2	4	(AP)					
6837		PALE	09 18 1840	N16 W02	09 18.6		A	AX		1		4
6837		PALE	09 19 1855	N13 W15	09 18.6		A	AX	10	2	1	3
6837A		RAMY	09 15 1235	S13 E40	09 18.5		A	AX	10	4	2	4
6847		HOLL	09 22 1500	S23 W53	09 18.5		A	AX	20	3	1	5
6847	27078	MWIL	09 22 1730	S22 W54	09 18.6	4	AP					
6847		PALE	09 22 1910	S24 W55	09 18.5		B	BXO	40	5	7	4
6847		LEAR	09 23 0013	S23 W56	09 18.7		B	BXO	20	3	4	3
6847		CULG	09 23 0125	S23 W57	09 18.7		B	CAO	10	4	6	3
6847	27078	MWIL	09 23 1615	S23 W65	09 18.7	4	(B )					
6847		HOLL	09 23 1750	S24 W65	09 18.7		B	BXO	40	5	8	3
6847		PALE	09 23 1810	S27 W67	09 18.5		B	BXO	50	4	8	4
6847		RAMY	09 24 1229	S25 W70	09 19.1		A	AX		1		3
6847	27081	MWIL	09 24 1500	S25 W72	09 19.0	4	(AP)					
6847		RAMY	09 25 1339	S22 W82	09 19.3		A	AX		1		3
6832		SVTO	09 13 0716	N06 E78	09 19.1		A	AX	10	4	3	3
6832		RAMY	09 13 1308	N07 E77	09 19.3		B	CRO	100	9	5	4
6832	27057	MWIL	09 13 1500	N06 E75	09 19.2	4	(B					
6832		PALE	09 13 2000	N08 E75	09 19.4		B	DSO	110	7	6	3
6832		HOLL	09 13 2030	N08 E72	09 19.2		B	BXO	90	12	7	2
6832		CULG	09 14 0010	N06 E70	09 19.2		B	CAO	90	14	7	3
6832		SVTO	09 14 1202	N06 E65	09 19.4		B	DAO	110	13	7	2
6832		RAMY	09 14 1205	N05 E62	09 19.1		B	DAI	150	14	8	3
6832		BOUL	09 14 1445	N06 E63	09 19.3		B	DAI	190	13	7	2
6832	27057	MWIL	09 14 1500	N06 E63	09 19.3	5	(D )					
6832		HOLL	09 14 1650	N07 E61	09 19.3		B	DAO	140	16	7	2
6832		PALE	09 14 1900	N08 E60	09 19.3		B	DAO	170	16	7	2
6832		CULG	09 15 0100	N06 E57	09 19.3		B	DSO	10	7	8	2
6832		RAMY	09 15 1235	N06 E49	09 19.2		B	DAI	180	30	9	4
6832		BOUL	09 15 1430	N06 E48	09 19.2		B	DSI	150	8	9	1
6832	27057	MWIL	09 15 1500	N06 E48	09 19.2	5	(B )					
6832		HOLL	09 15 1506	N08 E48	09 19.2		B	DAI	110	24	8	2
6832		PALE	09 15 1930	N08 E49	09 19.5		B	DSO	100	21	9	3
6832		CULG	09 16 0040	N07 E43	09 19.2		B	DSO	110	17	8	3
6832		SVTO	09 16 1020	N07 E36	09 19.1		B	DAO	120	17	7	2
6832		RAMY	09 16 1310	N07 E36	09 19.2		B	DKI	150	35	8	3
6832		BOUL	09 16 1352	N07 E34	09 19.1		B	DAI	100	19	9	1
6832	27057	MWIL	09 16 1500	N07 E34	09 19.2	5	(B )					
6832		HOLL	09 16 1600	N07 E33	09 19.1		B	DAI	180	33	8	3
6832		PALE	09 16 1815	N08 E32	09 19.1		B	DAO	140	17	8	4
6832		CULG	09 17 0058	N07 E30	09 19.3		B	DAO	120	15	7	2
6832		SVTO	09 17 1056	N07 E24	09 19.2		B	EAI	130	30	11	2
6832		RAMY	09 17 1220	N08 E22	09 19.2		B	DAO	150	37	10	1

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6832		BOUL	09 17	1413	N08 E21	09 19.2		B	DAI	160	21	9	1
6832	27057	MWIL	09 17	1500	N07 E21	09 19.2	5	(BG)					
6832		HOLL	09 17	1625	N08 E20	09 19.2		BG	DAO	190	24	9	1
6832		PALE	09 17	1820	N08 E19	09 19.2		BG	DAO	100	9	10	2
6832		CULG	09 18	0055	N07 E16	09 19.2		B	DAO	140	23	10	2
6832		RAMY	09 18	1220	N08 E08	09 19.1		B	EKI	340	47	12	3
6832	27057	MWIL	09 18	1445	N07 E05	09 19.0	5	(D)					
6832		PALE	09 18	1840	N08 E07	09 19.3		BG	EAI	160	29	12	4
6832		CULG	09 19	0045	N08 E01	09 19.1		BG	EAI	230	24	13	2
6832		LEAR	09 19	0619	N08 W01	09 19.2		BG	EAI	290	44	14	3
6832		SVTO	09 19	0810	N08 W05	09 19.0		BG	EAI	240	30	13	2
6832		RAMY	09 19	1330	N08 W07	09 19.0		B	EKI	210	41	13	2
6832	27057	BOUL	09 19	1443	N09 W07	09 19.1		B	EAI	340	52	13	3
6832		MWIL	09 19	1500	N08 W08	09 19.0	5	(D)					
6832		PALE	09 19	1855	N07 W08	09 19.2		B	EAI	220	48	13	3
6832		LEAR	09 20	0003	N08 W12	09 19.1		BG	EAI	240	33	14	3
6832		CULG	09 20	0030	N08 W15	09 18.9		BG	EAO	240	23	13	3
6832		SVTO	09 20	0711	N08 W17	09 19.0		BG	FAI	300	29	16	3
6832		RAMY	09 20	1310	N08 W20	09 19.0		B	EKI	230	33	13	3
6832		BOUL	09 20	1453	N09 W22	09 19.0		B	EAI	270	39	12	3
6832	27057	MWIL	09 20	1500	N08 W22	09 19.0	5	(BP)					
6832		PALE	09 20	2000	N08 W22	09 19.2		B	EKI	210	37	14	3
6832		CULG	09 21	0030	N08 W29	09 18.8		BG	EAI	240	28	13	4
6832		SVTO	09 21	0715	N09 W31	09 19.0		BG	EAO	220	20	13	4
6832		RAMY	09 21	1245	N07 W34	09 19.0		B	EKO	230	31	15	3
6832		BOUL	09 21	1440	N07 W36	09 18.9		B	EAI	210	16	12	1
6832	27057	MWIL	09 21	1445	N08 W36	09 18.9	5	(BG)					
6832		HOLL	09 21	1450	N08 W39	09 18.7		BG	ESI	230	12	12	1
6832		LEAR	09 22	0007	N08 W40	09 19.0		B	EAO	160	18	13	3
6832		CULG	09 22	0045	N08 W42	09 18.9		BG	DAO	220	13	9	3
6832		SVTO	09 22	1001	N09 W46	09 19.0		B	CSO	120	20	13	2
6832		HOLL	09 22	1500	N08 W50	09 18.9		BG	EHI	210	24	12	5
6832	27057	MWIL	09 22	1730	N08 W55	09 18.6	5	BP					
6832		PALE	09 22	1910	N08 W52	09 18.9		BG	EHI	140	21	12	4
6832		LEAR	09 23	0013	N08 W54	09 19.0		B	ESO	150	14	13	3
6832		CULG	09 23	0125	N08 W57	09 18.8		BG	CSI	120	18	12	3
6832		SVTO	09 23	0933	N08 W59	09 19.0		BG	CAO	140	12	13	3
6832	27057	MWIL	09 23	1615	N08 W66	09 18.7	5	(B)					
6832		HOLL	09 23	1750	N07 W66	09 18.8		BG	CSO	160	8	13	3
6832		PALE	09 23	1810	N07 W66	09 18.8		B	CHO	130	6	11	4
6832		LEAR	09 24	0010	N06 W70	09 18.8		A	HS	120	1	3	3
6832		CULG	09 24	0105	N08 W68	09 18.9		BG	CSO	120	6	12	3
6832		RAMY	09 24	1229	N06 W80	09 18.5		A	HA	120	1	2	3
6832		BOUL	09 24	1356	N07 W80	09 18.6		A	HS	60	1	2	1
6832	27057	MWIL	09 24	1500	N07 W81	09 18.5	5	(AP)					
6832		HOLL	09 24	1735	N07 W87	09 18.2		A	HS	80	1	1	3
6832		PALE	09 24	1900	N04 W88	09 18.2		B	CSO	30	2	3	4
6841		PALE	09 17	1820	S14 E19	09 19.2		A	AX		1		2
6841		RAMY	09 18	1220	S16 E09	09 19.2		A	AX	10	4	2	3
6841		RAMY	09 19	1330	S15 W03	09 19.3		A	AX	10	2	2	2
6841		BOUL	09 19	1443	S13 W03	09 19.4		B	BXO	10	3	1	3
6841	27070	MWIL	09 19	1500	S14 W04	09 19.3	4	(B)					
6841		PALE	09 19	1855	S14 W06	09 19.3		B	CSO	30	6	3	3
6841		LEAR	09 20	0003	S14 W09	09 19.3		B	BXO	30	6	4	3
6841		CULG	09 20	0030	S14 W09	09 19.3		B	CRO	20	4	3	3
6841		SVTO	09 20	0711	S14 W13	09 19.3		B	DAO	30	7	4	3
6841		RAMY	09 20	1310	S15 W17	09 19.3		B	BXO	20	10	4	3
6841		BOUL	09 20	1453	S13 W17	09 19.3		B	CAO	60	7	4	3
6841	27070	MWIL	09 20	1500	S14 W16	09 19.4	5	(BP)					
6841		PALE	09 20	2000	S15 W18	09 19.5		B	BXO	20	11	4	3
6841		CULG	09 21	0030	S14 W23	09 19.3		B	CSO	20	4	4	4
6841		SVTO	09 21	0715	S13 W26	09 19.3		B	CRO	30	9	5	4
6841		RAMY	09 21	1245	S13 W28	09 19.4		B	CAO	90	11	6	3
6841		BOUL	09 21	1440	S12 W29	09 19.4		B	CSO	60	6	5	1
6841	27070	MWIL	09 21	1445	S13 W31	09 19.3	4	(BP)					
6841		HOLL	09 21	1450	S12 W30	09 19.3		B	CSO	50	6	5	1
6841		CULG	09 22	0045	S14 W36	09 19.3		B	CSO	70	13	5	3
6841		SVTO	09 22	1001	S13 W40	09 19.4		B	CSO	50	9	5	2

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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
6841		HOLL	09 22	1500	S12 W43	09 19.4		BG	CSI	110	13	7	5
6841	27070	MWIL	09 22	1730	S11 W47	09 19.2	5	BP					
6841		PALE	09 22	1910	S13 W46	09 19.3		BG	CSI	110	17	9	4
6841		LEAR	09 23	0013	S12 W49	09 19.3		B	DSO	110	11	7	3
6841		CULG	09 23	0125	S13 W50	09 19.3		BG	CSI	80	18	6	3
6841		SVTO	09 23	0933	S12 W54	09 19.3		BG	DAO	110	14	8	3
6841	27070	MWIL	09 23	1615	S12 W58	09 19.3	5	(BP)					
6841		HOLL	09 23	1750	S13 W60	09 19.2		B	DSO	150	12	7	3
6841		PALE	09 23	1810	S12 W60	09 19.2		B	DSO	110	13	9	4
6841		LEAR	09 24	0010	S12 W64	09 19.2		B	CSO	60	7	8	3
6841		CULG	09 24	0105	S12 W65	09 19.1		B	CAO	110	10	8	3
6841		RAMY	09 24	1229	S14 W68	09 19.4		B	CAO	80	8	7	3
6841		BOUL	09 24	1356	S12 W72	09 19.1		B	CSO	100	5	9	1
6841	27070	MWIL	09 24	1500	S12 W72	09 19.2	5	(B )					
6841		HOLL	09 24	1735	S13 W72	09 19.3		B	CSO	90	7	11	3
6841		PALE	09 24	1900	S13 W76	09 19.0		B	CSO	60	3	9	4
6841		LEAR	09 25	0016	S12 W78	09 19.1		A	HS	60	7	2	3
6841		CULG	09 25	0105	S12 W78	09 19.2		B	CAO	20	5	8	2
6841		RAMY	09 25	1339	S12 W89	09 18.9		A	AX		1		3
6837B		LEAR	09 25	0016	N08 W75	09 19.4		B	BXO	30	3	4	3
6841B	27072	MWIL	09 20	1500	N17 W15	09 19.5	3	(AF)					
6840		RAMY	09 18	1220	N07 E21	09 20.1		A	AX	10	4	2	3
6840	27067	MWIL	09 18	1445	N06 E21	09 20.2	4	(B )					
6840		PALE	09 18	1840	N08 E17	09 20.0		B	BXO	10	3	4	4
6840		CULG	09 19	0045	N07 E14	09 20.1		B	BXO	10	2	2	2
6840		LEAR	09 19	0619	N08 E10	09 20.0		B	BXO	20	9	6	3
6840		SVTO	09 19	0810	N08 E11	09 20.2		B	BXO	10	4	3	2
6840		RAMY	09 19	1330	N06 E06	09 20.0		B	BXO	10	14	6	2
6840		BOUL	09 19	1443	N08 E06	09 20.1		B	BXO	10	8	6	3
6840	27067	MWIL	09 19	1500	N07 E07	09 20.1	4	(B )					
6840		PALE	09 19	1855	N07 E04	09 20.1		B	BXO	20	10	6	3
6840		LEAR	09 20	0003	N07 E01	09 20.1		B	BXO	20	5	5	3
6840		CULG	09 20	0030	N08 W01	09 19.9		B	BXO	10	3	5	3
6840		SVTO	09 20	0711	N07 W01	09 20.2		A	AX		2	1	3
6840		RAMY	09 20	1310	N07 W11	09 19.7		A	AX		4	2	3
6840		BOUL	09 20	1453	N07 W11	09 19.8		B	BXO	10	3	1	3
6840		PALE	09 20	2000	N09 W09	09 20.1		A	AX	10	2	2	3
6841A		SVTO	09 21	0715	S22 W16	09 20.1		B	BXO	10	2	1	4
6840A		RAMY	09 20	1310	N25 E00	09 20.5		A	AX		3	1	3
6840A		PALE	09 20	2000	N26 W02	09 20.7		A	AX		1	1	3
6840B		RAMY	09 20	1310	S17 E04	09 20.8		A	AX	10	3	1	3
6840C		PALE	09 17	1820	N04 E52	09 21.6		A	AX		1		2
6840C		BOUL	09 20	1453	N04 E15	09 21.7		G	AX		1		3
6844		RAMY	09 20	1310	S11 E21	09 22.1		A	AX		2	1	3
6844	27073	BOUL	09 20	1453	S11 E19	09 22.0		B	BXO	10	4	2	3
6844		MWIL	09 20	1500	S12 E20	09 22.1	3	(BP)					
6844		PALE	09 20	2000	S12 E22	09 22.5		B	BXO	10	5	3	3
6844		CULG	09 21	0030	S12 E15	09 22.1		B	BXO	20	8	6	4
6844		SVTO	09 21	0715	S12 E11	09 22.1		B	CRO	20	12	6	4
6844		RAMY	09 21	1245	S12 E08	09 22.1		B	DRO	30	8	7	3
6844		BOUL	09 21	1440	S10 E06	09 22.1		B	BXO	20	7	4	1
6844	27073	MWIL	09 21	1445	S12 E06	09 22.1	4	(AP)					
6844		HOLL	09 21	1450	S12 E06	09 22.1		B	BXO	10	8	4	1
6844		SVTO	09 22	1001	S11 W04	09 22.1		B	BXO	30	17	5	2
6844		HOLL	09 22	1500	S10 W07	09 22.1		B	BXO	40	36	6	5
6844	27073	MWIL	09 22	1730	S10 W09	09 22.0	4	B					
6844		PALE	09 22	1910	S10 W09	09 22.1		B	DSO	70	21	7	4
6844		LEAR	09 23	0013	S10 W12	09 22.1		B	BXO	40	17	6	3
6844		CULG	09 23	0125	S10 W14	09 22.0		B	CAI	30	25	5	3
6844	27073	MWIL	09 23	1615	S10 W22	09 22.0	5	(B )					
6844		HOLL	09 23	1750	S10 W21	09 22.2		B	BXO	20	12	6	3

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)								
6844		PALE	09	23	1810	S11 W21	09 22.2	B	BXO	30	10	5	4
6844		LEAR	09	24	0010	S10 W25	09 22.1	B	BXO	30	7	7	3
6844		CULG	09	24	0105	S10 W27	09 22.0	B	BXO	10	10	5	3
6844	27073	MWIL	09	24	1500	S11 W33	09 22.1	5	(B )				
6844		HOLL	09	24	1735	S08 W34	09 22.2	A	AX		1		3
6844		PALE	09	25	2100	S12 W47	09 22.3	A	AX		1		3
6844		PALE	09	26	2035	S12 W60	09 22.3	A	AX	10	2	1	3
6838		PALE	09	17	1820	N12 E61	09 22.3	B	BXO	20	3	4	2
6838		CULG	09	18	0055	N09 E57	09 22.3	B	BXO		2	2	2
6838		RAMY	09	18	1220	N10 E48	09 22.1	B	BXO	20	4	3	3
6838	27068	MWIL	09	18	1445	N09 E48	09 22.2	5	(B )				
6838		PALE	09	18	1840	N11 E48	09 22.4	B	BXO	20	2	4	4
6838		CULG	09	19	0045	N11 E43	09 22.3	B	BXO	10	2	3	2
6838		LEAR	09	19	0619	N08 E40	09 22.3	B	BXO	10	3	4	3
6838		SVTO	09	19	0810	N10 E38	09 22.2	B	BXO	10	2	4	2
6838		RAMY	09	19	1330	N09 E36	09 22.3	A	AX	10	4	3	2
6838		BOUL	09	19	1443	N10 E34	09 22.2	B	BXO	10	2	3	3
6838	27068	MWIL	09	19	1500	N09 E35	09 22.2	4	(B )				
6838		PALE	09	19	1855	N09 E33	09 22.3	A	AX	10	1	1	3
6838		LEAR	09	20	0003	N10 E28	09 22.1	B	BXO	10	2	3	3
6838		BOUL	09	20	1453	N10 E20	09 22.1	A	AX		1		3
6838		PALE	09	20	2000	N11 E24	09 22.6	A	AX	10	2	2	3
6838		SVTO	09	21	0715	N09 E14	09 22.3	A	AX	10	3	2	4
6838		RAMY	09	21	1245	N09 E12	09 22.4	B	BXO	10	3	3	3
6838	27068	MWIL	09	21	1445	N09 E12	09 22.5	3	(BG)				
6838		CULG	09	22	0045	N10 E05	09 22.4	B	BXO		2	3	3
6838		SVTO	09	22	1001	N10 E00	09 22.4	B	BXO	20	8	4	2
6838		HOLL	09	22	1500	N10 W03	09 22.4	B	CRO	30	16	4	5
6838	27068	MWIL	09	22	1730	N10 W05	09 22.3	5	B				
6838		PALE	09	22	1910	N10 W05	09 22.4	B	CSO	40	13	4	4
6838		LEAR	09	23	0013	N10 W07	09 22.5	B	CSO	30	9	4	3
6838		CULG	09	23	0125	N10 W09	09 22.4	B	BXO	10	7	4	3
6838		SVTO	09	23	0933	N10 W13	09 22.4			30	96	5	3
6838	27068	MWIL	09	23	1615	N10 W17	09 22.4	5	(B )				
6838		HOLL	09	23	1750	N08 W18	09 22.4	B	CSO	50	12	5	3
6838		PALE	09	23	1810	N09 W18	09 22.4	B	CSO	50	11	6	4
6838		LEAR	09	24	0010	N09 W22	09 22.3	B	CSO	40	9	6	3
6838		CULG	09	24	0105	N10 W23	09 22.3	B	CAO	30	13	6	3
6838		RAMY	09	24	1229	N10 W29	09 22.3	B	CAO	80	13	7	3
6838		BOUL	09	24	1356	N09 W29	09 22.4	B	CAI	80	12	4	1
6838	27068	MWIL	09	24	1500	N10 W30	09 22.4	6	(B )				
6838		HOLL	09	24	1735	N09 W32	09 22.3	B	CSI	110	12	6	3
6838		PALE	09	24	1900	N08 W32	09 22.4	B	DAO	80	13	6	4
6838		LEAR	09	25	0016	N09 W35	09 22.4	B	DAO	100	11	5	3
6838		CULG	09	25	0105	N10 W37	09 22.3	B	CAO	70	13	6	2
6838		SVTO	09	25	0712	N10 W39	09 22.4	B	DAO	100	13	5	3
6838		RAMY	09	25	1339	N10 W43	09 22.3	B	CAO	80	14	6	3
6838		BOUL	09	25	1447	N08 W43	09 22.4	B	DAO	130	20	6	2
6838		HOLL	09	25	1500	N09 W44	09 22.3	B	CAO	50	15	7	4
6838	27068	MWIL	09	25	1615	N10 W45	09 22.3	5	(BG)				
6838		PALE	09	25	2100	N08 W45	09 22.5	B	DAO	80	22	7	3
6838		LEAR	09	26	0044	N10 W49	09 22.3	B	CAO	120	8	6	2
6838		CULG	09	26	0130	N09 W50	09 22.3	B	CAO	90	15	6	3
6838		SVTO	09	26	0637	N10 W53	09 22.3	B	CAO	120	10	6	4
6838		RAMY	09	26	1311	N10 W57	09 22.3	B	CAO	90	9	7	3
6838		BOUL	09	26	1458	N10 W57	09 22.3	B	DAO	130	13	6	3
6838	27068	MWIL	09	26	1500	N09 W58	09 22.3	5	(BP)				
6838		HOLL	09	26	1601	N08 W58	09 22.3	B	CAO	70	7	7	3
6838		LEAR	09	27	0020	N08 W63	09 22.3	B	CRO	40	3	5	2
6838		CULG	09	27	0105	N09 W60	09 22.5	B	CSO	90	2	3	3
6838		SVTO	09	27	0700	N10 W68	09 22.2	B	CSO	40	2	6	4
6838		RAMY	09	27	1220	N09 W71	09 22.2	B	CAO	100	3	6	3
6838		BOUL	09	27	1507	N08 W72	09 22.2	A	HS	80	1	2	2
6838		HOLL	09	27	1515	N08 W74	09 22.1	A	HS	60	1	1	4
6838	27068	MWIL	09	27	1545	N09 W75	09 22.0	5	(BP)				
6838		PALE	09	27	2000	N08 W75	09 22.2	B	CAO	110	2	11	3
6838		LEAR	09	28	0035	N10 W78	09 22.2	A	HS	60	2	3	2
6838		RAMY	09	28	1250	N09 W81	09 22.4	B	BXO	30	2	1	2

