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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE
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Solar-Geophysical Data prompt reports

Data for May, April 1991 and Late Data

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NATIONAL GEOPHYSICAL DATA CENTER
Michael A. Chinnery, Director
Boulder, Colorado

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S O L A R - G E O P H Y S I C A L D A T A

NUMBER 562

(Issued in Two Parts)

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C O N T E N T S

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PART II (COMPREHENSIVE REPORTS)

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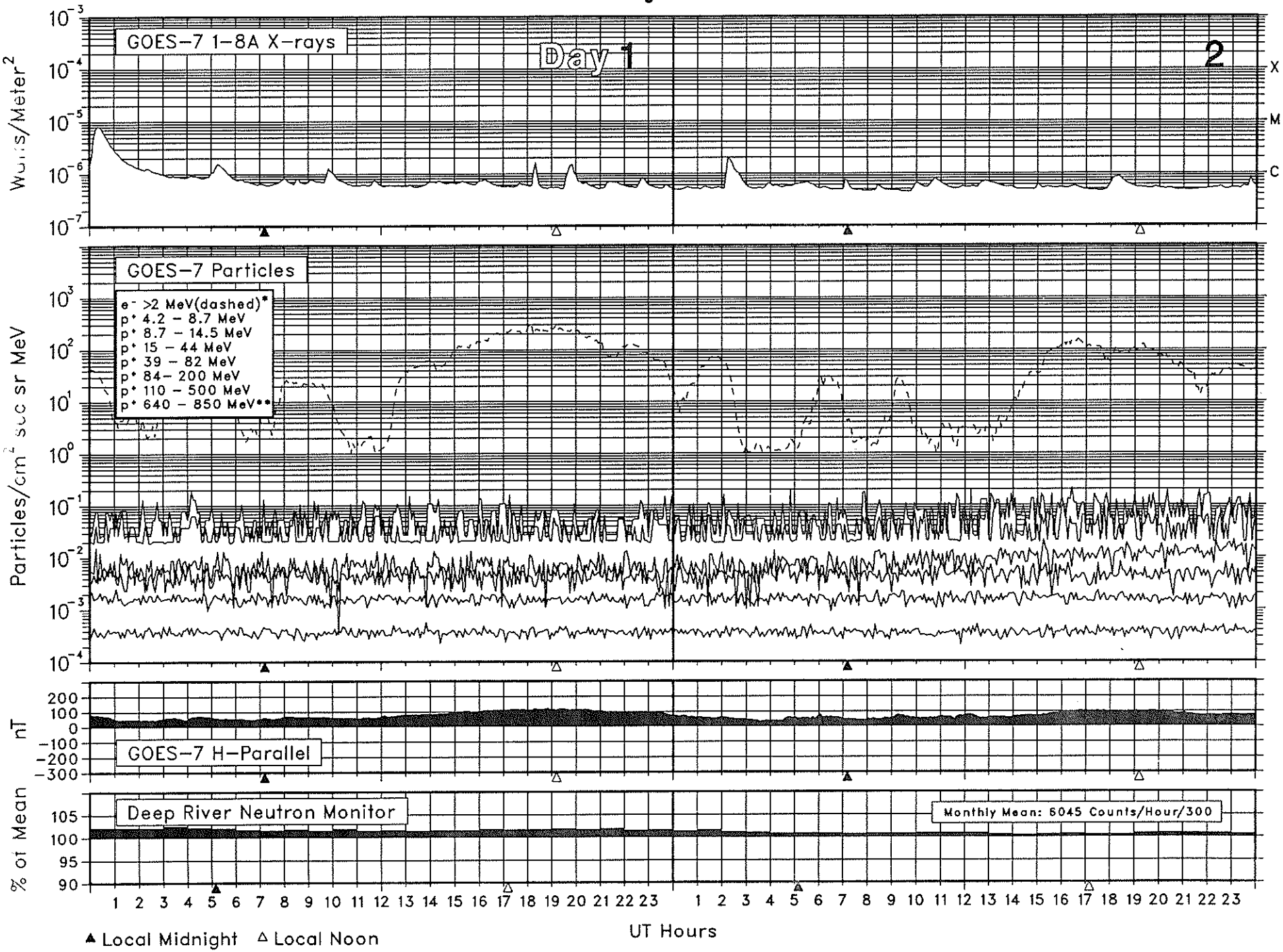

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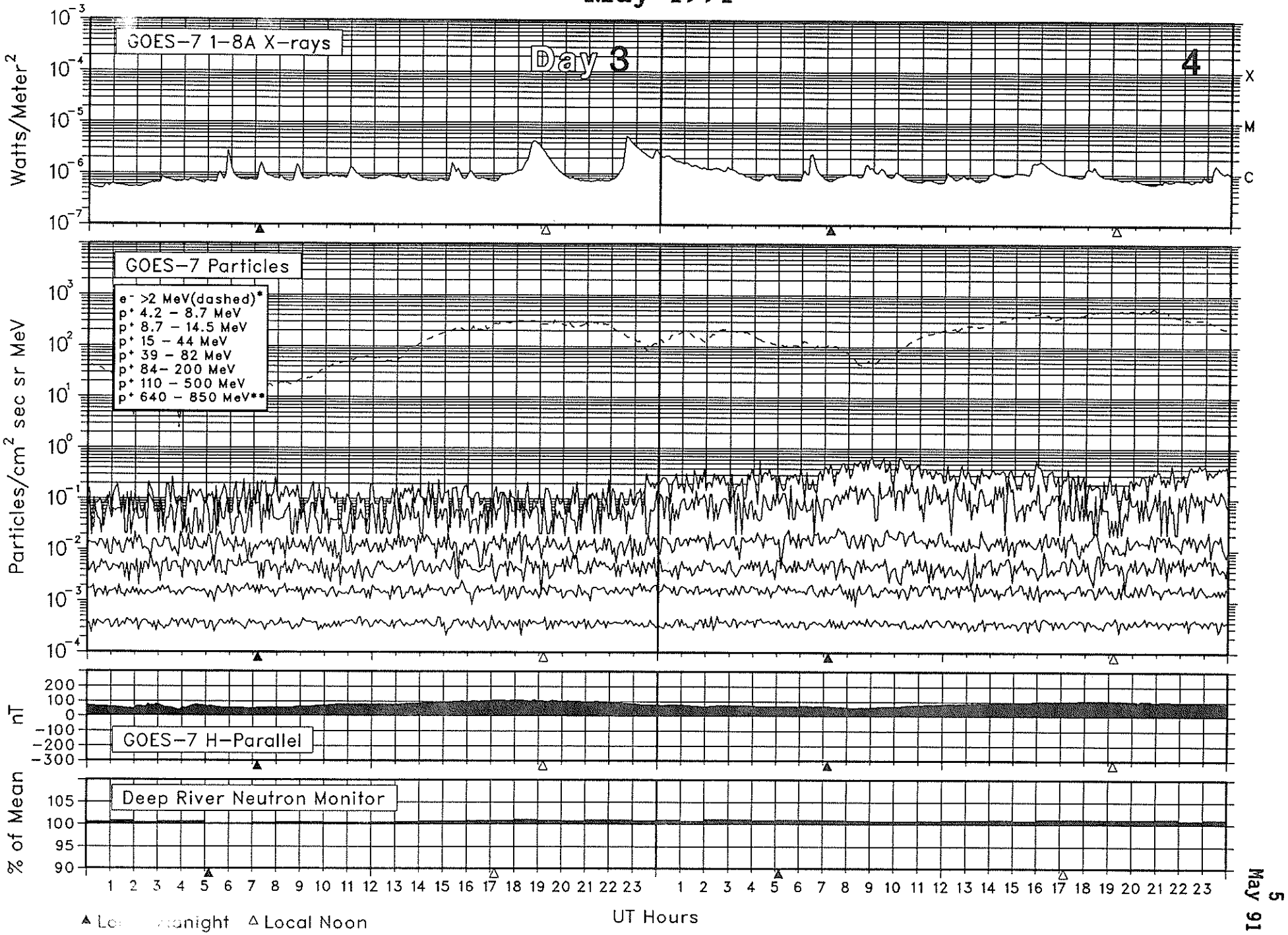

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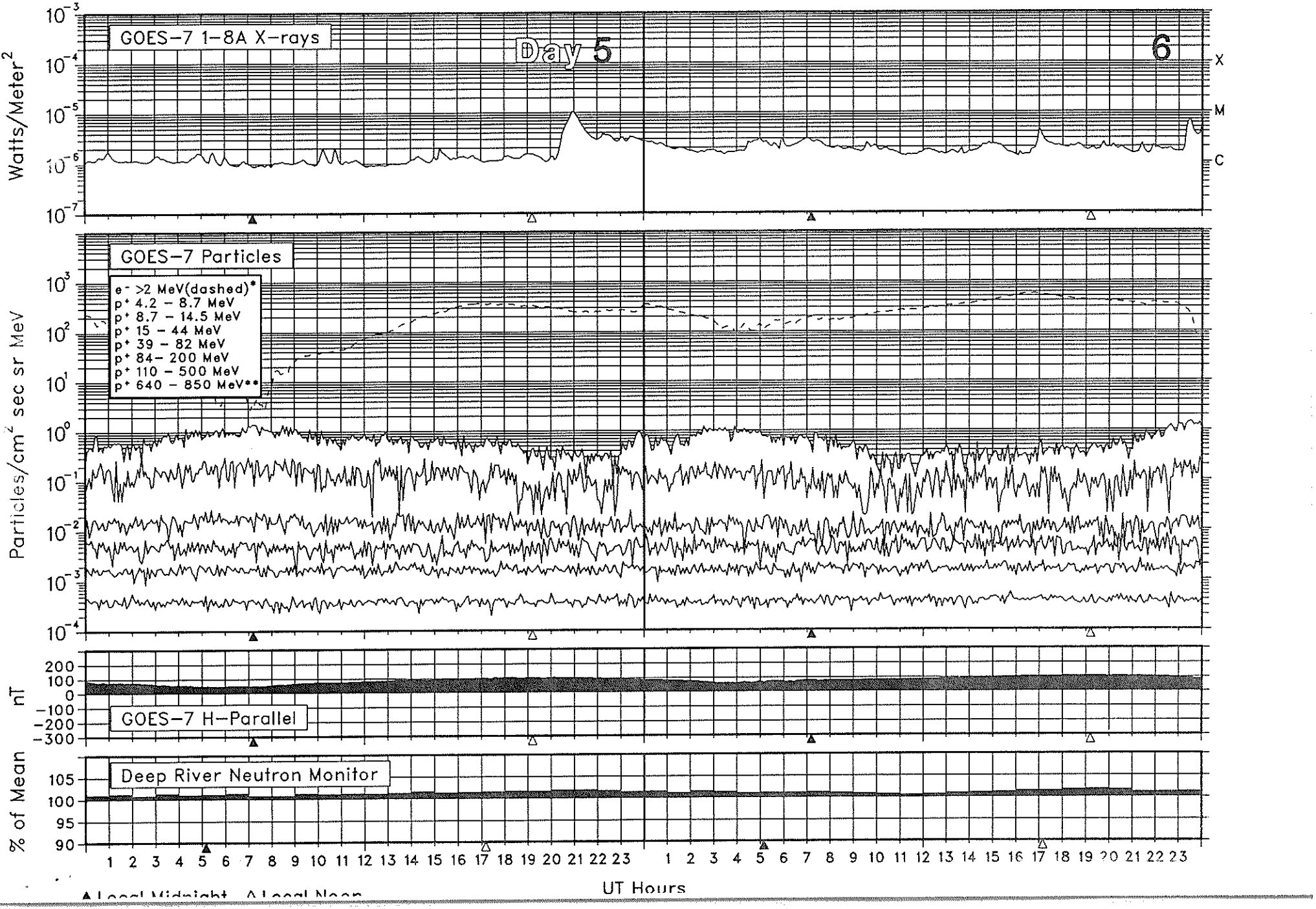

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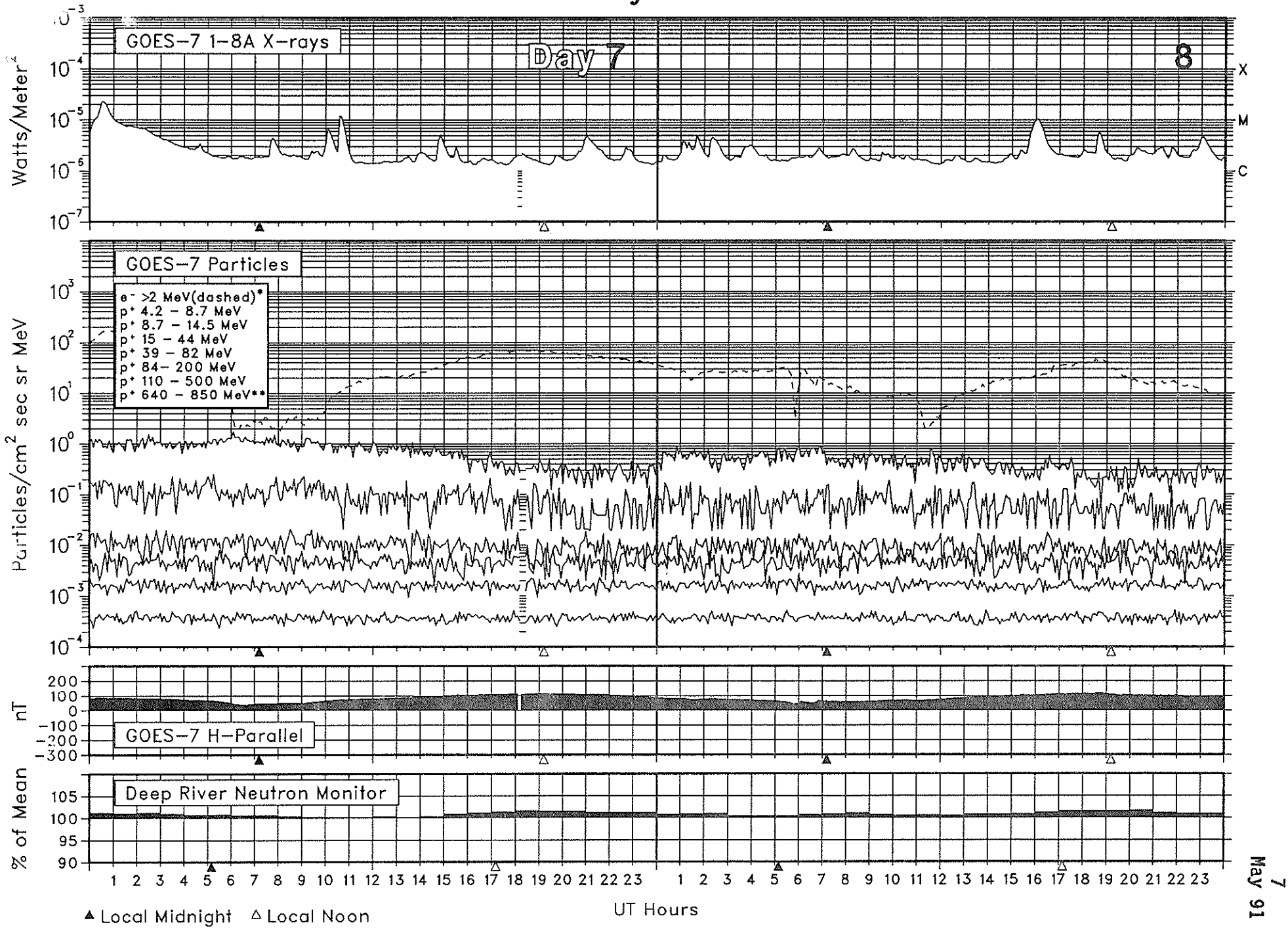

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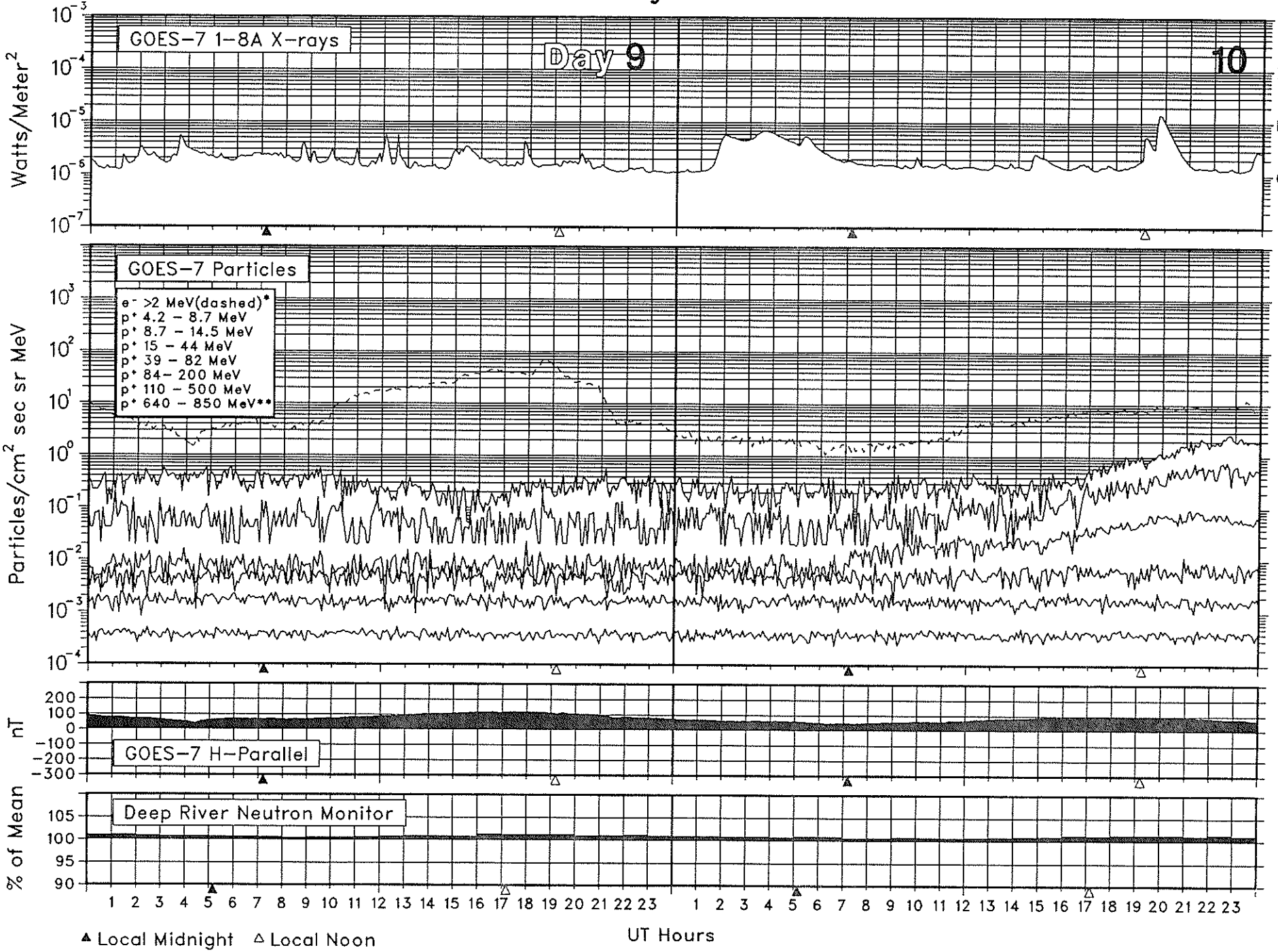

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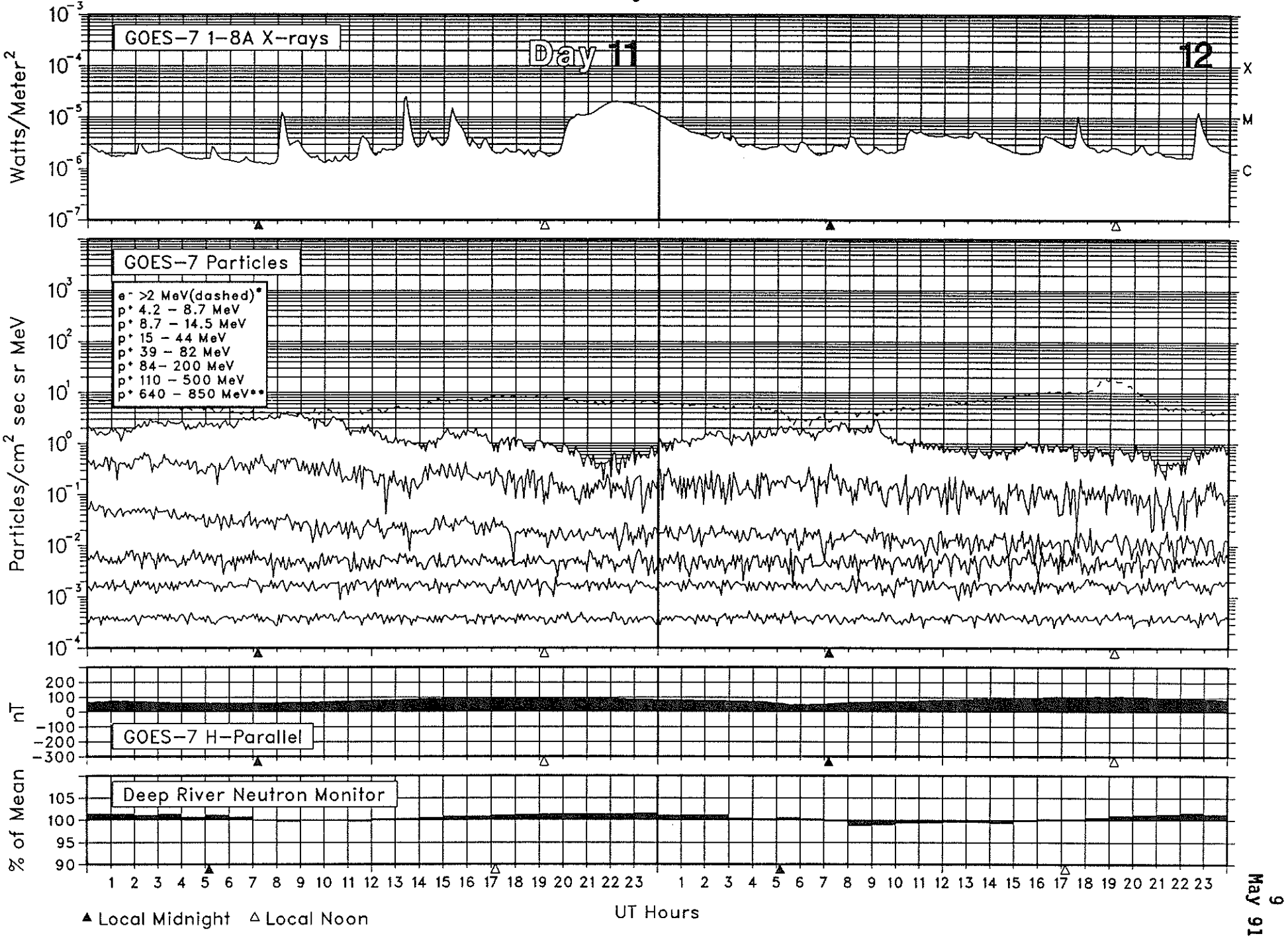

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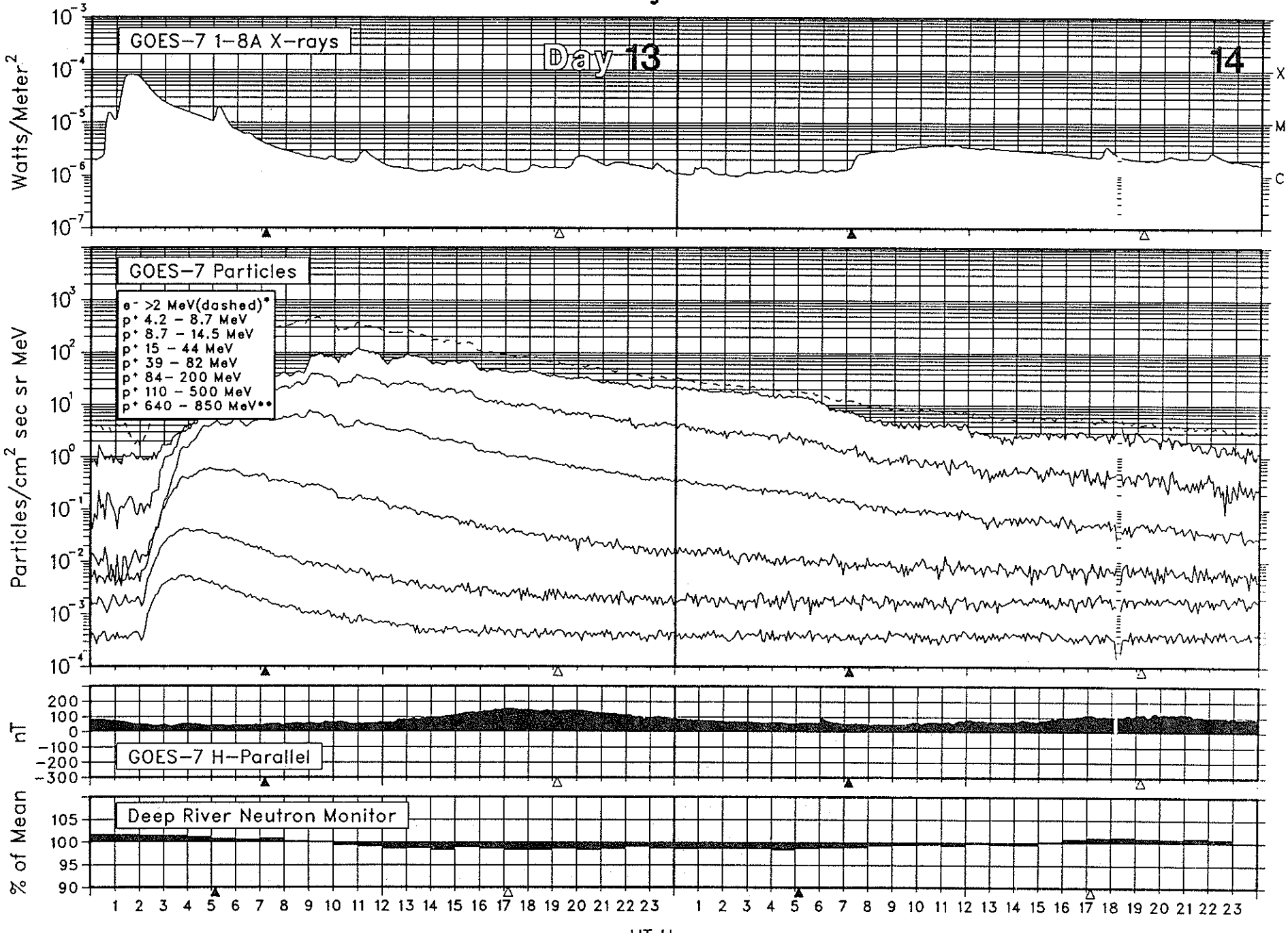

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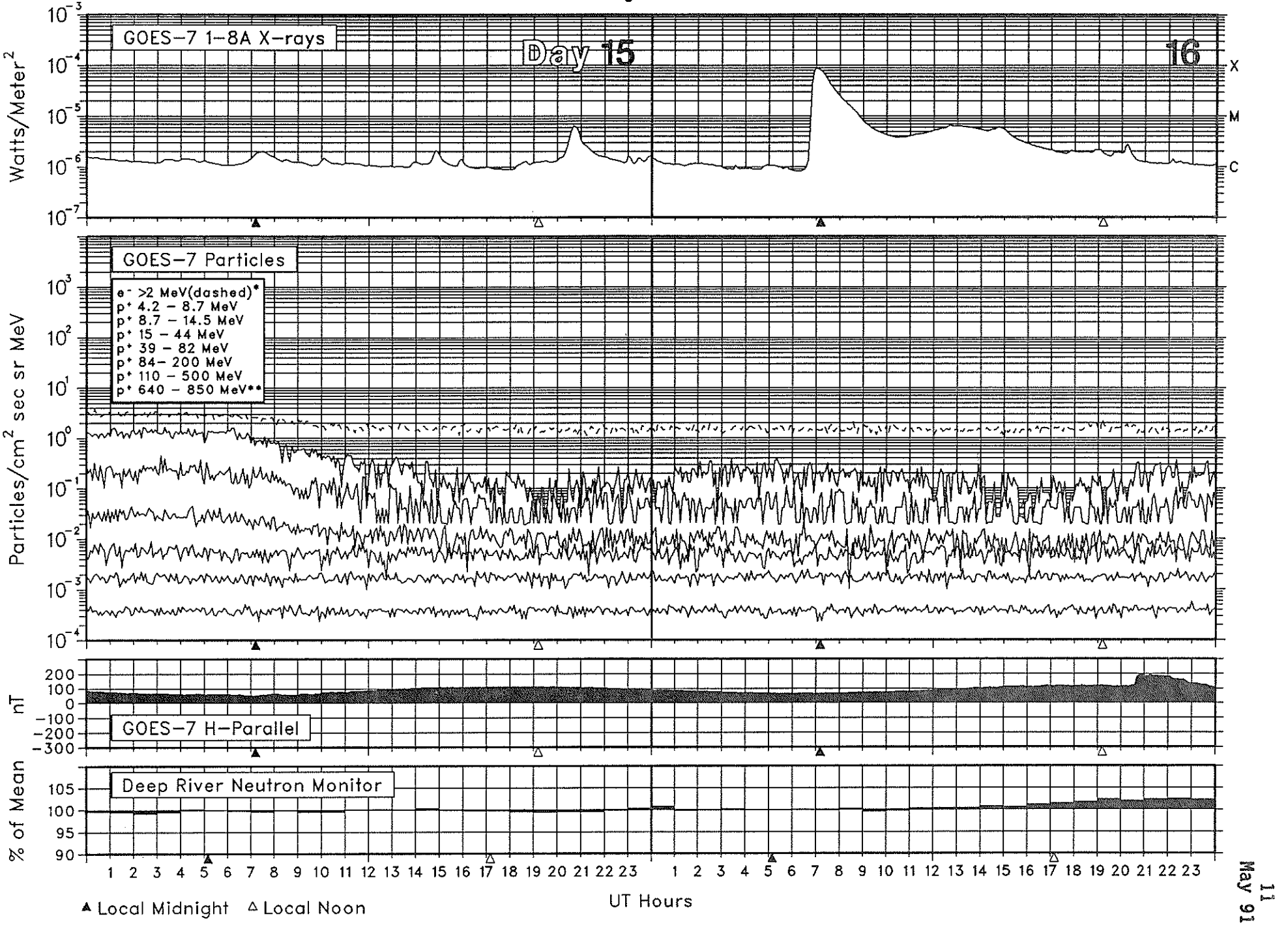

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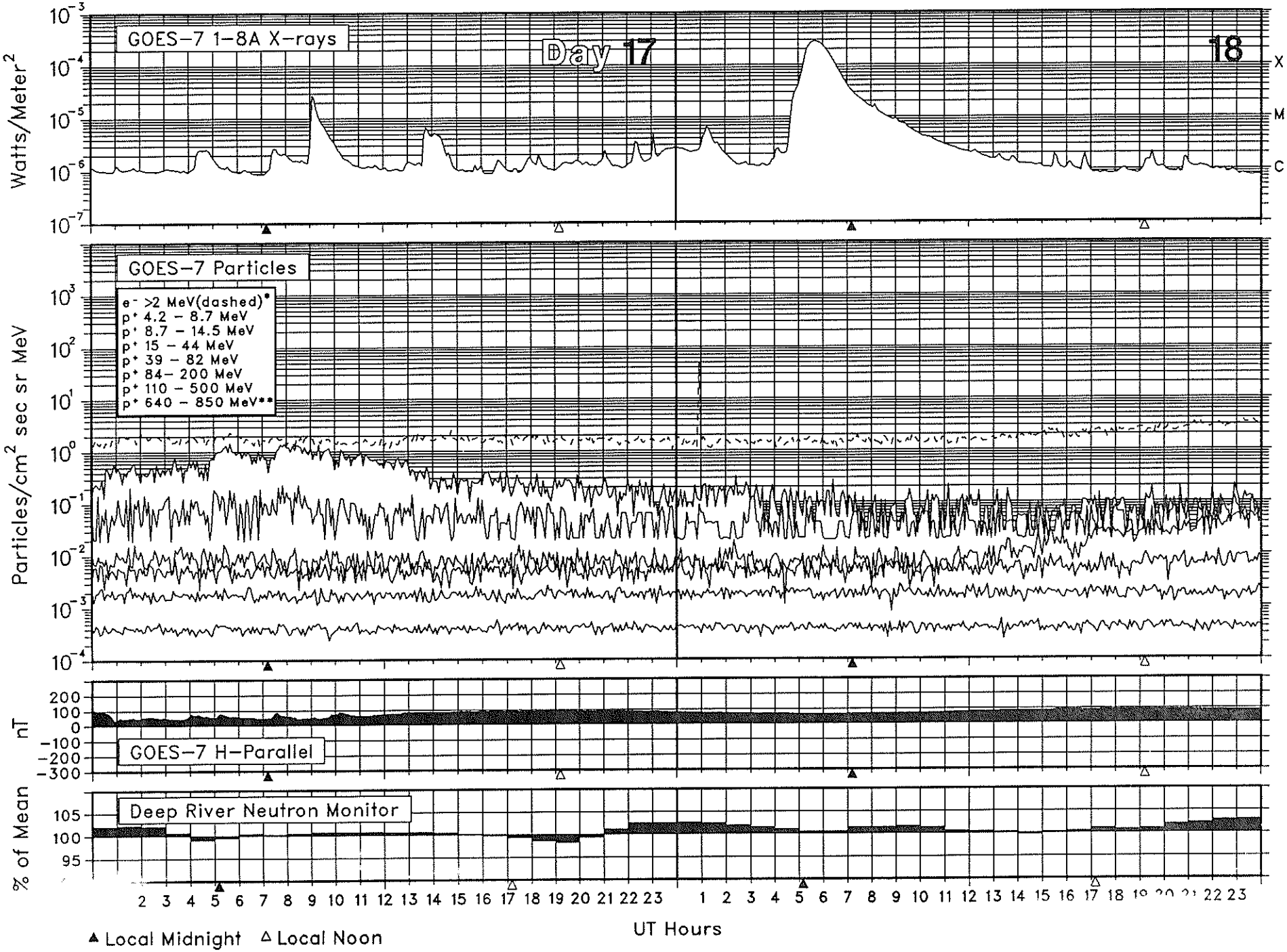

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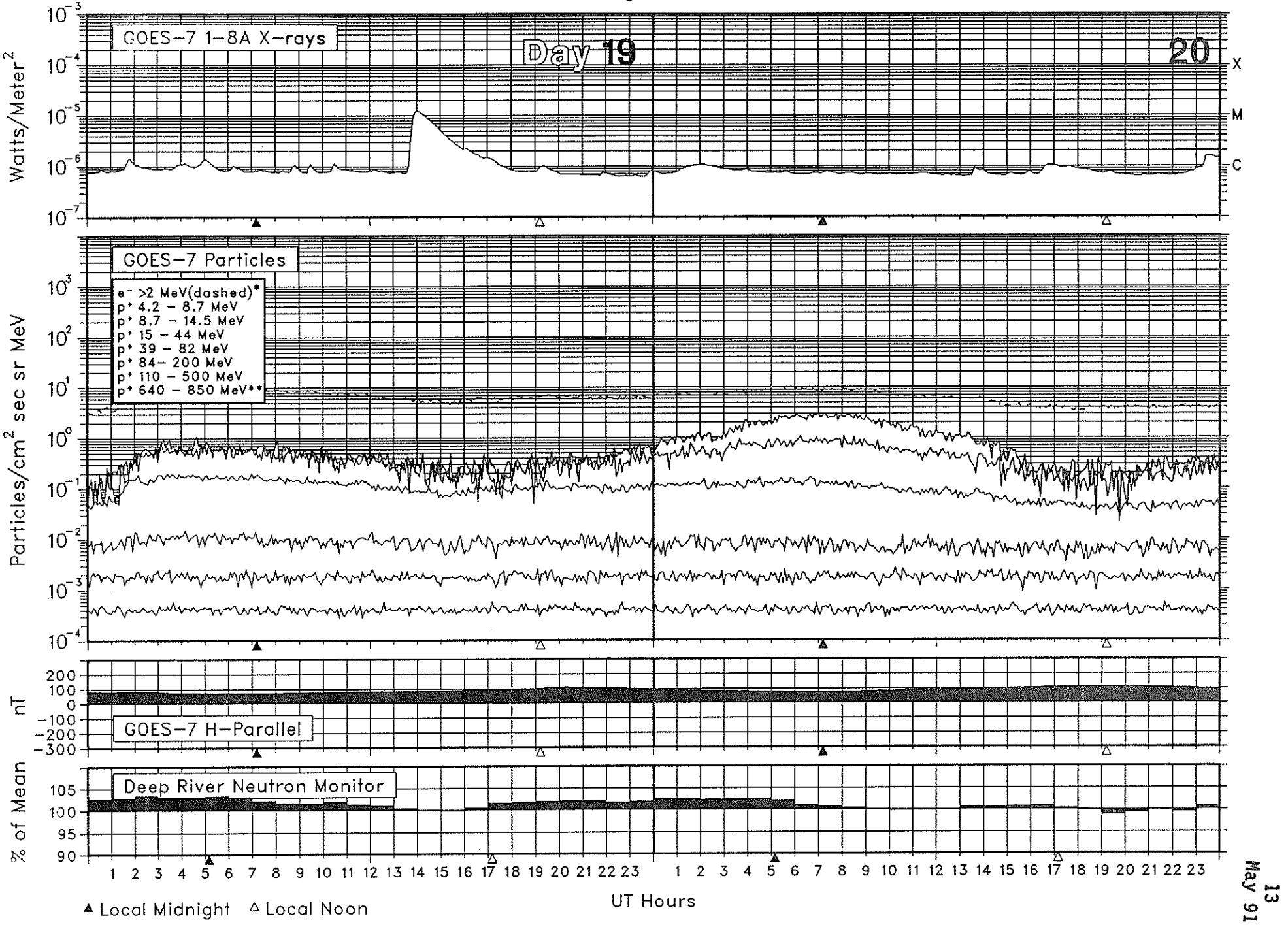

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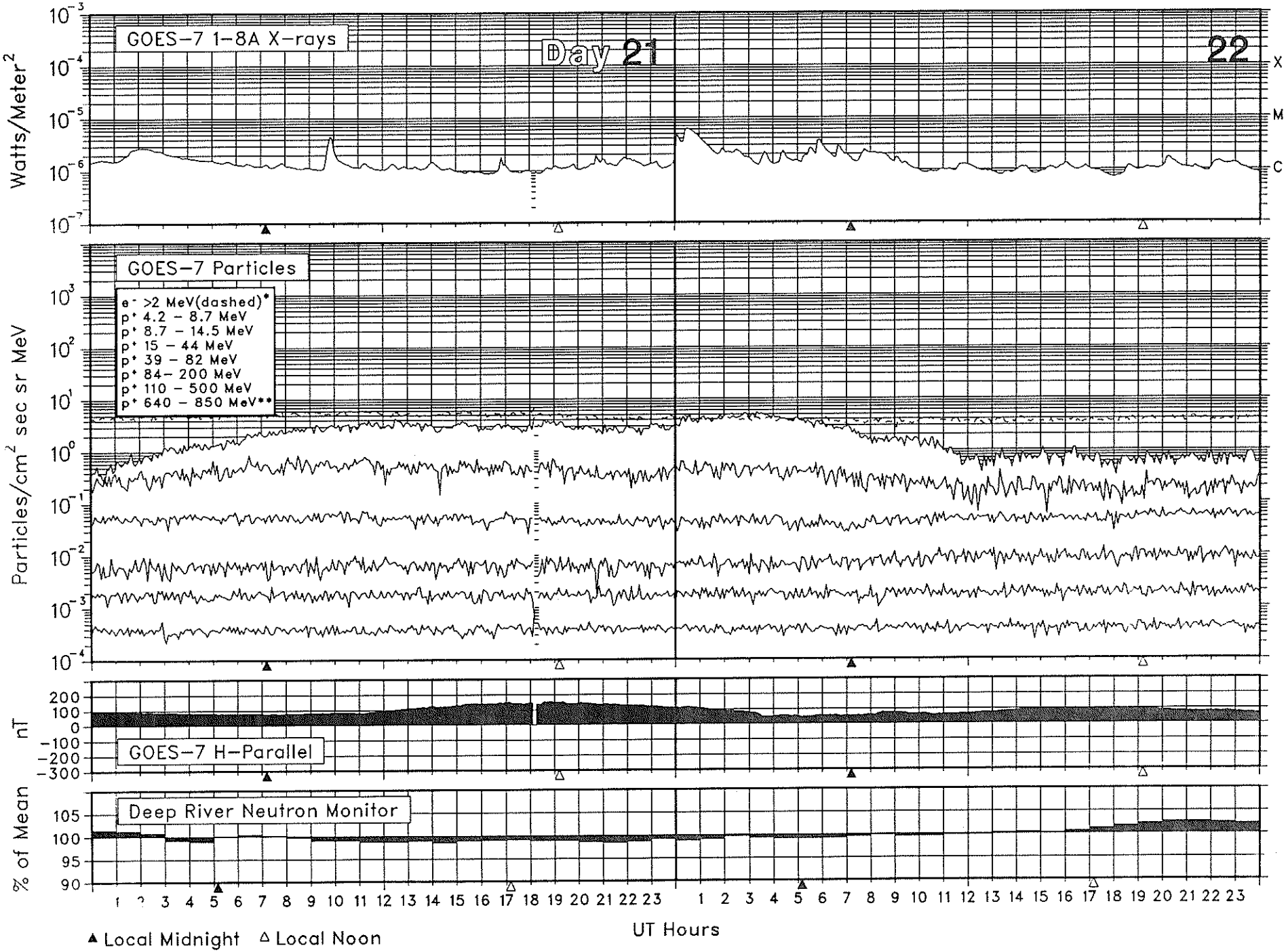

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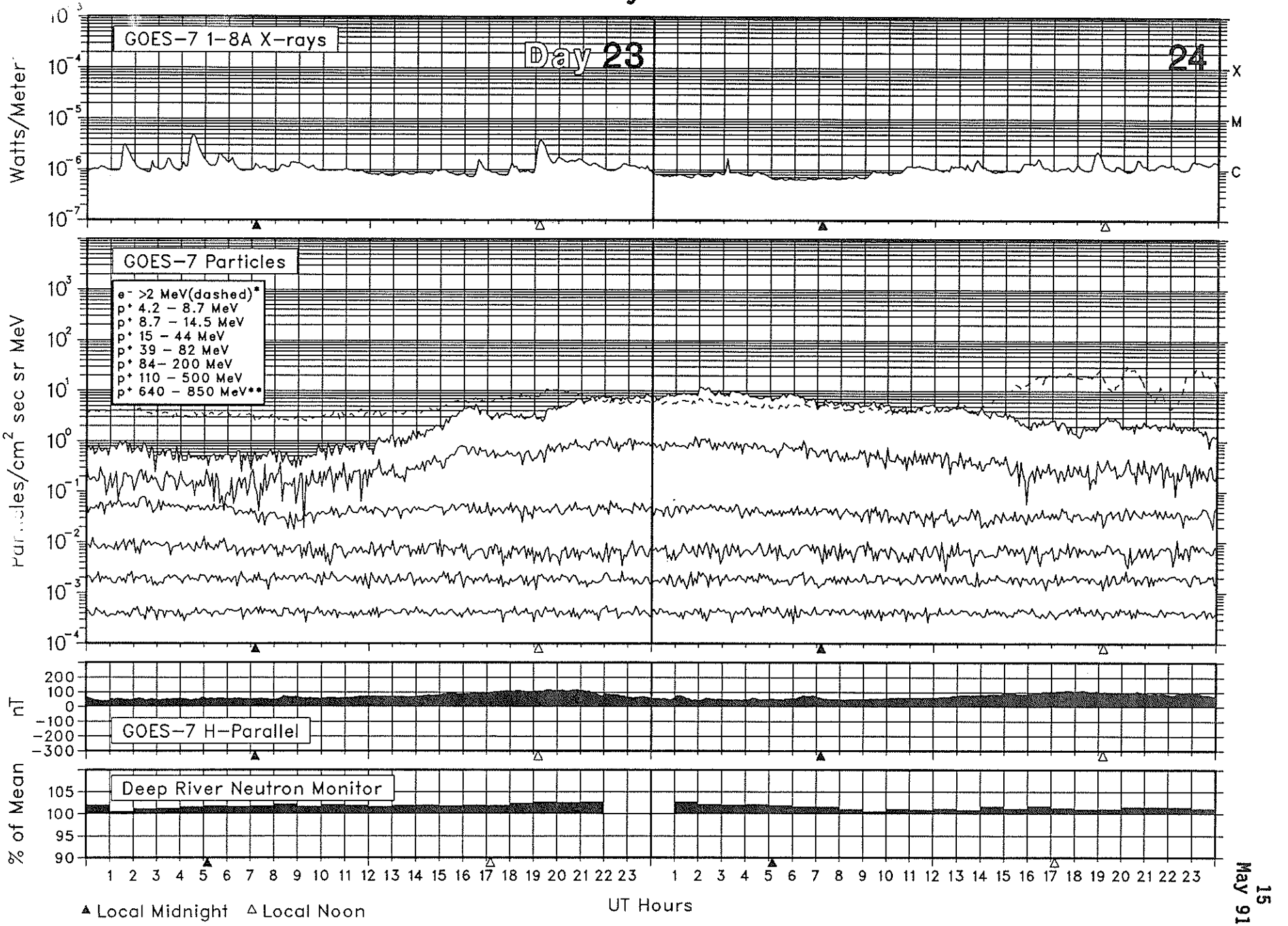

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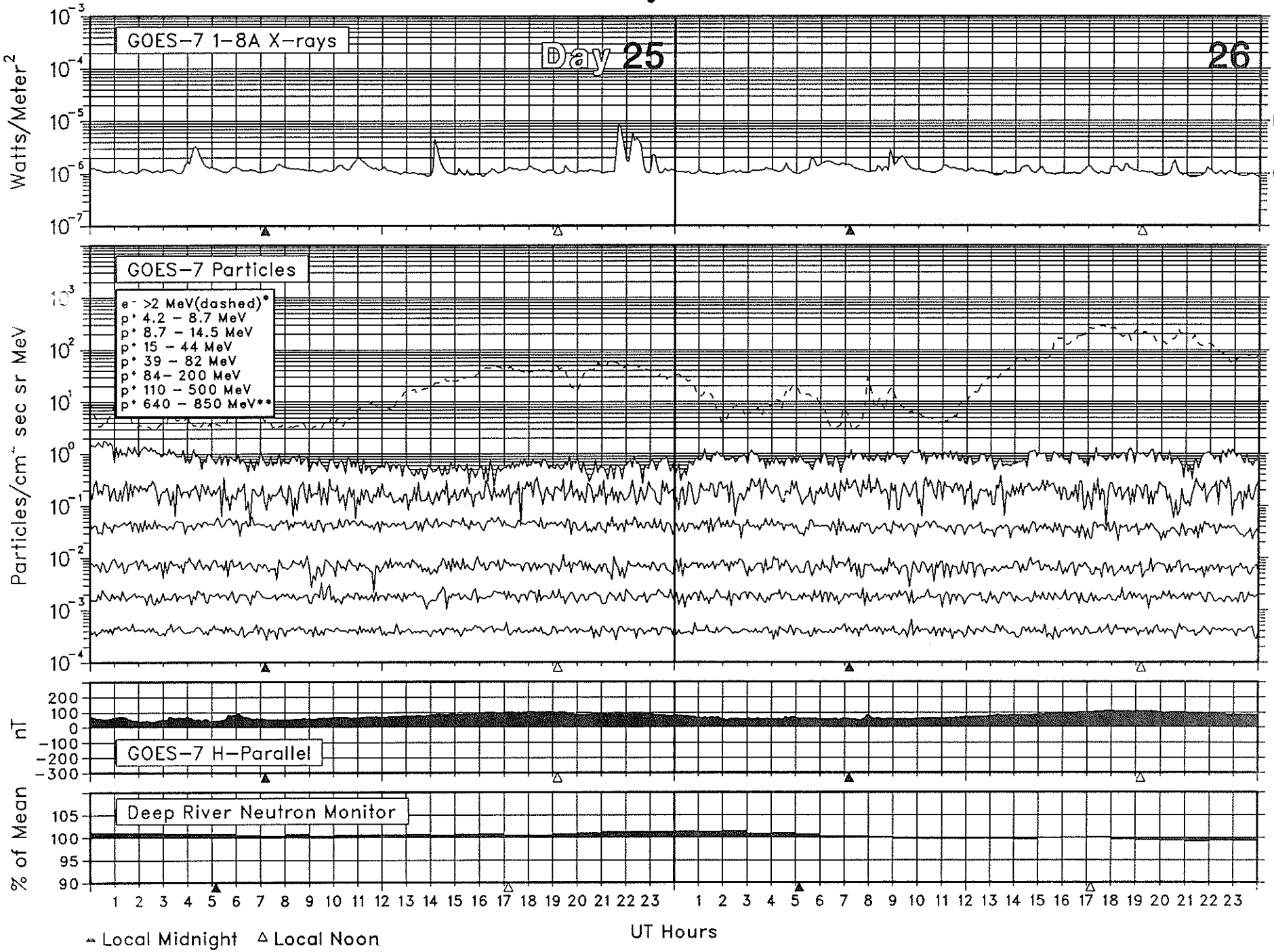

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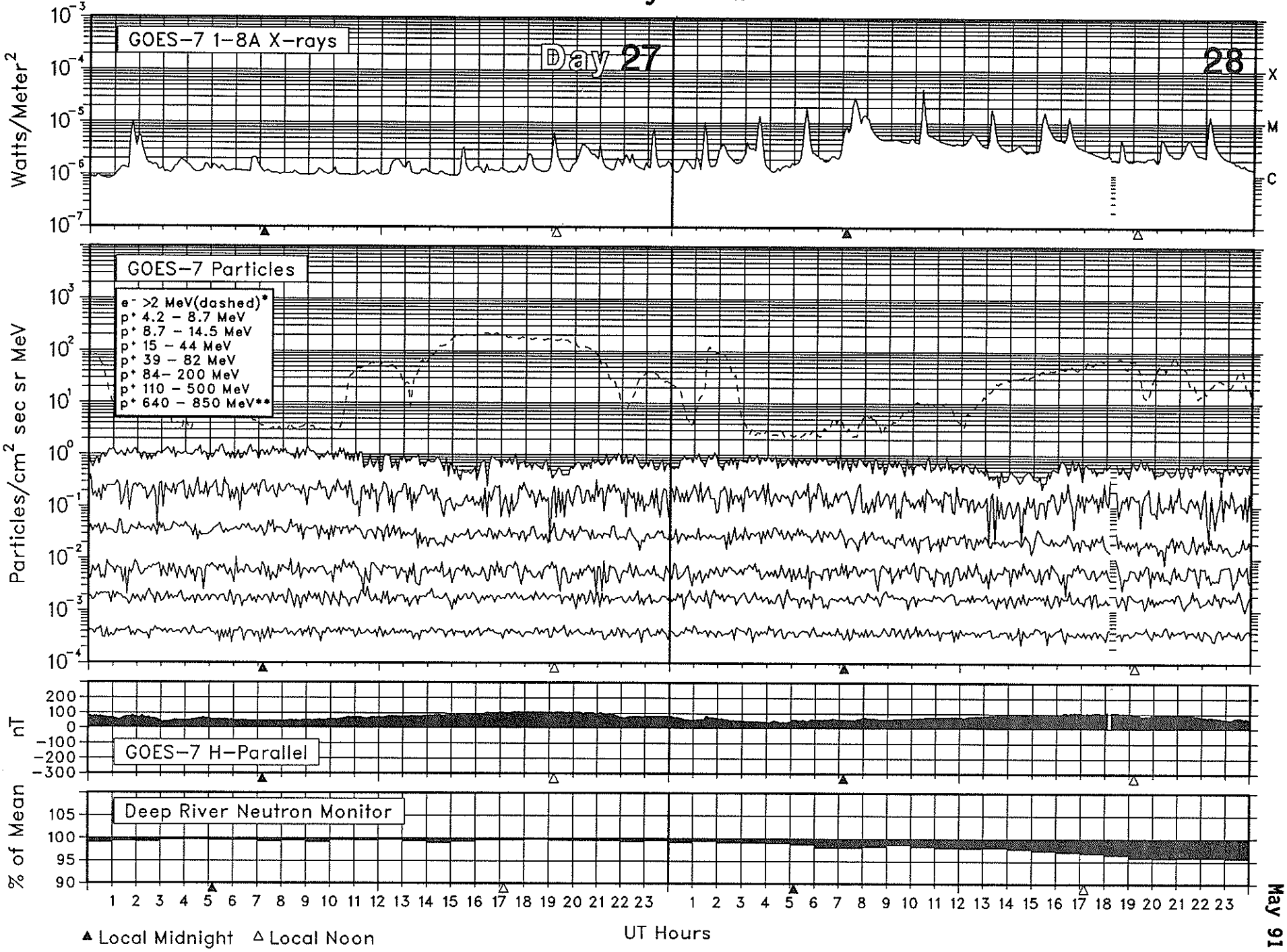

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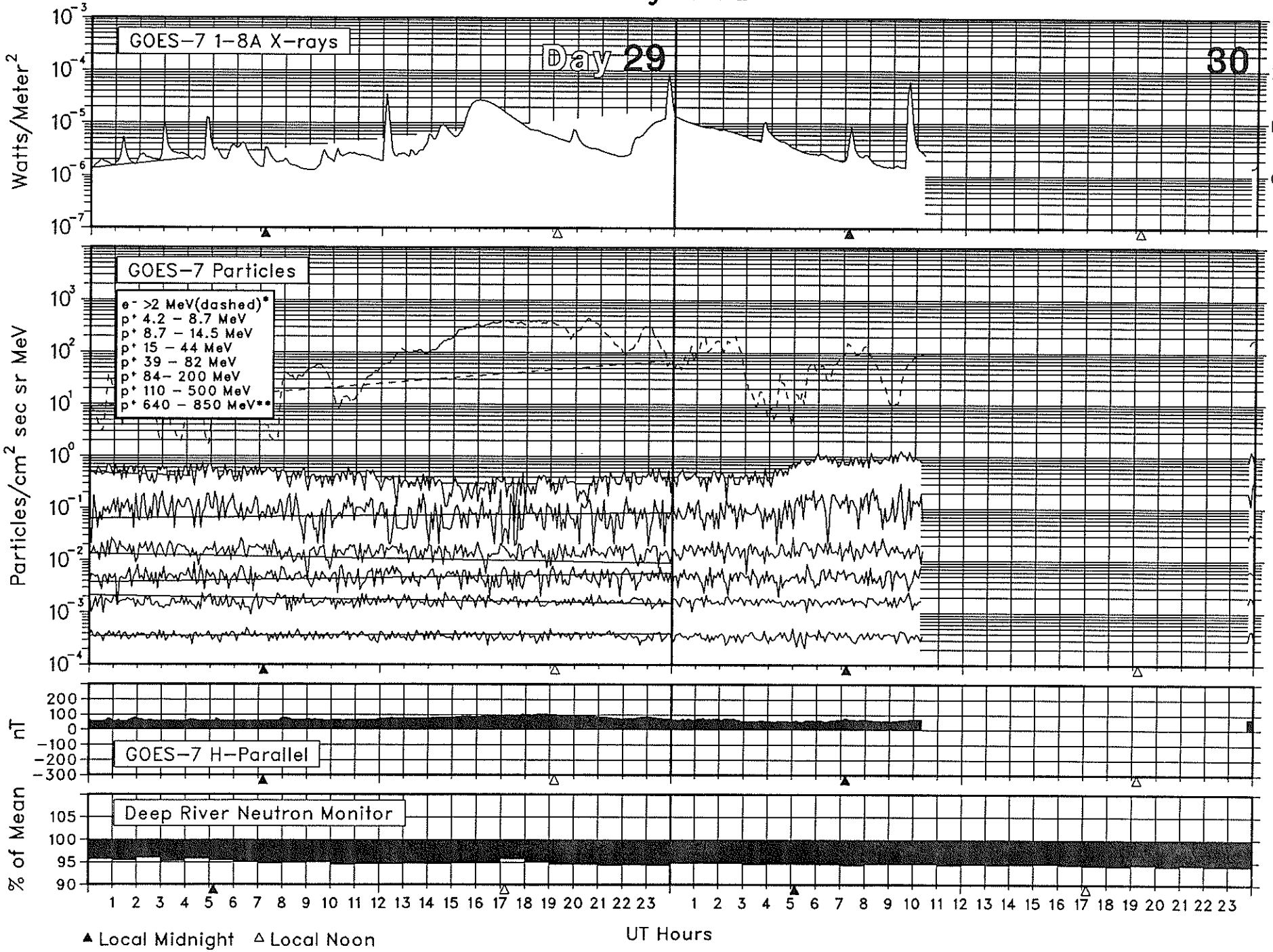

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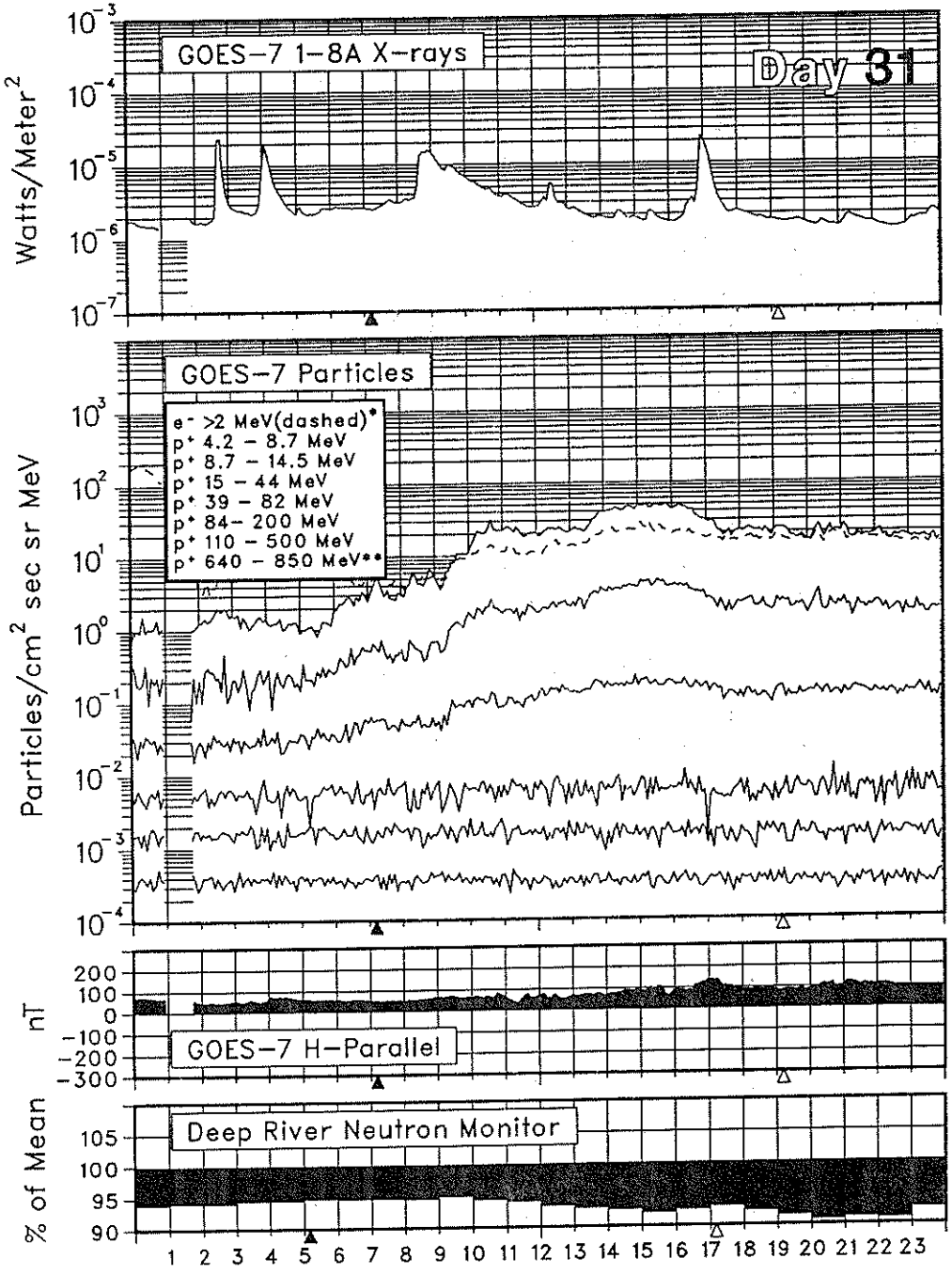
May 1991



* The y-axis units for the electron flux are Particles/cm2 sec sr. Also, the plotted electron values have been divided by 10.

** The 648-850 MeV proton data are from the GOES-6 High Energy Proton and Alpha Detector (HEPAD). These data will appear on these charts only during very energetic proton events.

The Deep River Neutron Monitor data for this month are preliminary.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages MAY 1991

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast [1]	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
121	01	30	196	160	26	S29	W86	9	0	0	01	S29	W86	E	Solquiet,
						S22	W12	1	0	0		S22	W12	Q	Magalert 01/01.
						N08	E15	3	0	0		N08	E15	E	
						N09	W71	0	0	0		N09	W71	Q	
						S40	W18	0	0	0		S40	W18	Q	
						S21	E25	0	0	0		S21	E25	Q	
						S14	E19	0	0	0		S14	E19	Q	
						S06	E36	0	0	0		S06	E36	Q	
						S27	W35	1	0	0		S27	W35	E	
						S14	W13	1	0	0		S14	W13	Q	
						S13	E65	1	0	0		S13	E65	E	
122	02	01	129	162	25	S23	W24	0	0	0	02	S23	W24	Q	Solquiet,
						N08	E02	1	0	0		N08	E02	E	Magnil.
						S40	W30	0	0	0		S40	W30	Q	
						S21	E12	0	0	0		S21	E12	Q	
						S05	E22	0	0	0		S05	E22	Q	
						S27	W49	0	0	0		S27	W49	Q	
						S13	E50	6	0	0		S13	E50	E	
123	03	02	128	157	28	S27	W35	0	0	0	03	S27	W35	Q	Solquiet,
						N08	W11	0	0	0		N08	W11	E	Magquiet.
						S21	W00	0	0	0		S21	W00	Q	
						S13	W05	0	0	0		S13	W05	Q	
						S05	E09	0	0	0		S05	E09	Q	
						S27	W62	0	0	0		S27	W62	Q	
						S11	E37	4	0	0		S11	E37	E	
124	04	03	126	158	18	S25	W49	6	0	0	04	S25	W49	Q	Solquiet,
						N08	W24	1	0	0		N08	W24	Q	Magquiet.
						S21	W13	0	0	0		S21	W13	Q	
						S04	W04	0	0	0		S04	W04	Q	
						S26	W75	0	0	0		S26	W75	Q	
						S11	E24	6	0	0		S11	E24	E	
						S12	W01	0	0	0		S12	W01	Q	
125	05	04	163	163	7	S23	W64	1	0	0	05	S23	W64	E	Solquiet,
						N08	W37	1	0	0		N08	W37	Q	Magquiet.
						S21	W27	0	0	0		S21	W27	Q	
						S05	W18	0	0	0		S05	W18	Q	
						S25	W91	0	0	0		S25	W91	Q	
						S11	E10	7	0	0		S11	E10	E	
						S12	W14	0	0	0		S12	W14	Q	
						N18	W10	0	0	0		N18	W10	Q	
						N17	E69	0	0	0		N17	E69	Q	
126	06	05	171	181	7	S23	W78	0	0	0	06	S23	W78	Q	Solquiet,
						N08	W51	2	0	0		N08	W51	E	Magquiet.
						S22	W40	0	0	0		S22	W40	Q	
						S05	W30	1	0	0		S05	W30	Q	
						S10	W02	7	1	0		S10	W02	E	
						N28	E69	0	0	0		N28	E69	E	
						S04	E07	0	0	0		S04	E07	Q	
						N09	E76	2	0	0		N09	E76	Q	
						S28	E80	0	0	0		S28	E80	Q	
127	07	06	146	203	6	N08	W65	0	0	0	07	N08	W65	Q	Solalert 07/XX,
						S22	W52	0	0	0		S22	W52	Q	Magquiet.
						S05	W43	0	0	0		S05	W43	Q	
						S10	W16	10	0	0		S10	W16	A	
						N28	E58	4	0	0		N28	E58	E	
						N07	E68	2	0	0		N07	E68	E	
						S27	E70	0	0	0		S27	E70	Q	

Presto:[2] Toyokawa Tenflare 310 flux units 07/0023 UT duration 15 minutes.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages **MAY 1991**

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat °Long	Flares Total	M	X	Date of Forecast	Location °Lat °Long	Region Forecast [1]	Geoalerts
128	08	07	134	213	8	N08 W79	0	0	0	08	N08 W79	Q	Solalert 08/XX,
						S22 W64	0	0	0		S22 W64	Q	Magquiet.
						S10 W31	9	2	0		S10 W31	A	
						N28 E45	6	0	0		N28 E45	E	
						N07 E57	1	0	0		N07 E57	E	
						S28 E57	0	0	0		S28 E57	Q	
						N03 E66	0	0	0		N03 E66	Q	
129	09	08	185	226	11	N09 W91	0	0	0	09	N09 W91	Q	Solalert 09/XX,
						S21 W76	0	0	0		S21 W76	Q	Magquiet.
						S09 W45	5	0	0		S09 W45	A	
						N30 E33	5	0	0		N30 E33	E	
						N09 E43	9	1	0		N09 E43	E	
						S27 E43	0	0	0		S27 E43	Q	
						N04 E53	0	0	0		N04 E53	Q	
						S16 E69	0	0	0		S16 E69	Q	
						N13 E71	6	0	0		N13 E71	Q	
						N22 W44	0	0	0		N22 W44	Q	
130	10	09	192	228	13	S21 W92	0	0	0	10	S21 W92	Q	Solalert 10/XX,
						S08 W58	9	0	0		S08 W58	A	Magquiet.
						N29 E22	2	0	0		N29 E22	E	
						N09 E31	2	0	0		N09 E31	E	
						S27 E31	0	0	0		S27 E31	Q	
						N05 E39	0	0	0		N05 E39	Q	
						S17 E55	0	0	0		S17 E55	Q	
						N12 E61	3	0	0		N12 E61	E	
						N23 W56	0	0	0		N23 W56	Q	
131	11	10	192	234	11	S10 W71	3	1	0	11	S10 W71	A	Solalert 11/XX,
						N29 E11	7	0	0		N29 E11	E	Magquiet.
						N10 E19	0	0	0		N10 E19	E	
						S27 E18	0	0	0		S27 E18	Q	
						N04 E27	0	0	0		N04 E27	Q	
						S17 E43	0	0	0		S17 E43	Q	
						N12 E48	1	0	0		N12 E48	E	
						N24 W69	0	0	0		N24 W69	Q	
						S18 W64	2	0	0		S18 W64	E	
		Presto:[2]	Boulder			Tenflare 860 flux units 10/0144 UT duration 11 minutes.							
132	12	11	222	231	5	S09 W85	5	3	0	12	S09 W85	A	Solalert 12/XX,
						N29 W03	5	1	0		N29 W03	E	Magquiet.
						N11 E05	3	0	0		N11 E05	E	
						S27 E06	0	0	0		S27 E06	Q	
						N04 E14	1	0	0		N04 E14	Q	
						S17 E30	2	0	0		S17 E30	Q	
						N12 E34	0	0	0		N12 E34	Q	
						S16 W78	1	0	0		S16 W78	Q	
						N08 W73	0	0	0		N08 W73	Q	
						S16 W49	1	0	0		S16 W49	Q	
						S11 E69	0	0	0		S11 E69	Q	
		Presto:	Boulder			Tenflare 20000 flux units 11/1950 UT duration 80 minutes.							
133	13	12	211	244	6	N29 W16	1	0	0	13	N29 W16	E	Solalert 13/XX,
						N09 W08	3	0	0		N09 W08	Q	Magquiet.
						S27 W07	0	0	0		S27 W07	Q	
						N05 E01	1	0	0		N05 E01	Q	
						S16 E17	9	1	0		S16 E17	E	
						N11 E20	0	0	0		N11 E20	Q	
						S15 W65	0	0	0		S15 W65	Q	
						S12 E56	0	0	0		S12 E56	Q	
						N14 E11	1	0	0		N14 E11	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — MAY 1991

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location	Flares			Date of Forecast	Location	Region Forecast [1]	Geoalerts
						°Lat °Long	Total	M	X		°Lat °Long		
134	14	13	173	212	22	N29 W28	1	0	0	14	N29 W28	E	Solalert 14/XX,
						N08 W23	1	0	0		N08 W23	E	Magquiet.
						S27 W19	0	0	0		S27 W19	Q	
						N03 W14	2	0	0		N03 W14	Q	
						S16 E03	1	0	0		S16 E03	E	
						N10 E05	0	0	0		N10 E05	Q	
						S11 E41	0	0	0		S11 E41	Q	
						N14 W00	0	0	0		N14 W00	Q	
						S08 E10	0	0	0		S08 E10	Q	
		Presto:[2] Boulder				Tenflare 1500 flux units 13/0235 UT duration 209 minutes.							
		Boulder				Proton event began 13/0300 UT, maximum of 350 particles-cm^{-2}-s-ster at greater than 10 MeV 13/0910 UT, in progress.							
135	15	14	168	207	19	N30 W41	0	0	0	15	N30 W41	E	Solalert 15/XX,
						N10 W37	0	0	0		N10 W37	E	Magquiet.
						S27 W32	0	0	0		S27 W32	Q	
						N04 W28	1	0	0		N04 W28	Q	
						S17 W10	1	0	0		S17 W10	E	
						N11 W06	0	0	0		N11 W06	Q	
						S11 E29	1	0	0		S11 E29	Q	
						N16 W14	0	0	0		N16 W14	Q	
						S08 W03	0	0	0		S08 W03	Q	
						S11 E78	0	0	0		S11 E78	Q	
136	16	15	159	191	7	N30 W53	2	0	0	16	N30 W53	E	Solalert 16/XX,
						N09 W53	1	0	0		N09 W53	Q	Magquiet.
						S27 W46	0	0	0		S27 W46	Q	
						N04 W44	0	0	0		N04 W44	Q	
						S17 W24	8	0	0		S17 W24	E	
						N10 W22	1	0	0		N10 W22	Q	
						S11 E15	2	0	0		S11 E15	Q	
						N16 W25	0	0	0		N16 W25	Q	
						S08 W17	1	0	0		S08 W17	Q	
						S12 E64	3	0	0		S12 E64	E	
137	17	16	176	187	12	N30 W67	2	1	0	17	N30 W67	A	Solalert 17/XX,
						N09 W67	0	0	0		N09 W67	Q	Magquiet.
						S27 W58	0	0	0		S27 W58	Q	
						N04 W57	0	0	0		N04 W57	Q	
						S16 W38	2	0	0		S16 W38	E	
						N10 W35	0	0	0		N10 W35	Q	
						S11 E01	0	0	0		S11 E01	Q	
						S09 W29	1	0	0		S09 W29	Q	
						S12 E51	2	0	0		S12 E51	E	
						N13 W03	2	0	0		N13 W03	E	
						S24 E13	0	0	0		S24 E13	Q	
		Presto: Boulder				Tenflare 5000 flux units 16/0645 UT duration 47 minutes.							
138	18	17	173	171	23	N31 W79	10	1	0	18	N31 W79	A	Solalert 18/XX,
						N09 W80	0	0	0		N09 W80	Q	Magalert 18/19, Flare.
						S26 W70	0	0	0		S26 W70	Q	
						N05 W71	1	0	0		N05 W71	Q	
						S15 W49	4	0	0		S15 W49	E	
						N11 W51	0	0	0		N11 W51	Q	
						S11 W06	0	0	0		S11 W06	Q	
						S07 W42	1	0	0		S07 W42	Q	
						S12 E37	8	0	0		S12 E37	E	
						N14 W18	0	0	0		N14 W18	Q	
						N18 E22	0	0	0		N18 E22	Q	
		Presto: Boulder				Tenflare 190 flux units 17/0418 UT duration 4 minutes.							
		Toyokawa				Tenflare 140 flux units 17/0416 UT duration 12 minutes.							

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — MAY 1991

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat °Long	Flares Total	M	X	Date of Forecast	Location °Lat °Long	Region Forecast [1]	Geoalerts
139	19	18	219	168	5	N31 W92	3	0	1	19	N31 W92	E	Solalert 19/20,
						N10 W92	0	0	0		N10 W92	Q	Magalert 19/20, Flare.
						S26 W83	0	0	0		S26 W83	Q	
						N06 W82	0	0	0		N06 W82	Q	
						S16 W62	4	0	0		S16 W62	E	
						N10 W64	0	0	0		N10 W64	Q	
						S11 W15	0	0	0		S11 W15	Q	
						S08 W58	3	0	0		S08 W58	Q	
						S13 E24	6	0	0		S13 E24	E	
						N14 W33	2	0	0		N14 W33	Q	
						S22 W09	0	0	0		S22 W09	Q	
						N18 E09	0	0	0		N18 E09	Q	
						N18 E33	1	0	0		N18 E33	Q	
						S28 E66	2	0	0		S28 E66	Q	
		Presto:[2]	Boulder	X-ray event X2/2B N32 W84 18/0545 UT duration 249 minutes.									
			Boulder	Tenflare 5700 flux units 18/0439 UT duration 14 minutes.									
			Culgoora	Weak Type IV observed between 18/0506–0547 UT.									
				SWF 18/0514–0535 UT. Associated with RF event, a 2B flare.									
140	20	19	196	164	4	S16 W75	1	0	0	20	S16 W75	Q	Solalert 20,
						N10 W77	0	0	0		N10 W77	Q	Magalert 20, Flare.
						S11 W26	1	0	0		S11 W26	Q	
						S07 W71	1	0	0		S07 W71	Q	
						S12 E11	3	1	0		S12 E11	E	
						N15 W47	3	0	0		N15 W47	Q	
						S22 W26	0	0	0		S22 W26	Q	
						N18 W04	0	0	0		N18 W04	Q	
						N17 E19	0	0	0		N17 E19	Q	
						S28 E52	0	0	0		S28 E52	Q	
						S19 W00	1	0	0		S19 W00	Q	
						S27 E04	1	0	0		S27 E04	E	
141	21	20	203	148	4	S16 W88	0	0	0	21	S16 W88	Q	Solnil,
						N11 W91	0	0	0		N11 W91	Q	Magnil.
						S07 W86	2	0	0		S07 W86	E	
						S11 W02	0	0	0		S11 W02	E	
						N17 W60	0	0	0		N17 W60	Q	
						S24 W36	0	0	0		S24 W36	Q	
						N20 W15	0	0	0		N20 W15	Q	
						N18 E06	0	0	0		N18 E06	E	
						S29 E41	0	0	0		S29 E41	Q	
						S21 W10	0	0	0		S21 W10	Q	
						S27 W07	1	0	0		S27 W07	Q	
						S09 W56	0	0	0		S09 W56	Q	
142	22	21	142	148	8	S11 W16	2	0	0	22	S11 W16	E	Solquiet,
						N16 W72	0	0	0		N16 W72	Q	Magquiet.
						N18 W09	1	0	0		N18 W09	E	
						S29 E28	4	0	0		S29 E28	Q	
						S20 W29	0	0	0		S20 W29	Q	
						S27 W22	0	0	0		S27 W22	Q	
						S08 W71	1	0	0		S08 W71	Q	
						S27 E45	0	0	0		S27 E45	Q	
143	23	22	173	147	18	S12 W29	0	0	0	23	S12 W29	E	Solquiet,
						S26 W04	1	0	0		S26 W04	Q	Magquiet.
						N18 W22	3	0	0		N18 W22	E	
						S29 E16	0	0	0		S29 E16	Q	
						S19 W39	1	0	0		S19 W39	Q	
						S27 W33	0	0	0		S27 W33	Q	
						S25 E33	0	0	0		S25 E33	Q	
						N20 E64	4	0	0		N20 E64	E	
						N05 E29	1	0	0		N05 E29	Q	
						S14 W16	0	0	0		S14 W16	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — MAY 1991

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location	Flares			Date of Forecast	Location	Region Forecast [1]	Geoalerts
						°Lat °Long	Total	M	X		°Lat °Long		
144	24	23	180	152	23	S12 W42	1	0	0	24	S12 W42	E	Solquiet,
						N18 W36	0	0	0		N18 W36	E	Magalert 24/XX.
						S28 E03	0	0	0		S28 E03	Q	
						S19 W53	1	0	0		S19 W53	Q	
						S24 W47	0	0	0		S24 W47	Q	
						S24 E22	0	0	0		S24 E22	Q	
						N21 E53	4	0	0		N21 E53	E	
						N05 E17	2	0	0		N05 E17	E	
						S14 W29	1	0	0		S14 W29	E	
						N17 E07	0	0	0		N17 E07	Q	
145	25	24	175	159	21	S12 W55	1	0	0	25	S12 W55	E	Solquiet,
						S30 W33	0	0	0		S30 W33	Q	Magalert 25/XX.
						N17 W49	0	0	0		N17 W49	E	
						S28 W12	0	0	0		S28 W12	Q	
						N19 E42	3	0	0		N19 E42	E	
						N05 E01	1	0	0		N05 E01	Q	
						S13 W42	1	0	0		S13 W42	E	
						N17 W07	0	0	0		N17 W07	Q	
						S13 E67	2	0	0		S13 E67	Q	
146	26	25	189	173	28	S12 W69	0	0	0	26	S12 W69	Q	Solquiet,
						N17 W62	0	0	0		N17 W62	Q	Magalert 26/28.
						S32 W23	0	0	0		S32 W23	Q	
						N20 E29	4	0	0		N20 E29	E	
						N04 W11	0	0	0		N04 W11	Q	
						S14 W57	1	0	0		S14 W57	E	
						N17 W19	2	0	0		N17 W19	Q	
						S13 E60	0	0	0		S13 E60	Q	
						S09 E50	0	0	0		S09 E50	Q	
147	27	26	251	184	18	S11 W79	1	0	0	27	S11 W79	Q	Solquiet,
						N16 W81	0	0	0		N16 W81	Q	Magalert 27/27.
						S28 W10	0	0	0		S28 W10	Q	
						N21 E16	4	0	0		N21 E16	A	
						N05 W23	1	0	0		N05 W23	Q	
						S13 W69	1	0	0		S13 W69	Q	
						N18 W32	1	0	0		N18 W32	Q	
						S15 E49	0	0	0		S15 E49	Q	
						S12 E36	1	0	0		S12 E36	Q	
						N20 W25	0	0	0		N20 W25	Q	
						S25 E04	0	0	0		S25 E04	Q	
						S09 E69	1	0	0		S09 E69	E	
						S22 E30	0	0	0		S22 E30	Q	
						N07 E77	0	0	0		N07 E77	Q	
148	28	27	258	194	18	N18 W91	0	0	0	28	N18 W91	Q	Solalert 28/XX,
						N21 E03	6	1	0		N21 E03	A	Magnil.
						N04 W37	0	0	0		N04 W37	Q	
						S12 W82	1	0	0		S12 W82	Q	
						N18 W45	1	0	0		N18 W45	Q	
						S15 E34	0	0	0		S15 E34	Q	
						S12 E23	0	0	0		S12 E23	Q	
						N20 W38	2	0	0		N20 W38	Q	
						S25 W10	0	0	0		S25 W10	Q	
						S09 E56	6	0	0		S09 E56	E	
						S23 E16	0	0	0		S23 E16	Q	
						N07 E66	16	1	0		N07 E66	E	
						S07 E73	0	0	0		S07 E73	Q	

ALERT PERIODS

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Summary of the Geoalert Messages — MAY 1991

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location	Flares			Date of Forecast	Location	Region Forecast [1]	Geoalerts
						°Lat °Long	Total	M	X		°Lat °Long		
149	29	28	232	210	25	N21 W09	1	0	0	29	N21 W09	E	Solalert 29/XX,
						S09 W91	1	0	0		S09 W91	Q	Magalert 29/29.
						N18 W60	0	0	0		N18 W60	Q	
						S14 E21	0	0	0		S14 E21	Q	
						S11 E09	0	0	0		S11 E09	Q	
						N21 W51	0	0	0		N21 W51	Q	
						S24 W24	0	0	0		S24 W24	Q	
						S09 E43	1	0	0		S09 E43	E	
						N06 E54	12	8	0		N06 E54	A	
						S08 E60	1	0	0		S08 E60	Q	
						N13 W11	0	0	0		N13 W11	Q	
150	30	29	219	216	22	N23 W22	2	0	0	30	N23 W22	E	Solalert 30/XX,
						N18 W72	0	0	0		N18 W72	Q	Magnil.
						S14 E07	0	0	0		S14 E07	Q	
						S12 W04	0	0	0		S12 W04	Q	
						N21 W65	0	0	0		N21 W65	Q	
						S24 W36	0	0	0		S24 W36	Q	
						S09 E31	4	1	0		S09 E31	A	
						N07 E40	11	3	1		N07 E40	A	
						S09 E44	0	0	0		S09 E44	Q	
						N13 W24	1	0	0		N13 W24	Q	
		Presto:[2]	Boulder	Tenflare 220 flux units 29/1207 UT duration 5 minutes.									
			Boulder	Tenflare 460 flux units 29/2342 UT duration 3 minutes.									
			Boulder	X-ray event X1/2B N05 E38 29/2339 UT duration 12 minutes.									
151	31	30	190	231	15	N22 W35	2	0	0	31	N22 W35	E	Solalert 31/XX,
						N19 W83	0	0	0		N19 W83	Q	Magquiet.
						S14 W09	0	0	0		S14 W09	Q	
						N21 W77	0	0	0		N21 W77	Q	
						S24 W51	0	0	0		S24 W51	Q	
						S09 E18	3	1	0		S09 E18	A	
						S22 W22	0	0	0		S22 W22	Q	
						N06 E26	6	2	0		N06 E26	A	
						S04 E28	0	0	0		S04 E28	Q	
						N13 W38	0	0	0		N13 W38	Q	
		Presto:	Boulder	Tenflare 510 flux units 30/0937 UT duration 5 minutes.									

[1]Q = quiet, E = eruptive, A = active, P = proton.

[2]Presto message is a rapid report of a major event.

INTERNATIONAL RELATIVE SUNSPOT NUMBERS

Day	Jun 90	Jul	Aug	Sep	Oct	Nov	Dec	Jan 91†	Feb†	Mar†	Apr†	May†
01	96	272	146	120	110	77	127	139	205	120	89	93
02	80	253	175	116	112	81	160	79	209	93	92	86
03	73	264	151	126	140	108	180	93	180	71	118	99
04	77	241	137	134	134	146	186	95	140	55	139	95
05	79	213	128	118	123	154	167	100	127	74	160	89
06	101	186	124	118	124	197	169	119	117	88	159	96
07	107	173	120	112	135	209	182	105	119	131	174	95
08	99	135	136	112	141	208	177	99	118	146	146	125
09	87	102	145	113	148	188	176	94	134	167	172	140
10	107	88	160	121	153	163	175	97	136	159	167	134
11	126	106	161	116	195	167	157	106	140	167	195	145
12	115	110	167	124	192	151	138	113	153	163	227	133
13	122	114	192	142	214	118	117	145	166	145	197	116
14	118	118	215	178	202	119	95	119	163	161	211	134
15	102	98	229	162	218	113	88	114	173	182	227	119
16	110	95	232	156	192	102	104	133	159	188	179	113
17	100	87	269	137	188	110	112	154	142	167	172	113
18	83	57	270	136	181	97	121	127	191	168	171	125
19	79	61	290	151	181	109	134	119	206	142	173	116
20	68	81	295	145	169	98	114	91	192	166	161	121
21	57	123	278	150	136	102	117	107	223	167	115	97
22	71	143	262	141	140	125	99	106	214	171	79	117
23	64	165	281	117	134	114	91	127	200	179	72	120
24	88	201	276	101	131	118	95	135	192	162	33	117
25	94	204	263	94	125	110	101	149	194	128	39	121
26	103	196	220	93	102	117	104	179	187	164	77	132
27	140	177	188	77	111	109	104	220	175	130	82	163
28	184	165	176	113	119	134	111	237	134	122	124	158
29	203	144	186	119	98	144	109	248		128	132	150
30	230	117	181	115	87	153	103	239		141	116	141
31		142	155		77		108	256		115		150
Mean	105.4	149.4	200.3	125.2	145.5	131.4	129.7	136.9	167.5	140.6	139.9	121.1

† = 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	Jun 90	Jul	Aug	Sep	Oct	Nov	Dec	Jan 91	Feb	Mar	Apr	May
01	140.6	248.3	199.0	171.4	160.5	141.6*	172.6	180.6	307.3	216.5	192.8	163.6
02	141.2	267.6	208.6	168.9	162.8	138.5	178.0	175.8	289.3	207.5	189.1	159.6
03	146.1	253.8	192.4	162.6	177.4*	150.2	187.6	170.0	258.4	206.4	195.9	159.5
04	148.1	238.3*	191.2	158.2*	186.8	154.7	199.3	170.2	239.2	218.9J	195.1	165.8
05	153.7	231.6	180.8	157.5	170.0	169.7	207.0*	172.9	216.5	208.1	196.7	183.2
06	161.4	221.8	174.6	157.6	170.0	196.4	221.0	179.7*	198.7	206.7	199.9	207.2*
07	183.6	215.7	172.1	165.1	169.3	214.3	222.0	199.6	192.7	214.5	192.6	215.3
08	195.5	189.6	184.8	163.5	175.9*	211.8	223.6	207.9	192.7	209.1	182.8	235.6
09	203.9*	170.9	183.2	170.4	183.9	201.2	230.3	209.1	174.0	215.7	204.2	230.1
10	207.5*	164.0	186.3	171.2	194.7	191.1	233.4	214.6	169.5	222.8	223.6	237.0
11	217.2	160.2	187.1	180.6	205.1	195.0	233.4	209.4	176.5	221.9	231.5	234.5
12	221.8*	160.9	188.2	193.3	200.6	191.0	228.0	201.6	181.6	228.7	254.4	253.7
13	208.8	161.5	192.5	198.0	209.4	181.5	219.5	190.5	182.2	239.1	242.6	219.7
14	206.8	155.4	188.2*	209.4*	220.6	198.0	195.3	184.5	184.0	241.6	269.3	212.8
15	196.3	149.1	199.6	207.3	231.6	207.3	193.2	184.6	191.9	242.2	263.1	197.7
16	189.9	146.5	211.0	205.2	224.6	207.3	186.2	181.8	200.4	258.5	269.1	193.4
17	187.5	147.6	228.4	210.7	193.7	217.1	192.5	202.0	210.2	245.4	254.2	176.2
18	169.5	144.7	246.1	207.5	198.2	198.9	201.6	196.8	259.6	274.8	239.1	174.2
19	163.5	145.3	268.0*	213.8	214.2*	191.2	191.2	192.3	269.8	264.9	232.0	162.7*
20	161.2	154.0	288.7	204.0	201.7	186.8	181.6	197.5	283.8	254.2	235.3	151.8
21	155.8	159.2	298.3	203.2	188.7	177.6	185.8	195.9	299.2	253.1	181.6	153.0
22	145.2	166.0*	322.8*	195.3	167.9	177.4	178.1	217.5*	302.6	257.7	168.7	151.9
23	139.1	180.4	322.7	185.4	164.0	171.7	185.6	216.0	311.5	233.4	149.0	158.6
24	143.8	186.6	329.2	178.7	157.5	167.2	184.9	236.8	313.1*	260.5	137.4	162.8
25	149.3	213.6	303.9	167.1	161.8	162.3	185.0	260.9	288.4*	235.2	138.1	178.8
26	154.5	209.9	285.1*	159.6	153.5	153.2	188.1	276.9	271.8	229.4	138.3*	191.4
27	173.4*	197.2	269.2	152.6	162.5	155.0	191.9	293.8J	248.7	203.0	144.6	202.9
28	187.7	193.1	250.2	152.1	150.9	167.1	192.4	313.8	228.0	197.7	158.4	221.4
29	210.8	180.3	225.2	150.1	155.9	163.2	195.5	344.5		192.9	161.0	231.1
30	226.6	188.3	210.4	157.8	151.1*	169.6	189.6	359.2		201.3	161.7	213.5
31		183.4	182.9*		141.6		180.6	348.6		194.7		230.7
Mean	176.3	186.6	228.1	179.3	180.9	180.3	198.5	222.1	237.2	227.6	200.1	194.5

* = corrected for burst in progress; J = no calibration due to burst.

DAILY SOLAR INDICES

May 1991

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Amer	Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit — SGMR (15400)	SGMR (8800)	SGMR (4995)	Ottawa (2800)	SGMR (2695)	SGMR (1415)	SGMR (610)	SGMR (410)	SGMR (245)
01	121	26	93	92	161.1	559	266	195	163.6	171	115	73	44	18
02	122	27	86	90	157.1	554	259	188	159.6	165	114	79	43	18
03	123	1	99	91	157.0	560	265	195	159.5	164	118	82	42	18
04	124	2	95	98	163.1	568	275	207	165.8	173	119	84	44	22
05	125	3	89	103	180.1	592	304	238	183.2	192	125	91	48	27
06	126	4	96	104	203.6*	546	315	248	207.2*	212	132	90	51	35
07	127	5	95	102	211.4	628	375	301	215.3	224	140	95	51	38
08	128	6	125	128	231.3	722	396	311	235.6	246	149	98	59	39
09	129	7	140	139	225.7	668	378	300	230.1	241	149	107	75	--
10	130	8	134	138	232.5	635	378	297	237.0	259	166	107	59	61
11	131	9	145	131	229.8	646	361	285	234.5	246	153	102	55	39
12	132	10	133	124	248.5	630	359	299	253.7	266	163	96	57	26
13	133	11	116	116	215.1	613	325	253	219.7	242	149	93	50	26
14	134	12	134	117	208.3	614	324	257	212.8	260	143	95	48	23
15	135	13	119	105	193.4	605	313	239	197.7	195	134	87	47	22
16	136	14	113	109	189.2	603	305	226	193.4	197	134	90	52	26
17	137	15	113	116	172.3	590	296	220	176.2	198	125	86	46	19
18	138	16	125	120	170.2	600	295	218	174.2	178	119	82	39	20
19	139	17	116	121	159.0*	581	275	206	162.7*	176	117	83	45	23
20	140	18	121	110	148.2	571	257	183	151.8	157	109	77	41	23
21	141	19	97	97	149.3	573	259	183	153.0	167	107	81	40	22
22	142	20	117	116	148.2	564	262	188	151.9	145	105	83	37	30
23	143	21	120	121	154.7	570	270	194	158.6	162	108	79	29	22
24	144	22	117	115	158.7	574	270	204	162.8	172	110	78	37	25
25	145	23	121	128	174.3	568	280	215	178.8	191	111	79	37	24
26	146	24	132	150	186.5	582	306	243	191.4	188	120	84	32	20
27	147	25	163	153	197.7	575	304	249	202.9	194	125	90	41	23
28	148	26	158	150	215.5	597	322	261	221.4	234	145	95	65	--
29	149	27	150	141	224.9	637	392	326	231.1	280	174	114	60	--
30	150	1	141	138	207.8	583	300	250	213.5	208	132	90	42	46
31	151	2	150	138	224.4	569	304	254	230.7	214	142	95	37	28
Mean			121.1	119.4	190.3	596	309	240	194.5	204	131	89	47	27

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

The observed and the adjusted Ottawa fluxes tabulated here are the "Series C" daily values reported by the Algonquin Radio Observatory, Ottawa, Ontario, Canada. Numbers in parentheses in the column headings denote frequencies in MHz. Qualifiers after an entry have the following meaning:

* = corrected for burst in progress.

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	138 (2)
1991	138 (5)	136 (7)	134 (12)	134 (18)	134 (20)	131 (18)	127 (18)	122 (18)	118 (16)	116 (15)	116 (17)	116 (19)
1992	115 (19)	110 (16)	106 (12)	103 (3)	100 (8)	98 (3)	96 (7)	92 (11)	90 (12)	86 (14)	80 (20)	72 (27)

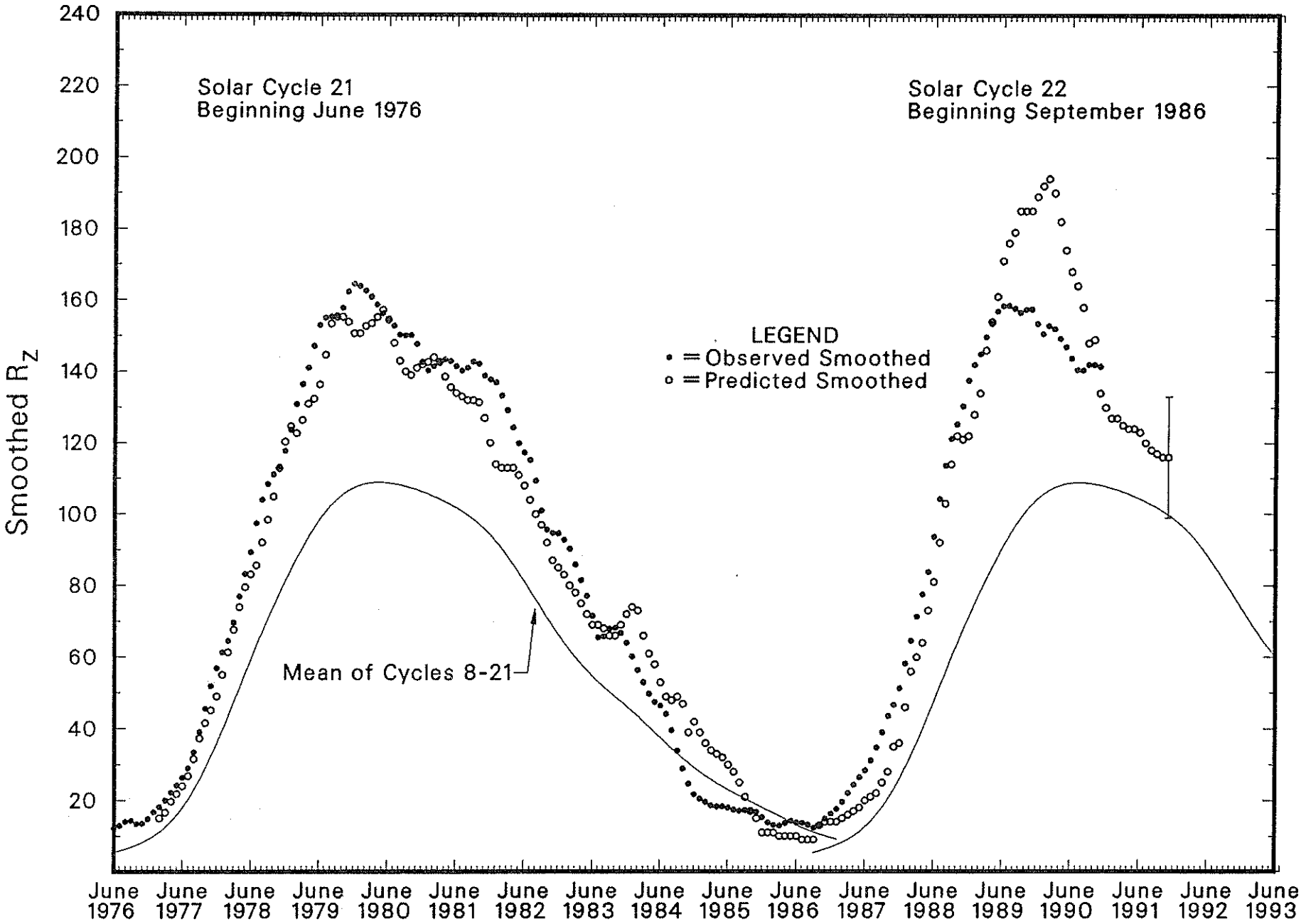
*September 1986 marks the onset of Sunspot Cycle 22.