SUNSPOT GROUPS  
(Ordered by Central Meridian Passage Date)

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)		Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6838		PALE	09 28	1730	N08 W87	09 22.2		A	AX	10	1	1	4
6839	27069	RAMY	09 18	1220	N07 E60	09 23.0		B	BXO	20	4	3	3
6839		MWIL	09 18	1445	N06 E61	09 23.2	3	(AP)					
6839	27069	BOUL	09 20	1453	N08 E32	09 23.0		A	AX	10	1	1	3
6839		MWIL	09 20	1500	N08 E34	09 23.2	2	(AF)					
6839	27069	SVTO	09 21	0715	N08 E23	09 23.0		A	AX		1		4
6839		RAMY	09 21	1245	N08 E20	09 23.0		A	AX	10	7	2	3
6839	27069	BOUL	09 21	1440	N07 E18	09 22.9		A	AX		2	1	1
6839		MWIL	09 21	1445	N07 E19	09 23.0	3	(AP)					
6839	27069	HOLL	09 22	1500	N07 E05	09 23.0		B	BXO	20	12	5	5
6839		MWIL	09 22	1730	N06 E04	09 23.0	4	AP					
6839		PALE	09 22	1910	N08 E03	09 23.0		B	BXO	10	2	4	4
6839B	27079	MWIL	09 23	1615	N16 W04	09 23.4	4	(AP)					
6839A		PALE	09 22	1910	S32 E15	09 24.0		B	BXO	10	3	3	4
6839A		LEAR	09 23	0013	S32 E11	09 23.9		B	BXO	10	3	3	3
6839A		CULG	09 23	0125	S33 E08	09 23.7		B	BXO		4	3	3
6839A		SVTO	09 28	0835	S27 W57	09 23.9		A	AX	10	1		3
6839A		HOLL	09 28	1520	S29 W63	09 23.7		A	AX	20	1		4
6839A		PALE	09 28	1730	S30 W64	09 23.7		A	AX	10	1	1	4
6849	27082	CULG	09 22	0045	N12 E20	09 23.5		A	AX		1		3
6849		PALE	09 23	1810	N12 E05	09 24.1		A	AX	10	2	2	4
6849	27082	RAMY	09 24	1229	N11 W06	09 24.1		B	BXO	20	11	4	3
6849		BOUL	09 24	1356	N11 W05	09 24.2		B	CSI	30	7	3	1
6849	27082	MWIL	09 24	1500	N12 W07	09 24.1	5	(B)					
6849		HOLL	09 24	1735	N11 W08	09 24.1		B	BXO	30	9	6	3
6849	27082	PALE	09 24	1900	N10 W09	09 24.1		B	CSO	40	11	6	4
6849		LEAR	09 25	0016	N10 W11	09 24.2		B	CSO	50	14	6	3
6849	27082	CULG	09 25	0105	N11 W12	09 24.1		B	CAO	20	16	6	2
6849		SVTO	09 25	0712	N10 W15	09 24.2		B	DAO	70	11	6	3
6849	27082	RAMY	09 25	1339	N11 W19	09 24.1		B	BXO	30	23	6	3
6849		BOUL	09 25	1447	N11 W18	09 24.3		B	DAO	60	22	7	2
6849	27082	HOLL	09 25	1500	N11 W19	09 24.2		B	CAO	30	14	6	4
6849		MWIL	09 25	1615	N11 W21	09 24.1	5	(BG)					
6849	27082	PALE	09 25	2100	N10 W21	09 24.3		B	DAO	50	21	8	3
6849		LEAR	09 26	0044	N11 W26	09 24.1		B	DAO	90	14	7	2
6849	27082	CULG	09 26	0130	N11 W25	09 24.2		B	DAI	60	23	6	3
6849		SVTO	09 26	0637	N11 W29	09 24.1		B	CAO	60	10	6	4
6849	27082	RAMY	09 26	1311	N11 W33	09 24.1		B	CAO	60	9	6	3
6849		BOUL	09 26	1458	N11 W33	09 24.1		B	CAO	50	10	6	3
6849	27082	MWIL	09 26	1500	N11 W34	09 24.1	5	(B)					
6849		HOLL	09 26	1601	N11 W35	09 24.0		B	CAO	60	10	7	3
6849	27082	PALE	09 26	2035	N12 W34	09 24.3		B	DSO	50	16	9	3
6849		LEAR	09 27	0020	N11 W38	09 24.1		B	BXO	30	7	7	2
6849	27082	CULG	09 27	0105	N11 W39	09 24.1		B	BXO	20	13	8	3
6849		SVTO	09 27	0700	N11 W41	09 24.2		B	BXO	30	9	7	4
6849	27082	RAMY	09 27	1220	N11 W46	09 24.0		B	BXO	20	7	7	3
6849		BOUL	09 27	1507	N11 W46	09 24.2		B	CAO	30	5	7	2
6849	27082	HOLL	09 27	1515	N10 W47	09 24.1		B	BXO	20	4	6	4
6849		MWIL	09 27	1545	N12 W48	09 24.0	4	(B)					
6849	27082	LEAR	09 28	0035	N12 W51	09 24.2		B	DSO	60	4	8	2
6849		SVTO	09 28	0835	N11 W57	09 24.1		B	BXO	20	2	6	3
6849	27082	RAMY	09 28	1250	N11 W58	09 24.2		B	BXO	20	2	5	2
6849		BOUL	09 28	1445	N12 W60	09 24.1		B	BXO	10	2	4	3
6849	27082	HOLL	09 28	1520	N11 W60	09 24.1		B	BXO	30	2	6	4
6849		PALE	09 28	1730	N10 W63	09 24.0		B	BXO	20	3	6	4
6849	27082	MWIL	09 28	2115	N12 W66	09 23.9	4	(AP)					
6849		SVTO	09 29	0717	N10 W73	09 23.8		A	AX	20	1	1	4
6849	27082	MWIL	09 29	1500	N12 W76	09 23.9	4	(AP)					
6849		RAMY	09 29	1716	N12 W74	09 24.1		B	BXO	10	2	3	2
6849A		PALE	09 25	2035	S21 W22	09 24.2		A	AX	10	2	1	3
6849B		BOUL	09 25	1447	N18 W17	09 24.3		A	AX		1		2
6849C		RAMY	09 26	1311	S20 W20	09 25.0		A	AX		3	2	3

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NOAA/ USAF Group	Mt Wilson Group	Observation Sta	Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long- Extent (Deg)	Qual
			Mo	Day										
6849C		BOUL	09	26	1458	S19 W21	09 25.0		B	BXO	10	2	1	3
6849C	27087	MWIL	09	26	1500	S21 W22	09 24.9	4	(B)					
6849C		PALE	09	26	2035	S21 W22	09 25.2		A	AX	10	2	1	3
6849D	27088	MWIL	09	26	1500	S03 W22	09 25.0	4	(AP)					
6845		RAMY	09	20	1310	N05 E65	09 25.4		A	AX		1		3
6845		BOUL	09	20	1453	N07 E62	09 25.3		A	AX	10	1	1	3
6845	27074	MWIL	09	20	1500	N07 E66	09 25.6	2	(AP)					
6845		PALE	09	20	2000	N07 E65	09 25.7		A	AX	20	2	1	3
6845		CULG	09	21	0030	N07 E59	09 25.4		B	BXO	20	6	3	4
6845		SVTO	09	21	0715	N06 E56	09 25.5		B	BXO	30	10	4	4
6845		RAMY	09	21	1245	N07 E52	09 25.4		B	BXO	30	9	4	3
6845		BOUL	09	21	1440	N07 E50	09 25.3		B	BXO	20	6	4	1
6845	27074	MWIL	09	21	1445	N07 E51	09 25.4	4	(B)					
6845		HOLL	09	21	1450	N08 E50	09 25.4		B	BXO	10	7	5	1
6845		CULG	09	22	0045	N07 E46	09 25.5		B	CAO	30	7	3	3
6845		SVTO	09	22	1001	N06 E40	09 25.4		B	BXO	20	8	5	2
6845		HOLL	09	22	1500	N07 E37	09 25.4		B	BXO	30	23	6	5
6845	27074	MWIL	09	22	1730	N05 E35	09 25.3	4	B					
6845		PALE	09	22	1910	N05 E35	09 25.4		B	BXO	30	8	5	4
6845		LEAR	09	23	0013	N05 E30	09 25.2		B	BXO	20	7	5	3
6845		CULG	09	23	0125	N07 E30	09 25.3		B	BXO	10	10	4	3
6845	27074	MWIL	09	23	1615	N05 E22	09 25.3	4	(B)					
6845		HOLL	09	23	1750	N06 E20	09 25.2		B	BXO	20	11	5	3
6845		PALE	09	23	1810	N06 E21	09 25.3		B	DSO	60	19	5	4
6845		LEAR	09	24	0010	N06 E18	09 25.3		B	BXO	20	10	5	3
6845		CULG	09	24	0105	N05 E17	09 25.3		B	BXO	10	11	5	3
6845		RAMY	09	24	1229	N05 E10	09 25.3		B	BXO	10	4	6	3
6845		BOUL	09	24	1356	N06 E10	09 25.3		B	BXO	10	3	4	1
6845	27074	MWIL	09	24	1500	N06 E10	09 25.4	5	(B)					
6845		HOLL	09	24	1735	N06 E08	09 25.3		B	BXO		2	3	3
6845		PALE	09	24	1900	N06 E07	09 25.3		B	BXO	20	5	7	4
6845		LEAR	09	25	0016	N05 E04	09 25.3		B	BXO	10	3	5	3
6845		CULG	09	25	0105	N06 E03	09 25.3		B	BXO		3	4	2
6845		SVTO	09	25	0712	N07 W01	09 25.2		A	AX		2	1	3
6845	27074	MWIL	09	25	1615	N06 W06	09 25.2	4	(B)					
6845		PALE	09	25	2100	N05 W06	09 25.4		B	BXO	10	9	4	3
6845		LEAR	09	26	0044	N07 W08	09 25.4		B	BXO		2	3	2
6845		CULG	09	26	0130	N06 W10	09 25.3		B	BXO	10	3	1	3
6845		RAMY	09	26	1311	N06 W16	09 25.3		A	AX		3	2	3
6845		BOUL	09	26	1458	N06 W16	09 25.4		A	AX		1		3
6845	27074	MWIL	09	26	1500	N07 W18	09 25.3	4	(B)					
6845		HOLL	09	26	1601	N06 W17	09 25.4		A	AX	10	1	1	3
6845		PALE	09	26	2035	N06 W18	09 25.5		A	AX	10	3	1	3
6845		RAMY	09	27	1220	N06 W29	09 25.3		A	AX		1		3
6845		RAMY	09	28	1250	N07 W42	09 26.1		A	AX	10	2	2	2
6845		PALE	10	01	2145	N07 W83	09 25.8		B	BXO	70	3	4	3
6842		SVTO	09	20	0711	S13 E76	09 26.0		A	AX	10	1		3
6842		RAMY	09	20	1310	S11 E71	09 25.9		A	AX		1		3
6842		BOUL	09	20	1453	S12 E69	09 25.8		A	AX	10	1	1	3
6842	27075	MWIL	09	20	1500	S12 E71	09 26.0	3	(AP)					
6842		PALE	09	20	2000	S11 E71	09 26.2		A	AX	10	1	1	3
6842		CULG	09	21	0030	S12 E66	09 26.0		A	AX		1	1	4
6842		SVTO	09	21	0715	S11 E62	09 26.0		A	AX	10	1		4
6842		RAMY	09	21	1245	S12 E59	09 26.0		A	AX	10	1	1	3
6842		BOUL	09	21	1440	S11 E57	09 25.9		A	AX		1		1
6842	27075	MWIL	09	21	1445	S12 E58	09 26.0	4	(AP)					
6842		HOLL	09	21	1450	S11 E58	09 26.0		A	AX	10	2	1	1
6842		CULG	09	22	0045	S12 E52	09 25.9		B	BXO	10	2	2	3
6842		SVTO	09	22	1001	S10 E46	09 25.9		A	AX	10	2	2	2
6842		HOLL	09	22	1500	S10 E45	09 26.0		B	BXO	20	8	6	5
6842	27075	MWIL	09	22	1730	S10 E42	09 25.9	4	AP					
6842		PALE	09	22	1910	S10 E41	09 25.9		B	BXO	30	5	5	4
6842		LEAR	09	23	0013	S11 E38	09 25.9		B	BXO	30	6	4	3
6842		CULG	09	23	0125	S10 E38	09 25.9		B	BXO		5	7	3
6842		SVTO	09	23	0933	S10 E33	09 25.9		B	DRO	20	9	9	3
6842	27075	MWIL	09	23	1615	S10 E27	09 25.7	5	(B)					



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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6842		HOLL	09 23 1750	S09	E29	09 25.9		B	CSO	70	10	8	3
6842		PALE	09 23 1810	S08	E27	09 25.8		B	CSO	70	16	8	4
6842		LEAR	09 24 0010	S08	E25	09 25.9		B	CSO	40	6	8	3
6842		CULG	09 24 0105	S10	E24	09 25.8		B	CAO	40	9	8	3
6842		RAMY	09 24 1229	S10	E16	09 25.7		B	BXO	20	24	10	3
6842		BOUL	09 24 1356	S09	E18	09 25.9		B	DAO	90	12	9	1
6842	27075	MWIL	09 24 1500	S09	E14	09 25.7	5	(BG)					
6842		HOLL	09 24 1735	S10	E16	09 25.9		BG	CSO	60	17	12	3
6842		PALE	09 24 1900	S10	E14	09 25.8		B	CAO	60	14	9	4
6842		LEAR	09 25 0016	S09	E08	09 25.6		B	CSO	50	10	4	3
6842		CULG	09 25 0105	S09	E08	09 25.6		B	CAO	20	15	8	2
6842		SVTO	09 25 0712	S09	E03	09 25.5		B	CAO	50	10	7	3
6842		RAMY	09 25 1339	S11	E04	09 25.9		B	CSO	60	20	9	3
6842		BOUL	09 25 1447	S08	E01	09 25.7		B	CAO	50	13	8	2
6842		HOLL	09 25 1500	S09	E02	09 25.8		B	CAO	30	11	9	4
6842	27075	MWIL	09 25 1615	S09	E01	09 25.7	5	(BG)					
6842		PALE	09 25 2100	S10	E01	09 25.9		B	DAO	60	24	9	3
6842		LEAR	09 26 0044	S09	W03	09 25.8		B	DAO	30	7	8	2
6842		CULG	09 26 0130	S09	W05	09 25.7		B	CAO	40	14	9	3
6842		SVTO	09 26 0637	S09	W07	09 25.7		B	CAO	30	10	8	4
6842		RAMY	09 26 1311	S11	W11	09 25.7		B	BXO	20	21	10	3
6842		BOUL	09 26 1458	S09	W12	09 25.7		B	CAO	50	15	7	3
6842	27075	MWIL	09 26 1500	S10	W13	09 25.6	5	(BG)					
6842		HOLL	09 26 1601	S10	W12	09 25.8		B	CAO	40	12	8	3
6842		LEAR	09 27 0020	S10	W17	09 25.7		B	BXO	20	7	9	2
6842		CULG	09 27 0105	S09	W17	09 25.8		B	BXO	20	11	9	3
6842		SVTO	09 27 0700	S10	W21	09 25.7		B	BXO	10	7	8	4
6842		RAMY	09 27 1220	S10	W25	09 25.6		B	BXO	10	6	7	3
6842		BOUL	09 27 1507	S10	W25	09 25.7		B	BXO	20	5	8	2
6842		HOLL	09 27 1515	S10	W27	09 25.6		B	BXO	10	5	8	4
6842	27075	MWIL	09 27 1545	S10	W27	09 25.6	4	(BG)					
6842		PALE	09 27 2000	S10	W24	09 26.0		B	BXO	30	19	9	3
6842		SVTO	09 28 0835	S10	W31	09 26.0		B	BXO	20	7	4	3
6842		RAMY	09 28 1250	S10	W35	09 25.9		B	CRO	20	7	4	2
6842		BOUL	09 28 1445	S10	W34	09 26.0		B	DSI	40	7	5	3
6842		HOLL	09 28 1520	S10	W35	09 26.0		B	BXO	40	8	5	4
6842		PALE	09 28 1730	S11	W37	09 25.9		B	BXO	30	12	6	4
6842	27075	MWIL	09 28 2115	S10	W38	09 26.0	5	(B )					
6842		LEAR	09 29 0004	S10	W40	09 26.0		B	BXO	20	4	4	2
6842		SVTO	09 29 0717	S10	W43	09 26.1		B	BXO	30	12	5	4
6842	27075	MWIL	09 29 1500	S10	W50	09 25.9	5	(B )					
6842		HOLL	09 29 1505	S11	W49	09 25.9		B	BXO	50	10	7	4
6842		BOUL	09 29 1550	S09	W48	09 26.0		B	CSO	20	3	2	3
6842		RAMY	09 29 1716	S09	W51	09 25.9		B	CRO	10	4	3	2
6842		PALE	09 29 1840	S10	W50	09 26.0		B	BXO	50	6	4	3
6842		CULG	09 30 0050	S10	W56	09 25.8		B	CRO	40	3	3	4
6842		LEAR	09 30 0128	S09	W55	09 25.9		B	BXO	2	2	3	2
6842		SVTO	09 30 1325	S10	W64	09 25.7		B	BXO	40	2	3	2
6842	27075	MWIL	09 30 1500	S10	W63	09 25.9	4	(BP)					
6842		HOLL	09 30 1615	S10	W65	09 25.8		B	BXO	20	5	3	4
6842		PALE	09 30 2300	S10	W70	09 25.7		B	BXO	30	3	3	2
6842		LEAR	10 01 0010	S11	W69	09 25.9		B	BXO	20	2	3	3
6842		RAMY	10 01 1244	S10	W74	09 26.1		A	AX	1	1		2
6842	27075	MWIL	10 01 1515	S08	W78	09 25.9	4	AP					
6842A		PALE	09 29 1840	S20	W49	09 26.0		A	AX		1		3
6857		BOUL	09 27 1507	N13	W16	09 26.4		A	AX		2	2	2
6857		RAMY	09 28 1250	N12	W32	09 26.1		B	BXO	10	2	2	2
6857		HOLL	09 28 1520	N11	W32	09 26.2		B	BXO	10	4	4	4
6857		PALE	09 28 1730	N11	W34	09 26.2		B	BXO	10	6	5	4
6857	27094	MWIL	09 28 2115	N12	W36	09 26.2	5	(B )					
6857		LEAR	09 29 0004	N12	W38	09 26.1		B	BXO	10	3	3	2
6857		SVTO	09 29 0717	N11	W41	09 26.2		A	AX	20	4	3	4
6857	27094	MWIL	09 29 1500	N12	W46	09 26.1	5	(B )					
6857		HOLL	09 29 1505	N12	W47	09 26.1		B	BXO	20	2	3	4
6857		BOUL	09 29 1550	N13	W47	09 26.1		B	BXO	10	2	3	3
6857		PALE	09 29 1840	N11	W48	09 26.2		B	BXO	10	3	4	3
6857		RAMY	10 01 1244	N08	W69	09 26.4		B	BXO	10	2	4	2

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NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6857		HOLL	10	01	1920	N11	W77	09 26.1		A	AX		1		2
6857A		BOUL	09	25	1447	S09	E10	09 26.4		B	BXO		2	1	2
6857C		BOUL	09	27	1507	S04	W14	09 26.6		B	BXO		2	2	2
6857C	27092	MWIL	09	27	1545	S05	W15	09 26.5	4	(AF)					
6857E		BOUL	09	26	1458	N17	E00	09 26.6		A	AX	10	1		3
6857E		RAMY	09	27	1220	N14	W09	09 26.8		A	AX	10	5	2	3
6857E		BOUL	09	27	1507	N14	W09	09 26.9		B	BXO	10	3	2	2
6857E	27093	MWIL	09	27	1545	N13	W08	09 27.0	3	(AP)					
6857E		RAMY	09	29	1716	N17	W37	09 26.9		B	BXO	110	4	3	2
6857D		BOUL	09	26	1458	N28	E03	09 26.8		B	BXO	10	7	4	3
6857F		PALE	09	25	2035	N24	E17	09 27.2		A	AX	10	3	2	3
6852		RAMY	09	25	1339	N11	E28	09 27.7		A	AX		2	1	3
6852		BOUL	09	25	1447	N11	E27	09 27.6		B	BXO		2	1	2
6852		HOLL	09	25	1500	N11	E27	09 27.6		A	AX	10	2	1	4
6852	27086	MWIL	09	25	1615	N11	E28	09 27.8	5	(AF)					
6852		PALE	09	25	2100	N11	E27	09 27.9		A	AX	10	5	2	3
6852		HOLL	09	26	1601	N14	E13	09 27.6		A	AX	10	2	1	3
6852		SVTO	09	27	0700	N17	E06	09 27.7		A	AX		1		4
6852		SVTO	09	28	0835	N15	W10	09 27.6		A	AX	10	2	1	3
6852		HOLL	09	28	1520	N16	W15	09 27.5		B	BXO	10	4	4	4
6852		PALE	09	28	1730	N16	W15	09 27.6		B	BXO		3	3	4
6852		RAMY	09	29	1716	N17	W27	09 27.7		B	BXO	110	4	3	2
6852		RAMY	10	01	1244	N14	W49	09 27.9		A	AX	10	2	1	2
6852	27097	MWIL	10	01	1515	N16	W49	09 28.0	4	(B )					
6852A		RAMY	09	24	1229	S19	E44	09 27.9		A	AX		1		3
6852A	27083	MWIL	09	24	1500	S20	E40	09 27.7	4	(AP)					
6852A		PALE	09	24	1900	S19	E42	09 28.0		A	AX		1		4
6852A		CULG	09	25	0105	S20	E36	09 27.8		A	AX		1		2
6852B		SVTO	09	25	0712	N26	E37	09 28.2		A	AX		1		3
6852B		RAMY	09	25	1339	N26	E32	09 28.0		A	AX	10	2	2	3
6852B		BOUL	09	25	1447	N26	E35	09 28.3		B	BXO		2	2	2
6852B		HOLL	09	25	1500	N26	E33	09 28.2		A	AX	10	1	1	4
6852B		PALE	09	26	2035	N24	E17	09 28.2		A	AX	10	3	2	3
6852B		CULG	09	27	0105	N25	E12	09 28.0		B	BXO		2	1	3
6852B		RAMY	09	27	1220	N23	E07	09 28.0		A	AX	10	4	2	3
6852B		BOUL	09	27	1507	N24	E04	09 27.9		B	BXO		3	1	2
6852C		RAMY	09	26	1311	S09	E22	09 28.2		A	AX		1		3
6852C	27089	MWIL	09	26	1500	S10	E20	09 28.1	4	(AP)					
6852D		BOUL	09	25	1447	N31	E36	09 28.4		A	AX		1		2
6851		CULG	09	24	0105	S20	E68	09 29.2		A	AX		1		3
6851		RAMY	09	24	1229	S19	E62	09 29.2		A	AX		1		3
6851	27084	MWIL	09	24	1500	S21	E62	09 29.4	4	(AP)					
6851		PALE	09	24	1900	S19	E61	09 29.4		B	BXO	20	2	4	4
6851		LEAR	09	25	0016	S19	E59	09 29.5		A	AX	10	1	1	3
6851		CULG	09	25	0105	S20	E57	09 29.4		B	BXO		3	4	2
6851		RAMY	09	25	1339	S19	E50	09 29.4		A	AX	10	2	2	3
6851		BOUL	09	25	1447	S20	E48	09 29.3		A	AX		1		2
6851		HOLL	09	25	1500	S19	E48	09 29.3		A	AX	10	1	1	4
6851	27084	MWIL	09	25	1615	S21	E47	09 29.3	4	(AP)					
6851		PALE	09	25	2100	S21	E48	09 29.5		A	AX	10	1	3	3
6851	27084	MWIL	09	26	1500	S21	E37	09 29.5	4	(AP)					
6851		HOLL	09	26	1601	S20	E34	09 29.3		A	AX	10	2	1	3
6851		PALE	09	26	2035	S21	E37	09 29.7		A	AX		1	1	3
6851		CULG	09	27	0105	S20	E29	09 29.3		B	BXO	10	3	2	3
6851		SVTO	09	27	0700	S20	E27	09 29.3		A	AX		1		4
6851		RAMY	09	27	1220	S20	E24	09 29.3		A	AX		1		3
6851		BOUL	09	27	1507	S21	E23	09 29.4		B	BXO	10	3	3	2
6851		HOLL	09	27	1515	S21	E25	09 29.5		B	BXO	10	3	4	4