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 December 1990 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 November 1991 prediction. There exists a 90% chance that in November 1991 the actual smoothed sunspot number will fall somewhere between 99 and 133.

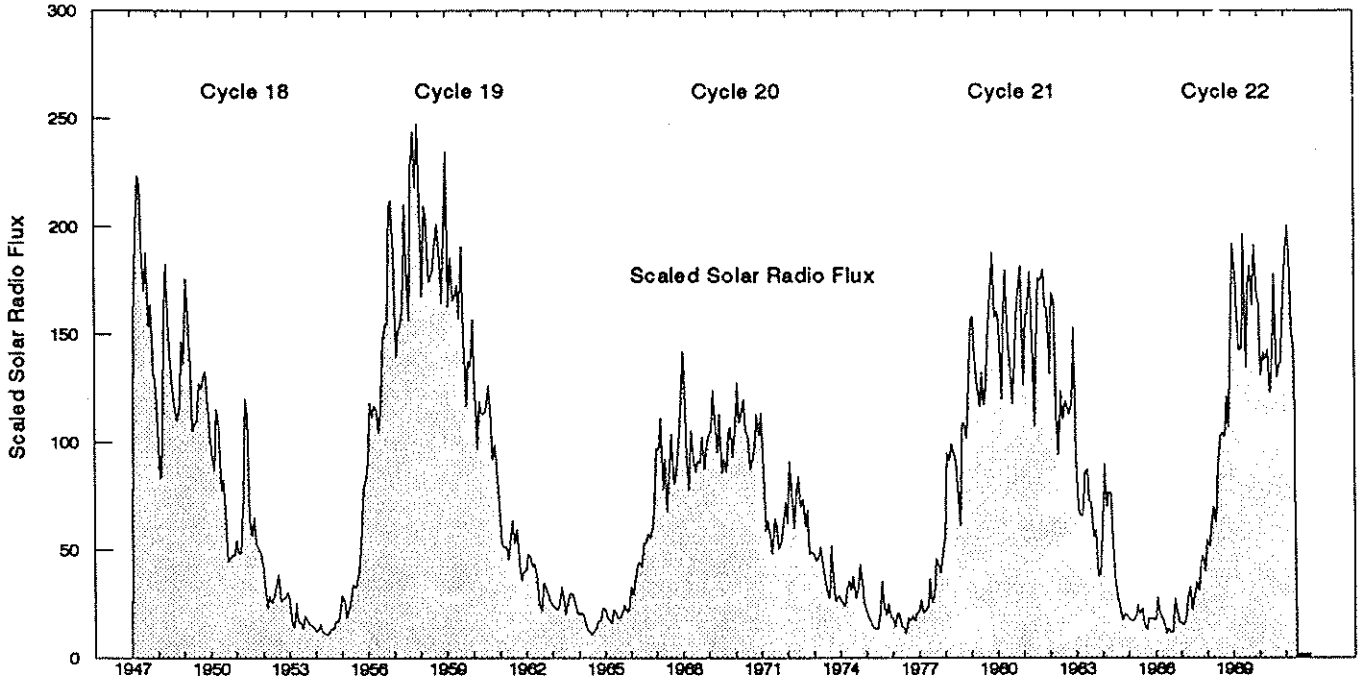
THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED, MONTHLY MEAN SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles used in the computation. Moreover, the method is very sensitive to the data defined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



29 May 91

Monthly Mean 2800 MHz Solar Flux (Observed) Jan 1947 – May 1991



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1947		202.7	235.7	264.1	261.2	226.6	215.2	231.2	199.7	209.0	179.8	176.4	218.3
1948	155.7	134.3	135.5	208.1	226.5	195.5	182.8	172.8	163.7	159.1	165.4	193.3	174.4
1949	183.5	220.2	203.9	182.5	154.9	157.5	159.9	175.2	172.5	178.2	180.4	165.2	177.8
1950	150.7	143.3	137.8	164.3	157.1	128.7	134.1	120.9	98.6	99.9	101.9	101.1	128.2
1951	107.9	101.9	102.5	127.1	168.6	161.7	116.3	109.8	117.8	106.0	104.4	102.4	118.9
1952	95.4	86.2	78.5	84.0	80.9	84.8	88.8	93.3	81.5	82.8	83.4	85.7	85.4
1953	83.2	72.8	70.4	81.0	72.5	73.0	69.8	75.5	74.3	71.9	71.4	70.8	73.9
1954	68.7	69.2	71.9	68.7	68.0	67.3	67.7	69.9	70.1	73.2	72.6	75.5	70.2
1955	84.3	82.0	74.8	77.3	82.8	88.8	87.3	90.7	91.1	111.8	130.0	134.6	95.0
1956	141.2	167.2	160.6	165.9	163.4	154.0	162.8	193.8	200.9	201.6	250.4	253.7	184.6
1957	231.2	186.7	197.8	200.0	208.5	252.1	218.0	202.3	267.1	283.1	259.2	286.5	232.7
1958	251.5	212.2	251.5	245.9	218.6	220.5	224.1	237.0	243.5	228.0	209.2	238.2	231.7
1959	274.5	207.9	229.2	210.6	212.7	217.5	203.0	234.2	194.3	165.1	184.8	182.2	209.7
1960	202.6	170.9	146.8	167.6	162.7	161.9	163.9	174.4	164.5	142.3	148.9	138.1	162.0
1961	122.0	106.4	104.8	105.0	99.3	109.9	116.5	106.2	112.7	96.7	90.3	94.8	105.4
1962	94.9	102.2	100.3	96.2	97.9	91.0	80.7	77.3	89.5	87.8	84.9	82.0	90.4
1963	79.5	79.7	77.8	79.5	87.8	83.5	75.9	80.9	85.1	85.1	81.7	78.4	81.2
1964	75.4	76.8	75.9	72.6	69.5	69.0	67.0	69.3	70.2	73.4	73.7	78.8	72.6
1965	78.6	75.2	74.1	72.0	78.2	77.0	74.3	74.8	76.6	80.2	77.7	77.8	76.4
1966	87.9	84.2	90.3	97.2	98.5	96.3	106.7	106.6	110.9	108.6	113.3	124.6	102.1
1967	147.7	147.0	160.6	129.9	143.0	120.2	140.3	153.7	132.1	136.1	145.3	163.0	143.2
1968	189.1	173.2	142.6	129.5	154.9	142.3	137.2	142.2	141.0	152.5	138.5	148.4	149.3
1969	152.7	155.2	172.3	155.5	145.4	162.2	136.6	143.0	137.3	154.0	156.7	143.6	151.2
1970	158.3	175.4	158.4	162.0	168.4	154.9	152.0	138.2	143.2	148.3	162.0	152.8	156.2
1971	162.6	137.8	111.9	116.7	109.9	101.7	117.4	114.1	104.0	107.2	114.0	124.5	118.5
1972	114.8	141.8	128.5	112.9	129.6	135.4	122.0	125.7	113.6	121.1	101.6	102.9	120.8
1973	102.2	98.7	100.4	105.0	97.0	91.2	84.5	82.9	105.6	87.7	81.5	84.2	93.4
1974	83.1	80.9	79.2	86.1	90.6	86.3	92.5	83.0	87.8	97.6	90.3	81.1	86.5
1975	77.5	74.2	72.4	70.7	70.1	69.7	77.2	90.4	79.6	75.7	80.8	74.6	76.1
1976	74.7	70.5	76.7	76.3	70.6	70.6	67.5	74.8	73.1	75.9	72.9	76.7	73.4
1977	77.4	82.3	76.6	77.6	79.6	91.5	81.1	84.3	99.9	96.9	93.7	102.1	86.9
1978	109.6	145.4	141.8	149.4	146.5	142.2	131.1	114.0	157.9	158.2	151.5	175.5	143.6
1979	203.0	204.1	185.8	173.8	165.2	180.3	165.9	172.7	200.2	217.9	231.7	203.5	192.0
1980	206.2	200.0	168.1	207.9	224.0	193.2	184.8	166.2	183.9	204.2	218.1	225.8	198.5
1981	174.6	204.5	205.3	223.2	194.6	156.9	191.9	220.6	219.5	224.3	207.8	207.8	202.6
1982	179.0	214.2	210.5	161.8	144.7	171.9	159.6	167.9	165.3	161.9	167.4	199.4	175.3
1983	142.3	122.6	118.6	118.9	137.1	138.6	125.0	124.4	109.0	112.4	92.5	93.4	119.6
1984	116.1	140.6	122.0	128.7	128.3	100.3	89.3	83.7	78.1	73.5	76.3	75.9	101.1
1985	74.5	73.7	73.3	75.1	80.2	76.1	78.7	71.5	69.5	74.7	74.2	74.8	74.7
1986	73.2	83.6	77.0	75.1	72.6	67.6	70.2	68.4	68.7	83.0	77.1	72.6	74.1
1987	72.5	71.5	74.0	84.9	87.8	77.9	84.2	90.0	86.1	98.1	101.2	94.4	85.3
1988	108.0	105.0	114.9	122.7	115.2	139.4	152.7	154.2	152.5	169.8	156.2	199.8	141.0
1989	235.4	222.4	205.1	189.6	190.1	239.6	181.9	217.1	225.9	208.7	235.1	213.0	213.7
1990	210.1	178.3	188.8	185.3	189.7	170.9	180.7	222.6	177.4	182.0	184.3	204.9	189.6
1991	229.4	243.0	230.0	198.8	190.3								218.3*

*Preliminary

Graph shows EFFECTIVE sunspot numbers: fluxes scaled by linear regression equation (1.08Flux – 62).

Hα S O L A R F L A R E S

MAY 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	01	0008	0020	0109	S15	E64	6615	05	5.8	61	SN	C 8.2	3	E		84		FE
GOES		0510E	0514	0535						25D		C 1.6						
SVTO		0616	0617	0620	S09	E67	6615	05	6.3	4	SF		3	E		21		
SVTO		0730	0742	0757	S13	E63	6615	05	6.1	27	SF		3	E		25		
GOES		0946	0952	1005						19		C 1.3						
SVTO		1136	1146	1202	S13	E60	6615	05	6.0	26	SF		3	E		36		
RAMY		1138	1156	1159	S16	E58	6615	05	5.9	21	SF		3	E		17		
HOLL		1517	1524	1536	S16	W08	6614	05	1.0	19	SF		3	E		13		F
HOLL		1816	1821	1830	S14	E57	6615	05	6.1	14	SF	C 1.8	3	E		30		FE
RAMY		1819	1819	1825	S15	E54	6615	05	5.8	6	SF		3	E		30		F
HOLL		1933	1936	2013	S16	E13	6610	05	2.8	40	SF		3	E		70		UF
RAMY		1940	1943	1949	S16	E12	6610	05	2.7	9	SF		3	E		37		F
HOLL		1945	1948	2019	S14	E56	6615	05	6.0	34	SF	C 1.8	3	E		35		F
HOLL		2345E	2347U	2358	S14	E34		05	4.5	13D	SF	B 8.6	3	E		20		F
PALE	02	0213	0214	0231	S14	E55	6615	05	6.2	18	SF	C 2.1	3	E		44		
LEAR		0503	0528	0616	S12	E44	6615	05	5.5	73	SF		3	E		34		
LEAR		0706	0706	0717	S12	E45	6615	05	5.7	11	SF	B 8.7	3	E		33		
SVTO		0953	1006	1023	S16	W20	6614	04	30.9	30	SF		3	E		33		
SVTO		1040	1047	1104	S16	W21	6614	04	30.8	24	SF	B 8.1	3	E		38		
GOES		1746	1821	1837						51		B 8.8						
GOES		2344E	2347	2349						5D		B 8.8						
LEAR	03	0035E	0042	0101	S22	W39	6604	04	30.0	26D	SF		2	E		23		
LEAR		0305	0306	0332	S14	E36	6615	05	5.8	27	SF		3	E		27		
LEAR		0527	0532	0544	N09	W15	6605	05	2.1	17	SF	C 1.1	3	E		25		
LEAR		0547	0551	0612	S16	E32	6615	05	5.7	25	SN	C 2.9	3	E		76		FE
LEAR		0707	0720	0737	S25	W40	6604	04	30.2	30	SF	C 1.6	3	E		41		
SVTO		0712E	0714	0718	S26	W38	6604	04	30.3	6D	SF		2	E		48		
GOES		0841	0849	0855						14		C 1.5						
GOES		1055	1103	1111						16		C 1.5						
HOLL		1323	1327	1334	S25	W42	6604	04	30.3	11	SF	C 1.1	3	E		33		
HOLL		1440	1514	1627	S13	E26	6615	05	5.6	107	1F	C 1.7	4	E		162		UF
RAMY		1513	1516	1531	S14	E26	6615	05	5.6	18	SF		4	E		47		F
HOLL		1530	1531	1547	S25	W44	6604	04	30.2	17	SF		4	E		44		F
HOLL		1548	1559	1642	S21	W46	6604	04	30.1	54	SF		4	E		66		F
HOLL		1804	1824	1929	S13	E23	6615			85	SN			E		79		K
HOLL		1804	1838	1929	S13	E23	6615	05	5.5	85	1N	C 4.5	3	E		197		F
PALE		1827	1838	1852	S12	E24	6615	05	5.6	25	SF		3	E		54		
RAMY		1831		1843D	S13	E23	6615	05	5.5	12D	SF		2	E				F
HOLL		2216	2220	2247	N21	W46		04	30.4	31	SF		3	E		28		F
HOLL		2230	2236	2307	S15	E28	6615	05	6.0	37	1N	C 5.6	3	E		132		UF
HOLL		2347	2349		S15	E20	6615	05	5.5	13	SN	C 3.6	3	E		94		F
HOLL	04	0008	0030	0058	S23	W53	6604	04	30.0	50	SF		2	E		61		F
LEAR		0017E	0024U	0050	S12	E20	6615	05	5.5	33D	SF		3	E		40		F
LEAR		0602	0623	0648	S11	E17	6615	05	5.5	46	1F	C 1.2	3	E		106		F
SVTO		0620	0627U	0633D	S12	E19	6615	05	5.7	13D	SF	C 3.0	2	E		34		F
LEAR		0840	0844	0947D	S11	E16	6615	05	5.6	67D	SF		3	E		17		FE
SVTO		0841	0921	1005	S08	E16	6615	05	5.6	84	1F	C 1.6	3	E		101		
HOLL		1400	1404	1410	S10	E12	6615	05	5.5	10	SF		3	E		11		F
HOLL		1537	1541	1601	S11	E10	6615	05	5.4	24	SF	C 1.8	3	E		33		FE
RAMY		1541	1541	1553	S13	E09	6615	05	5.3	12	SF		3	E		35		F
HOLL		2231	2236	2239	S08	E08	6615	05	5.5	8	SF		3	E		23		
LEAR		2319	2319	2334	S12	E09	6615	05	5.6	15	SF	C 1.5	3	E		10		F
LEAR	05	0307	0357	0431	N08	W39	6605	05	2.2	84	SF		3	E		29		F
SVTO		0459	0536	0603	N05	W41	6605	05	2.1	64	SF		3	E		35		
LEAR		0524	0528	0540	S09	E04	6615	05	5.5	16	SF	C 1.9	3	E		31		F
SVTO		0528	0529	0538	S08	E04	6615	05	5.5	10	SF		3	E		21		F
LEAR		0532	0532	0544	N07	W40	6605	05	2.2	12	SF		3	E		10		
LEAR		0557	0559	0625	S12	E05	6615	05	5.6	28	SF		3	E		20		
SVTO		0558	0604	0623	S09	E02	6615	05	5.4	25	SF		3	E		16		F
LEAR		0753	0756	0800	S12	E04	6615	05	5.6	7	SF	C 1.2	3	E		18		F
GOES		1012	1016	1022						10		C 2.1						
GOES		1043	1048	1053						10		C 2.2						
SVTO		1513	1515	1532	S06	W24	6611	05	3.8	19	SF	C 2.2	3	E		78		F
HOLL		1513	1515	1540	S07	W24	6611	05	3.8	27	1N		3	E		104		FE

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	05	1514	1515	1521	S05	W26	6611	05	3.7	7	SF		4	E		29		F
HOLL		1615	1615	1619	S09	W03	6615	05	5.4	4	SF		3	E		16		F
HOLL		1959	2003	2007	N07	E90		05	12.6	8	SF		3	E		47		
HOLL		2003	2004	2012	S09	W06	6615	05	5.4	9	SF		3	E		22		
HOLL		2023	2031	2147	S12	E07	6615			84	SN			E		87		K
HOLL		2023	2046	2147	S12	E07	6615	05	6.4	84	1N	M 1.1	3	E		149		UF
HOLL		2212	2218	2221	N06	E81		05	12.0	9	SN		3	E		68		
PALE		2217	2218	2221	N08	E89		05	12.6	4	SF		3	E		52		
HOLL		2330	2331	2342	S09	W08	6615	05	5.4	12	SF		3	E		52		F
LEAR	06	0057	0124	0203	S10	W05	6615	05	5.7	66	SF		3	E		17		F
LEAR		0310	0320	0326	N04	E85	6621	05	12.5	16	SF		3	E		53		
GOES		0430E	0435	0506D						36D		C 3.1						
LEAR		0433	0442	0535	N27	E65	6619			62	SF			E		65		K
LEAR		0433	0456	0535	N27	E65	6619	05	11.2	62	SF		3	E		64		F
LEAR		0537	0539	0553	S10	W07	6615	05	5.7	16	SF		3	E		25		F
LEAR		0557	0559	0611	N05	E77	6621	05	12.0	14	SF	C 5.0	3	E		52		
LEAR		0700	0711	0719	S15	W49	6610	05	2.6	19	SF		3	E		22		F
LEAR		0722	0727	0800	S10	W08	6615	05	5.7	38	SF		3	E		36		F
HOLL		1338	1338	1343	N30	E61	6619	05	11.4	5	SF	C 2.6	3	E		20		
RAMY		1339	1339	1343	N28	E61	6619	05	11.3	4	SF		3	E		20		
SVTO		1612E	1613U	1617D	S09	W16	6615	05	5.5	5D	SF	C 1.8	2	E		17		F
SVTO		1658E	1659U	1704D	S06	W18	6615	05	5.3	6D	SF		2	E		29		F
RAMY		1658	1700	1709	S05	W16	6615	05	5.5	11	SF	C 4.8	3	E		31		F
HOLL		1659	1701	1706	S08	W19	6615	05	5.3	7	SF		3	E		26		F
PALE		1943E	1952U	2001D	S11	W18	6615	05	5.5	18D	SF		3	E		13		F
RAMY		2124	2124	2131	N28	E57	6619	05	11.3	7	SF	C 2.5	3	E		33		
GOES		2321	2322	2331						10		C 7.8						
PALE		2321E	2428	2531	S08	W24	6615	05	5.2	130D	1N		3	E		230		FH
LEAR		2332	2434	2554D	S07	W22	6615	05	5.3	142D	1B		3	E		217		F
GOES	07	0001E	0034	0154						113D		M 2.3						
LEAR		0656	0657	0714	N27	E54	6619	05	11.5	18	SF		3	E		14		
LEAR		0736	0759	0847	N27	E52	6619	05	11.4	71	SF		3	E		26		
SVTO		0737	0739	0750	N31	E52	6619	05	11.4	13	SF		3	E		21		
LEAR		0740	0741	0830	S11	W21	6615	05	5.7	50	SF	C 4.5	3	E		45		FE
SVTO		0742	0754U	0824	S11	W24	6615	05	5.5	42	SF		3	E		24		F
SVTO		0758	0800	0815	N30	E52	6619	05	11.4	17	SF		3	E		13		
SVTO		0922	0925	0939	N30	E51	6619	05	11.4	17	SF		3	E		17		
SVTO		0958	1037	1113	S11	W27	6615	05	5.4	75	SN	M 1.4	3	E		59		F
GOES		1003	1008	1017						14		C 7.2						
RAMY		1036E	1038	1059	S08	W28	6615	05	5.3	23D	SF		2	E		45		F
SVTO		1037	1040	1044	N30	E50	6619	05	11.4	7	SF		3	E		12		
HOLL		1332	1333	1338	S09	W29	6615	05	5.4	6	SF		3	E		19		F
HOLL		1351	1403	1428	S08	W29	6615	05	5.4	37	SF		3	E		20		F
HOLL		1403	1406	1421	N29	E50	6619	05	11.5	18	SF		3	E		13		
HOLL		1445	1447	1531	S08	W29	6615	05	5.4	46	SF	C 5.2	3	E		41		FE
RAMY		1446	1447	1506	S08	W31	6615	05	5.3	20	SF		3	E		13		F
HOLL		1527	1529	1556	N29	E47	6619	05	11.3	29	SF	C 3.1	3	E		55		
RAMY		1528	1542	1547	N28	E47	6619	05	11.3	19	SF		3	E		23		
HOLL		1605	1605	1610	S11	W32	6615	05	5.3	5	SF		3	E		22		F
HOLL		1742E	1808U	1822D	S31	W33	6615	05	5.1	40D	SF	C 2.4	2	E		72		F
HOLL		2035	2040	2119	N12	E64	6621	05	12.7	44	SF		3	E		67		F
RAMY		2039	2109U	2125	N12	E64	6621	05	12.7	46	SF	C 4.8	3	E		42		F
HOLL		2238	2242	2259	S08	W35	6615	05	5.3	21	SF	C 3.2	3	E		80		F
HOLL		2334	2340	2352	N11	E62	6621	05	12.6	18	SF		3	E		43		
HOLL	08	0014	0015	0036	S10	W31	6615	05	5.7	22	SF	C 2.3	3	E		13		E
LEAR		0015	0015	0036	S11	W37	6615	05	5.2	21	SF		3	E		25		F
GOES		0103	0109	0116						13		C 4.1						
LEAR		0119	0121	0253	S11	W38	6615			94	SF			E		40		K
LEAR		0119	0221	0253	S11	W38	6615	05	5.2	94	SF		3	E		40		FE
PALE		0120	0121	0129	S12	W33	6615	05	5.6	9	SF	C 3.9	3	E		21		
LEAR		0138	0143	0200	N27	E43	6619	05	11.4	22	SF	C 5.3	3	E		69		F
PALE		0138	0143	0211	N27	E42	6619	05	11.3	33	SF	C 5.3	3	E		58		
PALE		0216	0217	0229	S10	W34	6615	05	5.5	13	SF	C 4.7	3	E		19		
PALE		0232	0232	0237	N06	E58	6621	05	12.4	5	SF		3	E		20		
LEAR		0332	0339	0405	N11	E55	6621	05	12.3	33	1N	C 3.3	3	E		109		FE

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CNP Mo	CNP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	08	0618	0622	0632	N11	E78		05	14.1	14	SF		3	E		48		
LEAR		0721	0813	0936	S11	W41	6615	05	5.2	135	SF	C 2.8	3	E		31		FE
SVTO		0900	0903	0918D	S05	W12	6620	05	7.5	18D	SF		3	E		13		
GOES		0930	0934	0936						6		C 2.8						
SVTO		1037	1040	1044	N30	E50	6619	05	12.4	7	SF		3	E		12		
SVTO		1331	1338	1346	N12	E86		05	15.0	15	SF		3	E		39		
SVTO		1336	1336	1340	N14	E54	6621	05	12.6	4	SF		3	E		16		
HOLL		1437	1438	1453	N29	E34	6619	05	11.3	16	SF		3	E		18		
SVTO		1437	1438	1500	N30	E33	6619	05	11.2	23	SF		3	E		28		
HOLL		1515	1520	1531	N09	E49	6621	05	12.3	16	SF		3	E		21		
SVTO		1516	1522	1529	N12	E45	6621	05	12.0	13	SF		3	E		23		
RAMY		1518	1520	1524	N12	E54	6621	05	12.7	6	SF		3	E		22		
HOLL		1520	1520	1531	N13	E77	6625	05	14.4	11	SF		3	E		49		
HOLL		1538	1546	1638	N12	E52	6621	05	12.6	60	1N		4	E		107		F
SVTO		1538	1548	1634	N14	E53	6621	05	12.6	56	SN		3	E		92		
HOLL		1538	1601	1638	N12	E52	6621			60	1N	M 1.0		E		134		K
SVTO		1538	1612	1634	N14	E53	6621			56	SN			E		81		K
RAMY		1540	1600	1631	N12	E54	6621	05	12.7	51	SF	M 1.0	4	E		90		F
HOLL		1648	1649	1656	N07	E47	6621	05	12.2	8	SF		4	E		17		
HOLL		1703	1703	1708	N10	E81	6625	05	14.8	5	SF		4	E		16		
HOLL		1759	1801	1808	N09	E47	6621	05	12.3	9	SF		4	E		20		
HOLL		1819	1820	1828	N10	E77	6625	05	14.5	9	SF		4	E		12		
HOLL		1823	1836	1916	N27	E33	6619			53	1N			E		120		K
HOLL		1823	1843	1916	N27	E33	6619	05	11.3	53	1N	C 6.1	4	E		109		FH
PALE		1834	1836	1939D	N28	E34	6619	05	11.4	65D	SF		3	E		62		
RAMY		1835	1839	1904	N28	E34	6619	05	11.4	29	SF		3	E		37		FH
HOLL		1955	2004	2020	N09	E46	6621	05	12.3	25	SF		4	E		31		
HOLL		2008	2011	2024	N30	E32	6619	05	11.3	16	SF		4	E		14		F
HOLL		2042	2112	2149	N06	E48	6621	05	12.4	67	SF		3	E		24		F
HOLL		2144	2144	2154	N13	E75	6625	05	14.6	10	SF		3	E		12		F
HOLL		2234	2301	2406	S08	W48	6615	05	5.3	92	SN	C 4.0	3	E		53		F
HOLL	09	0006	0007	0017	N11	E71	6625	05	14.3	11	SF		3	E		22		FH
HOLL		0040	0040	0047	S07	W52	6615	05	5.1	7	SN	C 1.5	3	E		28		F
HOLL		0120	0122	0129	N09	E70	6625	05	14.3	9	SF		2	E		30		
PALE		0122E	0122U	0130	N12	E82	6625	05	15.2	8D	SF	C 2.5	3	E		72		
LEAR		0159	0201	0216	S06	W52	6615	05	5.2	17	SF	C 3.5	3	E		65		
PALE		0202	0204	0210	S09	W48	6615	05	5.5	8	SF		3	E		58		
GOES		0338E	0340	0348D						10D		C 5.6						
GOES		0519	0520	0522						3		C 2.8						
SVTO		0654	0719	0823	N29	E26	6619	05	11.3	89	SF		4	E		39		
SVTO		0701	0721	0808	N10	E39	6621	05	12.2	67	SF		4	E		32		
SVTO		0734	0737	0800	S12	W49	6615			26	SF			E		25		K
SVTO		0734	0747	0800	S12	W49	6615	05	5.6	26	SF		4	E		15		
SVTO		0833	0842	0935D	S09	W56	6615	05	5.1	62D	1N	C 4.3	4	E		117		
GOES		0905	0910	0914						9		C 3.2						
GOES		0952	0956	0959						7		C 3.6						
SVTO		1052	1055	1113	S10	W52	6615	05	5.5	21	SF		3	E		46		F
RAMY		1054	1054	1104	S09	W54	6615	05	5.4	10	SF	C 4.1	4	E		28		F
GOES		1127	1132	1140						13		C 1.8						
GOES		1147	1151	1154						7		C 3.1						
SVTO		1148	1209	1228	S10	W52	6615	05	5.6	40	1N		3	E		108		F
RAMY		1203	1218	1220	S09	W54	6615	05	5.4	17	SF	C 7.9	4	E		88		
RAMY		1233	1236	1243	S09	W54	6615	05	5.5	10	SF	C 8.0	4	E		56		F
RAMY		1244	1245	1249	N10	E36	6621	05	12.2	5	SF		4	E		32		
RAMY		1444	1510	1545	N29	E27	6619	05	11.7	61	SF	C 3.5	4	E		46		FH
HOLL		1447E	1520	1547	N28	E22	6619	05	11.3	60D	SF		2	E		60		FH
GOES		1726	1729	1731						5		C 2.4						
HOLL		1745	1747	1757	S10	W56	6615	05	5.5	12	SN	C 5.9	3	E		38		F
RAMY		1747	1747	1758	S09	W58	6615	05	5.4	11	SF		3	E		31		F
GOES		2000	2006	2011						11		C 2.7						
GOES		2021	2023	2025						4		C 2.2						
PALE		2235	2235	2240	S08	W65	6615	05	5.1	5	SF	C 1.6	3	E		25		
LEAR	10	0115	0155	0253	N33	E23	6619	05	11.9	98	1F		3	E		106		F
PALE		0216	0218	0252	N34	E18	6619	05	11.5	36	SF	C 5.8	3	E		13		F
PALE		0254	0346	0357D	N39	E10	6619	05	10.9	63D	SF	C 7.0	3	E		64		F
GOES		0506	0516	0529						23		C 5.6						

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
SVTO	10	0514E	0516U	0604D	N18	E58	6625	05	14.6	50D	SF		1	E		81		
GOES		0947	0953	0956						9		C 2.4						
RAMY		1344	1347	1354	N25	E13	6619	05	11.6	10	SF	C 1.9	4	E		14		F
HOLL		1433	1437	1503	S16	W59		05	6.1	30	SF		3	E		82		F
RAMY		1435	1436	1448	S14	W58		05	6.2	13	SF	C 2.6	4	E		30		FH
HOLL		1813	1813	1822	N30	E11	6619	05	11.6	9	SF		3	E		18		F
HOLL		1906	1946	2041	S08	W71	6615	05	5.5	95	SN	C 5.9	3	E		59		F
GOES		1944E	1945	2001D						17D		M 1.5						
RAMY		1944	1945	2001	S46	W51	6615	05	6.6	17	SF		2	E		43		F
LEAR		2334	2343	2416	S07	W73	6615	05	5.5	42	SF		3	E		47		F
LEAR		2342	2342	2353	S16	W70	6627	05	5.7	11	SF		3	E		91		F
LEAR		2350	2402	2419	N30	E07	6619	05	11.5	29	SF		3	E		13		F
LEAR	11	0052	0054	0059	S05	W75	6615	05	5.4	7	SF		3	E		55		
LEAR		0204	0205	0209	N30	E06	6619	05	11.5	5	SF	C 3.2	3	E		27		
LEAR		0508	0516	0524	S05	W80	6615	05	5.2	16	SF	C 2.8	3	E		84		
LEAR		0636	0642	0705	N09	E13	6621	05	12.2	29	SF	C 1.8	3	E		23		F
GOES		0802	0814	0824						22		M 1.4						
LEAR		0804	0816	0910	S06	W81	6615	05	5.3	66	SF		3	E		48		F
SVTO		0806	0821	0910	S09	W76	6615	05	5.6	64	SF		3	E		21		
GOES		0834	0851	0858						24		C 3.7						
GOES		1024	1027	1030						6		C 2.0						
GOES		1123	1135	1152						29		C 4.5						
RAMY		1321	1322	1344	S08	W80	6615	05	5.5	23	SN	M 3.4	4	E		49		F
SVTO		1321E	1323U	1401	S09	W79	6615	05	5.6	40D	SF		2	E		54		
HOLL		1321	1323	1401	S09	W79	6615	05	5.6	40	SN		2	E		46		F
GOES		1358	1420	1429						31		C 5.5						
GOES		1436	1438	1442						6		C 4.3						
RAMY		1519	1524	1528	S08	W83	6615	05	5.4	9	SF	M 1.6	4	E		36		
HOLL		1521	1523	1530	S09	W80	6615	05	5.6	9	SF		3	E		16		
GOES		1610	1614	1617						7		C 4.2						
GOES		1632	1644	1650						18		C 4.3						
HOLL		1735	1736	1747	S16	W49		05	8.0	12	SF	C 2.6	4	E		12		
HOLL		1804	1805	1813	S14	W79	6627	05	5.8	9	SF	C 2.5	3	E		35		F
HOLL		1805	1807	1814	S16	E37	6624	05	14.5	9	SF		3	E		14		
HOLL		1826	1827	1852	N05	E17	6623	05	13.0	26	SF	C 2.6	3	E		65		FE
PALE		1827	1827	1842	N06	E17	6623	05	13.0	15	SF		3	E		35		
HOLL		1830	1831	1834	N30	E00	6619	05	11.8	4	SF		3	E		13		
HOLL		1850	1851	1912	N06	E07	6621	05	12.3	22	SF	C 2.3	3	E		16		F
HOLL		1954	2025	2512	N33	W02	6619	05	11.7	318	SN	M 2.1	3	E		96		ZYT
HOLL		1954	2037	2512	N33	W02	6619			318	1N			E		123		KT
RAMY		2000	2052U	2052D	N32	W01	6619	05	11.7	52D	SF		2	E		87		F
PALE		2012E	2054U	2423	N33	W03	6619	05	11.6	251D	SF		3	E		89		FT
HOLL		2237	2302	2337	N08	E06	6621	05	12.4	60	SF		3	E		36		F
LEAR		2301E	2305U	2508	N29	W02	6619	05	11.8	127D	1N		2	E		112		ZF
HOLL		2305	2306	2325	S17	E33	6624	05	14.5	20	SF		3	E		21		F
HOLL	12	0100	0103	0108	S17	E28	6624	05	14.2	8	SF		2	E		31		F
LEAR		0237	0237	0246	S08	W86	6615	05	5.7	9	SF	C 6.5	3	E		19		
GOES		0303	0308	0311						8		C 4.9						
GOES		0551	0602	0617						26		C 3.4						
LEAR		0709	0725	0737	N07	W02	6621	05	12.1	28	SF		3	E		28		F
LEAR		0718	0721	0725	S10	W84	6615	05	6.0	7	SF	C 3.0	3	E		23		F
LEAR		0802	0804	0812	S09	W82	6615	05	6.2	10	SN	C 5.0	3	E		90		E
GOES		0857	0908	0912						15		C 2.9						
GOES		1021	1038	1226						125		C 5.9						
SVTO		1238E	1238U	1249	N09	W01	6621	05	12.4	11D	SF		2	E		13		
RAMY		1301	1315	1321	S17	E24	6624	05	14.4	20	SF	C 5.6	3	E		17		F
SVTO		1306E	1310U	1320	S16	E25	6624	05	14.4	14D	SF		2	E		20		
HOLL		1310	1320	1324	N14	E17		05	13.8	14	SF		2	E		21		F
SVTO		1327	1331	1334	S15	E23	6624	05	14.3	7	SF		3	E		13		F
RAMY		1334	1335	1338	S16	E25	6624	05	14.5	4	SF		3	E		15		
HOLL		1340	1359	1430	S15	E25	6624	05	14.5	50	SF		3	E		27		F
HOLL		1555	1557U	1652	N08	W06	6621	05	12.2	57	SF		3	E		30		
HOLL		1555	1559	1614	S19	E22	6624	05	14.3	19	SF		3	E		13		F
HOLL		1614	1634	1706	S17	E22	6624	05	14.3	52	SF	C 4.6	3	E		55		F
RAMY		1624	1624	1628	S16	E22	6624	05	14.3	4	SF		3	E		19		
HOLL		1652	1659	1723	N02	E03	6623	05	12.9	31	SF		3	E		23		F

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	12	1707	1740	1822	S19	E24	6624	05	14.5	75	2B	M 1.2	3	E		260		F
PALE		1806E	1806U	1831	S15	E27	6624	05	14.8	25D	SF		3	E		45		F
HOLL		1823	1904	2008	S17	E20	6624	05	14.3	105	SF		3	E		65		F
GOES		2005	2019	2025						20		C 3.1						
HOLL		2035	2051	2120	S18	E22	6624	05	14.5	45	SF		3	E		19		F
GOES		2230	2241	2259						29		M 1.3						
GOES	13	0033	0042	0057						24		M 1.6						
GOES		0103	0144	0222						79		M 8.2						
GOES		0506	0513	0527						21		M 2.0						
SVTO		0623	0637	0656	N07	W03	6623	05	13.0	33	SF		3	E		73		
SVTO		0944	0958	1011	N14	W09	6621	05	12.7	27	SF		3	E		36		F
SVTO		1059	1108	1126	S15	E12	6624	05	14.4	27	SF	C 2.9	3	E		39		
SVTO		1107E	1107U	1151	S27	E33		05	16.0	44D	SF		3	E		79		UF
SVTO		1310	1311	1314	N04	W09	6623	05	12.9	4	SF		3	E		24		
GOES		1515E	1518	1524D						9D		C 1.7						
HOLL		1515	1618	1624	N26	W24	6619	05	11.8	69	SF		3	E		16		
HOLL		1834	1835	1848	N15	W47	6618	05	10.2	14	SF		3	E		38		F
GOES		1943	2002	2036						53		C 2.4						
HOLL		2113	2129	2218	S17	E04	6624	05	14.2	65	SF		3	E		31		F
GOES	14	0043	0047	0052						9		C 1.5						
SVTO		0554	0559	0613	N07	W14	6623	05	13.2	19	SF		3	E		22		
LEAR		0559	0600	0639	N08	W15	6623	05	13.1	40	SF		3	E		22		
LEAR		0717	0723	0745	S10	E39	6630	05	17.2	28	SF		3	E		33		
HOLL		1730	1739	1810	S19	W01	6624	05	14.6	40	SF	C 3.8	3	E		98		F
PALE		1732	1736	1804	S19	W01	6624	05	14.6	32	SF		3	E		52		
LEAR	15	0344	0404	0449	S18	W09	6624	05	14.5	65	SF		3	E		35		
LEAR		0653	0706	0757	N14	W50	6621	05	11.5	64	SF	C 2.0	3	E		38		
LEAR		0753	0808	0811	S13	E70	6633	05	20.6	18	SF		3	E		12		
SVTO		1102	1103	1123	S18	W10	6624	05	14.7	21	SF		3	E		18		
SVTO		1350	1354	1453	S11	E69	6633	05	20.8	63	SF		3	E		15		
SVTO		1352	1356	1416	S19	W13	6624	05	14.6	24	SF		3	E		17		
HOLL		1354	1404	1414	S19	W13	6624	05	14.6	20	SF		3	E		25		
RAMY		1359	1359	1405	S18	W13	6624	05	14.6	6	SF		2	E		31		
GOES		1434	1451	1506						32		C 2.1						
SVTO		1445	1450	1528	N31	W48	6619	05	11.8	43	SF		3	E		11		
SVTO		1459	1550	1557	S10	E68	6633	05	20.7	58	SF		3	E		17		
SVTO		1548	1602	1627	S09	W13	6632	05	14.7	39	SF	C 1.5	3	E		34		
HOLL		1550E	1552U	1620D	S08	W12	6632	05	14.8	30D	SF		3	E		19		F
HOLL		1700	1705	1707	S15	E25	6630	05	17.6	7	SF		3	E		20		F
HOLL		1757	1828	1909	S16	W20	6624	05	14.2	72	SF		3	E		44		F
HOLL		1757	1848	1909	S16	W20	6624			72	SN			E		55		K
HOLL		1815	1822	1840	N15	W14	6625	05	14.7	25	SF		3	E		58		F
PALE		1819	1820	1826	N16	W16	6625	05	14.5	7	SF		3	E		11		F
HOLL		1903	1904	1915	S13	E23	6630	05	17.5	12	SF		3	E		31		F
HOLL		1910	1911	1916	S16	W20	6624	05	14.3	6	SF		3	E		21		F
HOLL		2020	2032	2120	S16	W25	6624			60	SN			E		92		K
HOLL		2020	2052	2120	S16	W25	6624	05	13.9	60	SN	C 6.5	3	E		94		F
PALE		2116	2116	2138	S16	W26	6624	05	13.9	22	SF		3	E		13		
HOLL		2119	2121	2136	N30	W50	6619	05	11.9	17	SF		3	E		26		F
HOLL		2258	2306	2314	N30	W52	6619	05	11.9	16	SF	C 1.8	3	E		26		FE
LEAR		2322	2329	2403	S17	W22	6624	05	14.3	41	SF	C 1.5	3	E		52		
HOLL		2323	2324	2357	S18	W20	6624	05	14.4	34	SF		3	E		21		
GOES		2350	2355	2407						17		C 1.7						
HOLL	16	0011	0011	0035	N13	E10		05	16.8	24	SF		3	E		10		F
PALE		0135	0141	0145	S12	E64	6633	05	20.9	10	SF		3	E		18		
LEAR		0635	0654	0930D	N30	W56	6619	05	11.9	175D	2B	M 8.9	3	E		288		F
LEAR		0635	0702	0930D	N30	W56	6619			175D	3F			E		509		K
SVTO		0643	0706	0711D	N30	W54	6619	05	12.0	28D	2B		3	E		374		F
HOLL		1241E	1243	1302	S17	W29	6624	05	14.3	21D	SF		2	E		45		F
HOLL		1359	1359	1410	S17	W33	6624	05	14.1	11	SF		3	E		15		
HOLL		1423	1503	1529	S16	W34	6624	05	14.0	66	SF		3	E		78		F
SVTO		1441E	1444	1520	S17	W34	6624	05	14.0	39D	1F		2	E		106		F
RAMY		1444E		1453	S17	W30	6624	05	14.3	9D	SF		3	E				F
HOLL		1651	1704	1739	N13	W01	6634	05	16.6	48	SF		3	E		58		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	See	Obs Type	Area Measurement Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	Remarks
GOES	16	2009	2015	2037						28		C 3.0						
HOLL		2210	2210	2217	N29	W63	6619	05	12.0	7	SF		3	E		29		F
LEAR	17	0015	0034	0042	N29	W65	6619	05	11.9	27	SF		3	E		13		
HOLL		0047	0047U	0107	S17	W35	6624	05	14.4	20	SF		2	E		15		FH
LEAR		0104	0104	0109	N09	W56	6623	05	12.8	5	SF	C 1.4	3	E		50		F
GOES		0402E	0422	0426						24D		C 2.6						
LEAR		0520	0538	0612	S14	W42	6624	05	14.0	52	SF		3	E		63		
SVTO		0652	0728U	0728D	S17	W39	6624	05	14.3	36D	1F	C 3.2	3	E		228		
LEAR		0714	0726	0911	S19	W39	6624	05	14.3	117	1F		3	E		109		
LEAR		0812	0813	0821	N28	W69	6619	05	11.9	9	SF		3	E		22		F
LEAR		0902	0904	0924	N30	W68	6619	05	12.0	22	1N		3	E		173		
SVTO		0903	0904	1019D	N29	W73	6619	05	11.6	76D	SF	M 3.3	3	E		96		
RAMY		1134	1145	1203	S13	E47	6633	05	21.0	29	SF		3	E		19		
HOLL		1304E	1304U	1312D	S28	E09	6635	05	18.2	8D	SF		2	E		84		F
HOLL		1314	1335	1434	S14	E47	6633			80	SF			E		70		K
HOLL		1314	1359	1434	S14	E47	6633	05	21.1	80	SF		3	E		52		FE
HOLL		1316	1319	1335	N29	W72	6619	05	11.9	19	SF		3	E		22		F
HOLL		1339	1341	1434	S15	W46	6624	05	14.1	55	1B	C 7.1	3	E		134		UF
HOLL		1339	1349	1434	S15	W46	6624			55	2B			E		261		K
RAMY		1341E		1430	S15	W42	6624	05	14.4	49D	1B		2	E				F
HOLL		1355	1401	1423	S32	E53		05	21.8	28	SF		3	E		86		F
HOLL		1405	1405	1411	N30	W72	6619	05	11.9	6	SF		3	E		18		F
HOLL		1409	1418	1520	S09	W36	6632	05	14.9	71	1B	C 2.7	3	E		204		F
RAMY		1435E	1435U	1437D	S07	W37	6632	05	14.8	2D	SF		2	E		45		F
HOLL		1541	1546	1553	N28	W77	6619	05	11.6	12	SF	C 1.5	3	E		35		F
HOLL		1548	1552	1619	S14	E45	6633	05	21.0	31	SF		3	E		20		F
HOLL		1708	1711	1739	S14	E45	6633	05	21.1	31	SF		3	E		28		F
HOLL		1708	1730	1739	S14	E45	6633			31	SF			E		15		K
HOLL		1822	1829	1843	S26	E67		05	23.0	21	SF	C 2.4	3	E		64		F
HOLL		1832	1833	1840	S17	W46	6624	05	14.3	8	SF		3	E		41		F
HOLL		2029	2117	2125	S14	E42	6633	05	21.0	56	SN	C 1.8	3	E		97		F
HOLL		2104	2107	2119	N30	W78	6619	05	11.7	15	SN	C 3.0	3	E		95		E
HOLL		2159	2222	2359	S14	E43	6633	05	21.2	120	SB	C 4.2	3	E		78		F
HOLL		2159	2306	2359	S14	E43	6633			120	SB			E		89		K
HOLL		2208	2209	2213	N30	W80	6619	05	11.6	5	SF		3	E		37		
HOLL		2242	2245	2257	S14	E29		05	20.1	15	SF		3	E		14		F
HOLL		2303	2305	2309	N31	W80	6619	05	11.6	6	SN	C 5.9	3	E		50		E
LEAR		2305E	2305U	2417	S15	E38	6633	05	20.8	72D	SB		2	E		61		F
LEAR	18	0042	0048	0106	N32	W84	6619	05	11.4	24	SF		3	E		40		F
LEAR		0046	0103	0201	S14	W53	6624	05	14.0	75	1F	C 6.9	3	E		214		FE
HOLL		0046	0105U	0150D	S17	W51	6624	05	14.1	64D	SN		2	E		80		UF
LEAR		0140	0140	0144	S07	W45	6632	05	14.7	4	SF		3	E		26		
LEAR		0353	0409	0417	S13	E35	6633	05	20.8	24	SN	C 3.0	3	E		80		FE
LEAR		0421	0449	0537	S14	W50	6624	05	14.4	76	1F		3	E		157		F
LEAR		0435	0502	0535	S15	E37	6633	05	21.0	60	SN		3	E		53		FE
LEAR		0447	0512	0537	S07	W47	6632	05	14.7	50	SF		3	E		38		F
SVTO		0453E	0504U	0529	S18	W47	6624	05	14.6	36D	SF		3	E		94		
SVTO		0453E	0508U	0530	S13	E35	6633	05	20.8	37D	SF		3	E		66		
SVTO		0501	0502U	0529	S08	W46	6632	05	14.8	28	SF		3	E		26		
LEAR		0506	0546	0748	N32	W85	6619	05	11.5	162	2B	X 2.8	3	E		440		YF
SVTO		0506	0622	0723	N18	W90	6619			137	2N			E		571		K
SVTO		0506	0643	0723	N18	W90	6619	05	11.3	137	2N		3	E		393		
SVTO		0730E	0810U	0836D	N29	W89	6619	05	11.3	66D	SN		2	E		85		
LEAR		0754	0758	0805	S15	E36	6633	05	21.0	11	SF		3	E		13		
LEAR		0809	0810	0814	N32	W88	6619	05	11.4	5	SB		3	E		63		
HOLL		1315	1315	1321	S11	E31	6633	05	20.9	6	SF		3	E		17		F
HOLL		1403	1413	1417	N17	E39		05	21.5	14	SF		3	E		19		
HOLL		1437	1457	1525	N14	W27	6634	05	16.6	48	SF		3	E		36		FH
GOES		1529	1534	1539						10		C 2.1						
HOLL		1604	1604	1631	S12	E30	6633	05	20.9	27	SF	C 1.4	3	E		37		F
HOLL		1604	1614	1652	N14	W28	6634	05	16.5	48	SF		3	E		61		F
GOES		1642	1645	1648						6		C 3.1						
PALE		1915E	1915U	1948	S07	W55	6632	05	14.7	33D	SF	C 2.3	3	E		32		FH
HOLL		1945	1959	2004	S30	E72	6639	05	24.5	19	SF		3	E		16		F
HOLL		2051	2054	2115	S12	E27	6633	05	20.9	24	SN	C 2.4	3	E		98		F
HOLL		2107	2116	2133	S31	E67	6639	05	24.2	26	SF		3	E		25		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	18	2229	2229	2235	S17	W61	6624	05	14.3	6	SF		3	E		18		
LEAR	19	0025	0041	0103	S22	E14		05	20.1	38	SF		3	E		21		
LEAR		0036	0038	0043	S15	E26	6633	05	21.0	7	SF		3	E		26		
SVTO		0456	0506	0529	S17	W71	6624	05	13.8	33	SF		3	E		18		
LEAR		0735	0853	0934D	S05	W66	6632	05	14.4	119D	SF		3	E		48		
LEAR		0816	0821	0845	N15	W35	6634	05	16.7	29	SF		3	E		22		F
RAMY		1031E	1035U	1052	S11	E18	6633	05	20.8	21D	SF		2	E		25		F
RAMY		1344	1359	1507	S11	E17	6633	05	20.8	83	1F	N 1.2	3	E		235		F
SVTO		1609E	1613	1627	N15	W48	6634	05	16.0	18D	SF		3	E		28		F
PALE	20	0014	0029U	0049D	S12	W78	6632	05	14.1	35D	SF		3	E		26		
LEAR		0125	0229	0516	S06	W77	6632	05	14.3	231	SF		3	E		37		T
LEAR		2343E	2343	2402	S29	W38		05	18.0	19D	SF		3	E		40		
PALE	21	0003	0006	0019	S08	W01	6633	05	20.9	16	SF		3	E		15		F
LEAR		0004	0010	0027	S10	W05	6633	05	20.6	23	SF		3	E		39		F
GOES		0116	0213	0306						110		C 2.8						
LEAR		0144	0144	0150	S32	E41	6639	05	24.3	6	SF		3	E		11		F
LEAR		0353	0354	0409	S10	W52	6642	05	17.2	16	SF		3	E		28		F
SVTO		0630	0632	0635	N22	E86		05	27.9	5	SF		3	E		36		
SVTO		0707	0713	0725	S30	E36	6639	05	24.1	18	SF		3	E		26		
SVTO		0753	0756	0758	N23	E89		05	28.2	5	SF		3	E		32		
SVTO		0857	0900	0904	N22	E89		05	28.2	7	1F		3	E		105		
LEAR		0858	0900	0902	N17	E76		05	27.1	4	SF		3	E		49		
SVTO		0942	0944	0957	N23	E89		05	28.3	15	1N	C 5.3	3	E		221		
SVTO		0944	0950	1050	S31	E39	6639	05	24.5	66	SF		3	E		66		
RAMY		1013E	1013U	1047	S31	E35	6639	05	24.2	34D	SF		2	E		95		
SVTO		1103	1106	1113	N06	E54		05	25.5	10	SF		3	E		20		
SVTO		1109	1110	1121	N22	E84		05	27.9	12	SF		3	E		38		
SVTO		1317	1318	1325	N22	E89		05	28.4	8	SF		3	E		23		
SVTO		1341	1354	1414	N23	E89		05	28.4	33	SF		3	E		77		
SVTO		1352	1418	1429	S11	W15	6633	05	20.4	37	SF		3	E		21		F
SVTO		1532	1550	1552	N23	E84		05	28.1	20	SF		3	E		19		
SVTO		1552	1557	1614	N23	E83		05	28.0	22	SF		3	E		60		
SVTO		1616	1651	1705	N23	E86		05	28.3	49	SF	C 2.3	3	E		62		
GOES		2045	2049	2052						7		C 2.3						
LEAR		2345	2404	2428	N18	W09	6638	05	21.3	43	1N		3	E		176		FE
GOES	22	0002	0008	0021						19		C 5.1						
PALE		0004E	0011U	0037D	N18	W09	6638	05	21.3	33D	SF		3	E		93		H
LEAR		0019	0023	0153	S29	W03	6637			94	2N			E		173		K
LEAR		0019	0039	0153	S29	W03	6637	05	21.8	94	2N	C 6.4	3	E		562		FE
PALE		0020E	0040U	0137D	S29	E01	6637	05	22.1	77D	2F		3	E		314		UF
LEAR		0039	0052	0153	N17	E73		05	27.6	74	SF		3	E		59		F
PALE		0123E	0126U	0136D	N23	E82		05	28.4	13D	SF		3	E		90		
LEAR		0420	0425	0442	S20	W28	6640	05	20.0	22	SF	C 2.4	3	E		32		F
SVTO		0424	0427	0443	S22	W26	6640	05	20.2	19	SF		3	E		22		
LEAR		0441	0446	0451	N18	W12	6638	05	21.3	10	SF		3	E		24		F
SVTO		0512	0554	0624	N23	E76		05	28.1	72	1N	C 3.9	3	E		144		
LEAR		0549	0553	0615	N17	E70		05	27.6	26	1N		3	E		104		
GOES		0638	0643	0651						13		C 3.1						
SVTO		0743	0744	0759	N18	W12	6638	05	21.4	16	SF	C 2.4	3	E		20		
LEAR		0743	0746	0805	N18	W11	6638	05	21.5	22	SF		3	E		33		F
GOES		2009E	2013	2017D						8D		C 1.7						
GOES	23	0127	0136	0149						22		C 3.2						
GOES		0244	0247	0250						6		C 1.7						
GOES		0402	0407	0410						8		C 1.5						
GOES		0419	0432	0444						25		C 5.1						
GOES		0607	0611	0614						7		C 1.9						
SVTO		0813	0840	0916	N23	E65	6644	05	28.3	63	SF		3	E		45		
SVTO		0848	0850	0908	S14	W22	6646	05	21.7	20	SF		3	E		14		
SVTO		1359	1403	1412	N06	E22	6645	05	25.2	13	SF		3	E		27		
SVTO		1632	1639	1653	N06	E21	6645	05	25.3	21	SF		3	E		43		
GOES		1633E	1638	1648D						15D		C 1.6						
PALE		1634E	1634U	1649	N05	E18	6645	05	25.0	15D	SF		3	E		30		F
PALE		1758	1812	1842	N20	E58	6644	05	28.2	44	SF	C 1.4	4	E		27		F

Hα S O L A R F L A R E S

MAY 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
PALE	23	1905	1905	1931	S15	W44	6633	05	20.5	26	SF		4	E		19		
PALE		1905	1916	1935	S19	W47	6640	05	20.2	30	SF	C 3.8	4	E		68		FH
LEAR	24	0308	0313	0317	N20	E51	6644	05	28.0	9	SF	C 1.1	3	E		23		
PALE		0309	0310	0315	N21	E52	6644	05	28.1	6	SF		3	E		17		
GOES		1321	1324	1326						5		C 1.6						
GOES		1338	1347	1357						19		C 1.7						
GOES		1617	1623	1635						18		C 1.9						
PALE		1706	1708	1711	N20	E47	6644	05	28.3	5	SF		3	E		17		F
PALE		1840E	1844U	1915D	S13	W54	6633	05	20.7	35D	SF		3	E		60		
PALE		1842E	1842U	1904D	S13	W43	6646	05	21.5	22D	SF	C 2.3	3	E		16		F
GOES		2033	2040	2044						11		C 1.7						
PALE		2147E	2150U	2153D	S21	W80	6635	05	18.8	6D	SF		3	E		32		
LEAR	25	0356E	0421U	0449D	N18	E41	6644	05	28.3	53D	SF	C 3.3	3	E		59		
PALE		0412	0414	0423	N19	E40	6644	05	28.2	11	SF		3	E		19		F
GOES		1058	1106	1117						19		C 2.0						
SVTO		1405	1415	1446	N22	E35	6644	05	28.3	41	1F	C 5.7	3	E		106		
SVTO		1506	1512U	1655D	N21	E33	6644	05	28.1	109D	SF	C 1.3	2	E		21		
GOES		2135	2143	2153						18		C 9.1						
PALE		2213	2215	2217	S10	E90		06	1.7	4	SF	C 6.4	3	E		20		
PALE		2306	2308	2312	S17	W53	6646	05	21.9	6	SF		3	E		19		
PALE		2307	2307	2310	N17	W17	6647	05	24.7	3	SF	C 3.0	3	E		15		
PALE		2333	2337	2340	N17	W17	6647	05	24.7	7	SF		3	E		20		
PALE	26	0020	0020	0024	N21	E31	6644	05	28.4	4	SF		3	E		16		
LEAR		0343	0346	0404	N06	W11	6645	05	25.3	21	SF		3	E		42		
GOES		0432	0436	0439						7		C 1.8						
GOES		0536	0541	0546						10		C 2.1						
LEAR		0819	0823	0838	N20	E24	6644	05	28.2	19	SF	C 1.6	3	E		34		
SVTO		0834	0838	0851	S15	W62	6646	05	21.7	17	SF		3	E		50		F
LEAR		0837	0839	0854	S15	W62	6646	05	21.7	17	SF		3	E		39		
LEAR		0841	0855	0921	N20	E26	6644	05	28.3	40	SF	C 3.9	3	E		30		
LEAR		0851	0855	0900	S14	E74		06	1.0	9	SF		3	E		88		
SVTO		0852	0854	0858	S07	E79		06	1.3	6	SF		3	E		84		F
LEAR		0903	0910	0933D	S13	E43	6649	05	29.6	30D	SF		3	E		27		
SVTO		0912	0921	0948	S12	E47	6649	05	29.9	36	SF	C 2.2	3	E		26		F
GOES		1428E	1430	1442D						14D		C 1.4						
GOES		1652	1702	1712						20		C 1.4						
PALE		2028	2028	2033	N22	E20	6644	05	28.4	5	SF	C 2.0	3	E		13		
LEAR	27	0017	0020	0033	N21	E18	6644	05	28.4	16	SF		3	E		13		F
LEAR		0142	0144	0207	N20	E17	6644	05	28.4	25	SF	M 1.1	3	E		32		F
LEAR		0142	0146	0228	S14	E69	6652	06	1.3	46	1F		3	E		152		F
LEAR		0142	0204	0228	S14	E69	6652			46	1F			E		145		K
PALE		0151E	0151U	0221D	S11	E72	6652	06	1.5	30D	1F	C 7.1	3	E		113		F
PALE		0242	0246	0252	N23	E17	6644	05	28.4	10	SF		3	E		18		F
LEAR		0254	0303	0314	N19	W26	6650	05	25.1	20	SF		3	E		68		F
PALE		0259	0302	0311	N20	W26	6650	05	25.1	12	SF		3	E		27		
LEAR		0303	0309	0322	S15	W72	6646	05	21.7	19	SF		3	E		31		
GOES		0329	0346	0403						34		C 2.0						
LEAR		0526	0530	0534	N05	E74	6654	06	1.8	8	SF		3	E		65		
LEAR		0610	0612	0627	N20	W29	6650	05	25.0	17	SF		3	E		37		
LEAR		0641	0643	0737	N21	E13	6644	05	28.3	56	SF	C 2.3	3	E		69		
GOES		1224	1244	1253						29		C 2.0						
RAMY		1309	1310	1312	N06	E69	6654	06	1.7	3	SF	C 2.5	3	E		27		
GOES		1520	1525	1540D						20D		C 4.6						
GOES		1619	1622	1626						7		C 1.7						
RAMY		1632	1633	1638	S10	E64	6652	06	1.5	6	SF		3	E		15		
GOES		1757	1802	1805						8		C 2.3						
GOES		1805	1809	1814						9		C 2.7						
PALE		1907	1907	1913	S08	E63	6652	06	1.5	6	SF		3	E		18		F
PALE		1907	1908	1919	N06	E67	6654	06	1.8	12	1F	C 7.4	3	E		145		F
RAMY		1944	1953	1959	N06	E64	6654	06	1.6	15	SF	C 1.9	3	E		33		F
PALE		1947	1953	2002	N08	E67	6654	06	1.8	15	SF		3	E		40		F
GOES		1959	2019	2037						38		C 3.9						
RAMY		2032	2033	2041	N04	E66	6654	06	1.8	9	SF		3	E		17		
PALE		2041	2041	2050	N08	E65	6654	06	1.7	9	SF		3	E		22		F

Hα S O L A R F L A R E S

MAY 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
RAMY	27	2049	2049	2056	S09	E57	6652	06	1.1	7	SF		3	E		21		F
PALE		2101	2102	2109	N07	E68	6654	06	2.0	8	SF	C 5.0	3	E		39		
GOES		2201	2209	2214						13		C 2.4						
PALE		2217	2221U	2227	N08	E65	6654	06	1.8	10	SF	C 2.9	3	E		40		F
PALE		2238	2242	2249	N07	E64	6654	06	1.7	11	SF		3	E		46		F
GOES		2254	2258	2301						7		C 1.9						
PALE		2311	2313	2330	N05	E65	6654	06	1.8	19	1F	M 1.1	3	E		205		FE
LEAR		2327	2349	2432	N18	W51	6647	05	24.1	65	SF		3	E		81		
LEAR		2330	2358	2404D	N06	E67	6654	06	2.0	34D	SF		3	E		90		
LEAR		2351	2353	2428	N22	E05	6644	05	28.4	37	SF		3	E		44		
LEAR	28	0022	0104	0202	N01	E62	6654			100	1B			E		108		K
LEAR		0022	0120	0202	N01	E62	6654	06	1.6	100	2B		3	E		477		
LEAR		0023	0032	0038	S08	W83	6646	05	21.8	15	SF	C 2.1	3	E		48		
PALE		0058	0103	0111	N07	E69	6654	06	2.2	13	SF	C 3.3	3	E		43		F
GOES		0116	0123	0129						13		M 1.1						
PALE		0117	0120	0139	N05	E64	6654	06	1.8	22	2F		3	E		324		FH
GOES		0156	0209	0217						21		C 3.9						
GOES		0303	0308	0312						9		C 4.6						
PALE		0329	0334	0351	N05	E62	6654	06	1.8	22	1F	M 1.5	3	E		184		F
PALE		0435E	0440	0447	N06	E63	6654	06	1.9	12D	SF		2	E		38		
SVTO		0514	0537	0549	N09	E64	6654	06	2.0	35	1F	M 2.2	3	E		169		FH
LEAR		0700E	0701U	0817D	N06	E61	6654	06	1.8	77D	2B	M 3.2	3	E		290		
SVTO		1018	1023	1031	N08	E57	6654	06	1.7	13	1B	M 5.3	3	E		137		H
RAMY		1032E		1134	N07	E62	6654	06	2.1	62D	SF		3	E				F
GOES		1206	1226	1237						31		C 6.5						
SVTO		1305E	1313U	1330	N08	E55	6654	06	1.7	25D	1B	M 2.4	2	E		127		H
SVTO		1518E	1520U	1521D	N07	E59	6654	06	2.0	3D	1N	M 1.7	2	E		142		F
PALE		1624E	1624U	1645D	N06	E59	6654	06	2.1	21D	1B	M 1.5	3	E		124		F
GOES		1833E	1834	1839D						6D		C 6.8						
GOES		2009E	2012	2055D						46D		C 6.1						
GOES		2059	2120	2131						32		C 4.9						
PALE		2206	2212	2224D	N08	E52	6654	06	1.8	18D	1N	M 1.4	3	E		178		FE
PALE	29	0009	0010	0021	N05	E52	6654	06	1.9	12	SF		3	E		22		
PALE		0111	0121	0131	N07	E49	6654	06	1.7	20	SF	C 5.9	3	E		84		F
PALE		0205	0211U	0214	N07	E53	6654	06	2.0	9	SF		3	E		15		
PALE		0258	0301	0318	N07	E49	6654	06	1.8	20	1N	M 1.3	3	E		207		FE
LEAR		0303	0303	0322	N21	W09	6644	05	28.4	19	SF		3	E		44		
LEAR		0315	0331	0351	N14	W13	6656	05	28.1	36	SF		3	E		27		
PALE		0442	0447	0458D	N07	E50	6654	06	1.9	16D	1N		2	E		116		F
SVTO		0442	0447	0515	N08	E48	6654	06	1.8	33	1N	M 1.7	3	E		144		FH
SVTO		0508	0510	0528	S08	E40	6652	06	1.2	20	SF		3	E		42		F
GOES		0709	0715	0722						13		C 4.5						
SVTO		0943E	0947	1011	N23	W08	6644	05	28.8	28D	SF	C 3.1	3	E		80		F
SVTO		0952	0952	1004	N08	E45	6654	06	1.8	12	SF		3	E		20		
SVTO		1005	1011	1023	N07	E48	6654	06	2.0	18	SN	C 3.6	3	E		83		FH
SVTO		1207	1210	1231	N08	E43	6654	06	1.7	24	1B	M 4.3	3	E		138		H
SVTO		1241	1246	1249	N06	E48	6654	06	2.1	8	SF		3	E		18		
SVTO		1311	1311	1327	S08	E35	0652	06	1.2	16	SF		3	E		28		
SVTO		1346	1400	1745D	S05	E35	6652	06	1.2	239D	SF		3	E		62		FT
GOES		1355	1359	1404						9		C 6.8						
GOES		1414E	1419	1431D						17D		C 9.4						
SVTO		1527	1617	1648	N07	E44	6654	06	1.9	81	SF		3	E		56		
PALE		1629E	1629U	1749	S08	E35	6652	06	1.3	80D	1B	M 2.7	2	E		248		F
PALE		1756	1757U	1903D	S08	E28	6652	05	31.8	67D	SF		3	E		14		
PALE		1946E	1953U	2025D	N08	E39	6654	06	1.7	39D	SF	C 8.6	3	E		69		F
PALE		2214	2343	2443	N05	E38	6654	06	1.8	149	2B	X 1.0	3	E		523		FE
LEAR		2346E	2348	2518	N06	E36	6654	06	1.7	92D	2B		2	E		470		HF
PALE	30	0340E	0343U	0439D	N06	E41	6654	06	2.2	59D	SF	M 1.4	3	E		15		
SVTO		0358E	0406U	0449D	N09	E38	6654	06	2.0	51D	SF		1	E		86		F
GOES		0710	0718	0723						13		C 9.5						
SVTO		0943E	0944U	1007	N07	E30	6654	06	1.6	24D	1F	M 8.2	4	E		178		H
SVTO		0943E	0949	1007	N07	E30	6654			24D	1B			E		140		K
SVTO		1114	1116	1124	N04	E32	6654	06	1.9	10	SF		3	E		20		
SVTO		1117	1127	1159	S09	E22	6652	06	1.1	42	1B	M 1.9	3	E		207		F
SVTO		1611	1613	1655	N19	W36	6644	05	27.9	44	SF		3	E		35		

Hα SOLAR FLARES

MAY 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
SVTO	30	1651	1652	1658	N04	E31	6654	06	2.0	7	SF		3	E		14		H
SVTO		1740	1742	1749	S09	E19	6652	06	1.2	9	SF	C 2.0	2	E		28		
GOES		2205E	2207	2255D						50D		C 3.4						
LEAR	31	0127	0147	0205	S09	E15	6652	06	1.2	38	SF		3	E		88		F
LEAR		0229	0259	0310	S10	E16	6652	06	1.3	41	SF		3	E		32		F
LEAR		0232	0246	0318	N08	E24	6654	06	1.9	46	2B		3	E		539		
GOES		0344E	0345	0430D						46D		M 3.8						
SVTO		0402	0405	0435	S10	E14	6652	06	1.2	33	2B		1	E		314		
LEAR		0411E	0413	0500	S08	E09	6652	05	31.8	49D	2N	M 2.1	3	E		351		
LEAR		0806	0842	0930D	N06	E22	6654	06	2.0	84D	2B	M 1.6	3	E		283		F
LEAR		0828	0829	0833	N23	W39	6644	05	28.3	5	SF		3	E		21		F
SVTO		0842E	0856	0952	N09	E21	6654	06	1.9	70D	1N		3	E		248		F
SVTO		1215	1234	1247	N07	E14	6654	06	1.5	32	1B	C 7.8	3	E		152		F
SVTO		1252	1255	1304	N15	W45	6656	05	28.1	12	SF		3	E		19		
SVTO		1619	1700	1735	S10	E06	6652	06	1.1	76	2B		3	E		524		HF
SVTO		1631	1635	1654	N07	E11	6654	06	1.5	23	SF		3	E		53		H
PALE		1634E	1635	1705	N07	E13	6654	06	1.7	31D	SF		3	E		29		FH
PALE		1645	1657	1734D	S11	E05	6652	06	1.1	49D	SF	M 2.5	3	E		91		H

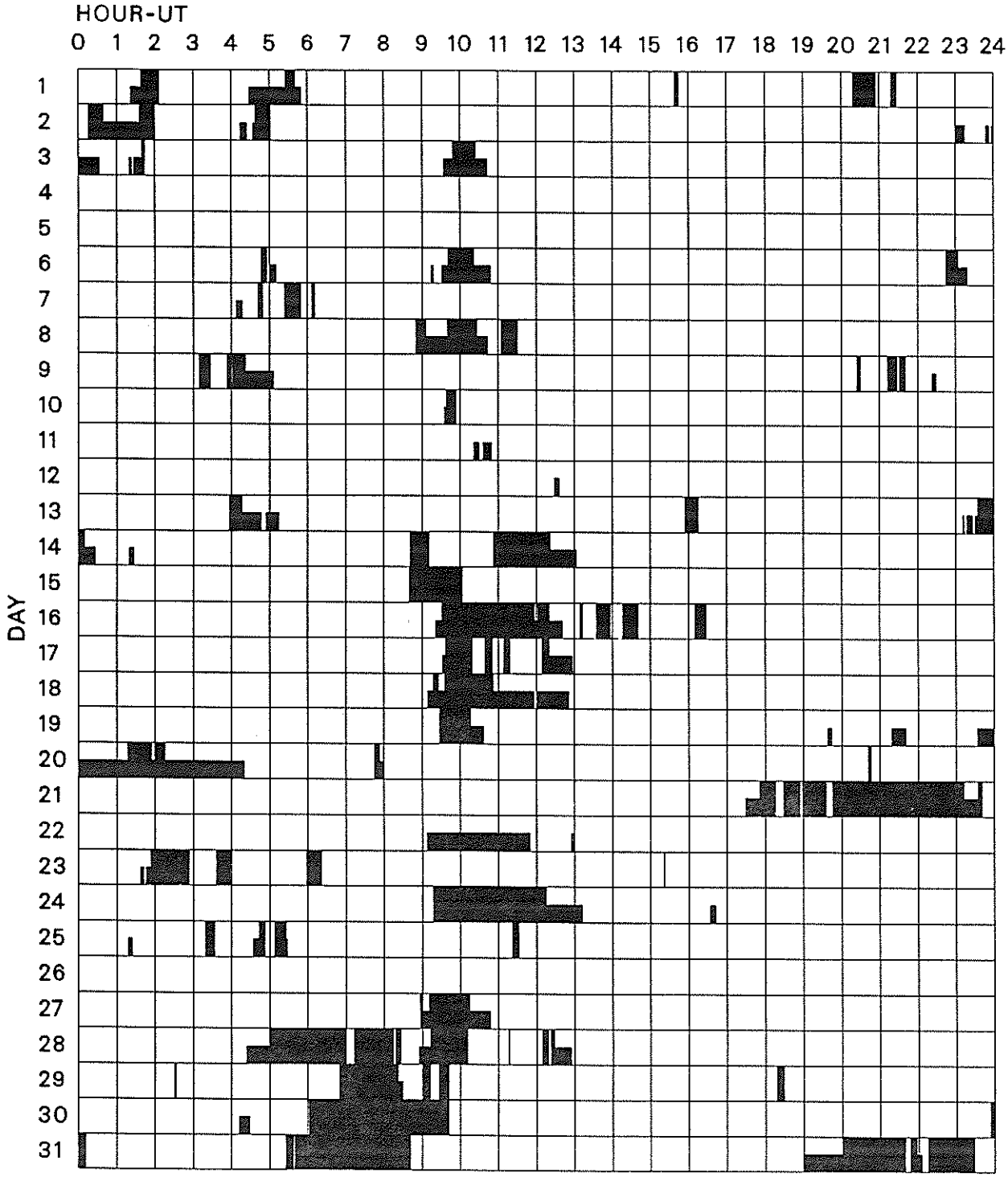
"Remarks"

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

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

MAY 1991



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

Holloman Learmonth Palehua Ramey San Vito

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

MAY 1991

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Mean	Int	Remarks
04	8800	LEAR	8	S	2308.0E	2309.0	1.0D	22.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	2309.0E	2309.0	1.0D	13.0			QL=2 ST=2 TYP=3
05	8800	LEAR	8	S	0224.0E	0225.0	2.0D	320.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1404.0E	1404.0	2.0D	65.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1404.0E	1404.0	2.0D	57.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	2147.0E	2148.0	3.0D	89.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	2148.0E	2148.0	2.0D	95.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	2149.0E	2149.0	U	32.0			QL=4 ST=2 TYP=3
06	8800	LEAR	8	S	0428.0E	0429.0	1.0D	19.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0429.0E	0434.0	5.0D	20.0			QL=2 ST=2 TYP=3
	2695	SVTO	4	S/F	0431.0E	0433.0	5.0D	16.0			QL=2 ST=2 TYP=3
	8800	SGMR	4	S/F	1156.0E	1157.0	4.0D	220.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	1156.0E	1157.0	5.0D	220.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1659.0E	1659.0	3.0D	90.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1659.0E	1659.0	2.0D	62.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	1659.0E	1700.0	3.0D	53.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2106.0E	2106.0	1.0D	84.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	2318.0E	2327.0	17.0D	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	2326.0E	2328.0	2.0D	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	2356.0E	2427.0	41.0D	460.0			QL=4 ST=2 TYP=5
	8800	PALE	4	S/F	2357.0E	2401.0	17.0D	180.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	2359.0E	2401.0	8.0D	78.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	2359.0E	2402.0	12.0D	80.0			QL=2 ST=2 TYP=3
07	2695	PALE	4	S/F	0021.0E	0027.0	17.0D	260.0			QL=4 ST=2 TYP=3
	8800	PALE	49	GB	0025.0E	0027.0	6.0D	520.0			QL=4 ST=2 TYP=6
	8800	LEAR	4	S/F	0055.0E	0056.0	7.0D	160.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0055.0E	0056.0	3.0D	220.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0658.0E	0659.0	1.0D	34.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0658.0E	0658.0	1.0D	47.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0740.0E	0740.0	5.0D	68.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0740.0E	0741.0	8.0D	69.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1004.0E	1004.0	6.0D	44.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1035.0E	1037.0	8.0D	70.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1036.0E	1037.0	1.0D	60.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1445.0E	1447.0	7.0D	42.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1941.0E	1941.0	U	29.0			QL=4 ST=2 TYP=3
08	2695	LEAR	8	S	0015.0E	0015.0	1.0D	46.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0015.0E	0015.0	U	53.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0139.0E	0139.0	1.0D	30.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1831.0E	1837.0	7.0D	50.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1831.0E	1835.0	7.0D	39.0			QL=4 ST=2 TYP=3
	2695	PALE	4	S/F	1834.0E	1837.0	4.0D	47.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1835.0E	1835.0	5.0D	68.0			QL=4 ST=2 TYP=3
09	8800	LEAR	4	S/F	0158.0E	0201.0	5.0D	47.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0336.0E	0339.0	7.0D	150.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0953.0E	0953.0	U	37.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1207.0E	1208.0	3.0D	140.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1509.0E	1510.0	2.0D	130.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1509.0E	1510.0	1.0D	42.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1509.0E	1510.0	2.0D	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1519.0E	1520.0	3.0D	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1519.0E	1520.0	3.0D	150.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1519.0E	1520.0	3.0D	120.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1520.0E	1520.0	1.0D	89.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1746.0E	1746.0	1.0D	65.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1746.0E	1746.0	3.0D	56.0			QL=4 ST=2 TYP=3
10	2695	LEAR	4	S/F	0138.0E	0141.0	3.0D	150.0			QL=2 ST=2 TYP=3
	2695	PALE	4	S/F	0138.0E	0141.0	3.0D	150.0			QL=4 ST=2 TYP=3
	2695	LEAR	49	GB	0144.0E	0146.0	5.0D	780.0			QL=2 ST=2 TYP=6
	2695	PALE	49	GB	0144.0E	0146.0	11.0D	860.0			QL=4 ST=2 TYP=6
	8800	SGMR	4	S/F	1908.0E	1910.0	8.0D	150.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1909.0E	1910.0	5.0D	110.0			QL=4 ST=2 TYP=3
	8800	PALE	20	GRF	1939.0E	1945.0	13.0D	110.0			QL=4 ST=2 TYP=2

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

MAY 1991

Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean (10 -22 W/m 2 Hz)	Int	Remarks
10	8800	SGMR	20	GRF	1939.0E	1945.0	14.0D	120.0			QL=4 ST=2 TYP=2
	2695	PALE	8	S	2341.0E	2341.0	U	31.0			QL=4 ST=2 TYP=3
11	8800	LEAR	4	S/F	0802.0E	0804.0	11.0D	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0802.0E	0804.0	13.0D	49.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1321.0E	1321.0	4.0D	57.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1321.0E	1321.0	8.0D	64.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1323.0E	1323.0	1.0D	35.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1517.0E	1520.0	523.0D	55.0			QL=4 ST=3 TYP=3
	8800	SVTO	8	S	1519.0E	1520.0	1.0D	56.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1850.0E	1851.0	3.0D	220.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1850.0E	1851.0	5.0D	260.0			QL=4 ST=2 TYP=3
	2695	SGMR	49	GB	1950.0E	2013.0	120.0D	20000.0			QL=4 ST=3 TYP=7
	2695	PALE	49	GB	1950.0E	2013.0	138.0D	21000.0			QL=4 ST=2 TYP=7
	8800	PALE	4	S/F	1955.0E	2001.0	133.0D	170.0			QL=4 ST=2 TYP=5
	8800	SGMR	4	S/F	1957.0E	2039.0	73.0D	190.0			QL=4 ST=2 TYP=5
12	8800	LEAR	8	S	0552.0E	0552.0	2.0D	46.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0552.0E	0552.0	1.0D	49.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0800.0E	0801.0	1.0D	110.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0801.0E	0801.0	U	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1022.0E	1023.0	4.0D	290.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1022.0E	1023.0	3.0D	44.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1022.0E	1023.0	818.0D	39.0			QL=4 ST=1 TYP=3
	8800	SGMR	8	S	1734.0E	1734.0	U	53.0			QL=4 ST=3 TYP=3
	8800	PALE	4	S/F	2231.0E	2231.0	3.0D	110.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2231.0E	2231.0	2.0D	110.0			QL=2 ST=2 TYP=3
13	8800	LEAR	4	S/F	0035.0E	0036.0	5.0D	61.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0036.0E	0036.0	2.0D	68.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0106.0E	0121.0	21.0D	100.0			QL=2 ST=2 TYP=5
	2695	PALE	20	GRF	0107.0E	0121.0	32.0D	100.0			QL=4 ST=2 TYP=2
	8800	LEAR	4	S/F	0108.0E	0118.0	27.0D	190.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	0108.0E	0118.0	31.0D	200.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0208.0E	0208.0	U	16.0			QL=4 ST=2 TYP=3
	2695	PALE	49	GB	0235.0E	0339.0	129.0D	1500.0			QL=4 ST=2 TYP=6
	2695	LEAR	49	GB	0235.0E	0341.0	182.0D	1500.0			QL=2 ST=2 TYP=6
	8800	PALE	4	S/F	0237.0E	0338.0	106.0D	410.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	0237.0E	0338.0	182.0D	360.0			QL=4 ST=2 TYP=3
	2695	SVTO	49	GB	0356.0E	0356.0	113.0D	840.0			QL=2 ST=2 TYP=6
14	2695	LEAR	8	S	0043.0E	0043.0	2.0D	16.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0043.0E	0043.0	1.0D	62.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0043.0E	0043.0	1.0D	42.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2118.0E	2118.0	1.0D	63.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	2254.0E	2255.0	5.0D	79.0			QL=4 ST=3 TYP=3
	8800	SGMR	8	S	2254.0E	2255.0	2.0D	71.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2312.0E	2313.0	1.0D	130.0			QL=4 ST=2 TYP=3
15	8800	PALE	8	S	0044.0E	0044.0	U	420.0			QL=4 ST=2 TYP=3
16	8800	LEAR	8	S	0636.0E	0636.0	1.0D	36.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0636.0E	0636.0	1.0D	76.0			QL=2 ST=2 TYP=3
	8800	SVTO	8	S	0636.0E	0636.0	2.0D	46.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0636.0E	0636.0	U	64.0			QL=4 ST=2 TYP=3
	8800	LEAR	49	GB	0642.0E	0647.0	54.0D	3500.0			QL=4 ST=2 TYP=7
	2695	LEAR	49	GB	0642.0E	0646.0	59.0D	5600.0			QL=2 ST=2 TYP=7
	8800	SVTO	49	GB	0642.0E	0647.0	54.0D	3300.0			QL=4 ST=2 TYP=7
	2695	SVTO	49	GB	0645.0E	0646.0	47.0D	5000.0			QL=4 ST=2 TYP=7
	2695	LEAR	8	S	0753.0E	0754.0	1.0D	24.0			QL=2 ST=2 TYP=3
17	8800	LEAR	4	S/F	0416.0E	0419.0	11.0D	480.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0416.0E	0419.0	17.0D	250.0			QL=2 ST=2 TYP=3
	8800	PALE	4	S/F	0418.0E	0419.0	5.0D	420.0			QL=2 ST=2 TYP=3
	2695	PALE	4	S/F	0418.0E	0420.0	4.0D	190.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0418.0E	0420.0	4.0D	200.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	0418.0E	0420.0	7.0D	470.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	0901.0E	0903.0	9.0D	330.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0901.0E	0904.0	9.0D	390.0			QL=2 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

MAY 1991

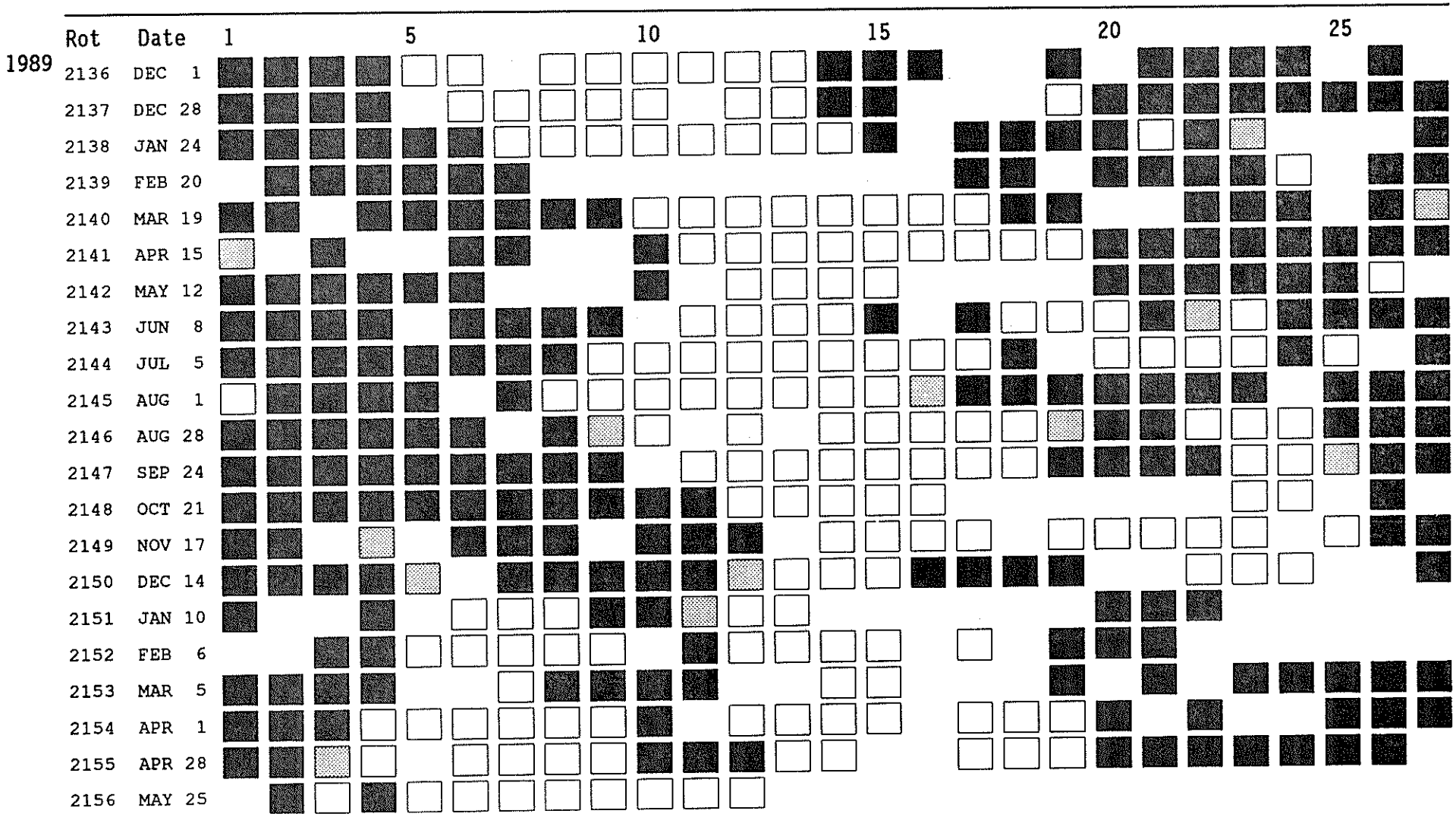
Day	Freq	Sta	Type		Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 -22 W/m 2 Hz)	Flux Density Mean	Int	Remarks
17	2695	LEAR	4	S/F	0903.0E	0904.0	5.0D	28.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	0903.0E	0904.0	1.0D	35.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1341.0E	1341.0	2.0D	49.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1341.0E	1341.0	2.0D	48.0			QL=4 ST=2 TYP=3
18	8800	LEAR	49	GB	0435.0E	0513.0	78.0D	26000.0			QL=4 ST=2 TYP=7
	8800	SVTO	49	GB	0438.0E	0513.0	84.0D	23000.0			QL=4 ST=2 TYP=6
	8800	PALE	49	GB	0439.0E	0446.0	8.0D	1300.0			QL=2 ST=2 TYP=7
	2695	PALE	49	GB	0439.0E	0446.0	8.0D	510.0			QL=2 ST=2 TYP=7
	2695	LEAR	49	GB	0439.0E	0516.0	74.0D	5600.0			QL=2 ST=2 TYP=7
	2695	SVTO	49	GB	0439.0E	0516.0	83.0D	5700.0			QL=4 ST=2 TYP=6
	2695	SGMR	8	S	2052.0E	2052.0	U	51.0			QL=4 ST=2 TYP=3
22	8800	SVTO	8	S	0818.0E	0818.0	U	75.0			QL=2 ST=2 TYP=3
24	2695	LEAR	8	S	0307.0E	0308.0	2.0D	53.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0308.0E	0308.0	U	63.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0308.0E	0308.0	U	63.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0308.0E	0308.0	U	52.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1843.0E	1843.0	1.0D	24.0			QL=4 ST=2 TYP=3
26	8800	PALE	8	S	2026.0E	2027.0	2.0D	61.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	2027.0E	2027.0	U	61.0			QL=4 ST=2 TYP=3
27	8800	LEAR	8	S	0640.0E	0640.0	1.0D	56.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0640.0E	0640.0	1.0D	73.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	1758.0E	1758.0	U	50.0			QL=4 ST=2 TYP=3
28	2695	SVTO	8	S	0530.0E	0530.0	U	31.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0532.0E	0532.0	1.0D	43.0			QL=2 ST=2 TYP=3
	2695	LEAR	8	S	0752.0E	0752.0	1.0D	48.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0753.0E	0753.0	U	27.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1518.0E	1518.0	1.0D	24.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1830.0E	1830.0	1.0D	49.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1832.0E	1832.0	U	24.0			QL=4 ST=2 TYP=3
29	8800	SVTO	8	S	1310.0E	1311.0	1.0D	39.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1311.0E	1311.0	U	35.0			QL=4 ST=2 TYP=3
	2695	PALE	20	GRF	1628.0E	1644.0	35.0D	100.0			QL=2 ST=3 TYP=2
	8800	SGMR	8	S	1946.0E	1947.0	2.0D	51.0			QL=4 ST=2 TYP=3
	8800	LEAR	49	GB	2340.0E	2343.0	13.0D	1000.0			QL=4 ST=2 TYP=6
	8800	PALE	49	GB	2342.0E	2343.0	5.0D	1000.0			QL=4 ST=2 TYP=6
30	2695	SVTO	49	GB	0937.0E	0937.0	5.0D	510.0			QL=4 ST=2 TYP=6
	8800	SVTO	49	GB	0937.0E	0937.0	10.0D	1000.0			QL=4 ST=2 TYP=6
	8800	PALE	8	S	1740.0E	1741.0	1.0D	66.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1740.0E	1741.0	1.0D	53.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1740.0E	1741.0	2.0D	100.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1740.0E	1741.0	2.0D	89.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1740.0E	1740.0	1.0D	36.0			QL=2 ST=2 TYP=3
31	8800	LEAR	8	S	0505.0E	0505.0	1.0D	26.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	0505.0E	0505.0	2.0D	190.0			QL=4 ST=2 TYP=3
	8800	SVTO	49	GB	1651.0E	1654.0	13.0D	3400.0			QL=4 ST=2 TYP=7
	8800	SGMR	49	GB	1651.0E	1654.0	23.0D	4000.0			QL=4 ST=2 TYP=7
	8800	PALE	49	GB	1653.0E	1654.0	6.0D	2500.0			QL=4 ST=2 TYP=6
	2695	SVTO	49	GB	1653.0E	1655.0	12.0D	1600.0			QL=4 ST=2 TYP=7
	2695	SGMR	49	GB	1653.0E	1655.0	21.0D	1500.0			QL=4 ST=2 TYP=7

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	1990 Jun	Jul	Aug	Sep	Oct	Nov	Dec	1991 Jan	Feb	Mar	Apr	May
1	-9	-4	14	-75	-80	3	57	-55	.	.	-75	10
2	-8	-13	-29	-77	-49	25	58	.	.	.	-47	.
3	-5	-34	-27	.	.	45	34	.	.	.	-8	68
4	-34	-42	-38	-44	22	45	.	26	.	.	11	80
5	-33	-36	-25	-2	44	29	11	74	.	-100	55	63
6	52	-36	.	19	57	.	7	94	.	-88	69	5
7	.	-45	-13	.	51	.	47	.	.	-36	73	-40
8	-26	-34	3	68	36	.	58	.	-99	-6	74	-51
9	-52	-12	26	.	41	.	82	-108	-54	.	43	-23
10	-86	-11	43	60	33	.	.	-168	7	.	-27	36
11	-83	-10	94	43	8	.	46	.	72	45	.	101
12	.	-15	137	41	-10	68	-7	.	97	-39	19	.
13	-88	17	76	14	-25	52	-83	-27	73	-63	79	.
14	-58	32	25	5	-43	.	-126	.	27	-112	144	209
15	-31	78	3	-1	-9	-4	-62	58	.	-70	148	127
16	-10	95	1	-17	24	.	-51	46	-6	.	.	42
17	.	57	-34	-9	12	-46	-20	35	26	.	116	-30
18	47	10	-33	30	0	-8	0	-7	89	131	60	-157
19	44	26	-27	35	-62	.	.	-21	142	137	16	-198
20	43	41	-22	23	-91	-1	-9	0	175	.	-38	-203
21	11	20	-30	-20	-89	.	-23	23	.	.	.	-165
22	-4	-12	-15	-78	-87	-24	-41	60	85	.	-208	-102
23	.	.	-16	-96	-69	-47	-55	.	.	-52	.	-80
24	-12	7	.	-112	-56	-50	-37	.	-11	.	.	.
25	7	25	-83	-121	-44	.	-1	.	-93	-163	-98	.
26	13	50	-82	-107	-52	-69	36	.	-134	.	-80	-6
27	42	10	-89	-90	-54	-56	45	.	.	-113	-71	2
28	-7	-13	-107	-82	-65	-11	31	.	.	-79	-61	-8
29	-2	39	-131	-86	-66	.	-18	-69		-75	-29	6
30	8	.	-128	-103	-54	48	-59	-53		-79	-2	32
31		-67	-90		-31		-48	-15		-87		46

Dot symbol indicates no data available for the day.
Note: Data from 21 June to 15 August 1990 are of poorer quality due to instrument problems.

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.

C O N T E N T S

Prompt Reports DATA FOR APRIL 1991 Number 562 Part I

P R E L I M I N A R Y H - ALPHA S O L A R S Y N O P T I C C H A R T

CARRINGTON ROTATION NUMBER 1840
(11 March to 7 April 1991)

Dates of Observations Below Days of Year: 100 95 90

Data unavailable at time of publication.

But it's coming!

Heliographic Longitude

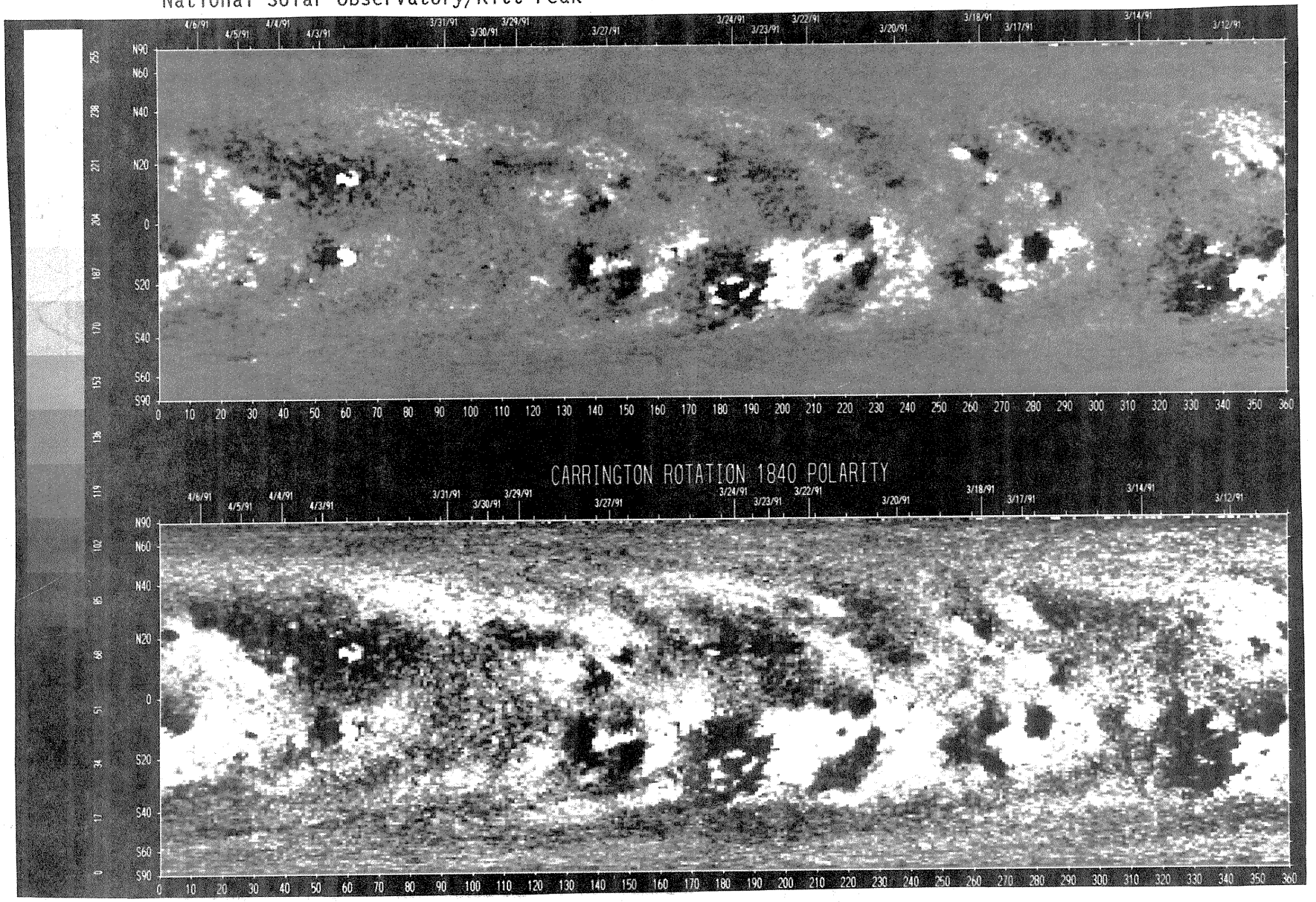
SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1840

(11 March to 7 April 1991)

National Solar Observatory/Kitt Peak

Dates of Observation

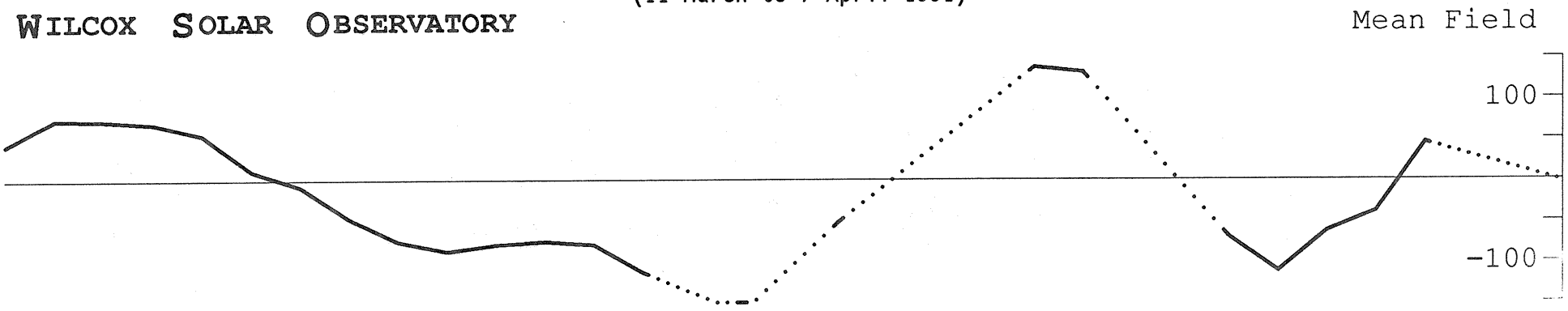


Heliographic Longitude

SOLAR MAGNETIC FIELD SYNOPTIC CHART

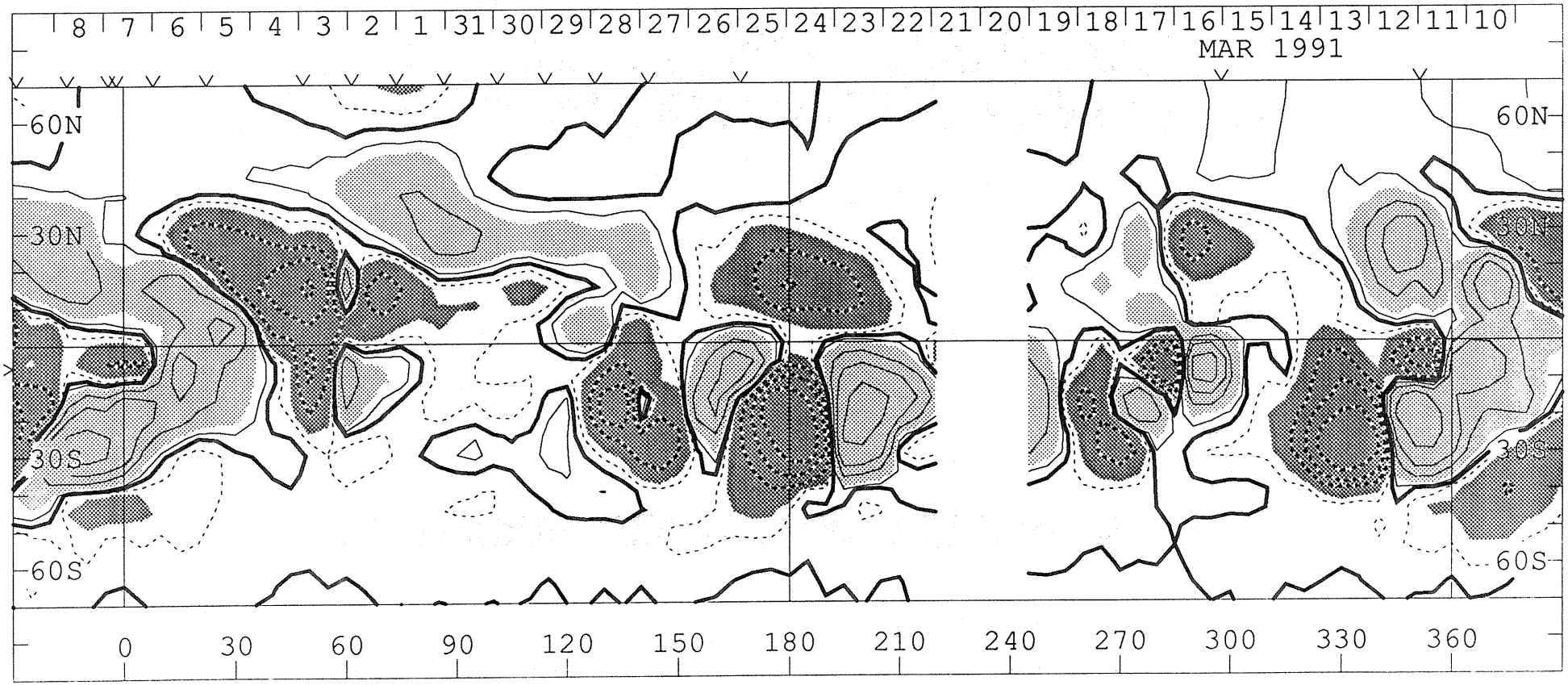
CARRINGTON ROTATION NUMBER 1840
(11 March to 7 April 1991)

WILCOX SOLAR OBSERVATORY



Photospheric Magnetic Field

0, ±100, 500, 1000, 2000 MicroTesla



Heliographic Longitude

1840

SOLAR MAGNETIC FIELD SYNOPTIC CHART

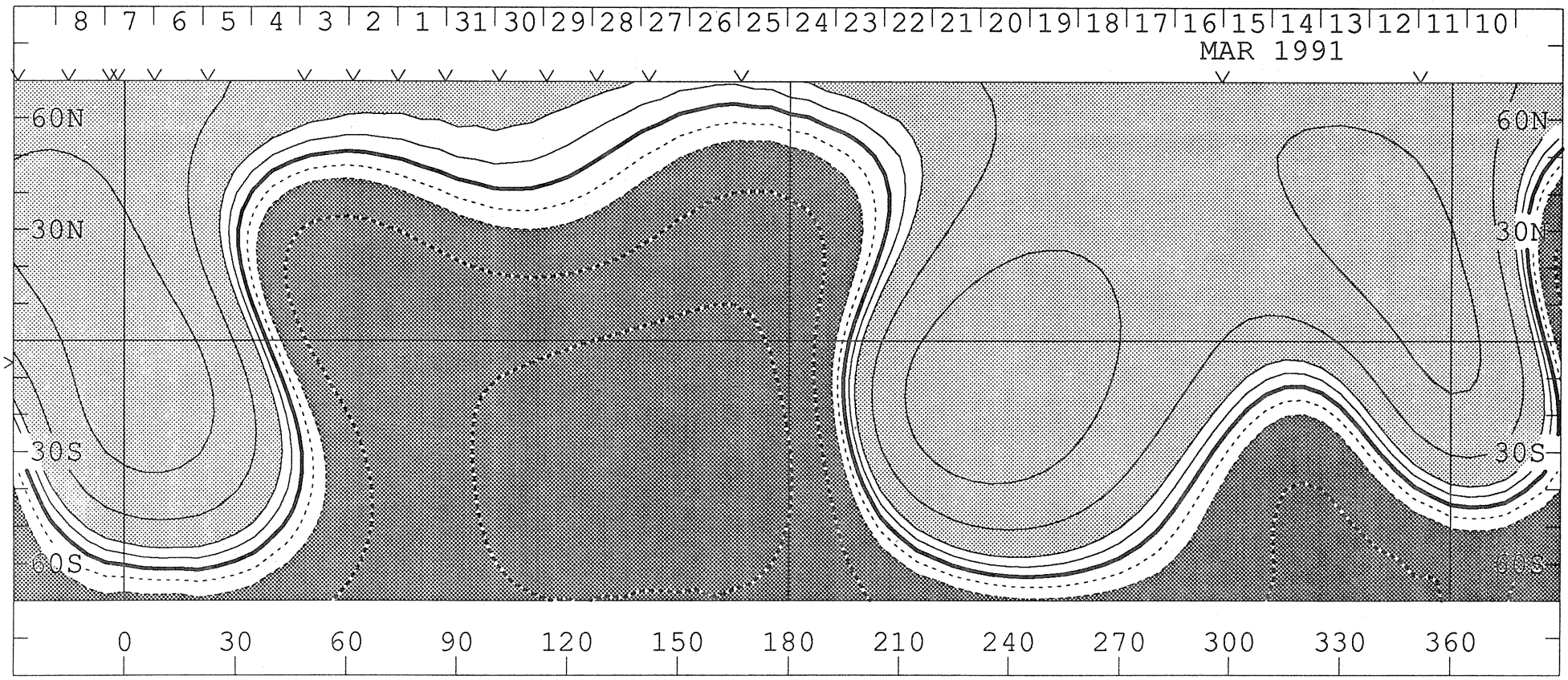
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1840

(11 March to 7 April 1991)

Wilcox Solar Observatory

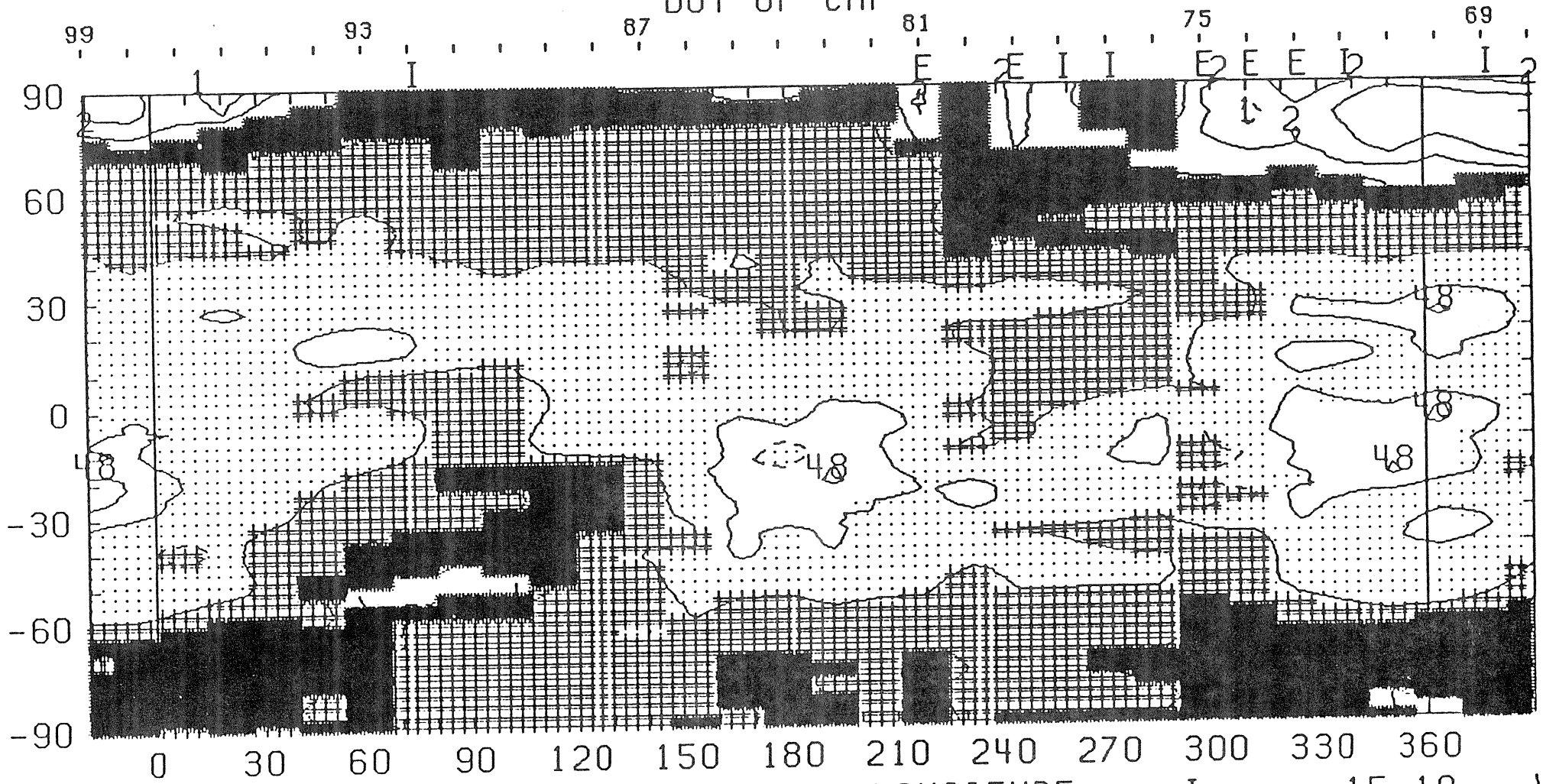
0, ±1, 2, 5, 10, 20 microTesla



Heliographic Longitude

1840

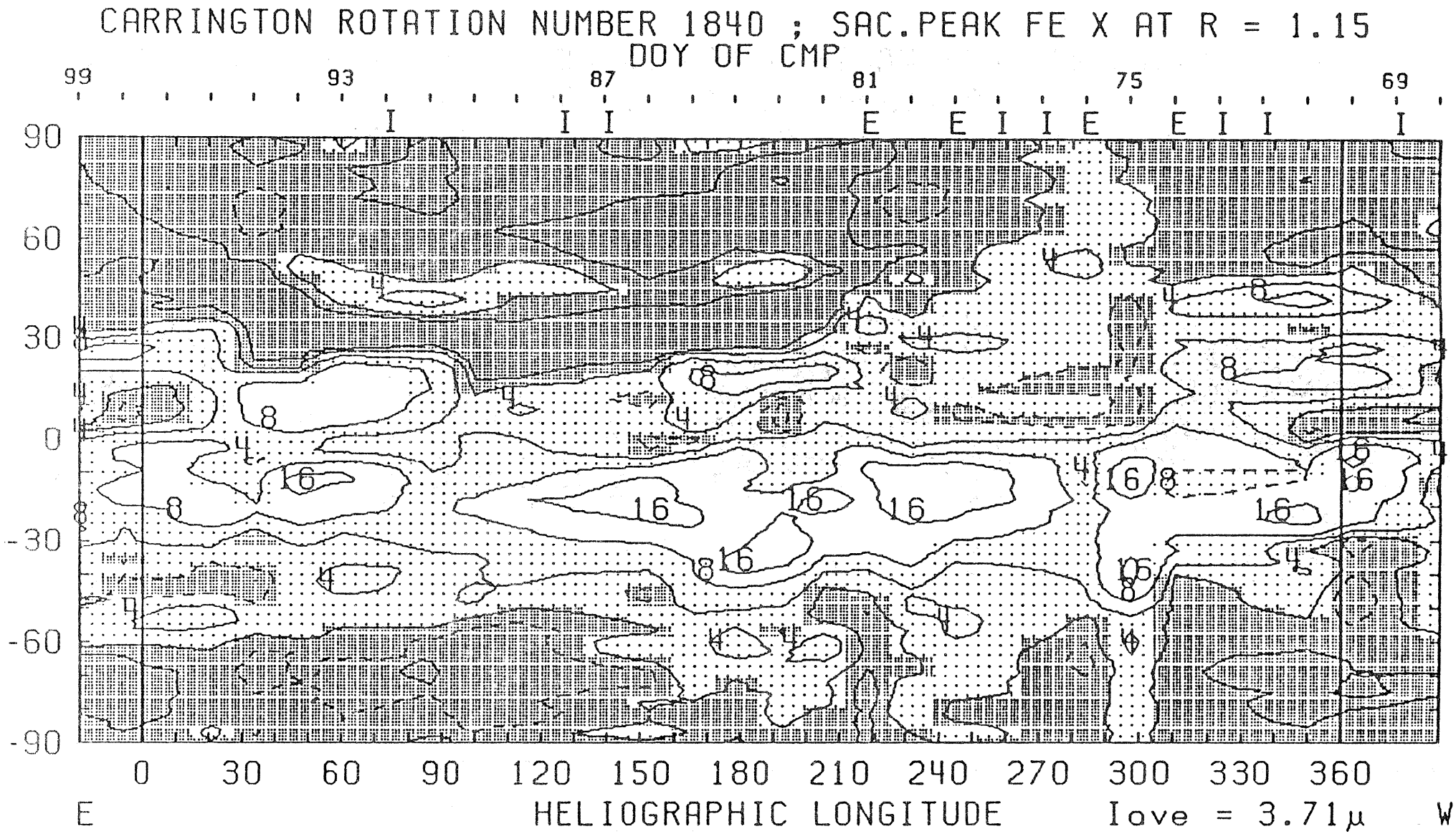
CARRINGTON ROTATION NUMBER 1840 ; SAC.PEAK FE XIV AT R = 1.15



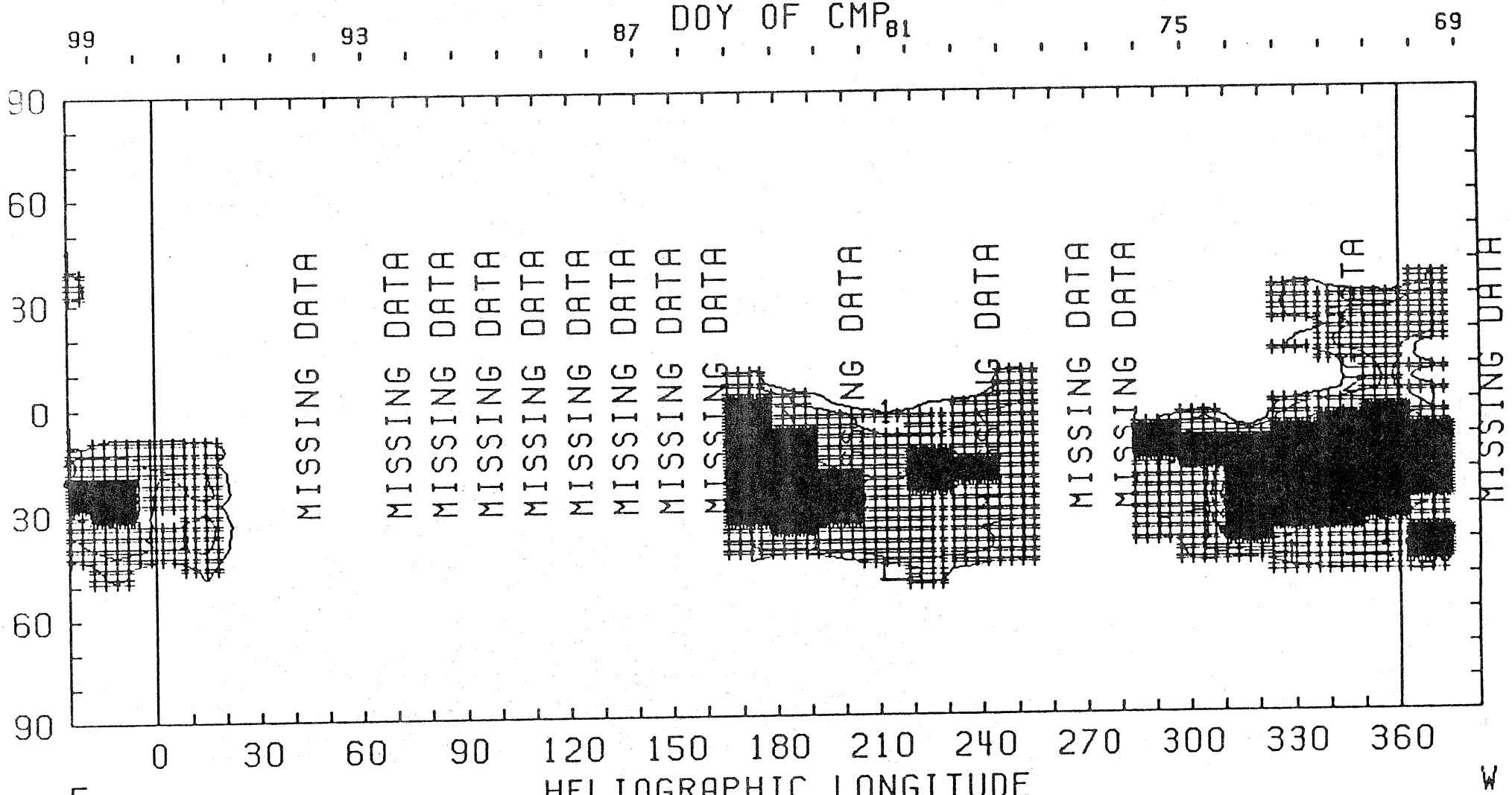
Iave = 15.10μ

1991 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io

(6-Jun-91) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

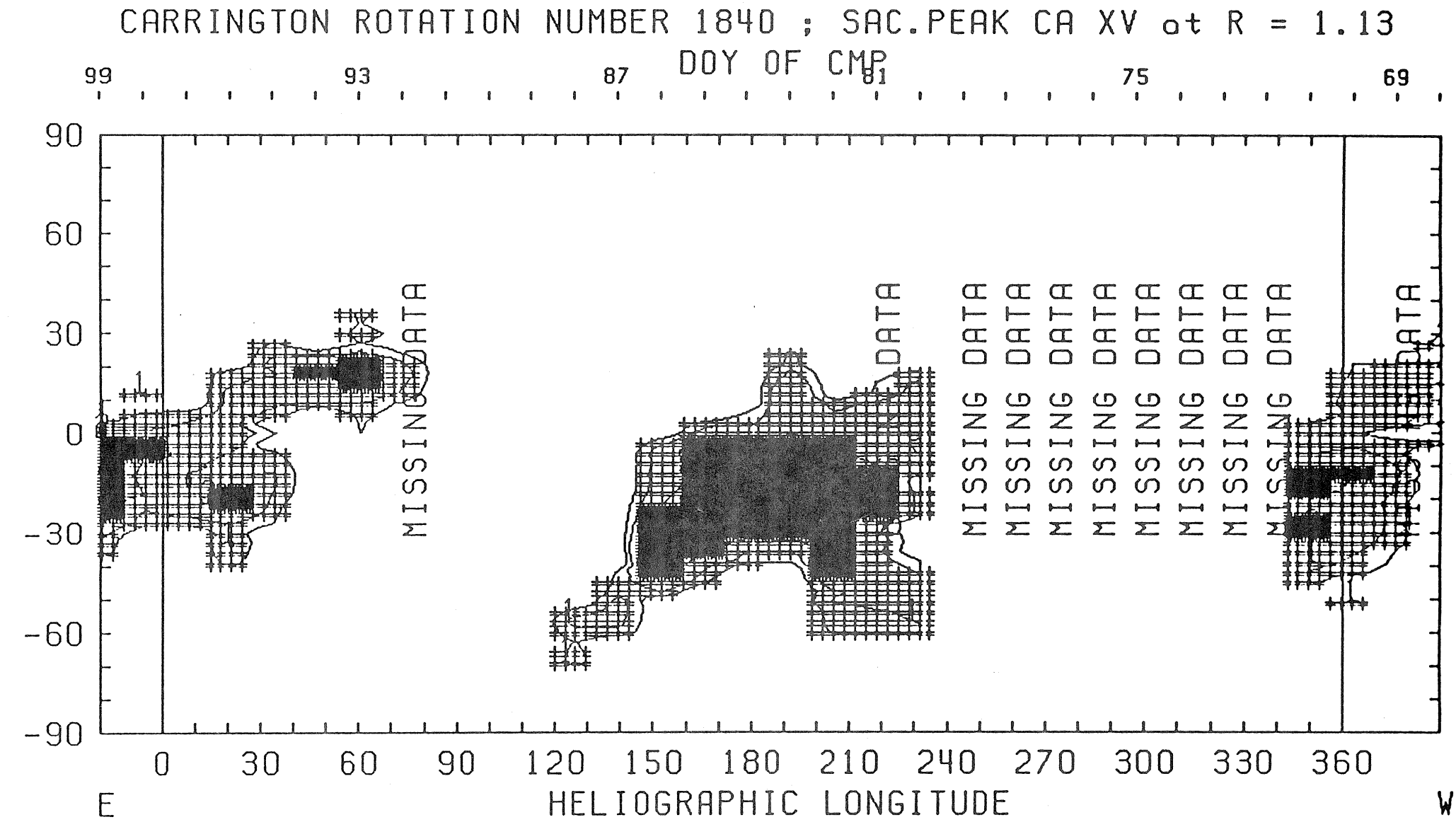

CARRINGTON ROTATION NUMBER 1840 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
99
93
87
81
75
69
I I I E E I I E E I I I
90
60
30
0
-30
-60
-90
0 30 60 90 120 150 180 210 240 270 300 330 360
E
HELIOGRAPHIC LONGITUDE
Iave = 3.71μ
W
1991 W+E LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io
(6-Jun-91)

CARRINGTON ROTATION NUMBER 1840 ; SAC.PEAK CA XV at R = 1.13



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

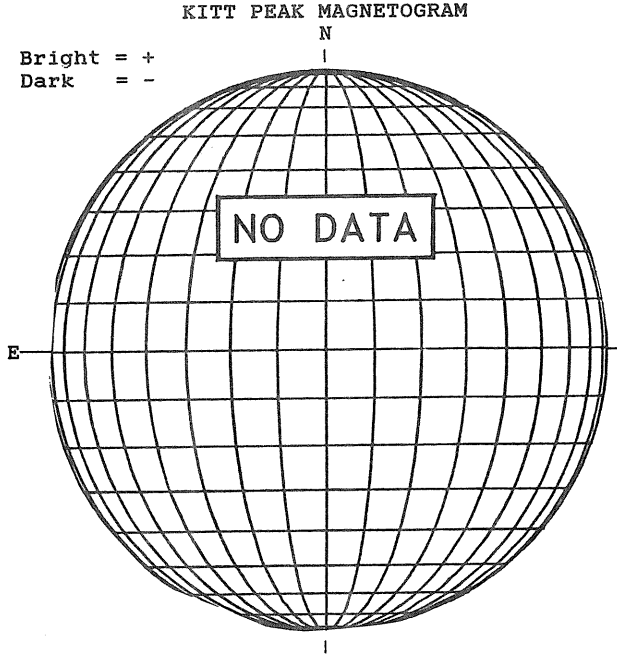
(6-Jun-91)


CARRINGTON ROTATION NUMBER 1840 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
99
93
87
81
75
69
90
60
30
0
-30
-60
-90
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
MISSING DATA
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
(6-Jun-91)

APRIL 1, 1991 (P=-26.15, B_o =-6.55, L_o = 86.93)

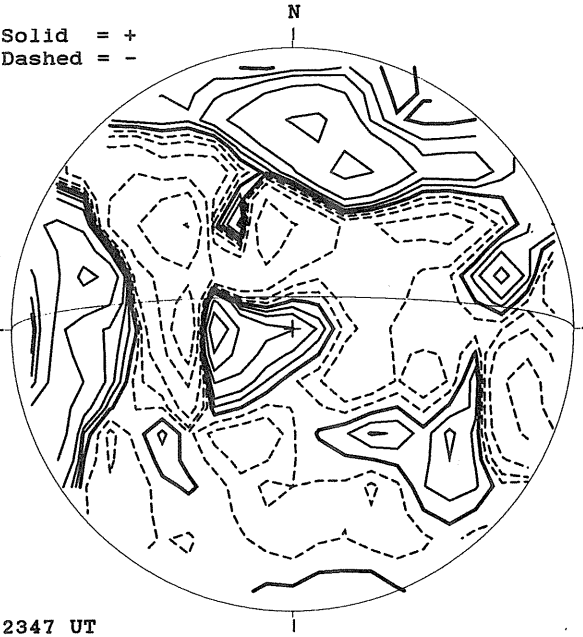
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

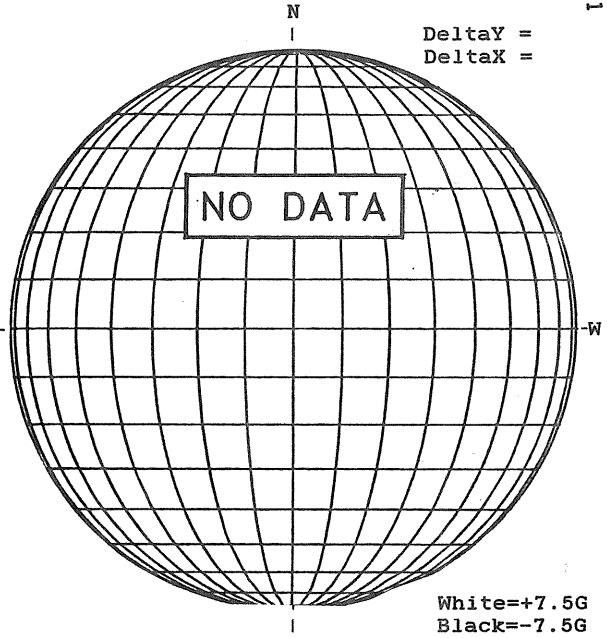
Solid = +
Dashed = -



2347 UT

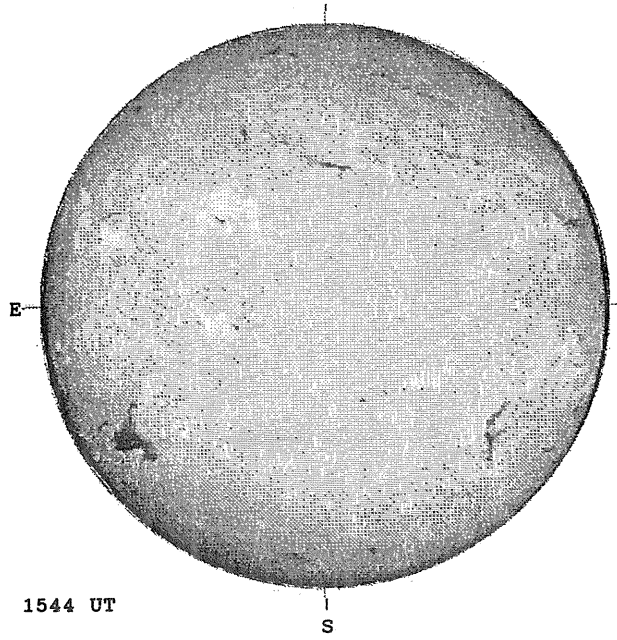
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



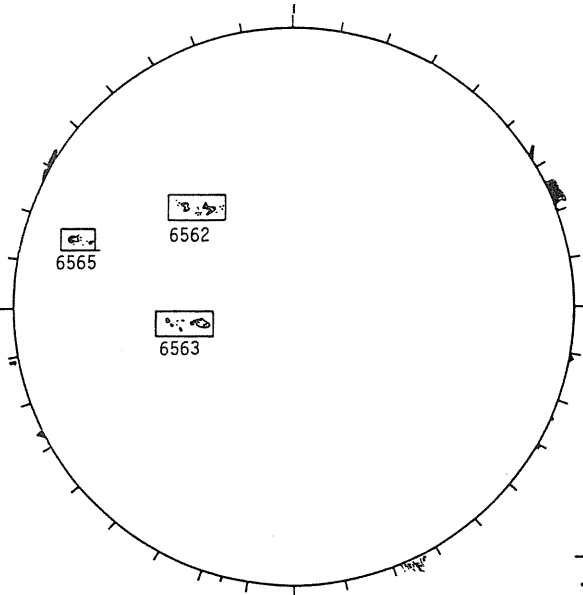
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



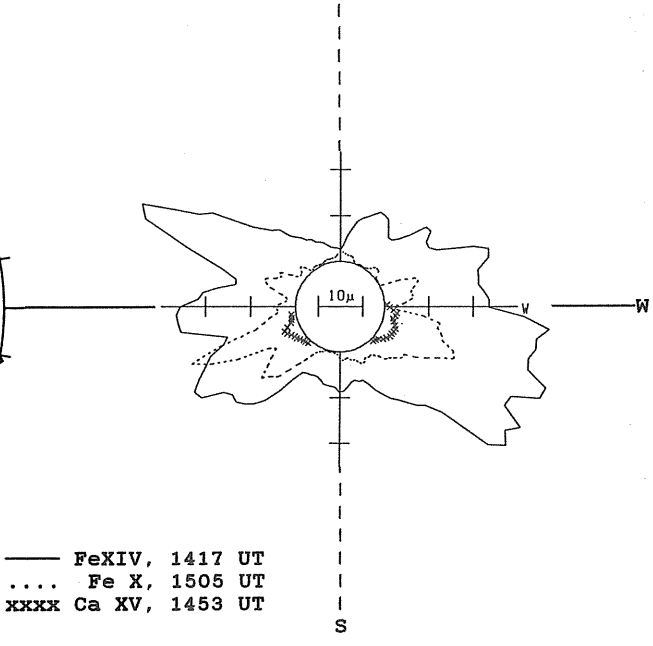
1544 UT

BOULDER SUNSPOT



1503 UT
1530 UT BOUL Prom

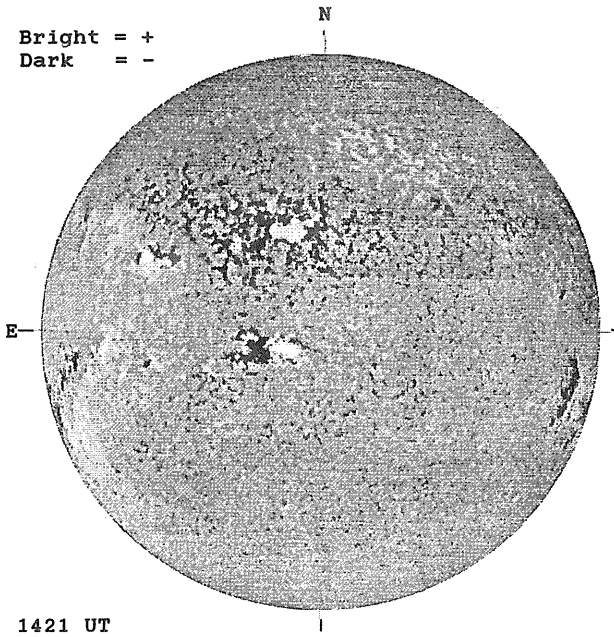
SACRAMENTO PEAK CORONA (1.15 Radii)



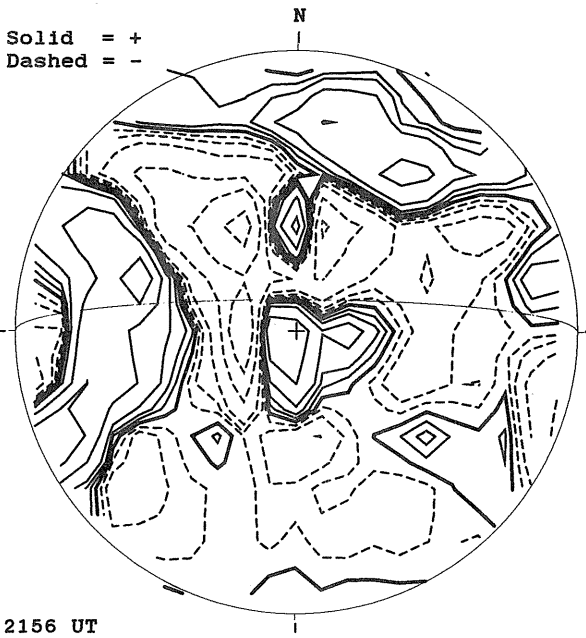
—— FeXIV, 1417 UT
.... Fe X, 1505 UT
xxxx Ca XV, 1453 UT

APRIL 2, 1991 (P=-26.20, B_o =-6.49, L_o = 73.74)

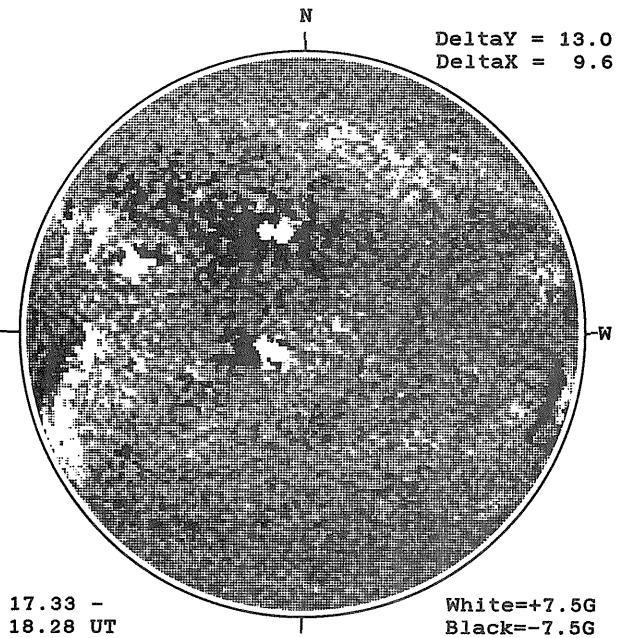
KITT PEAK MAGNETOGRAM



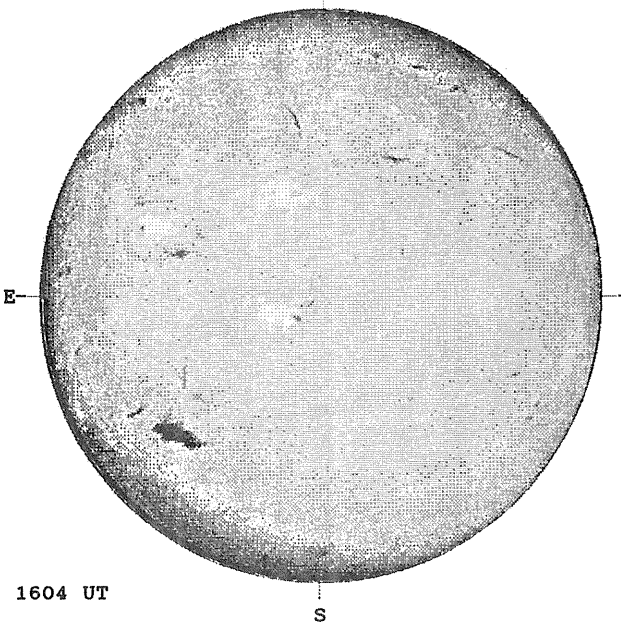
STANFORD MAGNETOGRAM



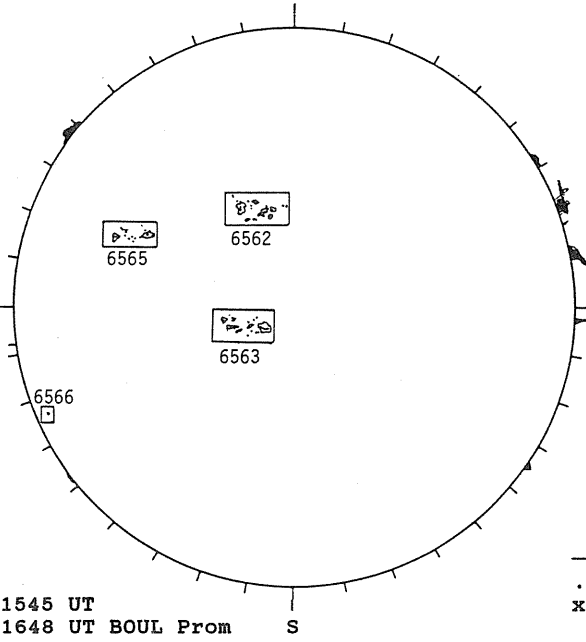
MT. WILSON MAGNETOGRAM



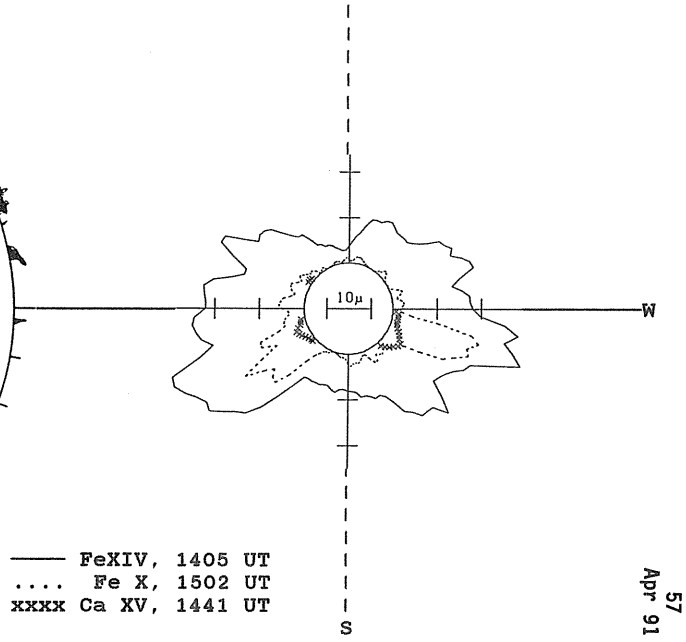
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

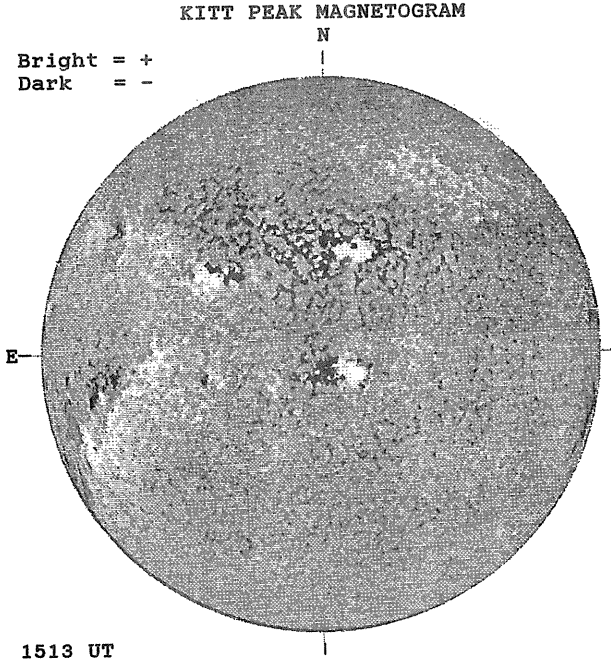


57
Apr 91

APRIL 3, 1991 (P=-26.23, B_o =-6.44, L_o = 60.55)

KITT PEAK MAGNETOGRAM

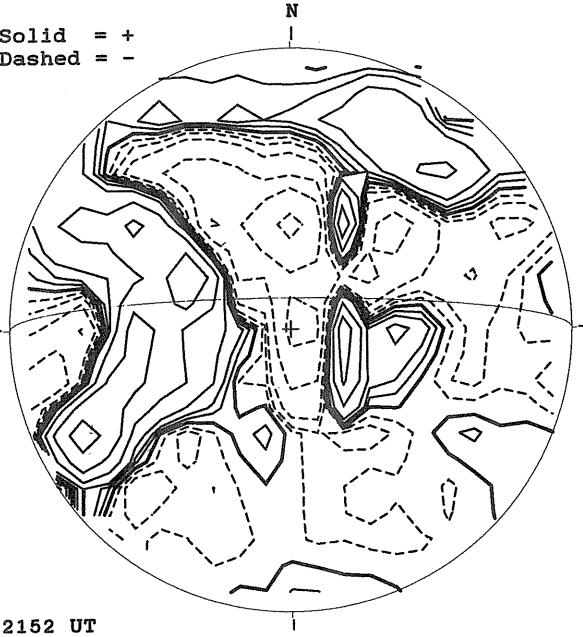
Bright = +
Dark = -



1513 UT

STANFORD MAGNETOGRAM

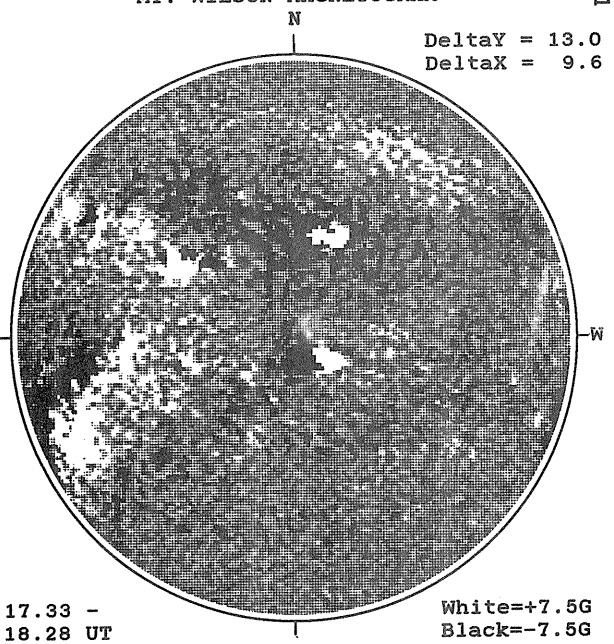
Solid = +
Dashed = -



2152 UT

MT. WILSON MAGNETOGRAM

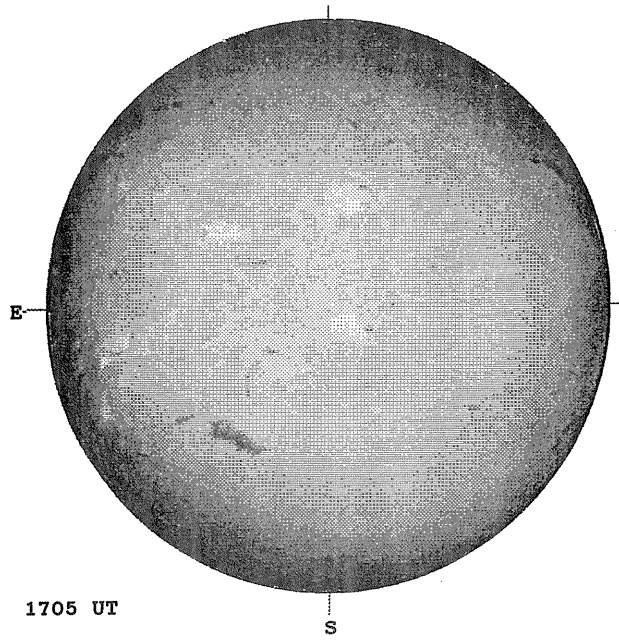
DeltaY = 13.0
DeltaX = 9.6



17.33 -
18.28 UT

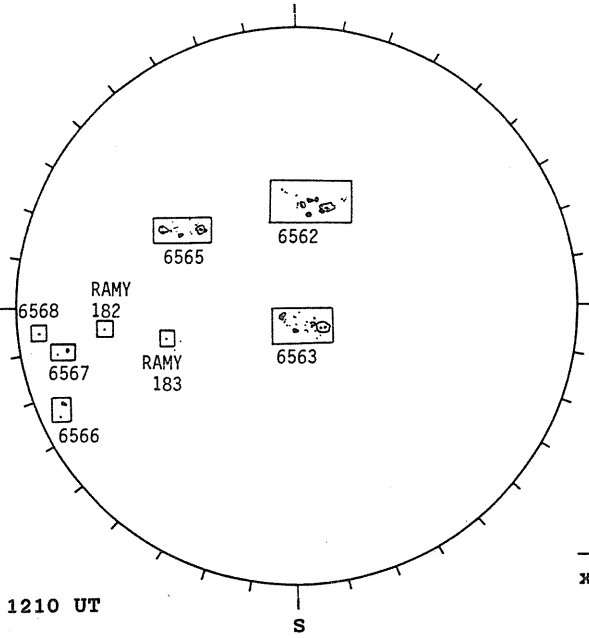
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



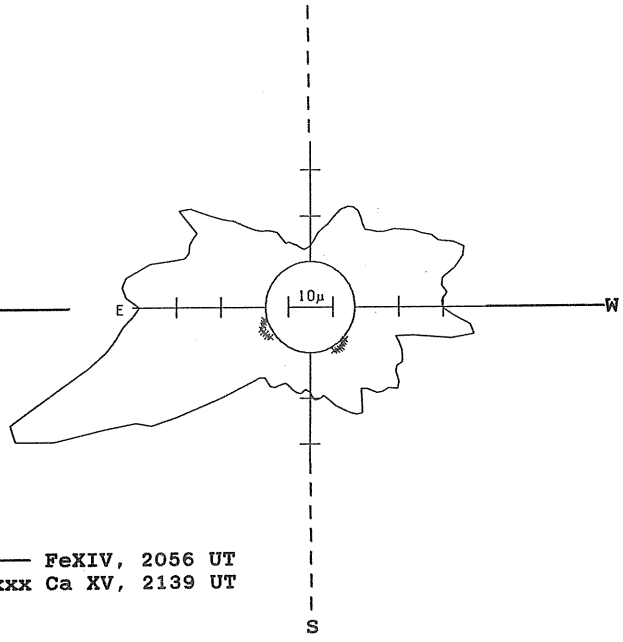
1705 UT

RAMEY SUNSPOT



1210 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

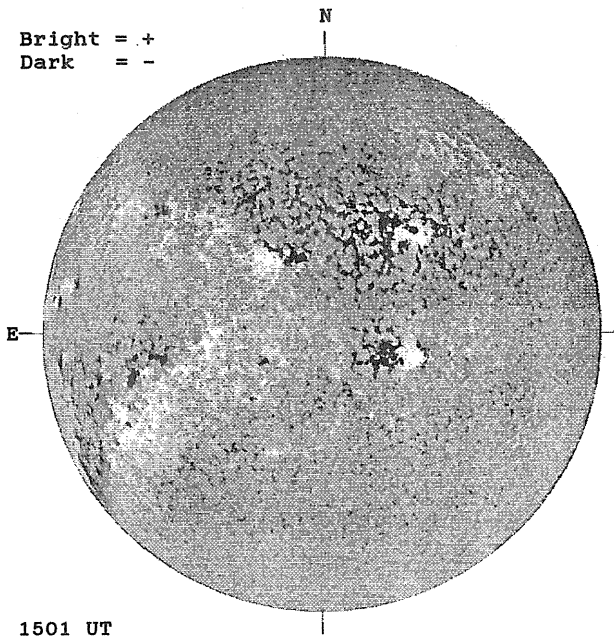


—— FeXIV, 2056 UT
xxxx Ca XV, 2139 UT

APRIL 4, 1991 (P=-26.26, B_o =-6.38, L_o = 47.35)

KITT PEAK MAGNETOGRAM

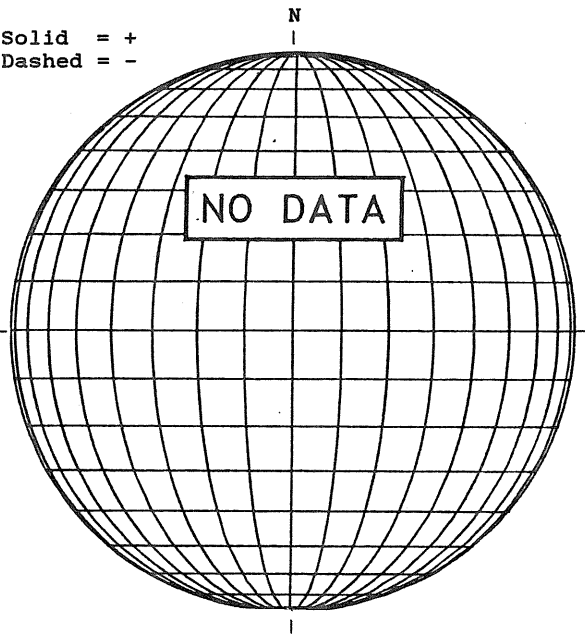
Bright = +
Dark = -



1501 UT

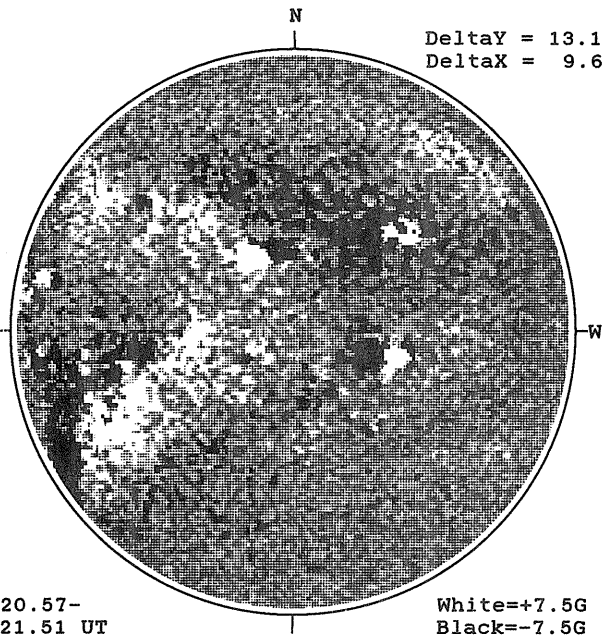
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

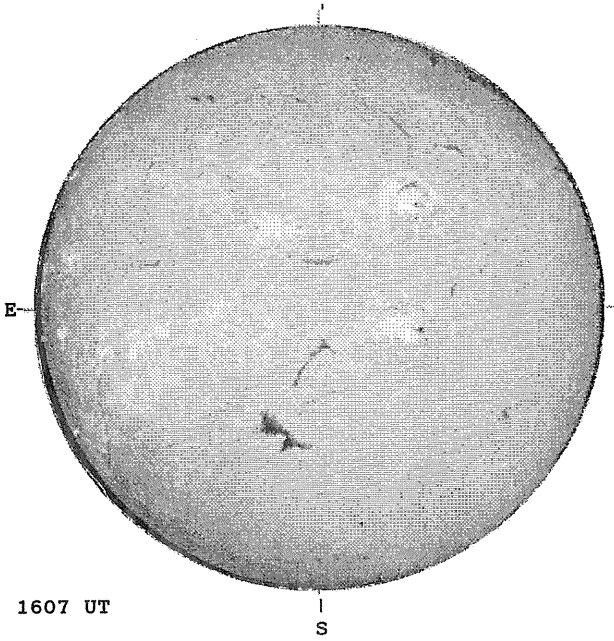
DeltaY = 13.1
DeltaX = 9.6



20.57-
21.51 UT

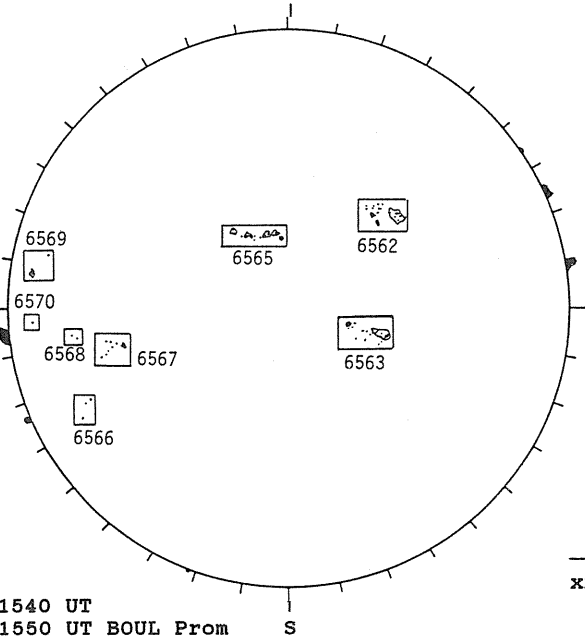
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



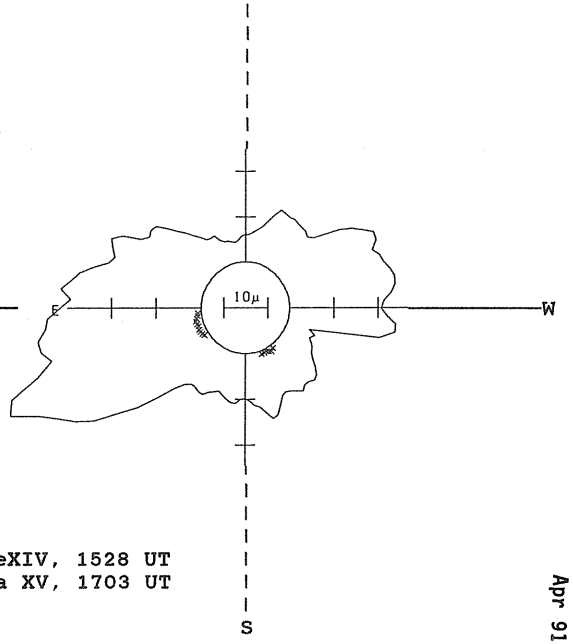
1607 UT

BOULDER SUNSPOT



1540 UT
1550 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



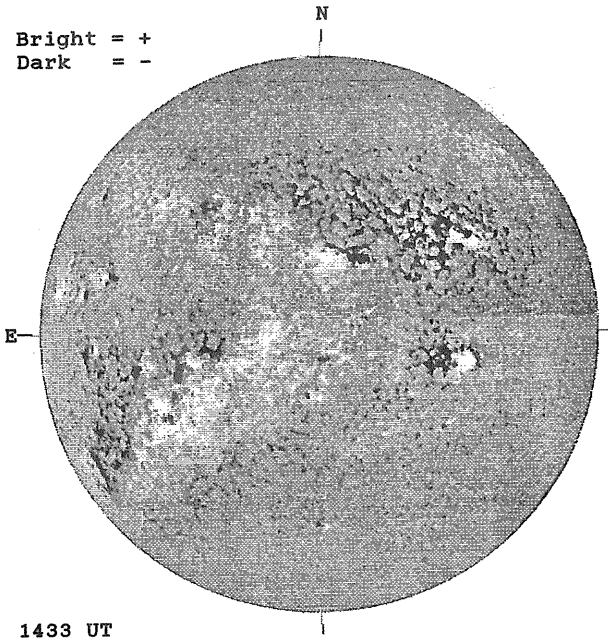
—— FeXIV, 1528 UT
xxxx Ca XV, 1703 UT

59
Apr 91

APRIL 5, 1991 (P=-26.28, B_o =-6.32, L_o = 34.16)

KITT PEAK MAGNETOGRAM

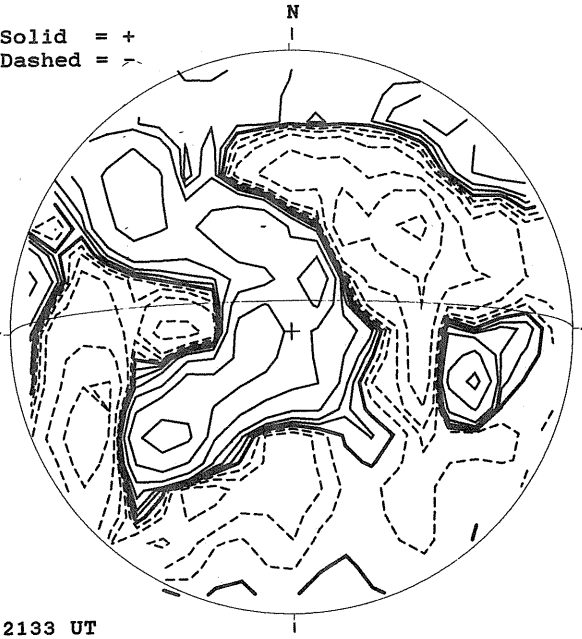
Bright = +
Dark = -



1433 UT

STANFORD MAGNETOGRAM

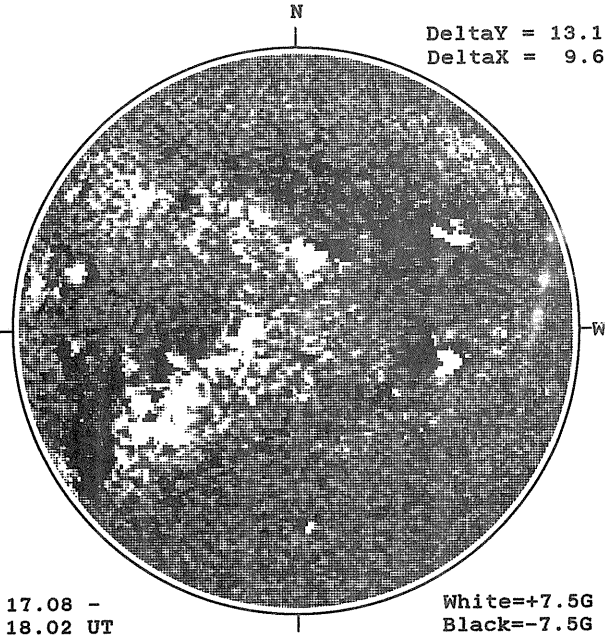
Solid = +
Dashed = -



2133 UT

MT. WILSON MAGNETOGRAM

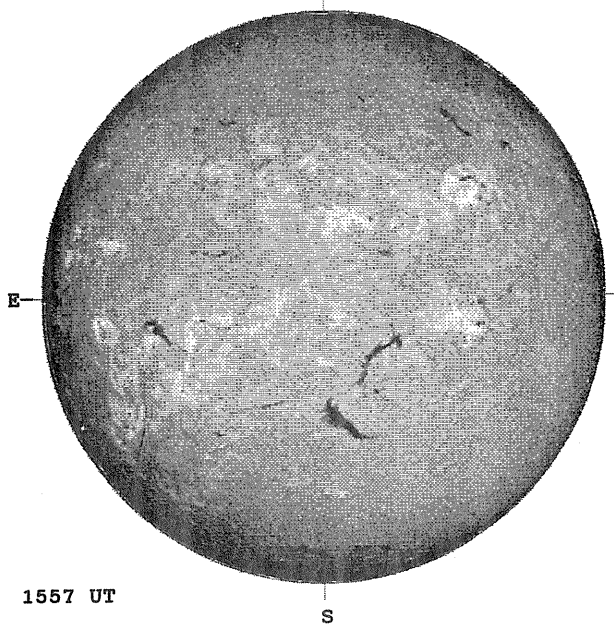
DeltaY = 13.1
DeltaX = 9.6



17.08 -
18.02 UT

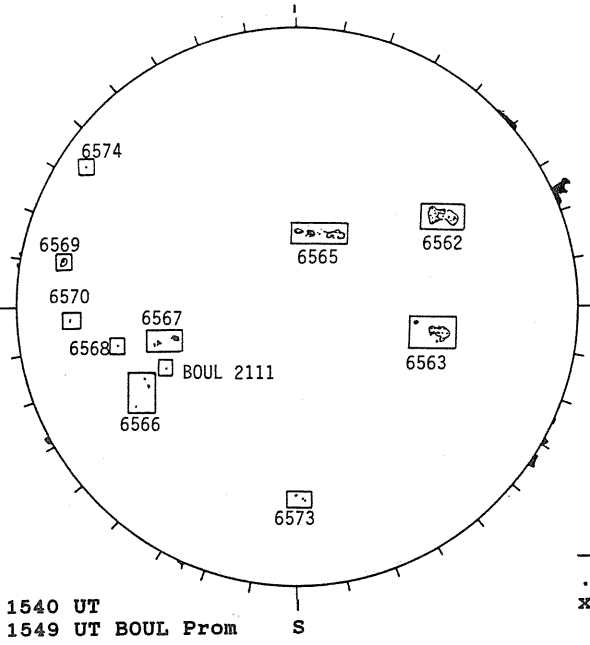
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



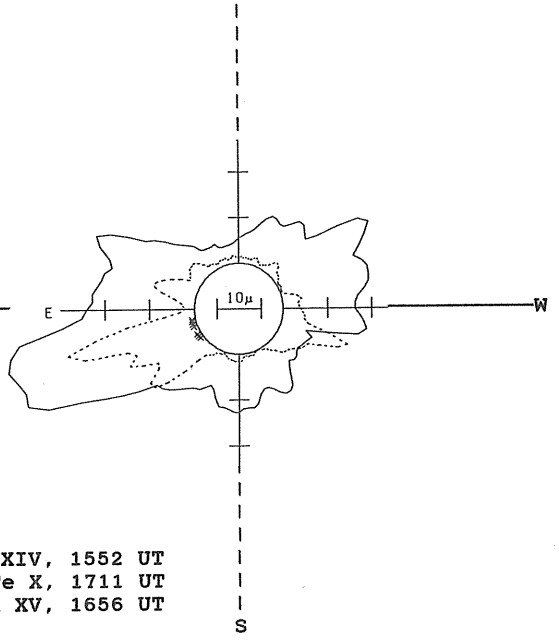
1557 UT

BOULDER SUNSPOT



1540 UT
1549 UT BOUL Prom

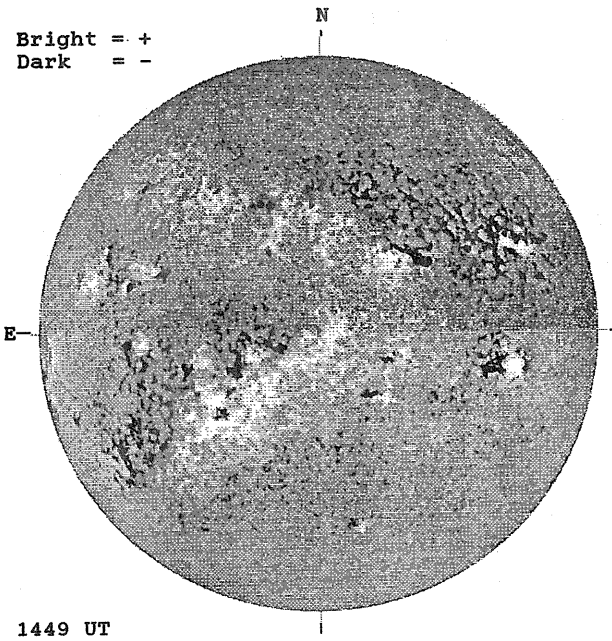
SACRAMENTO PEAK CORONA (1.15 Radii)



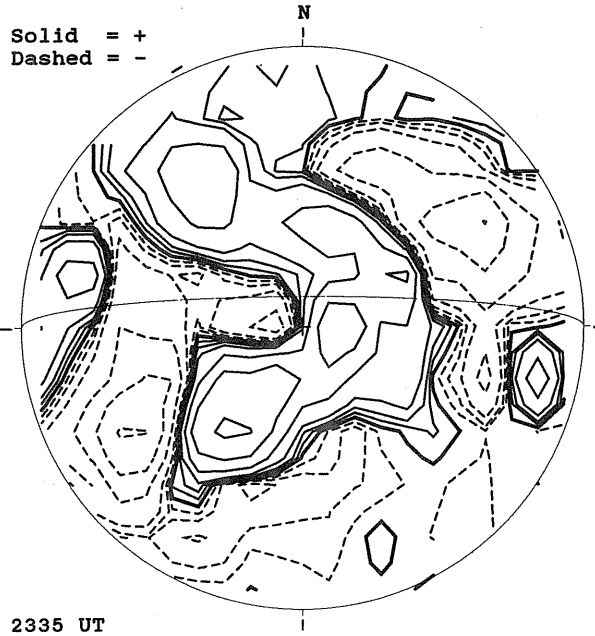
—— FeXIV, 1552 UT
.... Fe X, 1711 UT
xxxx Ca XV, 1656 UT

APRIL 6, 1991 (P=-26.29, B_o =-6.26, L_o = 20.96)

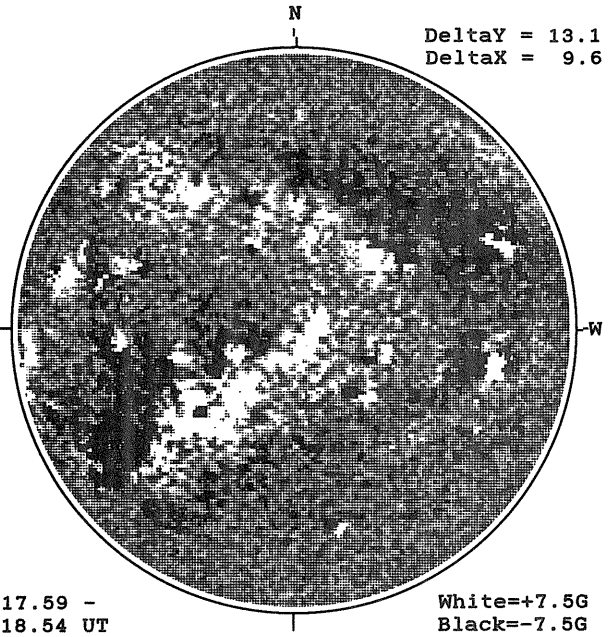
KITT PEAK MAGNETOGRAM



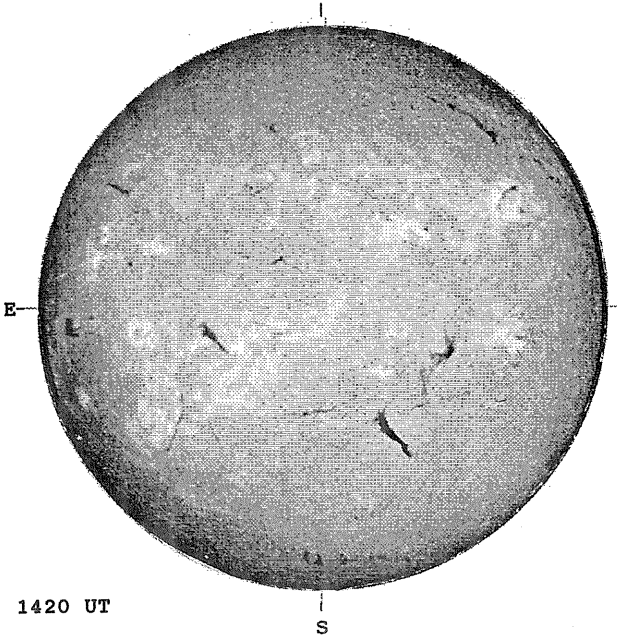
STANFORD MAGNETOGRAM



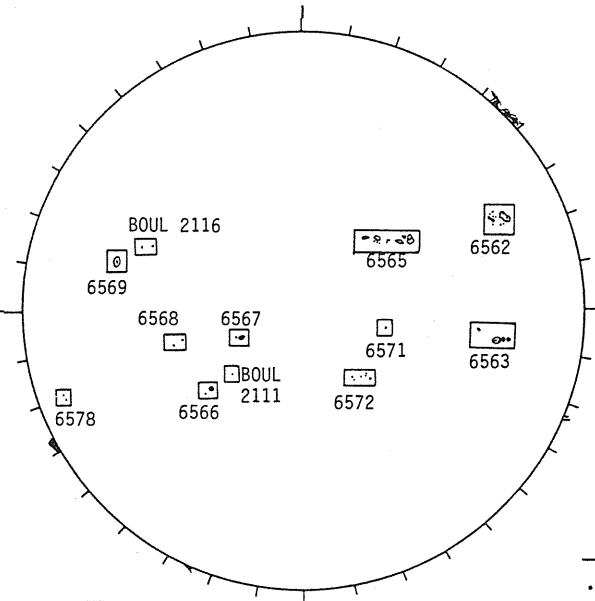
MT. WILSON MAGNETOGRAM



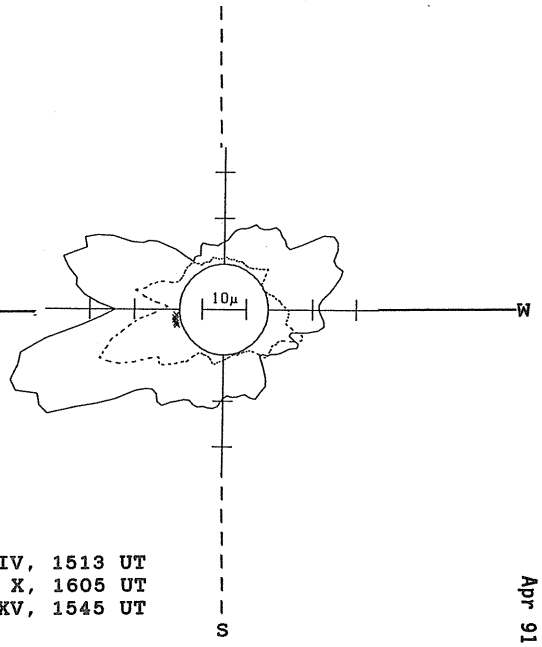
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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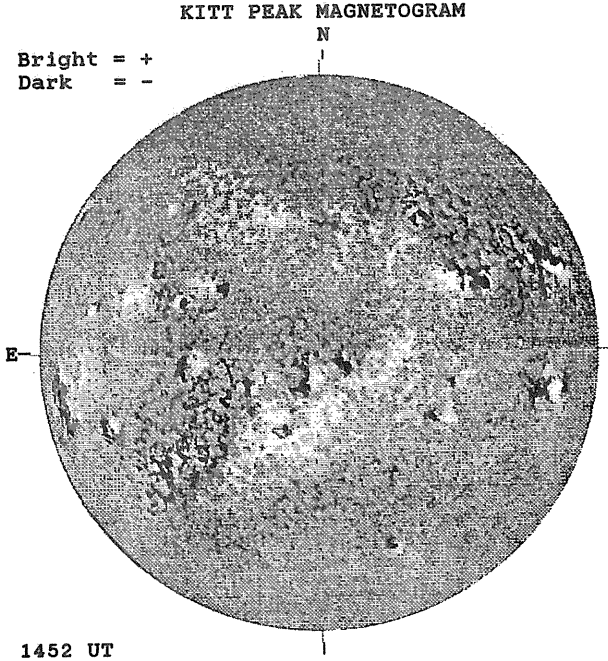
APRIL 7, 1991 (P=-26.30, B_o =-6.20, L_o = 7.76)

KITT PEAK MAGNETOGRAM

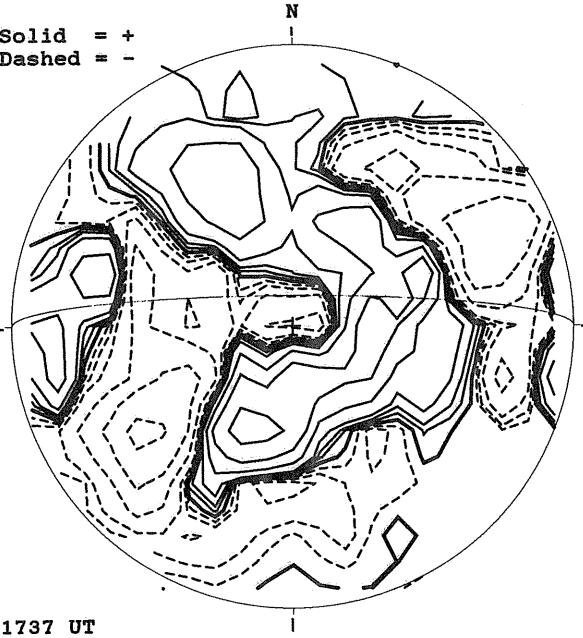
Bright = +
Dark = -



1452 UT

STANFORD MAGNETOGRAM

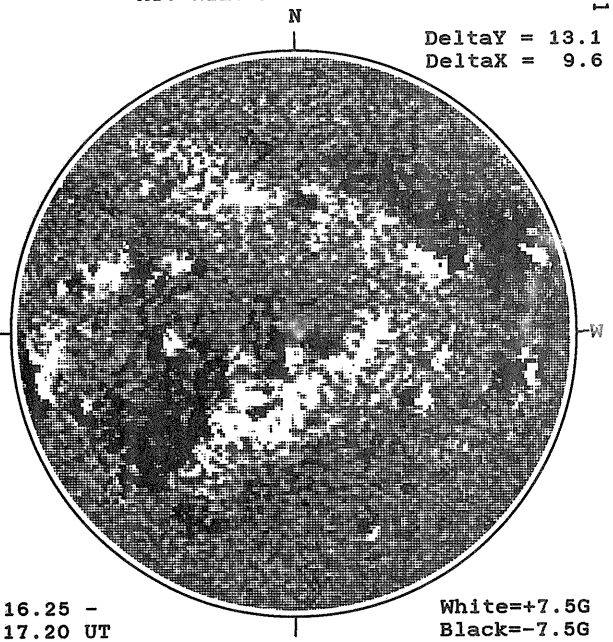
Solid = +
Dashed = -



1737 UT

MT. WILSON MAGNETOGRAM

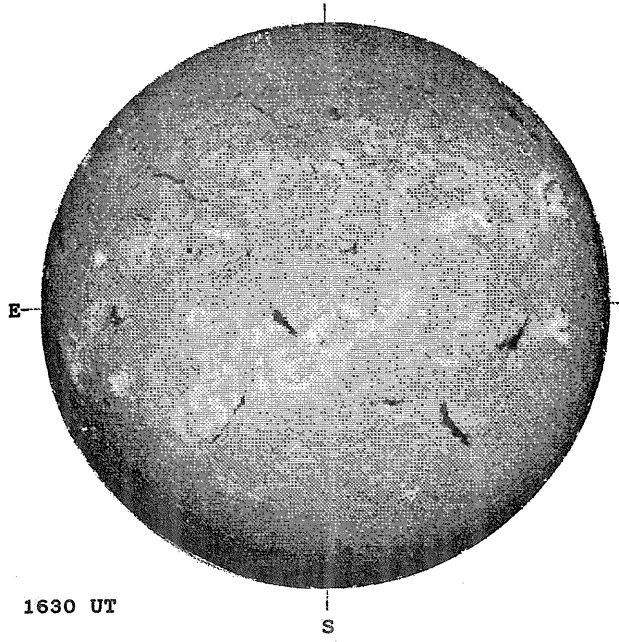
DeltaY = 13.1
DeltaX = 9.6



16.25 -
17.20 UT

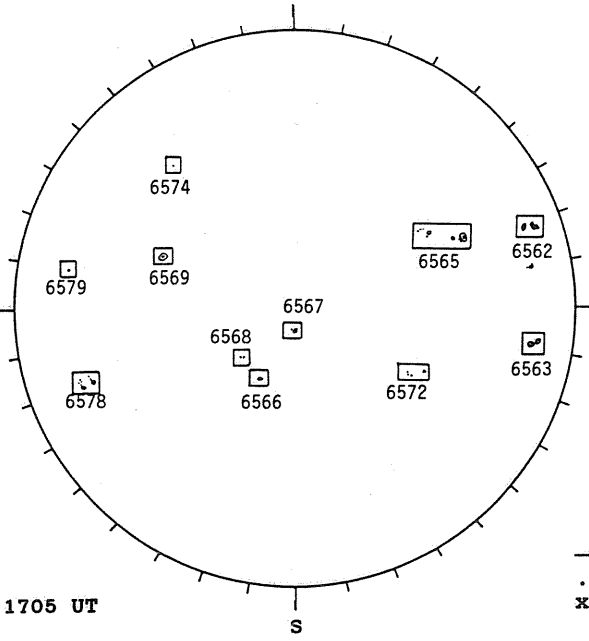
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



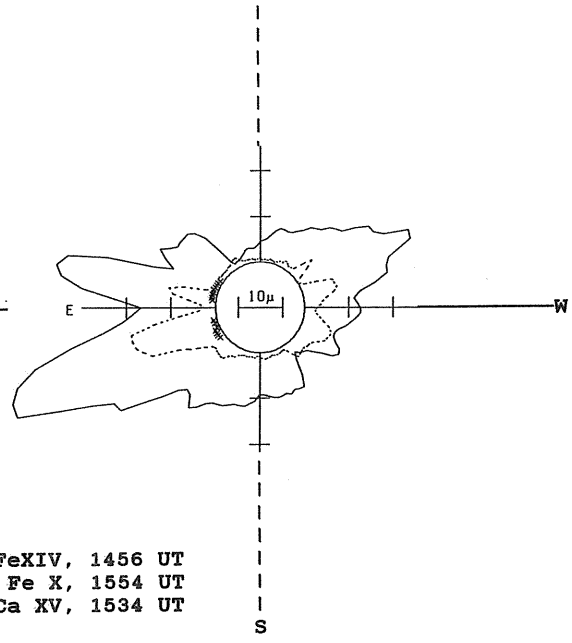
1630 UT

BOULDER SUNSPOT



1705 UT

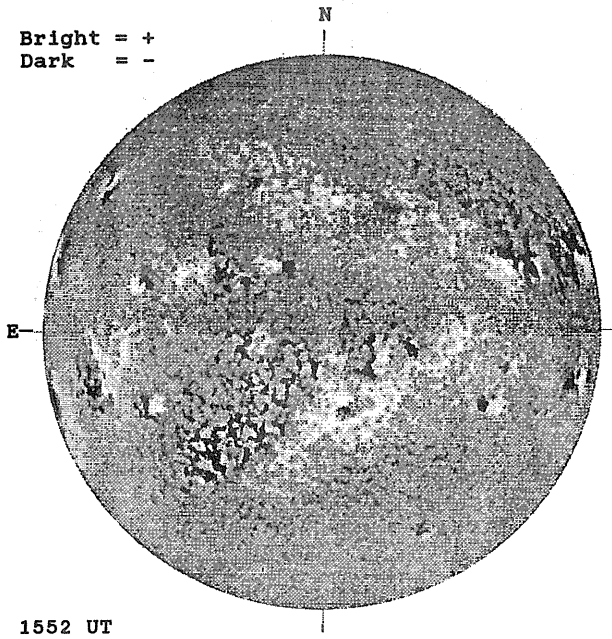
SACRAMENTO PEAK CORONA (1.15 Radii)



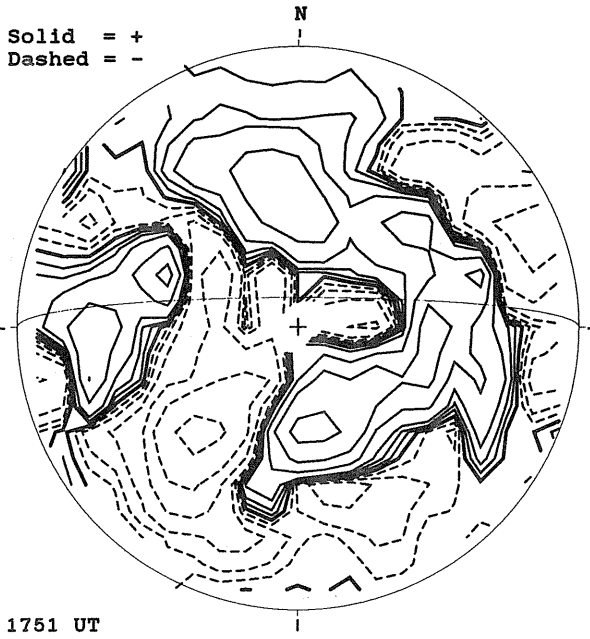
—— FeXIV, 1456 UT
.... Fe X, 1554 UT
xxxx Ca XV, 1534 UT

APRIL 8, 1991 (P=-26.30, B_o =-6.13, L_o = 354.57)

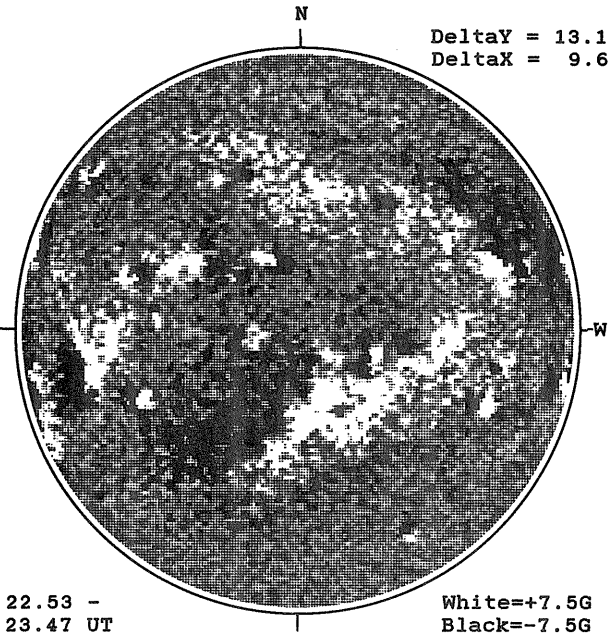
KITT PEAK MAGNETOGRAM



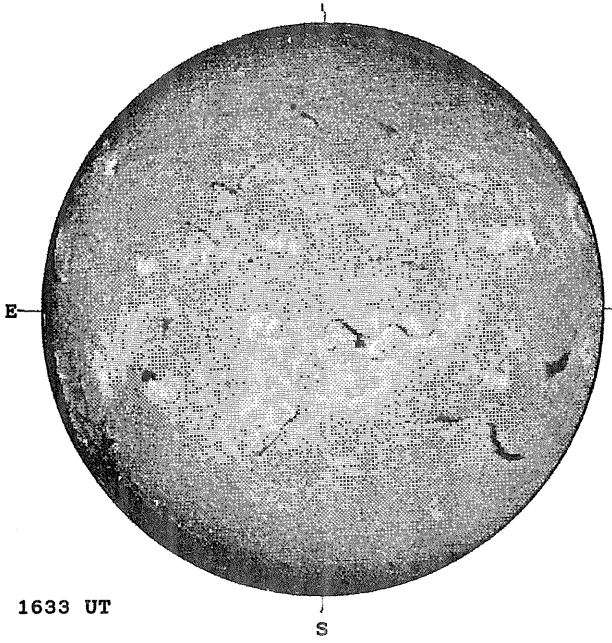
STANFORD MAGNETOGRAM



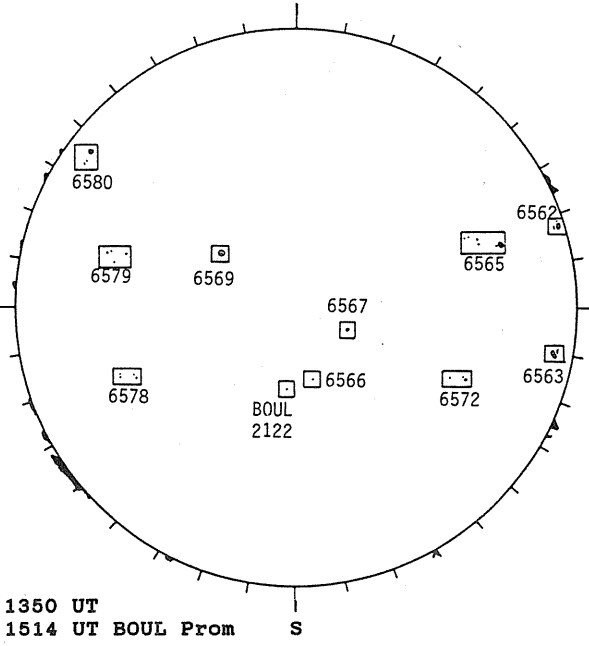
MT. WILSON MAGNETOGRAM



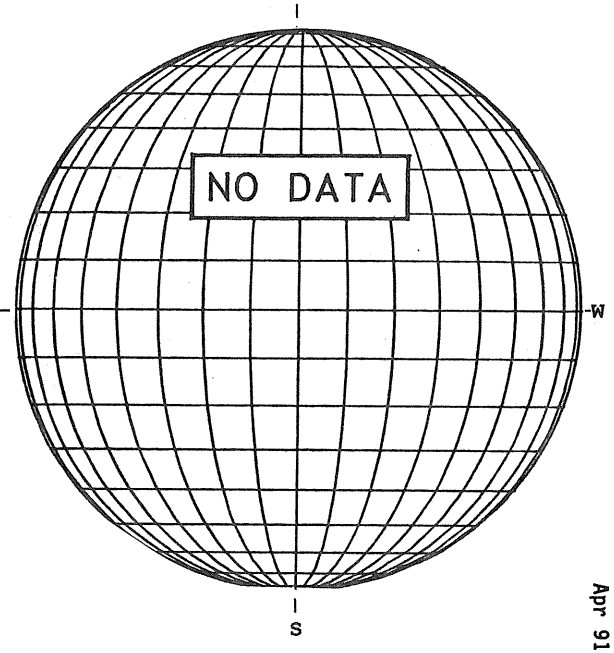
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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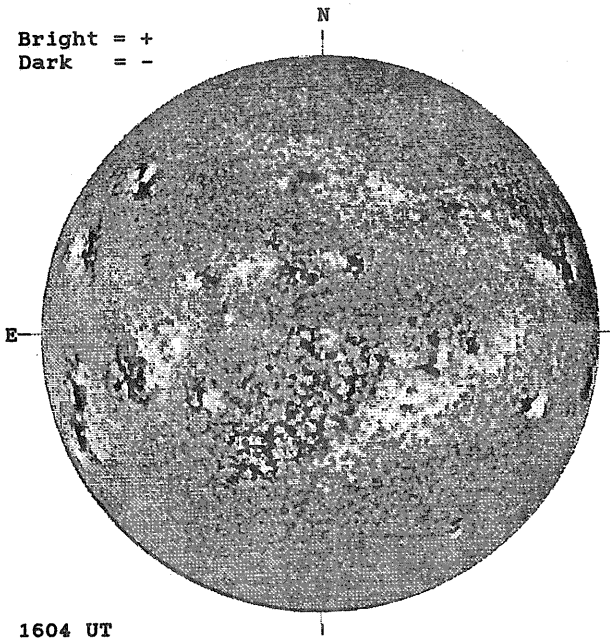
APRIL 9, 1991 (P=-26.29, B_o =-6.06, L_o = 341.37)

KITT PEAK MAGNETOGRAM

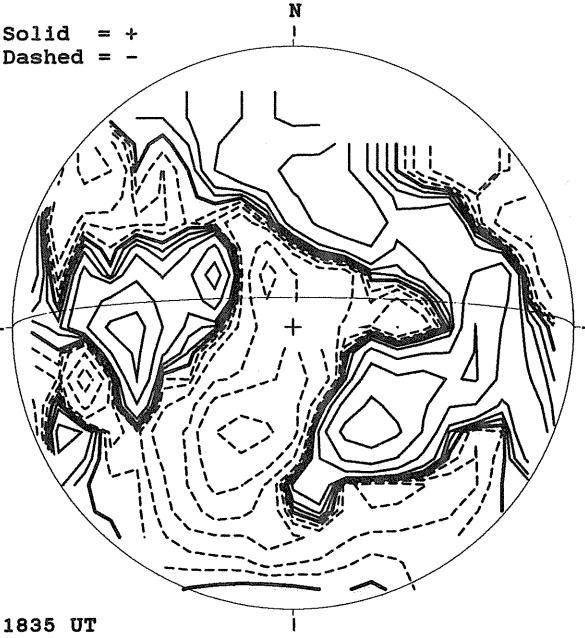
Bright = +
Dark = -



1604 UT

STANFORD MAGNETOGRAM

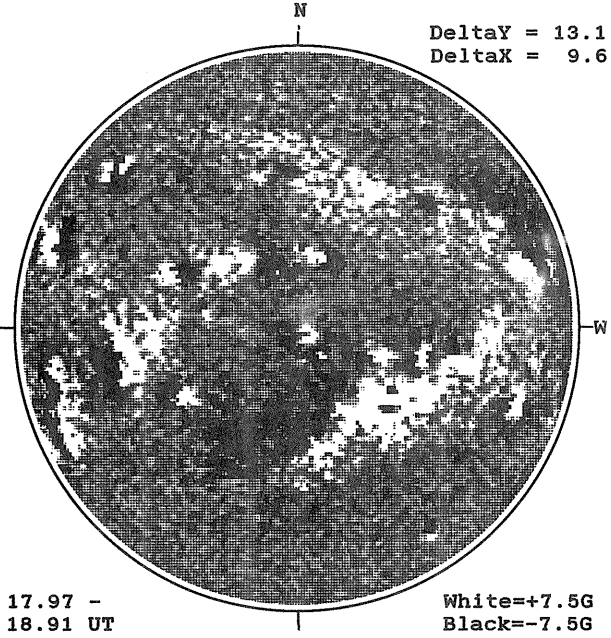
Solid = +
Dashed = -



1835 UT

MT. WILSON MAGNETOGRAM

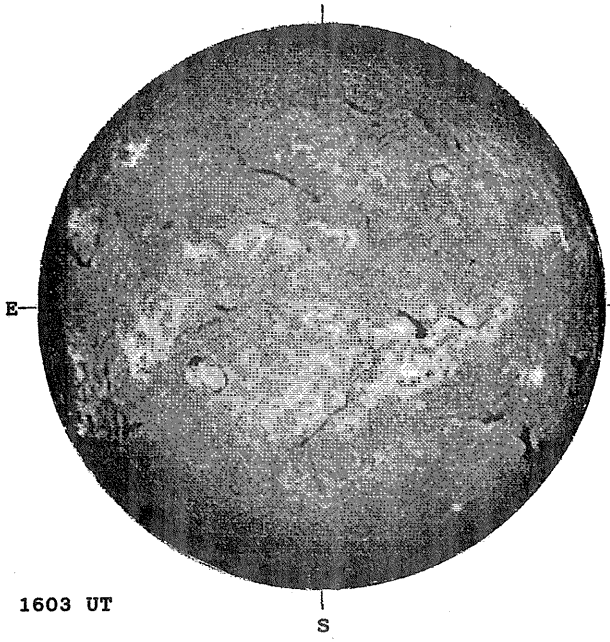
DeltaY = 13.1
DeltaX = 9.6



17.97 -
18.91 UT

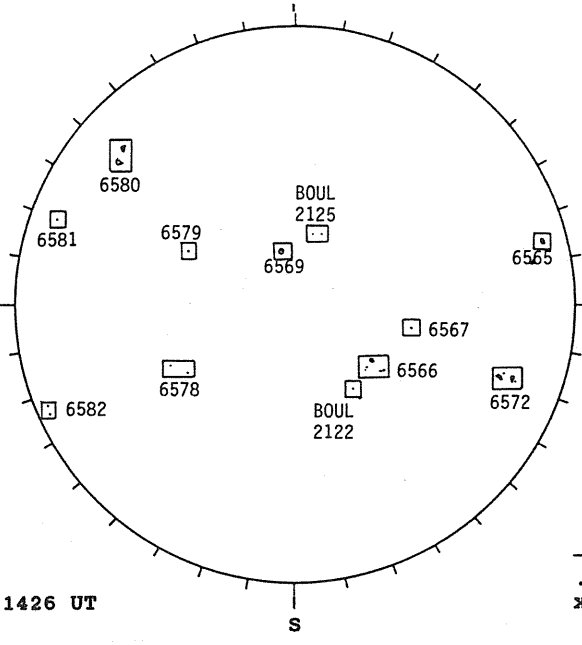
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