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NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6851	27084	MWIL	09 27 1545	S21 E23	09 29.4	4	(BG)					
6851		PALE	09 27 2000	S21 E21	09 29.4		B	CSO	10	3	3	3
6851		LEAR	09 28 0035	S21 E16	09 29.2		A	AX		1	1	2
6851		SVTO	09 28 0835	S20 E13	09 29.3		A	AX	10	1		3
6851		RAMY	09 28 1250	S20 E10	09 29.3		A	AX	10	2	1	2
6851		BOUL	09 28 1445	S20 E09	09 29.3		A	AX		1		3
6851		HOLL	09 28 1520	S20 E10	09 29.4		A	AX		1		4
6851		PALE	09 28 1730	S21 E08	09 29.3		A	AX		1		4
6851	27084	MWIL	09 28 2115	S20 E05	09 29.3	4	(AP)					
6851		SVTO	09 29 0717	S20 E00	09 29.3		A	AX	10	1		4
6851		SVTO	10 01 0735	S21 W24	09 29.6		A	AX	10	2	2	3
6851		RAMY	10 01 1244	S19 W26	09 29.6		A	AX		1		2
6851	27098	MWIL	10 01 1515	S20 W30	09 29.4	4	(AP)					
6851A		RAMY	09 29 1716	N27 E02	09 29.9		A	AX		1		2
6851A		PALE	09 29 1840	N28 E01	09 29.8		A	AX		1		3
6848	27080	MWIL	09 23 1615	S08 E79	09 29.6	5	AP					
6848		HOLL	09 23 1750	S08 E78	09 29.6		A	HS	60	3	1	3
6848		PALE	09 23 1810	S08 E85	09 30.1		B	CSO	60	4	10	4
6848		LEAR	09 24 0010	S07 E75	09 29.6		B	DSO	60	2	6	3
6848		CULG	09 24 0105	S08 E77	09 29.8		B	DSO	100	3	8	3
6848		RAMY	09 24 1229	S06 E69	09 29.7		B	DAO	180	2	8	3
6848		BOUL	09 24 1356	S06 E69	09 29.7		B	DSO	140	2	6	1
6848	27080	MWIL	09 24 1500	S07 E69	09 29.8	5	(B )					
6848		HOLL	09 24 1735	S07 E67	09 29.7		B	DSO	110	4	6	3
6848		PALE	09 24 1900	S07 E67	09 29.8		B	DSO	70	2	7	4
6848		LEAR	09 25 0016	S07 E62	09 29.6		B	DSO	130	3	7	3
6848		CULG	09 25 0105	S07 E63	09 29.8		B	DAO	110	4	8	2
6848		SVTO	09 25 0712	S07 E60	09 29.8		B	DAO	150	2	6	3
6848		RAMY	09 25 1339	S06 E57	09 29.8		B	DSO	140	4	7	3
6848		BOUL	09 25 1447	S07 E53	09 29.6		B	DAO	130	3	7	2
6848		HOLL	09 25 1500	S08 E55	09 29.7		B	DAO	110	6	7	4
6848	27080	MWIL	09 25 1615	S07 E55	09 29.8	5	(B )					
6848		PALE	09 25 2100	S08 E53	09 29.8		B	DSO	90	7	7	3
6848		LEAR	09 26 0044	S06 E51	09 29.8		B	EAO	180	6	12	2
6848		CULG	09 26 0130	S07 E50	09 29.8		B	DAO	100	5	12	3
6848		SVTO	09 26 0637	S07 E46	09 29.7		B	DSO	140	5	7	4
6848		RAMY	09 26 1311	S06 E45	09 29.9		B	DAO	140	6	10	3
6848		BOUL	09 26 1458	S07 E42	09 29.8		B	DAO	120	8	10	3
6848	27080	MWIL	09 26 1500	S07 E43	09 29.8	5	(B )					
6848	27090	MWIL	09 26 1500	S07 E49	09 30.3	4	(B )					
6848		HOLL	09 26 1601	S07 E43	09 29.9		B	DAO	150	13	10	3
6848		PALE	09 26 2035	S06 E43	09 30.1		B	ESO	110	17	13	3
6848		LEAR	09 27 0020	S08 E39	09 29.9		B	DAO	100	9	9	2
6848		CULG	09 27 0105	S07 E37	09 29.8		B	DAO	120	9	8	3
6848		SVTO	09 27 0700	S08 E35	09 29.9		B	EAO	140	22	12	4
6848		RAMY	09 27 1220	S06 E34	09 30.0		BG	EAO	180	18	15	3
6848		BOUL	09 27 1507	S06 E33	09 30.1		BG	FAI	230	19	16	2
6848		HOLL	09 27 1515	S07 E34	09 30.2		BG	EAI	250	23	15	4
6848	27080	MWIL	09 27 1545	S07 E29	09 29.8	5	(B )					
6848	27090	MWIL	09 27 1545	S07 E38	09 30.5	5	(BP)					
6848		PALE	09 27 2000	S06 E32	09 30.2		B	EAO	120	29	12	3
6848		LEAR	09 28 0035	S07 E26	09 30.0		B	EAO	170	11	13	2
6848		SVTO	09 28 0835	S07 E21	09 29.9		BG	ESI	110	20	12	3
6848		RAMY	09 28 1250	S08 E18	09 29.9		BG	EAO	110	24	13	2
6848		BOUL	09 28 1445	S07 E19	09 30.0		B	EAI	170	20	13	3
6848		HOLL	09 28 1520	S08 E20	09 30.1		BG	ESI	220	23	15	4
6848		PALE	09 28 1730	S07 E18	09 30.1		BG	FAI	190	39	16	4
6848	27090	MWIL	09 28 2115	S07 E21	09 30.4	5	(BP)					
6848	27080	MWIL	09 28 2115	S08 E13	09 29.9	5	(BG)					
6848		LEAR	09 29 0004	S08 E14	09 30.0		B	ESO	100	16	14	2
6848		SVTO	09 29 0717	S07 E10	09 30.0		BG	ESI	160	22	13	4
6848	27080	MWIL	09 29 1500	S07 E03	09 29.8	5	(B )					
6848	27090	MWIL	09 29 1500	S07 E09	09 30.3	5	(BP)					
6848		HOLL	09 29 1505	S07 E07	09 30.1		BG	EAI	220	25	15	4
6848		BOUL	09 29 1550	S06 E06	09 30.1		B	EAI	160	14	15	3
6848		RAMY	09 29 1716	S06 E05	09 30.1		BG	EAO	190	22	16	2
6848		PALE	09 29 1840	S08 E08	09 30.4		BG	FAI	150	31	16	3

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

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SEPTEMBER 1991

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CMP No Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6848		CULG	09 30 0050	S07 W01	09 29.9		BG	EAO	120	14	14	4
6848		LEAR	09 30 0128	S07 E00	09 30.1		BG	EAO	140	11	11	2
6848		SVTO	09 30 1325	S07 W08	09 29.9		BG	ESO	210	9	14	2
6848	27090	MWIL	09 30 1500	S07 W05	09 30.2	5	(BP)					
6848	27080	MWIL	09 30 1500	S07 W11	09 29.8	5	(B )					
6848		HOLL	09 30 1615	S07 W07	09 30.1		BG	EAI	130	17	13	4
6848		PALE	09 30 2300	S08 W12	09 30.0		BG	ESI	100	12	12	2
6848		LEAR	10 01 0010	S08 W13	09 30.0		B	ESO	110	13	15	3
6848		SVTO	10 01 0735	S08 W16	09 30.1		BG	EAO	70	13	15	3
6848		RAMY	10 01 1244	S07 W18	09 30.2		B	EAO	100	14	13	2
6848		BOUL	10 01 1413	S06 W18	09 30.2		B	ESI	110	11	14	1
6848	27090	MWIL	10 01 1515	S07 W18	09 30.3	5	(BG)					
6848	27080	MWIL	10 01 1515	S07 W24	09 29.9	5	(B )					
6848		HOLL	10 01 1920	S07 W22	09 30.1		BG	CSO	80	7	12	2
6848		PALE	10 01 2145	S08 W23	09 30.2		B	ESO	110	21	13	3
6848		LEAR	10 02 0005	S07 W29	09 29.9		B	ESO	90	14	15	4
6848		CULG	10 02 0100	S07 W27	09 30.0		B	CAO	60	6	11	3
6848		SVTO	10 02 0955	S08 W28	09 30.3		B	CSO	70	5	12	2
6848		BOUL	10 02 1502	S07 W30	09 30.4		B	EAO	70	4	11	2
6848	27080	MWIL	10 02 1530	S06 W38	09 29.9	5	(B )					
6848	27090	MWIL	10 02 1530	S07 W32	09 30.2	5	(BP)					
6848		RAMY	10 02 1530	S08 W29	09 30.5		BG	CAO	50	8	11	2
6848		PALE	10 02 2000	S09 W29	09 30.6		B	EAO	70	6	11	2
6848		HOLL	10 02 2030	S09 W33	09 30.4		B	ESO	70	5	11	3
6848		LEAR	10 03 0018	S07 W40	09 30.0		B	DAO	80	4	4	3
6848		CULG	10 03 0100	S07 W42	09 30.0		B	DSO	60	3	3	3
6848		SVTO	10 03 0715	S07 W42	09 30.1		A	HS	70	3	3	3
6848		RAMY	10 03 1356	S08 W48	09 30.0		B	CSO	60	3	3	4
6848	27080	MWIL	10 03 1430	S07 W48	09 30.0	5	(B )					
6848		HOLL	10 03 1533	S08 W47	09 30.1		B	CSO	90	2	4	3
6848		BOUL	10 03 1615	S09 W47	09 30.1		B	CAO	40	6	4	1
6848		PALE	10 03 2000	S08 W46	09 30.4		B	CSO	30	3	3	3
6848		LEAR	10 04 0203	S09 W52	09 30.2		B	CSO	40	2	3	3
6848		SVTO	10 04 0720	S07 W56	09 30.1		B	CAO	40	3	3	3
6848		RAMY	10 04 1237	S08 W61	09 30.0		A	HS	40	2	3	4
6848	27080	MWIL	10 04 1430	S08 W61	09 30.0	4	(BF)					
6848		HOLL	10 04 1536	S09 W60	09 30.1		B	CAO	50	3	3	3
6848		PALE	10 04 1830	S09 W62	09 30.1		B	CSO	60	2	4	3
6848		LEAR	10 05 0009	S08 W65	09 30.1		A	HR	30	1	1	3
6848		CULG	10 05 0020	S08 W67	09 30.0		A	HS	50	1	2	3
6848		SVTO	10 05 0638	S08 W68	09 30.2		A	HA	30	1	1	4
6848		RAMY	10 05 1345	S07 W72	09 30.2		A	HS	30	1	1	2
6848	27080	MWIL	10 05 1500	S07 W72	09 30.2	3	(AP)					
6848		HOLL	10 05 1540	S08 W75	09 30.0		A	HS	30	1	1	3
6848		PALE	10 05 1720	S09 W76	09 30.0		A	HA	30	1	2	3

Stations reporting:

BOUL = Boulder  
CULG = Culgoora

HOLL = Holloman  
LEAR = Learmonth

MWIL = Mt. Wilson  
PALE = Palehua

RAMY = Ramey  
SVTO = San Vito

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
01	0207	0221	0340	1+	3	1		1			0205	C6.1	6811
01	0455	0506	0543	1-	5			1		2	0455	C2.6	6811
01	1037	1043	1104	1-	5	1	1	1	1	3	1035	C3.8	6811
01	1054	1101	1129	1-	1			1			1058		6805
01	1340	1348	1410	1-	5	1	1		1	7	1336		
01	1748	1752	1805	1-	1						1748		6807
02	0313	0327	0415	1-	5	1		1	1	1	0311		6811
02	0709	0710	0731	1	1					1	0707	C1.4	6810
02	0805	0815	0853	1-	5	1		1	1	6	0803	C1.9	6805
02	0925	0940	1040	1	1					1	0946	C3.7	
02	1105	1109	1126	1-	5			1	1	3	1057E	C6.6	6811
02	1227	1233	1250	1-	5				1	5	1226	C4.2	6811
02	1253	1256	1314	1	5					5	1254	C2.6	6805
02	1528	1530	1552	1	1					1	No flare		
02	1617	1622	1653	2-	3					3	1618	C2.3	6812
02	2100	2115	2124	1	1						2113	C1.9	6811
03	0316	0322	0349	1-	3			1	1		0316	C3.3	6811
03	0455	0504	0532	1-	1			1			0439	C2.9	6814
03	0707	0722	0746	1-	1			1			0702	C3.1	6811
03	0825	0835	0907	1-	5			1		1	0824	C3.2	
03	1009	1014	1035	1-	3					2	1006	C3.2	
03	1102	1130	1200	1	1					1	1130	C1.9	6807
03	1519	1526	1540	1-	5				1	3	1520	C3.3	6805
03	1639	1645	1700	1	1					1	1638		6805
03	1758	1807	1853	2+	1					1	1759	C1.6	6815
03	1845	1846	1916	1+	1					1	1845		6808
03	1958	2003	2047	2-	1					1	1950		6815
03	2255	2300	2312	1-	1						2256	C2.2	
04	0005	0018	0053	1-	5			1	1	1	0005	C4.3	6807
04	0332	0403	0432	1-	3			1	1		0352	C2.0	
04	1117	1127	1214	1-	5	1	2	1	1	4	1116	C5.1	6805
04	1206	1211	1223	1-	1						1201	C1.8	
04	1425	1436	1540	1-	5	2	3	1	1	10	1415	C9.5	6805
04	1555	1601	1631	1-	1			1			No flare		
04	1711	1716	1734	1	5					3	1708	C2.2	
04	1835	1842	1937	2	3					7	1820	M1.3	6805
04	2024	2028	2045	1-	5	1		1		8	2023E	M1.5	6805
04	2036	2040	2116	2-	3					4	2023E	M1.5	6805
04	2120	2123	2147	1	1					1	2120	C2.9	
05	0018	0024	0038U	1-	1				1		*		
05	0036	0050	0100	1-	5			1	1	1	0038	C2.6	
05	0101E	0115	0243	3	5	2		1	1	2	0104E	M4.4	
05	0524	0530	0734	3	5	1		1	1	4	0524	M2.3	6805
05	1123	1127	1159D	2	1					1	1127	C2.0	6805
05	1202	1222	1315	2-	5	3	1	1	1	9	1201E	M1.6	6805
05	1556	1559	1621	1	5					8	1558	C3.0	
05	1645	1648	1655	1-	1					1	1644	C1.8	
05	1751	1754	1809	1-	3					4	1753	C2.6	6805
05	1815	1821	1831	1-	1					1	1815		6811
05	2020	2030	2039	1-	1					2	2020	C3.0	
05	2124	2131	2154	2-	1					2	2121	M2.9	
05	2200	2211	2249D	2	5	2		1		5	*		
05	2249E	2309	2414	1+	1			1			*		
06	0026	0031	0042U	1-	1				1		0028E		6811
06	0049	0107	0206	1	3	1		1	1		0055	C8.7	6811
06	0637	0653	0742	1-	5	1		1	1	4	0536E	C5.2	6818
06	1259	1305	1327	1+	5					3	1300	C3.0	6811
06	1318	1325	1325D	1-	1					1	No flare		
06	1348	1353	1414	1-	5	1		1	1	8	1345	C7.2	
06	1403	1412	1445	2	5					4	1404	C3.9	6811
06	1545	1546	1559	1-	3					2	1545	C2.9	
06	1604	1606	1624	1	5					8	1605	C6.0	6818

\* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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SEPTEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region	
						SWF	SEA	SPA	LF-SPA	SES				
06	1619	1622	1638	1-	5						2	1618	C3.0	
06	1638	1640	1658	1-	3						6	1637	C4.0	
06	1748	1758	1832	2	1						1	1803		6810
06	1908	1909	1922	1-	3						2	1909	C3.0	6818
06	2008	2012	2025	1-	3						2	2005		6811
06	2036	2044	2107	1+	3						6	2036	C5.4	6811
06	2217	2226	2257	1-	5						1	2219	C4.7	6805
06	2326	2330	2343	1-	1						1	No flare		
07	0032	0042	0057	1-	1						1	*		
07	0132	0138	0209	1-	3						1	0132	C3.3	
07	0248	0300	0328D	2-	3	1					1	0247	C7.3	
07	0328E	0411	0438D	2	3						1	*		
07	0438E	0506	0631	2	3						1	*		
07	0650	0702	0723D	1-	5						1	0629	M2.1	6818
07	0716	0755	0947	3	5	3	3	1	2	8		No flare		
07	0956	1011	1147	3-	5	4	3	1	1	7		0940	M4.1	6818
07	1116	1137	1226	2	1						1	1130E		6818
07	1237	1258	1357	2	5	3	3	1	1	10		1233	M2.1	6818
07	1512	1523	1544	1+	1						1	No flare		
07	1722	1730	1747	1	3						2	1729		6811
07	1747	1750	1811	1	3						3	1748	C6.4	
07	1817	1827	1908	2	3						5	1821	M1.9	6818
07	1844	1846	1900	1-	1						1	1822		6811
07	1915	1923	2009	2	5	2					7	1911E	X3.3	6818
07	2145E	2148	2204	1	1						1	2130E		6818
07	2215	2222	2235U	1	1						1	No flare		
07	2240	2303	2320D	1	5						1	2249	C6.1	
07	2341E	2341	2428	1-	5						1	2349	C7.1	6818
08	0134	0200	0406	2+	5	2					1	0143E	M2.1	6818
08	0415	0440	0535D	1-	1						1	*		
08	0535E	0550	0634D	1	5	1					1	No flare		
08	0634E	0650	0750	1+	5						1	0636	C7.8	
08	0758	0831	0858D	2	5	1					1	0813	M1.0	
08	0856E	0914	1130D	3	5	4					1	0906	X1.0	6818
08	1130	1152	1251	2	5	4	2	1	1	9		1128	M2.7	6820
08	1255	1300	1328	1+	5						5	1255		6822
08	1439	1442	1500	1-	5						2	1437		6818
08	1526	1529	1547	1	1						1	1526		6820
08	1553	1559	1623	1+	5						1	No flare		
08	1619	1627	1643	1	3						1	1613		6823
08	1653	1655	1740	2	3						6	1653	C8.9	6811
08	1738	1741	1758D	1	1						1	1740		6811
08	1758	1800	1824	1	3						6	1759	C8.6	6823
08	1828	1835	1933	2+	3						3	1829	C7.5	6818
08	1902	1908	1915	1-	1						1	1905		6818
08	2021	2036	2350	1	3	1					4	2028E		6823
08	2209	2215	2246	1-	1						1	2214E		6822
08	2229	2235	2325	2+	1						1	2230		6820
08	2311	2329	2400	1-	1						1	2321		6818
09	0100	0105	0118	1-	3						1	No flare		
09	0132	0137	0152	1-	1						1	No flare		
09	0210	0218	0242	1-	1						1	No flare		
09	0324	0345	0435D	1-	3						1	No flare		
09	0435E	0446	0517D	1-	1						1	*		
09	0559	0611	0821	3	5	4					1	0555E	M2.0	
09	0854	0914	0944	1-	5						1	0854	C3.1	
09	1650	1654	1701	1-	1						1	1650	C2.5	
09	1746	1749	1807	1	3						2	1746	C3.1	
09	2110	2112	2116	1-	1						1	2110	C2.8	
09	2207	2211	2228	1-	5						1	2209E	C2.7	6824
10	0320	0335	0507	2	3	1					1	0321	C8.5	
10	0654	0752	0933	1-	1						1	0634	C6.6	
10	1021	1025	1052	1-	5						1	1017	C4.1	

\* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
10	1345	1358	1454	1	5	2	2	1	1	8	1345	C7.3	
10	1457	1506	1553	1-	5	1	2	1	1	6	1453	C4.3	
10	1701	1708	1733	2-	1						No flare		
10	1738	1743	1808	1+	3					3	1738	C4.7	
10	2044	2049	2114	1	3					3	2046	M3.0	
10	2047	2113	2153	1+	5	1		1		6	2046	M3.0	
10	2303	2313	2331	1-	1			1			No flare		
11	0252	0335	0448	1	3			1	1		0248	C4.7	
11	0858	0912	0935	1-	5			1	1	3	0858	C2.4	
11	2051	2059	2145	2+	1					1	2014E	C4.0	6824
12	0834	0842	0935	1	3		2				0843		
12	1246	1254	1315	1-	5	1	1		1	4	1245	C3.9	6823
12	1315	1331	1408	1	1		1				No flare		
12	1414	1438U	1520	1	1		1				No flare		
12	1815	1821	1835	1	1						1818	C1.7	6823
13	0505	0520	0608	1	5	1	1	1	1	1	0507	C4.6	
13	1104	1112	1220	1-	1					1	No flare		
13	1747	1752	1820	2-	3					6	1746	C3.4	
14	0006	0013	0043	1-	3			1	1		0003	C3.0	
14	1219	1224	1244	1	1					1	1219		6822
14	1346	1353	1410	1-	5	1	1		1	6	1343	C5.3	6824
14	1542	1542	1600	1-	1					1	1538	C1.2	
14	1645	1647	1658	1-	1					1	1641		6820
15	1425	1435	1512	1-	5	3	3	1	1	11	1419	C9.4	6824
15	1650	1707	1739	1	1		1				No flare		
16	0739	0805	0926	2	5	1	1	1	2	5	0738	C8.1	
16	1545	1550	1600	1-	5					2	1545	C1.1	
16	2111	2118	2130	1	1					1	2109	C1.7	6827
17	0012	0020	0050	1-	1			1			0010	C1.9	
17	0829	0840	1200	1+	1					1	0807	C1.6	
17	1215	1224	1241	1	1					1	1215	C1.8	
17	1545	1553	1626	2-	5					6	1546	C4.4	6832
17	1858	1901	1948	2	3					4	1900E	M1.3	6832
18	0159	0203	0217	1-	3			1	1		0157	C2.3	
18	0407	0426	0500	1-	3			1	1		0417E	C3.2	
18	0610	0633	0723	1-	3			1	1		0625E		6832
18	0917	0920	0931	1-	1					1	0916	C2.7	
18	0937	0945	1017	1-	5			1	1	2	0934	C4.4	
18	1118	1125	1150	1-	5	1		1	1	2	1118	C2.9	6832
18	1349	1356	1356D	1-	5		1		1	4	1348	C3.8	
18	1405	1425	1504	1-	5	2	1	1	1	8	1407	C7.6	6832
18	1718	1723	1758	2-	3					2	1708	C4.0	6832
18	2229	2234	2236	1-	1	1					2223	C2.0	
19	1050	1100	1140	1	3	1	1		1	4	1052	C1.4	6832
20	0252	0308	0345	1-	3			1	1		0250	C2.5	6832
20	2223	2237	2310	1-	1			1			*		
21	0900E	0907	0931	1+	1					1	0850	C2.1	
22	1117	1124	1146	1+	1					1	1102	C2.6	6841
22	1334	1337	1353	1	5					2	1334	C2.3	
22	1401	1407	1418	1-	1					1	1403	C1.8	
22	1547	1553	1629	2-	5					8	1547	C6.2	6841
23	0210	0218	0231	1-	3			1	1		No flare		
23	0344	0351	0400	1-	3			1	1		0343	C4.2	6832
23	0400E	0418	0457	1-	3			1	1		0400	C3.8	6841

\* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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SEPTEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
23	0507	0520	0555	1-	3			1	1		No flare		
23	0725	0726	0740D	1-	1					1	0725	C2.4	
23	0740	0745	0805	1	1					1	No flare		
23	1022	1027	1051	1-	3		1		1	3	1023	C3.3	6841
23	1131	1136	1145	1-	1					1	1131	C1.9	6832
23	1301	1315	1401	2+	1					1	1302	C2.8	6841
23	1750	1756	1833	2-	5					8	1754	M1.0	6841
23	2012	2015	2046	2	1					1	2015	C2.5	6841
23	2141	2149	2223	1-	5			1		1	2146	C3.4	6841
24	0130	0143	0219D	1-	3			1	1		0130	C3.5	
24	0219E	0231	0243	1-	3			1	1		0224		6835
24	0536E	0543	0616D	1	3			1	1	2	0536	C3.3	
24	0616E	0629	0733	2	5	1		1	1	3	0616	C5.2	
24	0739	0744U	0752	1	1		1				No flare		
24	0749	0805	1011	3	5	4	3	1	2	8	0751E	M6.1	6848
24	0920	0923	0937	1-	1					1	0922		6845
24	1055	1104	1240	3	1					1	1058E		6835
24	1231	1234	1254	1	1					1	1231	C3.4	
24	1316	1324	1357	2-	5					4	1318	C4.0	6847
24	1326	1348	1419	1-	5			1		1	1318	C4.0	6847
24	2021	2025	2031	1-	1					1	2019	C2.6	
24	2256	2300	2321U	1	1					1	2301		6838
24	2322	2334	2410	1-	1			1			No flare		
25	0145	0207	0239	1-	3			1	1		0135	C5.0	
25	0324	0334	0402D	1-	3			1	1		0327	C3.5	6849
25	0402E	0406	0507	1-	3			1	1		No flare		
25	0708	0719	0751	1-	1			1			No flare		
25	1112	1126	1241	2-	5	1	3	1	1	3	1112	C9.7	6850
25	1442	1500	1550	1-	5			1		4	1446	C5.9	
25	1526	1532	1549	1	1					1	No flare		
25	1622	1625	1639	1-	5					2	1624	C3.0	
25	1645	1652	1705	1	1					1	1649		6850
25	2008	2015	2030	1	1					1	2009	C3.3	
25	2230	2248	2410	1+	5	1		1		1	2228	C4.9	6849
26	0014	0029	0105D	1	5	1		1	1		0020	C8.0	
26	0105E	0114	0139	1-	3			1	1		0103	C3.8	
26	0141	0148	0208	1-	3			1	1		0142	C3.6	
26	0441	0456	0519	1-	3			1	1		0440	C3.1	
26	0602	0630	0650D	1-	1					1	0614		6850
26	0603	0714	0850D	3-	5		1	1	2	2	0620E	M1.7	
26	0850E	0905	1052	2	5	1	1	1	1	2	0855E	C9.6	6850
26	1227	1241	1340	2+	5	4	4	1	1	9	1224	M3.4	
26	1353	1356	1411	1-	3					2	1352E	C3.8	6850
26	1558	1600	1610	1-	1					1	1559	C2.6	6850
26	1700	1704	1717	1-	3					2	1701	C3.8	6850
26	2043	2100	2154	1-	5	1		1		5	2042	M1.4	6848
26	2306	2320	2414	1-	5	1		1			2306	C5.8	
27	0105	0116	0146	1-	3			1	1		0055	C4.3	6848
27	0352	0358	0457	1-	5	1		1	1	1	0353	C8.5	6853
27	1029	1042	1059	2	3		2				*		
27	1514	1524	1551	2-	3					2	No flare		
27	1559	1614	1708	2+	3					3	1548	C7.0	6853
27	1615	1640	1730	2+	1					1	1557		6853
28	0109	0124	0146	1-	3			1	1		0111	C2.0	6850
28	0151	0156	0226	1-	3			1	1		0149	C3.1	
28	0322	0332	0401	1-	3			1	1		0322	C1.5	
28	0444	0450	0516	1-	3			1	1		0443	C1.7	
28	0535	0541	0604D	1-	1			1			0535	C1.7	
28	0607	0610	0632	1-	1			1			0604	C1.6	
28	0714	0720	0745	1-	1			1			0720	C1.9	6850
28	0940	0953	1024	2	3					2	0931	C2.1	
28	1945	1947	2011	1+	1					1	1943		6855
28	2340	2355	2442	1-	1			1			2337E		6848

\* = no flare patrol.



SUDDEN IONOSPHERIC DISTURBANCES

SEPTEMBER 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
29	0121	0128	0149	1-	3			1	1		No flare		
29	0156	0204	0227	1-	3			1	1		0154	C2.8	
29	0534	0540	0558	1-	1			1			No flare		
29	0834	0846	0909	1-	1			1			No flare		
29	1134	1145	1202	1	1		1				No flare		
29	1309	1318	1345	2-	3					2	1306	C2.8	6853
29	1404	1422	1445	1-	1			1			1409E	C2.7	6853
29	1518	1535	1647	2	5	3	4	1	1	10	1513	M7.3	6853
29	1606	1607	1616U	1-	1						1607		6848
29	1920	1922	1942	1	3					4	1921	C4.9	6853
30	0122	0141	0200D	1-	3			1	1		0121	C2.7	6853
30	0200E	0206	0235	1-	3			1	1		0202	C2.1	
30	0452	0458	0555	1+	5	1		1	1	2	0451	C8.2	6850
30	0656	0703U	0757	2	1		1				0639	C2.5	6853
30	0821	0833	0858	1	1		1				0820	C1.9	6853
30	0933	0941	1000	1-	3	1	2		1	3	0932	C3.1	
30	1125	1142	1210	1-	3	1	2		1	2	1121	C2.6	
30	1256	1303	1354	1-	5	1	2	1	1	2	1254	C4.6	6853
30	1430	1446	1530	1-	5	1	1	1	1	9	1429		6850
30	2224	2234	2353D	2-	5	1		1		2	2233E	M1.0	6850
30	2353E	2408	2448	1-	1			1			No flare		

\* = no flare patrol.

OBSERVATORIES REPORTING FOR SEPTEMBER 1991

Amherst, New Hampshire, USA	SES	Lintong, People's Rep of China	SPA
Athens, Georgia, USA	SES	Locust Grove, Georgia, USA	SES
Ayrshire, Scotland	SES	Madison, Wisconsin, USA	SES
Boksburg, Rep of S. Africa	SES	Manahawkin, New Jersey, USA	SES
Cleveland, Ohio, USA	SES	Mau, Hawaii, USA	SWF
Darmstadt, Germany	SWF	Nerja, Spain	SES
Edenvale, Rep of S. Africa	SES	Panska Ves, Czechoslovakia	SES, SEA, SWF
Farsta, Sweden	SES	Paterson, New Jersey, USA	SES
Gettysburg, Pennsylvania, USA	SES	Piscataway, New Jersey, USA	SES
Hiraiso, Japan	SWF	San Francisco, California, USA	SES
Houston, Texas, USA	SES	Shaker Heights, Ohio, USA	SES
Hudson, Ohio, USA	SES	Sofia, Bulgaria	SES
Inubo, Japan	SPA	Tucson, Arizona, USA	SES
Johannesburg, Rep of S. Africa	SES	Upice, Czechoslovakia	SEA
Juliusruh, Germany	SWF	Vlasim, Czechoslovakia	SEA
Kuhlungsborn, Germany	SEA, SPA	Windsor Locks, Connecticut, USA	SES
LaCrescenta, California, USA	SES		

Observations are not necessarily continuous.

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

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SEPTEMBER 1991

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type				
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)					
01	0000	0730	CULG				0016.0	0135.0	3				IV C				
			LEAR				0018.0	0158.0	2				CONT				
			PALE				0021.0	0433.0	1				CONT				
			CULG				0215.5	0216.0	1				IIIB				
			LEAR				0216.0	0225.0	2				III				
			CULG				0220.0	0221.0	1				IIIG				
			LEAR				0232.0	0236.0	2				III				
			CULG				0236.0	0236.5	1				IIIB				
			LEAR				0250.0	0250.0	1				III				
			CULG				0250.5	0251.0	1				IIIB				
			LEAR				0414.0	0414.0	2				III				
			LEAR				0433.0	0435.0	1				III				
	LEAR				0502.0	0502.0	1				III						
	0517	0524	WEIS														
			CULG				0521.0	0536.0	1				IIIS				
			SVTO				0521.0	0535.0	2				S				
	0629	1453	POTS														
			POTS				0629.0E	1453.0U	1				I, S, C, DC, P				
			LEAR				0902.0	0910.0	2				III				
			SVTO				0902.0	0915.0	2				S				
			POTS				0903.8U	0907.3	3				IIIGG				
			POTS				1036.5	1038.8	2				IIIGG, RS				
	0551	1615	WEIS				1055.5	1101.1	2				IIIG				
			ONDR	1229.9	1230.0	2	1229.7	1229.8	2				IIIB				
	0633	1402	ONDR										IIIG				
			SGMR				1331.0	1355.0	2				S				
			SVTO				1331.0	1352.0	2				S				
			POTS				1334.5U	1356.0U	3				IIIGG				
			WEIS				1338.3	1349.7	2				IIIGG				
			SGMR				1516.0	1516.0	1				III				
2030	2400	CULG															
		PALE				2224.0	2224.0	1				III					
02	0000	0730	CULG				0145.0	0400.0	1				IV C				
			LEAR				0200.0	0200.0	1				III				
			PALE				0200.0	0200.0	1				III				
			CULG				0435.0	0615.0	1				IV C				
			SVTO				0528.0	0734.0	1				CONT				
			0610	1402	ONDR												
					0741	1507	POTS										
					POTS				0753.4	0753.8	1				IIIG		
					POTS				0913.0	0930.0	2				IIIGG		
					SVTO				0913.0	1929.0	2				S		
					SVTO				1000.0	1013.0	2				II		
					POTS				1000.8	1005.5	2				II		
	POTS						1017.7	1019.6	1				I				
	POTS						1022.7	1029.0	1				IIIG				
	POTS						1100.9	1101.4	1				IIIG				
	SGMR						1204.0	1228.0	1				S				
	SGMR						1258.0	1305.0	2				III				
	SVTO						1258.0	1304.0	2				III				
	POTS						1258.3	1304.9	3				IIIGG				
	0537	1739			WEIS				1259.2	1259.4	2				IIIB		
					POTS				1409.8	1410.0	1				IIIB		
					SGMR				1410.0	1410.0	1				V		
					POTS				1501.9	1506.5U	1				IIIG		
			SGMR				1502.0	1510.0	1				III				
			SGMR				1531.0	1531.0	1				III				
	2030	2400	PALE				1911.0	1922.0	2				S				
			CULG				2034.5	2035.0	2				IIIB				
			PALE				2134.0	2135.0	1				III				
			PALE				2234.0	2235.0	2				III				
			PALE				2257.0	2311.0	2				S				
CULG						2305.5	2306.0	1				IIIB					
CULG						2310.0	2311.0	1				IIIB					
03	0000	0730	CULG				0136.0	0137.0	1				IIIB				
			LEAR				0136.0	0137.0	2				III				
			PALE				0136.0	0136.0	1				III				

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

SEPTEMBER 1991

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
03				0319.0	0319.0	2				III
				0501.0	0503.0	1				IIIG
				0502.0	0503.0	2				III
				0522.0	0522.0	1				III
				0639.0	0639.0	1				III
				0647.0	0649.0	2				III
				0647.0	0648.0	2				III
0646 1509				0647.7	0649.0	2				IIIGG
				0649.0	0650.0	1				IIIB
				0759.0	0759.0	1				III
				0759.6	0759.7	1				IIIB
				0815.0	0816.0	1				III
				0823.9	0824.0	1				UNCLF
				1039.1	1039.2	1				RS
				1045.9	1101.7	3				IIIGG
				1048.7	1048.9	1				UNCLF
		1059.8	1101.4	2						DCIM
0520 1335				1059.8	1101.4	2				IIIG
0609 1401		1059.9	1101.3	3	1059.9	1101.3	3			IIIGG
				1125.0	1125.0	1				III
				1125.0	1125.0	1				III
				1125.3	1126.8	2				IIIG
				1129.5	1129.8	1				UNCLF
				1143.5	1143.6	3				IIIB
				1143.6	1143.7	1				IIIG
				1143.6	1143.7	1				IIIB
				1155.3	1155.4	2				IIIB
				1203.4	1203.6	1				UNCLF
				1205.9	1214.7	2				IIIGG
				1209.7	1211.2	1				IIIG
				1213.0	1214.0	1				III
				1213.0	1213.0	2				III
				1232.8U	1234.0	1				RS, IIIB
				1311.0	1311.4	1				IIIG
				1312.2	1312.4	1				IIIB
				1408.1	1409.6	1				IIIG,U
				1443.8	1451.2	3				IIIGG,V
1343 1736				1444.4	1444.5	1				IIIB
		1445.0	1445.2	3						IIIB
		1509.2	1509.3	1						IIIB
				1513.0	1513.0	2				III
				1513.4	1513.7	3				IIIG
				1548.0	1549.0	1				III
				1548.0	1548.0	2				III
				1603.9	1604.1	2				IIIG
				1656.0	1658.0	1				III
				1656.3	1656.5	2				IIIG
				1708.0	1709.0	2				III
				1712.0	1724.0	1				S
				1737.0	1741.0	2				III
				1737.0	1742.0	2				V
				1811.0	1811.0	1				III
				1811.0	1812.0	1				III
				1919.0	1920.0	1				III
				1920.0	1920.0	1				III
				1944.0	1944.0	1				III
				1945.0	1945.0	1				III
				2004.0	2007.0	2				V
				2004.0	2007.0	3				V
				2057.0	2059.0	1				III
				2206.0	2218.0	2				S
				2206.0	2208.0	2				V
				2253.0	2302.0	1				III
04				0003.0	0008.0	3				III
				0003.0	0008.0	2				III
				0028.0	0029.0	2				III
				0028.0	0029.0	2				III
				0109.0	0109.0	1				III

S O L A R R A D I O E M I S S I O N  
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SEPTEMBER 1991

Observation Day (UT)	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
04			PALE				0109.0	0109.0	1				III
			LEAR				0130.0	0132.0	2				III
			PALE				0130.0	0132.0	1				III
			LEAR				0515.0	0516.0	2				III
	0000	0730	CULG				0515.5	0515.5	1				IIIB
	0523	1735	WEIS										
			LEAR				0540.0	0550.0	2				S
			SVTO				0540.0	0548.0	2				III
			CULG				0540.5	0548.5	1				IIIN
	0608	1403	ONDR										
			LEAR				0657.0	0657.0	1				III
			SVTO				0657.0	0657.0	1				III
	0623	1503	POTS				0657.1	0657.3	1				IIIB
			POTS				0820.0	0821.7	1				I
			POTS				0831.1	0831.2	1				IIIB
			SVTO				0841.0	0842.0	1				III
			POTS				0841.8	0846.6	1				IIIG
			POTS				0917.0	1503.0U					I,S,C
			POTS				1224.7	1226.3	2				IIIGG
			POTS				1244.3	1244.4	1				IIIB
			POTS				1352.0	1419.6U	3				IIIGG,RS
			SGMR				1356.0	1357.0	1				V
			SGMR				1553.0	1553.0	1				V
			SGMR				1632.0	1633.0	1				III
			SGMR				1743.0	1821.0	1				S
	2030	2400	CULG										
05	0000	0730	CULG				0259.5	0259.5	1				IIIB
			CULG				0302.0	0302.5	1				IIIG
			CULG				0306.5	0306.5	1				IIIB
	0523	0921	WEIS										
	0609	1402	ONDR										
	0932	1732	WEIS										
	0953	1501	POTS				1027.0	1501.0U	1				I,S,W
			POTS				1055.0	1055.1	1				IIIB
			POTS				1101.3	1101.4	1				IIIB
			LEAR				2324.0	2324.0	1				III
			PALE				2324.0	2324.0	1				III
	2030	2400	CULG				2324.5	2324.5	1				IIIG
			LEAR				2358.0	2358.0	1				III
			PALE				2358.0	2358.0	1				III
06			LEAR				0105.0	0118.0	1				S
			LEAR				0129.0	0130.0	2				III
			PALE				0129.0	0130.0	2				III
	0000	0730	CULG				0129.5	0129.5	1				IIIB
			PALE				0130.0	0428.0	1				CONT
			LEAR				0134.0	0232.0	1				CONT
			LEAR				0205.0	0206.0	2				III
			PALE				0205.0	0206.0	2				III
			CULG				0205.5	0206.5	1				IIIG
			LEAR				0320.0	0321.0	1				III
			CULG				0321.0	0321.0	1				IIIB
	0526	1714	WEIS										
			LEAR				0547.0	0550.0	2				III
			SVTO				0547.0	0549.0	2				III
			CULG				0548.0	0549.0	1				IIIG
	0608	0929	ONDR										
			LEAR				0651.0	0659.0	2				III
	0623	1457	POTS				0651.1	0656.8	1				IIIG
			SVTO				0655.0	0658.0	2				III
			CULG				0656.0	0658.0	1				IIIG
			POTS				0742.4	0742.5	1				IIIB
			POTS				0828.0U	1457.0U	1				I,S
			POTS				1053.9	1054.1	1				IIIG
	1130	1402	ONDR										
			POTS				1355.1	1355.5	2				IIIG
			SGMR				1417.0	1415.0	2				V
			SVTO				1417.0	1418.0	2				III