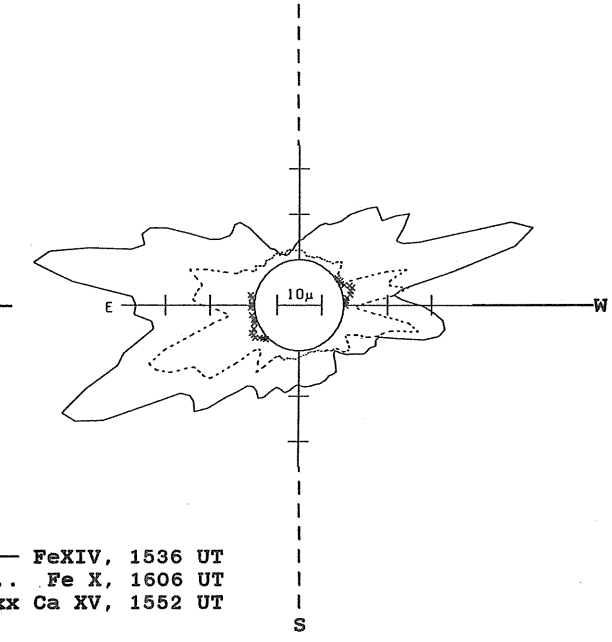
1603 UT

BOULDER SUNSPOT



1426 UT

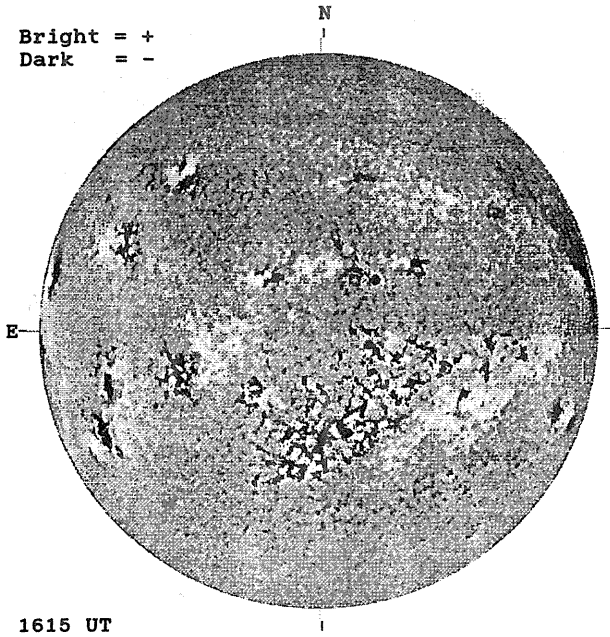
SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1536 UT
.... Fe X, 1606 UT
xxxx Ca XV, 1552 UT

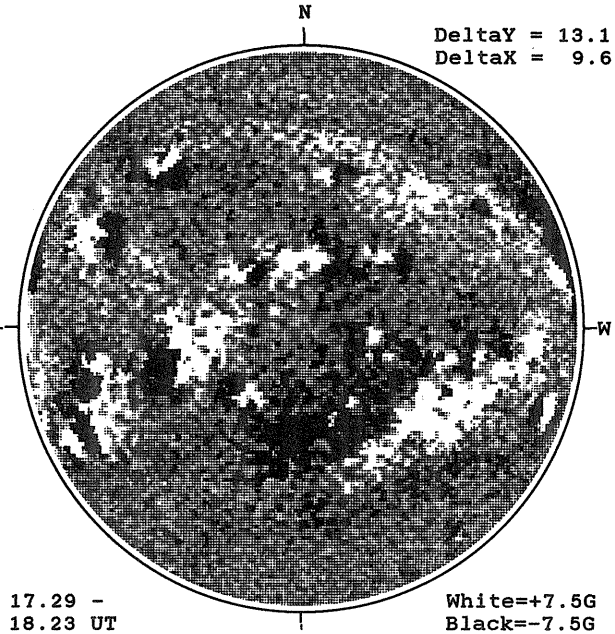
APRIL 10, 1991 (P=-26.27, B_o =-6.00, L_o = 328.17)

KITT PEAK MAGNETOGRAM

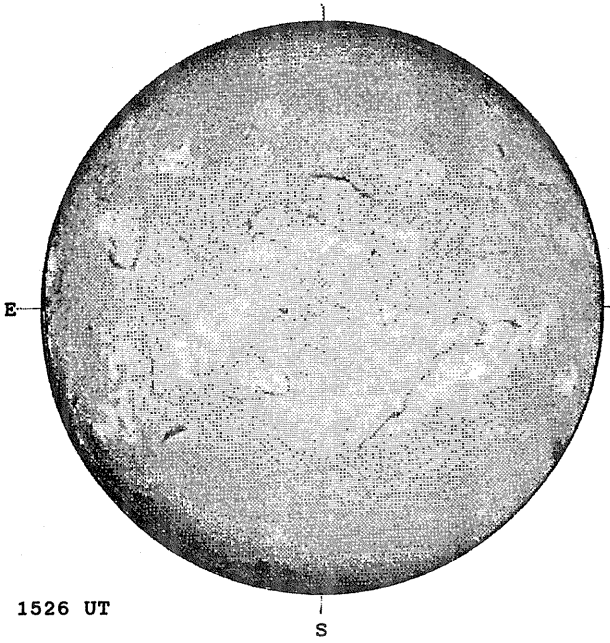


STANFORD MAGNETOGRAM

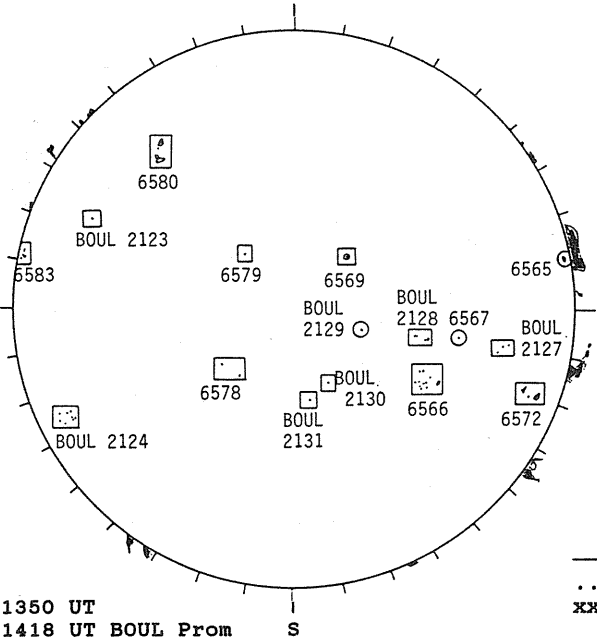
MT. WILSON MAGNETOGRAM



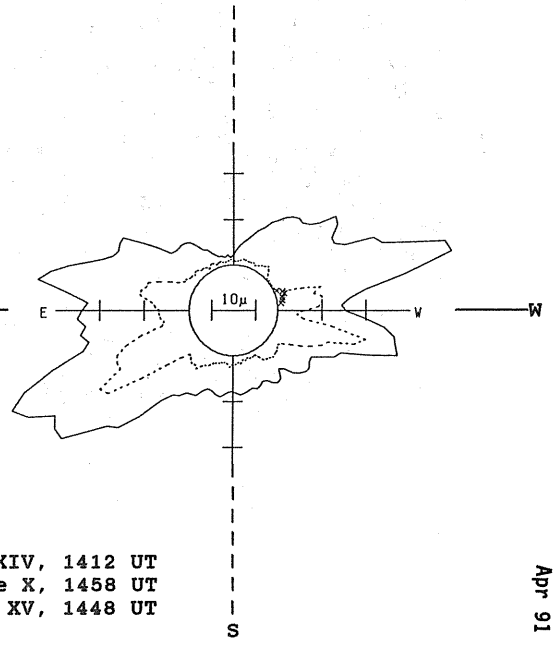
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



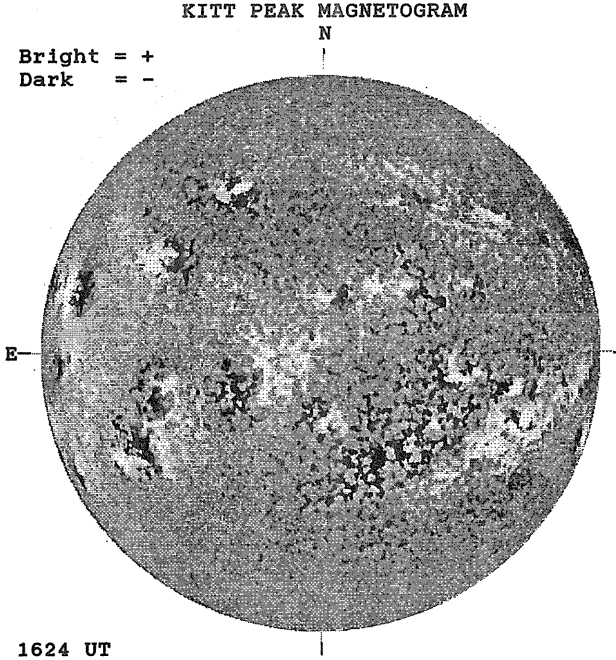
SACRAMENTO PEAK CORONA (1.15 Radii)



APRIL 11, 1991 (P=-26.25, $\bar{B}_o$ =-5.93, L_o = 314.97)

KITT PEAK MAGNETOGRAM

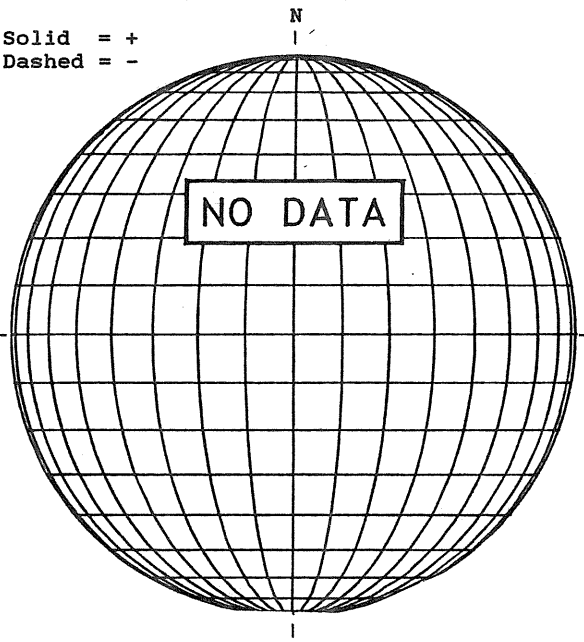
Bright = +
Dark = -



1624 UT

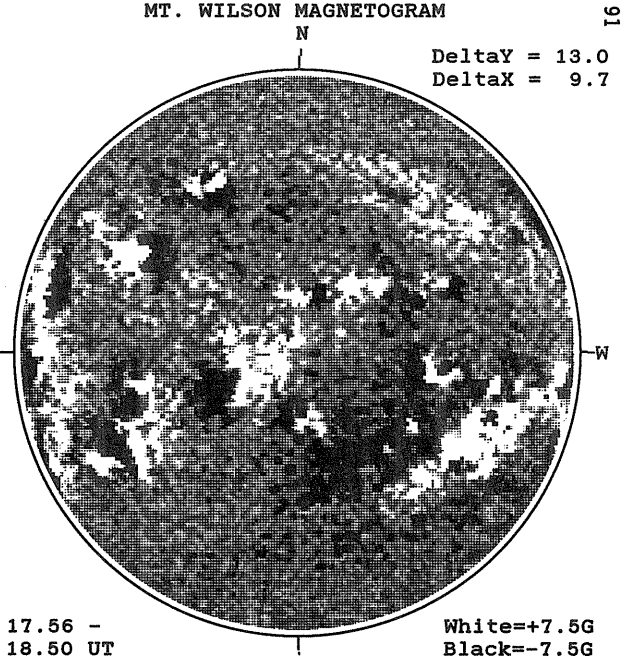
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

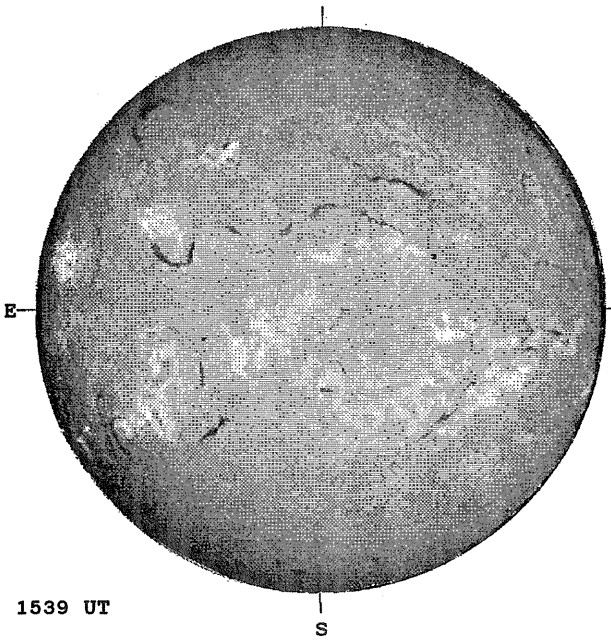
DeltaY = 13.0
DeltaX = 9.7



17.56 -
18.50 UT

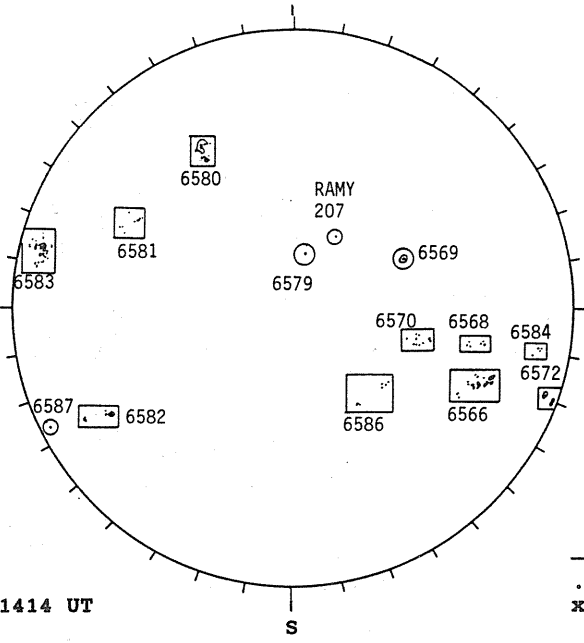
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



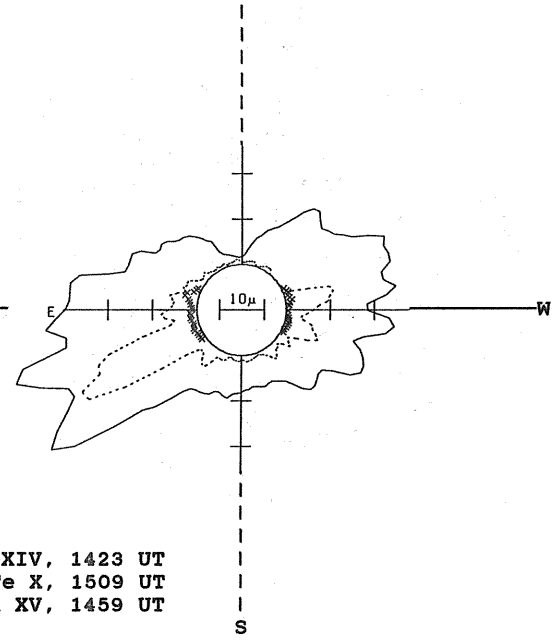
1539 UT

RAMEY SUNSPOT



1414 UT

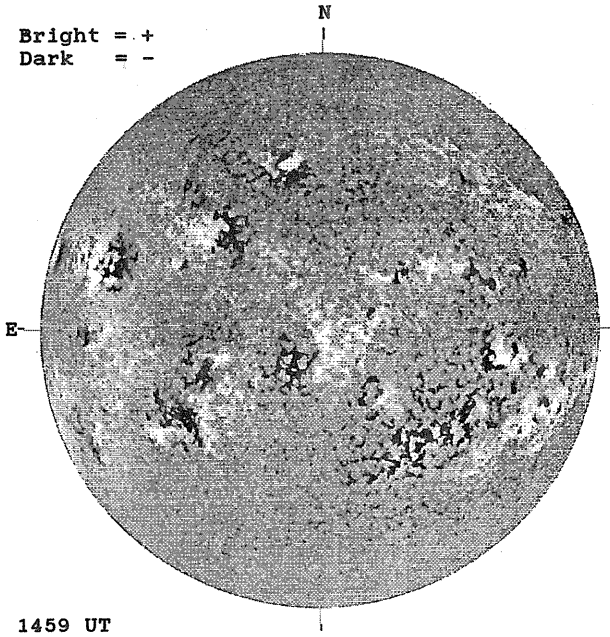
SACRAMENTO PEAK CORONA (1.15 Radii)



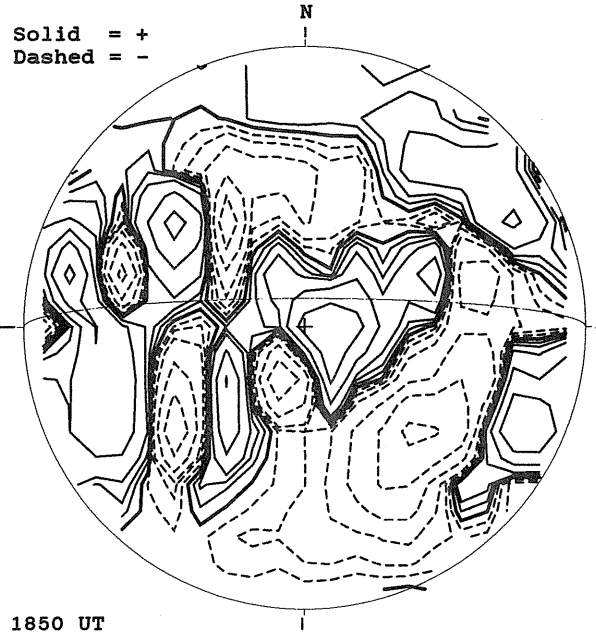
—— FeXIV, 1423 UT
.... Fe X, 1509 UT
xxxx Ca XV, 1459 UT

APRIL 12, 1991 (P=-26.22, B_o =-5.85, L_o = 301.77)

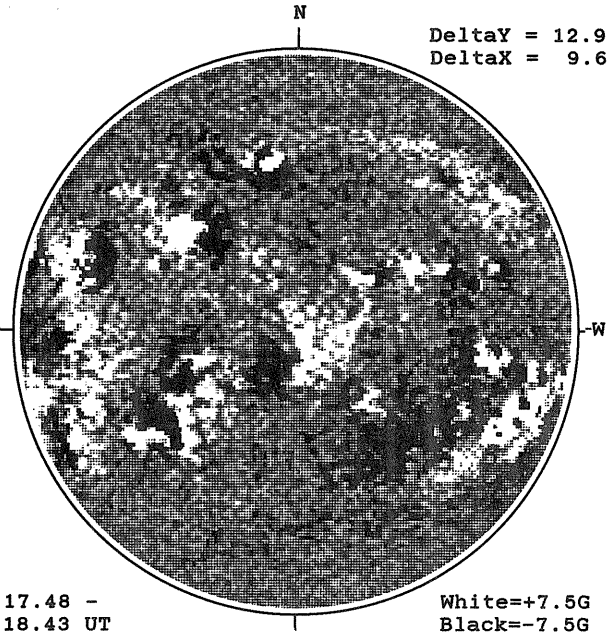
KITT PEAK MAGNETOGRAM



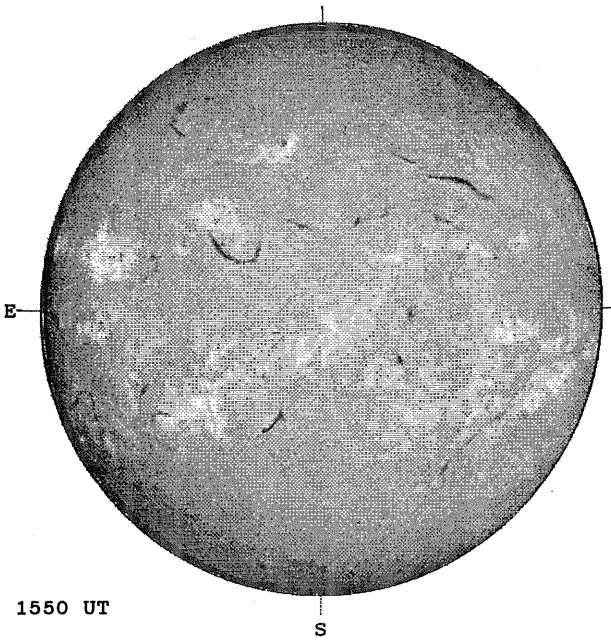
STANFORD MAGNETOGRAM



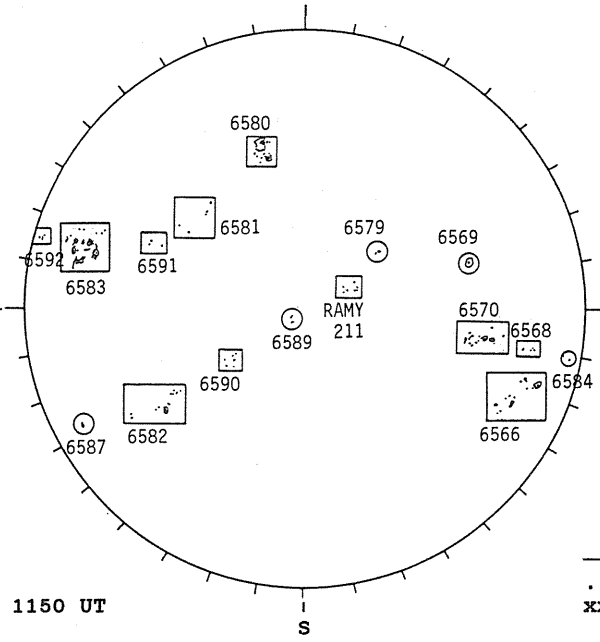
MT. WILSON MAGNETOGRAM



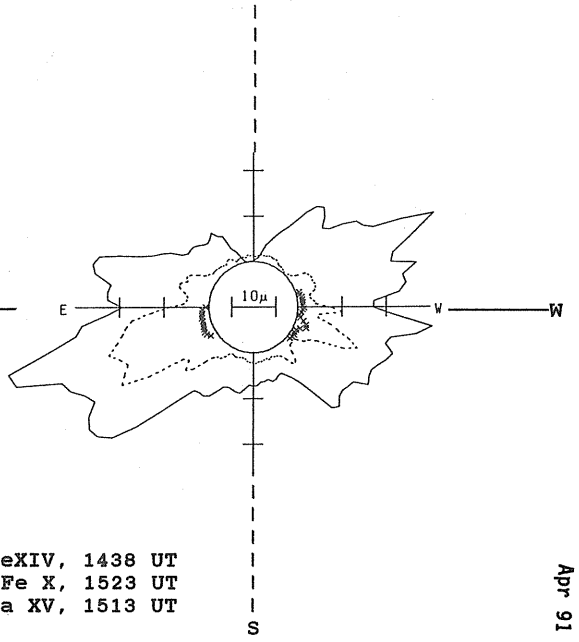
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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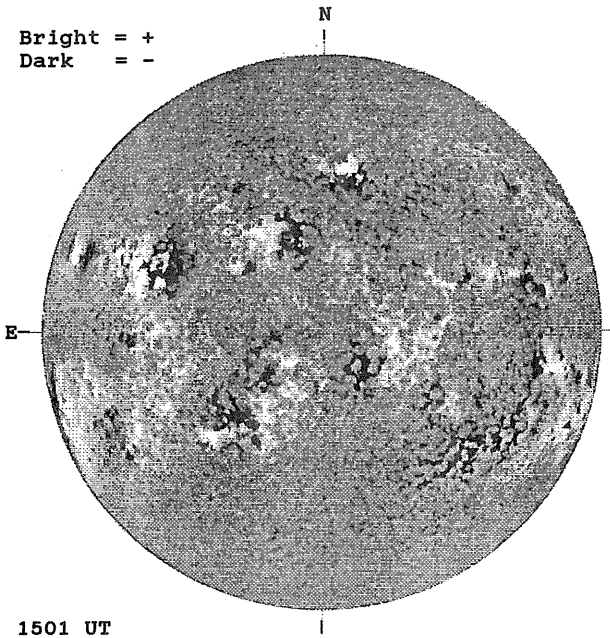
APRIL 13, 1991 (P=-26.18, B_o =-5.78, L_o = 288.57)

KITT PEAK MAGNETOGRAM

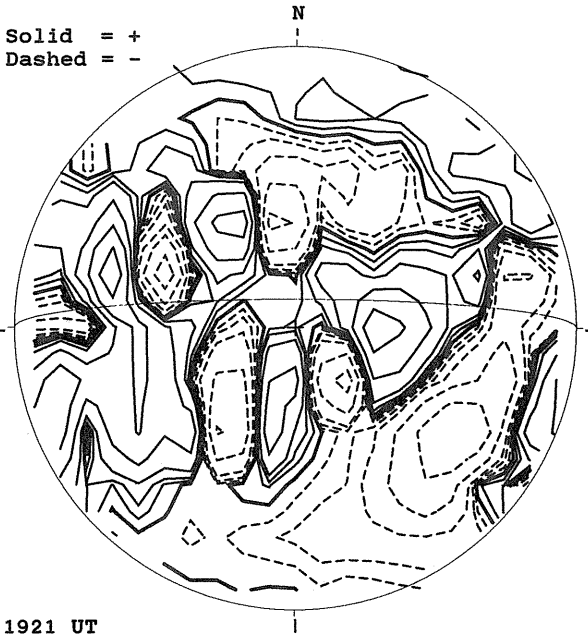
Bright = +
Dark = -



1501 UT

STANFORD MAGNETOGRAM

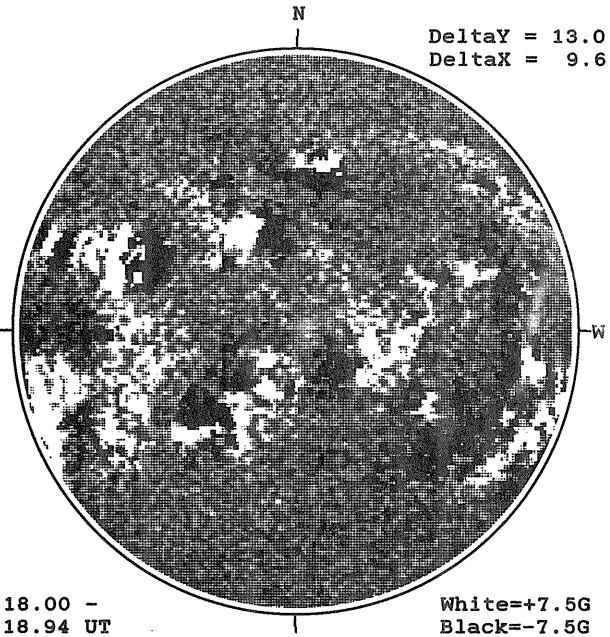
Solid = +
Dashed = -



1921 UT

MT. WILSON MAGNETOGRAM

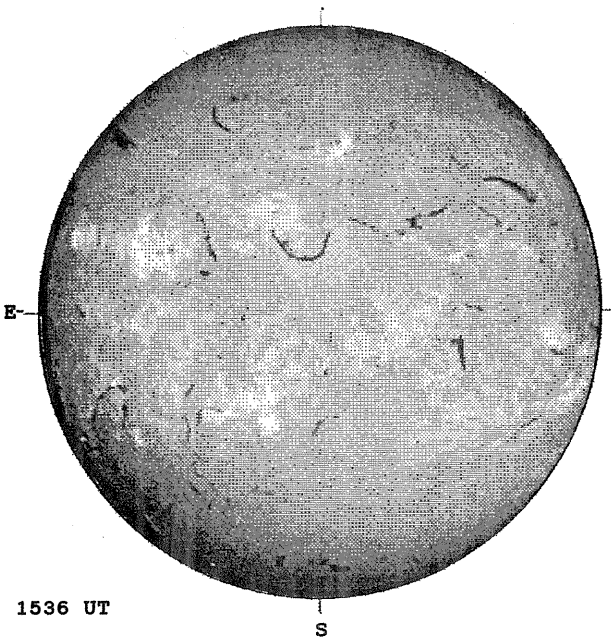
DeltaY = 13.0
DeltaX = 9.6



18.00 -
18.94 UT

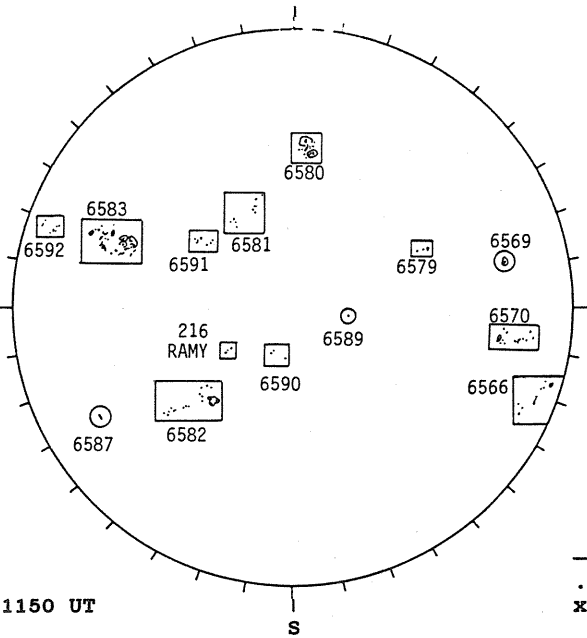
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



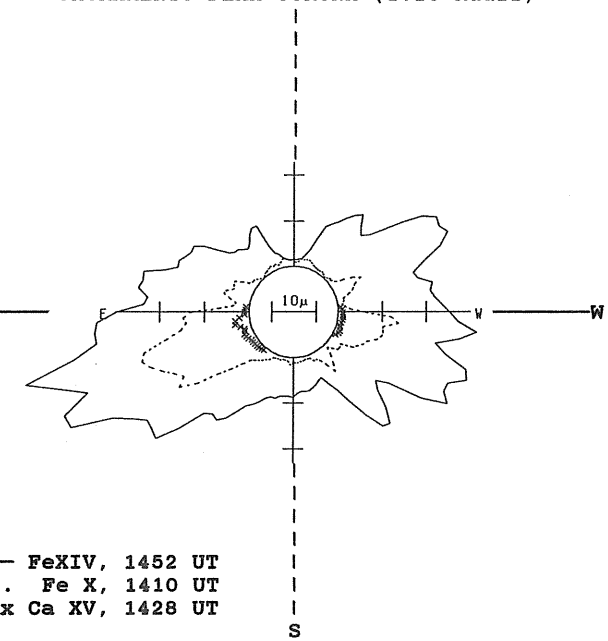
1536 UT

RAMEY SUNSPOT



1150 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

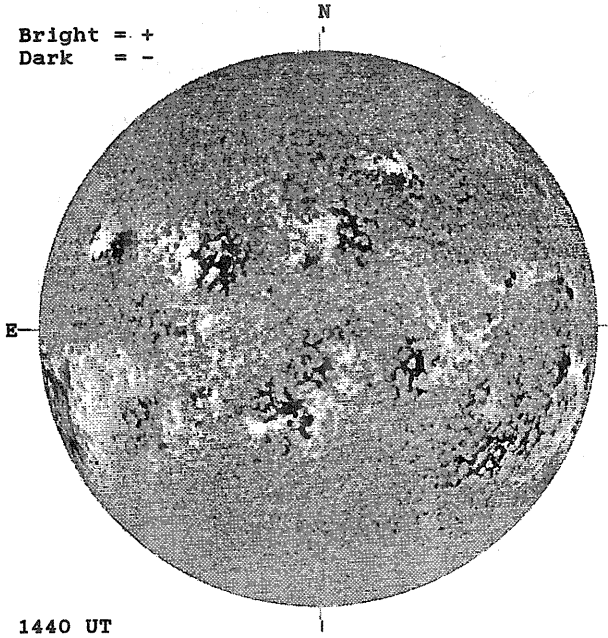


—— FeXIV, 1452 UT
.... Fe X, 1410 UT
xxxx Ca XV, 1428 UT

APRIL 14, 1991 (P=-26.13, B_O =-5.70, L_C = 275.37)

KITT PEAK MAGNETOGRAM

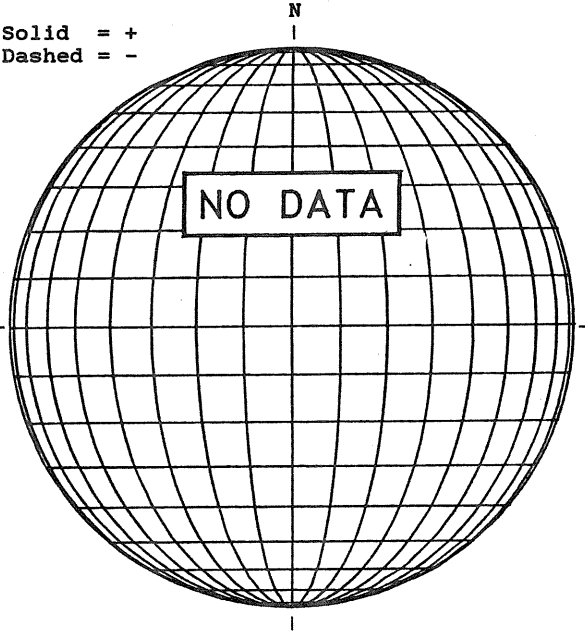
Bright = +
Dark = -



1440 UT

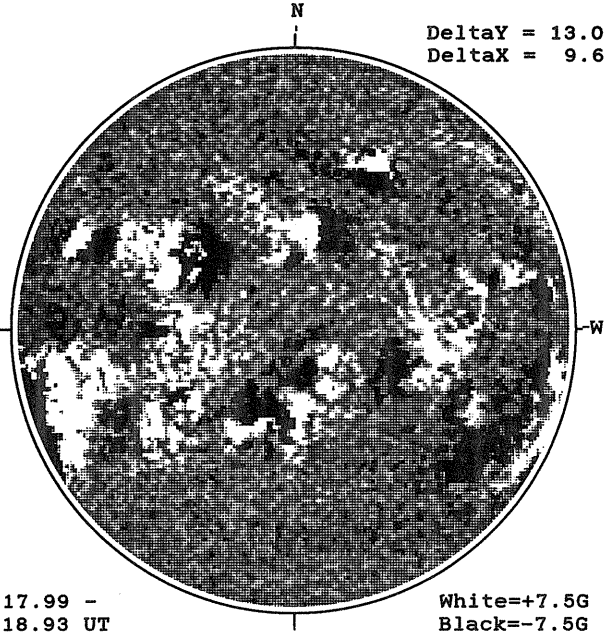
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

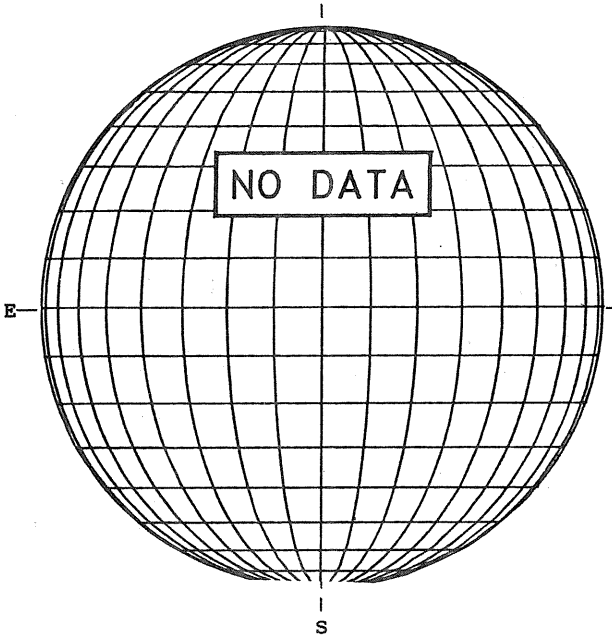
DeltaY = 13.0
DeltaX = 9.6



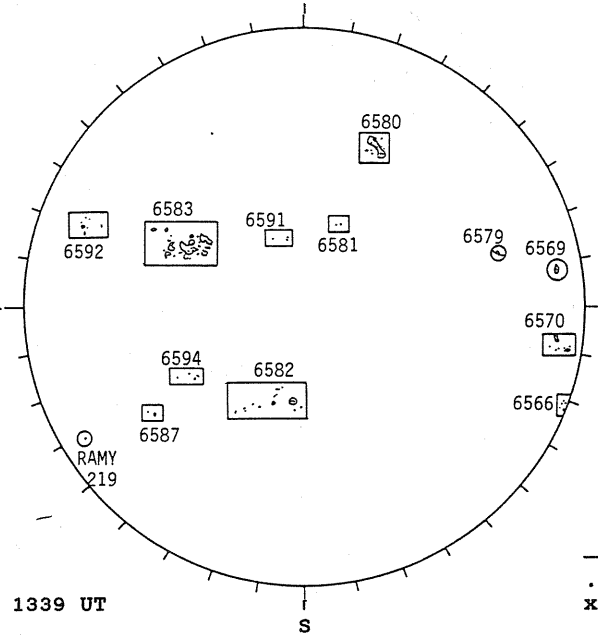
17.99 -
18.93 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

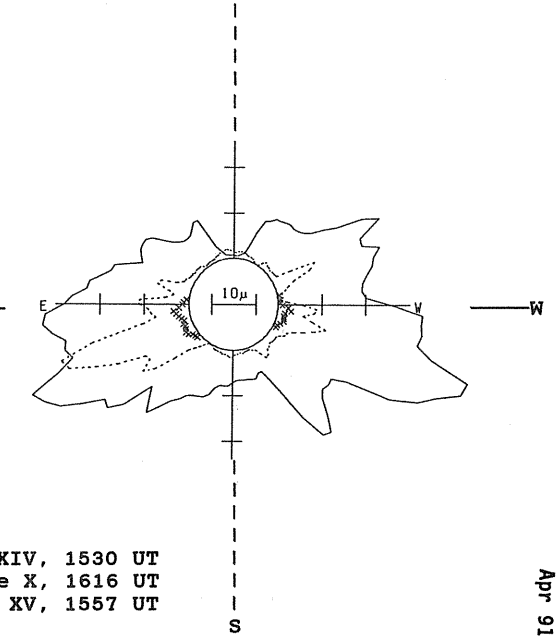


RAMEY SUNSPOT



1339 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

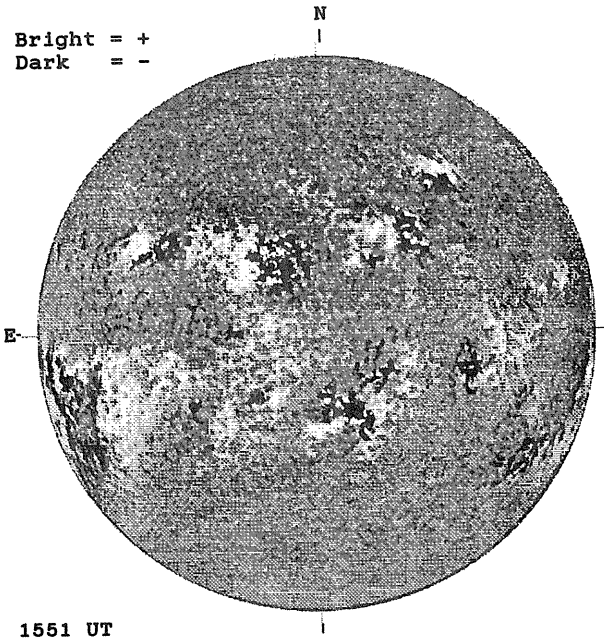


—— FeXIV, 1530 UT
.... Fe X, 1616 UT
xxxx Ca XV, 1557 UT

APRIL 15, 1991 (P=-26.08, B_o =-5.63, L_o = 262.16)

KITT PEAK MAGNETOGRAM

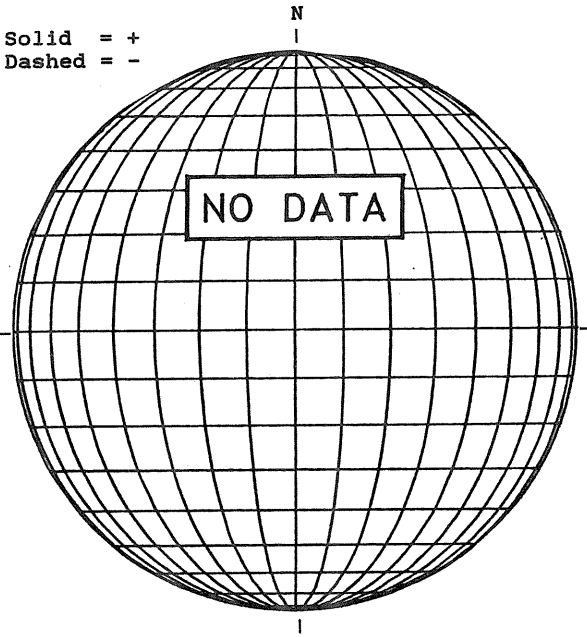
Bright = +
Dark = -



1551 UT

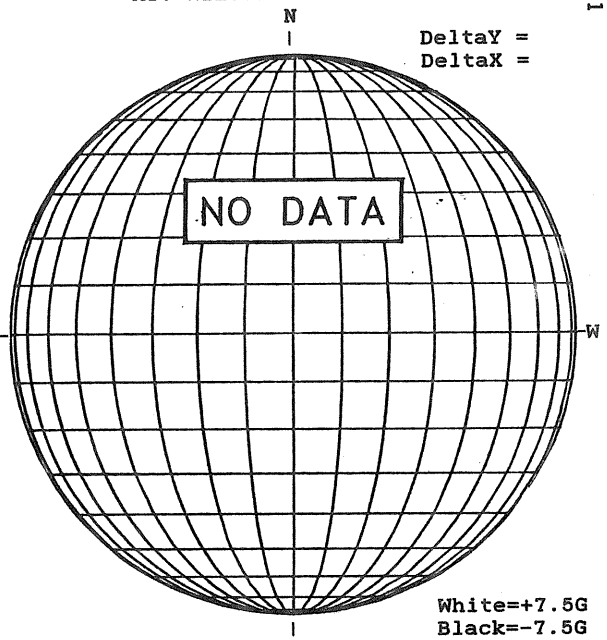
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



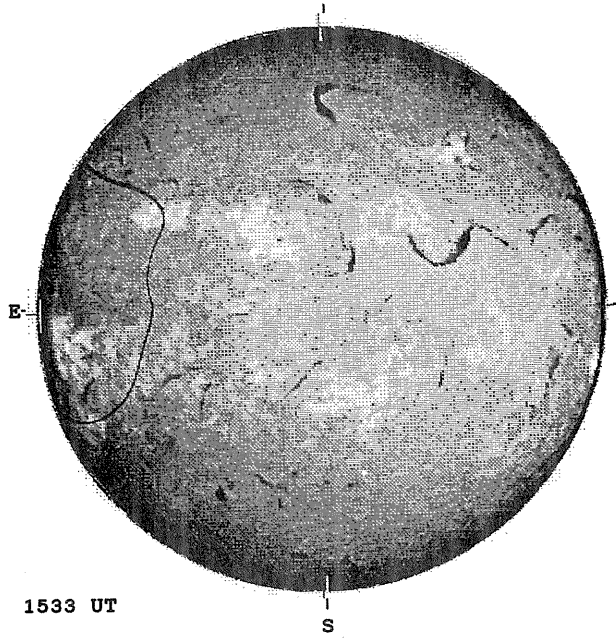
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



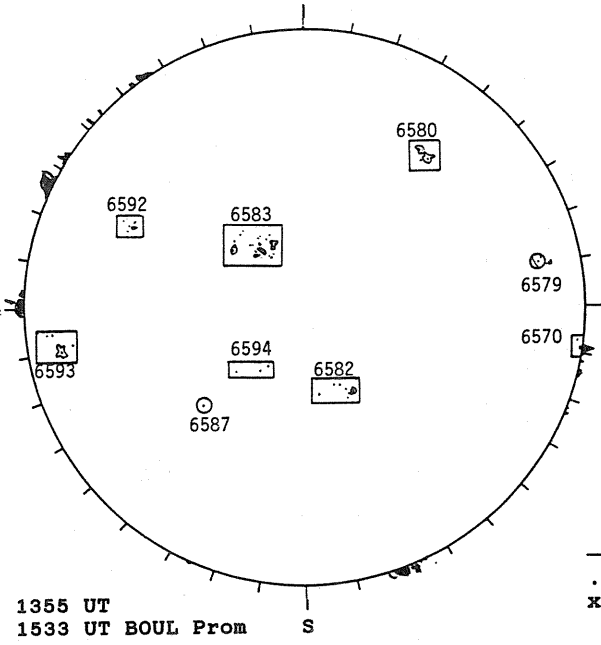
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



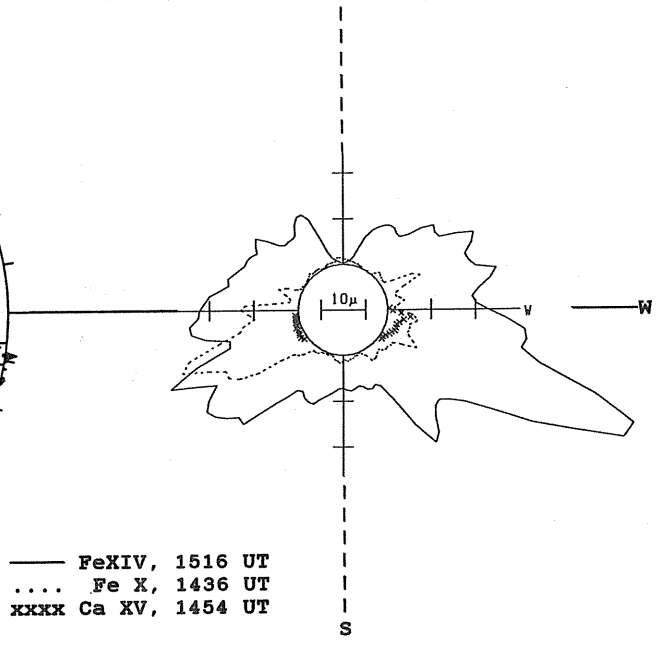
1533 UT

BOULDER SUNSPOT



1355 UT
1533 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

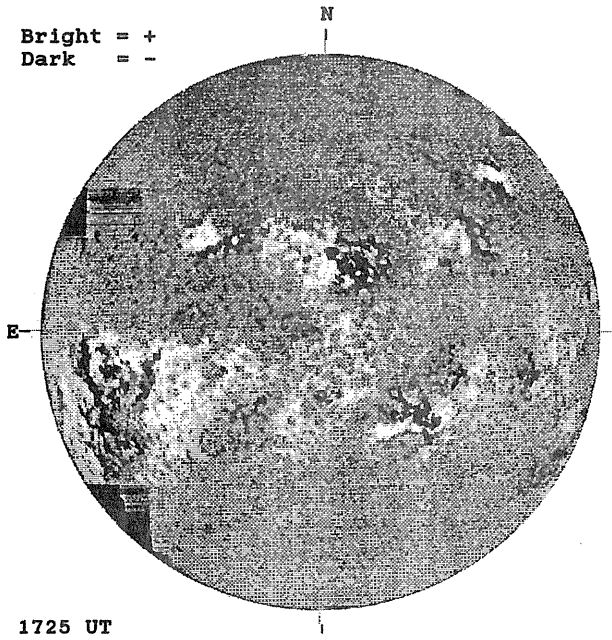


—— FeXIV, 1516 UT
.... Fe X, 1436 UT
xxxx Ca XV, 1454 UT

APRIL 16, 1991 (P=-26.02, B_o =-5.55, L_o = 248.96)

KITT PEAK MAGNETOGRAM

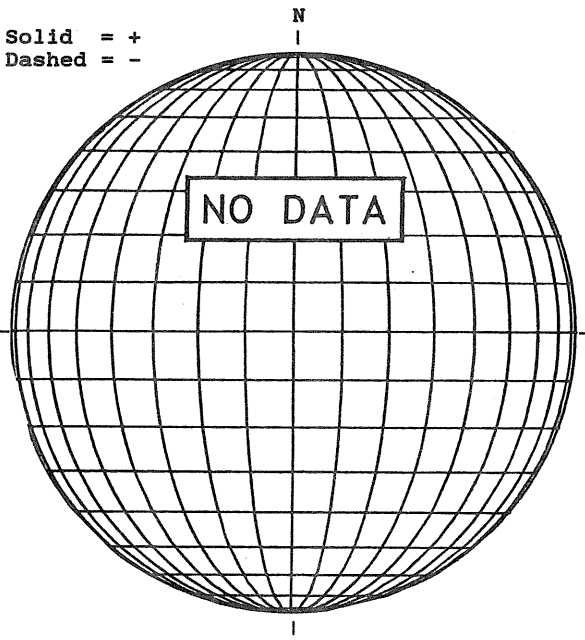
Bright = +
Dark = -



1725 UT

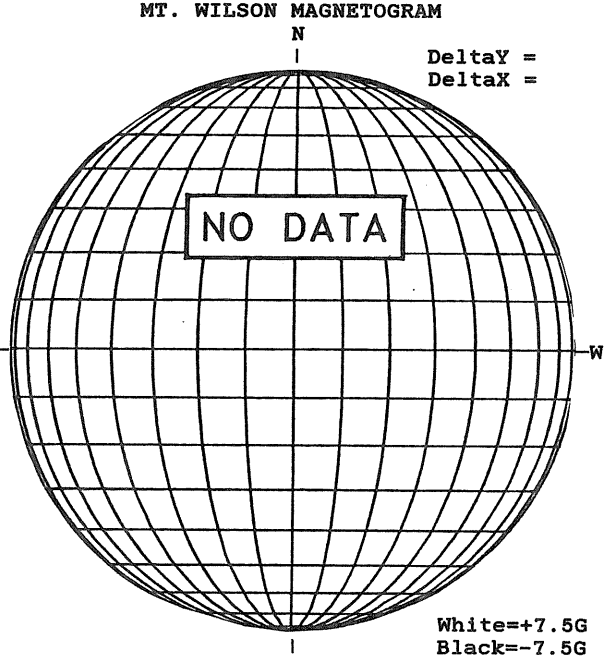
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



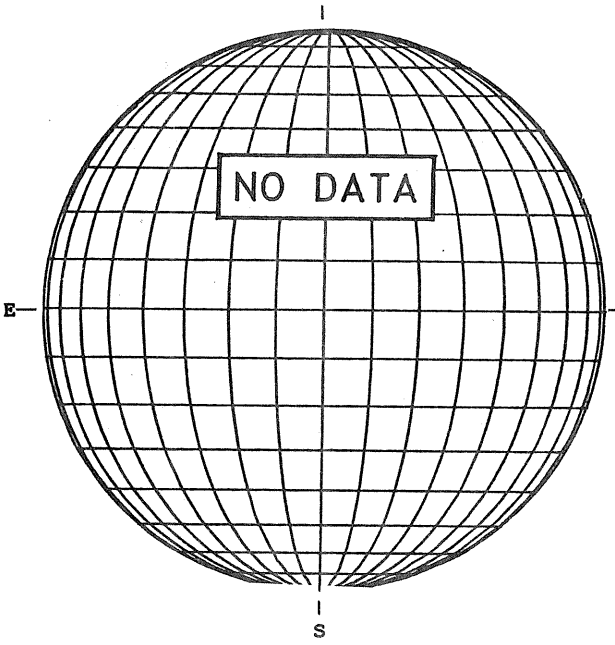
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

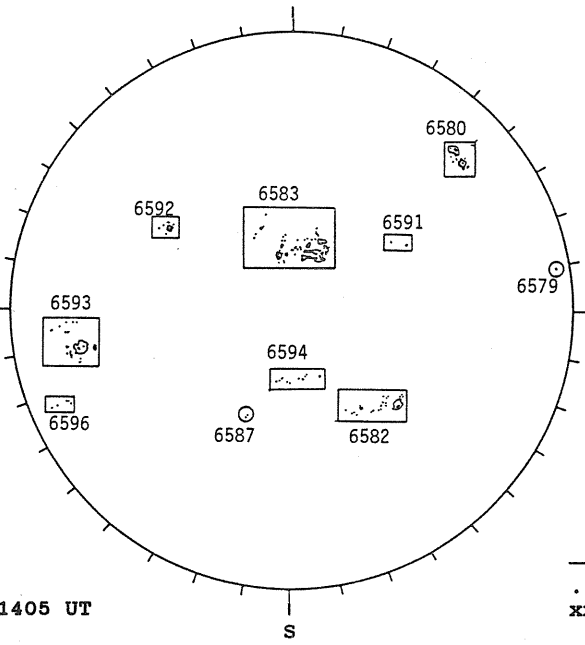


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

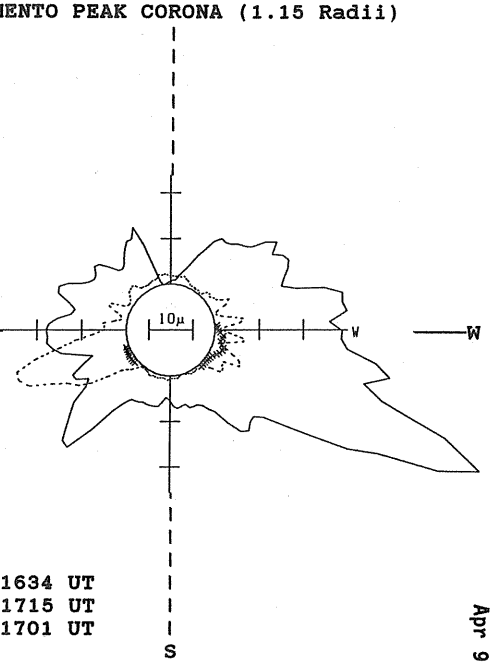


RAMEY SUNSPOT



1405 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1634 UT
.... Fe X, 1715 UT
xxxx Ca XV, 1701 UT

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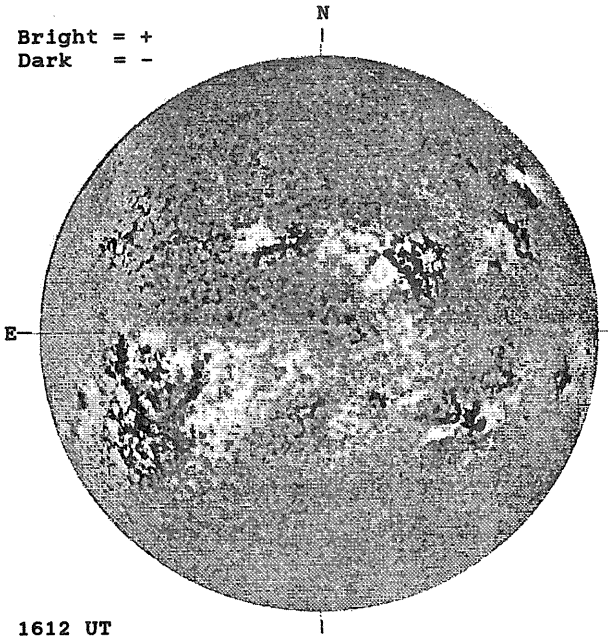
APRIL 17, 1991 (P=-25.95, B_o =-5.47, L_o = 235.76)

KITT PEAK MAGNETOGRAM

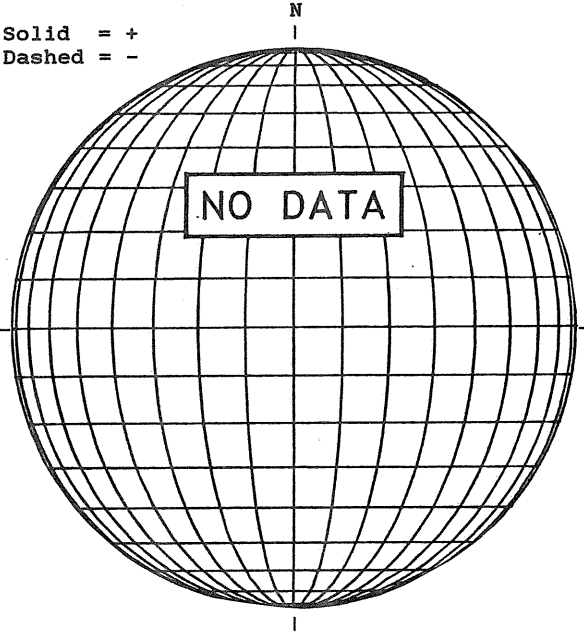
Bright = +
Dark = -



1612 UT

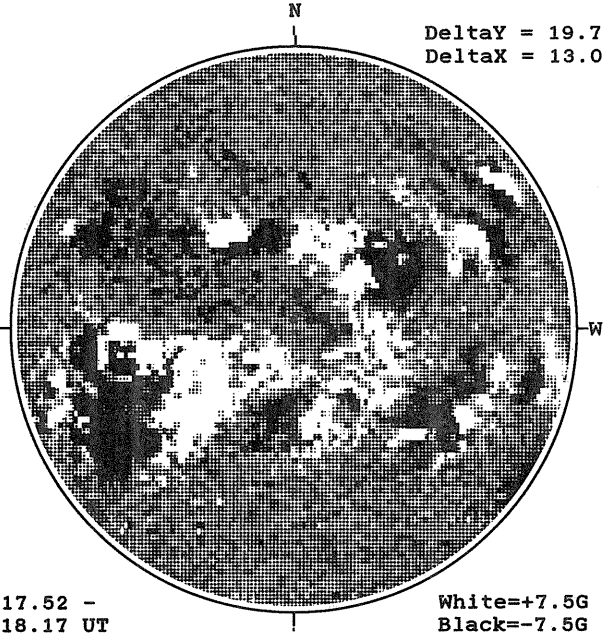
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

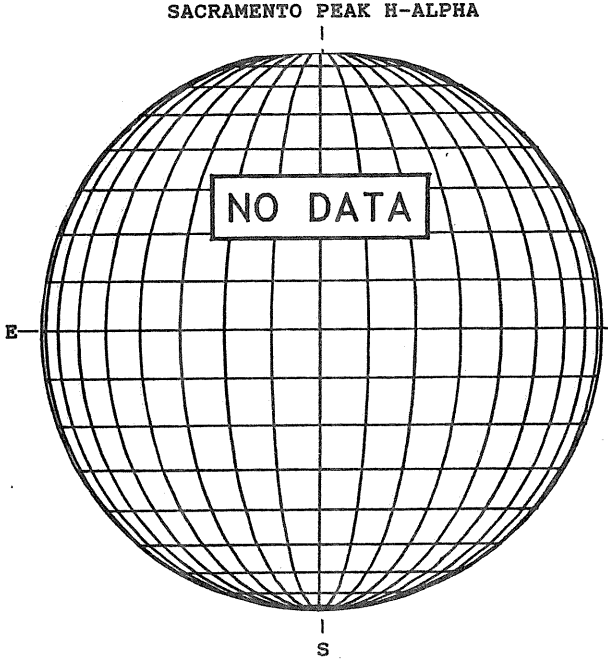
DeltaY = 19.7
DeltaX = 13.0



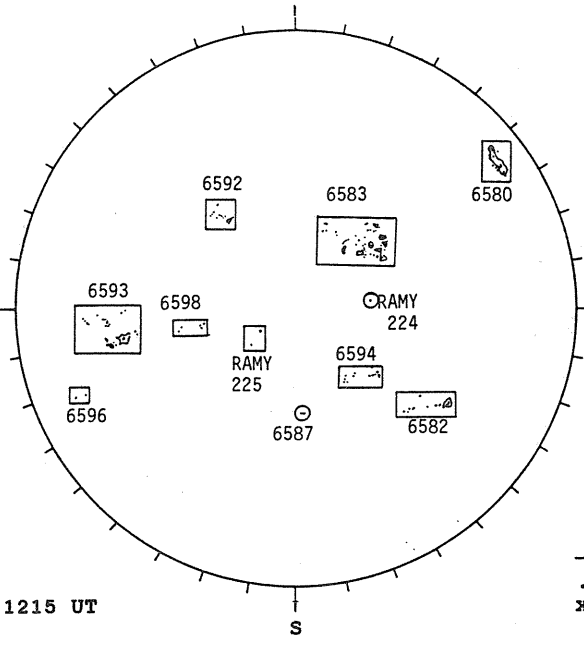
17.52 -
18.17 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

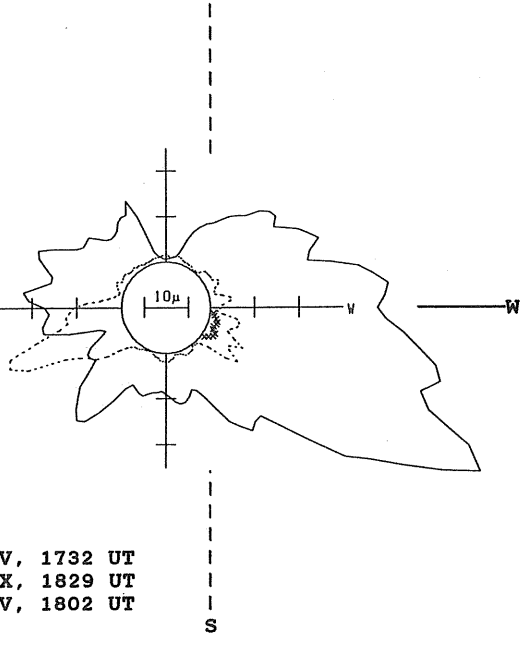


RAMEY SUNSPOT



1215 UT

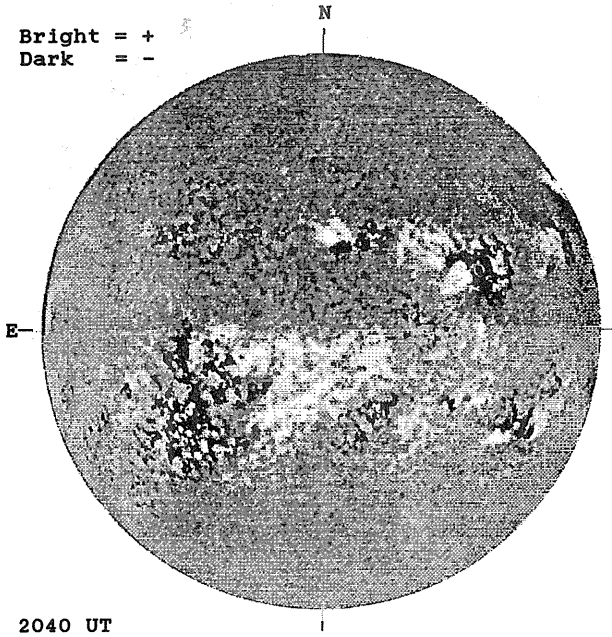
SACRAMENTO PEAK CORONA (1.15 Radii)



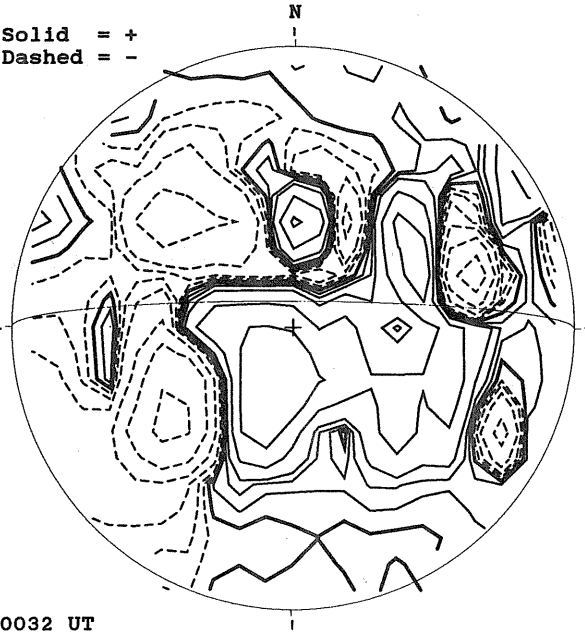
—— FeXIV, 1732 UT
.... Fe X, 1829 UT
xxxx Ca XV, 1802 UT

APRIL 18, 1991 (P=-25.88, B_o =-5.39, L_o = 222.55)

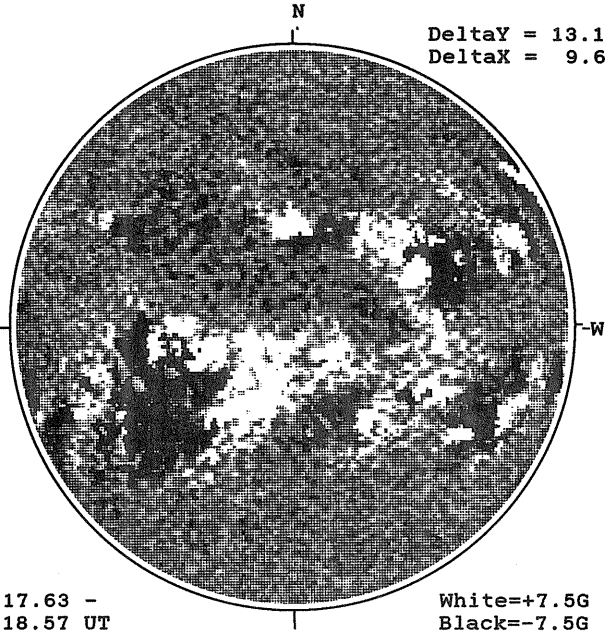
KITT PEAK MAGNETOGRAM



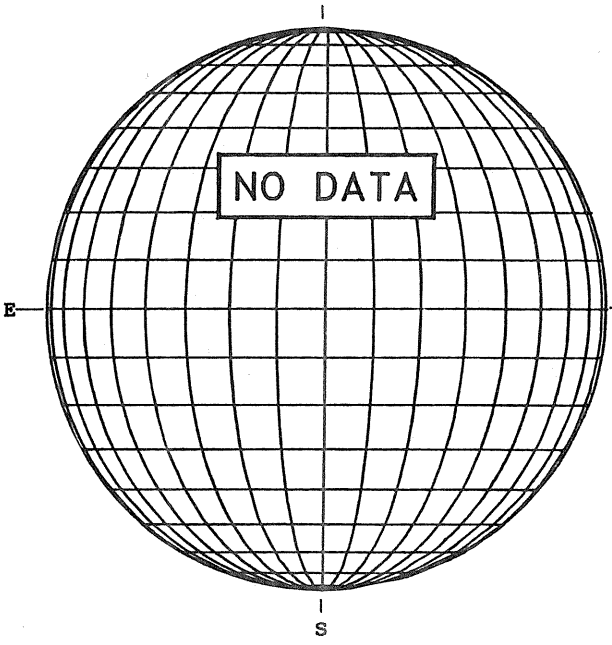
STANFORD MAGNETOGRAM



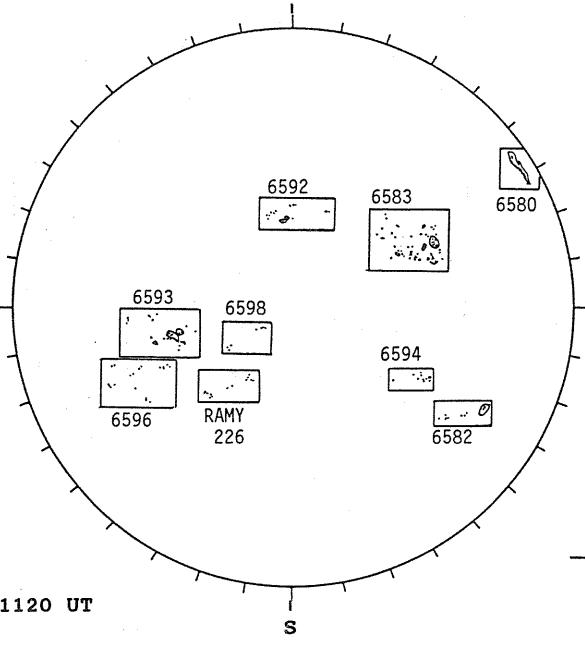
MT. WILSON MAGNETOGRAM



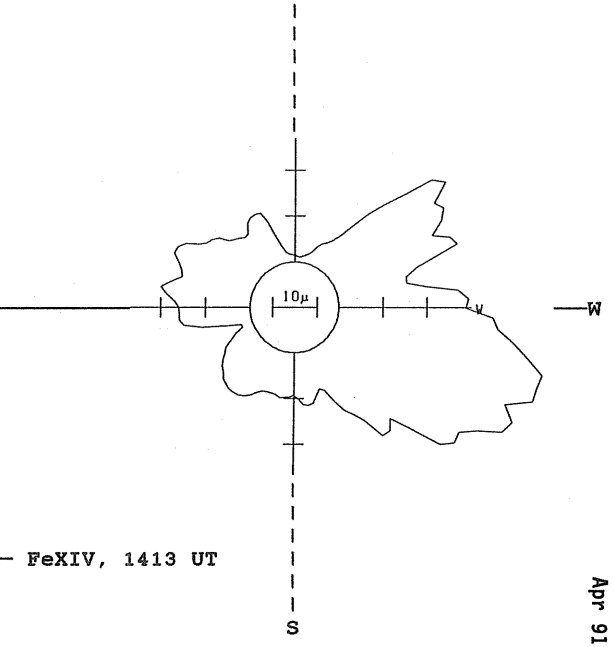
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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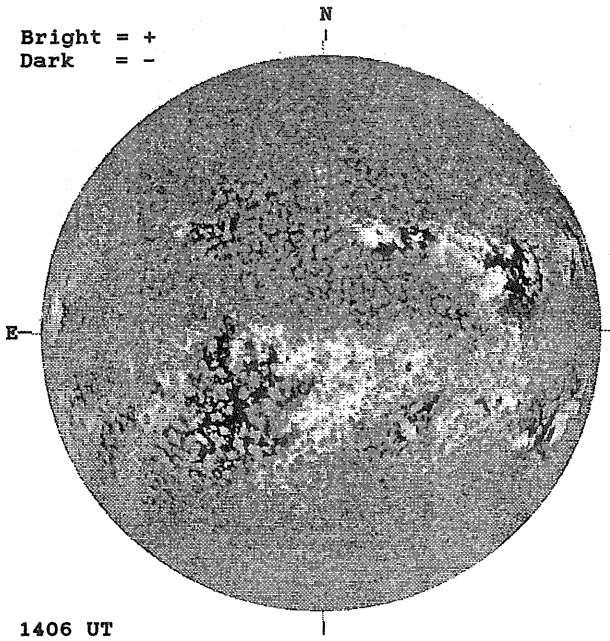
APRIL 19, 1991 (P=-25.80, B_o =-5.30, L_o = 209.35)

KITT PEAK MAGNETOGRAM

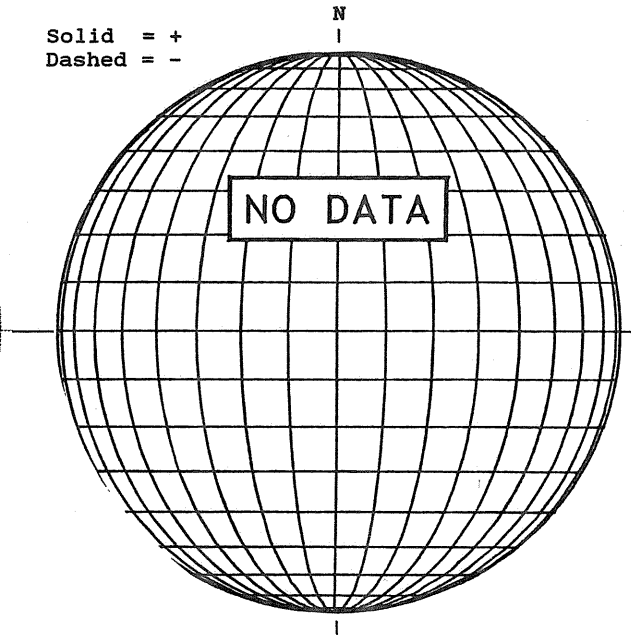
Bright = +
Dark = -



1406 UT

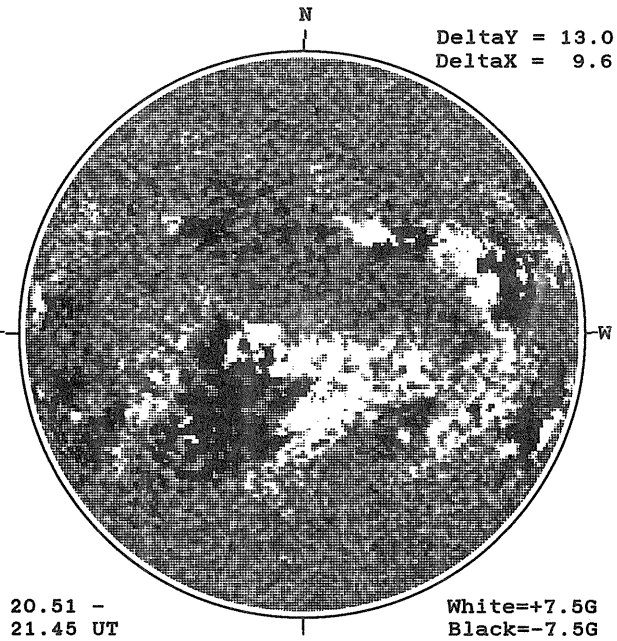
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

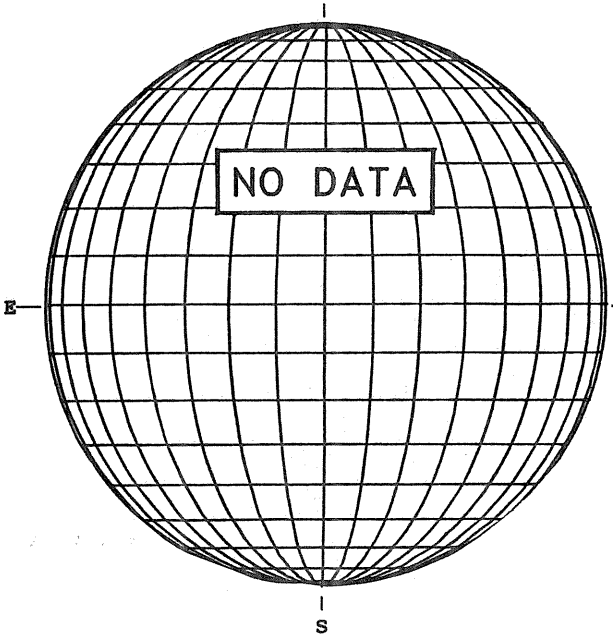
DeltaY = 13.0
DeltaX = 9.6



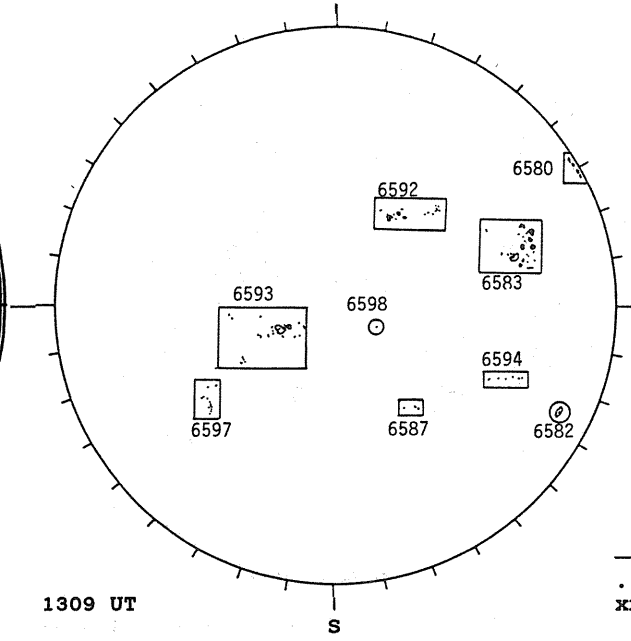
20.51 -
21.45 UT

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

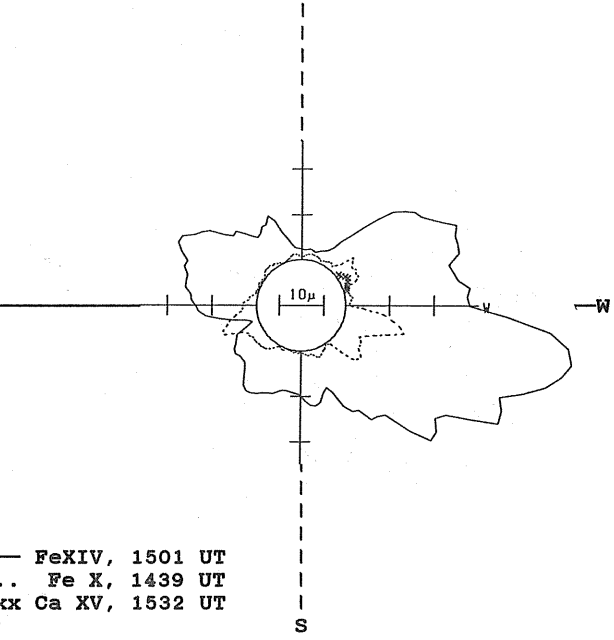


RAMEY SUNSPOT



1309 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

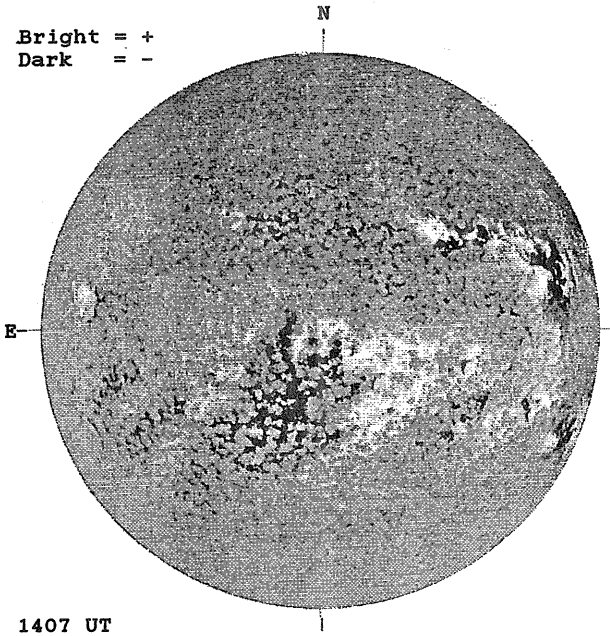


—— FeXIV, 1501 UT
.... Fe X, 1439 UT
xxxx Ca XV, 1532 UT

APRIL 20, 1991 (P=-25.71, B_o =-5.22, L_o = 196.14)

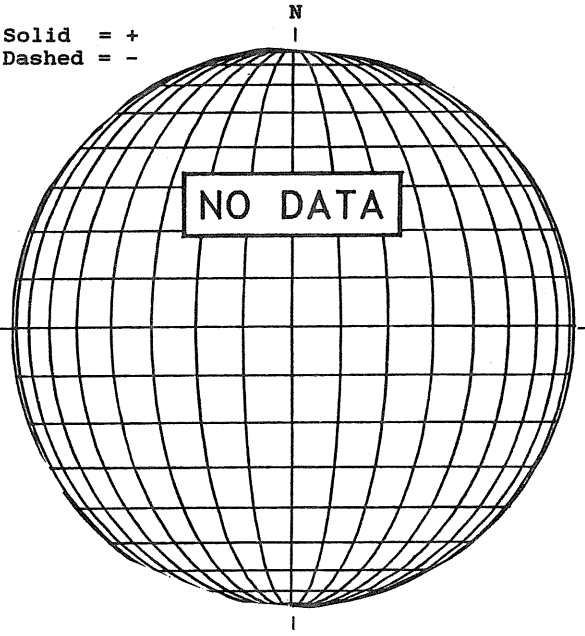
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



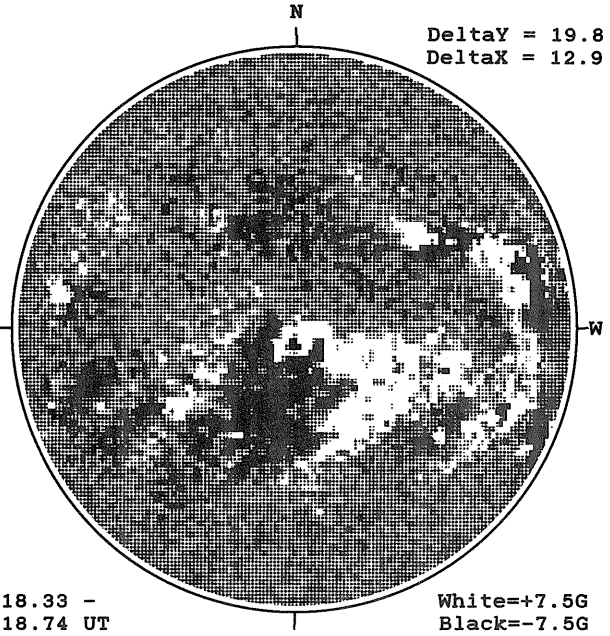
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

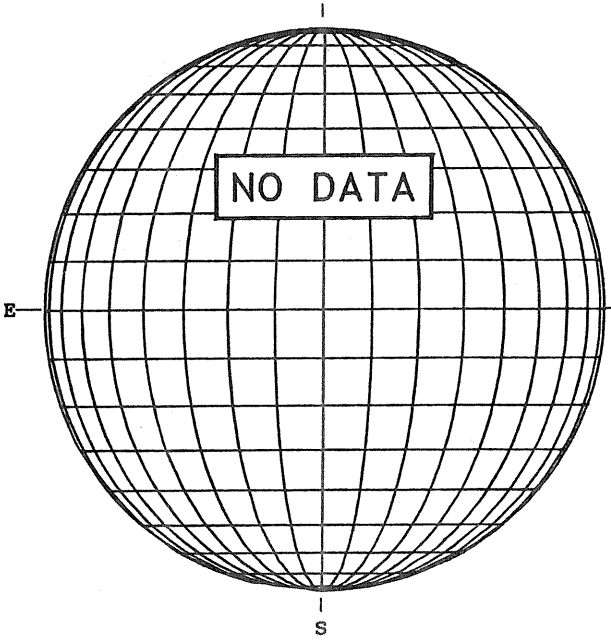


MT. WILSON MAGNETOGRAM

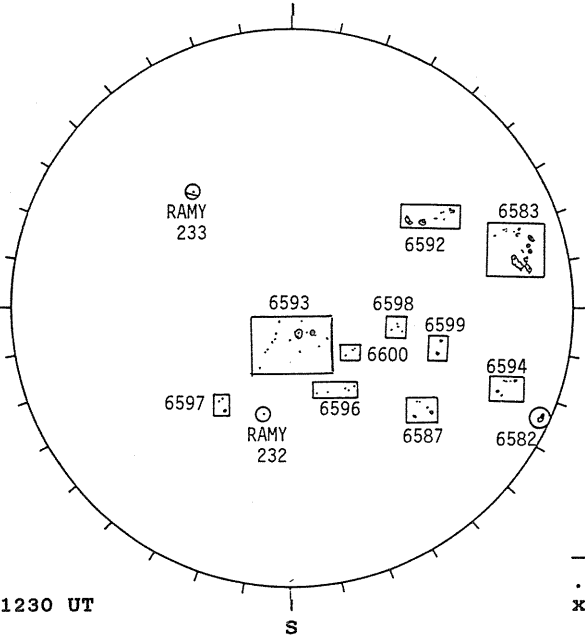
DeltaY = 19.8
DeltaX = 12.9



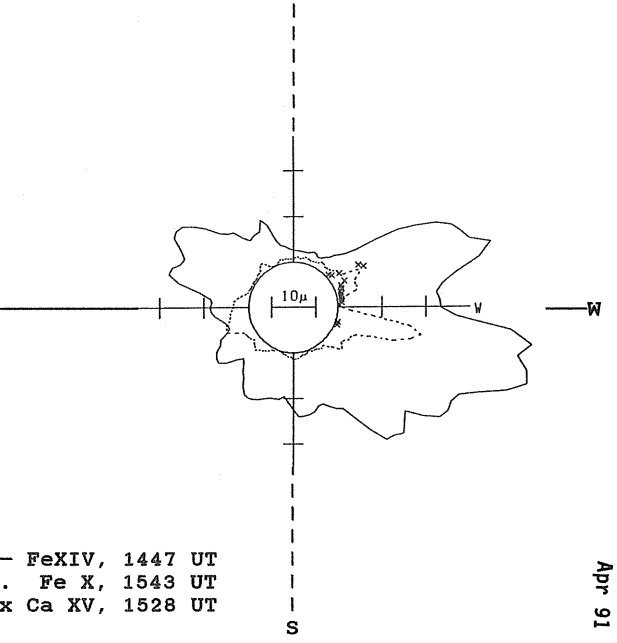
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1447 UT
.... Fe X, 1543 UT
xxxx Ca XV, 1528 UT

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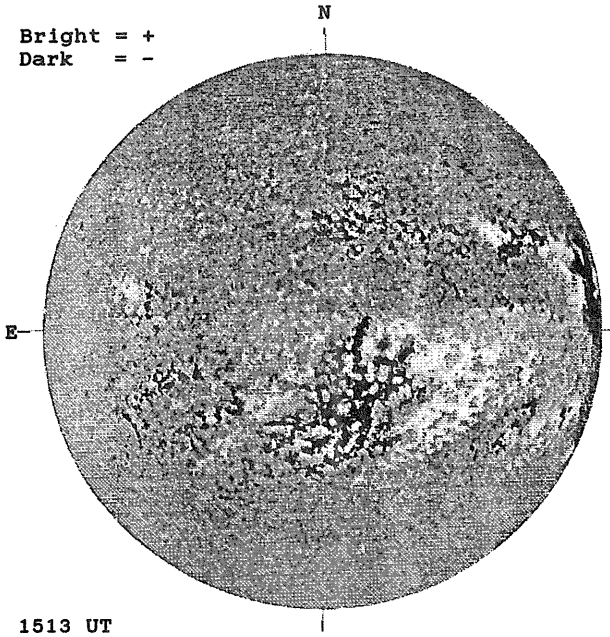
APRIL 21, 1991 (P=-25.61, B_o =-5.13, L_o = 182.93)

KITT PEAK MAGNETOGRAM

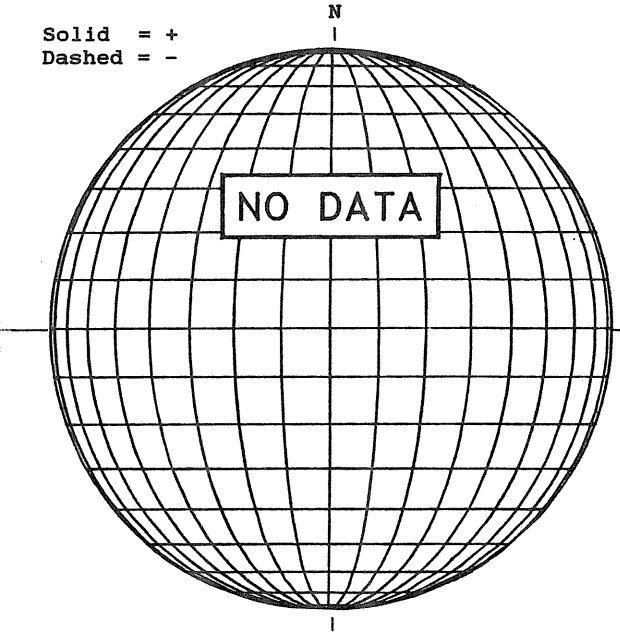
Bright = +
Dark = -



1513 UT

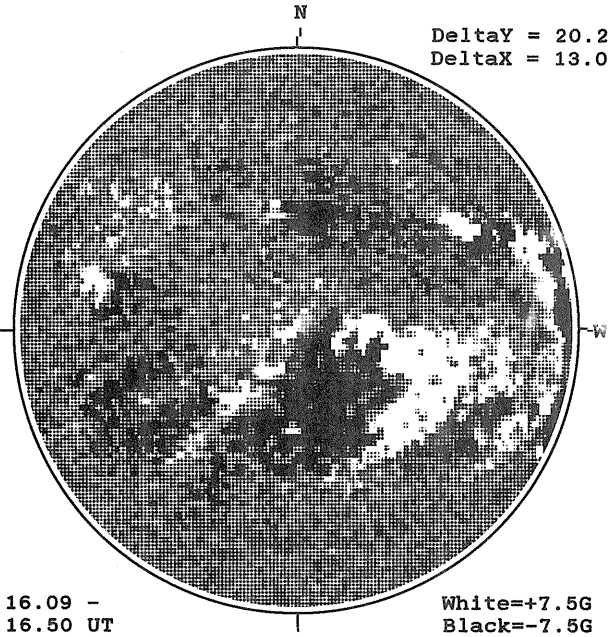
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

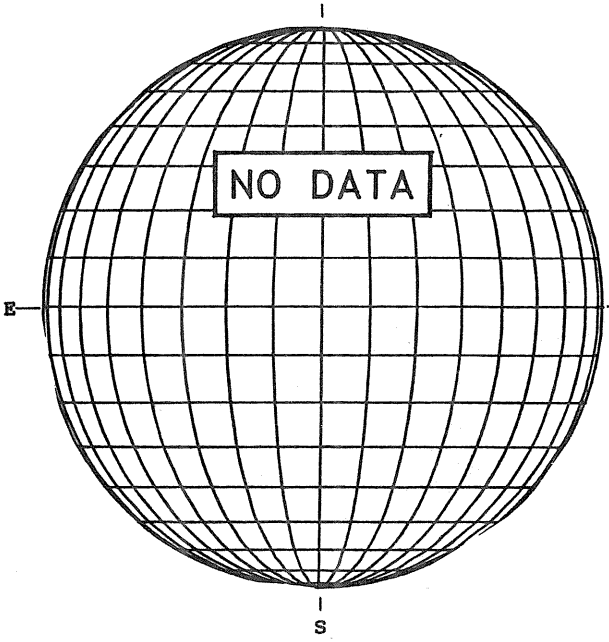
DeltaY = 20.2
DeltaX = 13.0



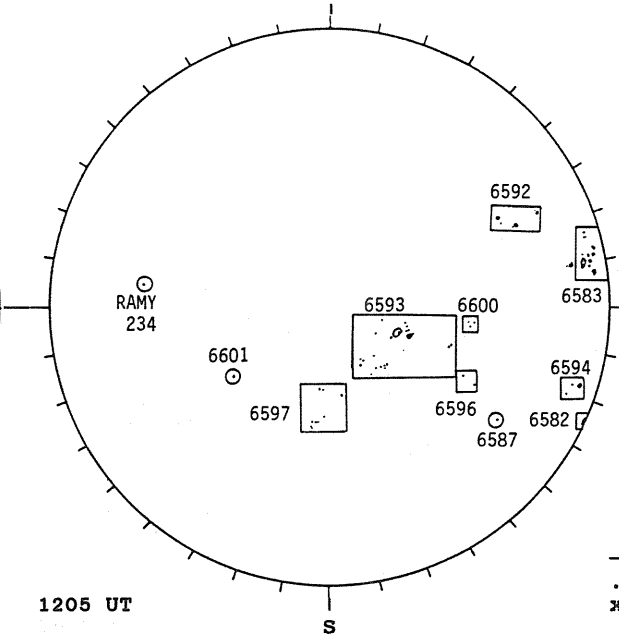
16.09 -
16.50 UT

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

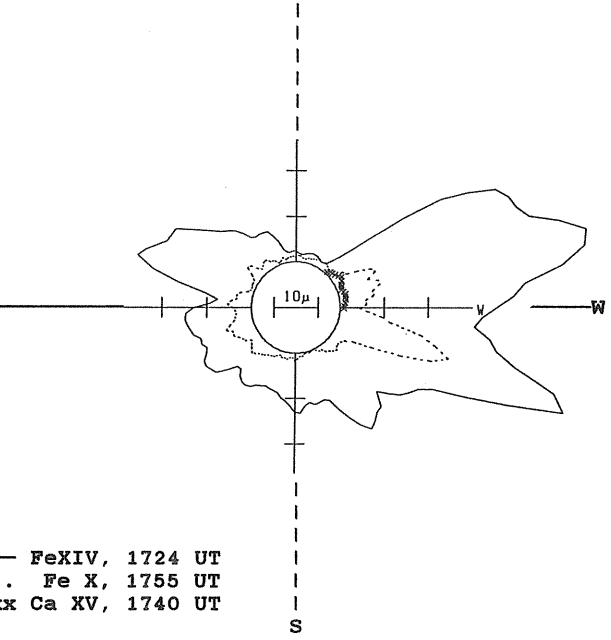


RAMEY SUNSPOT



1205 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

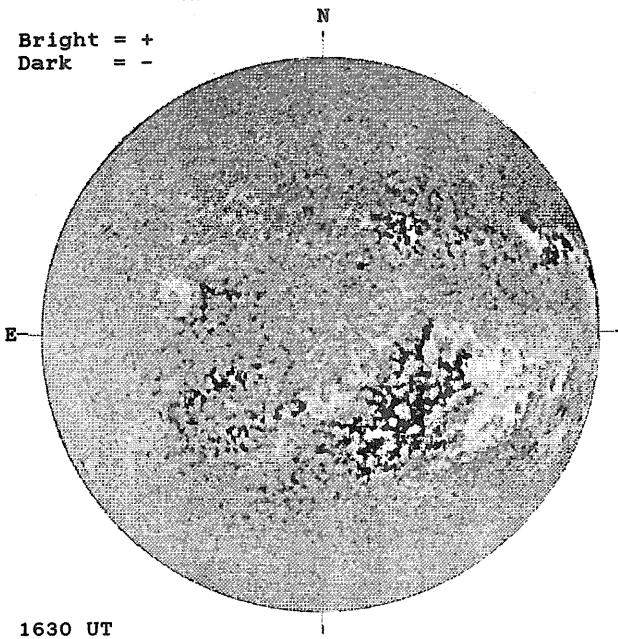


—— FeXIV, 1724 UT
.... Fe X, 1755 UT
xxxx Ca XV, 1740 UT

APRIL 22, 1991 (P=-25.51, B_o =-5.05, L_o = 169.72)

KITT PEAK MAGNETOGRAM

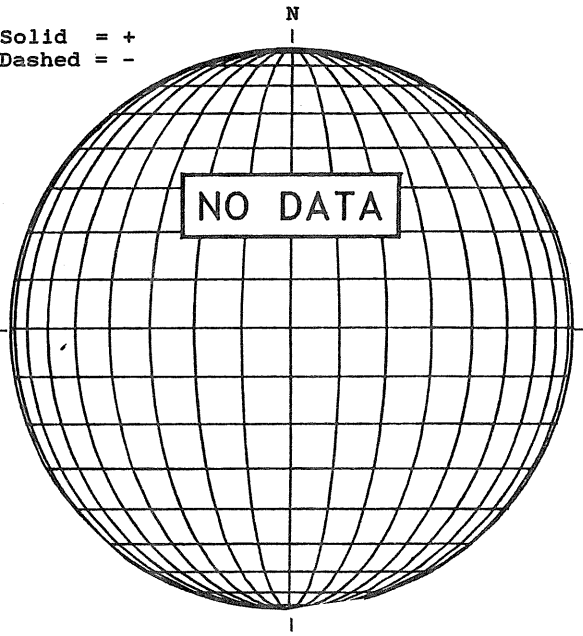
Bright = +
Dark = -



1630 UT

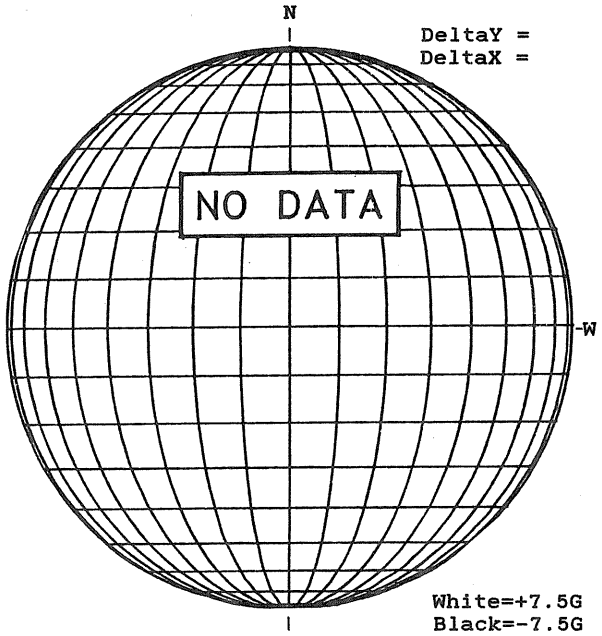
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



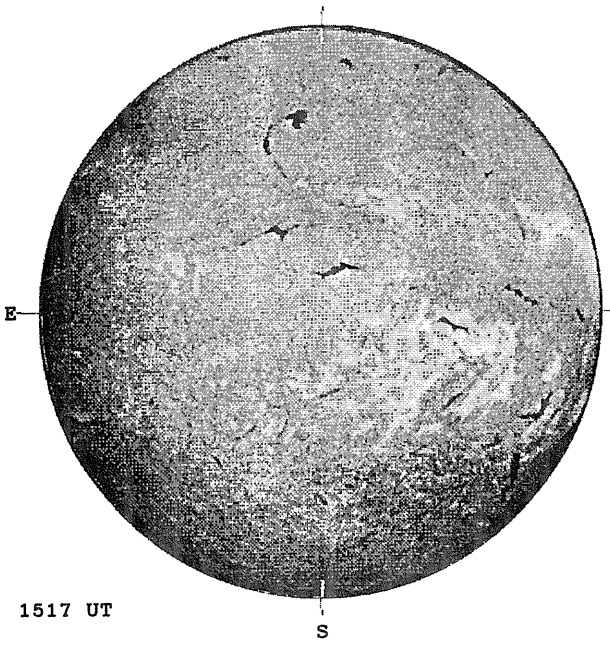
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



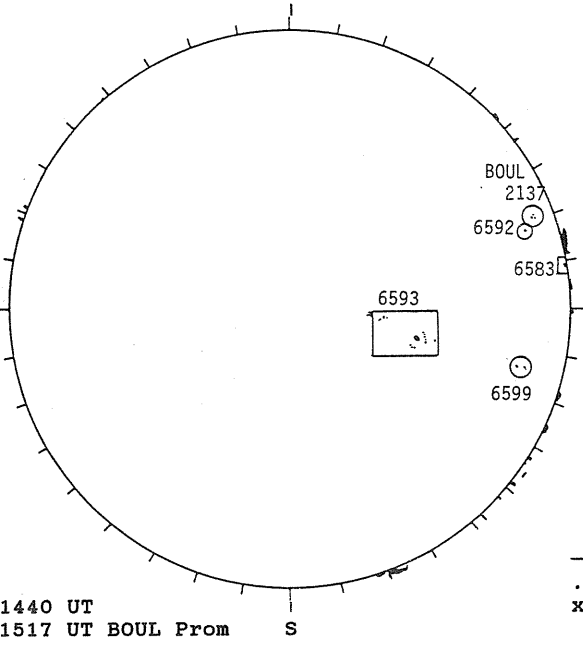
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



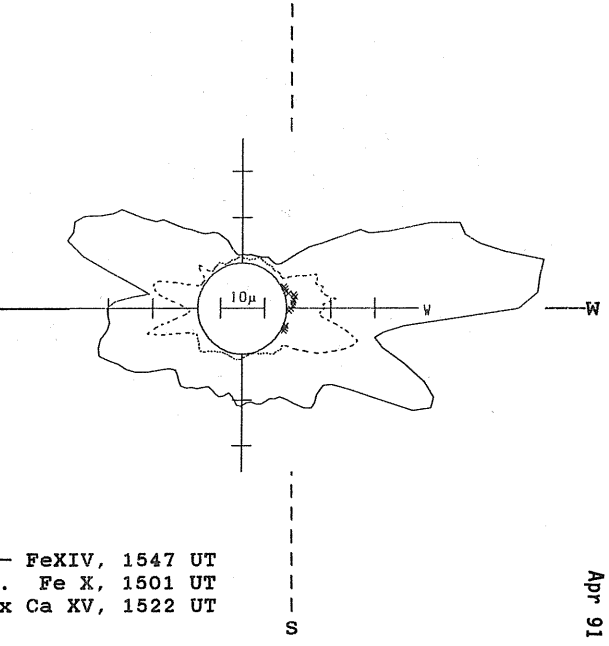
1517 UT

BOULDER SUNSPOT



1440 UT
1517 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1547 UT
.... Fe X, 1501 UT
xxxx Ca XV, 1522 UT

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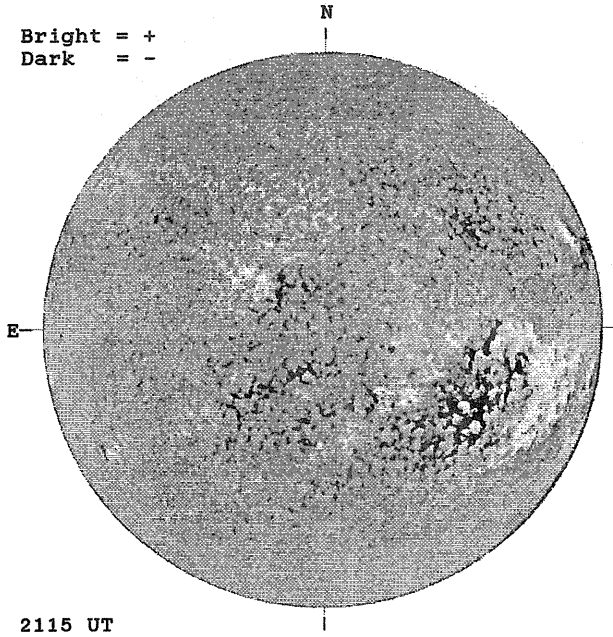
APRIL 23, 1991 (P=-25.39, B_o =-4.96, L_o = 156.51)

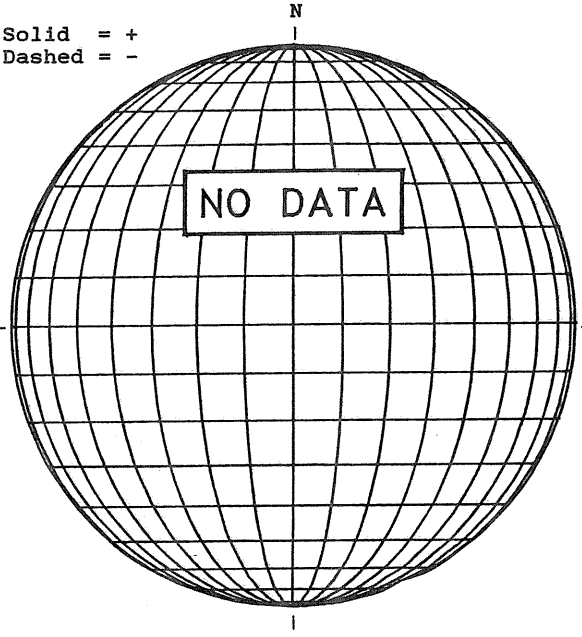
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



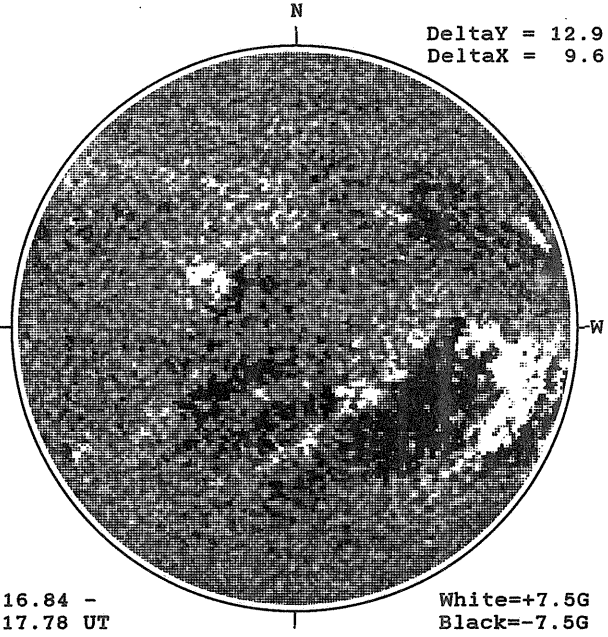
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

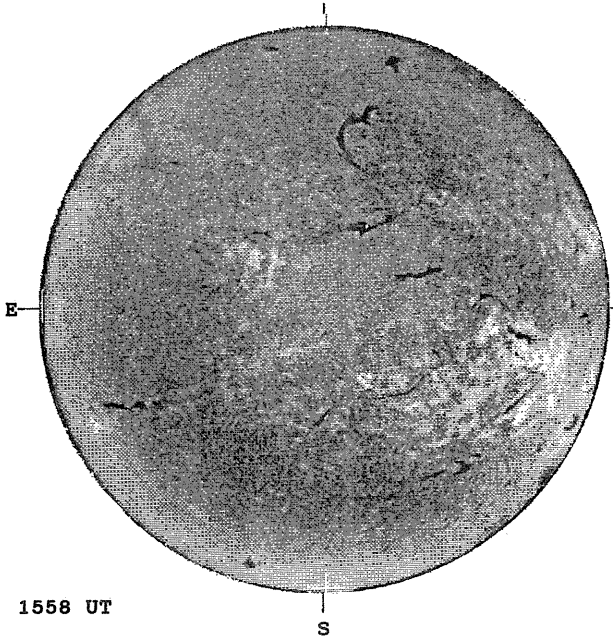


MT. WILSON MAGNETOGRAM

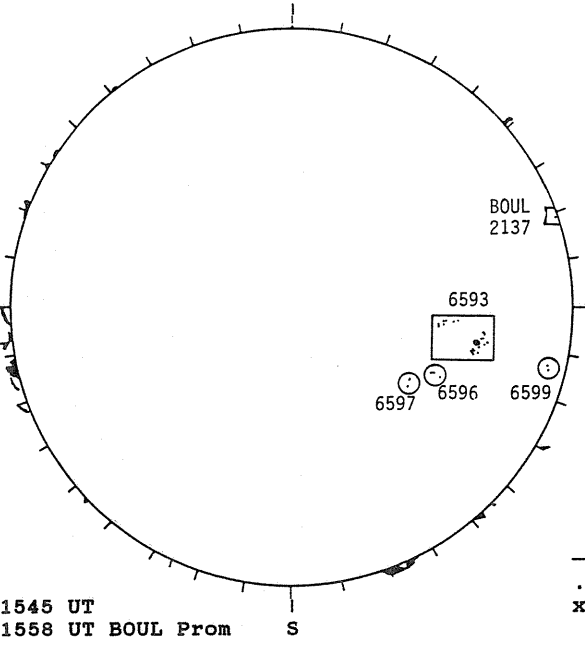
DeltaY = 12.9
DeltaX = 9.6



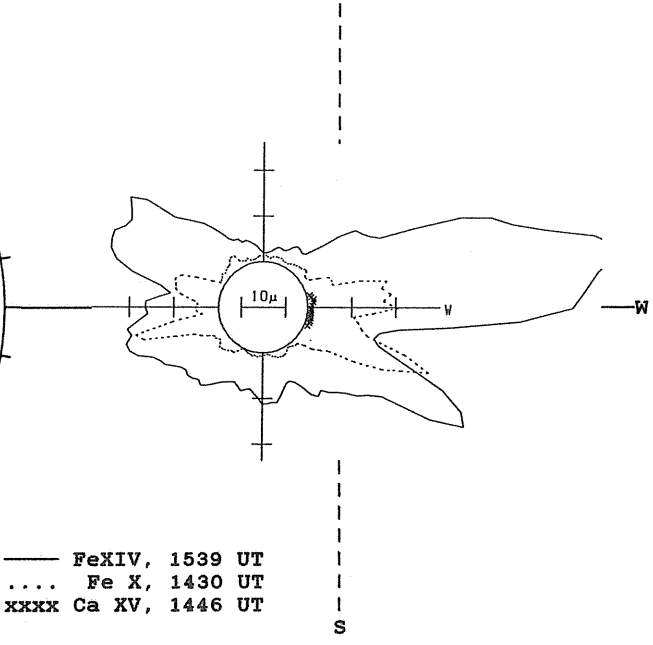
BOULDER H-ALPHA



BOULDER SUNSPOT



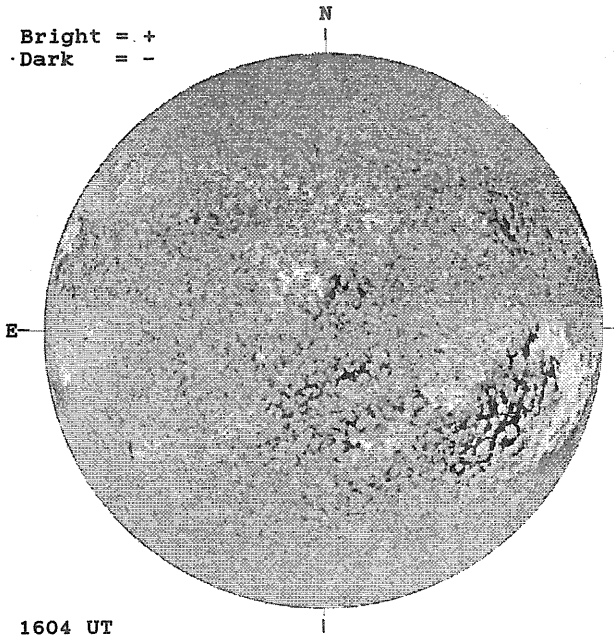
SACRAMENTO PEAK CORONA (1.15 Radii)



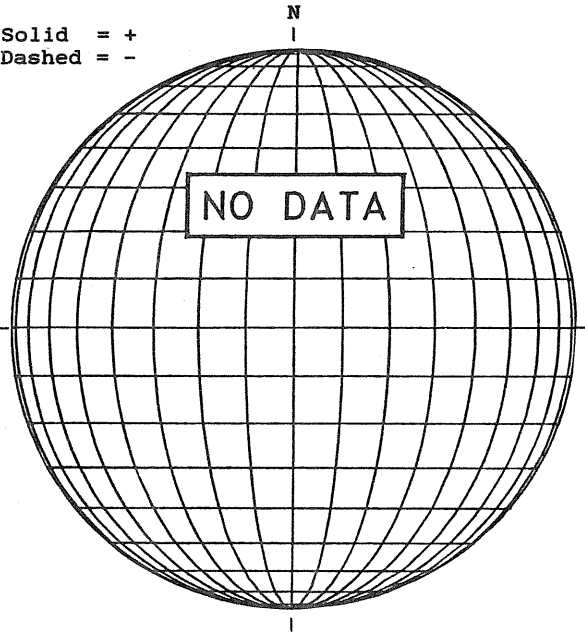
—— FeXIV, 1539 UT
.... Fe X, 1430 UT
xxxx Ca XV, 1446 UT

APRIL 24, 1991 (P=-25.27 B_o =-4.87, L_o = 143.30)

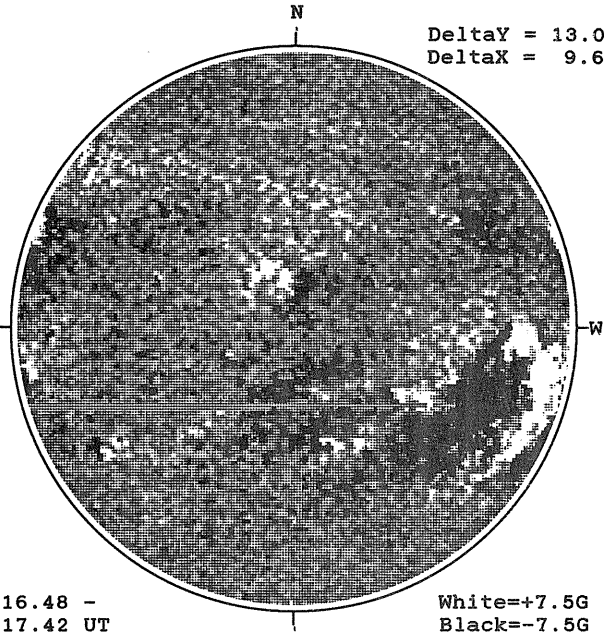
KITT PEAK MAGNETOGRAM



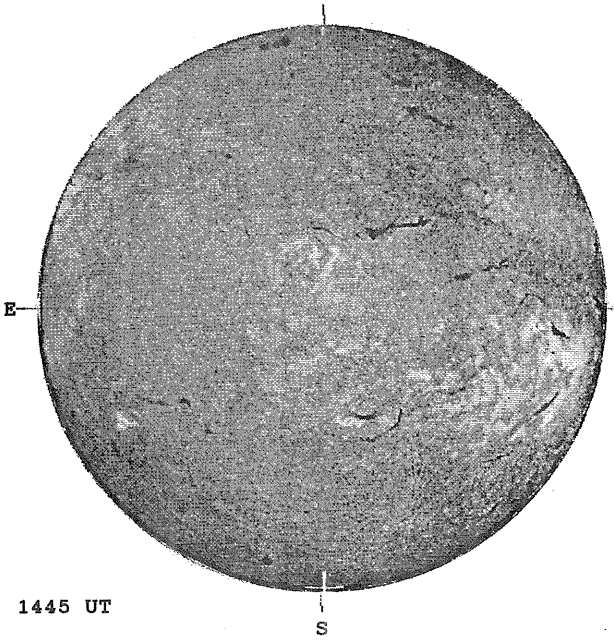
STANFORD MAGNETOGRAM



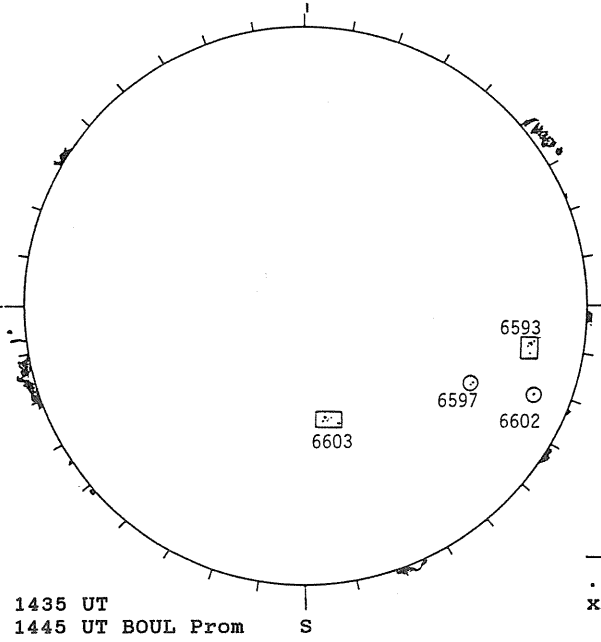
MT. WILSON MAGNETOGRAM



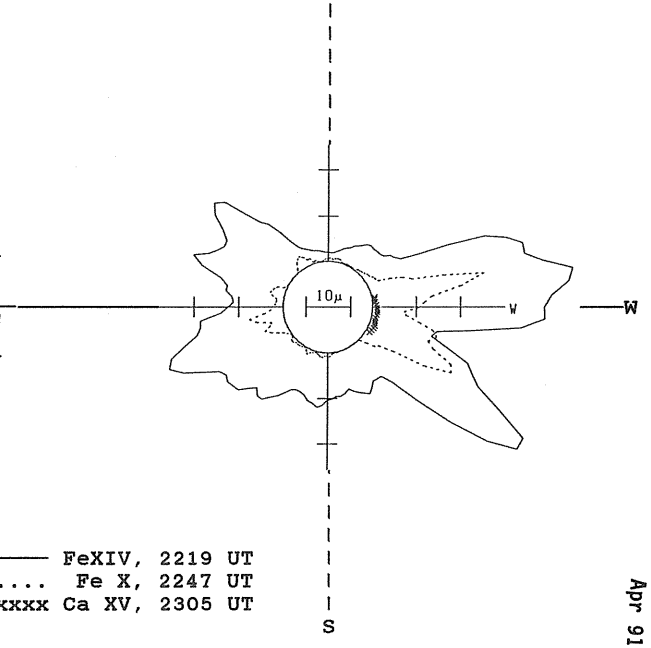
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

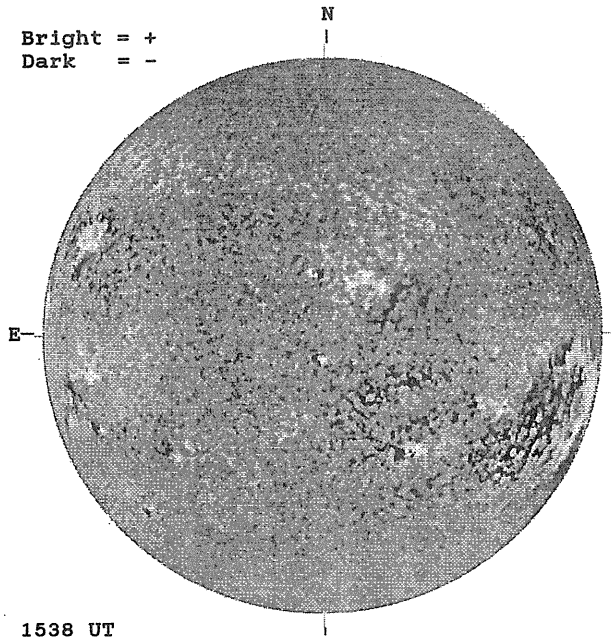


APRIL 25, 1991 (P=-25.15, B_o =-4.77, L_o = 130.09)

80
Apr 91

KITT PEAK MAGNETOGRAM

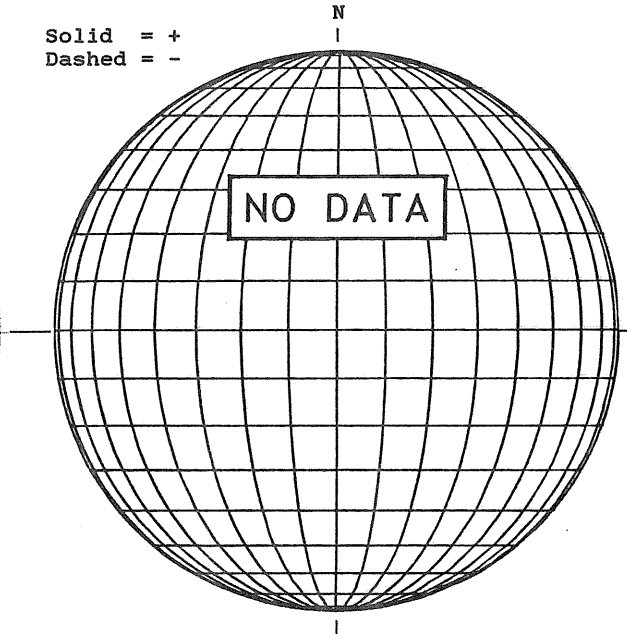
Bright = +
Dark = -



1538 UT

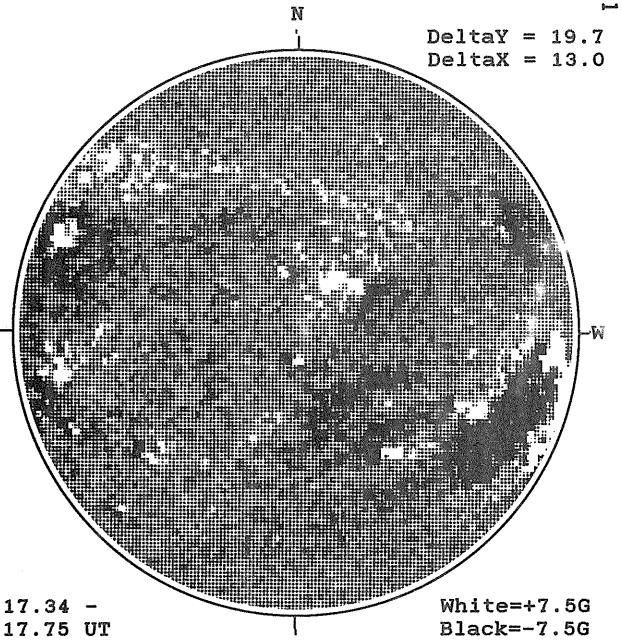
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

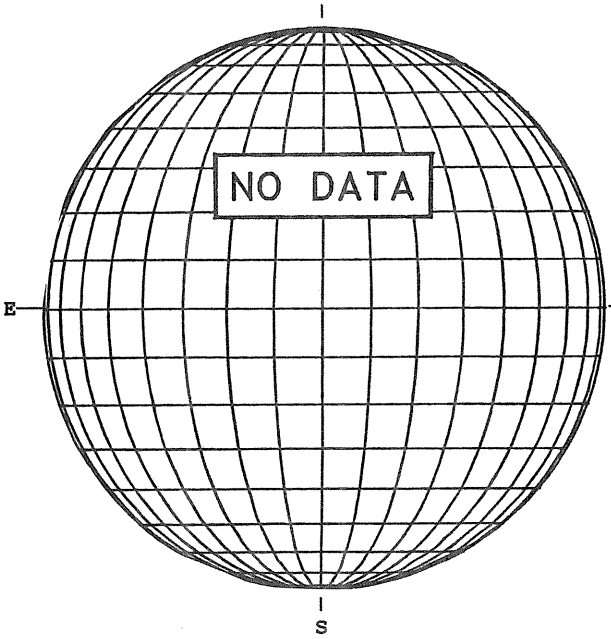
DeltaY = 19.7
DeltaX = 13.0



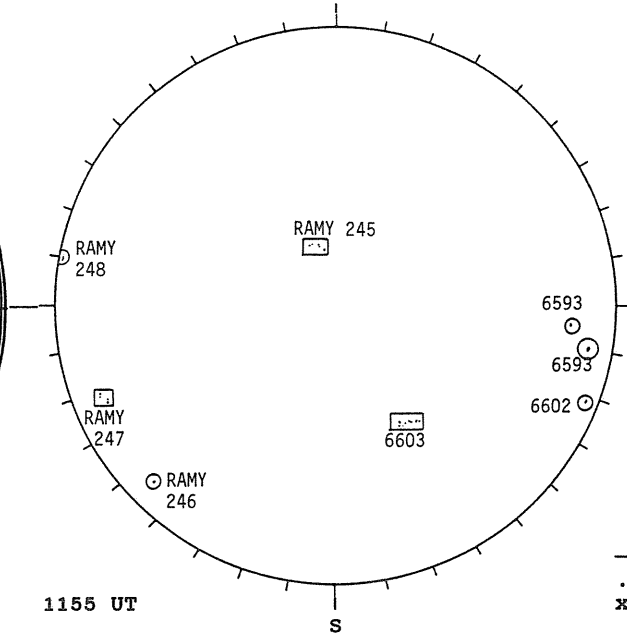
17.34 -
17.75 UT

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

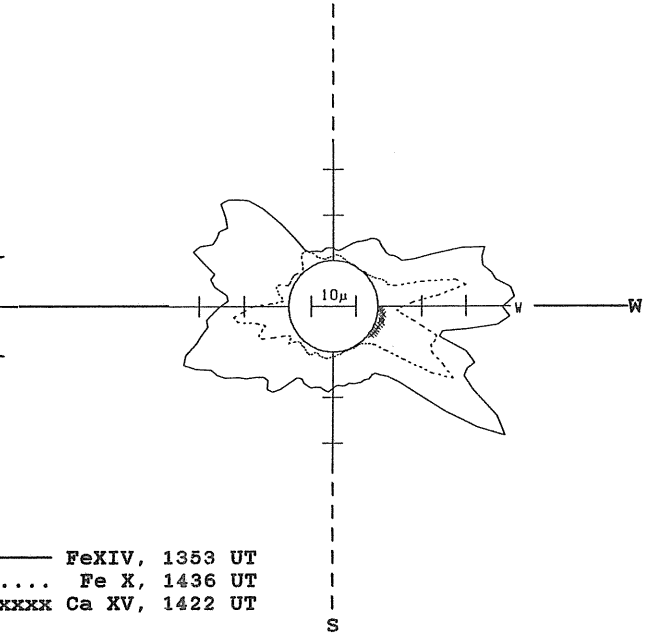


RAMEY SUNSPOT



1155 UT

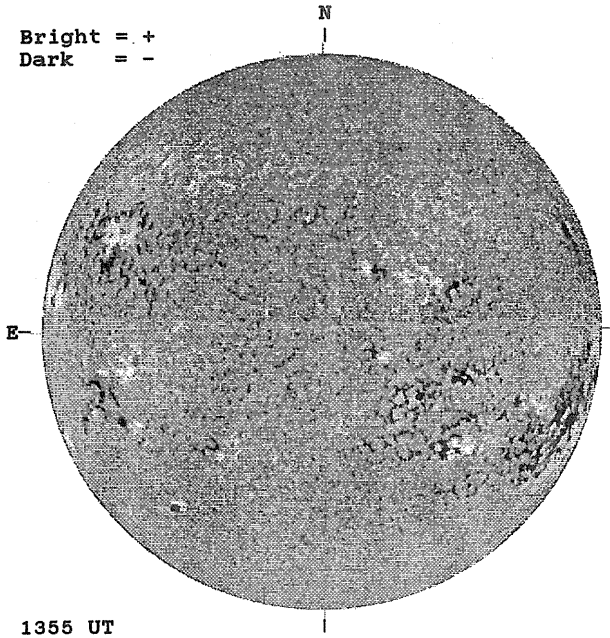
SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1353 UT
.... Fe X, 1436 UT
xxxx Ca XV, 1422 UT

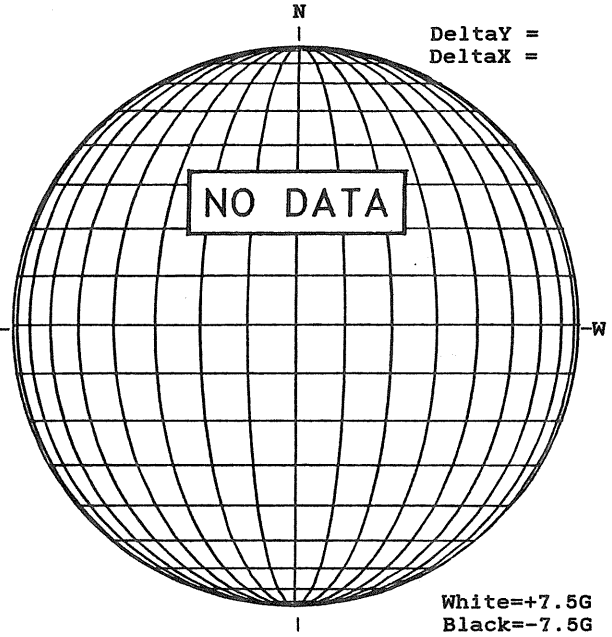
APRIL 26, 1991 (P=-25.01, B_o =-4.68, L_o = 116.88)

KITT PEAK MAGNETOGRAM

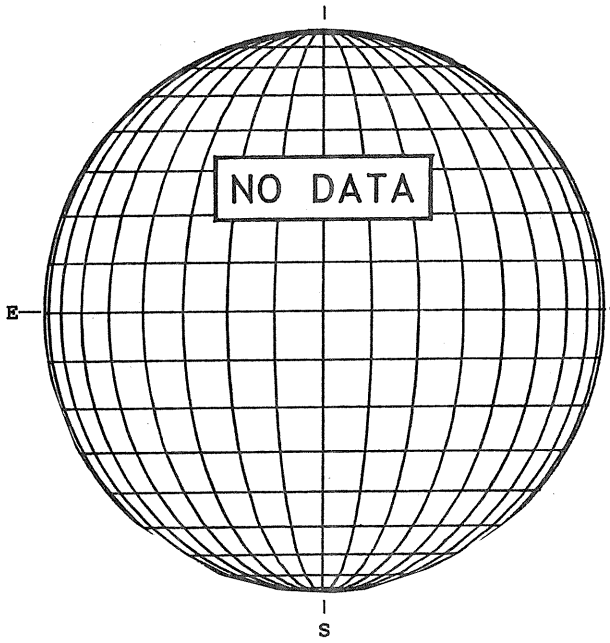


STANFORD MAGNETOGRAM

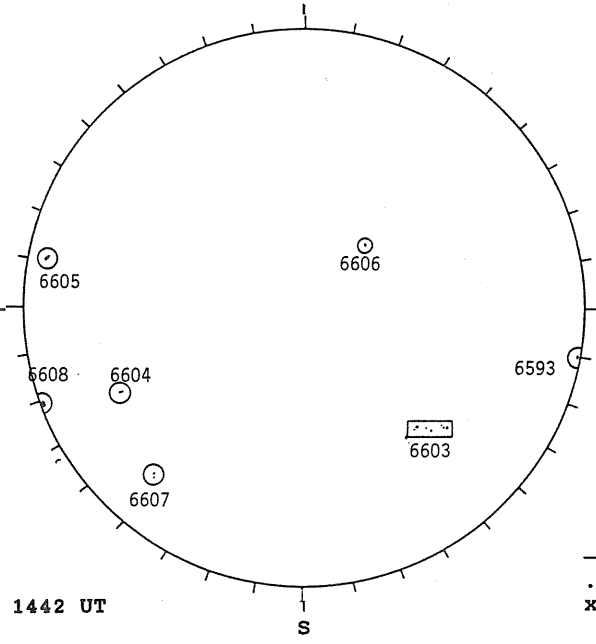
MT. WILSON MAGNETOGRAM



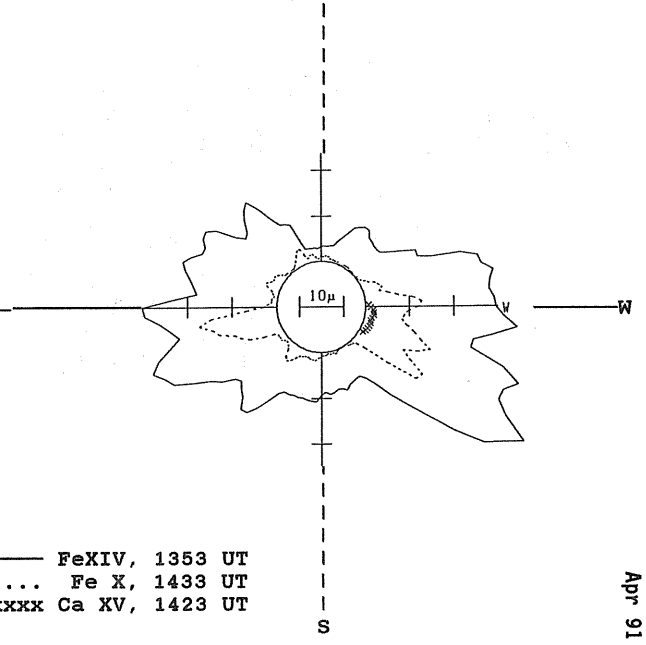
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT

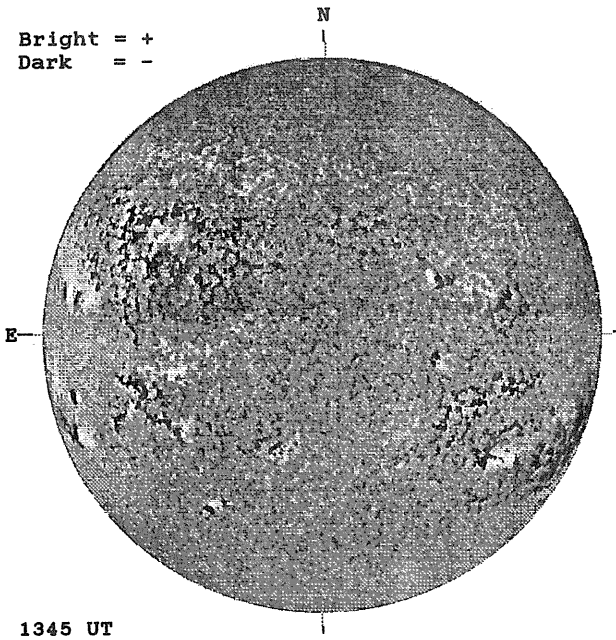


SACRAMENTO PEAK CORONA (1.15 Radii)



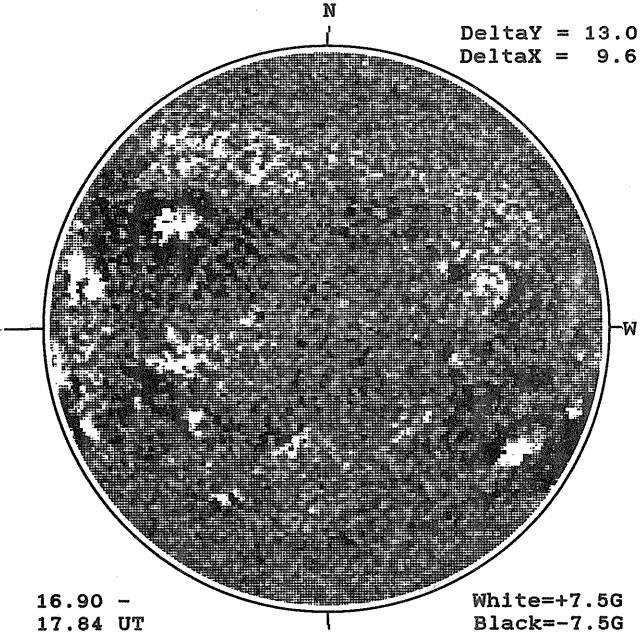
APRIL 27, 1991 (P=-24.87, B_o =-4.59, L_o = 103.67)

KITT PEAK MAGNETOGRAM

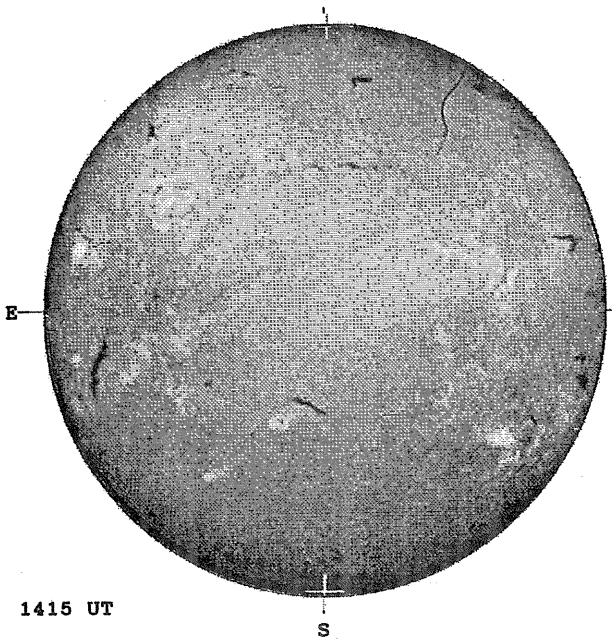


STANFORD MAGNETOGRAM

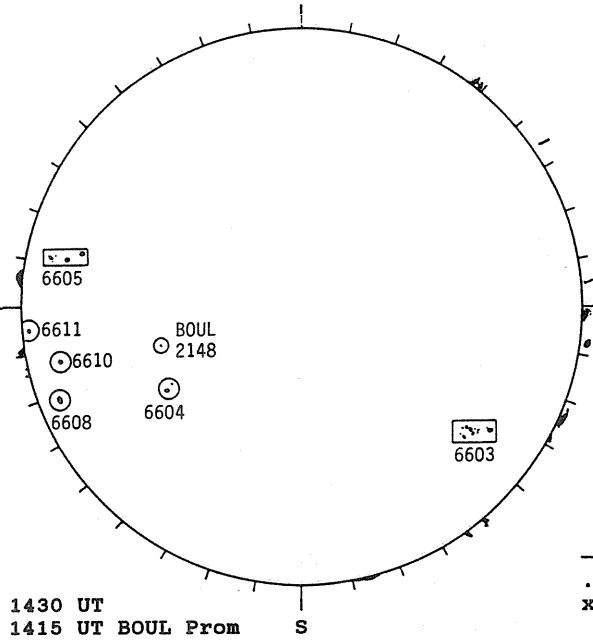
MT. WILSON MAGNETOGRAM



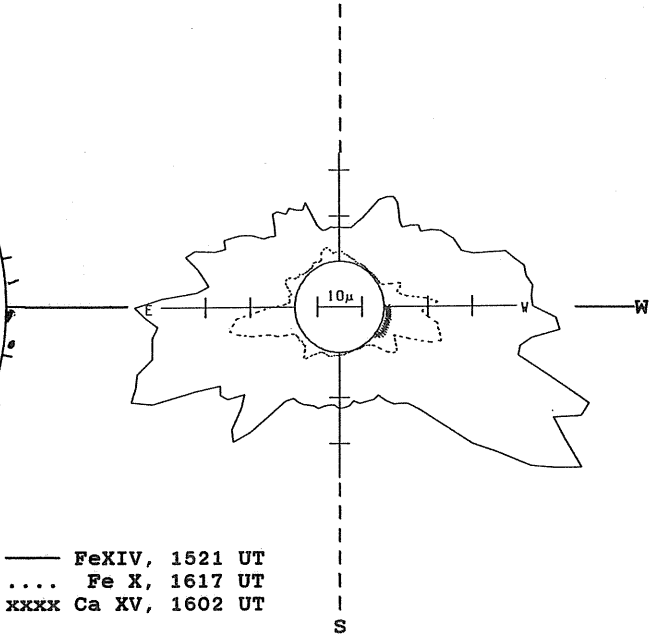
BOULDER H-ALPHA



BOULDER SUNSPOT



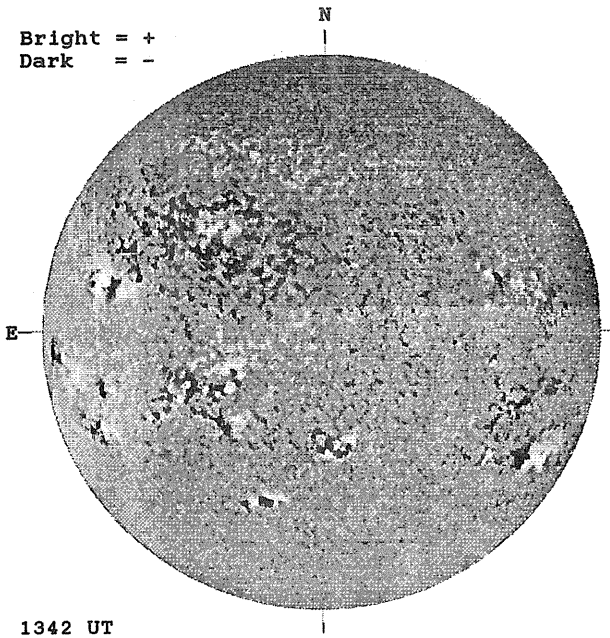
SACRAMENTO PEAK CORONA (1.15 Radii)



APRIL 28, 1991 (P=-24.73 B_o =-4.49, L_o = 90.45)

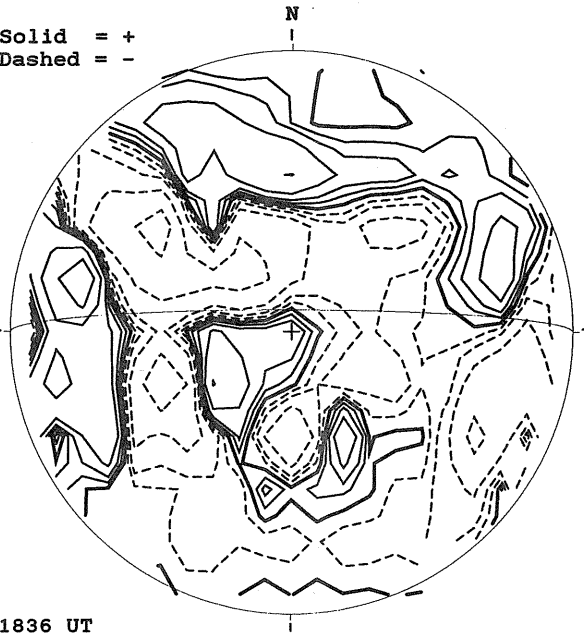
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



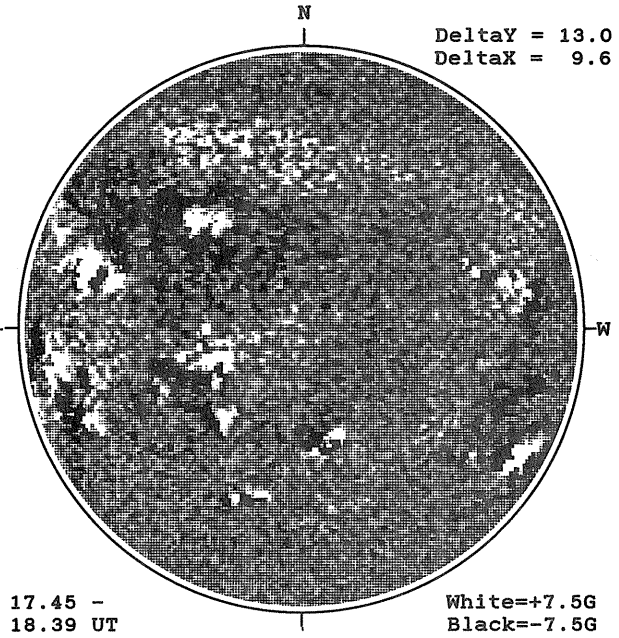
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

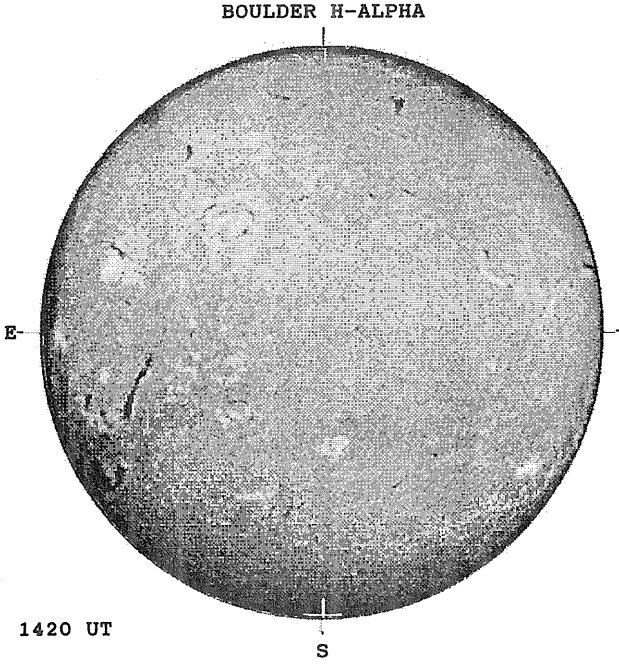


MT. WILSON MAGNETOGRAM

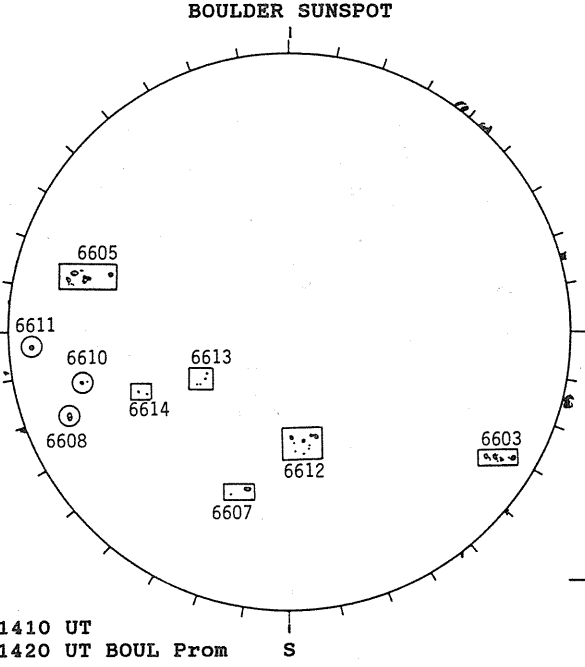
DeltaY = 13.0
DeltaX = 9.6



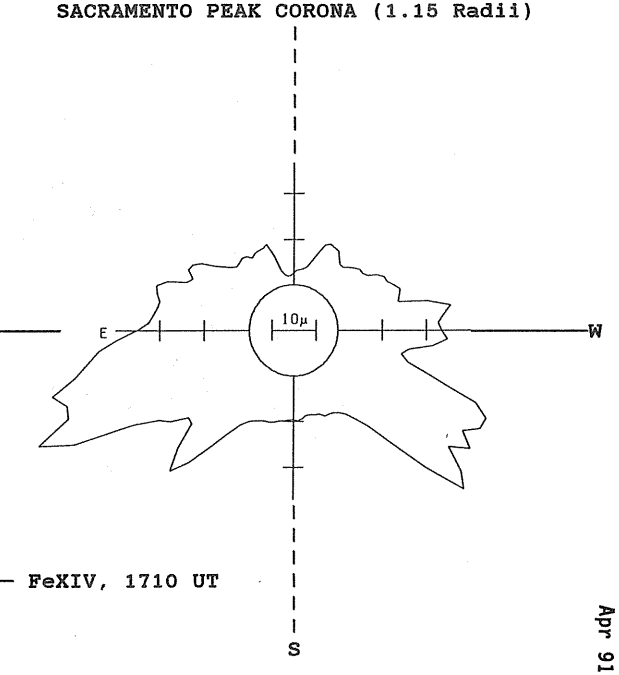
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



FeXIV, 1710 UT

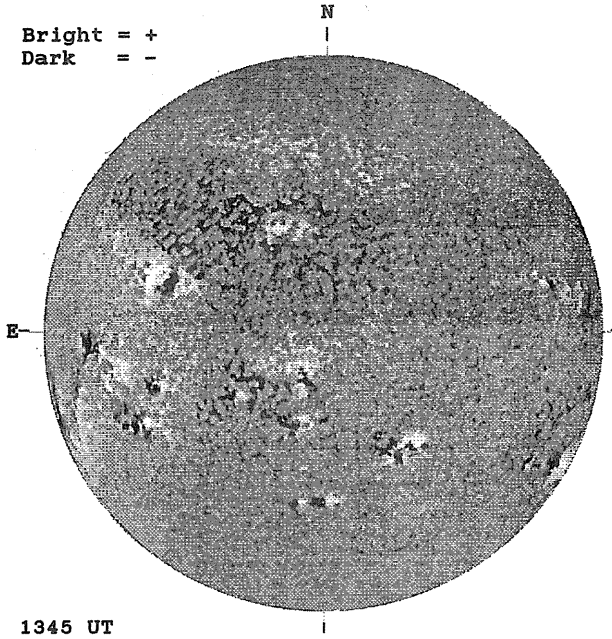
83
Apr 91

APRIL 29, 1991 (P=-24.57, B_o =-4.39, L_o = 77.24)

84
Apr 91

KITT PEAK MAGNETOGRAM

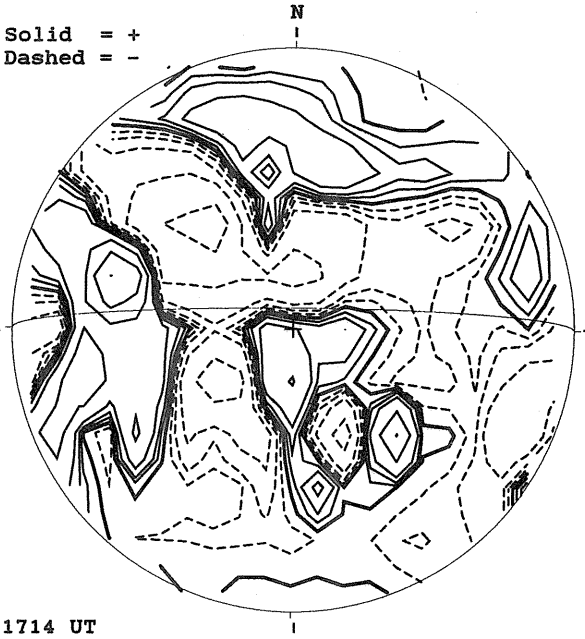
Bright = +
Dark = -



1345 UT

STANFORD MAGNETOGRAM

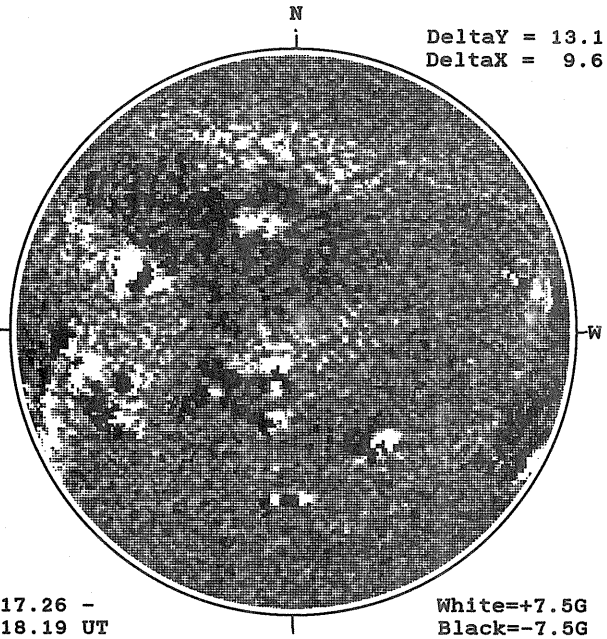
Solid = +
Dashed = -



1714 UT

MT. WILSON MAGNETOGRAM

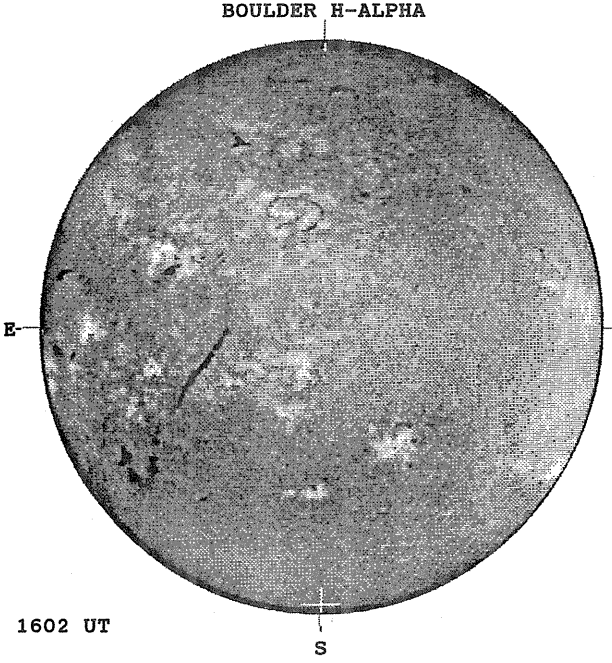
DeltaY = 13.1
DeltaX = 9.6



17.26 -
18.19 UT

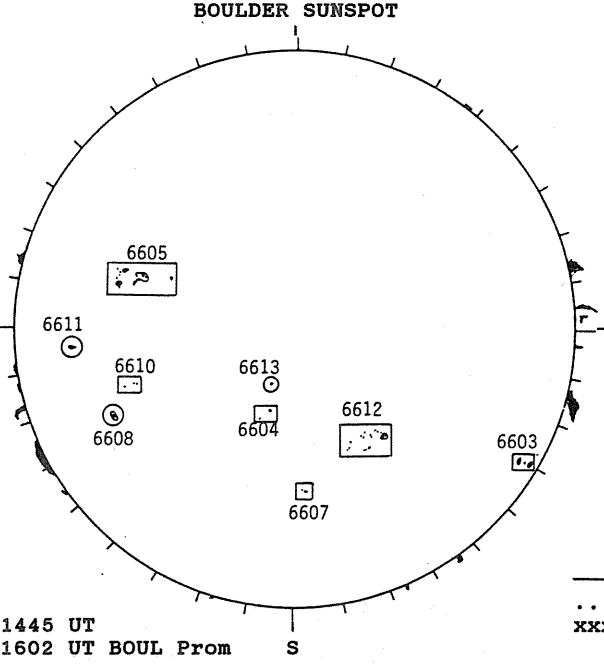
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



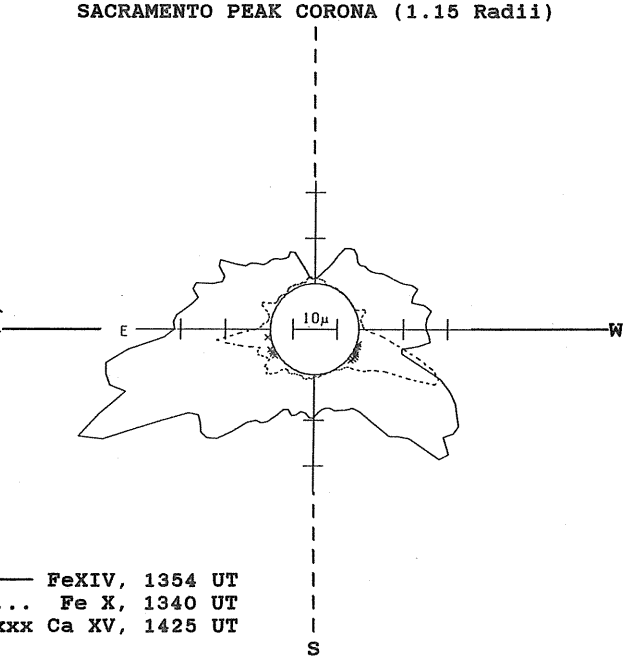
1602 UT

BOULDER SUNSPOT



1445 UT
1602 UT BOUL Prom

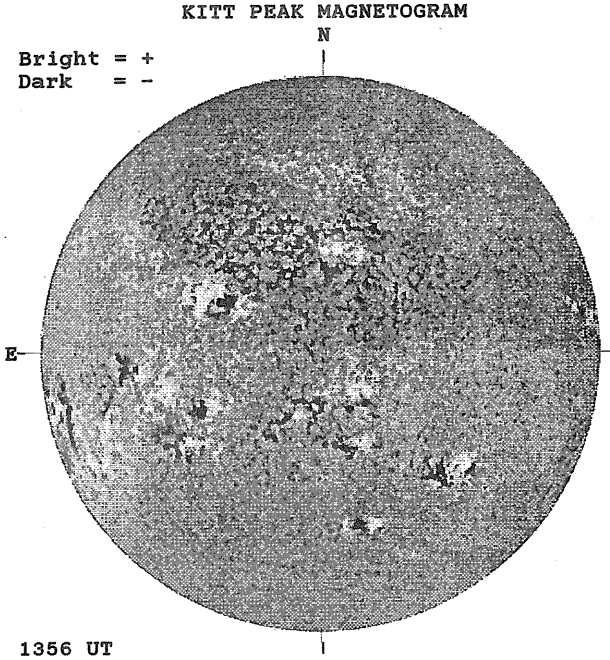
SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1354 UT
.... Fe X, 1340 UT
xxxx Ca XV, 1425 UT

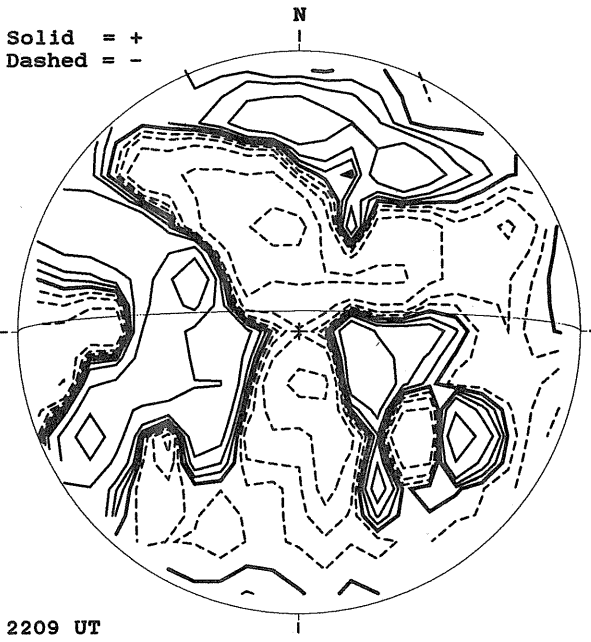
APRIL 30, 1991 (P=-24.41, B_o =-4.30, L_o = 64.02)

KITT PEAK MAGNETOGRAM



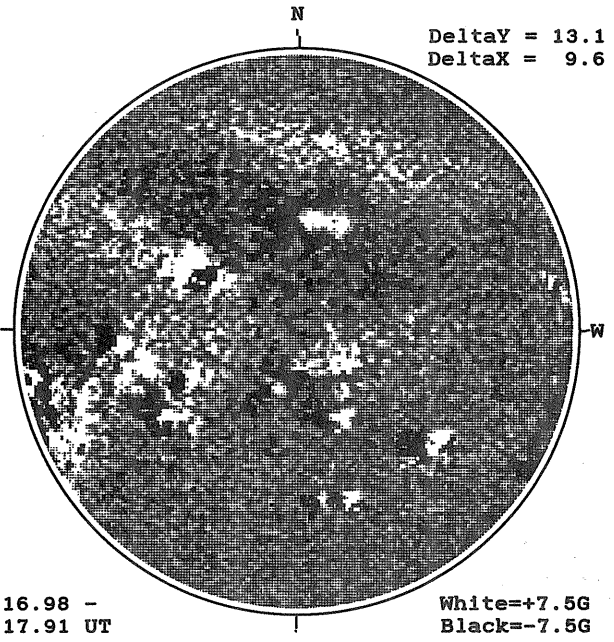
1356 UT

STANFORD MAGNETOGRAM



2209 UT

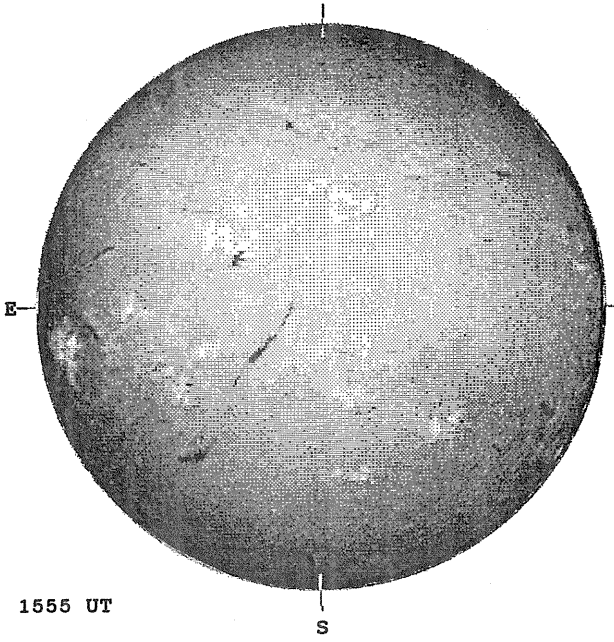
MT. WILSON MAGNETOGRAM



16.98 -
17.91 UT

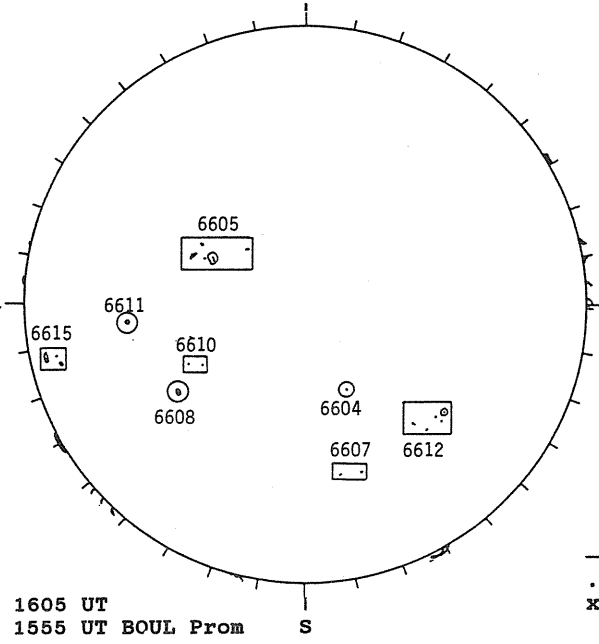
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



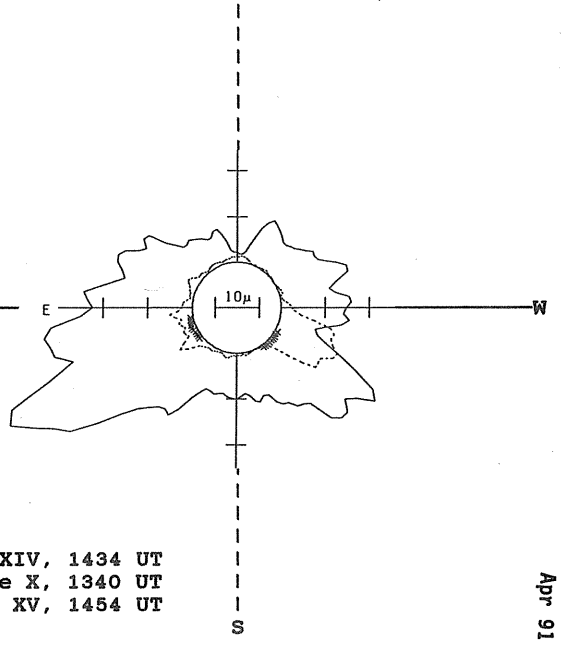
1555 UT

BOULDER SUNSPOT



1605 UT
1555 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1434 UT
.... Fe X, 1340 UT
xxxx Ca XV, 1454 UT

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Apr 91

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

APRIL 1991

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
6564A		PALE	04 01 2100	N50 W05	04 1.4		A	AX		1		4
6562		RAMY	03 28 1336	N15 E72	04 3.0		B	BXO	10	3	4	4
6562		PALE	03 28 2010	N16 E68	04 3.0		B	CSO	90	3	4	2
6562	26656	MWIL	03 28 2145	N15 E71	04 3.3	3	X					
6562		HOLL	03 28 2315	N15 E70	04 3.3		B	BXO	10	3	4	2
6562		LEAR	03 29 0010	N16 E69	04 3.2		B	BXO	30	10	6	3
6562		CULG	03 29 0120	N15 E66	04 3.0		B	BXO	20	5	8	3
6562		RAMY	03 29 1407	N15 E62	04 3.3		B	DAO	280	10	10	3
6562		HOLL	03 29 1422	N16 E60	04 3.1		B	DAI	240	17	7	3
6562	26656	MWIL	03 29 1600	N14 E59	04 3.1	5	(D)					
6562		PALE	03 29 1850	N15 E57	04 3.1		B	CKI	180	22	8	3
6562		LEAR	03 30 0043	N15 E54	04 3.1		B	DAI	360	29	8	3
6562	26656	MWIL	03 30 1530	N14 E46	04 3.1	5	(D)					
6562		HOLL	03 30 1800	N13 E45	04 3.1		BG	DAC	410	39	10	3
6562		LEAR	03 31 0018	N14 E41	04 3.1		B	DKI	360	29	10	3
6562		CULG	03 31 0025	N15 E40	04 3.0		BG	DAI	420	28	10	3
6562		RAMY	03 31 1200	N13 E36	04 3.2		BG	EAI	460	30	11	3
6562		BOUL	03 31 1535	N14 E32	04 3.1		B	EAI	290	29	11	4
6562	26656	MWIL	03 31 1545	N14 E33	04 3.1	5	(BG)					
6562		PALE	03 31 1815	N14 E33	04 3.2		BG	EKI	330	33	12	3
6562		LEAR	04 01 0026	N15 E27	04 3.1		BG	EKI	460	36	13	3
6562		CULG	04 01 0050	N14 E28	04 3.1		BG	EAI	260	60	11	3
6562		SVTO	04 01 0845	N13 E25	04 3.2		BG	EKI	310	35	12	2
6562		RAMY	04 01 1140	N13 E22	04 3.1		BG	EKO	340	61	12	3
6562		BOUL	04 01 1503	N15 E20	04 3.1		B	EKI	260	25	11	1
6562		HOLL	04 01 1630	N13 E20	04 3.2		BG	EKI	300	70	12	4
6562		PALE	04 01 2100	N14 E18	04 3.2		B	EAI	360	44	12	4
6562		CULG	04 02 0105	N14 E15	04 3.2		BG	EAI	220	45	12	2
6562		LEAR	04 02 0114	N14 E15	04 3.2		BG	EAO	260	51	13	3
6562	26656	MWIL	04 02 1530	N13 E07	04 3.2	5	(D)					
6562		RAMY	04 02 1545	N15 E07	04 3.2		BG	EAO	360	27	12	3
6562		HOLL	04 02 1640	N14 E07	04 3.2		BG	EKI	410	71	13	4
6562		PALE	04 02 1920	N14 E06	04 3.2		BG	EKO	300	49	12	2
6562		LEAR	04 03 0007	N15 E02	04 3.1		BG	EAO	250	39	14	3
6562		CULG	04 03 0045	N15 E03	04 3.2		BG	EKI	310	47	13	3
6562		RAMY	04 03 1210	N14 W03	04 3.3		BG	EAI	370	52	13	4
6562	26656	MWIL	04 03 1530	N13 W06	04 3.2	5	(D)					
6562		HOLL	04 03 1700	N15 W06	04 3.2		BG	EKC	300	43	13	2
6562		PALE	04 03 2015	N14 W08	04 3.2		BG	EKC	340	41	12	1
6562		LEAR	04 04 0022	N15 W10	04 3.2		B	EAO	240	31	10	3
6562		SVTO	04 04 0605	N15 W14	04 3.2		BG	EKI	250	33	11	4
6562		RAMY	04 04 1222	N15 W16	04 3.3		B	EKI	270	50	11	4
6562	26656	MWIL	04 04 1530	N15 W19	04 3.2	5	(G)					
6562		BOUL	04 04 1540	N14 W20	04 3.1		BG	DKI	350	20	9	2
6562		HOLL	04 04 1543	N15 W19	04 3.2		B	DKI	350	40	8	4
6562		PALE	04 04 2206	N15 W23	04 3.2		BG	DKI	180	20	8	1
6562		LEAR	04 05 0014	N17 W22	04 3.3		BG	DKI	400	24	10	3
6562		CULG	04 05 0030	N15 W24	04 3.2		BG	DKI	220	30	10	3
6562		SVTO	04 05 0740	N16 W27	04 3.3		BG	DAI	290	22	7	3
6562		RAMY	04 05 1220	N15 W29	04 3.3		BG	DKI	430	44	9	3
6562	26656	MWIL	04 05 1515	N15 W32	04 3.2	5	(BP)					
6562		HOLL	04 05 1515	N15 W33	04 3.1		BG	EKC	320	51	11	4
6562		BOUL	04 05 1540	N14 W33	04 3.1		BG	DKI	620	35	7	3
6562		PALE	04 05 2135	N15 W37	04 3.1		BG	DKI	420	30	7	4
6562		LEAR	04 06 0117	N15 W37	04 3.2		BG	DSO	460	21	8	3
6562		CULG	04 06 0140	N15 W38	04 3.2		BG	DKI	310	26	9	3
6562		SVTO	04 06 1130	N16 W42	04 3.3		BG	DAI	210	21	8	2
6562		RAMY	04 06 1200	N15 W42	04 3.3		BG	DKO	350	46	10	4
6562		HOLL	04 06 1445	N14 W46	04 3.1		BG	DKI	350	27	8	3
6562		BOUL	04 06 1545	N15 W46	04 3.2		B	DKO	250	14	7	2
6562	26656	MWIL	04 06 1600	N15 W46	04 3.2	5	(G)					
6562		PALE	04 06 1800	N14 W47	04 3.2		B	DKI	370	25	8	4
6562		LEAR	04 07 0010	N15 W50	04 3.2		B	DAO	250	23	8	3
6562		CULG	04 07 0020	N16 W52	04 3.1		BG	DKI	240	17	9	3
6562		SVTO	04 07 0930	N15 W54	04 3.3		BG	DAO	180	14	8	3
6562		RAMY	04 07 1125	N14 W56	04 3.2		B	DAO	180	10	8	3
6562	26656	MWIL	04 07 1500	N15 W60	04 3.1	5	(BG)					
6562		HOLL	04 07 1610	N14 W58	04 3.3		BD	DAC	190	12	8	4

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

APRIL 1991

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
6562		BOUL	04	07	1705	N14	W59	04	3.2		B	DAO	170	5	7	3
6562		PALE	04	07	1810	N15	W60	04	3.2		B	DAO	180	14	9	4
6562		LEAR	04	08	0010	N15	W64	04	3.2		B	DAO	210	4	8	2
6562		CULG	04	08	0107	N15	W66	04	3.0		BG	DAO	120	8	8	1
6562		SVTO	04	08	0743	N15	W67	04	3.2		BG	DAO	110	7	6	3
6562		BOUL	04	08	1350	N14	W75	04	2.9		B	CSO	130	5	9	1
6562	26656	MWIL	04	08	1615	N15	W75	04	3.0	5	(AP)					
6562		RAMY	04	08	1625	N16	W79	04	2.7		B	CAO	180	4	3	1
6562		HOLL	04	08	1805	N14	W75	04	3.1		A	HA	140	4	3	2
6562		PALE	04	08	2018	N16	W78	04	2.9		A	HS	60	1	2	2
6562		CULG	04	09	0019	N15	W81	04	2.9		A	HA	60	2	4	3
6562		LEAR	04	09	0027	N16	W80	04	2.9		B	CSO	120	2	6	4
6563		RAMY	03	28	1336	S09	E78	04	3.4		A	AX	10	2	2	4
6563		BOUL	03	28	1610	S09	E76	04	3.4		B	BXO	30	3	4	3
6563		PALE	03	28	2010	S10	E73	04	3.3		B	DSO	20	3	6	2
6563	26657	MWIL	03	28	2145	S10	E74	04	3.5	5	B					
6563		HOLL	03	28	2315	S11	E73	04	3.5		B	DSO	50	2	6	2
6563		LEAR	03	29	0010	S10	E70	04	3.3		B	CAO	60	6	6	3
6563		CULG	03	29	0120	S09	E72	04	3.4		B	BXO	10	4	8	3
6563		RAMY	03	29	1407	S10	E65	04	3.5		B	DAO	140	9	7	3
6563		HOLL	03	29	1422	S10	E64	04	3.4		B	CAO	120	8	6	3
6563	26657	MWIL	03	29	1600	S10	E63	04	3.4	5	(B)					
6563		PALE	03	29	1850	S10	E61	04	3.4		B	DSO	150	9	6	3
6563		LEAR	03	30	0043	S10	E57	04	3.3		B	DAO	300	16	8	3
6563	26657	MWIL	03	30	1530	S10	E50	04	3.4	5	(BG)					
6563		HOLL	03	30	1800	S10	E48	04	3.3		B	DKI	510	26	9	3
6563		LEAR	03	31	0018	S11	E44	04	3.3		B	DKO	490	20	8	3
6563		CULG	03	31	0025	S10	E45	04	3.4		B	DKI	480	26	9	3
6563		RAMY	03	31	1200	S11	E39	04	3.4		B	DKO	550	25	10	3
6563		BOUL	03	31	1535	S09	E35	04	3.3		B	DAO	450	17	10	4
6563	26657	MWIL	03	31	1545	S10	E36	04	3.4	5	(BG)					
6563		PALE	03	31	1815	S11	E35	04	3.4		B	DKO	490	19	10	3
6563		LEAR	04	01	0026	S09	E34	04	3.6		B	DHO	360	14	10	3
6563		CULG	04	01	0050	S10	E31	04	3.4		B	DKI	450	29	10	3
6563		SVTO	04	01	0845	S11	E27	04	3.4		B	EAO	420	23	13	2
6563		RAMY	04	01	1140	S10	E25	04	3.4		B	EKO	560	31	11	3
6563		BOUL	04	01	1503	S10	E23	04	3.3		B	DAI	310	19	10	1
6563		HOLL	04	01	1630	S10	E22	04	3.3		B	EKI	540	36	11	4
6563		PALE	04	01	2100	S11	E22	04	3.5		B	EHI	440	33	11	4
6563		CULG	04	02	0105	S10	E18	04	3.4		B	EKI	340	29	11	2
6563		LEAR	04	02	0114	S11	E17	04	3.3		B	EAO	390	27	11	3
6563		SVTO	04	02	0730	S10	E14	04	3.4		B	EAO	380	41	11	2
6563	26657	MWIL	04	02	1530	S11	E09	04	3.3	5	(BG)					
6563		RAMY	04	02	1545	S09	E10	04	3.4		B	DKO	400	26	10	3
6563		HOLL	04	02	1640	S10	E10	04	3.4		B	ESI	460	46	11	4
6563		PALE	04	02	1920	S11	E08	04	3.4		B	EHO	540	35	11	2
6563		LEAR	04	03	0007	S10	E05	04	3.4		B	EKO	370	36	11	3
6563		CULG	04	03	0045	S10	E04	04	3.3		B	EKI	370	35	11	3
6563		RAMY	04	03	1210	S10	W01	04	3.4		B	DKO	420	41	9	4
6563	26657	MWIL	04	03	1530	S11	W04	04	3.3	5	(B)					
6563		HOLL	04	03	1700	S10	W05	04	3.3		B	DKI	360	33	10	2
6563		PALE	04	03	2015	S10	W06	04	3.4		B	EKI	480	26	11	1
6563		LEAR	04	04	0022	S11	W09	04	3.3		B	EAO	370	22	12	3
6563		SVTO	04	04	0605	S10	W11	04	3.4		B	DAO	270	22	10	4
6563		RAMY	04	04	1222	S11	W15	04	3.4		B	DKO	380	46	10	4
6563	26657	MWIL	04	04	1530	S10	W17	04	3.4	5	(B)					
6563		BOUL	04	04	1540	S11	W16	04	3.4		B	DKI	230	16	10	2
6563		HOLL	04	04	1543	S10	W16	04	3.4		B	DAO	280	21	9	4
6563		PALE	04	04	2206	S10	W20	04	3.4		B	DKI	410	23	9	1
6563		LEAR	04	05	0014	S11	W22	04	3.3		B	DKI	360	29	9	3
6563		CULG	04	05	0030	S11	W20	04	3.5		B	DAO	280	30	10	3
6563		SVTO	04	05	0740	S09	W26	04	3.4		B	DSO	250	17	9	3
6563		RAMY	04	05	1220	S10	W28	04	3.4		B	DKO	340	29	9	3
6563	26657	MWIL	04	05	1515	S10	W31	04	3.3	5	(BP)					
6563		HOLL	04	05	1515	S11	W30	04	3.4		B	DKI	300	36	10	4
6563		BOUL	04	05	1540	S11	W29	04	3.5		B	DKO	330	21	9	3
6563		PALE	04	05	2135	S10	W34	04	3.3		B	EHO	280	21	10	4
6563		LEAR	04	06	0117	S11	W35	04	3.4		B	DKO	310	21	10	3

SUNSPOT GROUPS
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APRIL 1991

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
6563		CULG	04	06	0140	S11	W33	04	3.6		B	DKO	320	27	8	3
6563		SVTO	04	06	1130	S09	W42	04	3.3		B	DAO	210	14	9	2
6563		RAMY	04	06	1200	S11	W41	04	3.4		B	DKO	250	17	9	4
6563		HOLL	04	06	1445	S11	W42	04	3.4		B	DKO	270	10	10	3
6563		BOUL	04	06	1545	S10	W44	04	3.3		B	DAO	190	7	10	2
6563	26657	MWIL	04	06	1600	S11	W45	04	3.3	5	(BP)					
6563		PALE	04	06	1800	S11	W45	04	3.4		B	DAO	190	11	9	4
6563		LEAR	04	07	0010	S10	W47	04	3.5		B	DAO	210	15	9	3
6563		CULG	04	07	0020	S11	W48	04	3.4		B	DAO	150	14	9	3
6563		RAMY	04	07	1125	S11	W54	04	3.4		B	DAO	200	8	9	3
6563	26657	MWIL	04	07	1500	S11	W60	04	3.1	5	(BP)					
6563		HOLL	04	07	1610	S12	W58	04	3.3		B	DAO	170	14	8	4
6563		BOUL	04	07	1705	S11	W59	04	3.3		B	DAO	150	4	4	3
6563		PALE	04	07	1810	S11	W58	04	3.4		B	DAO	120	12	8	4
6563		LEAR	04	08	0010	S11	W64	04	3.2		B	DAO	240	4	4	2
6563		CULG	04	08	0107	S12	W65	04	3.1		B	DAO	100	6	4	1
6563		SVTO	04	08	0743	S12	W66	04	3.3		B	DAO	140	6	5	3
6563		BOUL	04	08	1350	S11	W70	04	3.3		B	DSO	140	3	5	1
6563	26657	MWIL	04	08	1615	S11	W73	04	3.2	5	(AP)					
6563		RAMY	04	08	1625	S11	W74	04	3.1		B	DAO	240	2	6	1
6563		HOLL	04	08	1805	S12	W73	04	3.2		B	DAO	80	3	6	2
6563		PALE	04	08	2018	S10	W74	04	3.3		B	DSO	90	2	3	2
6563		CULG	04	09	0019	S12	W77	04	3.2		B	DSO	60	4	4	3
6563		LEAR	04	09	0027	S11	W75	04	3.4		B	DAO	180	2	5	4
6563		RAMY	04	09	1422	S12	W88	04	3.0		A	HS	30	1	2	2
6563	26657	MWIL	04	09	1545	S12	W87	04	3.1	4	AP					
6563D	26661	MWIL	03	30	1530	N11	E54	04	3.7	4	(AP)					
6563D		CULG	04	03	0045	N10	E08	04	3.6		A	AX		1		3
6563B		HOLL	04	03	1700	S19	E06	04	4.2		A	AX		3	2	2
6563B		LEAR	04	04	0022	S19	E02	04	4.2		B	BXO	20	2	2	3
6563A	26664	MWIL	03	31	1545	S14	E51	04	4.5	4	(AF)					
6563A		PALE	03	31	1815	S15	E50	04	4.5		A	AX	10	2	2	3
6563A		CULG	04	01	0050	S15	E47	04	4.6		B	BXO		3	3	3
6565		SVTO	03	30	0655	N08	E79	04	5.2		A	HR	30	1	1	3
6565	26662	MWIL	03	30	1530	N10	E76	04	5.3	4	(B					
6565		HOLL	03	30	1800	N09	E75	04	5.4		B	DSO	70	4	9	3
6565		LEAR	03	31	0018	N08	E69	04	5.2		B	DAO	120	3	6	3
6565		CULG	03	31	0025	N10	E72	04	5.4		B	DSO	70	5	9	3
6565		RAMY	03	31	1200	N09	E65	04	5.4		B	DAO	130	7	9	3
6565		BOUL	03	31	1535	N10	E60	04	5.1		B	DAO	150	9	8	4
6565	26662	MWIL	03	31	1545	N10	E64	04	5.5	5	(B)					
6565		PALE	03	31	1815	N09	E62	04	5.4		B	DSO	140	9	10	3
6565		LEAR	04	01	0026	N11	E55	04	5.1		BG	DAO	240	13	7	3
6565		CULG	04	01	0050	N10	E58	04	5.4		B	DAO	170	13	9	3
6565		SVTO	04	01	0845	N08	E54	04	5.4		B	DAO	210	13	8	2
6565		RAMY	04	01	1140	N10	E50	04	5.2		B	DAO	240	23	10	3
6565		BOUL	04	01	1503	N10	E49	04	5.3		B	DAI	200	15	8	1
6565		HOLL	04	01	1630	N09	E48	04	5.3		B	DAI	330	34	10	4
6565		PALE	04	01	2100	N09	E46	04	5.3		B	DAI	320	31	10	4
6565		CULG	04	02	0105	N10	E44	04	5.3		B	DAO	320	29	10	2
6565		LEAR	04	02	0114	N09	E44	04	5.3		B	DAO	240	19	10	3
6565		SVTO	04	02	0730	N10	E41	04	5.4		B	DAO	150	21	9	2
6565	26662	MWIL	04	02	1530	N10	E35	04	5.3	5	(BG)					
6565		RAMY	04	02	1545	N11	E37	04	5.4		B	EAO	310	20	11	3
6565		HOLL	04	02	1640	N09	E34	04	5.2		B	EAO	300	31	11	4
6565		PALE	04	02	1920	N08	E33	04	5.3		B	EAO	220	24	11	2
6565		LEAR	04	03	0007	N09	E31	04	5.3		B	EAO	220	19	12	3
6565		CULG	04	03	0045	N10	E31	04	5.4		B	DAO	200	25	10	3
6565		RAMY	04	03	1210	N11	E25	04	5.4		B	EAO	300	44	12	4
6565	26662	MWIL	04	03	1530	N09	E22	04	5.3	5	(BG)					
6565		HOLL	04	03	1700	N11	E22	04	5.4		B	EKI	260	39	12	2
6565		PALE	04	03	2015	N09	E19	04	5.3		B	EAI	260	30	12	1
6565		LEAR	04	04	0022	N09	E17	04	5.3		B	EAO	230	28	12	3
6565		SVTO	04	04	0605	N10	E14	04	5.3		B	EAI	180	24	11	4
6565		RAMY	04	04	1222	N10	E10	04	5.3		B	EAO	280	33	11	4

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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
6565	26662	MWIL	04	04	1530	N10	E10	04	5.4	5	(B)					
6565		BOUL	04	04	1540	N09	E06	04	5.1		B	EAO	270	15	11	2
6565		HOLL	04	04	1543	N10	E09	04	5.3		B	EAI	260	30	11	4
6565		PALE	04	04	2206	N09	E06	04	5.4		B	EAI	200	17	11	1
6565		LEAR	04	05	0014	N10	E03	04	5.2		B	EAO	350	24	12	3
6565		CULG	04	05	0030	N10	E03	04	5.2		B	EAO	240	26	11	3
6565		SVTO	04	05	0740	N10	E00	04	5.3		B	EAO	190	25	11	3
6565		RAMY	04	05	1220	N10	W02	04	5.4		B	EAO	210	37	11	3
6565	26662	MWIL	04	05	1515	N10	W04	04	5.3	5	(B)					
6565		HOLL	04	05	1515	N10	W05	04	5.2		B	EKI	250	43	12	4
6565		BOUL	04	05	1540	N09	W05	04	5.3		B	DAI	240	31	10	3
6565		PALE	04	05	2135	N10	W09	04	5.2		B	EAO	220	25	11	4
6565		LEAR	04	06	0117	N10	W09	04	5.4		B	EAO	360	20	14	3
6565		CULG	04	06	0140	N10	W10	04	5.3		B	EAO	240	29	11	3
6565		SVTO	04	06	1130	N09	W17	04	5.2		B	EAO	140	17	12	2
6565		RAMY	04	06	1200	N10	W15	04	5.4		B	EAO	220	37	12	4
6565		HOLL	04	06	1445	N09	W19	04	5.2		B	ESI	200	25	12	3
6565		BOUL	04	06	1545	N09	W18	04	5.3		B	EAO	200	19	11	2
6565	26662	MWIL	04	06	1600	N10	W18	04	5.3	5	(B)					
6565		PALE	04	06	1800	N09	W19	04	5.3		B	ESO	220	26	12	4
6565		LEAR	04	07	0010	N10	W22	04	5.3		B	EAO	190	31	12	3
6565		CULG	04	07	0020	N10	W23	04	5.3		B	EAO	120	27	12	3
6565		RAMY	04	07	1125	N09	W28	04	5.4		B	EAO	180	35	14	3
6565	26662	MWIL	04	07	1500	N10	W32	04	5.2	5	(B)					
6565		HOLL	04	07	1610	N09	W32	04	5.3		B	ESO	150	17	13	4
6565		BOUL	04	07	1705	N10	W32	04	5.3		B	EAO	130	10	11	3
6565		PALE	04	07	1810	N09	W34	04	5.2		B	EAO	140	18	11	4
6565		LEAR	04	08	0010	N10	W37	04	5.2		B	CSO	200	6	12	2
6565		CULG	04	08	0107	N10	W37	04	5.3		B	CAO	90	14	13	1
6565		SVTO	04	08	0743	N09	W40	04	5.3		B	EAO	110	15	13	3
6565		BOUL	04	08	1350	N09	W42	04	5.4		B	CSI	60	6	11	1
6565	26662	MWIL	04	08	1615	N10	W46	04	5.2	5	(BP)					
6565		RAMY	04	08	1625	N10	W44	04	5.4		B	CAO	170	13	13	1
6565		HOLL	04	08	1805	N09	W46	04	5.3		B	CSO	150	10	12	2
6565		PALE	04	08	2018	N11	W48	04	5.2		B	CSO	80	8	13	2
6565		CULG	04	09	0019	N09	W49	04	5.3		B	CSO	80	7	13	3
6565		LEAR	04	09	0027	N10	W51	04	5.2		B	CSO	130	5	8	4
6565		SVTO	04	09	0750	N10	W56	04	5.1		B	DAO	90	7	10	4
6565		RAMY	04	09	1422	N09	W58	04	5.2		B	CSO	70	8	10	2
6565		BOUL	04	09	1426	N11	W64	04	4.8		A	HS	90	1	2	1
6565	26662	MWIL	04	09	1545	N09	W60	04	5.1	5	(BP)					
6565		PALE	04	09	2040	N10	W67	04	4.8		A	HS	100	1	2	3
6565		LEAR	04	10	0100	N09	W68	04	4.9		A	HS	110	1	2	3
6565		CULG	04	10	0100	N10	W70	04	4.8		A	HS	60	3	2	3
6565		SVTO	04	10	0730	N10	W75	04	4.7		A	HA	90	1	2	3
6565		BOUL	04	10	1350	N09	W76	04	4.9		A	HA	60	1	2	1
6565		RAMY	04	10	1355	N08	W75	04	4.9		A	HA	60	1	2	3
6565	26662	MWIL	04	10	1530	N09	W78	04	4.8	4	(AP)					
6565		PALE	04	10	1917	N08	W79	04	4.9		A	HS	60	1	2	4
6565		CULG	04	11	0100	N09	W84	04	4.7		A	HS	60	1	2	3
6571		SVTO	04	02	0730	S11	E43	04	5.5		A	AX		2		2
6571		RAMY	04	03	1210	S12	E28	04	5.6		A	AX	10	1	1	4
6571		RAMY	04	04	1222	S11	E13	04	5.5		B	BXO	10	7	4	4
6571		SVTO	04	05	0740	S11	E02	04	5.5		A	AX		2	1	3
6571		RAMY	04	05	1220	S11	E01	04	5.6		B	BXO	10	5	5	3
6571	26675	MWIL	04	05	1515	S10	W02	04	5.5	3	(B)					
6571		HOLL	04	05	1515	S11	W02	04	5.5		B	BXO	10	9	4	4
6571		PALE	04	05	2135	S10	W08	04	5.3		A	AX		2	1	4
6571		SVTO	04	06	1130	S09	W16	04	5.3		B	BXO	10	2	2	2
6571		RAMY	04	06	1200	S10	W13	04	5.5		B	BXO	20	10	5	4
6571		HOLL	04	06	1445	S10	W17	04	5.3		A	AX	10	2	1	3
6571		BOUL	04	06	1545	S10	W17	04	5.4		A	AX		1		2
6571	26675	MWIL	04	06	1600	S09	W17	04	5.4	4	(AP)					
6571		PALE	04	06	1800	S10	W19	04	5.3		A	AX	10	1	1	4
6571		LEAR	04	07	0010	S11	W21	04	5.4		B	BXO		3	3	3
6571		CULG	04	07	0020	S09	W22	04	5.4		A	AX		1		3
6573		RAMY	04	05	1220	S50	W01	04	5.4		B	BXO	10	2	3	3

S U N S P O T G R O U P S
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APRIL 1991

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
6573		HOLL	04	05	1515	S49	E00	04	5.6		B	BXO	10	2	3	4
6573	26676	MWIL	04	05	1515	S50	W00	04	5.6	4	(B)					
6573		BOUL	04	05	1540	S49	W01	04	5.6		B	BXO	10	3	4	3
6573		PALE	04	05	2135	S50	W05	04	5.5		B	BXO	10	2	3	4
6573		LEAR	04	06	0117	S48	W04	04	5.7		B	BXO	20	2	4	3
6573		CULG	04	06	0140	S48	W06	04	5.6		B	BXO		2	3	3
6573		RAMY	04	06	1200	S49	W11	04	5.6		B	BXO	10	4	3	4
6573		HOLL	04	06	1445	S49	W09	04	5.8		A	AX		1		3
6573	26676	MWIL	04	06	1600	S49	W13	04	5.6	3	(B)					
6573		PALE	04	06	1800	S48	W12	04	5.7		A	AX	10	2	1	4
6573		RAMY	04	07	1125	S51	W22	04	5.6		B	BXO	10	2	2	3
6572		CULG	04	03	0045	S12	E34	04	5.6		A	AX		2	1	3
6572		RAMY	04	04	1222	S19	E15	04	5.6		A	AX		1		4
6572	26669	MWIL	04	04	1530	S19	E13	04	5.6	4	(AP)					
6572		HOLL	04	04	1543	S18	E13	04	5.6		A	AX	10	1	1	4
6572		SVTO	04	05	0740	S19	E05	04	5.7		B	BXO	10	3	3	3
6572		RAMY	04	05	1220	S18	E03	04	5.7		B	BXO	10	3	3	3
6572		HOLL	04	05	1515	S19	E01	04	5.7		B	BXO	10	6	4	4
6572	26669	MWIL	04	05	1515	S19	E01	04	5.7	4	(B)					
6572		PALE	04	05	2135	S19	W03	04	5.7		B	CRO	20	4	4	4
6572		LEAR	04	06	0117	S19	W05	04	5.7		B	DSO	70	9	5	3
6572		CULG	04	06	0140	S18	W05	04	5.7		B	CSO	20	6	4	3
6572		SVTO	04	06	1130	S19	W12	04	5.6		B	DSO	30	9	5	2
6572		RAMY	04	06	1200	S19	W11	04	5.7		B	DRO	30	12	5	4
6572		HOLL	04	06	1445	S19	W12	04	5.7		B	BXO	20	11	5	3
6572		BOUL	04	06	1545	S20	W14	04	5.6		B	CSO	20	6	4	2
6572	26669	MWIL	04	06	1600	S19	W13	04	5.7	5	(B)					
6572		PALE	04	06	1800	S19	W14	04	5.7		B	BXO	20	10	6	4
6572		LEAR	04	07	0010	S19	W18	04	5.6		B	BXO	10	4	5	3
6572		CULG	04	07	0020	S19	W17	04	5.7		B	CRO	10	12	6	3
6572		RAMY	04	07	1125	S20	W24	04	5.6		B	CRO	20	11	5	3
6572	26669	MWIL	04	07	1500	S20	W27	04	5.5	4	(B)					
6572		HOLL	04	07	1610	S20	W27	04	5.6		B	BXO	30	13	6	4
6572		BOUL	04	07	1705	S18	W27	04	5.6		B	CSO	20	4	4	3
6572		PALE	04	07	1810	S19	W28	04	5.6		B	DRO	30	11	5	4
6572		LEAR	04	08	0010	S19	W31	04	5.6		B	CSO	70	5	5	2
6572		CULG	04	08	0107	S20	W32	04	5.6		B	DRO	10	8	5	1
6572		SVTO	04	08	0743	S20	W35	04	5.6		B	DSO	40	9	7	3
6572		BOUL	04	08	1350	S19	W38	04	5.7		B	CSO	40	3	5	1
6572	26669	MWIL	04	08	1615	S20	W40	04	5.6	5	(B)					
6572		RAMY	04	08	1625	S20	W40	04	5.6		B	DAO	40	5	7	1
6572		HOLL	04	08	1805	S20	W41	04	5.6		B	DRO	50	6	6	2
6572		PALE	04	08	2018	S19	W43	04	5.6		B	DSO	40	5	7	2
6572		CULG	04	09	0019	S20	W44	04	5.6		B	CRO	10	8	6	3
6572		LEAR	04	09	0027	S19	W44	04	5.7		B	DSO	80	10	7	4
6572		SVTO	04	09	0750	S18	W50	04	5.5		B	DAO	90	10	7	4
6572		RAMY	04	09	1422	S19	W52	04	5.6		B	DSO	100	10	7	2
6572		BOUL	04	09	1426	S19	W52	04	5.6		B	DAO		5	7	1
6572		HOLL	04	09	1514	S20	W53	04	5.6		B	DAO	110	8	7	3
6572	26669	MWIL	04	09	1545	S20	W53	04	5.6	5	(B)					
6572		PALE	04	09	2040	S20	W55	04	5.6		B	DAO	190	10	6	3
6572		CULG	04	10	0100	S20	W59	04	5.5		B	DAO	170	12	8	3
6572		SVTO	04	10	0730	S19	W62	04	5.6		B	DAO	180	8	8	3
6572		BOUL	04	10	1350	S20	W64	04	5.7		B	DAO	170	3	9	1
6572		RAMY	04	10	1355	S20	W65	04	5.6		B	DAO	170	4	8	3
6572		HOLL	04	10	1442	S21	W66	04	5.5		B	DSO	100	7	8	3
6572	26669	MWIL	04	10	1530	S20	W66	04	5.6	5	(B)					
6572		PALE	04	10	1917	S21	W69	04	5.5		B	DAO		3	7	4
6572		LEAR	04	11	0008	S21	W69	04	5.7		B	DAO	140	3	8	3
6572		CULG	04	11	0100	S20	W72	04	5.5		B	DAO	130	5	9	3
6572		RAMY	04	11	1414	S20	W77	04	5.7		B	DAO	240	3	10	3
6572		HOLL	04	11	1440	S21	W77	04	5.7		B	DSO	180	2	9	3
6572	26669	MWIL	04	11	1630	S20	W79	04	5.6	4	(B)					
6572		CULG	04	12	0045	S21	W83	04	5.7		B	DAO	60	2	9	3
6572B		PALE	04	05	2135	S20	E03	04	6.1		B	BXO	10	3	3	4
6572A		RAMY	04	05	1220	S08	E07	04	6.0		A	AX		1		3