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

SEPTEMBER 1991

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
06			POTS				1417.7	1418.1	1				IIIG
			SVTO				1608.0	1610.0	2				III
			SGMR				1729.0	1730.0	1				V
	2030	2400	CULG										
07			LEAR				0118.0	0118.0	1				III
			PALE				0118.0	0118.0	1				III
			LEAR				0140.0	0145.0	2				III
			PALE				0140.0	0144.0	1				III
	0000	0730	CULG				0146.0	0149.0	1				IIIG
			PALE				0239.0	0243.0	1				III
			CULG				0240.0	0242.5	1				IIIG
			LEAR				0436.0	0437.0	2				III
			CULG				0436.5	0437.5	1				IIIG
			LEAR				0511.0	0559.0	2				S
			SVTO				0511.0	0633.0	2				S
			CULG				0511.5	0538.5	1				IIIN
			CULG				0556.0	0559.0	1				IIIGG
	0623	1415	POTS				0623.0E	1415.0U	1				I,S,C
			CULG				0628.0	0628.0	1				IIIB
			LEAR				0628.0	0633.0	2				III
			POTS				0628.0	0633.3	1				IIIG
			CULG				0632.5	0632.5	1				IIIB
			SVTO				0756.0	0801.0	2				V
			LEAR				0757.0	0801.0	2				III
			POTS				0757.3	0801.4	1				IIIG
			SVTO				0833.0	0837.0	2				V
			LEAR				0834.0	0837.0	3				III
			POTS				0834.0	0836.9	2				IIIG,V,U,HARM,C
	0525	1728	WEIS				0834.1	0837.2	2				IIIG
			SVTO				0913.0	0914.0	2				III
			SVTO				1045.0	1048.0	3				V
			POTS				1046.0	1047.5U	3				IIIGG,U,C
			WEIS				1046.2	1047.7	2				IIIG
			SVTO				1058.0	1100.0	3				V
			POTS				1058.3	1059.2	3				IIIG
			WEIS				1058.4	1058.7	2				IIIG
			POTS	1129.5	1130.8	3							DCIM
	0606	1401	ONDR	1129.7	1130.8	1							P
			SGMR				1147.0	1147.0	1				III
			POTS				1205.6	1205.7	1				IIIB
			SVTO				1215.0	1220.0	2				III
			SGMR				1222.0	1321.0	1				CONT
			SVTO				1238.0	1300.0	2				CONT
			POTS	1243.7	1244.2	2							DCIM
		SVTO				1321.0	1322.0	1				III	
		SGMR				1355.0	1356.0	2				III	
		POTS				1356.1	1356.3	1				IIIB	
		SVTO				1449.0	1449.0	1				III	
		SGMR				1527.0	1528.0	1				III	
		SGMR				1643.0	1643.0	1				III	
		PALE				1747.0	1749.0	3				V	
		SGMR				1747.0	1749.0	3				V	
		PALE				1901.0	1901.0	1				III	
		SGMR				1901.0	1901.0	1				III	
		PALE				1930.0	1955.0	2				II	
		SGMR				1930.0	1956.0	2				II	
		SGMR				1956.0	2100.0	1				CONT	
2030	2400	CULG				2037.0	2038.5	1				IIIG	
		PALE				2037.0	2039.0	2				III	
		SGMR				2037.0	2038.0	2				III	
		CULG				2102.0	2103.5	1				IIIG	
		PALE				2102.0	2104.0	2				V	
		PALE				2104.0	2202.0	1				CONT	
		PALE				2156.0	2157.0	2				III	
		LEAR				2300.0	2301.0	1				III	
		PALE				2300.0	2301.0	1				III	
		LEAR				2311.0	2313.0	1				III	
		PALE				2311.0	2325.0	3				S	

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		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)			
07	CULG				2311.5	2313.5	1				IIIG		
	LEAR				2322.0	2325.0	3				III		
08	LEAR				0117.0	0119.0	3				III		
	PALE				0117.0	0119.0	2				V		
	LEAR				0139.0	0140.0	1				III		
	PALE				0139.0	0152.0	2				S		
	LEAR				0146.0	0153.0	3				III		
	0000 0730	CULG				0148.0	0149.0	1				IIIG	
		SVTO				0539.0	0541.0	3				V	
	LEAR				0540.0	0542.0	3				III		
	CULG				0540.5	0542.5	2				VB		
	0631 1427	POTS				0657.7	0707.2	3				IIIGG,UG	
		CULG				0658.0	0658.0	1				IIIB	
		LEAR				0658.0	0659.0	2				III	
		SVTO				0658.0	0659.0	2				III	
		LEAR				0706.0	0707.0	2				III	
		SVTO				0706.0	0707.0	2				III	
		POTS				0707.0U	1427.0U	1				I,S	
		LEAR				0821.0	0821.0	2				III	
		SVTO				0821.0	0821.0	2				III	
		POTS				0821.4	0821.6	1				IIIB	
		LEAR				0828.0	0831.0	3				III	
		SVTO				0828.0	0831.0	3				V	
		POTS				0828.7	0829.9	3				IIIG,U,HARM,C	
		0747 1727	WEIS				0828.7	0830.3	1				IIIG
			SVTO				0907.0	0908.0	1				III
	LEAR					0910.0	0911.0	2				III	
	SVTO					0910.0	0916.0	3				V	
	WEIS					0910.4	0911.1	1				IIIG	
	POTS					0912.8	1015.0	3				II IIIG,V	
	POTS					0912.8	1015.0	3				IV HARM,H	
	LEAR					0913.0	0915.0	3				III	
	0606 1403		ONDR				0913.5	0920.0	2				CONT
			WEIS				0913.7	0914.5	2				IIIG
	WEIS					0914.7	0924.0	3				II	
LEAR					0918.0	0929.0	2				II		
SVTO				0919.0	0929.0	2				II			
WEIS				0920.8	0926.7	1				CONT			
SVTO				0930.0	0936.0	1				II			
SVTO				0946.0	1105.0	1				IV			
LEAR				0952.0	0952.0	2				III			
WEIS				0952.2	0952.3	1				IIIB			
SGMR				1147.0	1147.0	1				III			
POTS				1202.1	1202.3	1				IIIB			
SVTO				1301.0	1304.0	2				III			
POTS				1301.4	1302.5	2				IIIG,U			
SGMR				1302.0	1305.0	1				V			
SGMR				1341.0	1341.0	1				III			
POTS				1341.2	1341.9	1				IIIG,U			
SGMR				1537.0	1538.0	1				III			
SGMR				1558.0	1559.0	1				V			
SGMR				1645.0	1646.0	2				V			
SGMR				1708.0	1713.0	1				V			
SGMR				1811.0	1819.0	3				III			
PALE				1816.0	1819.0	3				III			
SGMR				1843.0	1844.0	1				III			
SGMR				1910.0	1931.0	2				S			
PALE				1955.0	1955.0	2				V			
SGMR				1955.0	1955.0	1				III			
PALE				2007.0	2010.0	3				V			
SGMR				2007.0	2009.0	3				V			
PALE				2046.0	2049.0	2				V			
SGMR				2046.0	2049.0	2				III			
PALE				2312.0	2313.0	1				V			
PALE				2346.0	0002.0	1				S			
LEAR				2347.0	2348.0	1				III			
09 0000 0730	CULG				0105.0	0105.5	1				IIIB		

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		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
09	LEAR				0105.0	0105.0	1				III	
	LEAR				0137.0	0137.0	1				III	
	PALE				0137.0	0137.0	1				III	
	LEAR				0156.0	0157.0	1				III	
	LEAR				0225.0	0226.0	1				III	
	PALE				0235.0	0236.0	1				III	
	CULG				0320.0	0321.0	1				IIIB	
	CULG				0329.0	0330.0	2				IIIB	
	LEAR				0329.0	0330.0	1				III	
	LEAR				0509.0	0510.0	2				III	
	SVTO				0509.0	0509.0	2				III	
	CULG				0509.5	0510.0	2				IIIB	
	0528 1723	WEIS										
	0608 1403	ONDR										
	0629 1457	POTS				0629.0E	1457.0U	1				I,S,C,DC
		CULG				0634.5	0635.0	1				IIIB
		POTS				0652.8	0653.3	1				IIIG
		POTS				0718.5	0719.3	2				IIIG
		SVTO				0729.0	0729.0	2				III
LEAR					0813.0	0828.0	2				S	
SVTO					0813.0	0828.0	2				S	
POTS					0813.1	0833.0	2				IIIGG	
LEAR					0856.0	0857.0	1				III	
SVTO					0856.0	0856.0	2				III	
POTS					0856.2	0903.6	1				IIIG	
POTS					0934.0	0937.1	1				IIIG	
POTS					1040.1	1040.3	1				IIIG	
POTS					1218.9	1219.0	1				IIIB	
SGMR					1240.0	1240.0	1				III	
POTS					1240.1	1240.3	1				IIIB	
POTS					1402.6	1402.7	1				IIIB	
POTS					1417.5	1417.8	1				IIIG	
SVTO					1449.0	1449.0	1				III	
SGMR					2032.0	2032.0	1				III	
2030 2400	CULG				2152.0	2153.0	1				IIIB	
	PALE				2152.0	2152.0	1				III	
	CULG				2232.0	2358.0	1				CONTINUUM	
	LEAR				2349.0	2349.0	1				III	
	PALE				2349.0	2349.0	1				III	
	CULG				2349.5	2350.0	2				IIIB	
10	LEAR				0053.0	0054.0	2				III	
	PALE				0053.0	0054.0	1				III	
	0000 0730	CULG				0320.0	0320.5	1				IIIB
		LEAR				0320.0	0320.0	1				III
	CULG				0326.5	0327.0	1				IIIB	
	CULG				0433.5	0434.0	1				IIIB	
	CULG				0445.0	0445.5	1				IIIB	
	CULG				0453.5	0454.0	1				IIIB	
	0531 0750	WEIS										
		LEAR				0602.0	0602.0	2				III
	SVTO				0602.0	0602.0	2				III	
	0627 1457	POTS				0627.0E	1457.0U	2				I,S,C,DC
		POTS				0651.5	0652.6	1				IIIG,RS
	0608 1119	ONDR	0717.1	0717.2	1	0717.1	0717.2	1				IIIGU
		POTS				0717.1	0720.0	2				IIIG
		ONDR	0718.6	0719.0	1	0718.6	0719.0	1				IIIG
		POTS				0726.7	0727.0	2				IIIG
	POTS				0733.4	0740.7	2				IIIGG	
	0758 1335	WEIS				0857.0	0858.0	1				I
	1149 1402	ONDR										
		SGMR				1221.0	1223.0	1				III
		SGMR				1455.0	1455.0	1				III
		SGMR				1514.0	1514.0	1				III
		SGMR				1615.0	1616.0	1				III
		SGMR				1634.0	1757.0	1				CONT
	2030 2400	CULG				2113.5	2130.0	1				II B
		PALE				2156.0	0424.0	2				CONT
LEAR					2300.0	0309.0	1				CONT	

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	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
11	0000	0730	CULG										
	0608	1401	ONDR										
			SVTO				0852.0	0852.0	1				III
			SGMR				1153.0	1154.0	1				III
	1249	1720	WEIS										
			SGMR				1302.0	1303.0	1				III
			SGMR				1323.0	2000.0	1				CONT
			SVTO				1336.0	1356.0	2				S
			PALE				1755.0	1755.0	1				III
			PALE				1907.0	1908.0	1				III
			PALE				2007.0	2021.0	2				V
			PALE				2101.0	2105.0	2				V
			PALE				2130.0	2130.0	1				III
			PALE				2253.0	2254.0	1				III
	2030	2400	CULG				2254.0	2255.0	1				IIIB
12			LEAR				0008.0	0730.0	1				CONT
	0000	0730	CULG				0045.0	0045.5	1				IIIB
			CULG				0053.0	0053.5	1				IIIB
			CULG				0105.5	0106.0	1				IIIB
			CULG				0111.5	0112.0	1				IIIB
			CULG				0115.5	0116.0	1				IIIB
			CULG				0415.0	0415.5	1				IIIB
			LEAR				0417.0	0417.0	2				III
	0610	1403	ONDR										
			CULG				0644.0	0645.0	1				IIIB
			LEAR				0722.0	0743.0	2				S
	0534	1719	WEIS				0831.4	0831.5	2				IIIG
			SGMR				1419.0	1426.0	1				III
			PALE				1822.0	1823.0	1				III
			PALE				1856.0	1903.0	2				III
			SGMR				1859.0	1905.0	1				V
			SGMR				1922.0	1923.0	2				V
			PALE				1949.0	1953.0	2				V
			PALE				2026.0	2028.0	1				III
	2030	2400	CULG				2138.0	2140.0	1				IIIG
			PALE				2211.0	2211.0	1				III
			CULG				2323.0	2335.0	1				IIIN
			PALE				2351.0	0215.0	1				CONT
13			LEAR				0312.0	0315.0	1				III
	0000	0730	CULG				0313.0	0315.0	1				IIIG
	0534	1537	WEIS										
	0608	1158	ONDR										
	0623	1459	POTS	1242.4	1242.5	1							DCIM
			PALE				1959.0	1959.0	1				III
			SGMR				1959.0	2000.0	2				III
	2030	2400	CULG										
14	0000	0730	CULG				0733.9	0742.6	1				IIIGG
	0654	1511	POTS				0820.2	0820.3	1				IIIB
			POTS				0841.9	0848.7	1				UNCLF
			POTS				1106.5U	1107.3	1				IIIG,U
			POTS				1134.7	1135.8	1				IIIG
			POTS				1214.1	1215.9	2				IIIG
			POTS				1305.8	1306.1	2				UNCLF
			POTS				1343.4	1345.7	3				IV
	0918	1402	ONDR	1345.0	1345.3	3	1345.0	1345.3	3				IIIG,SPIKES
	0534	1715	WEIS				1345.1	1345.3	2				IIIG
			POTS				1349.8	1349.9	2				IIIB
			SGMR				1354.0	1354.0	1				III
			POTS				1354.1	1358.3	1				IIIG
			SVTO				1420.0	1425.0	3				III
			POTS				1420.9	1435.1U	3				RS,IIIGG,V,UGG
			SGMR				1421.0	1426.0	3				V
			POTS	1424.2	1426.2	2							DCIM
			WEIS				1424.2	1426.1	2				SPIKES,RS
			WEIS				1424.3	1425.6	3				IIIG





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	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
20			LEAR				0113.0	0113.0	1				III	
	0000	0730	CULG				0114.5	0115.0	1				IIIB	
	0608	1403	ONDR											
	0638	1523	POTS				0707.1	0709.2	2				IIIGG	
			POTS				1029.3	1029.4	1				IIIB	
			POTS				1142.6	1145.3	2				IIIG	
			POTS				1223.0	1229.7	2				IIIGG, SPIKES, U	
			POTS				1236.0	1332.0	1				I, S	
	1329	1703	WEIS											
			POTS				1504.1	1505.5	1				IIIG	
			PALE				1759.0	1802.0	1				III	
			SGMR				1759.0	1802.0	1				V	
			CULG				2023.0	2358.0	1				UNCLF	
2030	2400	CULG				2244.0	2248.0	2				IIIG		
		PALE				2338.0	2338.0	1				III		
21			WEIS											
	0000	0730	CULG				0031.5	0032.0	1				IIIB	
			LEAR				0231.0	0232.0	3				III	
			PALE				0231.0	0231.0	2				III	
			LEAR				0301.0	0313.0	2				S	
	0609	0906	ONDR											
			LEAR				0655.0	0658.0	2				S	
	0621	1443	POTS				0655.8	0658.0	2				IIIG	
			SGMR				1428.0	1430.0	1				III	
			POTS				1428.8	1428.9	1				IIIB	
	1433	1659	WEIS											
	0544	1306	WEIS				1502.3	1503.5	2				IIIG	
			SVTO				1503.0	1503.0	1				III	
			SGMR				1553.0	1603.0	1				III	
			PALE				1739.0	1739.0	2				III	
		SGMR				1739.0	1739.0	1				V		
2030	2400	CULG												
22			LEAR				0208.0	0209.0	1				III	
	0000	0730	CULG				0209.0	0290.5	1				IIIG	
	0623	1427	POTS				0853.6	0853.8	1				UNCLF	
			POTS				0929.8	0933.7	2				IIIGG	
	0547	1658	WEIS				0930.2	0930.0	2				IIIG	
			WEIS				0932.4	0932.7	2				IIIG	
			POTS				0940.5	0940.6	1				UNCLF	
			POTS				0957.7	0957.8	1				IIIB	
			POTS				1148.2	1148.3	1				IIIB, V	
			SGMR				1527.0	1542.0	1				S	
			PALE				2102.0	2103.0	1				III	
	2025	2400	CULG				2103.0	2104.0	1				IIIG	
	23	0000	0730	CULG										
				LEAR				0214.0	0215.0	1				III
		0547	1655	WEIS										
0628		1455	POTS				0715.6	0715.7	1				IIIB	
			POTS				0926.4	0928.9	1				UNCLF	
			POTS				1100.8	1101.0	1				UNCLF	
1030		1401	ONDR	1134.6	1134.6	2							IIIB	
			POTS	1134.6	1134.7	2							DCIM	
			POTS				1219.8	1219.9	1				IIIB	
			POTS				1339.4	1339.5	1				IIIB	
		SGMR				1724.0	1725.0	1				V		
2025	2400	CULG												
24			PALE				0030.0	0031.0	1				III	
			LEAR				0031.0	0031.0	1				III	
			LEAR				0043.0	0047.0	3				III	
			PALE				0044.0	0047.0	2				III	
	0000	0730	CULG				0045.0	0046.0	2				IIIG	
			CULG				0047.0	0048.0	2				IIIG	
			LEAR				0049.0	0108.0	2				II	
			CULG				0050.0	0102.0	2				CONTINUUM	
			PALE				0055.0	0411.0	1				CONT	

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Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
24			LEAR				0108.0	0144.0	1				IV
			CULG				0336.5	0336.5	1				IIIB
			LEAR				0430.0	0439.0	1				S
			CULG				0437.0	0437.0	1				IIIB
	0610	1403	ONDR										
	0619	1501	POTS				0642.5	0642.7	1				I
			POTS				0750.5	0923.0U	3				II H,U
			POTS				0750.5	0923.0U	3				IV IIIGG
	0550	1654	WEIS				0751.0	0816.0	2				I
			LEAR				0759.0	0805.0	1				II
			POTS				0947.0U	1430.0U	1				I,S
			POTS				1211.4	1223.1	2				IV IIIG,RS
			WEIS				1211.7	1212.3	2				IIIG
			SGMR				1256.0	1256.0	1				III
			POTS				1437.0	1439.1	1				IIIG
			SGMR				1437.0	1439.0	1				III
			SGMR				1515.0	1523.0	1				III
			WEIS				1522.6	1522.7	2				IIIG
			SGMR				1904.0	1904.0	1				III
			SGMR				1958.0	1958.0	1				III
			PALE				2017.0	2018.0	2				III
			SGMR				2017.0	2018.0	1				III
	2025	2400	CULG				2107.0	2107.0	1				IIIB
			CULG				2131.0	2132.0	1				IIIG
25	0000	0730	CULG				0107.0	0107.5	2				IIIPAIR
			LEAR				0107.0	0107.0	3				III
			PALE				0107.0	0107.0	2				III
			LEAR				0135.0	0135.0	1				III
			LEAR				0230.0	0231.0	1				III
			LEAR				0324.0	0327.0	2				V
			CULG				0335.0	0337.0	1				IIIG
			LEAR				0615.0	0616.0	1				III
			SVTO				0616.0	0616.0	2				III
	0617	1451	POTS				0617.0E	0717.0U	1				I,S
			POTS				0641.4	0641.7	1				IIIG
			POTS				0922.0	1111.0U	1				I,S,DC
			WEIS				0959.8	1000.1	1				I
			SVTO				1111.0	1117.0	3				V
			POTS				1111.5	1115.3	3				IIIG,UG,RS,C
	0550	1651	WEIS				1112.3	1112.8	2				IIIG
	0610	1402	ONDR	1136.7	1137.3	1							CONT
			POTS				1242.0	1251.0	1				I,DC
			POTS				1441.1	1442.0	2				IIIG,UG,I
			WEIS				1441.2	1441.7	3				IIIG,RS
			WEIS				1624.2	1624.4	2				IIIG,U
			SGMR				1709.0	1709.0	1				III
			PALE				1919.0	1921.0	1				III
			SGMR				1919.0	1921.0	1				III
			PALE				2056.0	2101.0	2				III
			SGMR				2056.0	2057.0	2				III
			PALE				2137.0	2139.0	2				III
	2113	2400	CULG				2142.5	2144.0	1				IIIG
			PALE				2222.0	2323.0	2				CONT
			CULG				2223.5	2240.5	1				IIIN
			LEAR				2236.0	2240.0	1				III
			LEAR				2309.0	2316.0	1				III
			CULG				2310.0	2315.0	1				IIIN
26			LEAR				0209.0	0209.0	1				III
			LEAR				0225.0	0230.0	2				III
			PALE				0225.0	0225.0	1				III
			LEAR				0348.0	0352.0	3				III
	0000	0730	CULG				0348.5	0357.0	1				IIIGG
			PALE				0349.0	0350.0	1				III
			LEAR				0510.0	0515.0	1				III
			CULG				0511.0	0511.0	1				IIIB
			CULG				0514.5	0514.5	1				IIIB
			CULG				0549.0	0550.5	1				IIIG

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Spectral Observations

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SEPTEMBER 1991

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
26				0549.0	0550.0	2				III
				0604.0	0619.0	1				IIIGG
				0610.0	0612.0	2				III
				0626.0	0709.0	3				S
				0636.0	0646.0	2				III
				0639.0	0659.5	1				IIIGG
0636 1457				0639.0E	0712.0U	3				IV IIIGG,SPIKES
				0647.0	0700.0	3				S
0552 1650				0647.0	0700.0	3				IIIGG
0609 1402	0650.8	0652.0	3	0648.7	0652.0	3				IIIGP
				0704.5	0705.0	1				IIIG
				0712.0U	1457.0U	2				I,S,C,DC
				0727.0	0729.0	2				III
				0727.5	0727.5	1				IIIB
				0727.7	0727.8	1				IIIB
				0728.5	0728.5	1				IIIB
				0742.0	1115.0	1				CONT
				0805.0	0915.0	1				CONT
				0818.0	0818.0	2				III
				0859.0	0908.0	2				III
				0903.0	0908.0	2				III
				0906.1	0906.3	2				IIIG
	0906.2	0906.3	1							IIIB
				0906.2	0907.2	2				IIIG
				0928.0	0929.0	1				III
				1211.7	1211.8	1				IIIB
				1225.5	1235.0U	1				IV
				1233.0	1235.0	2				V
				1252.0	1252.0	1				III
				1252.1	1252.5	1				IIIG
				1303.0	1306.0	1				I
				1322.0	1322.0	1				III
				1322.2	1322.3	1				IIIB
				1418.0	1418.0	1				III
				1418.1	1418.2	1				IIIB
				1544.0	1545.0	1				III
				1617.0	1617.0	1				III
				1716.0	1718.0	1				V
				1818.0	1819.0	1				III
				1922.0	1927.0	2				III
				1922.0	1927.0	2				III
2025 2400				2056.5	2059.0	1				IIIG
				2057.0	2058.0	1				III
				2312.0	2314.0	2				III
				2312.0	2316.0	2				V
				2312.5	2314.5	1				IIIGG
				2325.0	2334.0	1				III
27				0037.0	0037.0	2				III
0000 0730				0037.5	0037.5	1				IIIB
				0127.0	0127.0	2				III
				0145.0	0146.0	2				III
				0145.5	0146.5	1				IIIG
				0245.0	0246.0	2				III
				0245.0	0246.0	1				III
				0245.5	0247.0	1				IIIG
				0423.0	0424.0	1				IIIG
				0423.0	0425.0	2				III
0552 1646										
0609 1401										
0627 1457				0627.0E	0732.0	1				I,S
	0639.8	0639.9	2							DCIM
				0845.9	0846.6	1				DCIM
				1235.0	1235.0	1				III
				1332.8	1333.1	1				IIIG
				1344.1	1344.2	1				UNCLF
				1424.0	1429.0	1				III
				1504.0	1618.0	1				CONT
2025 2400				2157.5	2157.5	1				IIIB