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

APRIL 1991

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
6572A	26679	MWIL	04	06	1600	S08	W03	04	6.4	4	(AP)					
6572C		PALE	04	05	2135	N04	E07	04	6.4		A	AX		1		4
6575		CULG	04	03	0045	S10	E50	04	6.8		A	AX		1		3
6575		RAMY	04	03	1210	S08	E42	04	6.6		A	AX	10	1	1	4
6575		HOLL	04	05	1515	S08	E15	04	6.7		A	AX	10	1		4
6575		LEAR	04	06	0117	S11	E11	04	6.9		B	BXO	20	3	3	3
6575		CULG	04	06	0140	S11	E10	04	6.8		B	BXO		2	1	3
6575		RAMY	04	06	1200	S10	E01	04	6.6		B	BXO	10	9	7	4
6575		HOLL	04	06	1445	S11	E00	04	6.6		B	BXO	10	2	5	3
6575		PALE	04	06	1800	S08	W03	04	6.5		B	BXO	10	6	7	4
6575		PALE	04	07	1810	S08	W17	04	6.5		B	BXO		4	3	4
6575		BOUL	04	10	1350	S12	W49	04	6.9		B	BXO	10	3	3	1
6575		HOLL	04	10	1442	S13	W50	04	6.8		B	BXO	20	3	4	3
6575		LEAR	04	11	0008	S12	W57	04	6.7		B	BXO	20	3	2	3
6575		HOLL	04	11	1440	S12	W63	04	6.9		B	BXO	20	3	5	3
6584	26680	MWIL	04	06	1600	S13	E02	04	6.8	4	(AP)					
6584		RAMY	04	10	1355	S13	W49	04	6.9		B	BXO	10	4	3	3
6584	26696	MWIL	04	10	1530	S12	W51	04	6.8	4	(B)					
6584		PALE	04	10	1917	S13	W53	04	6.8		A	AX		2	2	4
6584		CULG	04	11	0100	S13	W57	04	6.7		B	BXO		4	4	3
6584		RAMY	04	11	1414	S11	W63	04	6.8		B	BXO	10	4	4	3
6584		CULG	04	12	0045	S12	W69	04	6.8		A	AX		1		3
6584		RAMY	04	12	1150	S11	W72	04	7.1		A	AX	10	2	1	4
6584		PALE	04	12	1750	S12	W77	04	6.9		A	AX	10	1	1	3
6567		PALE	04	01	2100	S11	E75	04	7.5		A	AX	10	1	1	4
6567		PALE	04	02	1920	S16	E66	04	7.8		B	CSO	40	2	4	2
6567		LEAR	04	03	0007	S14	E65	04	7.9		B	BXO	20	4	6	3
6567		RAMY	04	03	1210	S12	E57	04	7.8		B	DAO	60	6	5	4
6567	26667	MWIL	04	03	1530	S13	E55	04	7.8	4	(B)					
6567		HOLL	04	03	1700	S11	E55	04	7.8		B	CSO	80	4	5	2
6567		PALE	04	03	2015	S14	E53	04	7.8		B	DAO	100	4	6	1
6567		LEAR	04	04	0022	S12	E50	04	7.8		B	CSO	40	7	5	3
6567		SVTO	04	04	0605	S13	E48	04	7.9		B	CSO	40	9	5	4
6567		RAMY	04	04	1222	S13	E44	04	7.8		B	DAO	70	17	6	4
6567	26667	MWIL	04	04	1530	S11	E41	04	7.7	5	(BP)					
6567		BOUL	04	04	1540	S13	E40	04	7.7		B	CAO	80	9	7	2
6567		HOLL	04	04	1543	S12	E42	04	7.8		B	CSO	60	11	6	4
6567		PALE	04	04	2206	S13	E38	04	7.8		B	CAO	70	6	4	1
6567		LEAR	04	05	0014	S12	E37	04	7.8		B	CAO	170	8	5	3
6567		CULG	04	05	0030	S13	E37	04	7.8		B	DAO	60	7	6	3
6567		SVTO	04	05	0740	S14	E34	04	7.9		B	CSO	60	10	6	3
6567		RAMY	04	05	1220	S12	E31	04	7.8		B	CAO	80	17	6	3
6567		HOLL	04	05	1515	S12	E29	04	7.8		B	CSO	80	15	6	4
6567	26667	MWIL	04	05	1515	S12	E29	04	7.8	5	(BP)					
6567		BOUL	04	05	1540	S12	E28	04	7.8		B	DAO	80	11	6	3
6567		PALE	04	05	2135	S12	E24	04	7.7		B	CAO	60	9	6	4
6567		LEAR	04	06	0117	S12	E23	04	7.8		B	CAO	90	12	7	3
6567		CULG	04	06	0140	S13	E24	04	7.9		B	CAO	40	11	6	3
6567		SVTO	04	06	1130	S13	E18	04	7.8		B	CAO	30	8	7	2
6567		RAMY	04	06	1200	S12	E18	04	7.8		B	CAO	40	18	8	4
6567		HOLL	04	06	1445	S12	E17	04	7.9		B	CAO	30	11	6	3
6567		BOUL	04	06	1545	S11	E13	04	7.6		A	HA	20	3	2	2
6567	26667	MWIL	04	06	1600	S13	E15	04	7.8	5	(B)					
6567		PALE	04	06	1800	S12	E15	04	7.9		B	CSO	30	7	6	4
6567		LEAR	04	07	0010	S12	E08	04	7.6		B	CAO	20	5	2	3
6567		CULG	04	07	0020	S12	E11	04	7.8		B	CRO	20	9	6	3
6567		RAMY	04	07	1125	S12	E05	04	7.8		B	CRO	40	15	6	3
6567	26667	MWIL	04	07	1500	S11	E01	04	7.7	4	(BP)					
6567		HOLL	04	07	1610	S13	E03	04	7.9		B	CAO	30	5	5	4
6567		BOUL	04	07	1705	S11	E00	04	7.7		A	HS	20	2	1	3
6567		PALE	04	07	1810	S13	E01	04	7.8		B	CAO	90	5	5	4
6567		LEAR	04	08	0010	S12	W04	04	7.7		B	BXO	40	4	3	2
6567		CULG	04	08	0107	S11	W05	04	7.7		A	HS	10	4	2	1
6567		SVTO	04	08	0743	S13	W06	04	7.9		B	CAO	20	8	5	3
6567		BOUL	04	08	1350	S11	W11	04	7.7		A	HS	20	1	1	1

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

APRIL 1991

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
6567	26667	MWIL	04	08	1615	S12	W13	04	7.7	4	(BP)					
6567		RAMY	04	08	1625	S12	W12	04	7.8		B	CRO	20	5	4	1
6567		HOLL	04	08	1805	S13	W12	04	7.8		B	CRO	30	4	5	2
6567		PALE	04	08	2018	S11	W15	04	7.7		B	CSO	10	3	1	2
6567		CULG	04	09	0019	S10	W17	04	7.7		A	HA	10	5	1	3
6567		LEAR	04	09	0027	S12	W17	04	7.7		B	BXO	30	4	3	4
6567		SVTO	04	09	0750	S11	W22	04	7.7		B	BXO	10	3	1	4
6567		RAMY	04	09	1422	S11	W25	04	7.7		A	AX	10	2	1	2
6567		BOUL	04	09	1426	S10	W25	04	7.7		A	AX		1		1
6567		HOLL	04	09	1514	S11	W26	04	7.7		A	AX	10	2	1	3
6567	26667	MWIL	04	09	1545	S13	W25	04	7.8	5	(B)					
6567		PALE	04	09	2040	S11	W29	04	7.7		A	HS	10	1	1	3
6567		LEAR	04	10	0100	S11	W32	04	7.6		A	AX	10	1	1	3
6567		CULG	04	10	0100	S11	W32	04	7.6		A	HR	10	2	1	3
6567		SVTO	04	10	0730	S10	W36	04	7.6		A	AX		1		3
6567		BOUL	04	10	1350	S10	W37	04	7.8		A	AX		1		1
6567		RAMY	04	10	1355	S11	W38	04	7.7		A	HR	10	1	1	3
6567		HOLL	04	10	1442	S11	W39	04	7.7		A	AX	10	1	1	3
6567	26667	MWIL	04	10	1530	S11	W39	04	7.7	4	(AP)					
6567		PALE	04	10	1917	S12	W42	04	7.6		A	AX		1		4
6567		LEAR	04	11	0008	S11	W44	04	7.7		A	AX	10	1	1	3
6567		CULG	04	11	0100	S11	W45	04	7.6		A	AX		1		3
6575A	26670	MWIL	04	04	1530	S19	E44	04	8.0	4	(AP)					
6575A		HOLL	04	05	1515	S18	E30	04	7.9		A	AX	10	2	1	4
6575A	26670	MWIL	04	05	1515	S19	E30	04	7.9	4	(AP)					
6575A		BOUL	04	05	1540	S18	E29	04	7.9		A	AX	10	1	1	3
6575A		PALE	04	05	2135	S18	E22	04	7.6		B	BXO	10	6	4	4
6575A		LEAR	04	06	0117	S18	E23	04	7.8		B	BXO	40	5	4	3
6575A		CULG	04	06	0140	S16	E18	04	7.4		B	BXO	10	9	5	3
6575A		BOUL	04	06	1545	S19	E16	04	7.9		GD	AX		1		2
6575A	26670	MWIL	04	06	1600	S18	E14	04	7.7	4	(AP)					
6575A		CULG	04	09	0019	S19	W20	04	7.5		A	AX	10	2	1	3
6568C	26682	MWIL	04	06	1600	S17	E27	04	8.7	4	(B)					
6568C		CULG	04	07	0020	S16	E22	04	8.7		A	AX	10	2	2	3
6568C	26682	MWIL	04	07	1500	S18	E11	04	8.5	4	(AP)					
6568C	26682	MWIL	04	08	1615	S17	W03	04	8.4	3	(AP)					
6576		RAMY	04	06	1200	N21	E23	04	8.3		B	BXO	10	4	3	4
6576		HOLL	04	06	1445	N24	E24	04	8.5		A	AX		1		3
6576	26681	MWIL	04	06	1600	N23	E23	04	8.4	4	(AF)					
6576		PALE	04	06	1800	N24	E22	04	8.4		A	AX		1		4
6576	26681	MWIL	04	08	1615	N23	W04	04	8.4	4	(AF)					
6576		HOLL	04	08	1805	N22	W04	04	8.4		A	AX		1	1	2
6576		SVTO	04	09	0750	N23	W12	04	8.4		A	AX		2		4
6576		RAMY	04	09	1422	N23	W17	04	8.3		B	BXO	10	2	4	2
6576		HOLL	04	09	1514	N22	W16	04	8.4		A	AX	10	1	1	3
6576	26681	MWIL	04	09	1545	N23	W17	04	8.3	4	(AF)					
6568		RAMY	04	03	1210	S08	E66	04	8.4		A	AX	10	2	1	4
6568		PALE	04	03	2015	S09	E62	04	8.5		B	BXO	20	2	3	1
6568		LEAR	04	04	0022	S10	E62	04	8.7		B	BXO	30	4	4	3
6568		SVTO	04	04	0605	S11	E57	04	8.5		B	BXO	10	2	1	4
6568		RAMY	04	04	1222	S12	E54	04	8.6		B	BXO	20	5	5	4
6568	26671	MWIL	04	04	1530	S11	E51	04	8.5	4	(B)					
6568		BOUL	04	04	1540	S10	E51	04	8.5		A	AX	10	2	2	2
6568		HOLL	04	04	1543	S12	E52	04	8.6		B	BXO	10	4	3	4
6568		PALE	04	04	2206	S12	E50	04	8.7		B	BXO	30	3	4	1
6568		LEAR	04	05	0014	S13	E47	04	8.5		B	BXO	60	4	5	3
6568		CULG	04	05	0030	S10	E48	04	8.6		B	BXO		3	3	3
6568		SVTO	04	05	0740	S14	E44	04	8.6		B	BXO	10	3	5	3
6568		RAMY	04	05	1220	S13	E42	04	8.7		A	AX		1		3
6568		HOLL	04	05	1515	S12	E42	04	8.8		A	AX	10	2	1	4
6568	26671	MWIL	04	05	1515	S13	E42	04	8.8	4	(AF)					
6568		BOUL	04	05	1540	S12	E40	04	8.7		A	AX	10	1		3
6568		PALE	04	05	2135	S12	E35	04	8.5		B	BXO	10	2	3	4
6568		SVTO	04	06	1130	S14	E30	04	8.7		B	CAO	20	2	4	2
6568		RAMY	04	06	1200	S11	E30	04	8.7		B	CRO	20	5	3	4

S U N S P O T G R O U P S
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APRIL 1991

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
6568		HOLL	04	06	1445	S11	E29	04	8.8		B	BXO	10	3	3	3
6568		BOUL	04	06	1545	S12	E23	04	8.4		B	BXO		2	3	2
6568	26671	MWIL	04	06	1600	S12	E28	04	8.8	5	(B)					
6568		PALE	04	06	1800	S11	E28	04	8.8		B	CRO	10	3	3	4
6568		LEAR	04	07	0010	S14	E22	04	8.7		B	CAO	40	12	5	3
6568		CULG	04	07	0020	S11	E23	04	8.7		B	BXO	10	5	4	3
6568		RAMY	04	07	1125	S15	E16	04	8.7		B	BXO	20	11	6	3
6568		BOUL	04	07	1705	S16	E11	04	8.5		A	AX		2	1	3
6568		PALE	04	07	1810	S11	E10	04	8.5		A	AX		2		4
6568		LEAR	04	08	0010	S14	E06	04	8.5		B	BXO	30	6	7	2
6568		CULG	04	08	0107	S11	E06	04	8.5		A	AX	10	2	2	1
6568		SVTO	04	08	0743	S12	E02	04	8.5		B	BXO	10	5	4	3
6568		RAMY	04	08	1625	S16	W04	04	8.4		A	AX		2	1	1
6568		CULG	04	09	0019	S11	W03	04	8.8		A	AX	10	2	3	3
6568		LEAR	04	09	0027	S11	W04	04	8.7		B	BXO	20	4	4	4
6568		SVTO	04	09	0750	S12	W09	04	8.6		B	BXO	10	3	4	4
6568		RAMY	04	09	1422	S12	W12	04	8.7		B	CRO	10	4	3	2
6568		HOLL	04	09	1514	S12	W14	04	8.6		B	BXO	10	2	3	3
6568	26690	MWIL	04	09	1545	S12	W15	04	8.5	4	(B)					
6568		PALE	04	09	2040	S13	W17	04	8.6		B	CSO	30	5	3	3
6568		CULG	04	10	0100	S12	W21	04	8.4		B	BXO		5	5	3
6568		LEAR	04	10	0100	S12	W21	04	8.4		B	BXO	30	6	5	3
6568		SVTO	04	10	0730	S11	W27	04	8.3		B	CRO	30	5	3	3
6568		BOUL	04	10	1350	S11	W27	04	8.5		B	BXO	10	4	3	1
6568		RAMY	04	10	1355	S11	W29	04	8.4		B	CRO	20	3	4	3
6568		HOLL	04	10	1442	S12	W29	04	8.4		B	CRO	30	5	5	3
6568	26690	MWIL	04	10	1530	S11	W31	04	8.3	4	(B)					
6568		PALE	04	10	1917	S12	W32	04	8.4		B	BXO	10	3	4	4
6568		LEAR	04	11	0008	S12	W35	04	8.4		B	BXO	10	2	5	3
6568		CULG	04	11	0100	S12	W36	04	8.3		B	BXO	10	7	5	3
6568		RAMY	04	11	1414	S12	W42	04	8.4		B	BXO	10	9	5	3
6568		HOLL	04	11	1440	S12	W42	04	8.4		B	BXO	30	7	5	3
6568	26690	MWIL	04	11	1630	S12	W43	04	8.4	4	(B)					
6568		CULG	04	12	0045	S12	W47	04	8.5		B	BXO	10	7	5	3
6568		LEAR	04	12	0451	S12	W51	04	8.3		B	CSO	30	2	4	1
6568		RAMY	04	12	1150	S12	W53	04	8.5		B	CAO	20	5	5	4
6568		HOLL	04	12	1455	S12	W56	04	8.4		B	BXO	10	4	5	4
6568	26690	MWIL	04	12	1545	S12	W57	04	8.4	4	(B)					
6568		PALE	04	12	1750	S12	W58	04	8.4		B	CRO	20	3	4	3
6568		LEAR	04	13	0009	S12	W58	04	8.6		A	AX	20	1	1	3
6568A	26668	MWIL	04	03	1530	S07	E66	04	8.6	4	(B)					
6568A		HOLL	04	03	1700	S07	E65	04	8.6		A	AX	10	2		2
6568A	26668	MWIL	04	04	1530	S08	E51	04	8.5	3	(AP)					
6566		SVTO	04	02	0730	S25	E80	04	8.5		A	AX	10	1		2
6566	26666	MWIL	04	02	1530	S24	E76	04	8.5	4	X					
6566		RAMY	04	02	1545	S23	E74	04	8.3		A	AX		1		3
6566		HOLL	04	02	1640	S23	E73	04	8.3		A	AX	10	2	2	4
6566		PALE	04	02	1920	S26	E73	04	8.5		A	AX	30	2	1	2
6566		LEAR	04	03	0007	S24	E70	04	8.4		A	AX	30	1	1	3
6566		CULG	04	03	0045	S24	E71	04	8.5		A	HA	30	1	1	3
6566		RAMY	04	03	1210	S23	E66	04	8.6		B	DAO	100	9	6	4
6566	26666	MWIL	04	03	1530	S24	E64	04	8.6	4	(B)					
6566		HOLL	04	03	1700	S22	E64	04	8.6		B	BXO	40	7	5	2
6566		PALE	04	03	2015	S25	E62	04	8.6		B	BXO	60	6	6	1
6566		LEAR	04	04	0022	S24	E59	04	8.6		B	CSO	30	4	4	3
6566		SVTO	04	04	0605	S25	E55	04	8.5		B	BXO	20	6	5	4
6566		RAMY	04	04	1222	S24	E52	04	8.5		B	DAO	70	10	8	4
6566	26666	MWIL	04	04	1530	S23	E50	04	8.5	4	(B)					
6566		BOUL	04	04	1540	S25	E54	04	8.8		B	BXO	20	3	7	2
6566		HOLL	04	04	1543	S23	E50	04	8.5		B	BXO	30	5	7	4
6566		PALE	04	04	2206	S25	E47	04	8.6		B	BXO	40	3	5	1
6566		LEAR	04	05	0014	S22	E43	04	8.3		B	CSO	110	8	10	3
6566		CULG	04	05	0030	S24	E45	04	8.5		B	CAO	20	7	7	3
6566		RAMY	04	05	1220	S22	E38	04	8.4		B	EAO	50	14	13	3
6566	26666	MWIL	04	05	1515	S22	E35	04	8.3	4	(B)					
6566		HOLL	04	05	1515	S22	E38	04	8.5		B	BXO	40	9	6	4
6566	26677	MWIL	04	05	1515	S26	E40	04	8.7	4	(AP)					

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

APRIL 1991

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
6566		BOUL	04	05	1540	S23	E37	04	8.5		B	DAO	50	6	6	3
6566		PALE	04	05	2135	S23	E32	04	8.4		B	BXO	20	9	6	4
6566		LEAR	04	06	0117	S23	E30	04	8.4		B	DSO	100	15	10	3
6566		CULG	04	06	0140	S24	E32	04	8.5		B	CSO	50	6	7	3
6566		SVTO	04	06	1130	S22	E18	04	7.9		B	DAO	20	10	9	2
6566		RAMY	04	06	1200	S22	E21	04	8.1		B	CAO	60	31	16	4
6566		HOLL	04	06	1445	S21	E21	04	8.2		B	CSO	30	9	17	3
6566		BOUL	04	06	1545	S22	E21	04	8.3		A	HS	20	2	2	2
6566	26666	MWIL	04	06	1600	S22	E22	04	8.3	5	(B)					
6566	26677	MWIL	04	06	1600	S25	E24	04	8.5	4	(BG)					
6566		PALE	04	06	1800	S21	E19	04	8.2		B	CSO	40	14	15	4
6566		LEAR	04	07	0010	S22	E16	04	8.2		B	BXO	30	7	12	3
6566		CULG	04	07	0020	S22	E17	04	8.3		B	CRO	10	1	13	3
6566		RAMY	04	07	1125	S23	E12	04	8.4		B	CAO	40	20	10	3
6566	26666	MWIL	04	07	1500	S21	E09	04	8.3	4	(B)					
6566	26677	MWIL	04	07	1500	S25	E12	04	8.5	4	(AP)					
6566		HOLL	04	07	1610	S22	E08	04	8.3		B	CAO	40	12	13	4
6566		BOUL	04	07	1705	S20	E08	04	8.3		A	HS	10	1	1	3
6566		PALE	04	07	1810	S22	E08	04	8.4		B	CSO	30	18	10	4
6566		LEAR	04	08	0010	S24	E06	04	8.5		B	DSO	80	10	7	2
6566		CULG	04	08	0107	S21	E06	04	8.5		B	BXO	10	10	7	1
6566		SVTO	04	08	0743	S22	W02	04	8.2		B	BXO	30	20	13	3
6566		BOUL	04	08	1350	S21	W04	04	8.3		A	AX		1		1
6566		BOUL	04	08	1350	S23	E01	04	8.6		A	AX		1		1
6566	26666	MWIL	04	08	1615	S21	W06	04	8.2	4	(B)					
6566	26677	MWIL	04	08	1615	S24	W00	04	8.7	4	(AP)					
6566		RAMY	04	08	1625	S22	W02	04	8.5		B	CAO	20	20	9	1
6566		HOLL	04	08	1805	S23	W04	04	8.4		B	BXO	20	4	7	2
6566		PALE	04	08	2018	S22	W05	04	8.5		B	DSO	30	7	7	2
6566		CULG	04	09	0019	S22	W08	04	8.4		B	BXO	10	14	9	3
6566		LEAR	04	09	0027	S23	W09	04	8.3		B	BXO	70	15	9	4
6566		SVTO	04	09	0750	S22	W15	04	8.2		B	FAO	60	18	16	4
6566		RAMY	04	09	1422	S23	W16	04	8.4		B	EAO	50	14	14	2
6566		BOUL	04	09	1426	S19	W18	04	8.2		B	CSO	40	5	4	1
6566		BOUL	04	09	1426	S23	W13	04	8.6		A	AX		1		1
6566		HOLL	04	09	1514	S22	W15	04	8.5		B	DRO	70	16	11	3
6566	26666	MWIL	04	09	1545	S20	W18	04	8.3	5	(B)					
6566	26677	MWIL	04	09	1545	S25	W12	04	8.7	4	(AP)					
6566		PALE	04	09	2040	S21	W21	04	8.2		B	DSO	110	16	6	3
6566		LEAR	04	10	0100	S20	W21	04	8.4		B	EAO	120	18	13	3
6566		CULG	04	10	0100	S22	W23	04	8.3		B	CAO	40	22	9	3
6566		SVTO	04	10	0730	S20	W26	04	8.3		B	EAO	80	22	12	3
6566		BOUL	04	10	1350	S20	W29	04	8.3		B	DSI	80	11	6	1
6566		RAMY	04	10	1355	S22	W28	04	8.4		B	EAO	110	28	12	3
6566		HOLL	04	10	1442	S20	W32	04	8.2		B	DAI	120	20	6	3
6566	26666	MWIL	04	10	1530	S19	W32	04	8.2	5	(B)					
6566		PALE	04	10	1917	S20	W35	04	8.1		B	DSO	90	11	6	4
6566		LEAR	04	11	0008	S19	W37	04	8.2		B	DAO	50	13	8	3
6566		CULG	04	11	0100	S21	W37	04	8.2		B	DAO	100	24	10	3
6566		RAMY	04	11	1414	S20	W44	04	8.2		B	DAO	210	26	10	3
6566		HOLL	04	11	1440	S22	W43	04	8.3		B	EAI	170	21	15	3
6566	26666	MWIL	04	11	1630	S19	W47	04	8.1	5	(B)					
6566	26677	MWIL	04	11	1630	S24	W40	04	8.6	4	(AP)					
6566		CULG	04	12	0045	S22	W49	04	8.3		B	EAO	220	20	12	3
6566		LEAR	04	12	0451	S20	W52	04	8.2		B	CAO	180	6	5	1
6566		RAMY	04	12	1150	S20	W55	04	8.3		B	EAO	220	27	14	4
6566		HOLL	04	12	1455	S22	W55	04	8.4		B	FAO	90	18	16	4
6566	26666	MWIL	04	12	1545	S19	W61	04	8.0	5	(B)					
6566	26677	MWIL	04	12	1545	S24	W54	04	8.5	5	(D)					
6566		PALE	04	12	1750	S23	W58	04	8.3		B	EAO	190	17	14	3
6566		LEAR	04	13	0009	S21	W61	04	8.3		B	EAO	60	10	14	3
6566		CULG	04	13	0100	S21	W61	04	8.4		B	EAO	160	14	14	3
6566		RAMY	04	13	1150	S21	W68	04	8.3		B	CAO	90	13	14	3
6566	26666	MWIL	04	13	1545	S19	W76	04	7.8	4	(BP)					
6566	26677	MWIL	04	13	1545	S23	W69	04	8.3	4	(BG)					
6566		HOLL	04	13	1555	S22	W73	04	8.0		BG	CRO	110	11	16	3
6566		PALE	04	13	1845	S21	W72	04	8.3		B	CAO	80	6	9	1
6566		CULG	04	14	0120	S21	W75	04	8.3		B	BXO	20	6	11	3
6566		LEAR	04	14	0122	S20	W75	04	8.3		B	CSO	150	7	11	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

APRIL 1991

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
6566		SVTO	04 14 0745	S20 W79	04 8.3		B	BXO	10	2	3	3
6566		RAMY	04 14 1339	S22 W82	04 8.3		B	CRO	60	4	7	3
6566	26677	MWIL	04 14 1545	S22 W81	04 8.4	4	X					
6566		HOLL	04 14 1600	S23 W81	04 8.4		B	BXO	20	5	4	4
6566A		CULG	04 05 0030	S27 E50	04 8.9		A	AX		1		3
6577	26672	MWIL	04 04 1530	N08 E61	04 9.2	4	(AP)					
6577	26672	MWIL	04 05 1515	N08 E48	04 9.2	4	(AP)					
6577		RAMY	04 06 1200	N08 E38	04 9.3		B	BXO	20	10	6	4
6577		HOLL	04 06 1445	N09 E35	04 9.2		B	BXO	10	4	3	3
6577		BOUL	04 06 1545	N08 E34	04 9.2		B	BXO	10	2	3	2
6577	26672	MWIL	04 06 1600	N08 E35	04 9.3	4	(B)					
6577		PALE	04 06 1800	N09 E34	04 9.3		B	BXO	10	5	3	4
6577		LEAR	04 07 0010	N07 E30	04 9.2		B	BXO	10	4	3	3
6577		CULG	04 07 0020	N08 E30	04 9.3		B	BXO	10	8	4	3
6577		RAMY	04 07 1125	N08 E24	04 9.3		B	BXO	20	8	4	3
6577	26672	MWIL	04 07 1500	N08 E21	04 9.2	4	(BP)					
6577		HOLL	04 07 1610	N08 E21	04 9.2		B	CRO	20	4	4	4
6577		PALE	04 07 1810	N08 E19	04 9.2		B	CSO	10	5	3	4
6577		LEAR	04 08 0010	N07 E16	04 9.2		B	BXO	30	3	3	2
6577		CULG	04 08 0107	N09 E14	04 9.1		A	AX	10	3	1	1
6577		SVTO	04 08 0743	N08 E12	04 9.2		B	BXO	10	4	3	3
6577		CULG	04 09 0019	N09 E03	04 9.2		A	AX	10	3	3	3
6577		SVTO	04 09 0750	N08 W01	04 9.2		B	BXO	10	6	3	4
6577		BOUL	04 09 1426	N09 W05	04 9.2		B	BXO		2	2	1
6577		HOLL	04 09 1514	N08 W04	04 9.3		B	BXO	20	4	4	3
6577	26672	MWIL	04 09 1545	N08 W05	04 9.3	4	(B)					
6577		PALE	04 09 2040	N08 W08	04 9.3		B	BXO	20	5	3	3
6577		LEAR	04 10 0100	N11 W04	04 9.7		A	AX	10	1	1	3
6577		PALE	04 10 1917	N07 W25	04 8.9		A	AX		2	1	4
6570		RAMY	04 04 1222	S07 E68	04 9.6		B	CRO	10	2	4	4
6570	26673	MWIL	04 04 1530	S07 E69	04 9.8	4	(B)					
6570		BOUL	04 04 1540	S05 E68	04 9.7		A	AX	20	1	1	2
6570		HOLL	04 04 1543	S06 E68	04 9.7		B	BXO	20	2	5	4
6570		PALE	04 04 2206	S07 E66	04 9.9		B	CSO	60	2	4	1
6570		LEAR	04 05 0014	S07 E64	04 9.8		B	BXO	20	2	4	3
6570		CULG	04 05 0030	S06 E63	04 9.7		B	CSO	20	2	3	3
6570		SVTO	04 05 0740	S09 E59	04 9.7		A	HS	20	1	1	3
6570		RAMY	04 05 1220	S07 E53	04 9.5		A	HS	20	1	1	3
6570		HOLL	04 05 1515	S06 E53	04 9.6		A	HS	30	1	1	4
6570	26673	MWIL	04 05 1515	S07 E53	04 9.6	5	(AP)					
6570		BOUL	04 05 1540	S06 E53	04 9.6		A	HA	20	2	1	3
6570		PALE	04 05 2135	S07 E49	04 9.6		B	CSO	20	2	3	4
6570		LEAR	04 06 0117	S07 E48	04 9.6		A	HS	30	1	1	3
6570		CULG	04 06 0140	S07 E48	04 9.7		A	HS	20	1	1	3
6570		SVTO	04 06 1130	S09 E40	04 9.5		A	HS	10	1	1	2
6570		RAMY	04 06 1200	S08 E41	04 9.6		A	AX	10	4	1	4
6570		HOLL	04 06 1445	S06 E40	04 9.6		A	AX	10	1		3
6570	26673	MWIL	04 06 1600	S07 E39	04 9.6	4	(AP)					
6570		PALE	04 06 1800	S07 E38	04 9.6		A	AX	10	2	1	4
6570		LEAR	04 07 0010	S07 E33	04 9.5		A	AX		1	1	3
6570		CULG	04 07 0020	S06 E35	04 9.6		A	AX		1		3
6570		RAMY	04 07 1125	S08 E29	04 9.6		A	AX	10	2	2	3
6570	26673	MWIL	04 08 1615	S09 E17	04 9.9	4	(AF)					
6570		LEAR	04 09 0027	S09 E12	04 9.9		B	BXO	20	3	3	4
6570	26673	MWIL	04 09 1545	S10 E01	04 9.7	4	(AF)					
6570		PALE	04 09 2040	S12 W06	04 9.4		B	CSO	20	4	3	3
6570		LEAR	04 10 0100	S11 W07	04 9.5		B	BXO	10	2	3	3
6570		CULG	04 10 0100	S11 W08	04 9.4		A	AX		4	2	3
6570		SVTO	04 10 0730	S11 W11	04 9.5		B	CRO	10	5	4	3
6570		BOUL	04 10 1350	S10 W14	04 9.5		A	AX		1		1
6570		RAMY	04 10 1355	S11 W14	04 9.5		A	AX		2	1	3
6570		HOLL	04 10 1442	S12 W14	04 9.5		A	AX	10	1	1	3
6570	26673	MWIL	04 10 1530	S11 W16	04 9.4	4	(AF)					
6570		PALE	04 10 1917	S12 W16	04 9.6		B	BXO		4	5	4
6570		LEAR	04 11 0008	S11 W19	04 9.6		B	BXO	20	8	6	3
6570		CULG	04 11 0100	S10 W20	04 9.5		B	CRO	20	11	5	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

APRIL 1991

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
6570		RAMY	04	11	1414	S11	W27	04	9.6		B	BXO	20	13	6	3
6570		HOLL	04	11	1440	S12	W26	04	9.6		B	CAO	70	12	6	3
6570	26673	MWIL	04	11	1630	S12	W28	04	9.6	4	(B)					
6570		CULG	04	12	0045	S11	W32	04	9.6		B	DAO	80	24	10	3
6570		LEAR	04	12	0451	S11	W35	04	9.6		B	ESO	170	14	11	1
6570		RAMY	04	12	1150	S11	W39	04	9.5		B	EAO	130	29	11	4
6570		HOLL	04	12	1455	S12	W41	04	9.5		B	DSO	120	20	11	4
6570	26673	MWIL	04	12	1545	S11	W42	04	9.5	5	(BG)					
6570		PALE	04	12	1750	S11	W43	04	9.5		B	EAI	160	13	12	3
6570		LEAR	04	13	0009	S12	W46	04	9.5		BG	EAO	80	13	12	3
6570		CULG	04	13	0100	S11	W46	04	9.6		B	EAO	140	18	11	3
6570		RAMY	04	13	1150	S11	W51	04	9.6		B	EAO	110	25	12	3
6570	26673	MWIL	04	13	1545	S11	W54	04	9.6	5	(B)					
6570		HOLL	04	13	1555	S11	W56	04	9.4		B	ESO	120	25	13	3
6570		PALE	04	13	1845	S11	W55	04	9.6		B	EAO	140	13	10	1
6570		CULG	04	14	0120	S11	W59	04	9.6		B	ESO	120	13	11	3
6570		LEAR	04	14	0122	S10	W61	04	9.5		B	ESO	210	16	12	3
6570		SVTO	04	14	0745	S10	W64	04	9.5		B	ESO	160	14	11	3
6570		RAMY	04	14	1339	S11	W67	04	9.5		B	DAO	180	13	10	3
6570	26673	MWIL	04	14	1545	S11	W67	04	9.6	5	(B)					
6570		HOLL	04	14	1600	S12	W68	04	9.5		B	EAI	160	14	11	4
6570		PALE	04	14	1855	S10	W70	04	9.5		B	DSO	220	8	10	4
6570		LEAR	04	15	0046	S10	W72	04	9.6		B	DAO	200	11	10	3
6570		CULG	04	15	0050	S11	W72	04	9.6		B	DSO	180	6	10	3
6570		SVTO	04	15	0815	S10	W76	04	9.6		B	DSO	80	5	6	3
6570		BOUL	04	15	1355	S09	W80	04	9.6		B	BXO	10	2	4	1
6570		RAMY	04	15	1520	S08	W81	04	9.6		B	CAO	40	4	4	3
6570		HOLL	04	15	1540	S12	W77	04	9.8		B	BXO	30	7	5	3
6570	26673	MWIL	04	15	1545	S10	W80	04	9.6	4	B)					
6570		PALE	04	15	1920	S07	W82	04	9.7		B	HSO	30	2	2	2
6570A		PALE	04	09	2040	N09	W01	04	9.8		A	AX	10	2		3
6570A		CULG	04	10	0100	N10	W04	04	9.7		A	AX		1		3
6569		HOLL	04	03	1700	N06	E85	04	10.1		A	HS	60	1	1	2
6569		PALE	04	03	2015	N04	E80	04	9.8		A	HS	90	1	3	1
6569		LEAR	04	04	0022	N06	E78	04	9.8		A	HS	40	1	2	3
6569		SVTO	04	04	0605	N04	E75	04	9.9		A	HS	50	1	2	4
6569		RAMY	04	04	1222	N06	E66	04	9.4		B	DAO	70	2	9	4
6569	26674	MWIL	04	04	1530	N05	E69	04	9.8	5	(AP)					
6569		BOUL	04	04	1540	N08	E65	04	9.5		B	CAO	130	2	9	2
6569		HOLL	04	04	1543	N07	E65	04	9.5		B	CSO	50	3	12	4
6569		PALE	04	04	2206	N06	E62	04	9.6		B	CSO	90	2	9	1
6569		LEAR	04	05	0014	N06	E60	04	9.5		B	CAO	160	3	9	3
6569		CULG	04	05	0030	N05	E61	04	9.6		B	CSO	60	2	9	3
6569		SVTO	04	05	0740	N05	E58	04	9.6		B	CSO	70	3	9	3
6569		RAMY	04	05	1220	N06	E53	04	9.5		B	CAO	70	3	9	3
6569	26674	MWIL	04	05	1515	N05	E56	04	9.8	6	(AP)					
6569		HOLL	04	05	1515	N07	E52	04	9.5		B	CSO	110	3	13	4
6569		BOUL	04	05	1540	N06	E56	04	9.8		A	HS	70	1	2	3
6569		PALE	04	05	2135	N07	E53	04	9.9		B	CSO	120	3	10	4
6569		LEAR	04	06	0117	N07	E51	04	9.9		A	HS	100	1	2	3
6569		CULG	04	06	0140	N05	E50	04	9.8		A	HS	80	1	2	3
6569		SVTO	04	06	1130	N04	E41	04	9.5		B	CSO	80	3	10	2
6569		RAMY	04	06	1200	N05	E44	04	9.8		A	HS	140	1	2	4
6569		HOLL	04	06	1445	N06	E43	04	9.8		A	HS	130	1	2	3
6569		BOUL	04	06	1545	N06	E42	04	9.8		A	HS	80	1	2	2
6569	26674	MWIL	04	06	1600	N05	E43	04	9.9	5	(AP)					
6569		PALE	04	06	1800	N06	E41	04	9.8		A	HS	80	1	2	4
6569		LEAR	04	07	0010	N05	E38	04	9.8		A	HS	110	1	2	3
6569		CULG	04	07	0020	N07	E38	04	9.9		A	HS	100	1	2	3
6569		RAMY	04	07	1125	N06	E32	04	9.9		A	HS	130	1	2	3
6569	26674	MWIL	04	07	1500	N06	E30	04	9.9	6	(AP)					
6569		HOLL	04	07	1610	N06	E28	04	9.8		A	HS	90	1	2	4
6569		BOUL	04	07	1705	N06	E28	04	9.8		A	HS	90	1	2	3
6569		PALE	04	07	1810	N06	E28	04	9.8		A	HS	110	1	2	4
6569		LEAR	04	08	0010	N05	E24	04	9.8		A	HS	20	1	2	2
6569		CULG	04	08	0107	N07	E23	04	9.8		A	HS	110	1	2	1
6569		SVTO	04	08	0743	N06	E21	04	9.9		A	HS	80	1	2	3

S U N S P O T G R O U P S
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APRIL 1991

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
6569		BOUL	04	08	1350	N06	E15	04	9.7		A	HS	60	1	1	1
6569	26674	MWIL	04	08	1615	N06	E16	04	9.9	6	(AP)					
6569		RAMY	04	08	1625	N06	E16	04	9.9		A	HS	100	1	2	1
6569		HOLL	04	08	1805	N05	E14	04	9.8		A	HS	100	1	2	2
6569		PALE	04	08	2018	N04	E13	04	9.8		A	HS	150	1	2	2
6569		CULG	04	09	0019	N06	E11	04	9.8		A	HS	100	1	2	3
6569		LEAR	04	09	0027	N05	E11	04	9.8		A	HS	100	1	2	4
6569		SVTO	04	09	0750	N05	E07	04	9.8		A	HA	120	1	2	4
6569		RAMY	04	09	1422	N06	W01	04	9.5		B	CSO	90	7	12	2
6569		BOUL	04	09	1426	N06	E03	04	9.8		A	HS	60	1	1	1
6569		HOLL	04	09	1514	N05	E03	04	9.8		A	HS	100	1	2	3
6569	26674	MWIL	04	09	1545	N05	E03	04	9.9	5	(AP)					
6569		PALE	04	09	2040	N04	E00	04	9.9		A	HS	100	1	2	3
6569		LEAR	04	10	0100	N05	W03	04	9.8		A	HS	80	1	2	3
6569		CULG	04	10	0100	N05	W03	04	9.8		A	HS	100	1	2	3
6569		SVTO	04	10	0730	N06	W07	04	9.8		A	HS	120	1	2	3
6569		BOUL	04	10	1350	N05	W11	04	9.7		A	HS	80	1	2	1
6569		RAMY	04	10	1355	N05	W08	04	10.0		B	CAO	100	2	5	3
6569		HOLL	04	10	1442	N05	W11	04	9.8		A	HS	100	1	2	3
6569	26674	MWIL	04	10	1530	N05	W11	04	9.8	5	(AP)					
6569		PALE	04	10	1917	N05	W13	04	9.8		A	HS	60	1	2	4
6569		LEAR	04	11	0008	N05	W16	04	9.8		A	HS	60	1	2	3
6569		CULG	04	11	0100	N05	W17	04	9.8		A	HS	90	1	2	3
6569		RAMY	04	11	1414	N05	W24	04	9.8		A	HS	110	1	2	3
6569		HOLL	04	11	1440	N05	W25	04	9.7		A	HS	120	1	2	3
6569	26674	MWIL	04	11	1630	N05	W24	04	9.9	5	(AF)					
6569		CULG	04	12	0045	N05	W29	04	9.9		A	HS	70	1	2	3
6569		LEAR	04	12	0451	N05	W32	04	9.8		A	HA	70	1	2	1
6569		RAMY	04	12	1150	N05	W36	04	9.8		A	HS	130	1	2	4
6569		HOLL	04	12	1455	N04	W37	04	9.8		A	HS	80	1	2	4
6569	26674	MWIL	04	12	1545	N05	W38	04	9.8	5	(AP)					
6569		PALE	04	12	1750	N04	W39	04	9.8		A	HS	80	1	2	3
6569		LEAR	04	13	0009	N05	W42	04	9.9		A	HH	80	1	3	3
6569		CULG	04	13	0100	N05	W43	04	9.8		A	HS	80	1	2	3
6569		RAMY	04	13	1150	N05	W48	04	9.9		A	HS	150	1	2	3
6569	26674	MWIL	04	13	1545	N05	W52	04	9.8	5	(AP)					
6569		HOLL	04	13	1555	N04	W52	04	9.8		A	HS	100	1	2	3
6569		PALE	04	13	1845	N05	W53	04	9.8		A	HS	100	1	2	1
6569		CULG	04	14	0120	N05	W57	04	9.8		A	HS	100	1	2	3
6569		LEAR	04	14	0122	N05	W57	04	9.8		A	HS	70	1	2	3
6569		SVTO	04	14	0745	N06	W61	04	9.7		A	HS	50	1	2	3
6569		RAMY	04	14	1339	N05	W64	04	9.8		A	HS	100	1	2	3
6569	26674	MWIL	04	14	1545	N05	W66	04	9.7	5	(AP)					
6569		HOLL	04	14	1600	N04	W65	04	9.8		A	HS	60	1	2	4
6569		PALE	04	14	1855	N06	W68	04	9.7		A	HS	140	1	2	4
6569		LEAR	04	15	0046	N05	W68	04	9.9		A	HS	50	1	2	3
6569		CULG	04	15	0050	N05	W70	04	9.8		A	HS	60	1	1	3
6569		SVTO	04	15	0815	N06	W75	04	9.7		A	HS	50	1	2	3
6569		BOUL	04	15	1355	N05	W79	04	9.7		A	HS	50	1	1	1
6569		RAMY	04	15	1520	N07	W79	04	9.7		A	HA	60	1	2	3
6569		HOLL	04	15	1540	N05	W79	04	9.7		A	HS	60	1	1	3
6569	26674	MWIL	04	15	1545	N05	W79	04	9.7	4	(AP)					
6569		PALE	04	15	1920	N06	W81	04	9.7		A	HS	30	1	1	2
6570B	26692	MWIL	04	09	1545	S14	E03	04	9.9	4	(AF)					
6570C	26691	MWIL	04	09	1545	S28	E03	04	9.9	4	(AF)					
6574		LEAR	04	05	0014	N26	E67	04	10.2		B	BXO	30	2	3	3
6574		RAMY	04	05	1220	N26	E58	04	10.0		A	AX		1		3
6574	26678	MWIL	04	05	1515	N27	E58	04	10.1	4	(AP)					
6574		HOLL	04	05	1515	N28	E58	04	10.2		A	AX	10	1		4
6574		BOUL	04	05	1540	N27	E58	04	10.2		A	AX	10	1	1	3
6574		PALE	04	05	2135	N27	E54	04	10.1		A	AX		1	1	4
6574		LEAR	04	06	0117	N28	E52	04	10.1		A	AX	20	2	3	3
6574		CULG	04	06	0140	N28	E54	04	10.3		A	AX		1		3
6574		RAMY	04	06	1200	N27	E47	04	10.2		A	HA	30	2	1	4
6574		HOLL	04	06	1445	N27	E44	04	10.0		A	AX		2	1	3
6574	26678	MWIL	04	06	1600	N27	E43	04	10.0	4	(AP)					

S U N S P O T G R O U P S
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6574		PALE	04	06	1800	N27	E42	04	10.0		A	AX	10	2	2	4
6574		LEAR	04	07	0010	N27	E38	04	10.0		A	AX		1	1	3
6574		CULG	04	07	0020	N28	E39	04	10.1		A	HA	10	1	1	3
6574		RAMY	04	07	1125	N28	E32	04	10.0		A	HR	10	3	2	3
6574	26678	MWIL	04	07	1500	N28	E30	04	10.0	4	(AP)					
6574		HOLL	04	07	1610	N27	E28	04	9.8		A	AX	10	2	2	4
6574		BOUL	04	07	1705	N27	E29	04	10.0		A	AX		1		3
6574		PALE	04	07	1810	N27	E27	04	9.9		B	BXO	10	3	5	4
6574		LEAR	04	08	0010	N27	E24	04	9.9		A	AX	10	1	1	2
6574		CULG	04	08	0107	N29	E24	04	9.9		A	AX		1		1
6574A		CULG	04	09	0019	S08	E13	04	10.0		A	AX	10	2	1	3
6586		BOUL	04	10	1350	S25	W04	04	10.3		A	AX		1		1
6586		RAMY	04	10	1355	S24	W06	04	10.1		B	BXO	10	4	5	3
6586		HOLL	04	10	1442	S23	W06	04	10.1		B	BXO	30	6	7	3
6586	26697	MWIL	04	10	1530	S22	W08	04	10.0	4	(B)					
6586	26698	MWIL	04	10	1530	S25	W04	04	10.3	4	(AF)					
6586		PALE	04	10	1917	S26	W06	04	10.3		B	BXO	10	4	3	4
6586		LEAR	04	11	0008	S22	W14	04	9.9		B	CAO	20	3	5	3
6586		CULG	04	11	0100	S23	W13	04	10.0		B	CRO	20	11	9	3
6586		RAMY	04	11	1414	S24	W18	04	10.2		B	BXO	20	10	10	3
6586		HOLL	04	11	1440	S18	W23	04	9.8		B	BXO	20	6	8	3
6586	26697	MWIL	04	11	1630	S22	W22	04	10.0	4	(B)					
6586		CULG	04	12	0045	S21	W28	04	9.9		B	CAO	10	5	4	3
6570D	26693	MWIL	04	09	1545	S27	E15	04	10.8	4	(AF)					
6586A		HOLL	04	07	1610	N08	E44	04	11.0		A	AX		1		4
6586A	26685	MWIL	04	08	1615	N06	E30	04	10.9	4	(AF)					
6586A		CULG	04	09	0019	N06	E27	04	11.0		A	AX		1		3
6586A		LEAR	04	09	0027	N05	E26	04	11.0		B	BXO	10	2	3	4
6586A		RAMY	04	10	1355	N10	E08	04	11.2		A	AX		1		3
6586A		RAMY	04	11	1414	N09	W08	04	11.0		A	AX		1		3
6579		RAMY	04	07	1125	N06	E57	04	11.7		B	BXO	20	5	4	3
6579	26684	MWIL	04	07	1500	N05	E56	04	11.8	4	(AF)					
6579		HOLL	04	07	1610	N07	E54	04	11.7		B	BXO	20	6	3	4
6579		BOUL	04	07	1705	N05	E54	04	11.7		A	AX		1		3
6579		PALE	04	07	1810	N06	E52	04	11.6		B	BXO	20	7	4	4
6579		LEAR	04	08	0010	N06	E49	04	11.7		B	BXO	80	6	4	2
6579		CULG	04	08	0107	N08	E49	04	11.7		B	BXO	10	5	4	1
6579		SVTO	04	08	0743	N06	E44	04	11.6		B	BXO	10	6	5	3
6579		BOUL	04	08	1350	N06	E40	04	11.6		B	BXO	30	4	5	1
6579	26684	MWIL	04	08	1615	N06	E39	04	11.6	5	(B)					
6579		RAMY	04	08	1625	N06	E40	04	11.7		B	BXO	30	8	6	1
6579		HOLL	04	08	1805	N06	E39	04	11.7		B	BXO	40	7	5	2
6579		PALE	04	08	2018	N06	E35	04	11.5		B	CSO	20	7	6	2
6579		CULG	04	09	0019	N07	E36	04	11.7		B	BXO	10	10	6	3
6579		LEAR	04	09	0027	N06	E35	04	11.6		B	CSO	60	8	4	4
6579		SVTO	04	09	0750	N06	E32	04	11.7		B	DRO	20	8	6	4
6579		RAMY	04	09	1422	N06	E24	04	11.4		A	AX	20	2	1	2
6579		BOUL	04	09	1426	N06	E22	04	11.2		A	AX	10	2		1
6579		HOLL	04	09	1514	N05	E25	04	11.5		B	BXO	20	5	4	3
6579	26684	MWIL	04	09	1545	N05	E25	04	11.5	5	(BP)					
6579		PALE	04	09	2040	N05	E22	04	11.5		B	DSO	30	4	4	3
6579		CULG	04	10	0100	N06	E20	04	11.5		B	CRO	10	4	4	3
6579		SVTO	04	10	0730	N06	E16	04	11.5		B	CSO	30	5	4	3
6579		BOUL	04	10	1350	N06	E10	04	11.3		A	AX		1		1
6579		RAMY	04	10	1355	N04	E13	04	11.5		B	CAO	20	6	5	3
6579		HOLL	04	10	1442	N06	E12	04	11.5		B	BXO	30	8	6	3
6579	26684	MWIL	04	10	1530	N06	E10	04	11.4	4	(AP)					
6579		PALE	04	10	1917	N06	E07	04	11.3		A	AX	10	2	1	4
6579		LEAR	04	11	0008	N05	E05	04	11.4		B	BXO	10	3	2	3
6579		CULG	04	11	0100	N06	E06	04	11.5		B	CRO	10	6	5	3
6579		RAMY	04	11	1414	N06	W02	04	11.4		A	AX	10	4	3	3
6579		HOLL	04	11	1440	N06	W03	04	11.4		A	AX	20	2	1	3
6579	26684	MWIL	04	11	1630	N06	W03	04	11.5	4	(AF)					
6579		CULG	04	12	0045	N06	W08	04	11.4		A	HR	10	2	1	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

APRIL 1991

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
6579		LEAR	04 12 0451	N08 W12	04 11.3		B	DSO	50	2	4	1
6579		RAMY	04 12 1150	N06 W15	04 11.4		B	CAO	10	3	3	4
6579		HOLL	04 12 1455	N04 W15	04 11.5		B	CRO	20	4	5	4
6579	26684	MWIL	04 12 1545	N07 W17	04 11.4	5	(B)					
6579		PALE	04 12 1750	N06 W19	04 11.3		A	HS	20	2	1	3
6579		LEAR	04 13 0009	N07 W22	04 11.3		A	HA	20	1	2	3
6579		CULG	04 13 0100	N06 W21	04 11.5		B	CSO	10	3	6	3
6579		RAMY	04 13 1150	N07 W28	04 11.4		B	CAO	20	4	3	3
6579	26684	MWIL	04 13 1545	N06 W31	04 11.3	5	(AP)					
6579		HOLL	04 13 1555	N06 W31	04 11.3		B	BXO	20	3	3	3
6579		PALE	04 13 1845	N06 W32	04 11.4		B	CSO	20	3	3	1
6579		CULG	04 14 0120	N06 W36	04 11.4		B	HS	20	2	2	3
6579		LEAR	04 14 0122	N05 W35	04 11.4		B	BXO	20	4	4	3
6579		SVTO	04 14 0745	N06 W40	04 11.3		B	CRO	20	3	2	3
6579		RAMY	04 14 1339	N07 W42	04 11.4		B	CRO	40	3	3	3
6579	26684	MWIL	04 14 1545	N06 W44	04 11.4	5	(AP)					
6579		HOLL	04 14 1600	N05 W44	04 11.4		B	CSO	40	3	3	4
6579		PALE	04 14 1855	N07 W46	04 11.3		B	DAO	30	2	3	4
6579		LEAR	04 15 0046	N07 W48	04 11.4		A	AX	20	1	1	3
6579		CULG	04 15 0050	N06 W49	04 11.4		A	AX		1		3
6579		SVTO	04 15 0815	N07 W55	04 11.2		A	AX	10	1		3
6579		BOUL	04 15 1355	N06 W57	04 11.3		A	AX		1		1
6579		RAMY	04 15 1520	N08 W59	04 11.2		A	HS	20	1	1	3
6579		HOLL	04 15 1540	N06 W59	04 11.2		A	AX	10	1		3
6579	26684	MWIL	04 15 1545	N06 W58	04 11.3	4	(AP)					
6579		PALE	04 15 1920	N07 W61	04 11.2		A	AX	20	1	1	2
6579		CULG	04 16 0017	N07 W62	04 11.4		A	AX	10	1	1	2
6579		LEAR	04 16 0020	N09 W62	04 11.4		A	AX	20	1	1	3
6579		SVTO	04 16 0625	N07 W67	04 11.2		A	AX	10	1		3
6579		RAMY	04 16 1405	N07 W69	04 11.4		A	AX		1		2
6579		HOLL	04 16 1500	N06 W70	04 11.4		A	AX	10	1		3
6579	26684	MWIL	04 16 1545	N07 W71	04 11.3	4	(AP)					
6578		RAMY	04 06 1200	S20 E67	04 11.6		B	BXO	20	5	3	4
6578		HOLL	04 06 1445	S19 E67	04 11.7		A	AX	10	4	1	3
6578		BOUL	04 06 1545	S20 E65	04 11.6		A	AX	10	2	1	2
6578	26683	MWIL	04 06 1600	S20 E65	04 11.6	4	(B)					
6578		PALE	04 06 1800	S19 E66	04 11.8		B	CRO	40	4	3	4
6578		LEAR	04 07 0010	S20 E60	04 11.6		B	DAO	70	9	3	3
6578		CULG	04 07 0020	S19 E60	04 11.6		A	HA	30	6	5	3
6578		RAMY	04 07 1125	S19 E53	04 11.5		B	DAO	90	16	5	3
6578	26683	MWIL	04 07 1500	S19 E54	04 11.7	4	(B)					
6578		HOLL	04 07 1610	S19 E52	04 11.6		B	DAO	110	16	6	4
6578		BOUL	04 07 1705	S18 E52	04 11.7		B	DSO	60	9	6	3
6578		PALE	04 07 1810	S19 E52	04 11.7		B	DAO	50	16	5	4
6578		LEAR	04 08 0010	S20 E48	04 11.7		B	DAO	110	4	5	2
6578		CULG	04 08 0107	S18 E48	04 11.7		B	DRO	20	6	6	1
6578		SVTO	04 08 0743	S20 E44	04 11.7		B	CSO	30	8	6	3
6578		BOUL	04 08 1350	S18 E39	04 11.5		B	BXO	30	4	5	1
6578	26683	MWIL	04 08 1615	S19 E40	04 11.7	4	(B)					
6578		RAMY	04 08 1625	S19 E40	04 11.7		B	CSO	20	6	7	1
6578		HOLL	04 08 1805	S20 E38	04 11.6		B	CRO	40	4	5	2
6578		PALE	04 08 2018	S20 E36	04 11.6		B	DSO	40	4	5	2
6578		CULG	04 09 0019	S19 E35	04 11.7		B	BXO	10	6	5	3
6578		LEAR	04 09 0027	S20 E35	04 11.7		B	BXO	30	5	5	4
6578		SVTO	04 09 0750	S19 E31	04 11.7		B	CRO	20	5	5	4
6578		RAMY	04 09 1422	S20 E27	04 11.7		B	DAO	20	2	5	2
6578		BOUL	04 09 1426	S18 E26	04 11.6		B	BXO	60	2	4	1
6578		HOLL	04 09 1514	S19 E26	04 11.6		B	BXO	30	3	5	3
6578	26683	MWIL	04 09 1545	S18 E26	04 11.6	5	(B)					
6578		PALE	04 09 2040	S20 E23	04 11.6		B	DSO	20	2	5	3
6578		CULG	04 10 0100	S19 E21	04 11.6		B	CRO	10	4	4	3
6578		SVTO	04 10 0730	S18 E16	04 11.5		B	BXO	20	3	4	3
6578		BOUL	04 10 1350	S18 E14	04 11.6		B	BXO		2	4	1
6578		RAMY	04 10 1355	S19 E12	04 11.5		B	BXO	10	2	5	3
6578		HOLL	04 10 1442	S19 E13	04 11.6		B	BXO	20	4	5	3
6578	26683	MWIL	04 10 1530	S19 E13	04 11.6	4	(BG)					
6578		PALE	04 10 1917	S19 E11	04 11.6		B	BXO	20	12	5	4
6578		LEAR	04 11 0008	S19 E07	04 11.5		B	BXO	10	4	7	3

S U N S P O T G R O U P S
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APRIL 1991

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
6578		CULG	04 11 0100	S19 E07	04 11.6		B	BXO		3	5	3
6578A		CULG	04 11 0100	S03 E11	04 11.9		A	AX		1		3
6578A		CULG	04 12 0045	S03 W02	04 11.9		A	AX		2	2	3
6578A		RAMY	04 12 1150	S02 W09	04 11.8		B	BXO	10	8	3	4
6578A		HOLL	04 12 1455	S02 W11	04 11.8		B	BXO	10	3	3	4
6578A	26701	MWIL	04 12 1545	S02 W12	04 11.7	4	(B)					
6578A		PALE	04 12 1750	S02 W11	04 11.9		B	BXO		3	4	3
6589		RAMY	04 12 1150	S08 E02	04 12.6		A	AX	10	4	1	4
6589		PALE	04 12 1750	S07 W01	04 12.7		B	BXO		5	4	3
6589		CULG	04 13 0100	S08 W05	04 12.7		A	AX		1		3
6589		RAMY	04 13 1150	S08 W11	04 12.7		A	AX		1		3
6589		CULG	04 14 0120	S08 W19	04 12.6		A	AX		1		3
6589		PALE	04 14 1855	S13 W24	04 13.0		A	AX	10	1		4
6589		LEAR	04 15 0046	S13 W27	04 13.0		A	AX	10	1	1	3
6589		CULG	04 15 0050	S11 W28	04 12.9		A	AX		1		3
6589A		RAMY	04 07 1125	S15 E71	04 12.8		A	AX	10	2	2	3
6589A		HOLL	04 07 1610	S15 E68	04 12.8		A	AX	10	3	2	4
6589A		CULG	04 09 0019	S14 E49	04 12.7		A	AX		1		3
6589A	26706	MWIL	04 13 1545	S14 W07	04 13.1	4	(AF)					
6589A		CULG	04 14 0120	S15 W15	04 12.9		B	BXO		4	2	3
6589A	26706	MWIL	04 14 1545	S14 W22	04 13.0	4	(B)					
6580		RAMY	04 07 1125	N29 E79	04 13.7		A	HA	30	2	2	3
6580		HOLL	04 07 1610	N28 E70	04 13.1		A	AX	10	1		4
6580		PALE	04 07 1810	N30 E72	04 13.4		B	BXO	20	4	3	4
6580		LEAR	04 08 0010	N28 E67	04 13.2		B	BXO	60	2	3	2
6580		SVTO	04 08 0743	N28 E63	04 13.2		B	CAO	60	6	5	3
6580		BOUL	04 08 1350	N29 E59	04 13.2		B	CSO	30	3	2	1
6580	26686	MWIL	04 08 1615	N29 E59	04 13.3	4	(B)					
6580		RAMY	04 08 1625	N28 E60	04 13.4		B	CAO	80	11	4	1
6580		HOLL	04 08 1805	N28 E58	04 13.3		B	DAO	120	8	9	2
6580		PALE	04 08 2018	N28 E57	04 13.3		B	DAO	90	10	3	2
6580		CULG	04 09 0019	N30 E57	04 13.5		B	DAO	50	6	3	3
6580		LEAR	04 09 0027	N28 E56	04 13.4		B	DAO	200	11	9	4
6580		SVTO	04 09 0750	N27 E51	04 13.3		B	CAO	190	11	4	4
6580		RAMY	04 09 1422	N27 E47	04 13.3		B	DAO	220	7	5	2
6580		BOUL	04 09 1426	N29 E45	04 13.1		B	DAO	160	3	3	1
6580		HOLL	04 09 1514	N28 E47	04 13.3		B	DAO	220	10	6	3
6580	26686	MWIL	04 09 1545	N30 E47	04 13.3	6	(B)					
6580		PALE	04 09 2040	N27 E45	04 13.4		B	DAO	220	12	3	3
6580		CULG	04 10 0100	N30 E42	04 13.3		B	DAO	200	9	5	3
6580		SVTO	04 10 0730	N28 E39	04 13.4		B	CAO	220	14	5	3
6580		BOUL	04 10 1350	N29 E33	04 13.2		B	DAO	220	8	3	1
6580		RAMY	04 10 1355	N28 E33	04 13.1		B	DAO	250	15	5	3
6580		HOLL	04 10 1442	N29 E33	04 13.2		B	DAO	270	9	6	3
6580	26686	MWIL	04 10 1530	N29 E34	04 13.3	5	(B)					
6580		PALE	04 10 1917	N30 E31	04 13.2		B	DAO	160	15	4	4
6580		LEAR	04 11 0008	N28 E29	04 13.3		B	DAO	180	13	5	3
6580		CULG	04 11 0100	N30 E28	04 13.2		B	DAO	220	21	5	3
6580		RAMY	04 11 1414	N29 E22	04 13.3		B	DAO	250	13	6	3
6580		HOLL	04 11 1440	N28 E21	04 13.2		B	DAO	310	5	5	3
6580	26686	MWIL	04 11 1630	N29 E20	04 13.2	5	(B)					
6580		CULG	04 12 0045	N29 E16	04 13.3		B	DKO	280	22	5	3
6580		LEAR	04 12 0451	N29 E11	04 13.1		B	DKO	260	8	6	1
6580		RAMY	04 12 1150	N29 E11	04 13.3		B	DKI	330	26	6	4
6580		HOLL	04 12 1455	N27 E08	04 13.2		B	DAC	250	18	4	4
6580	26686	MWIL	04 12 1545	N29 E07	04 13.2	5	(D)					
6580		PALE	04 12 1750	N29 E07	04 13.3		B	DKI	350	28	5	3
6580		LEAR	04 13 0009	N28 E03	04 13.2		B	DKO	220	21	5	3
6580		CULG	04 13 0100	N29 E03	04 13.3		B	DKI	350	35	6	3
6580		RAMY	04 13 1150	N29 W02	04 13.3		B	DKI	380	29	5	3
6580	26686	MWIL	04 13 1545	N28 W06	04 13.2	5	(D)					
6580		HOLL	04 13 1555	N29 W07	04 13.1		BD	DKC	320	22	6	3
6580		PALE	04 13 1845	N28 W08	04 13.1		BD	DKC	380	20	5	1
6580		CULG	04 14 0120	N29 W11	04 13.2		B	DKI	310	23	5	3
6580		LEAR	04 14 0122	N28 W10	04 13.3		BD	DKI	320	23	6	3

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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
6580		SVTO	04	14	0745	N28	W14	04	13.2		BD	DKI	280	24	8	3
6580		RAMY	04	14	1339	N28	W16	04	13.3		BD	DKI	310	20	6	3
6580	26686	MWIL	04	14	1545	N28	W18	04	13.2	5	(D)					
6580		HOLL	04	14	1600	N28	W18	04	13.2		G	DKC	340	23	6	4
6580		PALE	04	14	1855	N29	W19	04	13.3		B	DAO	340	14	5	4
6580		LEAR	04	15	0046	N29	W23	04	13.2		B	DKO	350	19	5	3
6580		CULG	04	15	0050	N28	W23	04	13.2		BD	DKI	320	15	6	3
6580		SVTO	04	15	0815	N29	W26	04	13.3		B	DAO	310	19	5	3
6580		BOUL	04	15	1355	N28	W29	04	13.3		B	DKC	260	6	4	1
6580		RAMY	04	15	1520	N28	W28	04	13.4		BD	DKO	490	13	7	3
6580		HOLL	04	15	1540	N29	W33	04	13.1		BD	EKC	490	35	11	3
6580	26686	MWIL	04	15	1545	N29	W32	04	13.1	5	(B)					
6580		PALE	04	15	1920	N29	W34	04	13.1		B	DAO	320	10	5	2
6580		CULG	04	16	0017	N29	W34	04	13.3		BG	CKO	370	17	8	2
6580		LEAR	04	16	0020	N30	W35	04	13.3		B	DKO	230	10	4	3
6580		SVTO	04	16	0625	N29	W36	04	13.4		B	DKO	380	15	8	3
6580		RAMY	04	16	1405	N28	W42	04	13.3		BG	DKO	470	11	6	2
6580		HOLL	04	16	1500	N29	W43	04	13.2		B	DKC	580	17	10	3
6580	26686	MWIL	04	16	1545	N28	W44	04	13.2	5	(D)					
6580		PALE	04	16	2047	N29	W46	04	13.2		B	DAO	280	8	4	2
6580		LEAR	04	17	0043	N30	W47	04	13.3		B	DKO	400	11	6	3
6580		SVTO	04	17	1220	N30	W55	04	13.2		BD	DKI	540	6	6	2
6580	26686	MWIL	04	17	1600	N28	W56	04	13.3	5	(D)					
6580		HOLL	04	17	1605	N26	W57	04	13.2		BD	DKC	620	13	7	2
6580		PALE	04	17	1810	N28	W58	04	13.2		BD	DKC	740	23	7	4
6580		LEAR	04	18	0014	N29	W59	04	13.4		BD	DKO	1010	6	9	3
6580		CULG	04	18	0015	N29	W61	04	13.2		A	HK	250	12	7	2
6580		SVTO	04	18	0955	N28	W64	04	13.4		BD	DKI	980	5	7	3
6580		RAMY	04	18	1120	N29	W66	04	13.3		BD	DKC	940	7	7	3
6580	26686	MWIL	04	18	1530	N29	W69	04	13.2	5	(D)					
6580		PALE	04	18	1810	N28	W71	04	13.2		BD	DKC	720	10	10	4
6580		LEAR	04	19	0007	N30	W69	04	13.6		BD	EKO	630	4	11	3
6580		SVTO	04	19	0540	N27	W71	04	13.7		BD	DKC	660	3	8	3
6580		RAMY	04	19	1309	N27	W79	04	13.4		BD	DKC	420	3	6	3
6580		HOLL	04	19	1620	N28	W80	04	13.4		BD	DKC	900	3	6	4
6580	26686	MWIL	04	19	1630	N30	W85	04	13.0	5	X					
6580B		RAMY	04	12	1150	S17	E16	04	13.7		B	BXO	10	7	3	4
6580B		HOLL	04	12	1455	S16	E14	04	13.7		B	AX	10	2	1	4
6580B	26702	MWIL	04	12	1545	S16	E13	04	13.6	4	(AP)					
6580B		PALE	04	12	1750	S17	E13	04	13.7		B	BXO		3	3	3
6580B		RAMY	04	13	1150	S15	E03	04	13.7		B	BXO	10	3	3	3
6581A		CULG	04	14	0120	N07	W02	04	13.9		B	BXO		4	2	3
6580A		HOLL	04	09	1514	S14	E67	04	14.7		A	AX	10	1	1	3
6580A		PALE	04	09	2040	S16	E64	04	14.7		A	AX	40	3	2	3
6580A		CULG	04	10	0100	S13	E61	04	14.6		A	AX		1		3
6580A		LEAR	04	10	0100	S14	E60	04	14.6		A	AX	20	1	1	3
6580A		CULG	04	12	0045	S14	E33	04	14.5		A	AX		2	1	3
6580A	26703	MWIL	04	12	1545	S14	E25	04	14.5	4	(AF)					
6580A	26703	MWIL	04	13	1545	S15	E12	04	14.6	4	(AF)					
6580A	26703	MWIL	04	14	1545	S13	W05	04	14.3	4	(B)					
6581	26689	MWIL	04	08	1615	N15	E78	04	14.6	4	AP					
6581		HOLL	04	08	1805	N14	E73	04	14.3		B	BXO	30	2	4	2
6581		PALE	04	08	2018	N15	E73	04	14.4		B	CSO	60	4	5	2
6581		CULG	04	09	0019	N17	E75	04	14.7		B	CSO	20	4	8	3
6581		LEAR	04	09	0027	N15	E73	04	14.5		B	BXO	60	4	7	4
6581		SVTO	04	09	0750	N15	E70	04	14.6		B	DSO	40	4	6	4
6581		RAMY	04	09	1422	N15	E65	04	14.5		B	CRO	30	3	6	2
6581		BOUL	04	09	1426	N16	E62	04	14.3		A	AX	10	1		1
6581		HOLL	04	09	1514	N15	E64	04	14.5		B	BXO	20	3	6	3
6581	26689	MWIL	04	09	1545	N16	E66	04	14.7	4	(B)					
6581		PALE	04	09	2040	N14	E65	04	14.8		B	DSO	70	3	9	3
6581		LEAR	04	10	0100	N14	E59	04	14.5		B	BXO	40	5	8	3
6581		CULG	04	10	0100	N16	E60	04	14.6		B	CRO	20	3	5	3
6581		SVTO	04	10	0730	N14	E55	04	14.5		B	CRO	30	3	6	3
6581		BOUL	04	10	1350	N15	E48	04	14.2		A	AX	10	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
6581		RAMY	04 10 1355	N14 E51	04 14.4		B	CRO	20	2	6	3
6581		HOLL	04 10 1442	N16 E51	04 14.5		B	BXO	20	2	5	3
6581	26689	MWIL	04 10 1530	N14 E49	04 14.3	4	(B)					
6581		PALE	04 10 1917	N15 E46	04 14.3		A	AX	10	2	2	4
6581		LEAR	04 11 0008	N15 E43	04 14.3		B	CSO	10	2	3	3
6581		CULG	04 11 0100	N16 E42	04 14.2		A	HR	10	5	1	3
6581		RAMY	04 11 1414	N13 E37	04 14.4		B	BXO	10	8	6	3
6581		HOLL	04 11 1440	N14 E37	04 14.4		B	CAO	30	4	7	3
6581	26689	MWIL	04 11 1630	N14 E33	04 14.2	4	(B)					
6581		CULG	04 12 0045	N14 E31	04 14.4		B	DRO	50	7	6	3
6581		LEAR	04 12 0451	N11 E30	04 14.4		B	CSO	50	4	12	1
6581		RAMY	04 12 1150	N12 E23	04 14.2		B	DAO	20	9	7	4
6581		HOLL	04 12 1455	N13 E22	04 14.3		B	CRO	20	4	7	4
6581	26689	MWIL	04 12 1545	N14 E21	04 14.2	4	(BP)					
6581		PALE	04 12 1750	N12 E21	04 14.3		B	BXO	10	6	6	3
6581		LEAR	04 13 0009	N14 E14	04 14.1		B	CAO	10	2	5	3
6581		CULG	04 13 0100	N12 E15	04 14.2		B	CSO	10	3	6	3
6581		RAMY	04 13 1150	N13 E11	04 14.3		B	BXO	20	14	7	3
6581	26689	MWIL	04 13 1545	N14 E08	04 14.3	4	(B)					
6581		CULG	04 14 0120	N13 E04	04 14.3		B	CRO	10	5	5	3
6581		LEAR	04 14 0122	N12 E05	04 14.4		B	BXO	10	2	3	3
6581		RAMY	04 14 1339	N12 W08	04 14.0		B	BXO	10	5	4	3
6581	26689	MWIL	04 14 1545	N12 W08	04 14.0	4	(AP)					
6581		HOLL	04 15 1540	N14 W13	04 14.7		A	AX		2	1	3
6581	26689	MWIL	04 15 1545	N14 W13	04 14.7	4	(AF)					
6581B		RAMY	04 09 1422	S13 E63	04 14.3		B	BXO	10	2	8	2
6581B	26694	MWIL	04 09 1545	S12 E62	04 14.3	4	(B)					
6581B		CULG	04 14 0120	S11 E06	04 14.5		B	BXO		2		3
6581B		LEAR	04 14 0122	S12 E03	04 14.3		B	BXO	10	2	3	3
6581C	26687	MWIL	04 08 1615	S26 E75	04 14.5	4	(AP)					
6585	26688	MWIL	04 08 1615	S22 E77	04 14.6	4	AP					
6585		CULG	04 09 0019	S20 E73	04 14.6		A	AX	10	2	4	3
6585	26688	MWIL	04 09 1545	S22 E68	04 14.9	4	(B)					
6585		SVTO	04 10 0730	S26 E55	04 14.6		A	AX		1		3
6585		RAMY	04 10 1355	S26 E50	04 14.5		A	AX		1		3
6585		HOLL	04 10 1442	S26 E51	04 14.6		A	AX		1	1	3
6585	26688	MWIL	04 10 1530	S23 E58	04 15.1	4	(AF)					
6585		PALE	04 10 1917	S26 E48	04 14.5		A	AX		1		4
6585A		SVTO	04 09 0750	S07 E70	04 14.6		B	BXO	10	3	2	4
6585B	26707	MWIL	04 13 1545	S32 E13	04 14.7	3	(AP)					
6591		RAMY	04 12 1150	N08 E32	04 14.9		B	BXO	10	4	3	4
6591		HOLL	04 12 1455	N09 E31	04 14.9		B	BXO	10	3	3	4
6591	26704	MWIL	04 12 1545	N08 E31	04 15.0	4	(B)					
6591		PALE	04 12 1750	N09 E29	04 14.9		B	BXO		2	3	3
6591		LEAR	04 13 0009	N08 E25	04 14.9		B	BXO	10	2	5	3
6591		CULG	04 13 0100	N09 E26	04 15.0		B	BXO		3	4	3
6591		RAMY	04 13 1150	N08 E19	04 14.9		B	CRO	20	10	4	3
6591	26704	MWIL	04 13 1545	N08 E16	04 14.8	4	(B)					
6591		HOLL	04 13 1555	N08 E17	04 14.9		B	CRO	30	9	4	3
6591		PALE	04 13 1845	N09 E16	04 15.0		B	DSO	30	6	5	1
6591		CULG	04 14 0120	N08 E13	04 15.0		B	BXO		2	2	3
6591		LEAR	04 14 0122	N08 E11	04 14.9		B	BXO	20	4	4	3
6591		SVTO	04 14 0745	N09 E08	04 14.9		B	BXO	10	5	4	3
6591		RAMY	04 14 1339	N09 E05	04 14.9		B	BXO	10	4	3	3
6591	26704	MWIL	04 14 1545	N08 E04	04 14.9	4	(B)					
6591		HOLL	04 14 1600	N08 E05	04 15.0		A	AX		1		4
6591		PALE	04 14 1855	N09 E02	04 14.9		A	AX	30	5	4	4
6591		LEAR	04 15 0046	N08 W01	04 14.9		B	BXO	30	6	4	3
6591		CULG	04 15 0050	N09 W01	04 14.9		B	BXO		7	4	3
6591		RAMY	04 15 1520	N09 W09	04 15.0		B	BXO	10	5	4	3
6591		HOLL	04 15 1540	N09 W10	04 14.9		B	BXO	10	5	5	3
6591	26704	MWIL	04 15 1545	N09 W08	04 15.0	4	(B)					
6591		PALE	04 15 1920	N09 W12	04 14.9		A	BS	20	4	3	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
6591		CULG	04	16	0017	N09	W12	04	15.1		A	AX		1		2
6591		LEAR	04	16	0020	N09	W15	04	14.9		B	BXO	20	6	5	3
6591		RAMY	04	16	1405	N08	W23	04	14.9		B	BXO		2	5	2
6591A		RAMY	04	10	1355	S22	E58	04	15.0		B	BXO	10	6	3	3
6582		LEAR	04	08	0010	S27	E79	04	14.2		A	AX	30	1	1	2
6582		CULG	04	09	0019	S25	E76	04	14.9		B	BXO	10	3	16	3
6582		LEAR	04	09	0027	S25	E75	04	14.8		B	BXO	120	9	10	4
6582		SVTO	04	09	0750	S24	E78	04	15.3		B	BXO	20	2	3	4
6582		RAMY	04	09	1422	S25	E73	04	15.2		B	DRO	50	2	3	2
6582		BOUL	04	09	1426	S23	E73	04	15.2		B	BXO	20	2	3	1
6582		HOLL	04	09	1514	S24	E73	04	15.3		B	BXO	30	2	8	3
6582	26695	MWIL	04	09	1545	S25	E75	04	15.5	4	(AF)					
6582		PALE	04	09	2040	S26	E74	04	15.6		B	DSO	130	5	9	3
6582		CULG	04	10	0100	S25	E70	04	15.5		B	DRO	60	11	9	3
6582		SVTO	04	10	0730	S25	E65	04	15.3		B	DAO	70	11	8	3
6582		BOUL	04	10	1350	S25	E63	04	15.4		B	CSI	40	8	8	1
6582		RAMY	04	10	1355	S27	E63	04	15.5		B	DAO	120	9	8	3
6582		HOLL	04	10	1442	S24	E62	04	15.4		B	DAO	220	15	10	3
6582	26695	MWIL	04	10	1530	S27	E62	04	15.5	4	(B)					
6582		PALE	04	10	1917	S24	E62	04	15.6		B	DSO	70	9	10	4
6582		LEAR	04	11	0008	S27	E59	04	15.6		B	DAO	100	9	10	3
6582		CULG	04	11	0100	S25	E57	04	15.4		B	DAO	80	11	10	3
6582		RAMY	04	11	1414	S26	E50	04	15.5		B	DSO	100	7	10	3
6582		HOLL	04	11	1440	S25	E50	04	15.5		B	EAO	130	6	14	3
6582	26695	MWIL	04	11	1630	S26	E49	04	15.5	4	(B)					
6582		CULG	04	12	0045	S26	E45	04	15.5		B	EAO	60	13	11	3
6582		LEAR	04	12	0451	S25	E43	04	15.5		B	DSO	110	5	10	1
6582		RAMY	04	12	1150	S26	E38	04	15.4		B	EAO	80	24	14	4
6582		HOLL	04	12	1455	S25	E36	04	15.4		BG	DAO	50	19	18	4
6582	26695	MWIL	04	12	1545	S25	E33	04	15.2	5	(BG)					
6582		PALE	04	12	1750	S25	E34	04	15.4		B	EAO	90	19	15	3
6582		LEAR	04	13	0009	S25	E30	04	15.3		B	EAO	60	11	14	3
6582		CULG	04	13	0100	S26	E28	04	15.2		B	DAO	80	11	8	3
6582		RAMY	04	13	1150	S25	E22	04	15.2		B	EAO	130	27	14	3
6582	26695	MWIL	04	13	1545	S26	E20	04	15.2	4	(BG)					
6582		HOLL	04	13	1555	S26	E22	04	15.4		BG	CRO	50	17	14	3
6582		PALE	04	13	1845	S27	E22	04	15.5		B	EAO	110	15	14	1
6582		CULG	04	14	0120	S26	E15	04	15.2		B	EAO	90	27	13	3
6582		LEAR	04	14	0122	S25	E16	04	15.3		B	EAO	220	30	14	3
6582		SVTO	04	14	0745	S26	E11	04	15.2		B	EAO	100	30	15	3
6582		RAMY	04	14	1339	S26	E09	04	15.3		B	EAO	170	46	15	3
6582	26695	MWIL	04	14	1545	S25	E06	04	15.1	5	(BG)					
6582		HOLL	04	14	1600	S24	E08	04	15.3		B	EAI	180	42	15	4
6582		PALE	04	14	1855	S24	E05	04	15.2		B	ESO	150	43	14	4
6582		LEAR	04	15	0046	S25	E02	04	15.2		B	EAO	220	33	12	3
6582		CULG	04	15	0050	S25	E02	04	15.2		B	EAO	120	43	15	3
6582		SVTO	04	15	0815	S26	W02	04	15.2		B	ESO	110	31	15	3
6582		BOUL	04	15	1355	S23	W07	04	15.0		B	CAI	90	7	8	1
6582		RAMY	04	15	1520	S25	W05	04	15.2		B	FKO	280	28	16	3
6582		HOLL	04	15	1540	S25	W05	04	15.3		BG	FKI	230	55	16	3
6582	26695	MWIL	04	15	1545	S25	W08	04	15.0	5	(BG)					
6582		PALE	04	15	1920	S25	W11	04	14.9		B	ESO	120	26	11	2
6582		CULG	04	16	0017	S24	W11	04	15.2		B	EKO	160	34	11	2
6582		LEAR	04	16	0020	S24	W13	04	15.0		B	DAO	180	18	9	3
6582		SVTO	04	16	0625	S25	W15	04	15.1		B	EAO	210	24	15	3
6582		RAMY	04	16	1405	S25	W18	04	15.2		BG	DKO	280	24	12	2
6582		HOLL	04	16	1500	S25	W19	04	15.1		BG	CHO	180	22	13	3
6582	26695	MWIL	04	16	1545	S23	W23	04	14.9	5	(BG)					
6582		PALE	04	16	2047	S24	W23	04	15.1		B	CSO	100	7	10	2
6582		LEAR	04	17	0043	S23	W26	04	15.0		B	CAO	180	11	11	3
6582		RAMY	04	17	1215	S24	W30	04	15.2		B	CKO	160	11	12	4
6582		SVTO	04	17	1220	S24	W31	04	15.1		B	CSO	140	8	11	2
6582	26695	MWIL	04	17	1600	S24	W36	04	14.9	5	(BP)					
6582		HOLL	04	17	1605	S26	W31	04	15.3		B	CSO	190	11	14	2
6582		PALE	04	17	1810	S24	W35	04	15.0		B	CAO	130	8	12	4
6582		LEAR	04	18	0014	S23	W42	04	14.8		B	CKO	170	5	12	3
6582		CULG	04	18	0015	S24	W36	04	15.2		B	CSO	130	5	13	2

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6582		SVTO	04	18	0955	S26	W41	04	15.2		B	CAO	130	7	13	3
6582		RAMY	04	18	1120	S26	W43	04	15.1		BG	CSO	180	10	14	3
6582	26695	MWIL	04	18	1530	S25	W48	04	14.9	5	(BP)					
6582		PALE	04	18	1810	S26	W47	04	15.1		B	CSO	120	4	12	4
6582		LEAR	04	19	0007	S22	W55	04	14.8		A	HK	140	1	4	3
6582		SVTO	04	19	0540	S26	W52	04	15.2		B	CAO	100	3	13	3
6582		RAMY	04	19	1309	S24	W62	04	14.7		A	HS	160	1	2	3
6582		HOLL	04	19	1620	S26	W60	04	15.0		B	CSO	160	3	9	4
6582	26695	MWIL	04	19	1630	S25	W65	04	14.6	5	(AF)					
6582		PALE	04	19	1733	S28	W67	04	14.5		A	HS	120	1	1	3
6582		CULG	04	20	0020	S25	W65	04	15.0		A	HS	120	2	2	3
6582		LEAR	04	20	0113	S23	W67	04	14.9		A	HS	120	1	2	2
6582		SVTO	04	20	0728	S25	W67	04	15.1		B	CAO	150	3	8	3
6582		RAMY	04	20	1230	S24	W76	04	14.6		A	HA	120	1	2	3
6582		HOLL	04	20	1630	S26	W77	04	14.7		A	HS	120	1	2	3
6582		PALE	04	20	1918	S26	W79	04	14.7		A	HS	60	1	1	3
6582		LEAR	04	21	0044	S23	W78	04	15.0		A	HS	90	1	2	3
6582		CULG	04	21	0045	S25	W81	04	14.7		A	HS	80	1	2	3
6582		RAMY	04	21	1205	S25	W87	04	14.8		A	HA	60	1	2	3
6582A		CULG	04	13	0100	S26	E39	04	16.1		B	BXO		2	1	3
6582B		RAMY	04	17	1215	S03	W15	04	16.4		A	AX		1		4
6583		SVTO	04	10	0730	N08	E85	04	16.7		B	CAO	120	4	3	3
6583		BOUL	04	10	1350	N11	E79	04	16.5		B	CAO	120	4	4	1
6583		RAMY	04	10	1355	N10	E76	04	16.3		B	CKO	310	10	5	3
6583		HOLL	04	10	1442	N11	E77	04	16.4		A	HK	260	6	4	3
6583	26699	MWIL	04	10	1530	N10	E77	04	16.4	4	(AP					
6583		PALE	04	10	1917	N11	E75	04	16.4		B	DAO	260	15	7	4
6583		LEAR	04	11	0008	N09	E71	04	16.3		B	EKI	330	14	11	3
6583		CULG	04	11	0100	N10	E73	04	16.5		B	EAI	420	19	12	3
6583		RAMY	04	11	1414	N09	E66	04	16.5		B	EAI	490	24	11	3
6583		HOLL	04	11	1440	N09	E65	04	16.5		B	EAI	310	23	13	3
6583	26699	MWIL	04	11	1630	N10	E64	04	16.5	5	(B)					
6583		CULG	04	12	0045	N09	E60	04	16.5		B	EAI	390	34	14	3
6583		LEAR	04	12	0451	N09	E55	04	16.3		B	DAI	460	13	8	1
6583		RAMY	04	12	1150	N09	E53	04	16.5		B	EAO	700	67	14	4
6583		HOLL	04	12	1455	N09	E51	04	16.4		B	EAI	440	49	12	4
6583	26699	MWIL	04	12	1545	N08	E51	04	16.5	5	(D)					
6583		PALE	04	12	1750	N09	E50	04	16.5		B	EKI	580	57	14	3
6583		LEAR	04	13	0009	N08	E48	04	16.6		BG	EKO	660	33	13	3
6583		CULG	04	13	0100	N09	E46	04	16.5		B	EKO	500	27	12	3
6583		RAMY	04	13	1150	N09	E41	04	16.6		BG	EKI	860	96	14	3
6583	26699	MWIL	04	13	1545	N08	E38	04	16.5	5	(D)					
6583		HOLL	04	13	1555	N09	E39	04	16.6		BGD	EKC	770	72	13	3
6583		PALE	04	13	1845	N08	E38	04	16.6		BG	EKI	910	51	13	1
6583		CULG	04	14	0120	N09	E34	04	16.6		BGD	EKI	730	60	13	3
6583		LEAR	04	14	0122	N09	E34	04	16.6		BD	EKI	1030	76	14	3
6583		SVTO	04	14	0745	N09	E30	04	16.6		BD	EKI	790	79	13	3
6583		RAMY	04	14	1339	N09	E27	04	16.6		BGD	FKO	890	79	13	3
6583	26699	MWIL	04	14	1545	N07	E24	04	16.4	5	(D)					
6583		HOLL	04	14	1600	N08	E25	04	16.5		BGD	EKC	1070	86	15	4
6583		PALE	04	14	1855	N07	E22	04	16.4		BG	FKI	730	54	16	4
6583		LEAR	04	15	0046	N09	E21	04	16.6		B	EKI	1050	63	14	3
6583		CULG	04	15	0050	N08	E21	04	16.6		BGD	EKI	870	67	16	3
6583		SVTO	04	15	0815	N08	E18	04	16.7		BGD	FKI	620	75	16	3
6583		BOUL	04	15	1355	N08	E12	04	16.5		B	EAI	350	26	13	1
6583		RAMY	04	15	1520	N08	E11	04	16.5		GD	EAI	740	74	13	3
6583		HOLL	04	15	1540	N08	E12	04	16.5		BG	FAC	590	0	17	3
6583	26699	MWIL	04	15	1545	N07	E10	04	16.4	5	(BG)					
6583		PALE	04	15	1920	N08	E08	04	16.4		B	ESI	470	62	15	2
6583		CULG	04	16	0017	N09	E07	04	16.5		BGD	EKI	520	65	14	2
6583		LEAR	04	16	0020	N08	E08	04	16.6		BGD	EKI	500	42	14	3
6583		SVTO	04	16	0625	N07	E04	04	16.6		BGD	EKI	640	73	14	3
6583		RAMY	04	16	1405	N08	W01	04	16.5		BG	EKI	80	84	15	2
6583		HOLL	04	16	1500	N10	W01	04	16.5		B	FAC	430	87	16	3
6583	26699	MWIL	04	16	1545	N07	W03	04	16.4	5	(D)					
6583		PALE	04	16	2047	N10	W04	04	16.6		BG	EKI	480	35	14	2

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
6583		LEAR	04	17	0043	N08	W05	04	16.6		BGD	FKI	370	78	16	3
6583		RAMY	04	17	1215	N10	W12	04	16.6		BG	EAI	500	71	13	4
6583		SVTO	04	17	1220	N10	W11	04	16.7		BGD	EKI	430	62	14	2
6583	26699	MWIL	04	17	1600	N08	W16	04	16.5	5	(D)					
6583		HOLL	04	17	1605	N08	W15	04	16.5		BG	EKC	460	78	14	2
6583		PALE	04	17	1810	N09	W15	04	16.6		BG	EAI	500	74	13	4
6583		LEAR	04	18	0014	N09	W18	04	16.6		BG	EKI	400	62	15	3
6583		CULG	04	18	0015	N10	W17	04	16.7		BG	EKI	400	87	14	2
6583		SVTO	04	18	0955	N08	W24	04	16.6		BG	EAI	400	74	15	3
6583		RAMY	04	18	1120	N09	W26	04	16.5		BG	EKI	540	93	14	3
6583	26699	MWIL	04	18	1530	N08	W30	04	16.4	5	(D)					
6583		PALE	04	18	1810	N09	W29	04	16.6		BG	EKI	670	81	13	4
6583		LEAR	04	19	0007	N09	W31	04	16.7		BG	EKI	400	36	14	3
6583		SVTO	04	19	0540	N09	W35	04	16.6		BG	EAI	520	35	13	3
6583		RAMY	04	19	1309	N09	W40	04	16.5		BG	EKI	640	41	14	3
6583		HOLL	04	19	1620	N09	W42	04	16.5		BG	EAI	710	66	13	4
6583	26699	MWIL	04	19	1630	N09	W46	04	16.2	5	(B)					
6583		PALE	04	19	1733	N06	W45	04	16.4		BG	EAI	540	27	12	3
6583		CULG	04	20	0020	N09	W45	04	16.6		BG	EKI	480	38	13	3
6583		LEAR	04	20	0113	N11	W46	04	16.6		B	EKO	740	27	13	2
6583		SVTO	04	20	0728	N08	W48	04	16.7		BG	EAI	590	47	14	3
6583		RAMY	04	20	1230	N09	W54	04	16.5		BG	EKI	490	49	13	3
6583		HOLL	04	20	1630	N08	W55	04	16.6		BGD	EKC	460	59	13	3
6583		PALE	04	20	1918	N09	W59	04	16.4		B	DAO	180	15	7	3
6583		LEAR	04	21	0044	N11	W62	04	16.4		B	EAO	510	20	12	3
6583		CULG	04	21	0045	N09	W61	04	16.4		BG	EKI	360	21	11	3
6583		RAMY	04	21	1205	N08	W68	04	16.4		BG	EAI	360	22	12	3
6583		SVTO	04	21	1255	N08	W69	04	16.4		BG	DAI	310	15	8	2
6583	26699	MWIL	04	21	1500	N09	W71	04	16.3	5	(B)					
6583		HOLL	04	21	1700	N08	W70	04	16.5		BG	EAI	350	25	11	2
6583		PALE	04	21	1936	N08	W73	04	16.3		B	CAO	90	11	10	2
6583		CULG	04	22	0050	N09	W76	04	16.3		BG	EAO	150	8	11	3
6583		LEAR	04	22	0110	N08	W75	04	16.4		B	DAO	150	10	10	3
6583		SVTO	04	22	1136	N07	W79	04	16.6		B	CAO	70	3	3	3
6583		HOLL	04	22	1400	N07	W88	04	16.0		A	HA	90	1	2	4
6583		BOUL	04	22	1440	N08	W81	04	16.5		A	HA	60	3	2	3
6583	26699	MWIL	04	22	1530	N07	W82	04	16.5	4	AF)					
6583		RAMY	04	22	1630	N08	W85	04	16.3		A	HA	50	1	2	1
6594		SVTO	04	14	0745	S20	E30	04	16.6		B	BXO	20	8	4	3
6594		RAMY	04	14	1339	S19	E27	04	16.6		B	DAO	30	11	6	3
6594	26708	MWIL	04	14	1545	S19	E25	04	16.6	5	(BP)					
6594		HOLL	04	14	1600	S18	E25	04	16.6		B	CAI	90	13	6	4
6594		PALE	04	14	1855	S20	E22	04	16.5		B	DSO	50	12	6	4
6594		LEAR	04	15	0046	S19	E20	04	16.5		B	BXO	80	18	6	3
6594		CULG	04	15	0050	S18	E21	04	16.6		B	DSI	50	11	6	3
6594		SVTO	04	15	0815	S20	E15	04	16.5		B	BXO	20	13	6	3
6594		BOUL	04	15	1355	S18	E11	04	16.4		B	BXO	10	3	7	1
6594		RAMY	04	15	1520	S20	E11	04	16.5		B	DAO	40	6	8	3
6594		HOLL	04	15	1540	S19	E12	04	16.6		B	CSO	30	25	8	3
6594	26708	MWIL	04	15	1545	S20	E11	04	16.5	5	(B)					
6594		PALE	04	15	1920	S21	E08	04	16.4		B	DSO	40	5	9	2
6594		CULG	04	16	0017	S19	E08	04	16.6		B	DRO	10	7	9	2
6594		LEAR	04	16	0020	S19	E06	04	16.5		B	DSO	70	11	9	3
6594		SVTO	04	16	0625	S20	E03	04	16.5		B	BXO	20	9	8	3
6594		RAMY	04	16	1405	S19	W01	04	16.5		B	DAO	40	11	11	2
6594		HOLL	04	16	1500	S20	E00	04	16.6		B	BXO	30	10	9	3
6594	26708	MWIL	04	16	1545	S20	W03	04	16.4	4	(B)					
6594		PALE	04	16	2047	S19	W04	04	16.6		B	BXO	20	8	10	2
6594		LEAR	04	17	0043	S19	W07	04	16.5		B	CRO	20	14	10	3
6594		RAMY	04	17	1215	S18	W13	04	16.5		B	CAO	40	15	7	4
6594	26708	MWIL	04	17	1600	S19	W17	04	16.4	5	(B)					
6594		HOLL	04	17	1605	S20	W15	04	16.5		B	BXO	30	11	8	2
6594		PALE	04	17	1810	S19	W17	04	16.4		B	CAO	40	11	9	4
6594		LEAR	04	18	0014	S18	W20	04	16.5		B	BXO	10	5	9	3
6594		CULG	04	18	0015	S19	W20	04	16.5		B	CRO	10	7	9	2
6594		SVTO	04	18	0955	S19	W24	04	16.6		B	BXO	10	10	9	3
6594		RAMY	04	18	1120	S19	W27	04	16.4		B	CAO	20	12	9	3
6594	26708	MWIL	04	18	1530	S19	W29	04	16.4	5	(B)					

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6594		PALE	04 18 1810	S19 W30	04 16.5		B	CSO	30	11	8	4
6594		LEAR	04 19 0007	S18 W37	04 16.2		B	CAO	20	5	4	3
6594		CULG	04 19 0030	S19 W34	04 16.4		B	CAO	10	5	2	2
6594		SVTO	04 19 0540	S19 W36	04 16.5		B	BXO	10	9	8	3
6594		RAMY	04 19 1309	S19 W40	04 16.5		B	BXO	10	10	10	3
6594		HOLL	04 19 1620	S19 W42	04 16.5		B	BXO	10	11	7	4
6594	26708	MWIL	04 19 1630	S19 W45	04 16.2	4	(B)					
6594		PALE	04 19 1733	S18 W42	04 16.5		B	BXO	40	3	3	3
6594		LEAR	04 20 0113	S17 W48	04 16.4		B	BXO	10	2	4	2
6594		SVTO	04 20 0728	S18 W49	04 16.6		B	DRO	30	9	8	3
6594		RAMY	04 20 1230	S19 W53	04 16.5		B	DAO	80	16	7	3
6594		HOLL	04 20 1630	S20 W56	04 16.4		B	CRO	60	13	9	3
6594		PALE	04 20 1918	S20 W55	04 16.6		B	BXO	10	5	6	3
6594		LEAR	04 21 0044	S18 W59	04 16.5		B	BXO	90	10	6	3
6594		CULG	04 21 0045	S20 W60	04 16.4		B	CRO	30	7	6	3
6594		RAMY	04 21 1205	S18 W66	04 16.5		B	DAO	70	8	7	3
6594		SVTO	04 21 1255	S19 W67	04 16.4		B	BXO	20	4	6	2
6594	26708	MWIL	04 21 1500	S19 W69	04 16.3	4	(B)					
6594		HOLL	04 21 1700	S20 W68	04 16.5		B	BXO	30	6	9	2
6594		PALE	04 21 1936	S19 W67	04 16.7		B	BXO	10	4	4	2
6594		CULG	04 22 0050	S19 W73	04 16.5		B	BXO		2	6	3
6594		LEAR	04 22 0110	S17 W73	04 16.5		A	AX	20	1	1	3
6587		PALE	04 10 1917	S26 E85	04 17.4		A	AX		1		4
6587		CULG	04 11 0100	S26 E82	04 17.4		A	HS	20	1	1	3
6587		RAMY	04 11 1414	S26 E75	04 17.4		A	HS	30	1	2	3
6587		HOLL	04 11 1440	S26 E75	04 17.4		A	HS	30	1	1	3
6587	26700	MWIL	04 11 1630	S27 E75	04 17.5	4	AP					
6587		CULG	04 12 0045	S26 E70	04 17.5		A	HR	30	2	1	3
6587		RAMY	04 12 1150	S27 E61	04 17.2		A	HA	40	1	1	4
6587		HOLL	04 12 1455	S26 E63	04 17.5		B	CSO	30	2	3	4
6587	26700	MWIL	04 12 1545	S27 E62	04 17.5	5	(AP)					
6587		PALE	04 12 1750	S26 E62	04 17.6		B	CSO	20	3	3	3
6587		LEAR	04 13 0009	S28 E57	04 17.5		A	HA	20	1	2	3
6587		CULG	04 13 0100	S26 E57	04 17.5		B	CSO	30	2	2	3
6587		RAMY	04 13 1150	S27 E50	04 17.4		A	HA	30	2	1	3
6587	26700	MWIL	04 13 1545	S27 E48	04 17.4	5	(AP)					
6587		HOLL	04 13 1555	S26 E48	04 17.4		A	AX	20	2	1	3
6587		PALE	04 13 1845	S27 E48	04 17.5		A	HA	20	1	1	1
6587		CULG	04 14 0120	S26 E43	04 17.4		A	HR	20	2	1	3
6587		LEAR	04 14 0122	S27 E43	04 17.4		A	AX	30	2	2	3
6587		SVTO	04 14 0745	S27 E40	04 17.4		A	AX		2	1	3
6587		RAMY	04 14 1339	S28 E37	04 17.5		B	CRO	20	2	3	3
6587	26700	MWIL	04 14 1545	S27 E36	04 17.5	4	(AP)					
6587		HOLL	04 14 1600	S27 E36	04 17.5		A	HR	20	2	1	4
6587		PALE	04 14 1855	S27 E33	04 17.3		A	AX	10	1	1	4
6587		LEAR	04 15 0046	S27 E31	04 17.4		A	AX	20	2	1	3
6587		CULG	04 15 0050	S26 E31	04 17.4		B	BXO		2	1	3
6587		SVTO	04 15 0815	S26 E26	04 17.4		A	AX	10	2		3
6587		BOUL	04 15 1355	S25 E23	04 17.4		A	AX		1		1
6587		RAMY	04 15 1520	S28 E22	04 17.3		B	CRO	10	4	3	3
6587		HOLL	04 15 1540	S26 E23	04 17.4		A	AX	10	2		3
6587	26700	MWIL	04 15 1545	S27 E23	04 17.4	4	(AP)					
6587		PALE	04 15 1920	S27 E22	04 17.5		A	HS	30	3	2	2
6587		CULG	04 16 0017	S27 E19	04 17.5		A	AX	10	2	1	2
6587		LEAR	04 16 0020	S27 E17	04 17.3		A	AX	10	2	1	3
6587		SVTO	04 16 0625	S26 E15	04 17.4		A	AX	10	2	1	3
6587		RAMY	04 16 1405	S28 E10	04 17.4		A	AX		2	1	2
6587		HOLL	04 16 1500	S27 E11	04 17.5		A	AX	20	2	1	3
6587	26700	MWIL	04 16 1545	S27 E10	04 17.4	4	(AP)					
6587		LEAR	04 17 0043	S27 E05	04 17.4		B	BXO	10	2	4	3
6587		RAMY	04 17 1215	S26 W01	04 17.4		A	AX		2	1	4
6587	26700	MWIL	04 17 1600	S27 W03	04 17.4	4	(AP)					
6587		HOLL	04 17 1605	S27 W02	04 17.5		A	AX	10	1	1	2
6587		LEAR	04 18 0014	S25 W07	04 17.5		B	BXO	10	3	3	3
6587		PALE	04 18 1810	S23 W17	04 17.4		A	AX		1		4
6587		LEAR	04 19 0007	S27 W12	04 18.1		B	BXO	10	3	6	3
6587		CULG	04 19 0030	S24 W10	04 18.2		A	AX		1	1	2
6587		RAMY	04 19 1309	S26 W17	04 18.2		B	BXO	10	5	4	3

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6587		HOLL	04	19	1620	S26	W19	04	18.2		B	DRO	20	5	4	4
6587	26717	MWIL	04	19	1630	S27	W20	04	18.1	4	(B)					
6587		PALE	04	19	1733	S28	W20	04	18.2		B	DSO	20	2	3	3
6587		CULG	04	20	0020	S26	W23	04	18.2		B	DSO	20	2	4	3
6587		LEAR	04	20	0113	S25	W26	04	18.0		B	BXO	20	3	5	2
6587		SVTO	04	20	0728	S26	W27	04	18.2		B	DRO	20	3	6	3
6587		RAMY	04	20	1230	S26	W30	04	18.2		B	DAO	50	7	6	3
6587		HOLL	04	20	1630	S27	W32	04	18.2		B	BXO	10	3	5	3
6587		PALE	04	20	1918	S29	W33	04	18.2		B	BXO	10	2	4	3
6587		LEAR	04	21	0044	S25	W37	04	18.2		B	BXO	10	2	4	3
6587		CULG	04	21	0045	S27	W38	04	18.1		B	BXO		2	4	3
6587		RAMY	04	21	1205	S28	W42	04	18.2		A	AX		1		3
6587		HOLL	04	21	1700	S28	W44	04	18.3		A	AX		1		2
6587		PALE	04	21	1936	S27	W49	04	18.0		A	AX		2	1	2
6587A		BOUL	04	22	1440	N18	W66	04	17.6		B	BXO	10	3	2	3
6587A		BOUL	04	23	1545	N18	W81	04	17.5		A	AX	10	1	1	3
6587B	26714	MWIL	04	18	1530	N16	W08	04	18.0	4	(AP)					
6587B	26714	MWIL	04	19	1630	N16	W24	04	17.9	4	(B)					
6599		RAMY	04	15	1520	S13	E35	04	18.3		A	AX		1		3
6599	26711	MWIL	04	16	1545	S13	E22	04	18.3	4	(AP)					
6599		RAMY	04	17	1215	S11	E08	04	18.1		B	BXO		2	3	4
6599	26711	MWIL	04	17	1600	S11	E06	04	18.1	4	(AP)					
6599		HOLL	04	17	1605	S12	E08	04	18.3		A	AX	10	2	1	2
6599		CULG	04	18	0015	S12	E03	04	18.2		A	AX		1		2
6599	26711	MWIL	04	18	1530	S13	W07	04	18.1	3	(AP)					
6599		PALE	04	18	1810	S13	W08	04	18.1		B	BXO		2	3	4
6599		CULG	04	20	0020	S13	W22	04	18.3		B	BXO		2	1	3
6599		LEAR	04	20	0113	S12	W24	04	18.2		B	BXO	20	4	4	2
6599		SVTO	04	20	0728	S12	W28	04	18.2		B	BXO	10	4	4	3
6599		RAMY	04	20	1230	S12	W32	04	18.1		B	DAO	40	7	4	3
6599		HOLL	04	20	1630	S13	W33	04	18.2		B	BXO	10	3	4	3
6599		PALE	04	20	1918	S15	W36	04	18.1		A	AX		2	1	3
6599		LEAR	04	21	0044	S12	W37	04	18.2		B	BXO	20	3	3	3
6599		CULG	04	21	0045	S13	W38	04	18.2		B	BXO		3	3	3
6599		RAMY	04	21	1205	S13	W46	04	18.0		B	BXO	10	6	5	3
6599		PALE	04	21	1936	S15	W48	04	18.2		A	AX		2		2
6599		CULG	04	22	0050	S13	W51	04	18.2		B	BXO	10	4	3	3
6599		LEAR	04	22	0110	S12	W50	04	18.3		B	CSO	10	2	2	3
6599		SVTO	04	22	1136	S14	W54	04	18.4		B	CRO	30	5	5	3
6599		HOLL	04	22	1400	S15	W58	04	18.2		B	BXO	20	4	5	4
6599		BOUL	04	22	1440	S14	W58	04	18.2		B	BXO	20	3	4	3
6599	26723	MWIL	04	22	1530	S15	W58	04	18.2	4	(B)					
6599		RAMY	04	22	1630	S13	W60	04	18.2		B	CRO	20	2	6	1
6599		LEAR	04	23	0012	S13	W60	04	18.5		B	BXO	40	2	2	3
6599		CULG	04	23	0050	S16	W63	04	18.2		A	AX	20	2	1	3
6599		SVTO	04	23	0720	S15	W66	04	18.3		A	AX	10	2	1	5
6599		RAMY	04	23	1154	S14	W67	04	18.4		A	AX	10	2	2	3
6599	26723	MWIL	04	23	1515	S15	W70	04	18.3	4	(AP)					
6599		BOUL	04	23	1545	S15	W70	04	18.3		B	BXO	10	2	1	3
6599		HOLL	04	23	1620	S15	W70	04	18.4		A	AX		1		3
6599		PALE	04	23	1730	S16	W72	04	18.3		A	AX	10	1	1	4
6592		RAMY	04	12	1150	N12	E72	04	17.9		B	CAO	30	4	4	4
6592		HOLL	04	12	1455	N14	E73	04	18.1		B	AX	10	2	2	4
6592	26705	MWIL	04	12	1545	N14	E73	04	18.2	4	(AP)					
6592		PALE	04	12	1750	N15	E71	04	18.1		B	BXO	20	3	3	3
6592		LEAR	04	13	0009	N14	E68	04	18.1		B	BXO	30	6	7	3
6592		CULG	04	13	0100	N14	E67	04	18.1		B	BXO	10	4	2	3
6592		RAMY	04	13	1150	N14	E64	04	18.3		B	DRO	50	12	10	3
6592	26705	MWIL	04	13	1545	N14	E64	04	18.5	5	(B)					
6592		HOLL	04	13	1555	N16	E63	04	18.4		B	BXO	30	4	7	3
6592		PALE	04	13	1845	N14	E64	04	18.6		B	BXO	20	5	9	1
6592		CULG	04	14	0120	N14	E57	04	18.4		B	CSI	20	11	9	3
6592		LEAR	04	14	0122	N14	E58	04	18.4		B	CSO	80	16	9	3
6592		SVTO	04	14	0745	N13	E57	04	18.6		B	BXI	40	23	9	3
6592		RAMY	04	14	1339	N13	E53	04	18.6		B	DAO	60	22	9	3

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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
6592	26705	MWIL	04	14	1545	N13	E53	04	18.6	5	(D)					
6592		HOLL	04	14	1600	N13	E52	04	18.6		B	DAI	150	26	7	4
6592		PALE	04	14	1855	N14	E52	04	18.7		A	AX	100	15	5	4
6592		LEAR	04	15	0046	N13	E48	04	18.6		B	CAO	180	22	7	3
6592		CULG	04	15	0050	N14	E48	04	18.7		B	DAI	70	23	5	3
6592		SVTO	04	15	0815	N13	E45	04	18.7		B	CSI	80	23	5	3
6592		BOUL	04	15	1355	N14	E39	04	18.5		B	DSO	80	6	4	1
6592		RAMY	04	15	1520	N12	E42	04	18.8		B	DAO	180	20	8	3
6592		HOLL	04	15	1540	N15	E40	04	18.7		B	DAI	130	44	6	3
6592	26705	MWIL	04	15	1545	N12	E40	04	18.7	5	(B)					
6592		PALE	04	15	1920	N14	E37	04	18.6		B	DAO	100	19	6	2
6592		CULG	04	16	0017	N14	E36	04	18.7		B	CAO	50	21	6	2
6592		LEAR	04	16	0020	N12	E36	04	18.7		B	DAO	120	15	7	3
6592		SVTO	04	16	0625	N13	E32	04	18.7		B	CAO	60	60	6	3
6592		RAMY	04	16	1405	N12	E27	04	18.6		B	CAO	50	11	4	2
6592		HOLL	04	16	1500	N13	E28	04	18.7		B	CSO	80	25	6	3
6592	26705	MWIL	04	16	1545	N13	E27	04	18.7	5	(BG)					
6592		PALE	04	16	2047	N14	E23	04	18.6		A	HA	40	3	1	2
6592		LEAR	04	17	0043	N13	E23	04	18.8		B	CAO	30	15	7	3
6592		RAMY	04	17	1215	N15	E16	04	18.7		B	CAO	80	20	5	4
6592	26705	MWIL	04	17	1600	N13	E13	04	18.6	5	(B)					
6592		HOLL	04	17	1605	N16	E12	04	18.6		B	CSO	70	17	5	2
6592		PALE	04	17	1810	N13	E13	04	18.7		B	DAO	90	19	6	4
6592		LEAR	04	18	0014	N14	E10	04	18.8		B	CAO	60	13	7	3
6592		CULG	04	18	0015	N15	E10	04	18.8		B	DAO	30	12	6	2
6592		SVTO	04	18	0955	N15	E00	04	18.4		B	CAO	70	15	12	3
6592		RAMY	04	18	1120	N15	W02	04	18.3		B	CAO	110	41	13	3
6592	26705	MWIL	04	18	1530	N14	W00	04	18.6	4	(D)					
6592		PALE	04	18	1810	N14	W05	04	18.4		B	CAO	100	25	14	4
6592		LEAR	04	19	0007	N14	W08	04	18.4		B	EAO	110	13	13	3
6592		SVTO	04	19	0540	N14	W12	04	18.3		B	CAO	70	20	13	3
6592		RAMY	04	19	1309	N15	W17	04	18.3		B	EAO	120	24	13	3
6592		HOLL	04	19	1620	N14	W19	04	18.2		BG	EAI	130	42	12	4
6592	26705	MWIL	04	19	1630	N14	W16	04	18.5	5	(D)					
6592		PALE	04	19	1733	N12	W20	04	18.2		B	EAI	140	17	15	3
6592		CULG	04	20	0020	N15	W22	04	18.3		B	EAO	120	19	13	3
6592		LEAR	04	20	0113	N15	W23	04	18.3		B	EAO	170	18	12	2
6592		SVTO	04	20	0728	N14	W27	04	18.3		B	EAO	100	20	14	3
6592		RAMY	04	20	1230	N14	W30	04	18.2		BG	EAO	130	20	13	3
6592		HOLL	04	20	1630	N13	W31	04	18.3		BG	FAI	100	27	13	3
6592		PALE	04	20	1918	N14	W34	04	18.2		B	EAO	100	10	12	3
6592		LEAR	04	21	0044	N16	W36	04	18.3		B	EAO	140	15	13	3
6592		CULG	04	21	0045	N14	W37	04	18.2		B	EAO	60	21	14	3
6592		RAMY	04	21	1205	N15	W43	04	18.2		B	EAO	110	16	13	3
6592		SVTO	04	21	1255	N14	W43	04	18.3		B	EAO	60	13	13	2
6592	26705	MWIL	04	21	1500	N14	W47	04	18.1	4	(B)					
6592		HOLL	04	21	1700	N13	W46	04	18.2		B	BXO	40	14	13	2
6592		PALE	04	21	1936	N14	W48	04	18.2		B	BXO	20	6	12	2
6592		CULG	04	22	0050	N14	W51	04	18.2		B	BXO	10	8	13	3
6592		LEAR	04	22	0110	N16	W50	04	18.2		B	DSO	90	10	15	3
6592		SVTO	04	22	1136	N15	W61	04	17.9		B	BXO	30	7	12	3
6592		HOLL	04	22	1400	N15	W59	04	18.1		B	BXO	50	12	15	4
6592		BOUL	04	22	1440	N14	W60	04	18.1		A	AX		1	1	3
6592	26705	MWIL	04	22	1530	N15	W64	04	17.8	4	(AP)					
6592		RAMY	04	22	1630	N15	W62	04	18.0		B	CAO	20	2	8	1
6592		LEAR	04	23	0012	N17	W65	04	18.1		B	BXO	20	3	8	3
6592		CULG	04	23	0050	N14	W68	04	17.9		B	BXO		3	6	3
6592		SVTO	04	23	0720	N16	W73	04	17.8		B	BXO	20	2	6	5
6592		RAMY	04	23	1154	N15	W71	04	18.1		B	BXO	10	2	4	3
6592	26705	MWIL	04	23	1515	N15	W75	04	17.9	4	(AP)					
6592A		CULG	04	18	0015	S19	E18	04	19.4		A	AX		3	1	2
6592A		RAMY	04	18	1120	S21	E12	04	19.4		B	BXO	20	14	11	3
6592A	26715	MWIL	04	18	1530	S17	E03	04	18.9	4	(AP)					
6592A		CULG	04	19	0030	S18	E03	04	19.2		B	BXO		2	3	2
6592A	26718	MWIL	04	19	1630	S22	W07	04	19.1	3	AP)					
6592A		CULG	04	22	0050	S21	W39	04	19.0		A	AX		1		3
6598		LEAR	04	17	0043	S11	E31	04	19.4		B	BXO	10	4	4	3

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6598		RAMY	04	17	1215	S08	E22	04	19.1		B	BXO	20	12	7	4
6598	26713	MWIL	04	17	1600	S08	E21	04	19.2	4	(AP)					
6598		HOLL	04	17	1605	S08	E20	04	19.2		B	BXO	20	8	7	2
6598		LEAR	04	18	0014	S07	E18	04	19.3		B	BXO	10	2	2	3
6598		CULG	04	18	0015	S08	E19	04	19.4		A	AX		1		2
6598		SVTO	04	18	0955	S09	E10	04	19.2		B	BXO	10	6	6	3
6598		RAMY	04	18	1120	S10	E10	04	19.2		B	BXO	10	10	9	3
6598		HOLL	04	18	1510	S08	E05	04	19.0		B	BXO	10	3	3	2
6598	26713	MWIL	04	18	1530	S08	E04	04	18.9	3	(AP)					
6598		PALE	04	18	1810	S10	E03	04	19.0		B	BXO	10	6	9	4
6598		CULG	04	19	0030	S07	E02	04	19.2		B	CAO	10	4	2	2
6598		SVTO	04	19	0540	S08	W03	04	19.0		B	BXO	10	5	6	3
6598		RAMY	04	19	1309	S09	W09	04	18.9		A	AX	10	1	1	3
6598		HOLL	04	19	1620	S11	W06	04	19.2		B	BXO	10	6	11	4
6598	26713	MWIL	04	19	1630	S09	W11	04	18.9	3	(AP)					
6598		PALE	04	19	1733	S10	W11	04	18.9		A	HR	10	1	1	3
6598		CULG	04	20	0020	S08	W14	04	19.0		A	AX	10	1		3
6598		LEAR	04	20	0113	S08	W16	04	18.8		A	AX	10	1	1	2
6598		SVTO	04	20	0728	S09	W21	04	18.7		A	AX		1		3
6598		RAMY	04	20	1230	S09	W21	04	18.9		B	BXO	10	5	4	3
6598		HOLL	04	20	1630	S09	W25	04	18.8		A	AX		1		3
6598		RAMY	04	21	1205	S08	W31	04	19.2		B	BXO	10	4	3	3
6600		CULG	04	19	0030	S11	E09	04	19.7		B	BXO		2	1	2
6600	26719	MWIL	04	19	1630	S13	W01	04	19.6	4	(AP)					
6600		CULG	04	20	0020	S12	W03	04	19.8		B	CSO	10	2	2	3
6600		LEAR	04	20	0113	S13	W07	04	19.5		B	BXO	20	2	3	2
6600		SVTO	04	20	0728	S15	W09	04	19.6		B	BXO	10	5	4	3
6600		RAMY	04	20	1230	S14	W12	04	19.6		B	BXO	10	4	3	3
6600		HOLL	04	20	1630	S18	W14	04	19.6		B	BXO	10	4	8	3
6600		RAMY	04	21	1205	S13	W26	04	19.5		B	BXO	10	3	3	3
6600A		RAMY	04	14	1339	S31	E66	04	19.8		A	AX	10	1	1	3
6602		PALE	04	18	1810	S21	E16	04	20.0		B	BXO	10	4	6	4
6602		CULG	04	19	0030	S21	E13	04	20.0		B	BXO		5	3	2
6602		SVTO	04	19	0540	S21	E09	04	19.9		B	BXO	10	5	4	3
6602	26720	MWIL	04	19	1630	S23	E03	04	19.9	3	(AP)					
6602	26720	MWIL	04	21	1500	S25	W25	04	19.7	3	(AF)					
6602	26720	MWIL	04	22	1530	S23	W34	04	20.0	4	(AP)					
6602		RAMY	04	23	1154	S23	W45	04	20.0		A	AX		1		3
6602		PALE	04	23	1730	S24	W49	04	19.9		A	AX		1	1	4
6602		CULG	04	24	0050	S23	W53	04	19.9		B	AX		1		3
6602		RAMY	04	24	1215	S21	W60	04	19.9		A	AX	10	3	2	3
6602		BOUL	04	24	1435	S22	W61	04	19.9		A	AX	10	1	1	3
6602	26720	MWIL	04	24	1515	S22	W62	04	19.9	4	(AP)					
6602		HOLL	04	24	1700	S23	W62	04	19.9		A	AX	10	1	1	3
6602		PALE	04	24	1710	S24	W62	04	19.9		A	AX	10	1	1	4
6602		LEAR	04	25	0003	S19	W66	04	20.0		A	AX	20	1	1	3
6602		CULG	04	25	0050	S22	W66	04	20.0		A	AX		1		3
6602		SVTO	04	25	0640	S21	W70	04	19.9		B	CSO	30	2	2	3
6602		RAMY	04	25	1155	S21	W73	04	19.9		A	HA	30	1	1	4
6602	26720	MWIL	04	25	1645	S22	W77	04	19.8	4	(AP)					
6602		HOLL	04	25	1705	S22	W76	04	19.9		A	AX	10	1	1	3
6602		CULG	04	26	0000	S23	W79	04	19.9		A	AX		1		2
6602		PALE	04	26	0012	S23	W80	04	19.8		A	AX		1		3
6602A		PALE	04	14	1855	S06	E77	04	20.5		A	AX	30	1	1	4
6593		LEAR	04	14	0122	S13	E81	04	20.2		B	CSO	120	3	8	3
6593		SVTO	04	14	0745	S11	E81	04	20.4		B	CHO	140	4	8	3
6593		RAMY	04	14	1339	S11	E78	04	20.4		B	CKO	270	7	9	3
6593	26709	MWIL	04	14	1545	S11	E76	04	20.4	5	(BF					
6593		HOLL	04	14	1600	S10	E72	04	20.1		B	CKO	240	9	7	4
6593		PALE	04	14	1855	S12	E74	04	20.4		B	DSO	260	6	8	4
6593		LEAR	04	15	0046	S10	E73	04	20.5		B	CKO	570	10	13	3
6593		CULG	04	15	0050	S11	E71	04	20.4		B	DKO	210	7	10	3
6593		SVTO	04	15	0815	S10	E69	04	20.5		B	EKO	540	17	15	3
6593		BOUL	04	15	1355	S10	E62	04	20.2		B	EKO	330	7	11	1

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6593		RAMY	04	15	1520	S12	E65	04	20.5		B	FKO	590	16	16	3
6593		HOLL	04	15	1540	S08	E66	04	20.6		B	CKO	480	29	22	3
6593	26710	MWIL	04	15	1545	S07	E71	04	21.0	4	(B)					
6593	26709	MWIL	04	15	1545	S11	E65	04	20.5	6	(BG)					
6593		PALE	04	15	1920	S10	E65	04	20.7		B	EKO	530	23	11	2
6593		CULG	04	16	0017	S10	E62	04	20.7		B	EKO	670	14	10	2
6593		LEAR	04	16	0020	S11	E58	04	20.4		B	EKO	510	20	13	3
6593		SVTO	04	16	0625	S09	E58	04	20.6		BGD	FKI	440	32	16	3
6593		RAMY	04	16	1405	S09	E53	04	20.6		BG	EKO	530	27	14	2
6593		HOLL	04	16	1500	S09	E52	04	20.5		BG	FKI	440	45	16	3
6593	26710	MWIL	04	16	1545	S06	E56	04	20.8	4	(BG)					
6593	26709	MWIL	04	16	1545	S11	E49	04	20.3	5	(D)					
6593		PALE	04	16	2047	S09	E50	04	20.6		B	FKO	360	14	16	2
6593		LEAR	04	17	0043	S10	E40	04	20.0		BG	EKO	310	30	13	3
6593		RAMY	04	17	1215	S08	E42	04	20.6		B	FKO	380	34	16	4
6593	26710	MWIL	04	17	1600	S06	E40	04	20.7	4	(BG)					
6593	26709	MWIL	04	17	1600	S10	E37	04	20.4	5	(D)					
6593		HOLL	04	17	1605	S07	E36	04	20.4		BG	EAI	390	36	15	2
6593		LEAR	04	18	0014	S10	E33	04	20.5		BG	DKO	250	19	9	3
6593		CULG	04	18	0015	S09	E33	04	20.5		BG	DKO	270	25	9	2
6593		SVTO	04	18	0955	S10	E29	04	20.6		BG	EAO	240	35	18	3
6593		RAMY	04	18	1120	S09	E29	04	20.6		BG	FKO	260	43	16	3
6593		HOLL	04	18	1510	S10	E27	04	20.7		BG	FAI	320	49	19	2
6593	26710	MWIL	04	18	1530	S06	E31	04	21.0	3	(BG)					
6593	26709	MWIL	04	18	1530	S10	E25	04	20.5	5	(D)					
6593		PALE	04	18	1810	S10	E25	04	20.6		BG	FAO	230	32	17	4
6593		LEAR	04	19	0007	S11	E19	04	20.4		B	DAO	170	15	10	3
6593		SVTO	04	19	0540	S10	E18	04	20.6		BG	EAO	150	22	15	3
6593		RAMY	04	19	1309	S10	E15	04	20.7		BG	FAO	170	28	16	3
6593		HOLL	04	19	1620	S11	E14	04	20.7		BG	FAI	150	52	17	4
6593	26710	MWIL	04	19	1630	S07	E17	04	21.0	4	(AF)					
6593	26709	MWIL	04	19	1630	S10	E10	04	20.4	5	(B)					
6593		PALE	04	19	1733	S10	E12	04	20.6		BG	FAI	230	22	16	3
6593		CULG	04	20	0020	S09	E08	04	20.6		BG	ESO	150	25	11	3
6593		LEAR	04	20	0113	S12	E07	04	20.6		B	DAO	160	16	10	2
6593		SVTO	04	20	0728	S11	E05	04	20.7		BG	EAO	120	29	15	3
6593		RAMY	04	20	1230	S13	E02	04	20.7		BG	FAI	170	44	15	3
6593		HOLL	04	20	1630	S09	W03	04	20.5		BG	ESI	150	23	13	3
6593		PALE	04	20	1918	S12	W04	04	20.5		BG	EAO	80	26	14	3
6593		LEAR	04	21	0044	S12	W06	04	20.6		B	EAO	230	29	15	3
6593		CULG	04	21	0045	S11	W06	04	20.6		BG	CAO	80	21	13	3
6593		RAMY	04	21	1205	S13	W10	04	20.7		BG	EAO	180	20	12	3
6593		SVTO	04	21	1255	S12	W11	04	20.7		BG	EAO	120	14	12	2
6593	26709	MWIL	04	21	1500	S10	W16	04	20.4	5	(BF)					
6593		HOLL	04	21	1700	S10	W20	04	20.2		BG	EAI	130	17	11	2
6593		PALE	04	21	1936	S13	W14	04	20.8		B	EAO	90	13	12	2
6593		CULG	04	22	0050	S13	W21	04	20.4		BG	CAO	70	18	17	3
6593		LEAR	04	22	0110	S12	W18	04	20.7		B	ESO	80	13	12	3
6593		SVTO	04	22	1136	S09	W23	04	20.7		B	CAO	80	10	11	3
6593		HOLL	04	22	1400	S09	W25	04	20.7		BG	CSO	110	22	15	4
6593		BOUL	04	22	1440	S08	W25	04	20.7		B	ESO	40	15	13	3
6593	26710	MWIL	04	22	1530	S07	W21	04	21.1	4	(BF)					
6593	26709	MWIL	04	22	1530	S11	W29	04	20.5	4	(BG)					
6593		RAMY	04	22	1630	S10	W27	04	20.6		B	CAO	60	9	13	1
6593		LEAR	04	23	0012	S10	W31	04	20.7		BG	CAO	100	22	15	3
6593		CULG	04	23	0050	S10	W32	04	20.6		B	CSO	40	14	14	3
6593		SVTO	04	23	0720	S11	W39	04	20.4		B	CAO	60	9	6	5
6593		RAMY	04	23	1154	S09	W36	04	20.8		B	CSO	70	21	12	3
6593	26710	MWIL	04	23	1515	S07	W33	04	21.2	4	(AF)					
6593	26709	MWIL	04	23	1515	S12	W42	04	20.5	5	(BG)					
6593		BOUL	04	23	1545	S10	W38	04	20.8		B	CSO	50	21	13	3
6593		HOLL	04	23	1620	S11	W38	04	20.8		B	CSO	110	19	11	3
6593		PALE	04	23	1730	S11	W39	04	20.8		B	CSO	60	12	11	4
6593		LEAR	04	24	0017	S09	W43	04	20.8		B	CSO	120	6	8	2
6593		SVTO	04	24	0536	S11	W50	04	20.5		B	CSO	60	6	6	5
6593		RAMY	04	24	1215	S12	W53	04	20.5		B	CAO	70	4	4	3
6593		BOUL	04	24	1435	S12	W55	04	20.5		B	CAO	40	5	3	3
6593	26709	MWIL	04	24	1515	S12	W55	04	20.5	5	(BG)					
6593		HOLL	04	24	1700	S10	W53	04	20.7		B	CSO	70	7	12	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

APRIL 1991

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
6593		PALE	04	24	1710	S12	W52	04	20.8		B	CSO	50	6	10	4
6593		LEAR	04	25	0003	S09	W60	04	20.5		B	CSO	80	4	4	3
6593		CULG	04	25	0050	S11	W60	04	20.5		B	CSO	40	2	1	3
6593		SVTO	04	25	0640	S10	W63	04	20.5		B	CSO	40	3	3	3
6593		RAMY	04	25	1155	S09	W61	04	20.9		B	CAO	50	5	11	4
6593	26710	MWIL	04	25	1645	S06	W61	04	21.1	4	(AP)					
6593	26709	MWIL	04	25	1645	S11	W69	04	20.5	5	(AF)					
6593		HOLL	04	25	1705	S09	W65	04	20.8		B	CSO	60	2	14	3
6593		CULG	04	26	0000	S10	W71	04	20.7		B	CSO	40	4	7	2
6593		PALE	04	26	0012	S08	W70	04	20.8		B	BXO	50	2	10	3
6593		LEAR	04	26	0026	S08	W79	04	20.1		B	CSO	90	3	5	2
6593		SVTO	04	26	0820	S11	W77	04	20.5		B	CSO	60	3	5	2
6593		RAMY	04	26	1111	S08	W75	04	20.8		B	CAO	60	3	9	4
6593		BOUL	04	26	1442	S09	W80	04	20.6		A	HS	60	1	2	2
6593		HOLL	04	26	1510	S11	W80	04	20.6		A	AX	30	1	1	2
6593	26709	MWIL	04	26	1515	S12	W83	04	20.4	4	AF					
6593A		SVTO	04	15	0815	S21	E73	04	20.9		A	AX		1		3
6593A		RAMY	04	15	1520	S22	E68	04	20.9		A	AX		1		3
6593A		HOLL	04	15	1540	S20	E68	04	20.8		A	AX		1		3
6593A		HOLL	04	20	1630	S17	E03	04	20.9		B	BXO	10	5	6	3
6593A		HOLL	04	21	1700	S19	W09	04	21.0		B	BXO	20	8	6	2
6593A		HOLL	04	22	1400	S20	W20	04	21.0		B	BXO	20	19	8	4
6593B		SVTO	04	20	0728	S27	E08	04	20.9		A	AX		2	1	3
6593B		RAMY	04	20	1230	S27	E07	04	21.1		A	AX	10	1	1	3
6593C		RAMY	04	25	1155	S07	W57	04	21.2		A	AX	20	4	2	4
6596		LEAR	04	15	0046	S21	E78	04	21.0		B	BXO	60	3	5	3
6596		LEAR	04	16	0020	S22	E71	04	21.5		A	AX	30	2	1	3
6596		RAMY	04	16	1405	S23	E62	04	21.4		B	CRO	20	4	9	2
6596		LEAR	04	17	0043	S23	E53	04	21.1		B	BXO	20	3	4	3
6596		RAMY	04	17	1215	S21	E54	04	21.6		B	BXO	10	2	4	4
6596		CULG	04	18	0015	S20	E42	04	21.2		A	AX		2		2
6596		RAMY	04	18	1120	S19	E33	04	21.0		B	BXO	40	31	16	3
6596		HOLL	04	18	1510	S22	E32	04	21.1		A	AX		1		2
6596	26716	MWIL	04	18	1530	S18	E30	04	20.9	4	(AF)					
6596		PALE	04	18	1810	S19	E28	04	20.9		B	BXO	10	7	6	4
6596		CULG	04	19	0030	S22	E29	04	21.2		B	BXO	10	10	8	2
6596	26716	MWIL	04	19	1630	S16	E18	04	21.0	4	(AF)					
6596		PALE	04	19	1733	S25	E28	04	21.9		B	CSO	10	6	8	3
6596		CULG	04	20	0020	S22	E17	04	21.3		B	DSO	50	14	11	3
6596		RAMY	04	20	1230	S21	W09	04	19.8		B	BXO	10	5	8	3
6596		PALE	04	20	1918	S21	W16	04	19.6		A	AX		2		3
6596		PALE	04	20	1918	S25	E11	04	21.6		B	BXO	30	13	5	3
6596		RAMY	04	21	1205	S20	W30	04	19.2		B	BXO	10	5	4	3
6596	26716	MWIL	04	21	1500	S19	W03	04	21.4	3	(AF)					
6596		PALE	04	21	1936	S24	W03	04	21.6		B	BXO	10	10	6	2
6596	26716	MWIL	04	22	1530	S22	W17	04	21.3	4	(AF)					
6596		CULG	04	23	0050	S20	W26	04	21.0		A	AX		1		3
6596		SVTO	04	23	0720	S22	W44	04	19.9		B	BXO	10	3	3	5
6596		RAMY	04	23	1154	S18	W32	04	21.0		A	AX		2	1	3
6596	26716	MWIL	04	23	1515	S21	W30	04	21.3	4	(AF)					
6596		BOUL	04	23	1545	S18	W32	04	21.2		B	BXO		3	3	3
6596		PALE	04	23	1730	S24	W49	04	19.9		A	AX		1	1	4
6596		SVTO	04	24	0536	S20	W35	04	21.5		A	AX	10	2	2	5
6596	26716	MWIL	04	24	1515	S21	W40	04	21.6	4	(AF)					
6596		PALE	04	24	1710	S21	W48	04	21.0		A	AX		1		4
6597		SVTO	04	16	0625	S22	E71	04	21.7		B	BXO	10	2	3	3
6597		HOLL	04	16	1500	S21	E68	04	21.8		A	AX	10	1	1	3
6597	26712	MWIL	04	16	1545	S22	E65	04	21.6	4	(B)					
6597		PALE	04	16	2047	S22	E56	04	21.2		A	AX		2	2	2
6597		SVTO	04	19	0540	S24	E34	04	21.9		B	BXO	10	4	3	3
6597		RAMY	04	19	1309	S25	E29	04	21.8		B	BXO	60	15	8	3
6597		HOLL	04	19	1620	S24	E27	04	21.8		B	DAI	60	22	6	4
6597	26721	MWIL	04	19	1630	S25	E28	04	21.8	4	(B)					
6597		LEAR	04	20	0113	S23	E20	04	21.6		B	CAO	40	6	6	2

S U N S P O T G R O U P S
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APRIL 1991

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
6597		SVTO	04	20	0728	S23	E18	04	21.7		B	CRO	20	7	4	3
6597		RAMY	04	20	1230	S25	E16	04	21.8		B	DAO	30	12	3	3
6597		HOLL	04	20	1630	S23	E12	04	21.6		B	CRI	30	14	6	3
6597		LEAR	04	21	0044	S24	E06	04	21.5		B	BXO	50	10	5	3
6597		CULG	04	21	0045	S23	E07	04	21.6		B	CRO	10	9	5	3
6597		RAMY	04	21	1205	S27	E01	04	21.6		B	BXO	20	16	8	3
6597		SVTO	04	21	1255	S24	E01	04	21.6		B	CRO	30	13	6	2
6597		HOLL	04	21	1700	S24	W02	04	21.5		B	BXI	40	21	13	2
6597		CULG	04	22	0050	S24	W07	04	21.5		B	BXO	10	9	7	3
6597		LEAR	04	22	0110	S23	W10	04	21.3		B	BXO	30	15	9	3
6597		SVTO	04	22	1136	S21	W15	04	21.3		B	BXO	10	8	10	3
6597		HOLL	04	22	1400	S20	W12	04	21.7		B	BXO	10	13	5	4
6597		LEAR	04	23	0012	S23	W22	04	21.3		B	BXO	20	10	10	3
6597		CULG	04	23	0050	S23	W18	04	21.6		B	BXO	10	9	3	3
6597		SVTO	04	23	0720	S19	W26	04	21.3		B	BXO	10	5	8	5
6597		RAMY	04	23	1154	S21	W25	04	21.6		B	BXO	10	4	3	3
6597		BOUL	04	23	1545	S21	W27	04	21.6		B	BXO		2	1	3
6597		HOLL	04	23	1620	S22	W30	04	21.4		B	BXO	30	11	10	3
6597		PALE	04	23	1730	S21	W31	04	21.3		B	BXO	10	7	8	4
6597		CULG	04	24	0050	S21	W33	04	21.5		B	BXO		3	2	3
6597		RAMY	04	24	1215	S20	W42	04	21.3		B	BXO	20	9	8	3
6597		BOUL	04	24	1435	S21	W39	04	21.6		B	BXO	10	2	1	3
6597		HOLL	04	24	1700	S21	W40	04	21.6		A	AX	10	2		3
6597		PALE	04	24	1710	S22	W42	04	21.5		A	AX		1		4
6597A		RAMY	04	23	1154	S07	W22	04	21.8		A	AX		1		3
6597B		RAMY	04	20	1230	N21	E20	04	22.0		A	AX	10	1	1	3
6597C		CULG	04	24	0050	S33	W23	04	22.2		B	BXO		2	1	3
6601		HOLL	04	20	1630	S18	E30	04	23.0		B	BXO	10	3	3	3
6601		RAMY	04	21	1205	S21	E19	04	23.0		B	BXO	10	3	3	3
6601	26722	MWIL	04	21	1500	S18	E20	04	23.1	2	(B)					
6601		HOLL	04	21	1700	S19	E19	04	23.1		B	BXO		2	3	2
6601		HOLL	04	22	1400	S19	E06	04	23.0		B	BXO	10	4	3	4
6601	26722	MWIL	04	22	1530	S18	E05	04	23.0	4	(B)					
6601		LEAR	04	23	0012	S18	E00	04	23.0		B	BXO	10	3	5	3
6601		CULG	04	23	0050	S19	E00	04	23.0		B	BXO		4	3	3
6601		SVTO	04	23	0720	S19	W08	04	22.7		B	BXO	10	7	8	5
6601		RAMY	04	23	1154	S18	W07	04	23.0		B	BXO		2	3	3
6601	26722	MWIL	04	23	1515	S19	W13	04	22.6	4	(B)					
6601		PALE	04	23	1730	S21	W16	04	22.5		B	BXO	10	4	3	4
6603		LEAR	04	24	0017	S28	E03	04	24.2		B	CSO	60	6	5	2
6603		CULG	04	24	0050	S28	E02	04	24.2		B	BXO		4	4	3
6603		SVTO	04	24	0536	S29	W03	04	24.0		B	BXI	20	9	5	5
6603		RAMY	04	24	1215	S29	W06	04	24.0		B	BXO	20	9	5	3
6603		BOUL	04	24	1435	S29	W06	04	24.1		B	CRO	20	9	4	3
6603	26724	MWIL	04	24	1515	S29	W06	04	24.2	4	(B)					
6603		HOLL	04	24	1700	S29	W07	04	24.1		B	BXI	40	11	5	3
6603		PALE	04	24	1710	S30	W07	04	24.2		B	BXO	20	10	6	4
6603		LEAR	04	25	0003	S29	W13	04	24.0		B	BXO	40	9	6	3
6603		CULG	04	25	0050	S29	W12	04	24.1		B	BXO	10	7	5	3
6603		SVTO	04	25	0640	S28	W15	04	24.1		B	DRO	60	12	7	3
6603		RAMY	04	25	1155	S29	W18	04	24.1		B	BXO	20	11	5	4
6603	26724	MWIL	04	25	1645	S28	W19	04	24.2	4	(B)					
6603		HOLL	04	25	1705	S29	W20	04	24.1		B	BXI	20	11	6	3
6603		CULG	04	26	0000	S30	W24	04	24.1		B	BXO	10	12	7	2
6603		PALE	04	26	0012	S31	W25	04	24.0		B	BXO	110	11	5	3
6603		LEAR	04	26	0026	S27	W27	04	23.9		B	BXO	60	12	7	2
6603		SVTO	04	26	0820	S28	W29	04	24.1		B	CRO	30	15	7	2
6603		RAMY	04	26	1111	S30	W31	04	24.0		B	DAO	80	18	8	4
6603		BOUL	04	26	1442	S30	W32	04	24.1		B	DAO	40	7	9	2
6603		HOLL	04	26	1510	S30	W34	04	23.9		B	BXO	50	12	9	2
6603	26724	MWIL	04	26	1515	S29	W34	04	24.0	5	(BG)					
6603		PALE	04	26	1742	S32	W35	04	24.0		B	BXO	30	9	8	3
6603		CULG	04	27	0005	S31	W38	04	24.0		B	DSO	40	16	9	3
6603		LEAR	04	27	0025	S28	W38	04	24.0		B	DSO	70	11	9	3

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6603		RAMY	04	27	1109	S30	W44	04	24.0		B	EAO	120	21	11	4
6603		SVTO	04	27	1205	S29	W44	04	24.0		B	DSO	60	16	10	3
6603		BOUL	04	27	1430	S31	W45	04	24.0		B	DSO	130	13	10	2
6603		HOLL	04	27	1505	S30	W45	04	24.1		B	CRI	50	24	11	4
6603	26724	MWIL	04	27	1515	S30	W47	04	23.9	4	(BG)					
6603		PALE	04	27	1805	S28	W49	04	23.9		B	BXO	70	9	10	3
6603		CULG	04	28	0010	S31	W51	04	24.0		B	ESO	70	15	11	3
6603		LEAR	04	28	0110	S27	W53	04	23.9		B	EAO	100	8	11	3
6603		SVTO	04	28	0600	S29	W54	04	24.0		BG	EAI	100	17	11	4
6603		RAMY	04	28	1251	S29	W56	04	24.1		B	EAI	130	21	11	3
6603		BOUL	04	28	1410	S29	W59	04	24.0		B	EAO	170	17	14	4
6603		HOLL	04	28	1510	S30	W58	04	24.1		B	EAI	140	27	11	3
6603	26724	MWIL	04	28	1530	S29	W58	04	24.1	5	(B)					
6603		PALE	04	28	1800	S29	W59	04	24.1		B	EAI	190	23	12	4
6603		CULG	04	29	0025	S29	W64	04	24.0		B	EAI	110	19	11	3
6603		LEAR	04	29	0049	S27	W62	04	24.2		B	EAO	180	9	12	3
6603		SVTO	04	29	0804	S29	W66	04	24.2		B	EAI	170	8	11	3
6603		RAMY	04	29	1230	S29	W69	04	24.1		B	DAO	130	12	10	4
6603		BOUL	04	29	1445	S29	W72	04	24.0		B	EAO	130	6	11	2
6603	26724	MWIL	04	29	1515	S29	W71	04	24.1	4	(B)					
6603		HOLL	04	29	1605	S30	W70	04	24.2		B	ESO	120	12	12	3
6603		PALE	04	29	1730	S29	W71	04	24.2		B	ESO	100	7	12	3
6603		LEAR	04	30	0009	S27	W74	04	24.2		B	CAO	90	6	10	3
6603		CULG	04	30	0045	S29	W75	04	24.1		B	CAO	60	5	11	3
6603		SVTO	04	30	0706	S29	W79	04	24.1		B	CAI	60	7	10	4
6603		RAMY	04	30	1120	S30	W75	04	24.6		B	CAO	90	4	5	4
6603		HOLL	04	30	1455	S30	W78	04	24.5		A	HR	30	2	1	4
6603	26724	MWIL	04	30	1515	S30	W80	04	24.3	4	X					
6603		PALE	04	30	1700	S29	W84	04	24.1		B	CAO	80	3	9	3
6603		CULG	05	01	0040	S29	W86	04	24.4		A	HA	60	1	2	3
6603A		RAMY	04	21	1205	N01	E41	04	24.6		A	AX	10	1	1	3
6603B		PALE	04	23	1730	N08	E18	04	25.1		A	AX		2	1	4
6603C		HOLL	04	28	1510	S30	W41	04	25.4		B	BXO	10	2	3	3
6603C	26733	MWIL	04	28	1530	S29	W42	04	25.3	4	(B)					
6603C		PALE	04	28	1800	S29	W43	04	25.4		B	BXO	10	2	3	4
6603C		PALE	04	29	1730	S28	W56	04	25.3		B	BXO	10	2	2	3
6606		RAMY	04	25	1155	N08	E04	04	25.8		B	BXO	10	6	3	4
6606	26725	MWIL	04	25	1645	N08	E01	04	25.8	4	(B)					
6606		HOLL	04	25	1705	N08	E02	04	25.9		B	BXO	20	4	3	3
6606		CULG	04	26	0000	N08	W03	04	25.8		B	BXO	10	3	3	2
6606		PALE	04	26	0012	N07	W03	04	25.8		B	BXO	30	3	3	3
6606		LEAR	04	26	0026	N08	W04	04	25.7		A	HS	20	1	2	2
6606		SVTO	04	26	0820	N08	W07	04	25.8		B	CRO	10	4	5	2
6606		RAMY	04	26	1111	N08	W09	04	25.8		B	BXO	10	4	5	4
6606		BOUL	04	26	1442	N08	W13	04	25.6		A	AX	10	1		2
6606		HOLL	04	26	1510	N08	W13	04	25.6		B	BXO	10	3	4	2
6606	26725	MWIL	04	26	1515	N08	W13	04	25.7	4	(B)					
6606		PALE	04	26	1742	N07	W15	04	25.6		A	AX		1		3
6606		CULG	04	27	0005	N08	W17	04	25.7		A	AX		1		3
6606		LEAR	04	27	0025	N08	W17	04	25.7		B	BXO	20	3	4	3
6606		PALE	04	28	1800	N09	W39	04	25.8		B	BXO		2	3	4
6606		LEAR	04	29	0049	N10	W44	04	25.7		B	BXO	10	2	2	3
6606		SVTO	04	29	0804	N08	W49	04	25.7		B	BXO	10	3	3	3
6606		RAMY	04	29	1230	N08	W50	04	25.8		B	BXO	10	4	3	4
6606	26737	MWIL	04	29	1515	N08	W53	04	25.7	4	(B)					
6606		HOLL	04	29	1605	N08	W52	04	25.8		B	BXO	20	4	3	3
6606		PALE	04	29	1730	N08	W53	04	25.7		B	BXO	20	3	3	3
6606		LEAR	04	30	0009	N09	W56	04	25.8		B	BXO	20	2	14	3
6606		CULG	04	30	0045	N08	W58	04	25.7		B	BXO	10	2	3	3
6606		SVTO	04	30	0706	N09	W62	04	25.6		B	BXO	20	2	4	4
6606		RAMY	04	30	1120	N09	W64	04	25.7		B	BXO	10	3	4	4
6606		HOLL	04	30	1455	N08	W68	04	25.5		A	AX	10	1		4
6606	26737	MWIL	04	30	1515	N08	W68	04	25.5	3	(AP)					
6606		PALE	04	30	1700	N09	W68	04	25.6		A	AX		1		3

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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
6609		RAMY	04	24	1215	S10	E17	04	25.8		B	BXO	10	2	2	3
6609		CULG	04	26	0000	S10	W03	04	25.8		B	BXO		2	3	2
6609		PALE	04	26	0012	S12	W05	04	25.6		A	AX		1		3
6609		LEAR	04	26	0026	S10	W06	04	25.6		A	AX	10	1	1	2
6609		SVTO	04	26	0820	S11	W09	04	25.7		A	AX		2	1	2
6609		HOLL	04	26	1510	S11	W14	04	25.6		A	AX	10	1		2
6609	26727	MWIL	04	26	1515	S10	W14	04	25.6	4	(AP)					
6609		PALE	04	26	1742	S12	W17	04	25.4		B	BXO	10	3	3	3
6609		LEAR	04	27	0025	S10	W18	04	25.7		A	AX	10	1	1	3
6606A		RAMY	04	26	1111	N19	E02	04	26.6		A	AX	10	1	1	4
6606B		RAMY	04	24	1215	N05	E31	04	26.8		A	AX		1	1	3
6612		HOLL	04	27	1505	S28	E10	04	28.4		B	BXO	10	10	7	4
6612		PALE	04	27	1805	S28	E08	04	28.4		A	AX	30	3	2	3
6612		CULG	04	28	0010	S26	E03	04	28.2		B	CSO	10	4	4	3
6612		LEAR	04	28	0110	S28	E02	04	28.2		B	BXO	30	5	4	3
6612		SVTO	04	28	0600	S28	E01	04	28.3		B	BXO	30	15	6	4
6612		RAMY	04	28	1251	S27	W03	04	28.3		B	DAO	60	20	8	3
6612		BOUL	04	28	1410	S27	W04	04	28.3		B	DAO	70	11	6	4
6612		HOLL	04	28	1510	S27	W03	04	28.4		BG	DAI	90	26	8	3
6612	26734	MWIL	04	28	1530	S27	W04	04	28.3	5	(BG)					
6612		PALE	04	28	1800	S27	W05	04	28.4		B	DAO	70	24	9	4
6612		CULG	04	29	0025	S27	W09	04	28.3		B	DAO	50	14	7	3
6612		LEAR	04	29	0049	S27	W10	04	28.2		B	DAO	70	22	9	3
6612		SVTO	04	29	0804	S28	W13	04	28.3		B	DSI	180	21	9	3
6612		RAMY	04	29	1230	S27	W15	04	28.3		B	DAO	180	28	9	4
6612		BOUL	04	29	1445	S26	W17	04	28.3		B	DAI	150	15	9	2
6612	26734	MWIL	04	29	1515	S27	W18	04	28.2	5	(BP)					
6612		HOLL	04	29	1605	S27	W17	04	28.3		BG	EKI	250	24	11	3
6612		PALE	04	29	1730	S27	W18	04	28.3		B	DAI	200	17	10	3
6612		LEAR	04	30	0009	S27	W22	04	28.3		B	EAO	130	17	11	3
6612		CULG	04	30	0045	S27	W24	04	28.2		B	DAI	180	19	10	3
6612		SVTO	04	30	0706	S27	W26	04	28.3		B	CAI	140	14	10	4
6612		RAMY	04	30	1120	S28	W28	04	28.3		B	EAO	150	15	11	4
6612		HOLL	04	30	1455	S28	W30	04	28.3		B	CSO	130	10	13	4
6612	26734	MWIL	04	30	1515	S27	W32	04	28.1	5	(BP)					
6612		BOUL	04	30	1605	S27	W30	04	28.3		B	CAO	100	6	8	2
6612		PALE	04	30	1700	S27	W32	04	28.2		B	CAO	160	11	10	3
6612		CULG	05	01	0040	S27	W36	04	28.3		B	CAO	110	11	10	3
6612		SVTO	05	01	0715	S26	W39	04	28.4		B	CAO	140	7	9	4
6612		LEAR	05	01	0756	S25	W42	04	28.2		B	CSO	150	4	7	1
6612		RAMY	05	01	1135	S27	W42	04	28.3		B	CAO	140	7	8	4
6612		HOLL	05	01	1415	S28	W42	04	28.4		B	CAO	120	7	11	3
6612		BOUL	05	01	1435	S26	W47	04	28.0		A	HA	120	2	3	2
6612	26734	MWIL	05	01	1500	S26	W47	04	28.1	5	(BP)					
6612		PALE	05	01	2115	S27	W48	04	28.2		B	CSO	120	2	8	3
6612		CULG	05	02	0050	S27	W50	04	28.2		B	CAO	140	7	8	3
6612		LEAR	05	02	0423	S24	W52	04	28.3		B	CAO	10	9	7	1
6612		SVTO	05	02	0635	S27	W49	04	28.5		B	CAO	140	3	8	2
6612		RAMY	05	02	1109	S27	W54	04	28.3		B	CAO	180	9	8	4
6612		BOUL	05	02	1425	S26	W61	04	28.0		A	HA	110	3	3	2
6612	26734	MWIL	05	02	1500	S26	W59	04	28.1	4	(BP)					
6612		HOLL	05	02	1630	S28	W58	04	28.2		B	CSO	80	3	9	3
6612		PALE	05	02	1742	S28	W57	04	28.4		B	CSO	70	2	8	3
6612		CULG	05	03	0040	S27	W61	04	28.4		B	CSO	90	4	9	3
6612		LEAR	05	03	0147	S23	W64	04	28.2		A	HS	50	2	2	2
6612		RAMY	05	03	1104	S27	W69	04	28.2		B	CAO	130	4	8	4
6612		BOUL	05	03	1430	S25	W73	04	28.0		A	HA	170	1	3	1
6612	26734	MWIL	05	03	1430	S26	W72	04	28.1	4	(AP)					
6612		HOLL	05	03	1430	S27	W70	04	28.2		A	HS	100	2	2	3
6612		PALE	05	03	2030	S25	W76	04	28.1		A	HS	120	1	2	3
6612		LEAR	05	04	0007	S23	W75	04	28.3		A	HK	120	2	5	3
6612		CULG	05	04	0039	S24	W77	04	28.2		A	HA	50	4	3	3
6612		SVTO	05	04	0545	S25	W83	04	27.9		A	HA	90	1	2	3
6612		RAMY	05	04	1128	S25	W87	04	27.8		A	HA	50	1	2	4
6612	26734	MWIL	05	04	1430	S25	W87	04	28.0	4	AP					
6612		HOLL	05	04	1440	S27	W86	04	28.0		A	HS	60	1	2	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
6612		PALE	05	04	1835	S25	W89	04	28.0		A	AX	10	1	1	3
6612A		BOUL	05	02	1425	S30	W54	04	28.4		A	AX		1		2
6607		RAMY	04	25	1155	S41	E58	04	30.2		A	AX		1	1	4
6607		HOLL	04	25	1705	S42	E57	04	30.4		A	AX	10	1	1	3
6607		LEAR	04	26	0026	S44	E48	04	30.0		A	AX	20	1	1	2
6607		RAMY	04	26	1111	S41	E43	04	30.0		B	BXO	10	5	3	4
6607		BOUL	04	26	1442	S41	E44	04	30.2		B	BXO	10	2	1	2
6607		HOLL	04	26	1510	S41	E44	04	30.2		A	AX	20	3	2	2
6607	26728	MWIL	04	26	1515	S43	E44	04	30.3	4	(B)					
6607		CULG	04	27	0005	S42	E39	04	30.2		B	BXO	10	5	4	3
6607		LEAR	04	27	0025	S43	E37	04	30.1		B	BXO	20	4	4	3
6607		RAMY	04	27	1109	S41	E33	04	30.2		B	BXO	10	4	3	4
6607		HOLL	04	27	1505	S40	E30	04	30.1		B	BXO	10	10	8	4
6607	26728	MWIL	04	27	1515	S41	E30	04	30.1	4	(B)					
6607		CULG	04	28	0010	S40	E25	04	30.0		B	BXO	10	5	4	3
6607		SVTO	04	28	0600	S40	E20	04	29.9		B	BXO	20	8	10	4
6607		RAMY	04	28	1251	S40	E15	04	29.7		B	CAO	30	5	6	3
6607		BOUL	04	28	1410	S39	E12	04	29.6		B	CAO	30	3	5	4
6607		HOLL	04	28	1510	S40	E13	04	29.7		B	CAO	30	5	6	3
6607	26728	MWIL	04	28	1530	S40	E12	04	29.6	5	(BG)					
6607		PALE	04	28	1800	S40	E13	04	29.8		B	CSO	30	7	8	4
6607		CULG	04	29	0025	S40	E09	04	29.7		B	CAO	20	7	6	3
6607		LEAR	04	29	0049	S40	E05	04	29.4		B	BXO	20	7	7	3
6607		SVTO	04	29	0804	S41	E04	04	29.7		B	BXO	10	6	6	3
6607		RAMY	04	29	1230	S39	W01	04	29.4		B	DAO	20	4	3	4
6607		BOUL	04	29	1445	S39	W03	04	29.4		B	BXO	20	3	2	2
6607	26728	MWIL	04	29	1515	S40	W01	04	29.5	4	(B)					
6607		HOLL	04	29	1605	S40	E01	04	29.7		B	BXO	20	5	5	3
6607		PALE	04	29	1730	S40	W01	04	29.6		B	CRO	20	7	6	3
6607		LEAR	04	30	0009	S40	W06	04	29.5		B	BXO	10	5	5	3
6607		CULG	04	30	0045	S40	W05	04	29.6		B	CRO	10	8	6	3
6607		SVTO	04	30	0706	S40	W09	04	29.6		B	CRO	40	7	6	4
6607		RAMY	04	30	1120	S40	W10	04	29.6		B	DRO	20	4	6	4
6607		HOLL	04	30	1455	S40	W11	04	29.7		B	BXO	20	6	6	4
6607	26728	MWIL	04	30	1515	S40	W12	04	29.6	4	(B)					
6607		BOUL	04	30	1605	S41	W13	04	29.6		B	BXO	10	2	6	2
6607		PALE	04	30	1700	S40	W14	04	29.6		B	DSO	30	4	7	3
6607		CULG	05	01	0040	S40	W18	04	29.7		B	BXO	20	3	6	3
6607		SVTO	05	01	0715	S40	W21	04	29.7		B	BXO	10	2	5	4
6607		LEAR	05	01	0756	S38	W22	04	29.6		B	BXO	30	2	6	1
6607		RAMY	05	01	1135	S40	W22	04	29.8		B	DRO	20	2	7	4
6607		HOLL	05	01	1415	S41	W24	04	29.7		B	DRO	20	2	7	3
6607		BOUL	05	01	1435	S39	W23	04	29.8		B	BXO	10	2	6	2
6607	26728	MWIL	05	01	1500	S40	W25	04	29.7	5	(B)					
6613		BOUL	04	27	1430	S13	E31	04	29.9		A	AX		1		2
6613		HOLL	04	27	1505	S11	E31	04	30.0		B	BXO		2	3	4
6613		SVTO	04	28	0600	S14	E23	04	30.0		B	BXO	10	4	3	4
6613		RAMY	04	28	1251	S13	E19	04	30.0		B	BXO	10	7	4	3
6613		BOUL	04	28	1410	S14	E18	04	29.9		B	BXO	10	4	3	4
6613		HOLL	04	28	1510	S13	E17	04	29.9		B	BXO	20	9	4	3
6613	26735	MWIL	04	28	1530	S13	E18	04	30.0	4	(BG)					
6613		PALE	04	28	1800	S14	E16	04	29.9		B	BXO	20	11	8	4
6613		LEAR	04	29	0049	S15	E12	04	29.9		B	BXO	10	5	5	3
6613		SVTO	04	29	0804	S14	E08	04	29.9		B	BXO	10	5	5	3
6613		RAMY	04	29	1230	S12	E05	04	29.9		B	CRO	10	4	5	4
6613		BOUL	04	29	1445	S15	E04	04	29.9		A	AX	10	1		2
6613	26735	MWIL	04	29	1515	S13	E05	04	30.0	4	(B)					
6613		HOLL	04	29	1605	S12	E05	04	30.0		B	BXO	20	8	6	3
6613		PALE	04	29	1730	S14	E03	04	29.9		B	CRO	20	8	4	3
6613		LEAR	04	30	0009	S14	W01	04	29.9		B	BXO	10	5	5	3
6613		CULG	04	30	0045	S13	W01	04	29.9		B	BXO		4	5	3
6613		SVTO	04	30	0706	S15	W05	04	29.9		A	AX		1		4
6613		RAMY	04	30	1120	S16	W06	04	30.0		A	AX		1	1	4
6613		HOLL	04	30	1455	S15	W08	04	30.0		A	AX	10	1		4
6613	26735	MWIL	04	30	1515	S16	W09	04	29.9	3	(AP)					
6613		PALE	04	30	1700	S13	W09	04	30.0		B	BXO		4	3	3

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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
6613A	26738	MWIL	04	30	1515	S09	W08	04	30.0	4	(AP)					
6604		SVTO	04	25	0640	S21	E63	04	30.1		B	BXO	10	2	2	3
6604		RAMY	04	25	1155	S21	E61	04	30.2		B	BXO	20	5	4	4
6604	26726	MWIL	04	25	1645	S21	E60	04	30.3	4	(B)					
6604		HOLL	04	25	1705	S21	E59	04	30.2		B	BXO	20	2	5	3
6604		CULG	04	26	0000	S21	E56	04	30.3		B	BXO		3	4	2
6604		PALE	04	26	0012	S22	E55	04	30.2		A	AX	30	2	2	3
6604		LEAR	04	26	0026	S23	E52	04	30.0		B	BXO	30	3	4	2
6604		SVTO	04	26	0820	S22	E49	04	30.1		B	CSO	20	3	7	2
6604		RAMY	04	26	1111	S21	E48	04	30.1		B	CRO	20	6	7	4
6604		BOUL	04	26	1442	S21	E43	04	29.9		A	AX		2	1	2
6604		HOLL	04	26	1510	S21	E45	04	30.1		A	AX	10	1		2
6604	26726	MWIL	04	26	1515	S22	E45	04	30.1	5	(AP)					
6604		PALE	04	26	1742	S22	E43	04	30.0		A	AX		1		3
6604		CULG	04	27	0005	S21	E41	04	30.1		A	AX		1		3
6604		LEAR	04	27	0025	S23	E38	04	29.9		A	AX	10	1	1	3
6604		RAMY	04	27	1109	S22	E35	04	30.1		B	CAO	30	8	6	4
6604		SVTO	04	27	1205	S23	E34	04	30.1		B	CRO	10	4	5	3
6604		BOUL	04	27	1430	S21	E31	04	30.0		A	HS	20	2	2	2
6604		HOLL	04	27	1505	S22	E32	04	30.1		B	BXO	10	4	4	4
6604	26726	MWIL	04	27	1515	S23	E32	04	30.1	4	(AP)					
6604		PALE	04	27	1805	S23	E29	04	30.0		A	AX		1		3
6604		CULG	04	28	0010	S21	E26	04	30.0		A	AX		1		3
6604		LEAR	04	28	0110	S22	E23	04	29.8		A	AX	10	1	1	3
6604		SVTO	04	28	0600	S21	E22	04	29.9		A	AX		1		4
6604		RAMY	04	28	1251	S22	E18	04	29.9		A	AX		1		3
6604		HOLL	04	28	1510	S22	E17	04	29.9		A	AX		1		3
6604	26726	MWIL	04	28	1530	S21	E18	04	30.0	4	(AP)					
6604		PALE	04	28	1800	S22	E16	04	30.0		A	AX		3	2	4
6604		CULG	04	29	0025	S22	E12	04	29.9		B	BXO		2	2	3
6604		SVTO	04	29	0804	S22	E10	04	30.1		B	BXO	10	2	2	3
6604		RAMY	04	29	1230	S22	E08	04	30.1		B	DAO	30	8	4	4
6604		BOUL	04	29	1445	S21	E06	04	30.1		B	CAO	30	2	3	2
6604	26726	MWIL	04	29	1515	S22	E06	04	30.1	5	(B)					
6604		HOLL	04	29	1605	S23	E07	04	30.2		B	CRO	20	5	4	3
6604		PALE	04	29	1730	S22	E04	04	30.0		B	DSO	30	4	3	3
6604		LEAR	04	30	0009	S22	E01	04	30.1		B	CAO	20	3	5	3
6604		CULG	04	30	0045	S21	E01	04	30.1		B	CRO	10	4	3	3
6604		SVTO	04	30	0706	S22	W03	04	30.1		B	CRO	10	4	4	4
6604		RAMY	04	30	1120	S22	W05	04	30.1		B	BXO	20	11	5	4
6604		HOLL	04	30	1455	S22	W08	04	30.0		A	AX	10	3	1	4
6604	26726	MWIL	04	30	1515	S22	W09	04	29.9	5	(AP)					
6604		BOUL	04	30	1605	S22	W09	04	30.0		A	AX	10	1	1	2
6604		PALE	04	30	1700	S21	W07	04	30.2		B	CRO	10	3	7	3
6604		CULG	05	01	0040	S21	W15	04	30.0		A	AX		1		3
6604		HOLL	05	01	1415	S25	W16	04	30.3		B	BXO	10	4	3	3
6604	26726	MWIL	05	01	1500	S23	W17	04	30.3	3	(AF)					
6604		RAMY	05	02	1109	S27	W28	04	30.3		B	BXO	10	2	4	4
6604		RAMY	05	03	1104	S24	W43	04	30.1		B	CAO	30	10	7	4
6604		HOLL	05	03	1430	S25	W44	04	30.2		B	BXO	40	6	8	3
6604		BOUL	05	03	1430	S25	W44	04	30.2		B	CAO	40	5	7	1
6604	26726	MWIL	05	03	1430	S25	W44	04	30.2	4	(BF)					
6604		PALE	05	03	2030	S22	W50	04	30.0		A	BX	80	6	10	3
6604		LEAR	05	04	0007	S22	W52	04	30.0		B	CAO	90	9	6	3
6604		CULG	05	04	0039	S23	W51	04	30.1		B	CAO	30	9	7	3
6604		SVTO	05	04	0545	S23	W55	04	30.0		B	DAO	70	7	9	3
6604		RAMY	05	04	1128	S23	W57	04	30.1		B	CAO	70	12	9	4
6604	26726	MWIL	05	04	1430	S24	W58	04	30.1	4	(BF)					
6604		HOLL	05	04	1440	S25	W58	04	30.1		B	CAI	70	9	12	2
6604		PALE	05	04	1835	S24	W59	04	30.2		B	CAO	60	8	6	3
6604		LEAR	05	05	0012	S21	W65	04	30.0		B	CAO	70	4	4	3
6604		CULG	05	05	0017	S23	W63	04	30.1		B	CRO	20	6	7	3
6604		SVTO	05	05	0630	S23	W70	04	30.0		B	CAO	50	2	4	3
6604		RAMY	05	05	1235	S22	W71	04	30.1		B	BXO	20	4	8	4
6604	26726	MWIL	05	05	1430	S24	W74	04	30.0	4	(BF)					
6604		HOLL	05	05	1540	S24	W75	04	29.9		B	BXO	30	5	8	4
6604		PALE	05	05	2210	S24	W75	04	30.1		A	AX	10	1	1	3

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

APRIL 1991

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
6604A		SVTO	04 26 0820	S41 E47	04 30.2		B	CSO	20	4	5	2
6604A		PALE	04 26 1742	S42 E45	04 30.4		A	AX	10	3	2	3
6604B		PALE	04 28 1800	N18 E22	04 30.4		A	AX		1		4
6604C		SVTO	04 30 0706	N14 E02	04 30.4		A	AX		2	1	4
6604D	26739	MWIL	04 30 1515	S13 W00	04 30.6	3	(AF)					

Stations reporting:

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

APRIL 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	LF-SES	Flare (UT)	X-ray Class	NOAA Region
01	0030	0035	0110	1	1	1					No flare		
01	0119	0128	0144	1-	1			1			0121		6565
01	0345	0350	0402	1-	1			1			0344		6563
01	0642	0645	0702D	1-	5			1		1	0618	C5.1	6558
01	0702E	0715	0744	1-	5			1		2	0706		6562
01	1159	1212	1230	1	5	1			1	4	1158	C4.5	
01	1242	1245	1250	1-	5				1	2	1239	C4.5	
01	1655	1703	1812	3-	5					3	No flare		
01	1917	1922	2011	2+	3					3	*		
01	2029	2030	2055	1+	1					1	2029E		6562
01	2127	2136	2308	2+	5			1		6	2126	M1.2	
01	2229	2235	2248	1+	3	1				1	No flare		
01	2343	2356	2356D	1-	5			1		1	2355		6565
02	0017	0024	0046	1-	1			1			No flare		
02	0228	0237	0302	1-	3	1		1			0228	C3.4	
02	0305	0315	0324	1-	1	1					*		
02	0837	0847	0917	1-	5		2	1	1	4	0835	C4.1	6562
02	1003	1011	1057	1-	5	1		1	1	2	1002	C2.6	
02	1759	1807	1823	1	5					3	1805		6562
02	2114	2122	2151	1-	5			1		4	2111	C3.1	6562
02	2254	2329	2507	3	5	2		1		2	2251	M6.1	6562
02	2345	2352	2411	1+	5	1				1	2331E		6562
03	0634	0646	0700	1	3		2				No flare		
03	0707	0724	0747	1	1		1				No flare		
03	0753	0816	0834	1	3		2				0751		6562
03	0901	0939	1027	1	3		2				No flare		
03	1057	1118	1154	1-	3	1	2		1		No flare		
03	1300	1343U	1409	1	1		1				No flare		
03	2205	2224	2310	1-	5			1		1	2145E	C3.8	6567
04	0159	0205	0226	1-	1			1			0157	C1.8	6566
04	2158	2205	2225	1-	1			1			2153	C2.3	6562
05	0252	0258	0316	1-	1			1			0252	C1.7	
05	0932	0934	0934D	1-	1					1	0931	C1.3	
05	0950	0959	1015	1-	5			1	1	2	0945	C2.6	
05	1035	1039	1039D	1-	3		2		1	1	1032	C2.4	
05	1734	1748	1818	2	5					2	1744		6562
06	0803	0813	0920	1	1			1			0808		6562
06	0812	0835	0951	1+	5		2	1		2	0808		6562
06	1425	1429	1445	1	1					1	1425		6572
06	1525	1530	1545	1	1					1	1525	C2.1	6563
06	1609	1619	1637	1+	5					2	1609	C2.1	
06	1919	1922	1935	1-	1					1	1919		6571
07	0024	0036	0125	1-	5	1		1		1	0024	C2.5	6562
07	0352	0424	0451	1-	1			1			0405	C2.5	
07	0600	0602	0608	1-	1					1	No flare		
07	0814	0822	0851	1-	5	1		1	1	4	0810		6562
07	1258	1300	1310	1-	1					1	1254		6563
07	1408	1415	1430	1-	3	1	1		1	2	1406	C3.6	
07	1436	1444	1444D	1-	5	1			1	2	1438	C2.3	
07	1454	1500	1510	1-	3				1	1	1450	C3.5	
07	1954	2005	2035	2	3					2	2003		
07	2257	2302	2310	1-	1					1	2255	C1.4	
07	2319	2325	2346	1-	1			1			No flare		
07	2349	2400	2430	1-	5			1		1	2349	C1.8	
08	0203	0214	0254D	1+	3	1		1			0202	C5.5	
08	0254E	0321	0358	1-	1			1			0225	C3.0	6579
08	0516	0523	0547D	1-	5			1		1	0509	C3.1	6579
08	0547E	0554	0618	1-	5			1		2	0538	C2.1	
08	0825	0832	0852	1-	5	1		1	1	2	0825	C3.3	6580
08	1502	1518	1536	1-	5	1	5	1	1	7	1458	C4.1	6580

* = no flare patrol.

APRIL 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
08	1637	1644	1647U	1-	1					1	1639		6580
08	1816	1821	1845	1+	3					3	1811	C2.0	6566
09	0015	0024	0038	1-	1			1			0020		6566
09	0103	0115	0134	1-	1			1			No flare		
09	0612	0623	0711D	1-	5			1		2	0607		6565
09	0711E	0721	0754	1-	5	1		1	1	5	0709	C3.0	
09	0854	0908	0938	1-	5			1	1	5	0854	C3.2	
09	1356	1358	1415	1	1					1	1355		6565
09	1500	1510	1537D	1-	5			1		1	1438		6566
09	1537E	1547	1627	1-	5		1	1	1	6	1528	C7.4	6580
09	1610	1615	1630	2	1		1				No flare		
09	1844	1852	1919	1	5			1		8	1827	M1.0	6566
09	2245	2248	2317	1-	5			1		1	2235	C3.4	6566
09	2355	2359	2409	1-	1			1			2329	C3.6	6566
10	0050	0100	0137	1-	3	1		1			No flare		
10	0202	0214	0236	1-	3	1		1			0203	C3.1	6566
10	0307	0346	0456	3-	5	1		1		1	0323	M1.3	
10	0725	0732	0745	1-	1					1	No flare		
10	1247	1319	1346D	1-	5	1	3	1	1	4	1237	C6.0	6583
10	1346E	1358	1426	1-	5	1	2	1	1	2	No flare		
10	1434	1439	1450	1-	1				1		1432		6572
10	1509	1526	1607D	1	5	2	5	1	1	10	1513	M1.4	6580
10	1607E	1615	1651	1-	5			1	1	5	1541	C9.5	
10	1707	1715	1727	1	1					1	1708		
10	2013	2016	2043	1-	3					5	2017	M1.9	6583
10	2014	2034	2119D	2+	5	1		1		6	2017	M1.9	6583
10	2119E	2139	2221D	1	5	1		1		5	2119	C9.6	6583
10	2221	2245	2335	1+	5	1		1		4	2218	C6.0	6566
11	0006	0023	0034D	1-	5			1		1	0023		6570
11	0034E	0105	0221	1+	5			1		1	*		
11	0224	0228	0339D	1-	1			1			0224	C5.9	6566
11	0311	0318	0333D	2+	3	1		1			0252	M1.2	6580
11	0333E	0346	0453D	2+	1			1			0321	M1.0	6566
11	0453E	0536	0602D	2	5	1		1	1	2	*		
11	0602E	0621	0655D	3	5	3	3	1	1	5	0542	M4.9	6583
11	0655E	0659	0809D	3-	5	1	1	1	1	4	0654		6572
11	0809E	0846	1033	3	5	4	6	1	1	6	0823	M2.4	6583
11	1037	1045U	1100	1	1		1				*		
11	1113	1120	1249	2+	5	5	8	1	1	14	1103	M9.5	
11	1335	1335	1346	1-	1					1	1330E		6583
11	1434	1446	1507	1-	5	1	4	1	1	6	1431	C5.0	
11	1516	1517	1532	1-	1					1	No flare		
11	1554	1558	1618	1	1					1	No flare		
11	1843	1850	1951	2	3					7	1843E	C9.8	6570
12	0009	0039	0214	2	5			1		1	0042E	M1.2	
12	0313	0338	0419D	1+	1			1			0313E	M1.0	
12	0419E	0425	0440D	1	5			1		3	0421E	M1.0	
12	0440E	0455	0711	3-	5			1		3	0440E	M1.4	
12	0537	0540	0550	1-	1					1	*		
12	0800	0819	0914	1	5	1	3	1	1	1	No flare		
12	1525	1552	1647	1-	1			1			1536		6566
12	2007	2007	2027	1	3					2	2007		6583
12	2033	2038	2058	1-	5			1		3	2028	C4.8	6570
12	2158	2206	2241	1-	5			1		1	No flare		
12	2321	2340	2424D	1-	5			1		2	2320E	C5.5	
13	0025E	0029	0116	1-	5			1		1	0025E	C4.8	
13	0136	0151	0252D	2	3	1		1			0141E	C8.5	
13	0237E	0252	0313	1-	1			1			0251		6583
13	0519	0526	0654	2	5	2		1	1	3	0519E	C9.2	
13	0843	0854	1021	3	5	4	6	1	1	6	0841	M3.1	
13	1324	1326	1330	1-	1					1	No flare		
13	1520	1526	1535	1-	5		1		1	2	1515		6583

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

APRIL 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
13	1528	1542	1600	1-	5			1		1	No flare		
13	1610	1615	1645	2	1					1	1615		6566
13	1702	1708	1747	2	5					7	1703	C5.4	6570
13	1927	1930	1945	1-	3					2	1930		6582
13	1952	1953	2004	1-	1					1	*		
13	2147	2200	2228	1-	5			1		1	No flare		
13	2301	2306	2328	1-	1			1			*		
14	0011	0019	0028D	1-	1			1			No flare		
14	0028E	0045	0102D	1-	1			1			0042E	C6.7	
14	0102E	0129	0242	1	3	1		1			0113E		6583
14	0330	0403	0541D	2+	3	1		1		1	0315	M1.5	6582
14	0541E	0546	0657	1	5	1		1	1	4	0541	C8.7	6583
14	0844	0850	0904	1-	5			1	1	2	0844	C4.2	
14	1032	1044	1108	1-	5		3	1			1027		
14	1138	1151	1213	1-	5			1	1	1	1135	C4.6	
14	1300	1313	1402	1	5	4	2	1	1	10	1304E	M1.7	
14	1421	1440U	1458	1	1		1				1434	C3.4	6592
14	1504	1515	1539	1-	5		1	1	1	6	1503	C5.4	
14	1624	1632	1640	1-	5		2		1	6	1616	C5.2	6570
14	1656	1659	1729	1+	5					7	1658	C7.2	
14	1922	1923	1942	1	3					2	1921	C3.0	6583
14	2035	2044	2110	1-	5			1		3	2036	C3.4	6592
14	2243	2245	2302	1	1					1	No flare		
14	2327	2343	2411	1-	5			1		1	2329	C4.5	6583
15	0040	0049	0115	1-	1			1			0041E	C4.3	
15	0217	0225	0241	1-	1			1			0211	C3.8	
15	0312	0329	0347	1-	1			1			No flare		
15	0346E	0359	0545D	2-	3	1		1			0349	C6.4	6583
15	0545E	0557	0612D	1-	1			1			No flare		
15	0613	0637	0659D	1	5	1	1	1	1	3	0607E	C7.2	
15	0658E	0704	0743D	1-	5			1	1	3	0656E	C4.6	
15	0743E	0747	0814D	1-	1			1			No flare		
15	0815	0838	0906D	1-	5	1		1	1	2	0812	C5.5	
15	0900	0918	0918D	1-	1				1		No flare		
15	0930E	0944	1232	3	5	5	7	1	1	8	0923	M9.8	6593
15	1149	1201	1233	2	1		1				1155E	C8.3	6583
15	1156	1214	1250	1-	5	1	3	1	1	4	1155E	C8.3	6583
15	1330	1332	1345	1-	1					1	1331		6592
15	1400	1454	1552D	2	5	4	6	1	1	8	1451E		6583
15	1552E	1605	1717	2	5	4	6	1	1	9	1544	M4.2	6593
15	1710	1714	1724	1-	5					3	1709		6583
15	1821	1824	1840	1-	3					2	1815	C3.5	6593
15	1830	1836	1855	1	1					1	1829E	C4.6	6583
15	1901	1920	2011D	2+	5	2		1		5	1901	M3.9	6583
15	2011E	2026	2049	1	5			1		2	2003	C6.1	
15	2100	2113	2140	1-	5			1		3	2113E	C4.4	
15	2151	2200	2215D	1	1					1	No flare		
15	2215	2222	2246	1+	3					2	2215	C4.3	6593
15	2253	2307	2458	1	3	1				1	2249	C5.8	
15	2337	2342	2403D	1-	5			1		2	2323		6580
16	0003E	0013	0036	1-	5			1		1	No flare		
16	0057	0116	0137D	2	5	2		1		1	0058E	M1.3	
16	0137E	0143	0248D	2	5	1		1		1	0136	M2.4	
16	0250E	0257	0307	1-	1			1			0251E	C5.9	
16	0305E	0311	0342D	2-	3	1		1			0245	M1.1	6580
16	0342E	0414	0510D	3	5	1		1		2	0345E	M1.0	
16	0510E	0530	0604D	2+	5			1	1	1	0504	M1.5	6593
16	0605E	0625	0753	3-	5	1	1	1	1	6	0604	M1.8	6580
16	0726E	0730	0738	1-	5			1		2	No flare		
16	0814	0825	0852D	2+	5	4	3	1	1	6	0814	M1.3	6582
16	0852E	0857	0939	1+	5		1	1	1	3	0855	C6.5	6580
16	0944	1000	1025	1-	3		1		1	2	0941	C5.1	6582
16	1053	1107	1121	1-	5			1	1	4	1053	C6.4	6593
16	1130	1143	1217	2-	5		1			9	1129		6582

* = no flare patrol.

APRIL 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
16	1141	1217	1315	2	5	3	4	1	1	2	1139	M1.8	6593
16	1314E	1329	1343D	1+	1					1	1320	M2.4	6583
16	1348	1411	1508	1	5	4	5	1	1	12	1320	M2.4	6583
16	1439	1446	1520	1	5		1			1	1445	C4.9	6580
16	1547	1613	1656	2	5	3	5	1	1	9	1558	M3.3	6583
16	1821	1824	1843	1	5					5	1821	C4.6	6583
16	1851	1900	1920	1+	1					1	1850	C3.3	6580
16	2021	2026	2048	1-	5			1		5	2022	C5.1	6583
16	2100	2110	2130	1+	1					1	No flare		
16	2128	2134	2152	1-	5			1		1	2129		6593
16	2153	2200	2209	1-	1			1			2152		6593
16	2217	2224	2237D	1-	5			1		4	2217	C8.3	6583
16	2237E	2248	2325D	1	5			1		4	2236	M1.0	6593
16	2325E	2401	2425D	1+	5			1		2	2337E	M1.1	6593
17	0026E	0032	0126	1+	5	1		1		1	0025	M1.2	
17	0146	0158	0242D	2	5	1		1		1	0145	M1.7	6593
17	0243	0256	0335	1-	1			1			*		
17	0635	0638	0744	2	3					2	0639	M2.2	6593
17	0651	0704	0934	3	5	3	7	1	1	4	0639	M2.2	6593
17	0756	0801	0804	1-	1			1			*		
17	0949E	1008	1025	1-	5	1		1	1	2	0943	C3.5	
17	1200	1201	1215U	1-	1					1	1202		6580
17	1322	1324	1332	1-	1					1	1322		
17	1620	1627	1655	1+	5		2		1	7	1616	C8.6	
17	1657	1700	1705	1-	5				1	2	1657	C4.5	6593
17	2142	2146	2205	1-	1			1			2149E		
17	2236	2241	2300	1-	5			1		1	2235	C4.1	6580
17	2348	2405	2427	1-	5			1		1	2356E		6593
18	0043	0056	0130	1-	1			1			0044	C4.3	6580
18	0140	0147	0205	1-	1			1			0139	C4.6	6593
18	0237	0247	0302	1-	1			1			0234		6580
18	0526	0535	0611	1-	5			1	1	2	0529E	C5.5	6593
18	0642	0647	0717	1-	5			1	1	3	0640E	C3.4	
18	1842	1847	1902	1-	5			1		7	1844	C4.5	6593
19	0052	0054	0100	1-	1			1			0050	C1.9	
19	0104	0114	0133	1-	1			1			0103		6583
19	0205	0209	0233	1-	1			1			0203	C2.5	
19	0236	0242	0308	1-	1			1			No flare		
19	0320	0323	0335	1-	1			1			No flare		
19	0338	0347	0405	1-	1			1			0342	C3.3	6592
19	0454	0507	0527	1-	5			1		2	0448		6592
19	0654	0701	0757	1-	5	1	1	1	1	5	0644	C5.7	6592
19	0849	0855	0905	1-	3	1	1		1		*		
19	1048	1056	1210	2	5	3	7	1	1	4	1046	M1.7	
19	1136	1152	1233	1	3		1			1	1140		6583
19	1303	1317	1353	1-	5	2	4	1	1	7	1300	C5.4	6593
19	1407	1412	1421	1-	5				1	1	1417	C2.9	6592
19	1426	1429	1443	1-	5		1		1	3	1417	C2.9	6592
19	1500	1510	1538	1	3		3				No flare		
19	1623	1624	1633	1-	1					1	1624		6593
19	1809	1812	1834	1	3					4	1808	C2.3	
19	1944	1948	2001	1-	3					3	No flare		
19	2111	2115	2136	1-	5			1		4	2109	C3.1	
19	2220	2230	2236	1-	1					1	No flare		
20	0017	0029	0037U	1	1					1	0029	C2.6	6592
20	0503	0532	0610	1-	5		1	1			No flare		
20	0615	0633	0757	3	5	3	6	1	1	5	0619	M1.5	
20	0842	0904	0939D	3	5	1	4	1		3	0842	M3.5	
20	0939E	1018	1243	3	5	1	2	1	1	5	No flare		
20	1224	1227	1235	1-	1					1	No flare		
20	1303	1311	1324	1	1					1	1309		6583
20	1634	1639	1702	1	5					5	1641	C7.1	6594
20	2139	2145	2153D	1-	5			1		1	2142		6583
20	2153E	2157	2223	1-	1			1			2150		6583

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

APRIL 1991

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
21	0450	0507	0533D	1-	5			1		1	0504E	C8.3	6593
21	0533E	0546	0715	2-	5	1	2	1	1	3	0504E	C8.3	6593
21	0700	0710	0727	1	3		2				No flare		
21	2117	2121	2149	1-	5			1		4	2108	C4.9	
21	2251	2255	2312D	1	1					1	No flare		
21	2312	2319	2400	2+	1					1	No flare		
22	0048	0058	0147	1-	1			1			0047	C4.4	
22	0711	0719	0749	1-	5			1	1	2	0707	C5.9	6582
22	0742	0745	0755	1-	1				1		0738		6593
22	0929	0941	1003	1	3		2				No flare		
22	1008	1020	1045	1-	1					1	*		
22	1028	1057U	1202	1	1		1				*		
22	1205	1251U	1452	1	1		1				No flare		
22	1835E	1838	1847	1-	1					1	1835		6593
22	1944	1951	2028	2	1					1	1944	C3.1	
22	2156	2202	2214	1-	5			1		1	2156		6583
23	0403	0409	0435	1-	1			1			0403	C2.5	
23	1400	1404	1420	1	1					1	1403		6593
23	1610	1618	1636	1	3		2				No flare		
24	0909	0920	1018	1	1		1				No flare		
25	1352	1410	1515	1	1		1				No flare		
26	0540	0658U	0838	2	1		1				No flare		
27	0618	0639U	0718	1	1		1				0640E		6605
27	1340	1348	1410	1-	5				1	2	1338	C2.1	6603
27	1445	1448	1500U	1-	1					1	1452		6605
27	1525	1550	1740	3	1		2				No flare		
27	1652	1657	1715	1	1					1	1650		6603
27	1711	1722	1809	2	5					4	1720	C2.4	6603
27	1909	1914	1923	1-	1					1	1909		
27	2208	2216	2230	1-	5			1		1	2204	C2.3	
27	2310	2315	2330D	1	1					1	*		
27	2331	2345	2421D	2	5	2		1		2	2329	C9.7	6603
28	0020E	0030	0122	1	5	1		1		2	0019	C5.4	
28	0431	0437	0445	1-	1			1			0428	C1.4	
28	0457	0506	0543D	2-	5	1	1	1		2	0453E	C6.3	6603
28	0548E	0618	0651	1-	5			1		3	0543	C3.1	
28	0654	0708	0725	1	3		2				No flare		
28	0747	0756	0932	3	5	3	6	1	1	5	0746	M3.5	6603
28	0841	0849U	0934	1	1		1				No flare		
28	1131	1138	1150	1-	3	1			1		1132	C2.9	6603
28	1430	1432	1445	1-	5		1		1	6	1430	C2.9	6603
28	1600	1603	1627	1	5					3	1555	C1.9	6603
28	2132	2138	2150	1-	1					1	2133		6603
29	0614	0634U	0704	1	1		1				No flare		
29	0926	0928	0945	1-	3	1			1	1	0924	C2.0	
29	1246	1252	1320	1-	3	1			1		1248	C1.5	
29	2110	2141	2216	2+	1					1	2128	C1.2	6608
30	0235	0247	0325	1-	1			1			0235	C2.6	6603
30	0459	0505	0550	1-	5			1		1	0501	C4.2	6603
30	0721	0728	0750	1-	5	1		1	1	2	0724	C2.1	6603
30	0826	0832	0928	1	5	1		1	1	3	0828	C4.2	6603
30	1227	1232	1310	1-	5	1	1		1	5	1227	C2.4	6603
30	1425	1430	1441	1-	5					3	1425	C1.2	6613
30	1545	1604	1612	1+	1					1	1549		

* = no flare patrol.

OBSERVATORIES REPORTING FOR APRIL 1991

Amherst, New Hampshire, USA	SES	Locust Grove, Georgia, USA	SES
Athens, Georgia, USA	SES	Madison, Wisconsin, USA	SES
Boksburg, Rep of S. Africa	SES	Manahawkin, New Jersey, USA	SES
Cleveland, Ohio, USA	SES	Maui, Hawaii, USA	SWF
Darmstadt, Germany	SWF	Nerja, Spain	SES
Edenvale, Rep of S. Africa	SES	Panska Ves, Czechoslovakia	SES, SEA, SWF
Euclid, Ohio, USA	SES	Paterson, New Jersey, USA	SES
Farsta, Sweden	SES	Rimavska Sobota, Czechoslovakia	SEA
Hiraiso, Japan	SWF	Rochester, New Hampshire,USA	SES
Houston, Texas, USA	SES	San Francisco, California, USA	SES
Hudson, Ohio, USA	SES	Shaker Heights, Ohio, USA	SES
Inubo, Japan	SPA	Sofia, Bulgaria	SES
Johannesburg, Rep of S. Africa	SES	Tucson, Arizona, USA	SES
Juliusruh, Germany	SWF	Upice, Czechoslovakia	SEA
Kuhlungsborn, Germany	SEA, SPA	Vlasim, Czechoslovakia	SEA
LaCrescenta, California, USA	SES	Ziar nad Hronom, Czechoslovakia	SEA
Latrobe, Pennsylvania, USA	SES	Zilina, Czechoslovakia	SEA

Observations are not necessarily continuous.