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SEPTEMBER 1991

Observation Day (UT)	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
27			PALE				2348.0	2349.0	1				III
28			LEAR				0320.0	0320.0	1				III
	0555	0900	WEIS										
	0608	1403	ONDR										
	0629	1451	POTS				0913.9	0916.3	2				IIIGG
			POTS				1026.7	1026.9	1				I
			POTS				1118.8	1118.9	1				IIIB
			POTS				1233.6	1233.9	1				IIIG
	0907	1646	WEIS	1233.7	1233.8	1							IIIG
			POTS				1315.8	1451.0	1				I,S
			PALE				1658.0	1658.0	2				III
	2030	2400	CULG				2250.0	2307.0	1				IIIG
			LEAR				2256.0	2257.0	2				III
			PALE				2256.0	2257.0	2				III
			LEAR				2302.0	0420.0	1				CONT
29	0000	0730	CULG				0406.5	0407.0	1				IIIB
			LEAR				0454.0	0455.0	1				III
			LEAR				0500.0	0502.0	2				III
			LEAR				0524.0	0525.0	1				III
			LEAR				0530.0	0532.0	2				III
			CULG				0531.0	0532.5	1				IIIG
			SVTO				0531.0	0531.0	2				III
			LEAR				0545.0	0613.0	2				S
			CULG				0547.5	0548.5	1				IIIB
			CULG				0557.0	0558.0	1				IIIG
			SVTO				0557.0	0612.0	2				S
			CULG				0605.5	0606.0	1				IIIB
			CULG				0613.0	0613.5	1				IIIB
	0555	1643	WEIS				0636.0	1642.0	2				I,N
	0645	1450	POTS				0645.0E	1450.0	1				I,S,C,DC
			POTS				1049.3	1052.8	2				IIIGG
	0609	1402	ONDR				1105.5	1403.0	1				IN
			ONDR	1254.2	1254.4	1	1254.2	1254.6	1				IIIG
			WEIS				1254.3	1254.4	2				IIIG
			POTS				1255.3	1255.5	1				IIIG
			POTS				1356.5	1401.0	1				IIIG
			SGMR				1425.0	1425.0	1				III
			POTS				1437.6	1437.7	1				IIIB
			SGMR				1507.0	1522.0	2				S
			WEIS				1508.0	1534.0	2				III
			WEIS				1515.0	1552.0	2				CONT
			SVTO				1516.0	1520.0	2				V
			SGMR				1523.0	1542.0	2				IV
			SVTO				1523.0	1538.0	3				IV
			PALE				1751.0	1752.0	1				III
			SGMR				1829.0	1831.0	2				III
			PALE				1830.0	1831.0	1				III
			PALE				2014.0	2015.0	1				III
			PALE				2043.0	2043.0	1				III
			SGMR				2043.0	2043.0	1				III
	2021	2400	CULG				2044.0	2045.0	1				IIIB
			PALE				2114.0	2115.0	1				III
			CULG				2116.0	2117.0	1				IB
			CULG				2133.0	2146.0	1				IS
			CULG				2254.0	2255.0	1				IB
			LEAR				2332.0	2332.0	1				III
			CULG				2332.5	2333.0	1				IIIB
30	0000	0730	CULG				0047.0	0058.0	1				IS
			LEAR				0047.0	0053.0	2				III
			PALE				0049.0	0049.0	1				III
			LEAR				0058.0	0058.0	2				III
			LEAR				0112.0	0113.0	2				III
			LEAR				0218.0	0221.0	2				III
			CULG				0219.5	0221.0	1				IIIB
			PALE				0220.0	0220.0	2				III
			LEAR				0258.0	0259.0	1				III

S O L A R R A D I O E M I S S I O N  
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Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
30				0308.0	0309.0	1				III
				0425.0	0426.0	2				III
				0450.0	0458.0	2				IIIGG
				0515.0	0516.0	1				IIIB
				0553.0	1029.0	2				CONT
				0554.0	0555.0	1				IIIB
				0554.0	0623.0	2				S
0625 1457				0625.0E	1457.0U	2				I,S,C,IIIGG
				0637.0	0639.5	1				IIIG
				0637.3	0638.9	2				IIIGG,SPIKES
0608 1141			0637.4	0638.7	1					IIIGGP
0557 1641				0637.7	0638.6	2				IIIGG
				0638.0	0638.0	2				III
				0659.0	0723.0	2				S
			0717.3	0718.4	1					IIIG
				0717.5	0723.0	2				IIIG
				0748.0	1141.0	1				IN
				0858.2	0859.9	1				SPIKES,RS
				0900.1	0904.3	2				IIIG
			0904.8	0910.2	2					CONT
			0905.0	0909.5	2					IV
			0933.1	0933.4	1					IIIG
						1120.0	1125.0	1		III
						1120.0	1124.0	3		V
						1120.7	1124.3	3		IIIG,C
			1126.3	1128.2	2					CONT
						1248.0	1249.0	2		III
						1248.4	1249.8	3		IIIG
						1249.0	1249.0	3		III
						1249.4	1249.7	2		IIIG
						1301.0	1319.0	1		S
			1353.5	1353.8	1					DCIM
						1428.0	1429.5	3		IV ? ,IIIG
						1428.0	1432.0	3		V
						1428.0	1429.0	2		III
						1428.1	1429.2	3		IIIGG
						1436.0	1500.0	1		S
						1452.3	1506.6	2		SPIKES,RS
						1529.0	1533.0	1		III
						1714.0	1716.0	2		III
						1715.0	1716.0	3		V
						1802.0	0405.0	1		CONT
						1807.0	2100.0	1		CONT
						1900.0	1910.0	3		III
						1900.0	1903.0	3		V
2021 2400						2120.0	2120.5	1		IIIB
						2122.0	2124.0	2		V
						2204.0	2204.0	2		III
						2206.0	2206.5	1		IIIB
						2231.0	2244.5	1		IIIG
						2354.0	0014.0	2		S

The symbols used under the column heading SPECTRAL TYPE have the following definitions:

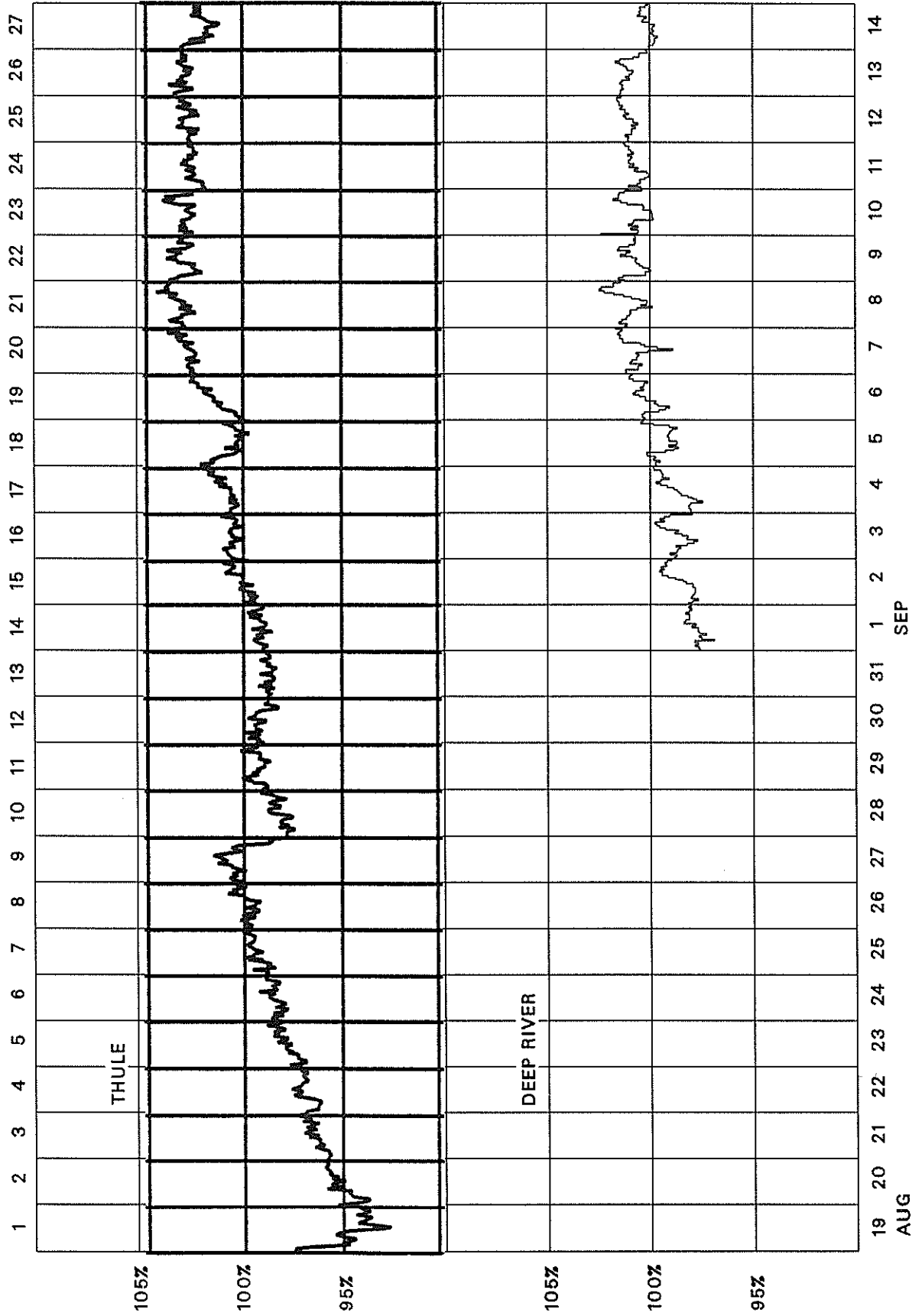
B = Single burst	RS = Reverse slope burst
G = Small group (< 10) of bursts	DP = Drifting pairs
GG = Large group (> 10) of burst	DC = Drifting Chains
C = Underlying continuum (particularly with Type I)	H = Herringbone
S = Storm in the sense of intermittent but apparently connected activity	W = Weak
N = Intermittent activity in this period	P = Pulsations
U = U-shaped burst of Type III	CONT = Continuum
	UNCLF = Unclassified activity
	DCIM = Fast drift

Stations Reporting:

BLEN = Bleien	CULG = Culgoora	LEAR = Learmonth	ONDR = Ondrejov	PALE = Palehua
POTS = Potsdam	SGMR = Sagamore Hill	SVTO = San Vito	WEIS = Weissenau	

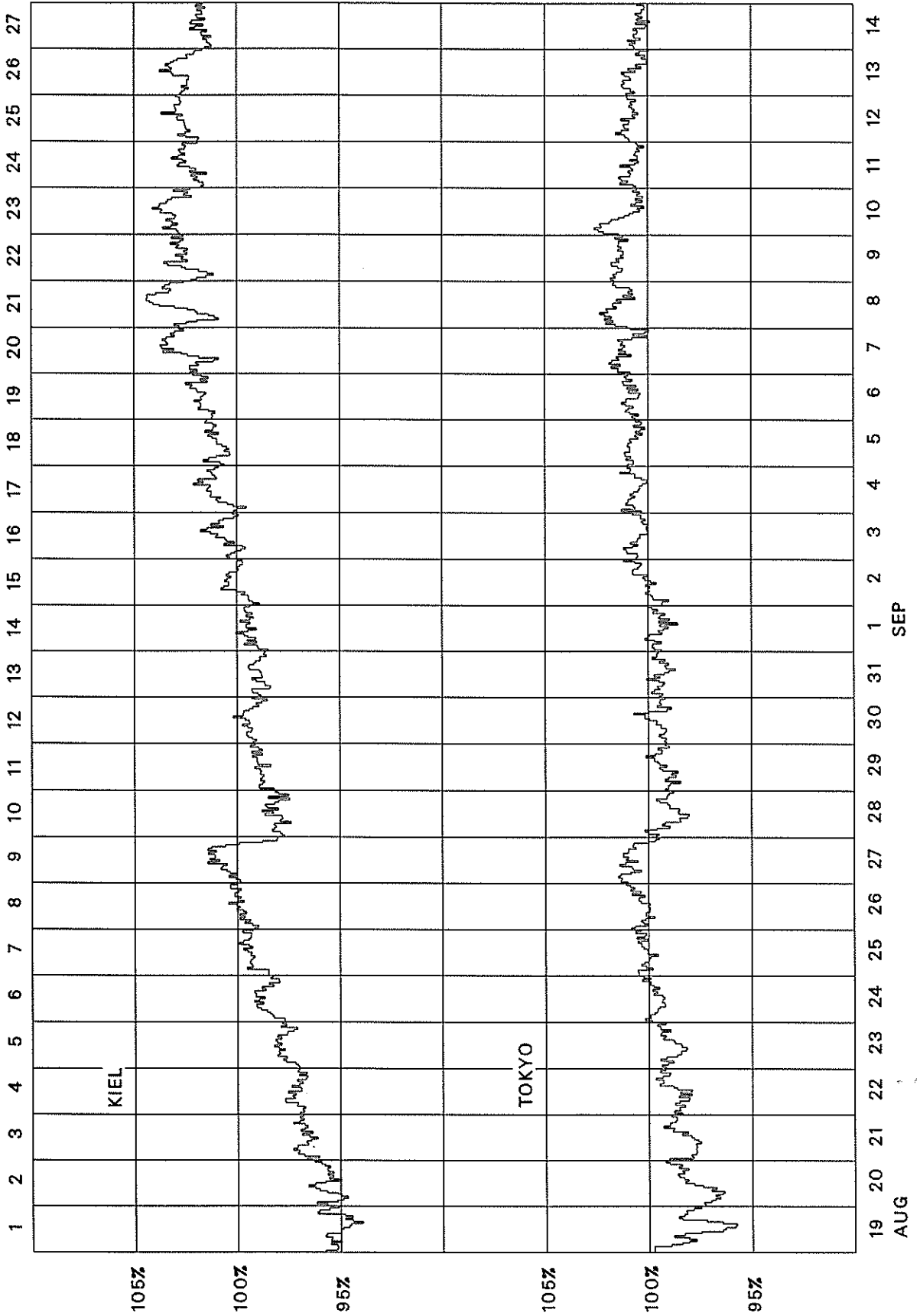
# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2159 (August 1991-September 1991)



# COSMIC RAY INDICES (Neutron Monitor)

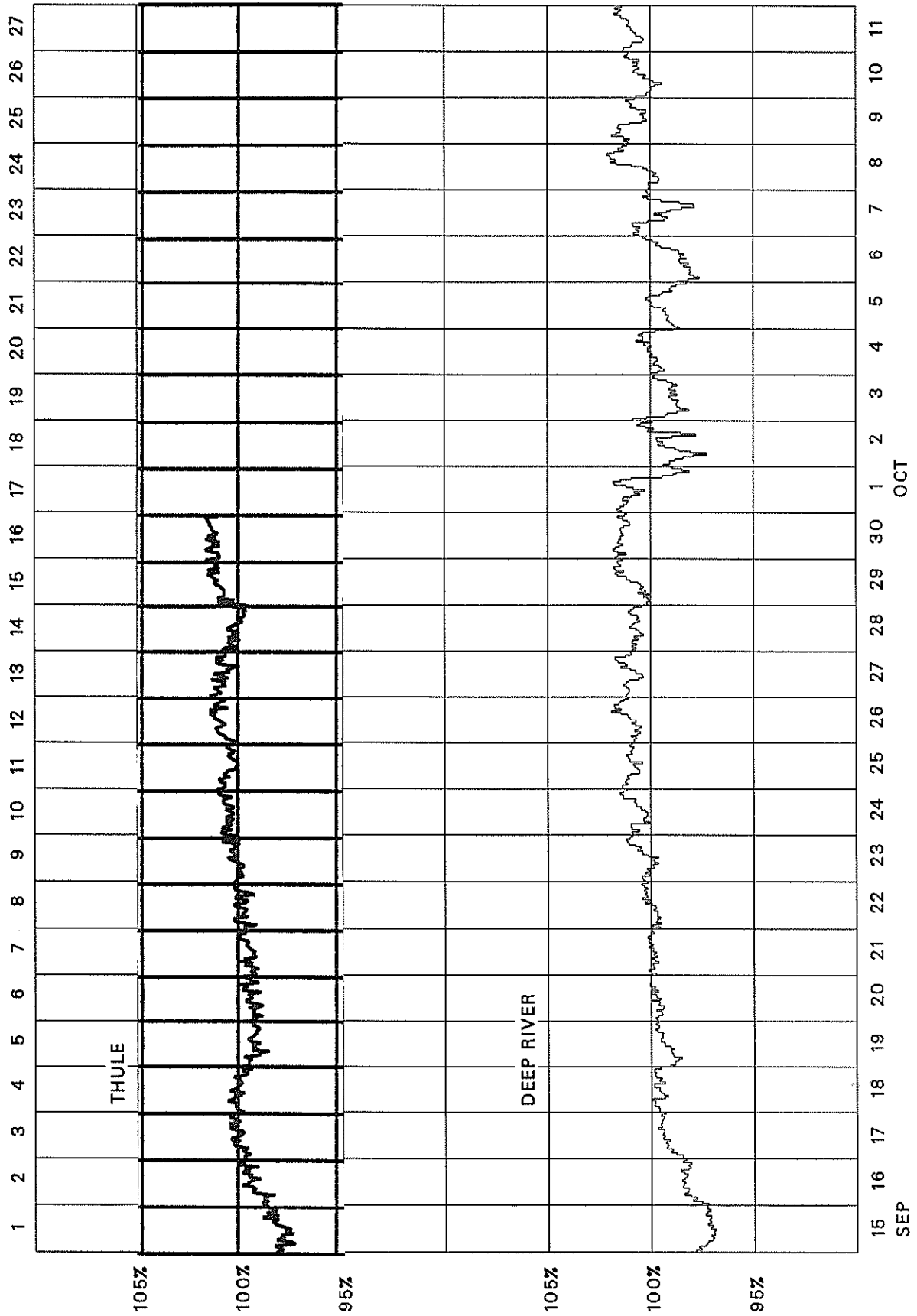
Bartels Rotation 2159 (August 1991-September 1991)





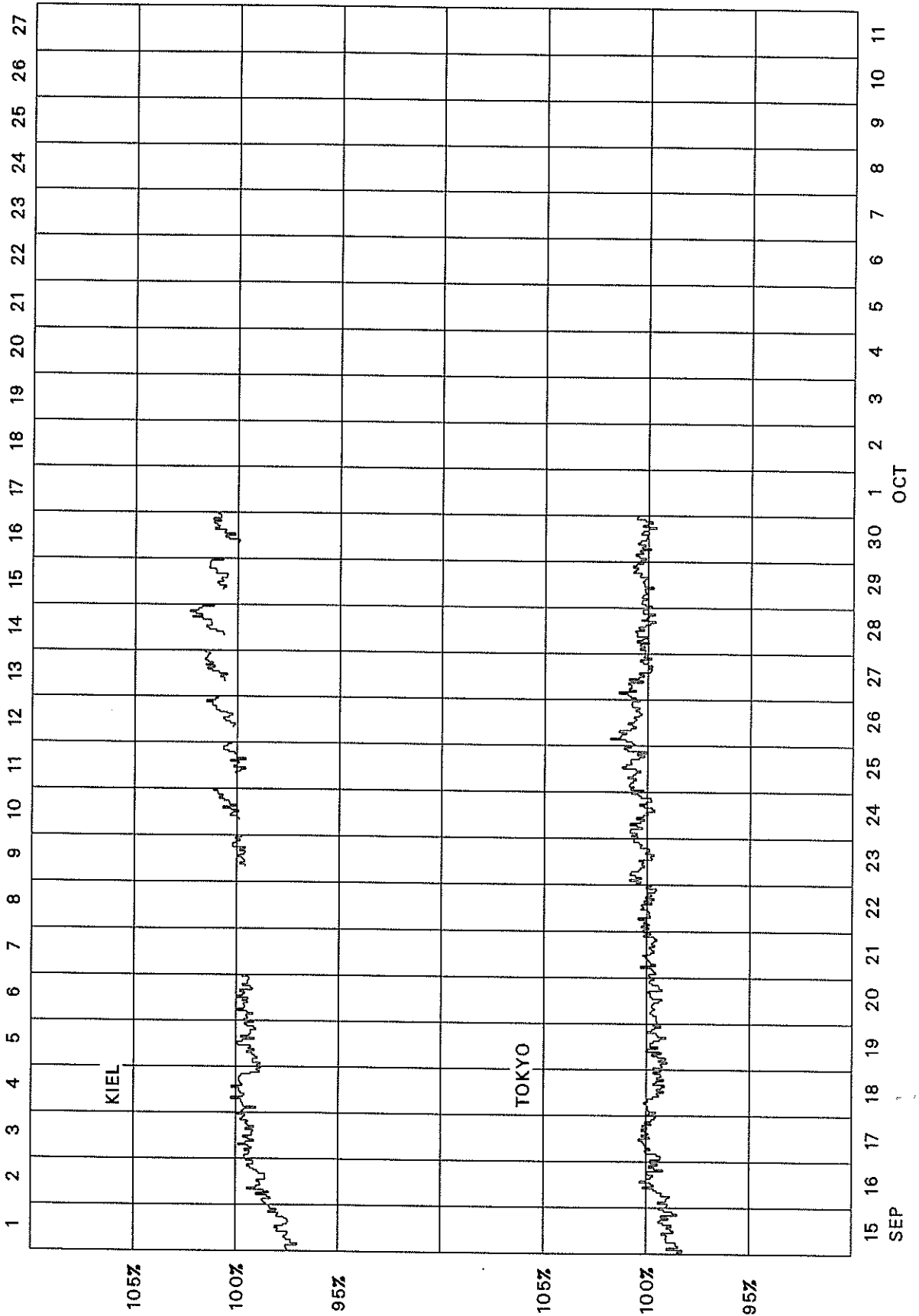
# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2160 (September 1991-October 1991)



# COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2160 (September 1991-October 1991)



COSMIC RAY INDICES  
(Neutron Monitor)

SEPTEMBER 1991

Day	THULE Average (cts/h)/100	DEEP RIVER Average (cts/h)/300	KIEL Average (cts/h)/100	CLIMAX Average (cts/h)/100	TOKYO Average (cts/h)/256	HUANCAYO Average (cts/h)/100
1	3693	5798.7	5204.4		3304.5	
2	3727	5841.0	5235.4		3323.5	
3	3748	5854.1	5265.1		3335.6	
4	3761	5853.7	5289.7		3342.9	
5	3749	5889.2	5287.9		3344.1	
6	3783	5941.1	5325.8		3348.6	
7	3832	5973.5	5375.9		3357.4	
8	3850	5995.2	5392.1		3370.5	
9	3838	5974.7	5367.5		3367.5	
10	3836	5972.0	5400.0		3357.0	
11	3820	5969.8	5356.7		3345.3	
12	3831	5992.3	5376.4		3351.1	
13	3838	5990.1	5376.7		3342.5	
14	3803	5930.0	5325.3		3335.7	
15	3797	5902.9	5317.1		3352.1	
16	3849	5962.4	5380.2		3374.0	
17	3880	6025.9	5412.2		3386.2	
18	3879	6049.7	5421.1		3375.5	
19	3849	6025.6	5403.7		3373.2	
20	3854	6057.0	5417.0		3377.0	
21	3859	6066.5	5419.3		3383.5	
22	3873	6068.8	5433.8		3388.6	
23	3884	6092.6	5470.3		3399.4	
24	3903	6114.8	5454.3		3399.6	
25	3899	6129.0	5482.3		3412.5	
26	3915	6135.4	5506.5		3416.1	
27	3913	6136.6	5512.0		3403.6	
28	3886	6116.1	5481.5		3395.6	
29	3917	6124.4	5486.7		3398.1	
30	3933	6156.5	5513.8		3396.6	
Mean	3840	6004.7	5389.7		3368.5	

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

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

GEOMAGNETIC ACTIVITY INDICES

September 1991

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								aa Provisional							
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M				
1	D2	5+	5+	5-	4+	4	4+	6	5+	39+	47	1.5	4+	4+	4	4-	4	4	5-	5-	61	79	49	54	75		
2		4+	5-	6-	4+	3+	3+	1+	2+	29+	28	1.2	4-	4-	5-	4+	3+	3+	2-	2+	42	36	45	55	28		
3		1	3-	3-	4-	4-	3	3	4-	24-	16	0.9	1	3	3-	3-	3+	3	3-	3-	26	30	26	19	37		
4		2+	3	3+	3-	3	2-	2-	3	21-	12	0.7	2	3-	3+	3-	3-	2	2-	3	21	23	17	25	15		
5		4+	5-	4	3	3	3	3	3-	28-	21	1.1	4-	3	4	3	3-	3	3	3-	34	30	32	38	24		
6		3	4+	3-	3-	2+	3+	2	2+	23-	14	0.8	3-	3+	2	3-	2+	3	2+	2+	21	30	17	27	20		
7		4	3+	3+	3-	3+	2-	3-	1+	22+	14	0.8	3+	3-	3-	2+	3-	2-	2+	1+	19	35	10	33	12		
8		4-	3+	2+	2+	4+	4-	5	3	28-	22	1.1	3	3	2	3-	4	3+	4+	3-	34	48	28	25	50		
9	D3	4	3+	4+	5	5	5-	5	7	38+	49	1.6	3+	3+	4-	4	5-	4-	4	5+	58	76	58	49	86		
10		5	6+	5+	3	3+	4-	3+	4-	34-	37	1.4	4+	5	4+	2	3	3+	3-	4-	46	55	33	50	38		
11		4+	2+	2+	4+	4+	3+	4+	3-	28	22	1.1	4-	2	2	4+	4-	3-	3+	2	32	38	35	42	31		
12	Q9A	2+	2+	3-	3-	2	2-	2	2-	17+	8	0.5	2+	3-	2+	2+	2-	2-	2-	2+	16	18	16	20	14		
13		2+	2+	2+	2	2+	3-	3+	4+	22-	13	0.8	2+	2-	2	2+	2-	2	3-	4-	19	32	18	15	36		
14		4+	4+	4-	4+	4	4	3+	3	31	26	1.2	4	4-	3	4-	4-	3+	3	3	39	48	41	49	40		
15	Q10A	4	3-	1+	1	2-	1+	2	2	16	9	0.5	3+	3-	1+	1	2-	2	2-	2	15	21	11	19	13		
16	Q6A	2+	2	2-	2	2	1-	2+	1+	14+	7	0.3	2	2-	2-	2-	1+	1-	2	2	11	14	10	13	11 CC		
17	Q3	2-	1+	1	0+	1+	2	1+	2	11	5	0.2	2-	1	1+	1-	1	2	1+	2-	9	11	9	9	11 CC		
18	Q4K	1	1-	1-	1	1+	1+	2	3	11-	6	0.3	1-	1-	1	1	1	1	2-	3-	9	14	8	6	16 KK		
19		3	3-	2-	3-	2+	2	2-	3-	19-	10	0.6	3	2	1+	3-	2+	2+	2-	3-	18	19	21	20	20		
20	Q8A	3-	4-	2+	2-	1+	2-	1-	1+	15+	8	0.5	2-	3-	2	2-	1+	1+	1-	1+	12	19	10	17	12		
21	Q2	2+	2-	1	1	1-	1-	0+	2-	9+	5	0.2	2-	1	1+	1+	1	1-	1-	1+	7	10	6	10	7 CC		
22	Q7A	2+	2-	1+	2+	3-	2	1+	1+	15	7	0.4	2-	1+	1	2	2+	2-	1+	2-	11	15	14	12	17 C		
23	Q1	2-	1+	1-	1-	1	1-	1+	1+	9-	4	0.1	1+	1-	1-	1-	1	1-	1+	2-	6	8	12	9	11 CC		
24	Q5A	2+	2+	1-	1	2-	2-	2-	3-	14-	7	0.3	2	2-	1	1	1+	2-	2-	3-	11	18	9	10	17 C		
25	D1	4	5-	4-	4-	5	6	6-	6+	39	50	1.6	3	3	3-	3	4	5-	5-	5+	54	71	46	42	75		
26		5	4+	5-	5-	5-	4	5-	4+	36+	37	1.4	4	3	4	4+	5-	4-	4	4-	53	48	55	49	54		
27	D4	5	6-	5	5	5	5+	5	3+	39+	48	1.6	4	4+	4	5-	5-	5-	4	3	61	66	44	58	52		
28	D5	4+	5	4	5-	5	4-	6-	5-	37	40	1.5	4	4-	3	4-	5-	4-	5-	4-	53	66	39	41	63		
29		3+	2+	2-	3	3+	4	4	4	26-	18	1.0	3	2	1+	2+	3+	3+	3+	4-	27	39	26	19	45		
30		3+	4	4	3+	4-	4	4+	4-	30+	24	1.2	3-	3	3	3	4-	4-	4	3+	35	38	37	30	46		
Mean											20	0.88												29.2	35.2	26.2	30.7
Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov									
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF				
1	4+	5-	4	4-	4+	4-	4-	5-	4+	62	4+	4	4-	3+	4	4	5	5-	61	179.1	170	162	131				
2	4-	4	5-	4+	3+	3+	2-	2+	2+	44	3+	4-	5-	4+	3	4-	2	2+	42	184.3	153	145	137				
3	1	3	3-	4-	3+	3	3-	3+	3+	29	1	3-	3-	3-	3	3-	3-	3+	24	178.1	147	127	130				
4	2	3	3+	3-	3-	2	2-	2-	3-	22	2	3-	3	3	2	2	1+	3	22	173.8	147	141	126				
5	4+	4-	4	3	3	3+	3	3-	3-	39	3+	3-	4-	3	3-	3-	3	3-	29	166.2	132	134	117				
6	2+	3	2+	3-	2+	3	2+	2+	2+	23	3-	4-	1+	3-	2	3-	2	2+	21	179.0	137	124	131				
7	3+	2+	3	3-	3	2	3	2-	2-	24	3	3-	2+	2-	2+	2-	2-	1	16	177.1	111	120	129				
8	3	3	2	3	4+	4-	4+	3-	3-	37	3-	3-	2-	3-	4-	3+	4+	2+	32	199.0	135	133	153				
9	3+	3+	4-	4	5	4	4	6-	6-	63	3	3+	4	4-	4+	4-	4	5	54	183.3	122	123	136				
10	4+	5	4	2+	3+	3	3-	3+	3+	45	4+	5	5-	2-	3-	3+	3	4-	48	187.2	127	110	140				
11	4-	2+	2+	4+	4	3	4-	2	2	36	4-	2	2	4	4-	2+	3+	2	30	179.9	123	118	132				
12	2+	3-	2+	2+	2	2-	2-	2	2	16	3-	3-	2+	2+	1+	2	2-	2+	17	185.4	130	128	138				
13	2+	2-	2	2	2	2+	3-	4-	4-	20	3-	2-	2-	2+	1+	2-	3	4-	19	187.1	143	144	140				
14	4-	4-	3+	4-	4-	3+	3	3	3	39	4	4-	3-	4-	4	3	3	3	40	183.4	147	138	136				
15	3+	3-	1+	1	2	2	2-	2+	2+	17	3	2+	1+	1	1+	2	2-	2-	15	182.2	123	115	135				
16	2	2-	2-	2	2-	1	2+	2	2	13	2-	1	2	1+	1+	0+	2-	2-	11	176.1	101	91	128				
17	2-	1	1+	1	1+	2+	1+	2	2	10	2-	1	1+	1	1	2-	1+	2-	9	178.7	103	96	131				
18	1-	1-	1+	1	1+	2-	2-	3	3	10	0+	1-	1-	1	1	0+	2-	3-	8	182.9	101	97	136				
19	3	2+	2-	3-	2	2+	2-	2-	3-	18	3	2-	1	3-	3-	3-	1+	2+	18	173.9	84	90	126				
20	2	3	2	2	2-	2-	1-	1+	1+	14	2-	2+	2	2-	1	1+	0+	2-	11	171.1	80	89	123				
21	1+	1+	1+	1+	1	1	1-	1+	1+	8	2-	1	1+	1	1-	1-	1+	1+	7	178.0	115	112	130				
22	2-	1+	1+	2+	3-	2	1+	2-	2-	13	1+	2-	1	2	2	2-	1	1+	11	189.0	124	130	142				
23	1+	1	1-	1	1	1	1+	2-	2-	7	2-	1-	1-	1-	1	0+	1+	2-	6	186.1	129	124	139				
24	2	2-	1+	1	2-	2	2-	2-	3-	12	2	1+	1	1	1+	1	2-	3-	11	180.9	112	111	133				
25	3+	3+	3	3	4	5-	5-	5	5	55	3	3	3-	3-	4-	5-	5-	5+	54	181.9	111	102	134				
26	4	3+	5-	5-	5-	4-	4+	4	4	61	4	3	3+	4	4+	3+	3+	4-	46	201.6	117	110	156				
27	4	5-	4+	5-	5-	5	4	3	3	65	4+	4+	4-	4+	5-	4+	4	3	59	178.7	120	116	131				
28	4	4-	3+	4	5	4	5-	4-	4-	56	4	4-	3-	3+	5-	4-	4+	4-	50	176.3	133	125	128				
29	3	2	2-	3-	3+	4-	4-	3+	3+	30	3-	2	1+	2+	3	3+	3	4-	26	195.4	144	136	149				
30	3-	3	3+	3	4-	4-	4	3+	3+	39	3-	3	3-	3	3+	3+	4-	3	33	200.4	138	131	154				
Mean											30.9												27.7	182.5	125.3	120.7	135.1

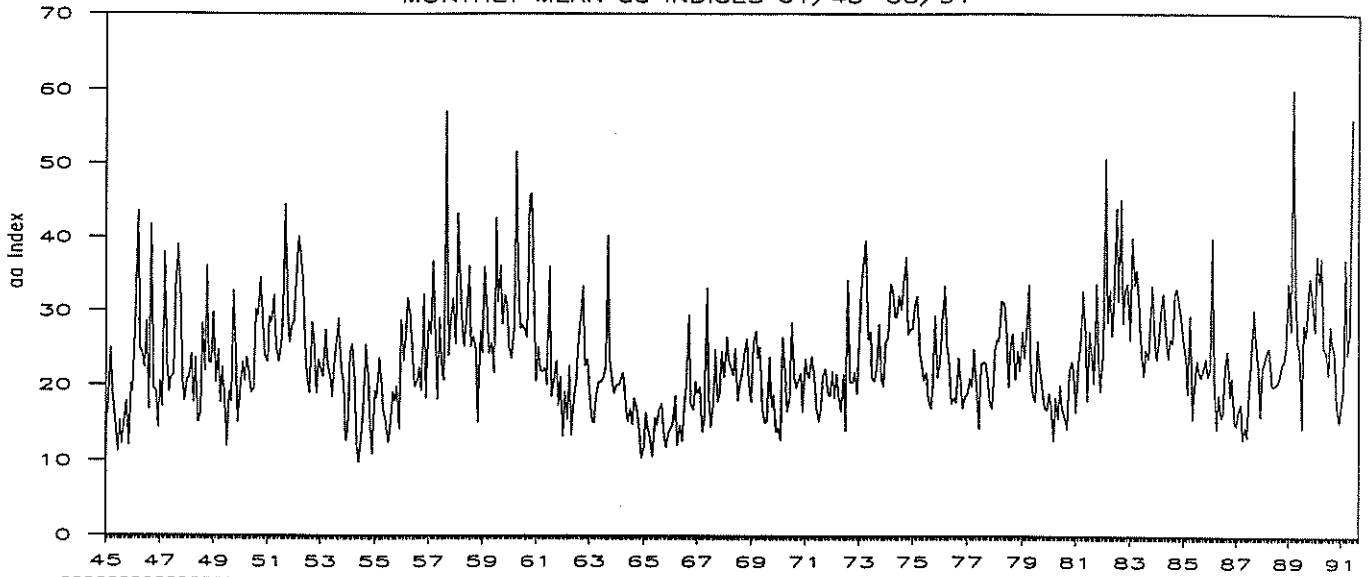
DAILY AVERAGE INDICES Ap

October 1990 to September 1991

DAY	1990			1991								
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2	9	5	8	28	13	29	27	74	11	36	47
2	5	10	5	10	12	9	22	45	60	21	52	28
3	10	6	6	11	5	6	37	16	16	29	42	16
4	16	3	17	8	6	9	50	9	58	13	44	12
5	10	2	13	8	8	22	15	5	196	4	32	21
6	12	2	7	4	6	24	14	5	49	8	32	14
7	8	6	4	3	10	24	10	6	27	7	16	14
8	4	8	8	8	14	17	6	10	26	68	11	22
9	12	12	5	8	17	25	10	12	58	117	15	49
10	48	12	2	9	8	21	8	9	119	19	8	37
11	42	12	2	7	16	4	5	3	88	20	24	22
12	31	5	7	19	13	17	13	4	66	28	64	8
13	16	3	15	12	11	27	5	27	120	134	8	13
14	17	1	8	4	8	7	6	33	8	75	19	26
15	26	3	6	12	9	6	6	8	13	12	36	9
16	10	17	8	7	5	8	5	15	5	22	19	7
17	5	16	6	11	4	13	13	35	67	41	21	5
18	5	15	5	10	4	9	12	4	26	21	26	6
19	9	10	2	4	8	12	14	4	28	40	74	10
20	23	7	8	5	6	12	4	4	14	28	67	8
21	11	10	3	4	8	26	6	7	25	32	41	5
22	10	3	3	4	14	20	8	17	18	23	48	7
23	10	4	7	6	21	11	8	21	47	14	13	4
24	25	2	15	22	6	161	11	26	31	6	11	7
25	9	4	10	13	11	130	17	35	24	11	10	50
26	10	9	4	11	8	114	12	23	22	5	8	37
27	8	45	6	7	9	31	24	21	10	8	37	48
28	4	18	4	5	18	20	33	31	9	6	16	40
29	10	5	4	4		4	59	22	5	6	14	18
30	20	8	12	4		26	34	12	21	8	49	24
31	25		9	14		9		52		6	52	
MEAN	15	9	7	8	10	27	17	18	44	27	30	20



MONTHLY MEAN aa INDICES 01/45-06/91



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1945	16.1	16.4	25.0	19.1	15.4	11.1	15.3	12.1	15.6	17.9	12.0	20.2	16.3
1946	19.2	30.2	43.5	25.0	24.1	22.3	28.6	16.7	41.7	19.6	19.3	14.3	25.4
1947	20.6	17.1	37.9	23.3	19.1	21.1	21.4	32.9	39.1	31.3	20.7	17.9	25.2
1948	20.8	21.0	24.2	17.7	23.7	15.0	16.2	28.3	22.0	36.1	23.1	23.0	22.6
1949	29.8	20.4	24.7	17.6	22.4	17.9	11.8	19.2	17.8	32.7	24.6	15.1	21.2
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				

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

SEPTEMBER 1991

Sta	Geomag Lat	Commencement Time Day (UT)	Type	SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour Day (UT)	
				D (Min)	H (Gamma)	Z (Gamma)		D (Min)	H (Gamma)	Z (Gamma)		
COL	64.6N	01 05--	..	..	..	..	02(3)	8	219	1940	940	02 17
GUA	04.0N	02 01--	..	..	..	..	02(4)	5	--	130	30	02 16
HYB	07.6N	05 0211	SC	- .3	15	- 4	05(6)	4	7	74	21	05 23
ETT	00.6S	05 0211	SC	- 1	37	18		-	5	122	44	05 21
GNA	43.2S	08 13--	..	..	..	..	08(7) 09(5,7)	5	14	90	110	09 24
KGL	56.5S	08 1230	..	..	..	..	09(8)	7	109	746	467	12 12
FRD	49.6N	09 05--	..	..	..	..	09(8) 10(2)	6	29	153	91	11 21
BJI	28.5N	09 05--	..	..	..	..	10(1,5)	-	14	137	35	10 21
HYB	07.6N	09 0517	SC	- .3	15	- 4	10(1)	6	13	183	59	11 22
GUA	04.0N	09 0516	SC*	- .4	12	- 4	09(5)	5	--	120	20	09 19
GUA	04.0N	09 22--	..	..	..	..	10(1)	6	10	100	30	10 18
ETT	00.6S	09 0516	SC	- .9	37	19		-	15	330	105	11 21
PMG	18.6S	09 05--	..	..	..	..	09(5) 11(1,4)	5	7	170	90	11 20
HER	33.7S	09 17--	..	..	..	..	09(8)	6	34	101	102	10 07
CNB	43.9S	09 0517	SC*	.4	15	* 4	* 09(5,6)	5	20	106	73	10 10
GUA	04.0N	10 22--	..	..	..	..	11(1)	5	10	120	20	11 06
KRC	16.4N	11 0128	SC	2	- 30	17	11(4)	6	5	88	50	11 23
GUA	04.0N	11 10--	..	..	..	..	11(4)	6	--	70	10	11 21
HYB	07.6N	13 0300	..	..	..	..	14(2)	5	9	108	37	14 20
HYB	07.6N	24 2200	..	..	..	..	25(6)	6	6	178	37	28 24
ETT	00.6S	24 2130	..	..	..	..		-	8	260	83	28 16
PMG	18.6S	24 22--	..	..	..	..	25(8) 26(4,5) 27(4,5) 28(5)	5	9	200	70	29 00
COL	64.6N	25 12--	..	..	..	..	27(3,4)	7	191	1500	1000	27 21
FRD	49.6N	25 01--	..	..	..	..	25(5,6,7,8) 26(1) 27(2,3,5)	5	24	142	106	29 01
BJI	28.5N	25 17--	..	..	..	..	27(5,6)	-	12	116	46	27 22
KRC	16.4N	25 09--	..	..	..	..	25(6,8)	6	4	172	55	27 --
GUA	04.0N	25 00--	..	..	..	..	25(1)	5	--	70	40	25 05
GUA	04.0N	25 21--	..	..	..	..	25(8)	5	10	110	30	26 08
HER	33.7S	25 13--	..	..	..	..	25(6,7,8)	5	36	75	112	26 04
GNA	43.2S	25 15--	..	..	..	..	28(5)	6	21	140	110	28 24
CNB	43.9S	25 11--	..	..	..	..	26(4,5) 28(5)	5	22	108	69	29 00
KGL	56.5S	25 1400	..	..	..	..	25(7)	8	205	900	400	29 02
GUA	04.0N	26 10--	..	..	..	..	26(5)	5	--	70	10	26 19
GUA	04.0N	27 08--	..	..	..	..	27(5)	5	--	80	20	27 21
HER	33.7S	27 12--	..	..	..	..	27(5,6)	5	16	63	72	27 23
GUA	04.0N	28 12--	..	..	..	..	28(5)	5	10	90	40	29 01

Stations:

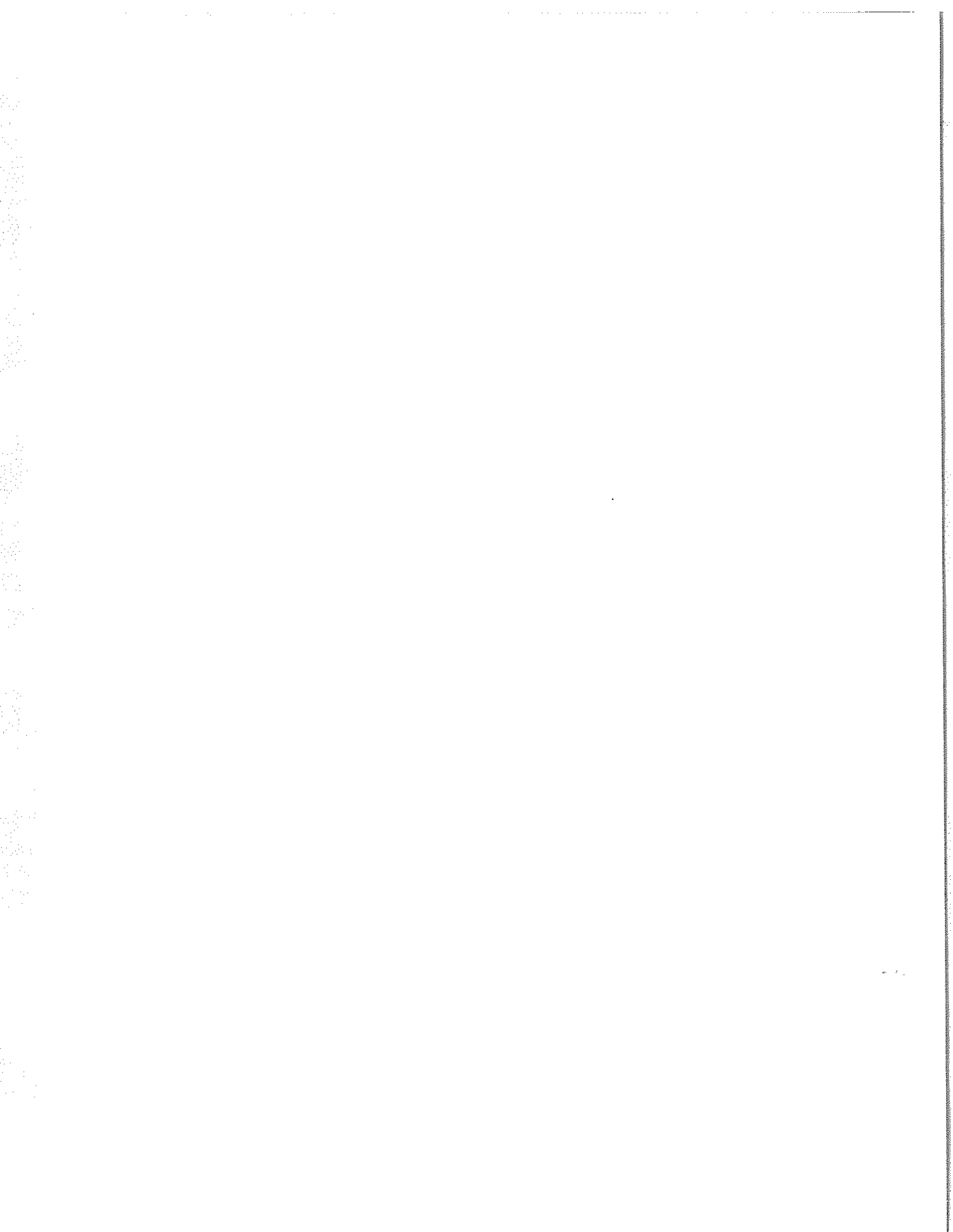
ABG = ALIBAG  
ANN = ANNAMALAINAGAR  
API = APIA  
BJI = BEIJING  
CNB = CANBERRA  
COL = COLLEGE