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

APRIL 1991

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
01	0000	0736	CULG				0024.0	0025.0	1				IIIPAIR
			LEAR				0024.0	0024.0	2				III
			LEAR				0628.0	0637.0	1				III
			LEAR				0648.0	0706.0	1				S
	0650	1403	ONDR										
			LEAR				0707.0	0708.0	2				III
			SVTO				0707.0	0709.0	2				III
	0541	1256	WEIS				0707.2	0708.4	1				IIIB
			CULG				0708.0	0709.5	1				IIIG
			SVTO				0819.0	0820.0	3				III
			LEAR				0820.0	0821.0	3				III
			SGMR				1215.0	1232.0	1				S
			SGMR				1750.0	1751.0	1				III
			SGMR				1839.0	1839.0	1				III
			SGMR				1918.0	1931.0	2				V
			PALE				1919.0	1922.0	2				III
	2036	2400	CULG										
02			LEAR				0042.0	0044.0	3				III
	0000	0736	CULG				0043.0	0044.0	2				IIIG
			PALE				0043.0	0043.0	3				III
	0650	1402	ONDR	1001.8	1003.0	3							IIIG,U
	0848	1731	WEIS	1001.8	1002.9	2							IIIG,U
			ONDR	1006.0	1009.5	3	1006.0	1009.5	3				IV
			WEIS				1006.0	1018.7	3				II H
			SVTO				1007.0	1023.0	2				II
			SVTO				1037.0	1038.0	2				V
			ONDR				1037.2	1037.9	1				P
			WEIS				1037.4	1037.9	1				IIIG,SPIKES
			WEIS	1500.7	1500.8	2							IIIG
			SGMR				1853.0	1853.0	1				III
			LEAR				2300.0	0252.0	2				IV
			PALE				2300.0	0145.0	2				IV
	2036	2400	CULG				2301.0	2307.0	1				IIIGG
			CULG				2307.0	2338.0	3				IV
03	0000	0735	CULG										
	0536	1831	WEIS										
	0650	1402	ONDR										
	2035	2400	CULG										
04	0000	0735	CULG										
			LEAR				0340.0	0341.0	1				III
	0520	1734	WEIS										
	0650	1401	ONDR	1006.1	1007.0	1	1006.1	1007.0	1				II
			SGMR				1313.0	1314.0	1				III
			SVTO				1611.0	1611.0	2				III
	2035	2400	CULG										
05	0000	0735	CULG										
	0532	1236	WEIS										
	0650	1403	ONDR										
	1240	1736	WEIS										
	2035	2400	CULG										
06	0000	0735	CULG				0431.5	0433.5	1				IIIG
			SVTO				0451.0	0452.0	1				III
			CULG				0452.0	0452.5	1				IIIB
			LEAR				0452.0	0453.0	2				III
			LEAR				0706.0	0708.0	2				III
			SVTO				0706.0	0708.0	2				V
			CULG				0706.5	0708.0	1				IIIG
			LEAR				0809.0	0812.0	2				III
			SVTO				0809.0	0814.0	2				V
	0650	1402	ONDR	0813.2	0816.4	3							IV
			ONDR				0936.0	0936.7	3				IIIGG
	0529	1736	WEIS				0936.3	0936.6	2				IIIG
			SGMR				1510.0	1540.0	1				CONT
	2035	2400	CULG										

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

APRIL 1991

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
07	0000	0735	CULG				0455.5	0455.5	1				IIIPAIR
			LEAR				0456.0	0457.0	2				III
	0528	1739	WEIS										
			CULG				0528.5	0529.0	1				IIIPAIR
			CULG				0543.0	0544.0	1				IIIPAIR
			SVTO				0543.0	0543.0	2				III
	0650	1402	ONDR										
			SGMR				1501.0	1501.0	1				III
	2034	2400	CULG										
			PALE				2237.0	2239.0	1				III
08	0000	0734	CULG				0530.0	0531.0	2				IIIB
			LEAR				0530.0	0531.0	2				III
			SVTO				0530.0	0531.0	3				III
			SVTO				0611.0	0613.0	2				III
			CULG				0611.5	0617.0	1				IIIN
			LEAR				0612.0	0615.0	2				III
	0650	1401	ONDR										
			LEAR				0727.0	0736.0	3				III
			SVTO				0727.0	0729.0	3				III
			CULG				0727.5	0729.0	2				IIIB
	0525	1231	WEIS				0727.6	0728.2	1				IIIG
			SVTO				0734.0	0736.0	3				III
			WEIS				0735.1	0735.3	1				IIIB
			LEAR				0926.0	0926.0	2				III
			SVTO				0926.0	0927.0	3				III
			WEIS				0926.6	0926.8	2				IIIB
			SVTO				1149.0	1149.0	2				III
	1240	1739	WEIS				1149.3	1149.4	1				IIIB
			SVTO				1415.0	1417.0	2				III
			SVTO				1457.0	1558.0	2				S
			SGMR				1558.0	1558.0	1				III
	2034	2400	CULG										
09	0000	0734	CULG				0317.5	0317.5	1				IIIB
	0524	0742	WEIS										
	0650	1403	ONDR										
			LEAR				2335.0	2338.0	3				III
			PALE				2335.0	2339.0	3				III
	2034	2400	CULG				2335.5	2339.0	2				IIIG
			LEAR				2338.0	0130.0	1				CONT
10	0000	0733	CULG										
	0650	1402	ONDR										
	0721	0807	WEIS										
	0819	1742	WEIS										
			SGMR				1210.0	1211.0	1				III
			SVTO							1210.0	1211.0	1	III
			SGMR				1345.0	1345.0	1				III
			SVTO				1345.0	1345.0	1				III
			SGMR				1410.0	1410.0	1				III
			SGMR				1426.0	1442.0	1				S
			SVTO				1442.0	1442.0	1				III
			PALE				1917.0	1923.0	2				III
			SGMR				1923.0	1923.0	2				III
			PALE				1945.0	1945.0	1				III
			SGMR				2011.0	2028.0	1				S
			PALE				2012.0	2012.0	1				III
			PALE				2017.0	2028.0	1				S
	2033	2400	CULG				2118.0	2118.0	1				IIIB
			PALE				2118.0	2118.0	1				III
			SGMR				2118.0	2118.0	1				III
			CULG				2131.0	2132.0	1				IIIPAIR
			CULG				2141.0	2141.0	1				IIIB
			PALE				2141.0	2141.0	1				III
			SGMR				2141.0	2141.0	1				III
			PALE				2247.0	2248.0	1				III
			CULG				2248.0	2249.0	1				IIIPAIR
			LEAR				2348.0	0006.0	1				II

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

APRIL 1991

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
10			PALE				2351.0	0006.0	1				II
11	0000	0733	CULG				0044.5	0045.5	1				IIIG
			CULG				0048.0	0049.0	2	0004.80	0004.90		1IIIPAIR
			LEAR				0048.0	0058.0	3				S
			PALE				0048.0	0058.0	2				S
			CULG				0053.0	0053.0	1				IIIB
			CULG				0056.0	0058.0	2				IIIG
			LEAR				0205.0	0206.0	1				III
			PALE				0205.0	0206.0	1				III
			CULG				0205.5	0205.5	1				IIIB
			LEAR				0232.0	0232.0	1				III
			LEAR				0309.0	0314.0	2				III
			PALE				0309.0	0314.0	1				III
			CULG				0310.0	0314.5	1				IIIG
			CULG				0410.0	0411.0	1				IIIPAIR
			LEAR				0410.0	0411.0	2				III
			SVTO				0543.0	0554.0	1				S
			LEAR				0554.0	0555.0	1				III
			CULG				0654.0	0655.5	2				IIIG
			LEAR				0654.0	0656.0	3				V
			SVTO				0654.0	0655.0	3				V
	0521	1745	WEIS				0654.2	0655.1	2				IIIG
	0650	1402	ONDR	1114.0	1119.0	3	1114.5	1119.0	3				IV
			WEIS				1115.9	1118.3	1				II
			ONDR	1120.9	1121.0	2	1120.9	1121.0	2				IIIG
			SGMR				1755.0	1756.0	1				III
	2033	2400	CULG				2329.0	2329.0	1				IIIB
			PALE				2351.0	0006.0	1				II
12			LEAR				0323.0	0324.0	1				III
	0000	0733	CULG				0324.0	0339.0	1				IIIN
			CULG				0507.0	0507.5	2				IIIPAIR
	0517	0711	WEIS										
	0650	1401	ONDR										
	0728	1745	WEIS										
			SGMR				1059.0	1059.0	1				V
	2033	2400	CULG				2159.0	2201.5	1				IIIG
13	0000	0733	CULG										
			LEAR				0158.0	0159.0	1				III
	0517	0705	WEIS										
	0650	1403	ONDR										
	0725	1747	WEIS										
			SGMR				1544.0	1544.0	1				III
	2032	2400	CULG				2317.5	2317.5	1				IIIPAIR
14			PALE				0110.0	0112.0	2				III
			LEAR				0111.0	0112.0	2				III
	0000	0732	CULG				0111.5	0111.5	2				IIIG
			LEAR				0119.0	0120.0	1				III
			LEAR				0451.0	0502.0	2				S
			CULG				0452.5	0454.5	2				IIIG
			SVTO				0453.0	0454.0	2				III
			CULG				0457.0	0457.0	1				IIIB
			LEAR				0517.0	0525.0	2				III
			CULG				0517.5	0517.5	1				IIIB
			CULG				0526.0	0526.0	1				IIIB
			CULG				0536.0	0536.0	1				IIIPAIR
	0514	1847	WEIS	0541.3	0541.9	2							IIIG,RS
			LEAR				0550.0	0551.0	1				III
			CULG				0551.0	0551.0	1				IIIB
			LEAR				0559.0	0601.0	2				III
			SVTO				0559.0	0608.0	2				III
			CULG				0608.0	0610.0	1				IIIG
			CULG				0644.0	0647.0	1				IIIG
			LEAR				0700.0	0708.0	2				III
			CULG				0702.5	0702.5	1				IIIB
			CULG				0706.5	0709.0	1				IIIB

S O L A R R A D I O E M I S S I O N
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Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
14			LEAR				0740.0	0748.0	3				III
			SVTO				0740.0	0748.0	3				V
			WEIS				0740.0	1517.0	2				IIIN
			LEAR				0758.0	0803.0	2				III
			LEAR				0818.0	0822.0	2				III
			LEAR				0835.0	0838.0	2				III
			LEAR				0847.0	0905.0	2				S
			SVTO				0847.0	0946.0	2				S
	0650	1404	ONDR				0850.6	0850.7	1				IIIG
			SVTO				1005.0	1005.0	2				III
			SGMR				1125.0	1218.0	1				S
			SVTO				1126.0	1217.0	2				S
			WEIS				1214.3	1214.9	2				IIIG
			SGMR				1247.0	1258.0	2				S
			SVTO				1247.0	1258.0	2				S
			SGMR				1328.0	2302.0	1				CONT
			SVTO				1415.0	1455.0	2				S
			SGMR				1417.0	1429.0	2				S
			WEIS				1428.9	1429.4	2				IIIG
			SGMR				1514.0	1517.0	2				V
			SVTO				1514.0	1516.0	2				III
			PALE				1649.0	1650.0	2				III
			SGMR				1649.0	1651.0	3				V
			SVTO				1649.0	1650.0	3				III
			WEIS				1649.2	1650.7	3				IIIG
			WEIS	1659.9	1700.0	1							SPIKES
			PALE				1803.0	1810.0	2				III
			SGMR				1806.0	1809.0	2				V
			PALE				1850.0	2029.0	2				S
			PALE				2109.0	2305.0	2				S
	2032	2400	CULG				2110.0	2115.0	1				IIIG
			CULG				2120.5	2120.5	1				IIIB
			CULG				2152.0	2152.0	1				IIIPAIR
			CULG				2203.5	2214.0	2				IIIGG
15			LEAR				0008.0	0014.0	2				III
			PALE				0008.0	0014.0	1				III
	0000	0732	CULG				0008.5	0008.5	1				IIIG
			LEAR				0021.0	0025.0	3				III
			PALE				0021.0	0025.0	3				V
			CULG				0021.5	0025.0	2				IIIGG
			PALE				0204.0	0205.0	1				III
			CULG				0205.0	0205.0	1				IIIG
			LEAR				0441.0	0442.0	2				III
			CULG				0442.0	0443.0	1				IIIG
	0650	1402	ONDR										
			SGMR				1418.0	1420.0	3				III
			SVTO				1418.0	1419.0	3				V
	0514	1750	WEIS				1419.3	1419.4	3				IIIG
			SGMR				1546.0	1617.0	2				IV
			SVTO				1556.0	1614.0	2				IV
			WEIS				1604.8	1612.5	1				IIIGG
	2032	2400	CULG										
16	0000	0732	CULG				0415.0	0420.0	1				IIIN
	0511	0542	WEIS										
	0555	1750	WEIS										
	0650	1401	ONDR										
	2032	2400	CULG										
17	0000	0732	CULG										
	0650	1403	ONDR										
			SGMR				1103.0	1103.0	1				III
			SVTO				1103.0	1104.0	2				III
	0519	1753	WEIS				1103.5	1103.8	2				IIIG
			SGMR				1215.0	1215.0	1				III
			SGMR				1237.0	1238.0	1				III
			SVTO				1237.0	1237.0	1				III
			WEIS				1237.7	1237.9	1				IIIB

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Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
17			SGMR				1444.0	1444.0	1				III
			SVTO				1444.0	1444.0	2				III
			SGMR				1520.0	1520.0	1				III
			SGMR				1645.0	1751.0	1				CONT
			WEIS				1708.4	1709.9	2				IIIG
			PALE				1745.0	1751.0	1				V
			SGMR				1745.0	1745.0	2				III
	2032	2400	CULG				2258.0	2259.0	1				IIIPAIR
18	0000	0731	CULG				0129.0	0228.5	1				IIIN
			LEAR				0129.0	0132.0	3				III
			PALE				0129.0	0150.0	2				S
			LEAR				0150.0	0151.0	2				III
			LEAR				0228.0	0228.0	2				III
			PALE				0228.0	0228.0	2				V
			CULG				0603.0	0604.0	2				IIIG
			LEAR				0603.0	0604.0	2				III
			SVTO				0603.0	0603.0	2				III
	0507	1642	WEIS				0603.3	0603.9	3				IIIG
			LEAR				0832.0	0833.0	3				III
			SVTO				0832.0	0833.0	3				III
	0650	1402	ONDR	0832.1	0832.3	2	0832.1	0832.3	2				IIIG
			WEIS				0832.1	0832.8	3				IIIG
			SVTO				0941.0	0942.0	2				III
			WEIS				0941.6	0942.4	1				IIIG
			SVTO				1017.0	1017.0	2				III
			WEIS				1017.5	1017.7	1				IIIB
			SGMR				1314.0	1316.0	2				V
			SVTO				1314.0	1316.0	2				V
			WEIS				1314.4	1314.7	2				IIIG
			SGMR				1500.0	1500.0	1				III
			SVTO				1520.0	1524.0	2				III
			SGMR				1521.0	1525.0	1				III
	2031	2400	CULG										
19			LEAR				0033.0	0834.0	1				III
			PALE				0033.0	0034.0	1				III
	0000	0731	CULG				0034.0	0034.0	1				IIIB
			LEAR				0153.0	0203.0	2				III
			PALE				0153.0	0203.0	1				III
			LEAR				0257.0	0257.0	1				III
	0504	1855	WEIS										
			SVTO				0628.0	0628.0	1				III
	0650	1402	ONDR										
			SVTO				0745.0	0745.0	2				III
	2031	2400	CULG				2209.0	2211.0	1				IIIGG
			PALE				2251.0	2254.0	2				III
20	0000	0731	CULG										
	0650	1401	ONDR										
	0503	1041	WEIS				1000.0	1005.3					IIIGG
			SVTO				1001.0	1046.0	2				IV
			SVTO				1007.0	1013.0	3				V
			WEIS				1007.7	1013.2	2				II HB
			SGMR				1008.0	1045.0	1				IV
			SVTO				1307.0	1307.0	2				III
	1050	1755	WEIS				1307.7	1307.9	1				IIIG
			SGMR				1357.0	1401.0	3				III
			WEIS				1357.6	1400.0	3				IIIGG/V
	2031	2400	CULG				2217.0	2217.5	1				IIIG
			PALE				2237.0	2240.0	2				V
			CULG				2238.0	2240.0	1				IIIG
			CULG				2316.0	2316.0	1				IIIB
21			LEAR				0011.0	0012.0	2				III
			PALE				0011.0	0012.0	1				III
	0000	0731	CULG				0011.5	0012.5	2				IIIPAIR
			LEAR				0348.0	0348.0	2				III
			CULG				0349.0	0349.0	1				IIIB

SOLAR RADIO EMISSION
Spectral Observations

APRIL 1991

Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
21	0650	1403	ONDR										
			SVTO				0743.0	0800.0	2				S
			LEAR				0749.0	0753.0	2				III
	0502	1541	WEIS				0749.9	0756.7	2				IIIGG
			SGMR				1459.0	1459.0	1				III
			WEIS				1459.5	1459.6	1				IIIB
	1605	1758	WEIS				1653.6	1653.7	1				IIIB
	2031	2400	CULG										
22	0000	0730	CULG										
			PALE				0004.0	0005.0	1				III
	0453	1758	WEIS										
	0650	1402	ONDR										
			PALE				2138.0	2138.0	1				III
	2032	2400	CULG				2204.0	2236.0	1				IIIS
			PALE				2204.0	2239.0	2				IV
			SGMR				2209.0	2216.0	2				III
			PALE				2353.0	2354.0	1				III
23	0000	0730	CULG										
			LEAR				0453.0	0454.0	1				III
	0650	1402	ONDR										
			SGMR				1451.0	1452.0	1				III
	0459	1801	WEIS				1451.8	1452.0	1				IIIB
			SGMR				1951.0	1952.0	1				III
			PALE				2026.0	2027.0	1				III
			SGMR				2026.0	2027.0	1				III
	2030	2400	CULG										
24			LEAR				0403.0	0403.0	1				III
	0000	0730	CULG				0403.5	0403.5	1				IIIB
	0650	1401	ONDR										
	0456	1310	WEIS				0828.0	0828.2	2				IIIB
	1318	1801	WEIS	1419.3	1419.7	1							IIIG
			SGMR				1603.0	1604.0	1				III
			PALE				1954.0	1958.0	1				III
			SGMR				1955.0	1956.0	1				III
	2030	2400	CULG										
25	0000	0730	CULG				0237.0	0237.0	1				IIIPAIR
			CULG				0329.0	0329.5	1				IIIG
			LEAR				0418.0	0418.0	1				III
			CULG				0418.5	0418.5	1				IIIB
			CULG				0511.5	0511.5	1				IIIB
	0650	1403	ONDR										
			LEAR				0654.0	0655.0	2				III
			SVTO				0654.0	0655.0	3				V
	0455	1807	WEIS				0654.4	0655.9	3				IIIGG
			CULG				0654.5	0656.0	1				IIIG
			SVTO				0840.0	0841.0	2				III
			WEIS				0840.3	0840.4	1				IIIB
			WEIS				0841.8	0841.9	1				IIIB
			SVTO				0956.0	0958.0	2				III
			WEIS				1045.4	1046.2	1				IIIG
			SGMR				1232.0	1232.0	1				III
			WEIS				1232.1	1232.2	1				IIIG
			SGMR				1331.0	1331.0	1				III
			WEIS				1331.5	1332.2	1				IIIG
			SGMR				1441.0	1442.0	1				III
			SVTO				1441.0	1442.0	1				III
			WEIS				1441.1	1441.6	1				IIIG
			SGMR				1633.0	1637.0	1				III
			WEIS				1633.6	1637.0	2				IIIGG
			PALE				1801.0	1801.0	2				III
			SGMR				1801.0	1801.0	2				III
			WEIS				1801.2	1801.4	2				IIIG
	2030	2400	CULG										
			SGMR				2131.0	2131.0	1				III

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Day	Observation Start (UT)	Observation End (UT)	Sta	Decimetric Band Start (UT)	Decimetric Band End (UT)	Decimetric Band Int (1-3)	Metric Band Start (UT)	Metric Band End (UT)	Metric Band Int (1-3)	Dekametric Band Start (UT)	Dekametric Band End (UT)	Dekametric Band Int (1-3)	Spectral Type
26	0000	0730	CULG				0026.0	0027.0	1				IIIPAIR
	0453	0656	WEIS										
	0650	1402	ONDR										
	0803	1804	WEIS				0845.7	0847.0	2				IIIG
			SGMR				1316.0	1317.0	1				III
			SVTO				1316.0	1316.0	2				III
			PALE				1916.0	1916.0	2				III
			SGMR				1916.0	1917.0	2				III
			SGMR				2021.0	2023.0	1				III
			PALE				2022.0	2023.0	1				III
	2030	2400	CULG				2235.5	2235.5	1				IIIB
			CULG				2251.5	2254.5	1				IIIG
27	0627	1402	ONDR										
			WEIS				0654.2	0657.4	1				IIIB
			LEAR				0655.0	0657.0	1				III
			SVTO				0655.0	0657.0	2				III
	0453	1806	WEIS				0655.3	0655.4	1				IIIB
	0000	0730	CULG				0657.5	0657.5	1				IIIG
			SGMR				1233.0	1238.0	1				III
			SVTO				1237.0	1238.0	1				III
			WEIS				1239.1	1239.2	1				IIIB
			SGMR				1304.0	1304.0	1				III
			WEIS				1304.3	1304.4	1				IIIB
			SGMR				1509.0	1510.0	1				III
			SVTO				1509.0	1509.0	1				III
			WEIS				1509.4	1509.9	1				IIIG
			SGMR				1721.0	1833.0	1				CONT
			PALE				1804.0	1805.0	2				III
			PALE				1805.0	2200.0	2				CONT
			SGMR				1913.0	1918.0	1				III
			LEAR				2333.0	2334.0	1				III
			PALE				2333.0	2336.0	2				III
	2030	2400	CULG				2334.0	2334.0	1				IIIB
28	0000	0730	CULG										
			SVTO				0549.0	0551.0	2				MWB
	0449	1651	WEIS				0615.4	0616.8	2				SPIKES
	0619	1401	ONDR	0853.1	0853.4	2							IIIG
			SGMR				1607.0	1607.0	1				III
			WEIS				1607.6	1607.7	2				IIIB
			WEIS				1635.7	1635.8	1				IIIB
			SGMR				2019.0	2050.0	1				CONT
	2029	2400	CULG										
			PALE				2233.0	2236.0	2				III
29	0619	1403	ONDR										
			SVTO				0653.0	0653.0	2				III
	0543	1809	WEIS				0653.8	0654.1	2				IIIB
	0000	0729	CULG				0654.0	0654.0	1				IIIB
			SVTO				1041.0	1043.0	2				III
			WEIS				1041.4	1043.4	2				IIIGG
			WEIS				1103.7	1105.9	1				IIIG
			SGMR				1104.0	1105.0	1				III
			SGMR				1327.0	1327.0	1				III
			SVTO				1327.0	1327.0	1				III
			WEIS				1327.3	1327.4	2				IIIB
			WEIS	1356.6	1357.3	1							I
			SGMR				1403.0	1421.0	1				II
			SVTO				1403.0	1410.0	2				II
			SGMR				1422.0	1424.0	2				III
			SVTO				1422.0	1424.0	2				III
			WEIS				1422.0	1425.6	2				IIIGG
			SGMR				1447.0	1447.0	1				III
			SGMR				1722.0	1724.0	2				III
	2029	2400	CULG				2323.0	2325.0	1				IIIG
			PALE				2323.0	2324.0	1				III
30	0000	0729	CULG										

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30	0447	1809	WEIS										
	0619	1342	ONDR	0828.5	0829.9	1							P
			ONDR	1226.0	1226.6	1							IIIGG
	2029	2400	CULG										

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

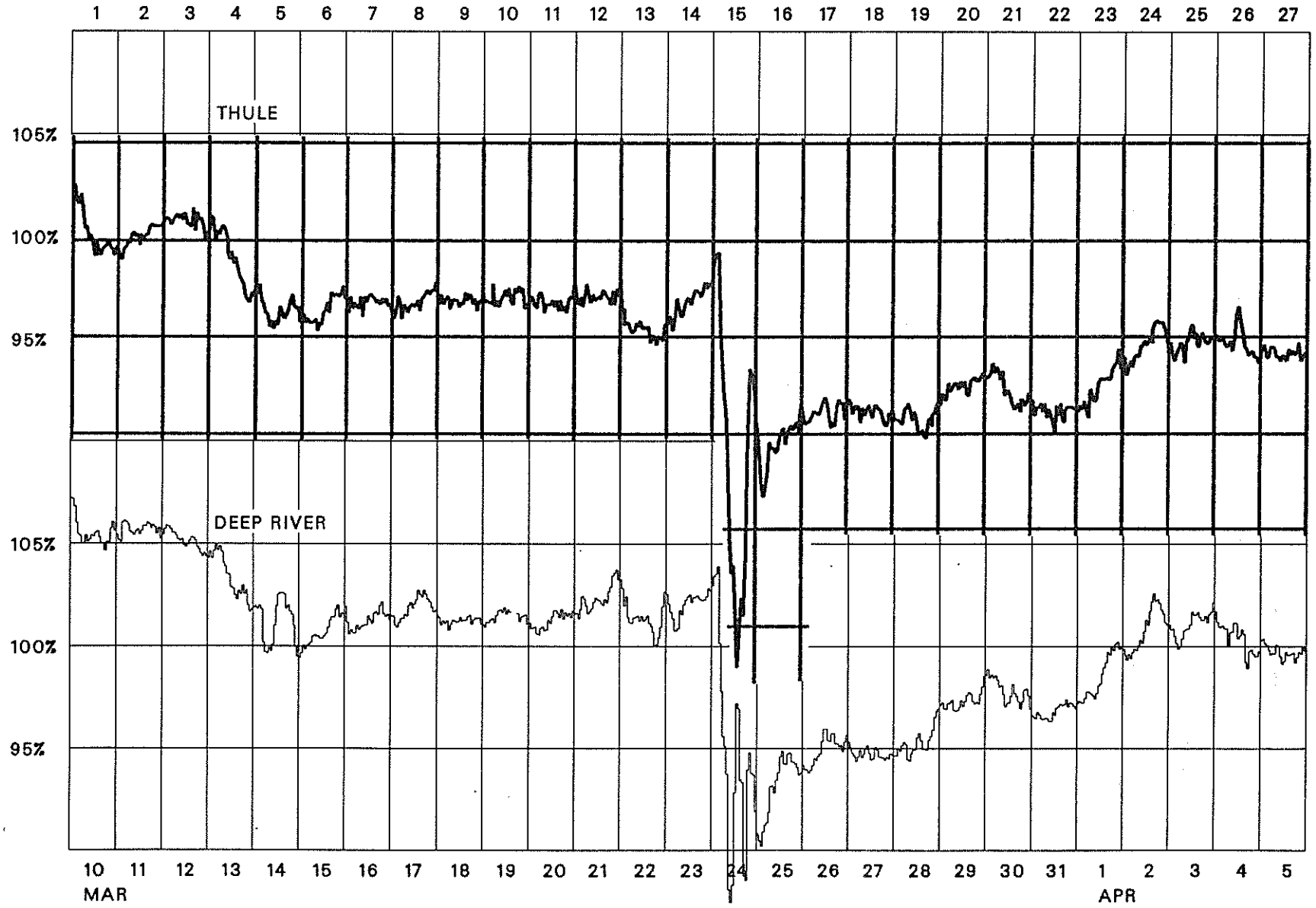
B = Single burst
G = Small group (< 10) of bursts
GG = Large group (> 10) of burst
C = Underlying continuum (particularly with Type I)
S = Storm in the sense of intermittent but apparently connected activity
N = Intermittent activity in this period
U = U-shaped burst of Type III
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
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 2153 (March 1991-April 1991)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2153 (March 1991-April 1991)

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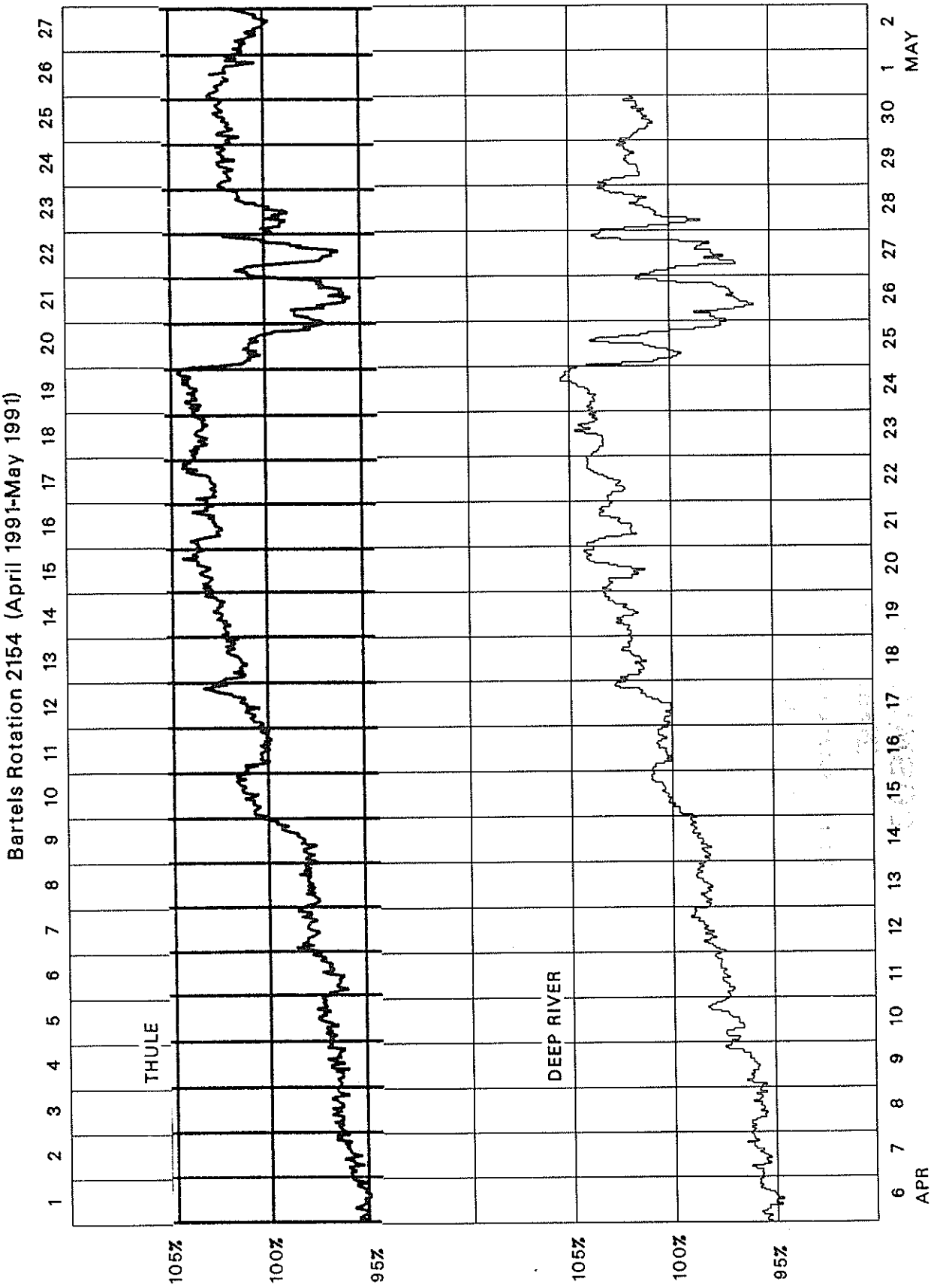
Apr 91

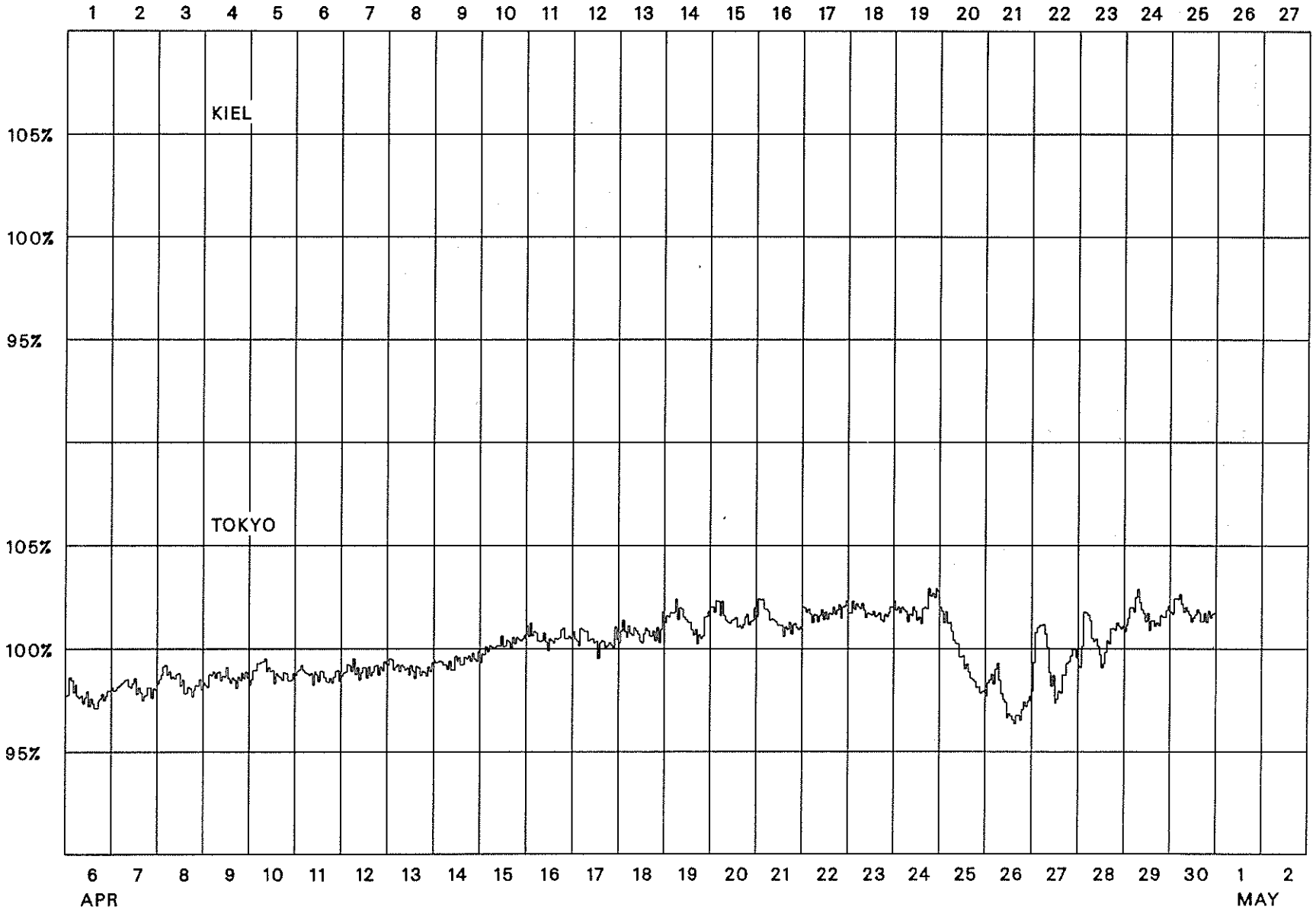
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2154 (April 1991-May 1991)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2154 (April 1991-May 1991)



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Apr 91

COSMIC RAY INDICES
(Neutron Monitor)

APRIL 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	3477	5729.1	5122.2		3320.9	
2	3554	5861.6	5225.2		3351.4	
3	3557	5876.4	5262.0		3352.7	
4	3559	5838.1	5273.7		3337.0	
5	3536	5799.0	5212.0		3313.4	
6	3536	5778.9	5210.9		3316.9	
7	3561	5804.9	5240.5		3329.8	
8	3582	5804.6	5243.3		3341.4	
9	3584	5833.1	5242.3		3347.3	
10	3603	5892.0	5275.7		3355.5	
11	3594	5905.3	5268.3		3351.5	
12	3637	5959.8	5311.1		3360.6	
13	3633	5963.3	5330.1		3362.3	
14	3659	5974.6	5355.3		3374.4	
15	3750	6073.4	5440.5		3401.0	
16	3727	6087.9	5494.3		3414.6	
17	3766	6112.6	5530.6		3409.2	
18	3777	6171.6	5572.9		3421.3	
19	3804	6206.0	5618.2		3440.6	
20	3839	6244.1	5629.1		3447.9	
21	3826	6232.6	5592.1		3442.2	
22	3838	6256.6	5618.6		3454.7	
23	3844	6284.8	5636.2		3455.5	
24	3862	6324.5	5650.9		3463.3	
25	3721	6091.1	5482.1		3384.7	
26	3605	5919.8	5313.2		3311.7	
27	3680	6034.6	5396.9		3373.8	
28	3719	6137.5	5516.4		3412.1	
29	3791	6185.8	5562.3		3450.3	
30	3791	6146.2	5553.8		3456.2	
Mean	3680	6017.7	5406.0		3385.1	

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

April 1991

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	Am	aa Provisional N	S	M
1		5-	4+	4+	5-	4+	3-	3	4+	32+	29	1.3											
2		4-	3+	4	4	3	4-	3	4	29-	22	1.1											
3	D3	3	4-	5+	5+	5	4+	5-	4	35+	37	1.4											
4	D2	3+	3-	3-	6+	7-	6-	5	5-	37	50	1.6											
5		4	3+	3	3-	3	3	2+	3-	24	15	0.9											
6		3	4-	3-	2-	2	3+	3+	3-	22+	14	0.8											
7		3	3	3	2+	2+	2+	2-	2-	19+	10	0.6											
8	Q5	2-	2	1+	1+	1	1+	2	2	13-	6	0.3											
9		3	3	2	1+	2+	2	3	2	19-	10	0.6											
10	Q9A	2	3-	2+	2+	3-	2-	1-	1+	16-	8	0.4											
11	Q2	1	1	1	2-	1	1+	2-	1+	10	5	0.2											
12		3-	3	3-	3+	3+	3+	1	1	20+	13	0.7											
13	Q3	1	1+	1+	1+	2-	1+	1+	2-	11	5	0.2											
14	Q7	1	2	2-	1	1+	2	2	2	13	6	0.3											
15	Q6	2-	2-	2-	1+	2+	1+	2-	1	13-	6	0.3											
16	Q4	1-	0+	0+	1+	2	3-	2	1	10+	5	0.2											
17		1+	3	2+	3-	3+	4-	3+	2-	21+	13	0.8											
18		2-	2+	3	4	3	2	2+	3-	21	12	0.7											
19		2+	4	4-	4-	2-	1+	2+	2+	21+	14	0.8											
20	Q1	1+	1-	1-	1	1	1	1	1	8-	4	0.1											
21	Q8	1	1	1+	3-	2	2	2-	1+	13	6	0.3											
22		3-	2-	2	2+	3-	3-	2-	0+	16	8	0.4											
23	Q10A	1	1+	1-	3-	1+	3+	2	2+	15-	8	0.4											
24		3-	2	2+	1+	2-	1+	3	4+	19-	11	0.7											
25		5-	4+	3	3	3-	1	2+	2+	23+	17	0.9											
26		3-	4+	2	1+	1+	2-	2+	4-	19+	12	0.7											
27		4	5+	3-	3-	3	3+	3+	4+	29-	24	1.1											
28	D5	4+	4+	3	3-	5	5-	5-	5	34-	33	1.3											
29	D1	6	5	5-	5+	7-	6-	4+	5-	42+	59	1.7											
30	D4	5+	5+	4+	4-	5-	4	4-	3	34	34	1.3											
Mean											17	0.74									.	.	.	.

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Prov Sa	Ri	Ra	Rs	IMF
1																			192.8	89	91	146	
2																			189.1	92	102	142	
3																			195.9	118	113	150	
4																			195.1	139	138	149	
5																			196.7	160	157	150	
6																			199.9	159	171	154	
7																			192.6	174	163	146	
8																			182.8	146	129	135	
9																			204.2	172	148	159	
10																			223.6	167	169	179	
11																			231.5	195	181	188	
12																			254.4	227	199	213	
13																			242.6	197	190	200	
14																			269.3	211	214	229	
15																			263.1	227	218	222	
16																			269.1	179	180	229	
17																			254.2	172	172	213	
18																			239.1	171	177	196	
19																			232.0	173	164	189	
20																			235.3	161	142	192	
21																			181.6	115	115	134	
22																			168.7	79	78	120	
23																			149.0	72	60	99	
24																			137.4	33	38	86	
25																			138.1	39	52	87	
26																			138.3*	77	71	87	
27																			144.6	82	82	94	
28																			158.4	124	116	109	
29																			161.0	132	122	112	
30																			161.7	116	118	113	
Mean																			200.1	139.9	135.7	154.1	

DAILY AVERAGE INDICES Ap

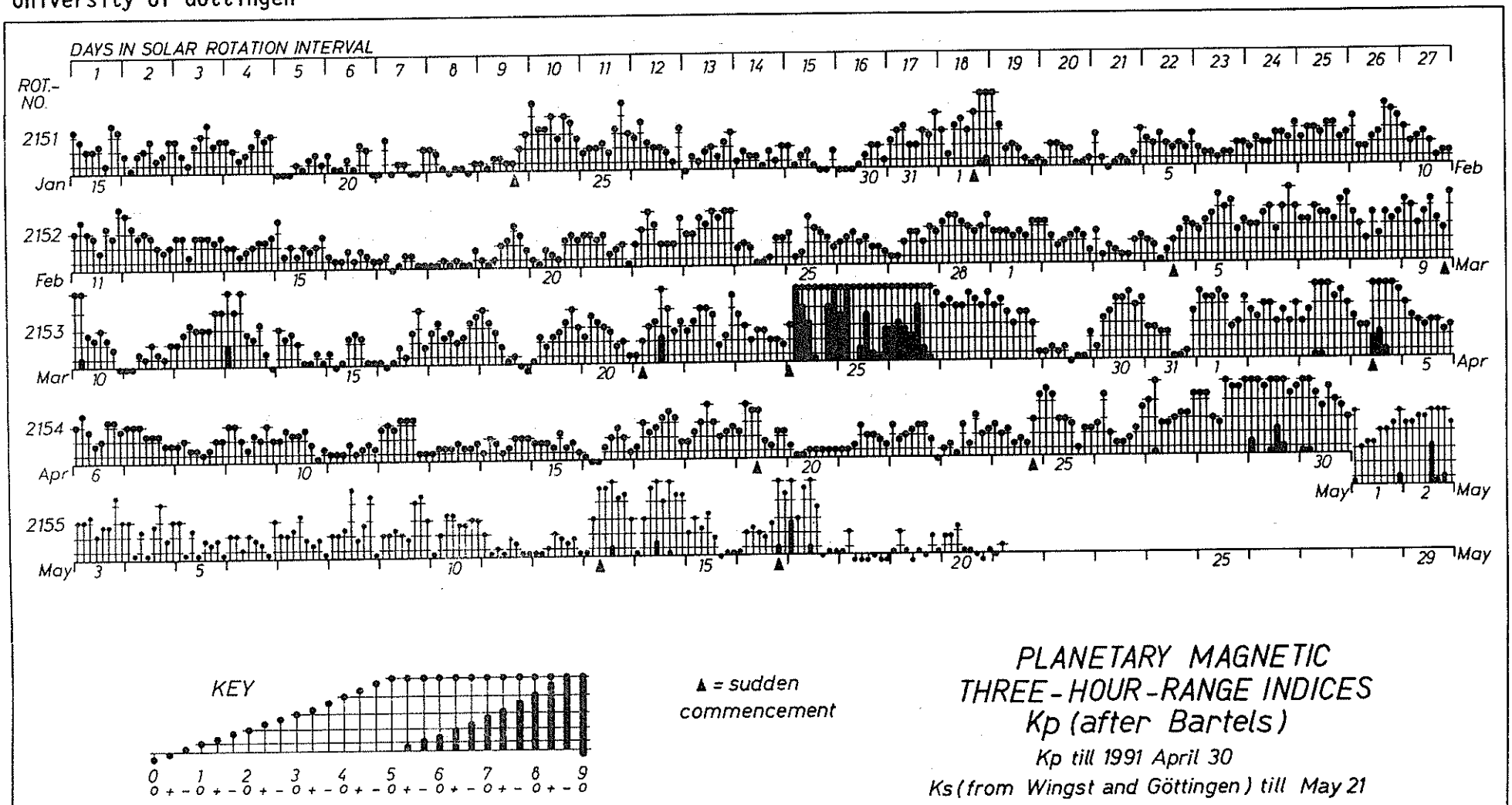
May 1990 to April 1991

DAY	1990 MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1991 JAN	FEB	MAR	APR
1	8	10	5	26	26	2	9	5	8	28	13	29
2	10	6	6	9	2	5	10	5	10	12	9	22
3	18	6	7	11	4	10	6	6	11	5	6	37
4	12	5	8	6	8	16	3	17	8	6	9	50
5	10	5	10	5	11	10	2	13	8	8	22	15
6	5	10	7	9	12	12	2	7	4	6	24	14
7	7	22	6	7	14	8	6	4	3	10	24	10
8	11	16	10	6	8	4	8	8	8	14	17	6
9	16	32	5	5	10	12	12	5	8	17	25	10
10	33	17	14	6	11	48	12	2	9	8	21	8
11	24	11	7	9	25	42	12	2	7	16	4	5
12	7	89	8	7	19	31	5	7	19	13	17	13
13	11	70	13	12	19	16	3	15	12	11	27	5
14	3	79	12	19	19	17	1	8	4	8	7	6
15	5	9	8	26	22	26	3	6	12	9	6	6
16	3	5	7	25	23	10	17	8	7	5	8	5
17	4	3	6	15	12	5	16	6	11	4	13	13
18	31	10	8	12	19	5	15	5	10	4	9	12
19	18	6	16	14	16	9	10	2	4	8	12	14
20	20	2	16	19	16	23	7	8	5	6	12	4
21	22	5	7	38	15	11	10	3	4	8	26	6
22	32	6	6	49	20	10	3	3	4	14	20	8
23	11	7	4	77	13	10	4	7	6	21	11	8
24	8	8	4	24	13	25	2	15	22	6	161	11
25	20	7	4	6	11	9	4	10	13	11	130	17
26	47	7	14	63	12	10	9	4	11	8	114	12
27	45	12	9	15	8	8	45	6	7	9	31	24
28	7	7	102	6	9	4	18	4	5	18	20	33
29	10	8	75	11	7	10	5	4	4		4	59
30	23	4	12	26	5	20	8	12	4		26	34
31	11		6	16		25		9	14		9	
MEAN	16	16	14	19	14	15	9	7	8	10	27	17

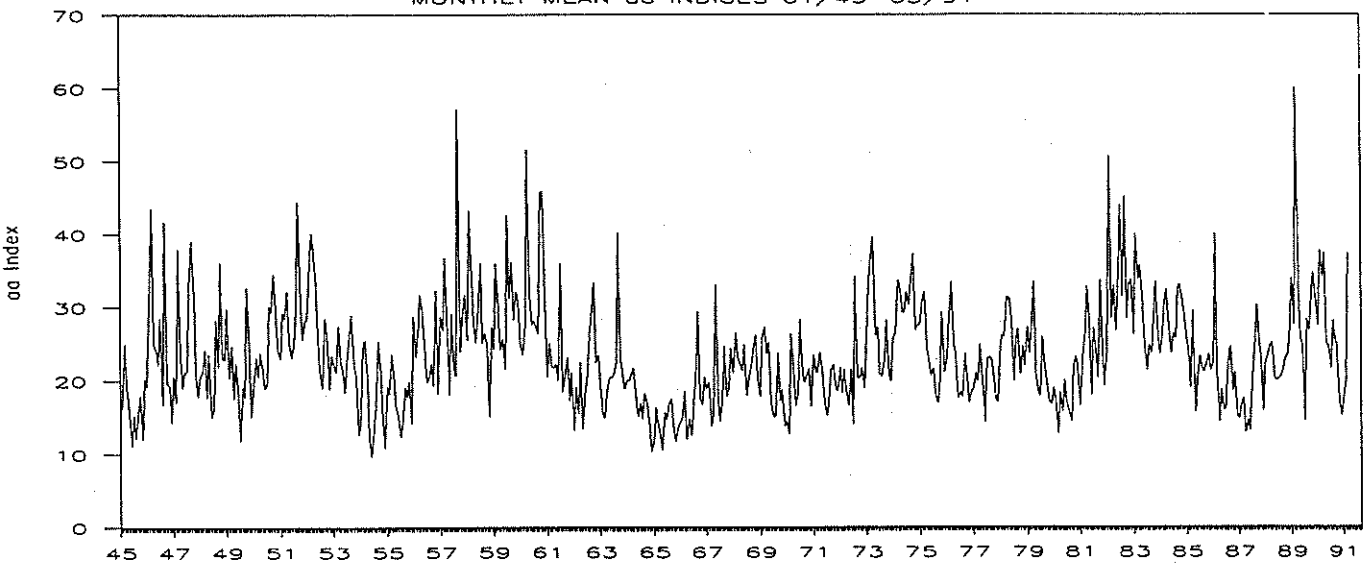
PLANETARY 3-HOUR-RANGE INDICES (Kp) BY 27-DAY SOLAR ROTATION INTERVAL

University of Göttingen

Kp through April 30, 1991



MONTHLY MEAN aa INDICES 01/45–03/91



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										24.9

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

APRIL 1991

Sta	Geomag Lat	Commencement Time Day	(UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges K	D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
FRD	49.6N	01	----	..	..	..	..	02(3) 03(4,5)	5	23	120	66	04	03
UJJ	13.5N	01	0400	..	..	..	..		-	5	119	27	02	23
ABG	09.5N	01	0400	..	..	..	..	01(7) 02(4)	4	5	129	38	02	23
HYD	07.6N	01	0000	..	..	..	..	01(3,4,5) 02(4)	5	5	148	21	02	13
GUA	04.0N	01	00--	..	..	..	..	01(3)	5	--	160	50	01	16
GUA	04.0N	01	22--	..	..	..	..	02(1)	5	--	130	30	02	13
ANN	01.5N	01	0400	..	..	..	..		-	4	222	75	02	23
TRD	01.1S	01	0400	..	..	..	..		-	3	315	121	02	23
HYD	07.6N	02	2000	SC	- 0.2	9	- 1	03(4)	6	5	142	29	04	03
GUA	04.0N	02	23--	..	..	..	..	03(1)	5	10	90	30	03	05
ETT	00.6S	02	2001	SC	- 0.3	9	7		-	5	209	99	03	21
ETT	00.6S	02	0200	..	..	..	..		-	3	156	65	02	19
COL	64.6N	03	07--	..	..	..	..	03(4)	7	190	1080	880	04	03
UJJ	13.5N	03	0800	..	..	..	..		-	4	72	23	03	24
ABG	09.5N	03	0800	..	..	..	..	03(4)	5	4	118	33	03	24
GUA	04.0N	03	08--	..	..	..	..	03(3)	5	--	90	10	03	17
GUA	04.0N	03	18--	..	..	..	..	04(1)	5	--	130	50	04	04
ANN	01.5N	03	0800	..	..	..	..		-	5	156	81	03	24
TRD	01.1S	03	0800	..	..	..	..		-	--	--	--	03	24
GNA	43.2S	03	08--	..	..	..	..	04(4,5)	6	32	160	200	04	24
CNB	43.9S	03	08--	..	..	..	..	04(4,5)	6	19	190	75	05	00
COL	64.6N	04	09--	..	..	..	..	04(4,5,6)	6	188	910	580	04	23
FRD	49.6N	04	1121	SC*	- 7.0	37	- 6	04(5)	6	26	125	68	05	06
BJI	28.5N	04	1122	SC	2.9	100	6	04(5)	7	8	198	38	05	18
KRC	16.4N	04	1123	SC	- 6.7	105	52	04(4)	7	7	220	90	05	05
UJJ	13.5N	04	1121	SC	- 2.0	75	- 17		-	4	191	38	05	03
ABG	09.5N	04	1121	SC	- 2.2	62	24	04(4,5,6)	6	4	193	44	05	03
HYD	07.6N	04	1122	SC	- 0.2	68	- 4	04(4,5,6)	6	5	202	23	05	22
GUA	04.0N	04	1124	SC	--	65	- 18	04(5)	7	--	140	30	04	20
ANN	01.5N	04	1121	SC	--	--	--		-	--	--	--	05	03
ETT	00.6S	04	1122	SC	- 2.4	74	65		-	6	266	120	05	23
TRD	01.1S	04	1121	SC	--	--	--		-	--	--	--	05	03
HER	33.7S	04	1121	SC	3	35	20	04(4,5)	6	81	139	126	04	23
KGL	56.5S	04	1122	SC	11	100	20		-	113	824	408	05	18
HYD	07.6N	10	0500	..	..	..	..	12(3)	5	8	157	41	12	20
KGL	56.5S	12	2240	SC	2	8	1		-	17	88	20	--	--
HYD	07.6N	16	1100	..	..	..	..	17(6) 18(3)	4	8	119	49	18	22
GUA	04.0N	17	01--	..	..	..	..	17(2)	5	--	130	30	17	08
HYD	07.6N	19	1056	SC	- 0.6	22	- 1		-	--	--	--	--	--
ETT	00.6S	19	1056	SC	- 0.8	29	23		-	--	--	--	--	--
KGL	56.5S	19	1057	SC	4	40	12	19(4)	3	6	85	20	19	23
FRD	49.6N	24	2046	SC*	- 1.5	39	- 5	29(1)	6	32	202	93	03	07
HYD	07.6N	24	2045	SC	- 0.2	6	- 1	24(8) 26(2)	4	6	80	30	27	05
GUA	04.0N	24	2044	..	..	..	..	24(8)	5	10	50	30	25	15
ETT	00.6S	24	2045	SC	- 0.3	13	12		-	5	174	39	25	15
KGL	56.5S	24	2045	SC	3	8	5	25(1)	5	26	130	168	25	15
GUA	04.0N	25	21--	..	..	..	..	26(1)	5	10	120	30	26	08
KGL	56.5S	26	2000	..	..	..	..	29(5)	8	110	1040	480	30	22
GUA	04.0N	27	00--	..	..	..	..	27(1)	5	--	60	20	27	08
GNA	43.2S	27	14--	..	..	..	..	29(5)	6	23	110	150	30	06
COL	64.6N	28	08--	..	..	..	..	28(5,6,7)	6	141	1030	710	28	21
BJI	28.5N	28	02--	..	..	..	..	30(2)	5	16	114	40	30	20
UJJ	13.5N	28	0700	..	..	..	..		-	7	119	41	30	22
ABG	09.5N	28	0700	..	..	..	..	29(1)	5	8	151	57	30	22
HYD	07.6N	28	0200	..	..	..	..	28(5) 29(1,4,5,6)	5	8	161	35	30	21
GUA	04.0N	28	22--	..	..	..	..	29(1)	6	10	180	30	29	20

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

APRIL 1991

Sta	Geomag Lat	Commencement Time Day	(UT)	Type	SC Amplitudes D (Min)	H (Gamma)	Z (Gamma)	Maximum 3-Hour K Index Day(3-Hour Periods)	K	Ranges D (Min)	H (Gamma)	Z (Gamma)	End Day	Hour (UT)
ANN	01.5N	28	0700	..	..	..	..			--	--	--	30	22
ETT	00.6S	28	0200	..	..	..	..		-	8	228	65	--	--
TRD	01.1S	28	0700	..	..	..	..		-	6	251	101	30	22
HER	33.7S	28	21--	..	..	..	..	29(1)	6	23	151	130	30	05
CNB	43.9S	28	12--	..	..	..	..	29(1,5,6)	5	20	145	70	30	21
COL	64.6N	29	00--	..	..	..	..	29(3,4,6)	6	212	1120	1040	30	20

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 562 Part I

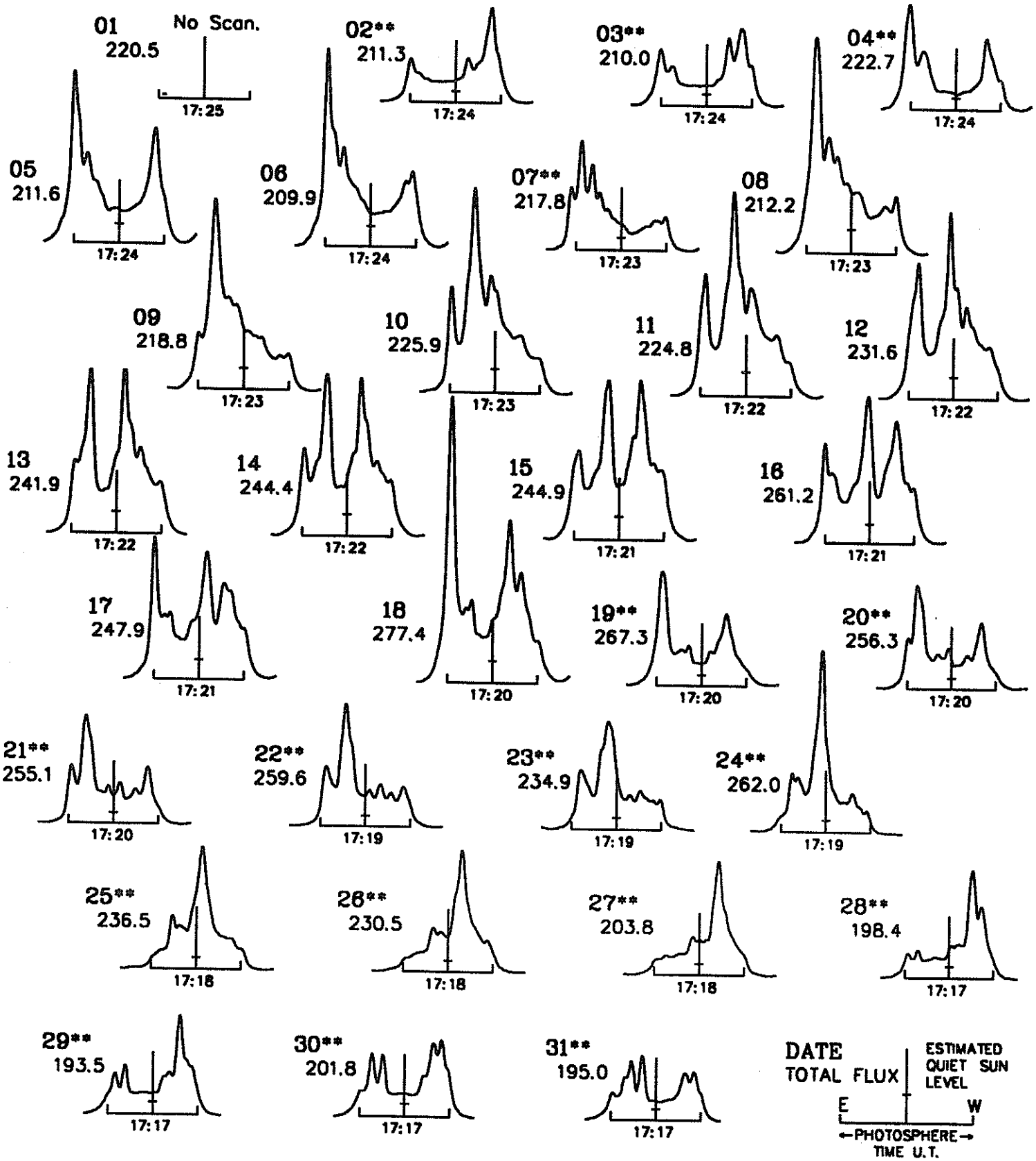
144
Late
Mar 91

EAST – WEST SOLAR SCANS
MARCH 1991

ALGONQUIN RADIO OBSERVATORY
CANADA

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

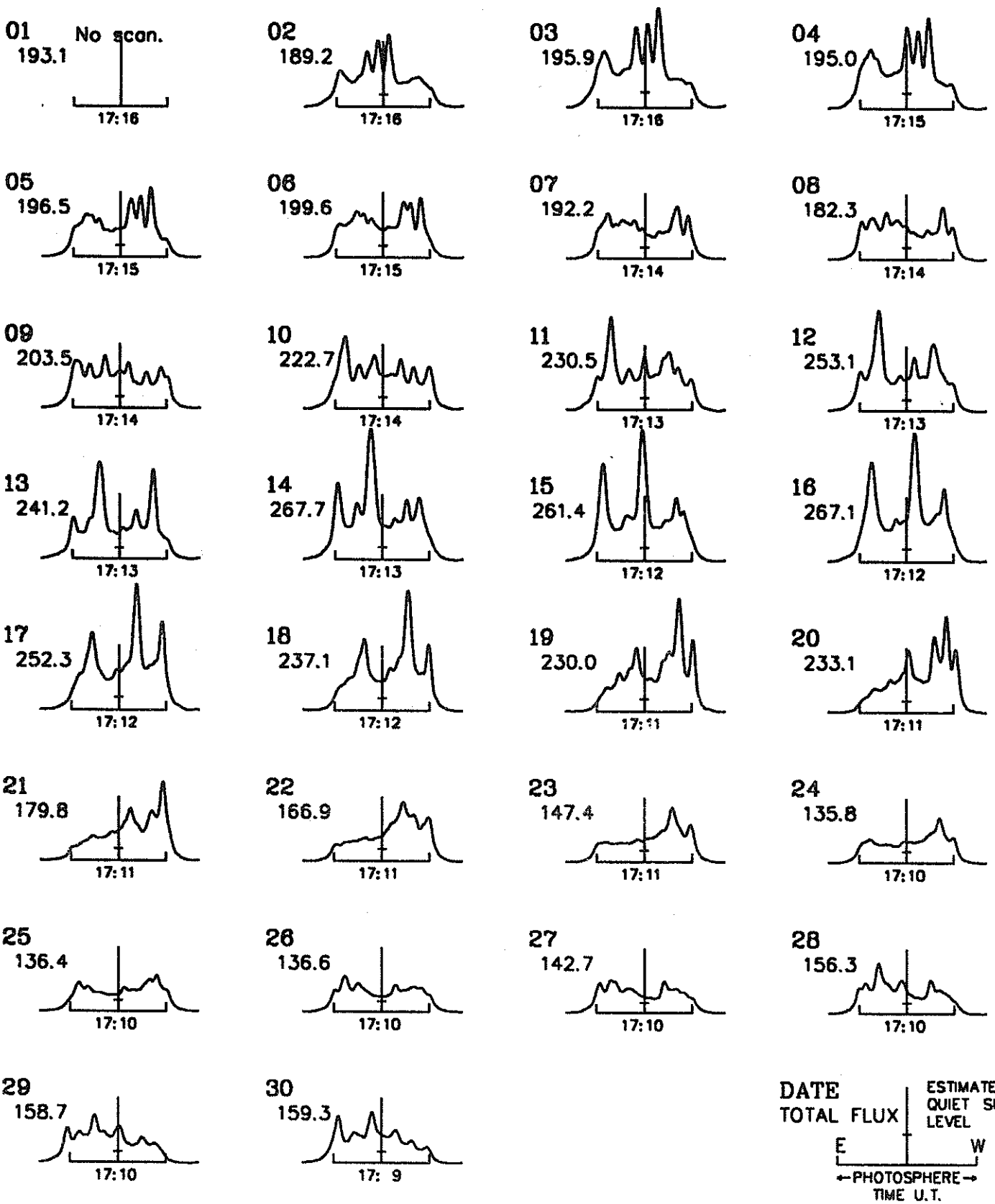
** 3dB attenuator.



EAST – WEST SOLAR SCANS
APRIL 1991

ALGONQUIN RADIO OBSERVATORY
CANADA

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



GEOMAGNETIC ACTIVITY INDICES

February 1991

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1	D1	3	1+	3+	4-	3	4	5+	6-	29+	28	1.2	3	1+	3	3+	3	4-	5	6-	52	47	49	29	68	
2		5	3+	2-	2	2-	1	1-	1	16+	12	0.7	4+	3	2-	1+	1+	1	1-	2-	19	24	22	34	12	
3	Q4	1-	2	2	2-	2-	1-	1-	1	10+	5	0.2	1+	2-	2	2-	1+	1	0+	1+	9	10	11	12	9	CC
4	Q6K	3-	1	0+	1-	1	1-	1+	3	11-	6	0.3	2-	1-	0+	1-	1	1	2-	3	10	14	12	9	17	K
5		2+	2	3-	2	2-	2	2-	3-	17	8	0.4	3-	2-	3	2+	2	2	2+	3-	19	20	19	25	14	
6	Q5	2-	1+	1+	1	1+	1+	2	2	12	6	0.2	1+	2-	1+	1+	1+	1+	2+	2	11	10	13	10	13	CC
7		2-	2+	2	2	3-	3-	2+	3+	19	10	0.6	1+	2	2	2	3-	3	2+	3-	19	22	22	13	31	
8		2+	3	3	3-	3+	3+	2+	3-	23-	14	0.8	2-	3-	2+	3	4-	3+	2+	3-	26	28	27	23	32	
9	D4*	4-	2-	2-	2+	3-	4+	4	4-	24	17	0.9	3-	1+	2-	2+	3-	4-	4	3	27	35	21	17	38	
10		3	2	2+	3-	2	1	1+	1+	16-	8	0.4	3-	2-	2	3-	2	2-	2	1+	15	14	10	16	8	C
11	D5*	3	4-	3	3-	2-	3+	3-	4+	24+	16	0.9	3-	3-	3-	2+	2-	3+	3-	4-	26	33	28	28	33	
12		4	3+	3-	3	3-	2	2-	2	21+	13	0.7	3+	3-	3-	3-	3	3-	2-	2+	22	25	20	27	18	
13		3-	3-	1+	3-	3-	3-	2+	3-	20-	11	0.6	2	3-	1	3-	3-	2+	3-	3-	19	23	20	18	25	
14		2	2	1+	2-	2	2+	2+	3-	16+	8	0.4	1+	1+	1	2-	2	2+	2+	2+	14	21	11	13	19	
15		4-	1+	2	1+	2	2-	2	3-	17-	9	0.5	3-	1+	2	1+	2	2	2	3-	16	20	11	15	16	
16	Q3	1+	1	1	2-	1	2-	1+	1	10	5	0.2	1+	1	1	1+	1	2-	1+	1	8	12	6	8	10	CC
17	Q2	1	1+	0+	1-	1+	1+	1-	1-	7+	4	0.1	1-	1	1-	1-	2-	1	1	1-	6	10	5	7	8	CC
18	Q1	1-	1-	1	1-	1	1-	1-	2-	7	4	0.1	0+	1-	1	1	1-	1	1+	2-	7	8	6	6	8	CC
19	Q9A	1	1-	1	2	2+	3+	3-	2-	15-	8	0.4	1	1-	1-	2	2	3	2+	1+	13	19	15	11	23	K
20	Q8	1	1-	2-	1+	1	2+	3-	2+	13	6	0.3	1+	1	1+	1+	2-	2+	3	3-	15	12	20	9	23	
21		3-	3-	2+	3-	1+	2-	2	1-	16	8	0.4	3-	3	2+	3-	1+	2-	2	1+	17	19	20	30	9	
22		2	3	4	3+	2	2	2	4-	22	14	0.8	2-	3	3+	3+	3-	2-	2	3+	25	29	28	34	23	
23	D2	3-	3-	4-	3+	4	4-	4	4	28	21	1.1	3-	2+	3+	3	3+	4-	4-	3	33	38	32	30	40	
24	Q7	2-	2	2-	1-	1-	1	2+	2+	12+	6	0.3	2	2	1+	1	1	1+	3	2	13	13	14	14	13	
25		3-	1	1+	4-	3	3-	2+	2-	18+	11	0.6	2+	1+	1+	3-	3-	3-	2	2-	17	24	17	21	20	
26	Q10A	2	2+	3-	2	2+	2-	2-	1+	16	8	0.4	2-	2-	2+	2+	2-	2	2-	1+	14	17	10	13	14	
27		1	1	2	3-	3-	2	3	3-	17	9	0.5	1-	1	2	3-	2+	2	3	3-	17	20	22	17	24	
28	D3*	3+	4-	4-	3+	3	3-	3	4-	26+	18	1.0	3+	3	4-	3	2+	3-	3-	3	28	40	26	35	31	
Mean											10	0.54									18.5	21.7	18.5	20.1	

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Prov Sa	Ri	Ra	Rs	IMF
1	2+	1+	3-	4-	3	4	5	5+	49	4-	2-	3+	3	3-	4-	5+	6-	54	307.3	205	212	270	
2	4	3	1+	1+	1+	1	1-	1+	17	4+	3+	2	2-	1+	1-	1-	2	20	289.3	209	192	250	
3	1	1+	2	1+	1+	1+	1-	1	9	1+	2	2	2-	1	1	0+	1+	10	258.4	180	167	217	
4	2-	1-	0	0+	1+	1	2-	3	9	2	1-	1-	1	1	1+	1+	3	11	239.2	140	149	196	
5	2+	2	3-	2+	2	2-	2	2+	17	3	2-	3	2	2+	2+	3-	3-	21	216.5	127	131	172	
6	1+	2-	1	1	1+	1+	2	2-	10	2-	2	1+	2-	1	1+	2+	2+	13	198.7	117	122	153	
7	1+	2	2-	2+	3-	3	2+	3-	20	2-	2	2	2-	3-	3	3-	3-	19	192.7	119	118	146	
8	2-	3-	3-	3	4-	4-	2+	3-	28	2-	3	2	3	3+	3	2	3-	24	192.7	118	113	146	
9	3	1+	2-	2+	3-	4-	4	3+	29	3-	1+	2-	2	2+	4-	4-	3	25	174.0	134	129	126	
10	2+	2-	2+	3-	2+	2-	2	1+	15	3-	2-	2-	3-	2-	1+	2	1+	15	169.5	136	136	121	
11	3-	3-	2+	2+	2-	4-	3-	4-	25	3-	3	3-	3-	2-	3+	3-	3+	27	176.5	140	136	129	
12	3+	3-	2+	3-	3-	3-	2	2-	22	3+	2+	3-	3-	3	2+	2-	2+	23	181.6	153	151	134	
13	2	2+	1	3-	3-	2+	3-	2+	19	2+	3-	1	3	3-	2+	3-	3-	20	182.2	166	179	135	
14	2-	1+	1	2-	2	2+	2+	2+	14	1	1+	1	1+	2	2	3-	2+	13	184.0	163	187	137	
15	3-	1+	2-	2-	2	2+	2	2+	16	3	2-	2	1+	2	2-	2	3-	16	191.9	173	176	145	
16	1-	1	1	2-	1	2	2-	1	9	2-	1	1+	1	1-	1+	1+	1-	8	200.4	159	167	154	
17	1-	1	0+	1	2-	1+	1	1-	6	1-	1+	1-	0+	1+	1	1	1-	6	210.2	142	150	165	
18	0+	1-	1	1	1-	1	2-	2-	7	0+	1-	1	1	1-	1	1+	2-	7	259.6	191	191	218	
19	1-	1-	1	2	2	3+	2+	2-	14	1	0+	1-	2-	2+	3	3-	1	13	269.8	206	213	229	
20	1+	1-	1+	1+	1+	3-	3	3-	15	1+	1	1+	2-	2-	2+	3	3	15	283.8	192	216	245	
21	2+	3-	2+	3-	1+	2-	2	1	16	3-	3+	2+	3-	2-	2	2+	2-	19	299.2	223	230	261	
22	2	3-	3+	3+	3-	2-	2+	3+	24	2-	3+	4-	3+	3-	2-	2-	3	27	302.6	214	219	265	
23	3-	2+	3	3-	4-	4-	4-	3+	34	3-	2+	4-	3+	3	4-	3+	3-	33	311.5	200	210	274	
24	2-	2	1+	1	1	1+	3	2+	13	2+	2	2-	1	1+	1+	3-	2	14	313.1*	192	188	276	
25	2+	1+	1+	3	3	3-	2+	2-	18	2	1+	1+	3-	3-	3-	2	2-	17	288.4*	194	201	249	
26	2	2-	3-	2+	2	2	2-	1+	15	2-	2-	2	2	1+	2-	2-	2-	13	271.8	187	187	232	
27	1	1	2	3-	2+	2	3	3	18	1-	1	2	3	2+	2-	3-	3-	16	248.7	175	179	207	
28	3	3	3+	3	3-	3-	3-	3	28	4-	3	4	3-	2	3-	3-	3-	29	228.0	134	160	184	
Mean									18.4									18.9	237.2	167.5	171.8	194.2	

GEOMAGNETIC ACTIVITY INDICES

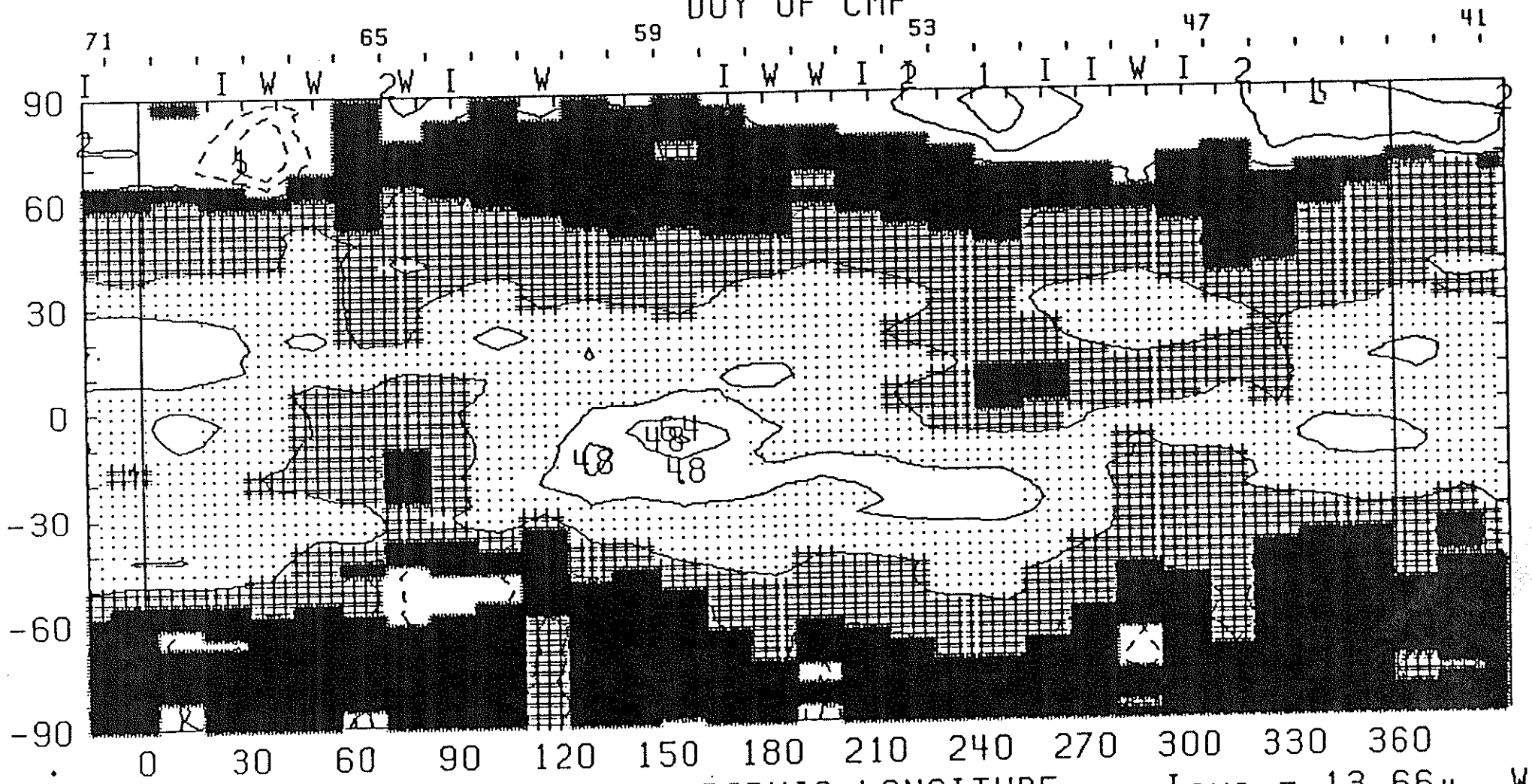
March 1991

Day		Kp Three-Hourly Indices 1	2	3	4	5	6	7	8	Sum	Ap	Cp	Km Three-Hourly Indices 1	2	3	4	5	6	7	8	aa Provisional Am	N	S	M	
1		3-	3-	3-	2+	3-	2+	3+	3+	22	13	0.7	3-	2	2+	2	3-	2+	3	4-	24	30	22	18	35	
2	Q10A	3+	2+	2-	2	2+	3-	2+	1+	18	9	0.5	3	2	2-	2-	2+	2+	3-	1+	18	20	20	21	19	
3	Q4	3-	1	2-	1+	1	1	2	2+	13	6	0.3	3-	1	2-	1+	1-	1-	2	2+	12	11	9	10	10	CC
4	Q8A	2	2-	1-	1+	2	3-	3+	3	17-	9	0.5	2	1	0+	2-	1+	3-	3+	3-	16	19	12	8	23	
5		3-	3+	4-	5-	4	4+	3-	3+	29-	22	1.1	2+	3	3+	4	4-	4	3-	3	36	41	36	35	41	
6		3	3	4-	4	3-	4	5	4	29+	24	1.2	2+	3	3	3+	3	4-	4+	4-	38	52	34	37	49	
7		3+	3+	4	4-	4-	3+	4+	5-	30+	24	1.2	3	3-	3+	3+	4	3+	4	4	42	47	44	40	51	
8		4-	3	2	4-	2+	4-	3+	4-	25+	17	0.9	3+	2+	2+	3+	2+	4-	3	3+	30	34	22	26	31	
9		4+	4	3	4-	4+	3+	3-	5-	30	25	1.2	4-	4-	3-	4	4	3	3-	4+	42	36	35	32	40	
10		5	6-	3-	2+	3	2+	2-	0+	23	21	1.1	4	4+	2+	2+	2+	2+	1+	1	28	35	19	39	15	
11	Q2	0+	0+	1+	1	2	1+	1	2	9+	4	0.2	1-	0+	1+	1	2-	1	1+	2	8	10	9	6	13	C
12		2	3-	3+	3	3	3	4	4	25	17	0.9	2-	2+	3	2+	2+	3-	3+	4	26	43	34	28	49	
13		6+	4	5	3-	2+	3+	1+	0+	25+	27	1.2	6-	4	4+	2+	2	3+	2-	1-	42	33	43	61	15	
14	Q5A	3	2+	3-	2	1-	1-	1+	1-	13+	7	0.4	2+	2-	2+	2+	1	1-	2-	1	12	17	8	18	7	CK
15	Q3	1+	0+	1-	2+	3-	2+	1-	1-	11	6	0.3	2-	1-	1-	2	2	2	1-	1	10	11	8	7	13	CC
16	Q6A	1-	0+	1-	2-	1	3-	4	2-	13-	8	0.4	1+	0+	1-	2-	0+	3-	4-	2-	14	17	12	7	22	
17		3-	3+	2+	3-	2	2+	3+	4-	22+	13	0.8	3-	3+	3-	3-	2	2-	3	3	25	33	27	30	30	
18	Q7A	4	3+	3-	2-	1-	1	0+	0	14-	9	0.5	4-	3	2	2	1-	1	0	0+	15	17	13	26	4	
19		1-	2+	2-	2+	3-	3+	4	3	20	12	0.7	1+	2	2	2+	2+	3-	4-	3	22	24	25	17	32	
20		2+	4-	3+	3	3-	2-	2	1	20-	12	0.7	3-	4-	3	3-	2+	1+	2-	1+	21	19	19	24	14	
21		1	2	3	3+	7-	4	3-	3+	26	26	1.2	1+	2	3-	3+	6-	3	2+	3-	35	39	29	22	46	
22		3-	3+	4	4	4-	2-	2+	5-	26+	20	1.0	3-	3-	3+	3+	3	2	2+	4	29	34	34	37	32	
23		4-	3	2	3-	3-	2	2	2-	20-	11	0.6	3+	3	2-	3-	2+	2-	2-	2-	19	21	18	25	13	
24	D1	3	9-	8	7+	5+	5	8	9-	54	161	2.0	3-	8+	7-	6	5-	4+	7+	8-	214	170	154	180	143	
25	D2	8-	9-	5	6	8-	6-	5+	7	53	130	1.9	7-	7	5-	5	6	5-	5-	6	142	124	110	123	112	
26	D3	7	7+	7	7-	8	6	5+	5-	52	114	1.9	6	6	6	5+	7+	6-	5-	4+	145	121	133	128	126	
27	D4	4	4+	4	4	5-	4+	4	5-	34	31	1.3	4-	4+	4-	4-	4+	4-	3+	4+	50	54	53	46	61	
28		4	4+	4-	3	4-	4-	3	1	26+	20	1.0	4-	4-	3+	3	3+	4-	3+	1+	36	27	50	34	44	
29	Q1	1	1+	1	1+	0+	1-	1-	2+	9-	4	0.2	1	1+	2-	1+	1-	1-	1-	2+	8	10	6	7	10	C
30	D5	1+	3+	4-	4+	4+	5-	4	4+	30	26	1.2	1	3+	4-	4	4	4	4-	4	43	51	46	35	61	
31	Q9A	3-	3-	2+	2+	1-	1-	1	4-	16	9	0.5	2+	2+	2+	2+	1-	1-	1+	3	15	21	12	21	12	
Mean											27	0.89									39.3	39.5	35.3	37.3		

Day	Kn Three-Hourly Indices 1	2	3	4	5	6	7	8	An	Ks Three-Hourly Indices 1	2	3	4	5	6	7	8	As	Sa	Prov Ri	Ra	Rs	IMF
1	2+	2	2+	2	3-	2+	3	3-	21	3	2	3-	2	3-	2+	3	4	26	216.5	120	114	172	
2	3-	2	2-	2	2+	2+	3-	1+	17	3	2+	2	2-	2+	2	3	2-	18	207.5	93	97	162	
3	2+	1	2-	1+	1	1	2	2	11	3	1-	2	1	0+	1-	2	2+	12	206.4	71	84	161	
4	2	1+	1-	1+	1+	3	3	3-	16	2	1	0+	2-	1+	2	4-	3-	16	218.9*	55	80	174	
5	2+	3	3+	4	4-	4-	3-	3-	35	3-	3	3+	4	4-	4	3	3+	39	208.1	74	92	163	
6	3-	3-	3	4-	3	4-	4-	3+	36	2+	3	3+	3	3-	4	5	4-	41	206.7	88	90	161	
7	3	3	3+	3+	4+	4-	4	4	43	3	3-	4-	3	4-	3-	4+	4	40	214.5	131	130	170	
8	3+	3-	2+	3+	2+	4	3	3+	31	3+	2+	2	3	2	3	3+	3+	28	209.1	146	139	164	
9	3+	3+	3	4	4+	3+	3-	4	43	4	4-	3-	4	4	3-	3-	4+	41	215.7	167	168	171	
10	4+	4+	2+	2+	3-	3-	2-	1-	28	4	5-	2	2+	2	2+	1+	1+	26	222.8	159	163	179	
11	1-	0+	1+	1	2	1+	1+	2	9	1-	0+	1	1+	2-	1-	1	2-	8	221.9	167	153	178	
12	2-	2+	3-	3-	3-	3	4-	4-	28	2-	2+	3	2	2	3-	3+	4	25	228.7	163	162	185	
13	5	4	4	2+	2	4-	2-	1-	39	6	4	4+	2	2-	3-	1+	1-	45	239.1	145	158	196	
14	2+	2	3-	3-	1	1	2-	1	14	2+	2-	2+	2	1-	1-	2-	1-	11	241.6	161	174	199	
15	2-	1	1+	2+	3-	2+	1	1	12	2-	1-	0+	2-	1+	2	1-	1	8	242.2	182	190	200	
16	1+	1-	1	2-	1-	3-	4	2	17	1+	0	0+	1+	0+	2+	3	2-	11	258.5	188	202	217	
17	3-	3	2+	3	2+	2	3	3+	24	3	4-	3-	2+	2-	1+	3+	3	25	245.4	167	188	203	
18	3	3-	2+	2	1	1+	0+	0+	14	4	3	2	2-	0+	1-	0	0+	16	274.8	168	168	235	
19	2-	2-	2-	2	3-	3	4-	3	22	1+	2+	2	2+	2+	3-	4	3-	22	264.9	142	150	224	
20	3-	4-	3	3-	3-	1+	2	1+	22	3-	4-	3-	3-	2+	1	2-	1+	20	254.2	166	173	213	
21	1+	2+	3-	3+	6-	3+	3-	3-	39	1+	2-	3-	3	6-	2+	2	3-	32	253.1	167	171	211	
22	3-	3-	3+	3+	3	2	3-	4	31	2+	3	3+	3	3-	2-	2	4	28	257.7	171	176	216	
23	3	3-	2-	3	3-	2	2-	2	20	3+	3+	1+	3-	2+	1+	1+	1+	19	233.4	179	183	190	
24	3	9-	7-	6	5-	4	7	8-	217	3-	8	7	6+	4+	5-	7+	8	212	260.5	162	179	219	
25	6+	7+	5-	5	6+	5	4+	6	147	7	7-	4+	5	6	5-	5	6	137	235.2	128	171	192	
26	6-	6	6	6-	7+	6-	5	4-	145	6	6	6	5	7+	5+	5-	5-	145	229.4	164	164	186	
27	3+	4-	3+	3+	4-	3+	3	4-	40	4	5-	4	4-	5-	4	3+	5-	61	203.0	130	142	157	
28	4-	3+	3-	3	3+	3	3-	1+	30	4	4	4-	3	4-	4	4	2-	42	197.7	122	129	152	
29	1-	1	2	1+	1	1	1	2+	9	1+	1+	1+	1	0+	1-	0+	2+	8	192.9	128	130	146	
30	1	3	3	4-	4	4	3+	4-	37	1	4-	4	4+	4	4-	4-	4+	48	201.3	141	142	155	
31	2	2+	2	2+	1	1	2-	3+	16	2+	2+	2+	2+	0+	1-	1-	3	15	194.7	115	118	148	
Mean									39.1									39.5	227.6	140.6	147.7	183.8	

148
ERR
Mar 91

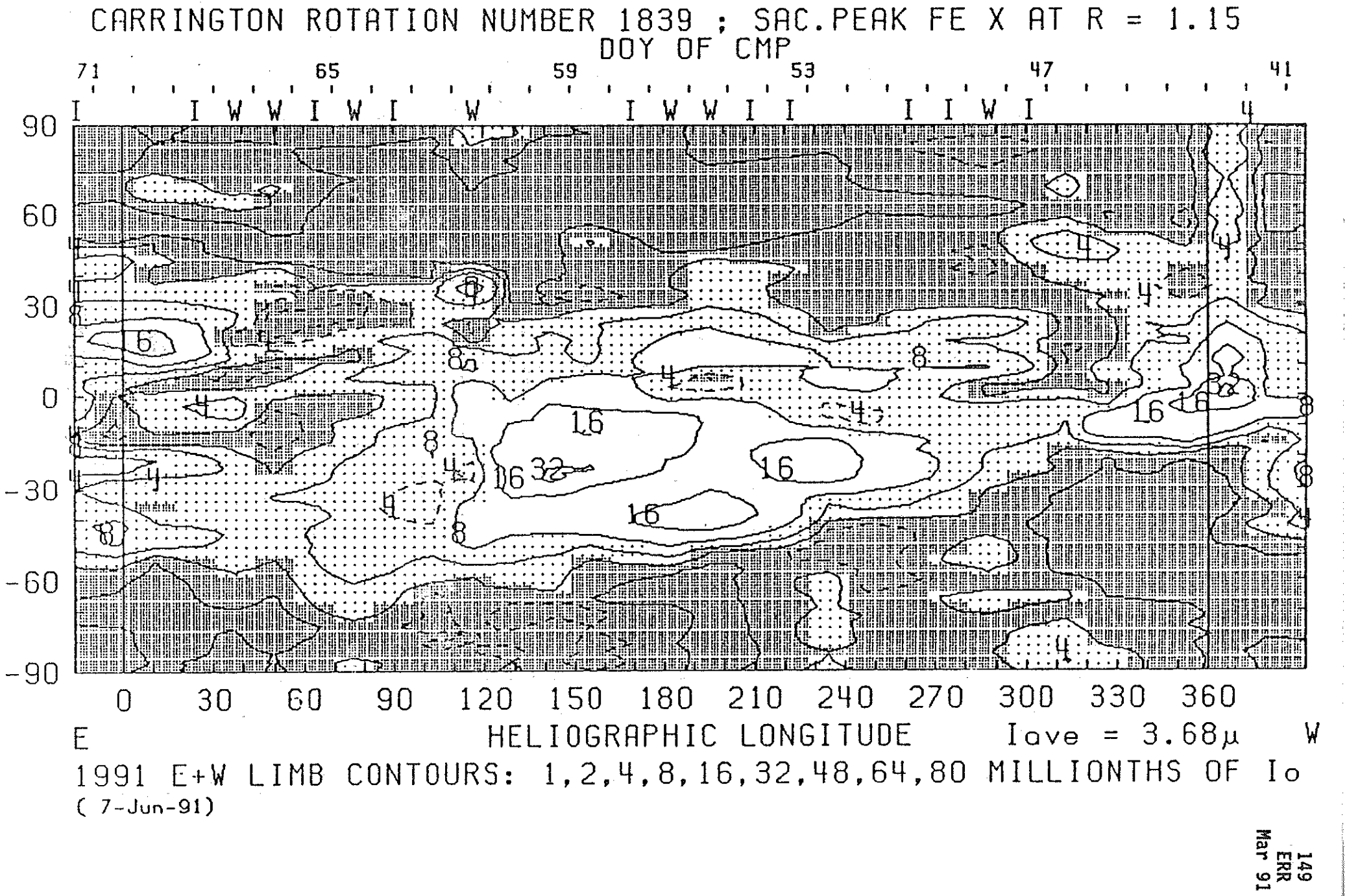
CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK FE XIV AT R = 1.15

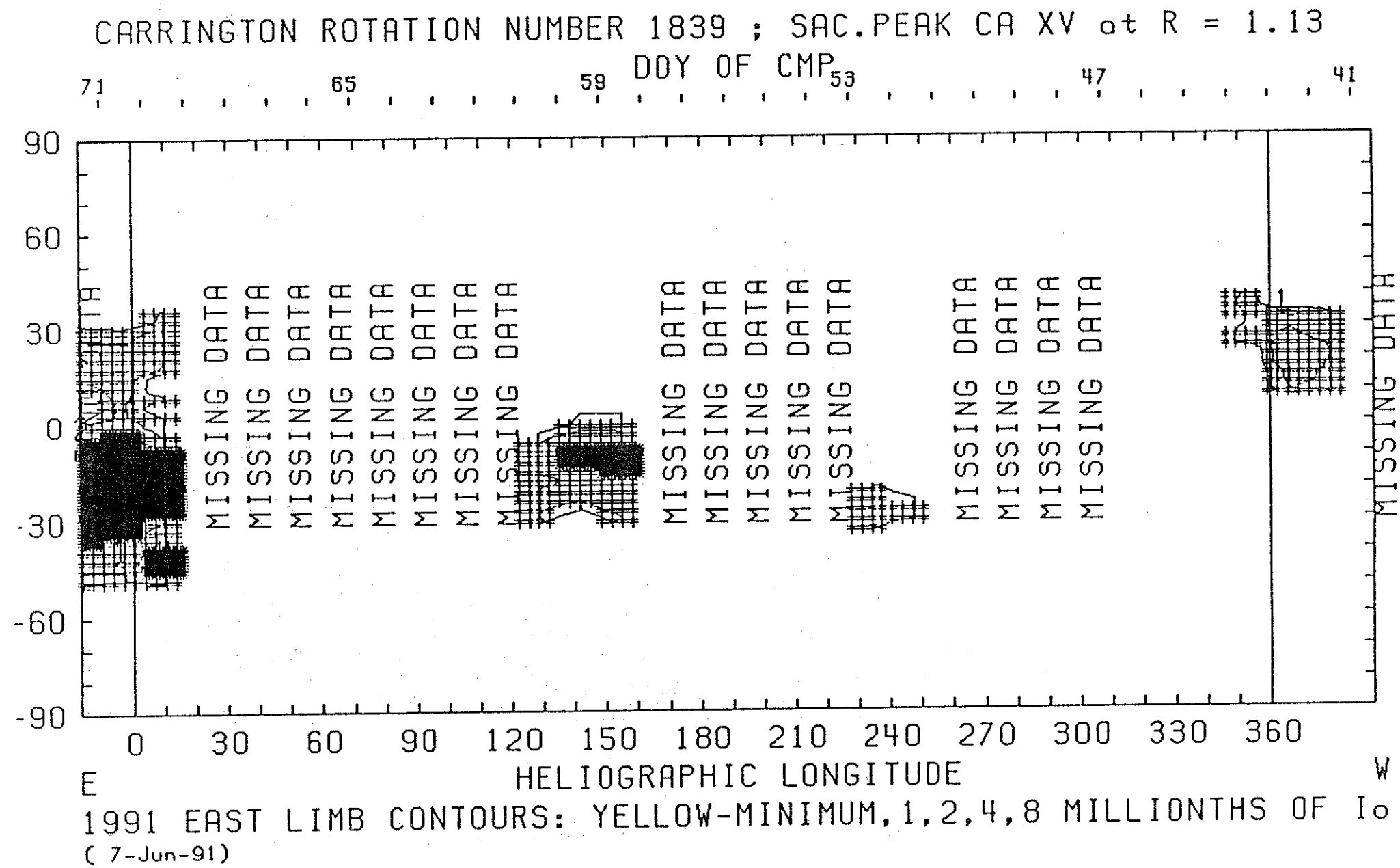


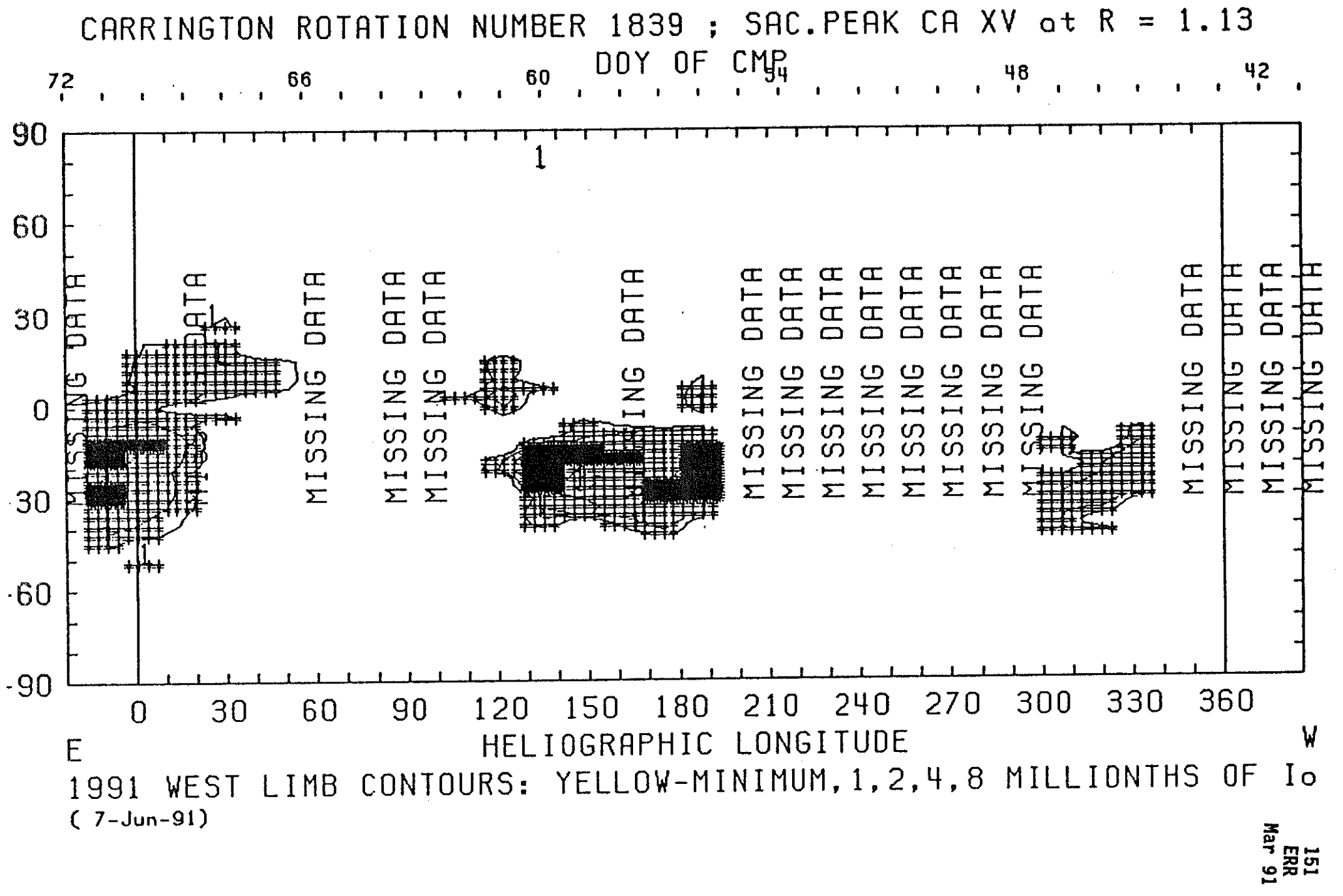
Iave = 13.66μ

1991 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io

(7-Jun-91) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK


CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
71
65
59
53
47
41
I I W W I W I W I W W I I I I W I 4
90
60
30
0
-30
-60
-90
0 30 60 90 120 150 180 210 240 270 300 330 360
E
HELIOGRAPHIC LONGITUDE
Iave = 3.68μ
W
1991 E+W LIMB CONTOURS: 1,2,4,8,16,32,48,64,80 MILLIONTHS OF Io
(7-Jun-91)
149
ERR
Mar 91


CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
71
65
59
53
47
41
90
60
30
0
-30
-60
-90
MISSING DATA
0
30
60
90
120
150
180
210
240
270
300
330
360
E
HELIOGRAPHIC LONGITUDE
W
1991 EAST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(7-Jun-91)


CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK CA XV at R = 1.13
DOY OF CMP
72
66
60
54
48
42
90
60
30
0
30
60
90
1
MISSING DATA
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
(7-Jun-91)
151
ERR
Mar 91

WORLD DATA CENTER A
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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."