ETT = ETAIYAPURAM  
FRD = FREDERICKSBURG  
GNA = GNANGARA  
GUA = GUAM  
HER = HERMANUS  
HON = HONOLULU

HYB = HYDERABAD  
JAI = JAIPUR  
KAK = KAKIOKA  
KNY = KANOYA  
KGL = KERGUELEN  
KRC = KARACHI

MMB = MEMAMBETSU  
PMG = PORT MORESBY  
SHL = SHILLONG  
SIT = SITKA  
TRD = TRIVANDRUM  
UJJ = UJJAIN





C O N T E N T S

Prompt Reports

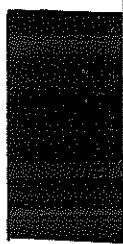
LATE DATA

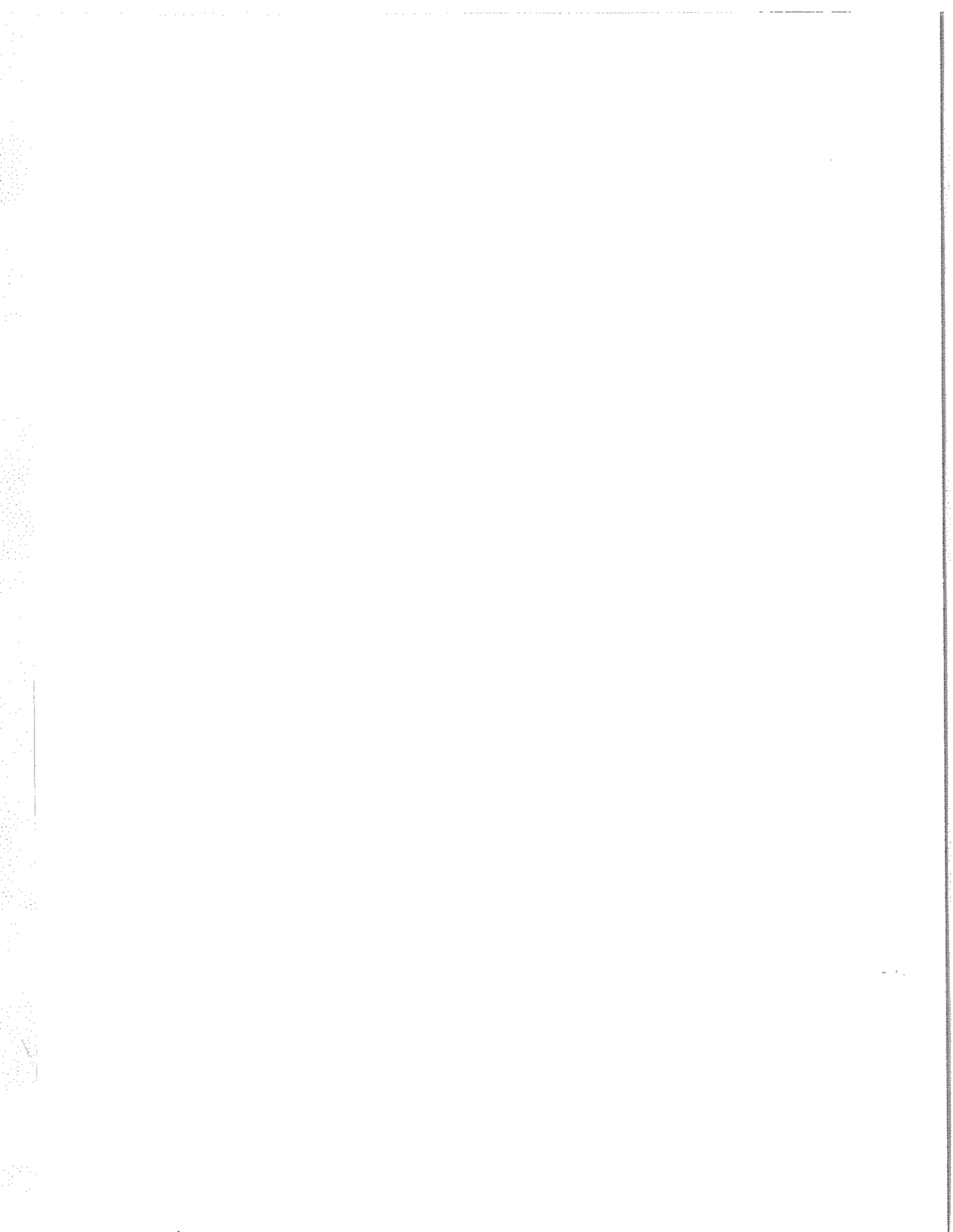
Number 567

Part I

Page

1992 INTERNATIONAL GEOPHYSICAL CALENDAR. . . . .	155-160
with recommended scientific programs	





# International Geophysical Calendar 1992

This Calendar continues the series begun for the IGY years 1957-58, and is issued annually to recommend dates for solar and geophysical observations which cannot be carried out continuously. Thus, the amount of observational data in existence tends to be larger on Calendar days. The recommendations on data reduction and especially the flow of data to World Data Centers (WDCs) in many instances emphasize Calendar days. The Calendar is prepared by the International Ursigram and World Days Service (IUWDS) with the advice of spokesmen for the various scientific disciplines. For some programs, greater detail concerning recommendations appears from time to time published in IAGA News, IUGG Chronicle, URSI Information Bulletin or other scientific journals or newsletters.

The definitions of the designated days remain as described on previous Calendars. Universal Time (UT) is the standard time for all world days. Regular Geophysical Days (RGD) are each Wednesday. Regular World Days (RWD) are three consecutive days each month (always Tuesday, Wednesday and Thursday near the middle of the month). Priority Regular World Days (PRWD) are the RWD which fall on Wednesdays. Quarterly World Days (QWD) are one day each quarter and are the PRWD which fall in the World Geophysical Intervals (WGI). The WGI are fourteen consecutive days in each season, beginning on Monday of the selected month, and normally shift from year to year. In 1992 the WGI will be March, June, September and December.

The Solar Eclipses are:

- a.) 4-5 January 1992 (annular) begins at N11 E137, crosses Central Pacific Ocean (crossing Oceania, then Philippines, Japan, extreme coast of N.E. Asia, N. Australia, and W. coast of N. America), ends at N33 W118; maximum duration 12 minutes.
- b.) 30 June 1992 (total) begins at S35 E35, crosses South Atlantic Ocean (crossing Central S. America, then S.W. Africa); ends at S51 E39; maximum duration 5 minutes 20 seconds; .
- c.) 23-24 December 1992 (partial), greatest eclipsing in the Arctic region; also in E. China, Korea, Japan, extreme E. of U.S.S.R., and S.W. Alaska; maximum phase 0.84.

**Meteor Showers** (selected by R. Hawkes, Canada) include important visual showers and also unusual showers observable mainly by radio and radar techniques. The dates for Northern Hemisphere meteor showers are: Jan 3-4 (Quadrantid); Apr 21-23 (Lyrid); May 3-6 (Eta-Aquarid); Jun 5-11 (Arietid, Zeta-Perseid); Jul 27-29 (Beta-Taurid); Aug 10-14 (Perseid); Oct 21-22 (Orionid); Nov 17-18 (Leonid); Dec 12-14 (Geminid); Dec 22-23, 1992 (Ursid); and Jan 3-4, 1993 (Quadrantid). The dates for Southern Hemisphere meteor showers are: Apr 23 (Pi-Puppis); May 3-6 (Eta-Aquarid); Jun 5-11 (Zeta-Perseid, Beta-Taurid); Jul 27-29 (S. Delta-Aquarid); Oct 21-22 (Orionid); Nov 17-18 (Leonid); and Dec 12-14, 1992 (Geminid).

The occurrence of unusual solar or geophysical conditions is announced or forecast by the IUWDS through various types of geophysical "Alerts" (which are widely distributed by telegram and radio broadcast on a current schedule). Stratospheric warmings (STRATWARM) are also designated. The meteorological telecommunications network coordinated by WMO carries these worldwide Alerts once daily soon after 0400 UT. For definitions of Alerts see IUWDS "Synoptic Codes for Solar and Geophysical Data, Third Revised Edition 1973" and its amendments. Retrospective World Intervals are selected and announced by MONSEE and elsewhere to provide additional analyzed data for particular events studied in the ICSU Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) programs.

## RECOMMENDED SCIENTIFIC PROGRAMS

### OPERATIONAL EDITION

(The following material was reviewed in 1991 by spokesmen of IAGA, WMO and URSI as suitable for coordinated geophysical programs in 1992.)

**Airglow and Aurora Phenomena.** Airglow and auroral observatories operate with their full capacity around the New Moon periods. However, for progress in understanding the mechanism of many phenomena, such as low latitude aurora, the coordinated use of all available techniques, optical and radio, from the ground and in space is required. Thus, for the airglow and aurora 7-day periods on the Calendar, ionosonde, incoherent scatter, special satellite or balloon observations, etc., are especially encouraged. Periods of approximately one weeks' duration centered on the New Moon are proposed for high resolution of ionospheric, auroral and magnetospheric observations at high latitudes during northern winter.

**Atmospheric Electricity.** Non-continuous measurements and data reduction for continuous measurements of atmospheric electric current density, field, conductivities, space charges, ion number densities, ionosphere potentials, condensation nuclei, etc.; both at ground as well as with radiosondes, aircraft, rockets; should be done with first priority on the RGD each Wednesday, beginning on 1 January 1992 at 0000 UT, 8 January at 0600 UT, 15 January at 1200 UT, 22 January at 1800 UT, etc. (beginning hour shifts six hours each week, but is always on Wednesday). Minimum program is at the same time on PRWD beginning with 15 January at 1200 UT. Data reduction for continuous measurements should be extended, if possible, to cover at least the full RGD including, in addition, at least 6 hours prior to indicated beginning time. Measurements prohibited by bad weather should be done 24 hours later. Results on sferics and ELF are wanted with first priority for the same hours, short-period measurements centered around the minutes 35-50 of the hours indicated. **Priority Weeks** are the weeks which contain a PRWD; minimum priority weeks are the ones with a QWD. The World Data Centre for Atmospheric Electricity, 7 Karbysheva, Leningrad 194018, USSR, is the collection point for data and information on measurements.

**Geomagnetic Phenomena.** It has always been a leading principle for geomagnetic observatories that operations should be as continuous as possible and the great majority of stations undertake the same program without regard to the Calendar.

Stations equipped for making magnetic observations, but which cannot carry out such observations and reductions on a continuous schedule are encouraged to carry out such work at least on RWD (and during times of **MAGSTORM** Alert).

**Ionospheric Phenomena.** Special attention is continuing on particular events which cannot be forecast in advance with reasonable certainty. These will be identified by Retrospective World Intervals. The importance of obtaining full observational coverage is therefore stressed even if it is possible to analyze the detailed data only for the chosen events. In the case of vertical incidence sounding, the need to obtain quarter-hourly ionograms at as many stations as possible is particularly stressed and takes priority over recommendation (a) below when both are not practical.

For the vertical incidence (VI) sounding program, the summary recommendations are: (a) All stations should make soundings on the hour and every quarter hour; (b) On **RWDs**, ionogram soundings should be made at least every quarter hour and preferably every five minutes or more frequently, particularly at high latitudes; (c) All stations are encouraged to make f-plots on **RWDs**; f-plots should be made for high latitude stations, and for so-called "representative" stations at lower latitudes for all days (i.e., including **RWDs** and **WGIs**) (Continuous records of ionospheric parameters are acceptable in place of f-plots at temperate and low latitude stations); (d) Copies of hourly ionograms with appropriate scales for **QWDs** are to be sent to **WDCs**; (e) Stations in the eclipse zone and its conjugate area should take continuous observations on solar eclipse days and special observations on adjacent days. See also recommendations under **Airglow and Aurora Phenomena**.

For the incoherent scatter observation program, every effort should be made to obtain measurements at least on the **Incoherent Scatter Coordinated Observation Days**, and intensive series should be attempted whenever possible in **WGIs** or the **Airglow and Aurora Periods**. The need for collateral VI observations with not more than quarter-hourly spacing at least during all observation periods is stressed. Special programs: Dr. J. Holt, M.I.T. Haystack Observatory, Route 40, Westford, MA 01886 U.S.A., URSI Working Group G.5. Phone: (617)981-5625, e-mail address: AMES: "jmh@chaos.haystack.edu".

For the ionospheric drift or wind measurement by the various radio techniques, observations are recommended to be concentrated on the weeks including **RWDs**.

For traveling ionosphere disturbances, propose special periods for coordinated measurements of gravity waves induced by magnetospheric activity, probably on selected **PRWD** and **RWD**.

For the ionospheric absorption program half-hourly observations are made at least on all **RWDs** and half-hourly tabulations sent to **WDCs**. Observations should be continuous on **solar eclipse** days for stations in eclipse zone and in its conjugate area. Special efforts should be made to obtain daily absorption measurements at temperate latitude stations during the period of Absorption Winter Anomaly, particularly on days of abnormally high or abnormally low absorption (approximately October-March, Northern Hemisphere; April-September, Southern Hemisphere).

For back-scatter and forward scatter programs, observations should be made and analyzed on all **RWDs** at least.

For synoptic observations of mesospheric (D region) electron densities, several groups have agreed on using the **RGD** for the hours around noon.

For ELF noise measurements involving the earth-ionosphere cavity resonances any special effort should be concentrated during the **WGIs**.

It is recommended that more intensive observations in all programs be considered on days of unusual meteor activity.

**Meteorology.** Particular efforts should be made to carry out an intensified program on the RGD -- each Wednesday, UT. A desirable goal would be the scheduling of meteorological rocketsondes, ozone sondes and radiometer sondes on these days, together with maximum-altitude rawinsonde ascents at both 0000 and 1200 UT.

During WGI and STRATWARM Alert Intervals, intensified programs are also desirable, preferably by the implementation of RGD-type programs (see above) on Mondays and Fridays, as well as on Wednesdays.

**Solar Phenomena.** Observatories making specialized studies of solar phenomena, particularly using new or complex techniques, such that continuous observation or reporting is impractical, are requested to make special efforts to provide to WDCs data for solar eclipse days, RWDs and during PROTON/FLARE ALERTS. The attention of those recording solar noise spectra, solar magnetic fields and doing specialized optical studies is particularly drawn to this recommendation.

**FLARES22(FLare REsearch at the maximum of solar cycle 22).** 1990-1995 worldwide Solar-Terrestrial Energy Program (STEP) project. Aimed at understanding basic physical processes of transient solar activity and its coupling with the solar-terrestrial environment, including times of the various solar ALERTS. Coordinates satellite and ground-based observations. Observational campaigns are driven by specific scientific objectives rather than observations per se. Satellites include SOLAR-A, GRO, CORONAS, WIND, GEOTAIL, ULYSSES, etc. Program will focus on international collaboration of data analyses and theoretical work via electronic mail and workshops. For more information, contact Dr. M. Machado, Department of Physics, The University of Alabama in Huntsville, Huntsville, AL 35899 USA. Phone: (205)895-6676; FAX number is (205)895-6790; SPAN e-mail address is SSL::MACHADO or SOLAR::MMACHADO.

**SOLTIP (Solar connection with Transient Interplanetary Processes).** Program within the SCOSTEP STEP (Solar-Terrestrial Energy Program) project: 1990-1995. Its focus is on remote and in situ observations and analyses of solar-generated phenomena and their propagation throughout the heliosphere, including times following the various solar ALERTS. Desired goals include: (1) interplanetary scintillation observation of remote radio galaxies as well as telemetry signals to/from interplanetary spacecraft; (2) coordination of Earth-orbiting spacecraft such as IMP-8 in the solar wind and solar-orbiting spacecraft such as ICE, GIOTTO, SAKIGAKE, VOYAGER 1/2, PIONEER 10/11, ULYSSES, RELICT, WIND, SOHO, Galileo, and ACE. Contact is Dr. M. Dryer, NOAA R/E/SE, 325 Broadway, Boulder, CO 80303 USA. Phone: (303)497-3978; FAX number (303)497-3645; SPAN e-mail address SELVAX::MDRYER.

**Space Research, Interplanetary Phenomena, Cosmic Rays, Aeronomy.** Experimenters should take into account that observational effort in other disciplines tends to be intensified on the days marked on the Calendar, and schedule balloon and rocket experiments accordingly if there are no other geophysical reasons for choice. In particular it is desirable to make rocket measurements of ionospheric characteristics on the same day at as many locations as possible; where feasible, experimenters should endeavor to launch rockets to monitor at least normal conditions on the Quarterly World Days (QWD) or on RWDs, since these are also days when there will be maximum support from ground observations. Also, special efforts should be made to assure recording of telemetry on QWD and Airglow and Aurora Periods of experiments on satellites and of experiments on spacecraft in orbit around the Sun.

The International Ursigram and World Days Service (IUWDS) is a permanent scientific service of the International Union of Radio Science (URSI), with the participation of the International Astronomical Union and the International Union Geodesy and Geophysics. IUWDS adheres to the Federation of Astronomical and Geophysical Data Analysis Services (FAGS) of the International Council of Scientific Unions (ICSU). The IUWDS coordinates the international aspects of the world days program and rapid data interchange.

This Calendar for 1992 has been drawn up by H.E. Coffey, of the IUWDS Steering Committee, in association with spokesmen for the various scientific disciplines in SCOSTEP, IAGA and URSI and other ICSU organizations. Similar Calendars are issued annually beginning with the IGY, 1957-58, and are published in various widely available scientific publications.

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Additional copies are available upon request to IUWDS Chairman, Dr. R. Thompson, IPS Radio and Space Services, Department of Administrative Services, P.O. Box 1548, Chatswood, NSW 2057, Australia (FAX number (61)(2)414 8331; e-mail address is richard@ipso.ips.oz.au), or IUWDS Secretary for World Days, Miss H.E. Coffey, WDC-A for Solar-Terrestrial Physics, NOAA E/GC2, 325 Broadway, Boulder, Colorado 80303, USA (FAX number (303)497-6513; e-mail address is 9555::hcoffey).



Footnotes to front of calendar --

NOTES on other dates and programs of interest:

1. Days with unusual meteor shower activity are: Northern Hemisphere Jan 3-4; Apr 21-23; May 3-6; Jun 5-11; Jul 27-29; Aug 10-14; Oct 21-22; Nov 17-18; Dec 12-14, 22-23, 1992; Jan 3-4, 1993. Southern Hemisphere Apr 23; May 3-6; Jun 5-11; Jul 27-29; Oct 21-22; Nov 17-18; Dec 12-14, 1992.
2. SOLTIP (Solar connection with Transient Interplanetary Processes). Observing Program 1990 - 1995: solar-generated phenomena and their propagation throughout the heliosphere. (See Explanations.)
3. FLARES22 (FLAre RESearch at solar cycle 22 maximum). Observing Program 1990-1995: basic physical processes of transient solar activity and its coupling with solar-terrestrial environment. (See Explanations.)
4. Day intervals that IMP 8 satellite is in the solar wind (begin and end days are generally partial days): 29 Dec 1991-6 Jan 1992; 10-19 Jan; 23-31 Jan; 4-12 Feb; 16-25 Feb; 29 Feb-8 Mar; 13-21 Mar; 26 Mar-3 Apr; 7-15 Apr; 20-28 Apr; 3-10 May; 15-22 May; 28 May-3 Jun; 9-16 Jun; 22-29 Jun; 5-12 Jul; 17-24 Jul; 30 Jul-6 Aug; 12-19 Aug; 23-31 Aug; 7-12 Sep; 19-25 Sep; 1-8 Oct; 14-21 Oct; 26 Oct-2 Nov; 8-15 Nov; 21-28 Nov; 3-11 Dec; 16-24 Dec; 28 Dec 1992-5 Jan 1993. Note that there will not necessarily be total IMP 8 data monitoring coverage during these intervals. (Information kindly provided by the WDC-A for Rockets and Satellites, NASA GSFC, Greenbelt, MD 20771 U.S.A.).
5. + Incoherent Scatter Coordinated Observations Days (see Explanations) starting at 1600 UT on the first day of the intervals indicated, and ending at 1600 UT on the last day of the intervals: 27-29 Jan 1992; 30 Mar-3 Apr CADITS/MLTCS; 5-6 May; 23-24 Jun; 30 Jul-5 Aug CADITS/MLTCS; 22-23 Sep SUNDIAL; 27-28 Oct; 23-26 Nov GISMOS; 26-27 Jan 1993

where CADITS = Coupling and Dynamics of the Ionosphere-Thermosphere System;  
GISMOS = Global Ionospheric Simultaneous Measurements of Substorms;  
MLTCS = Mesosphere, Lower-Thermosphere Coupling Study;  
SUNDIAL = Coordinated study of the ionosphere/magnetosphere.

OPERATIONAL EDITION, September 1991



**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."