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

Data for April, March 1991 and Late Data

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NATIONAL GEOPHYSICAL DATA CENTER
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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 561

(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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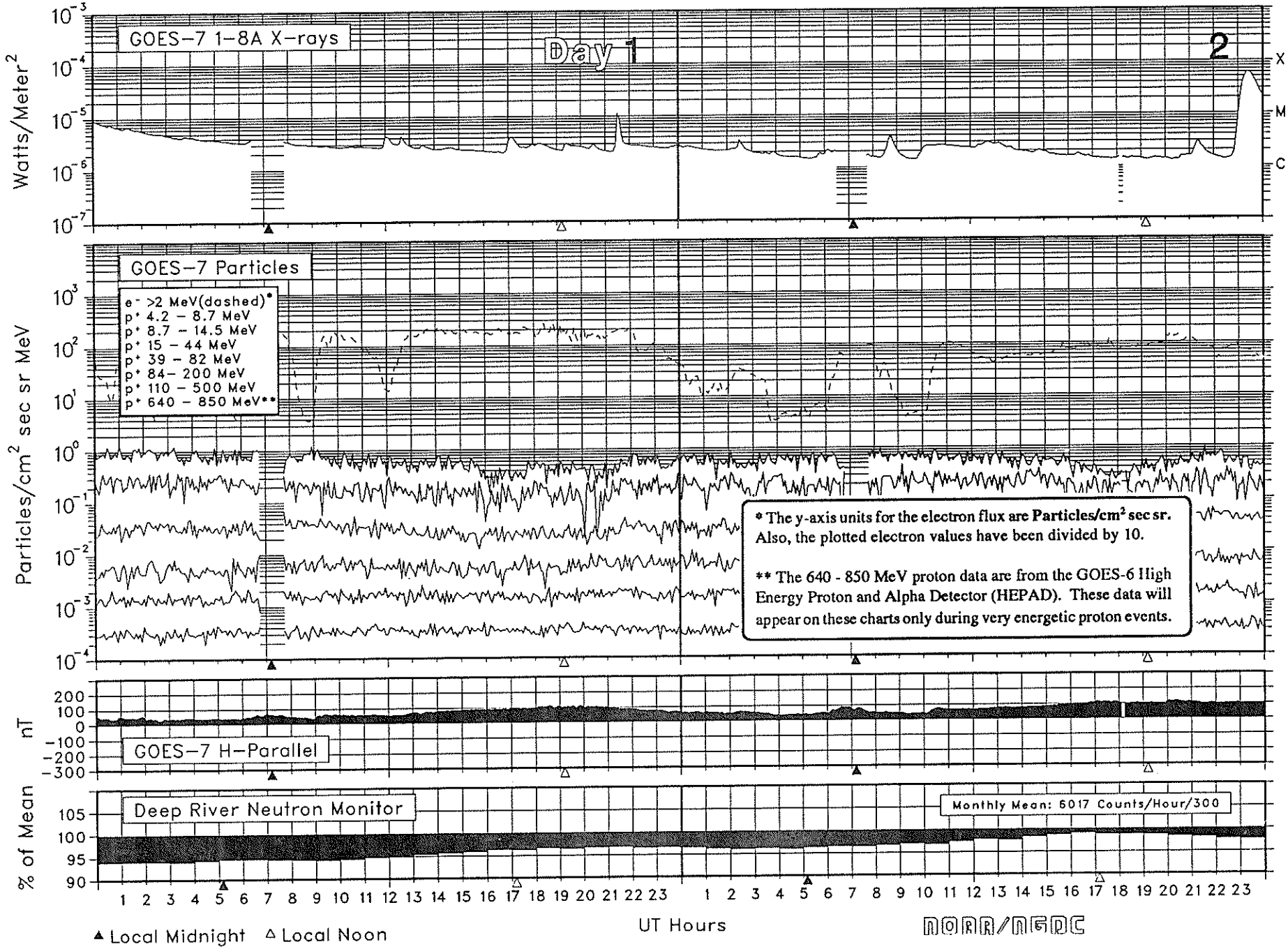
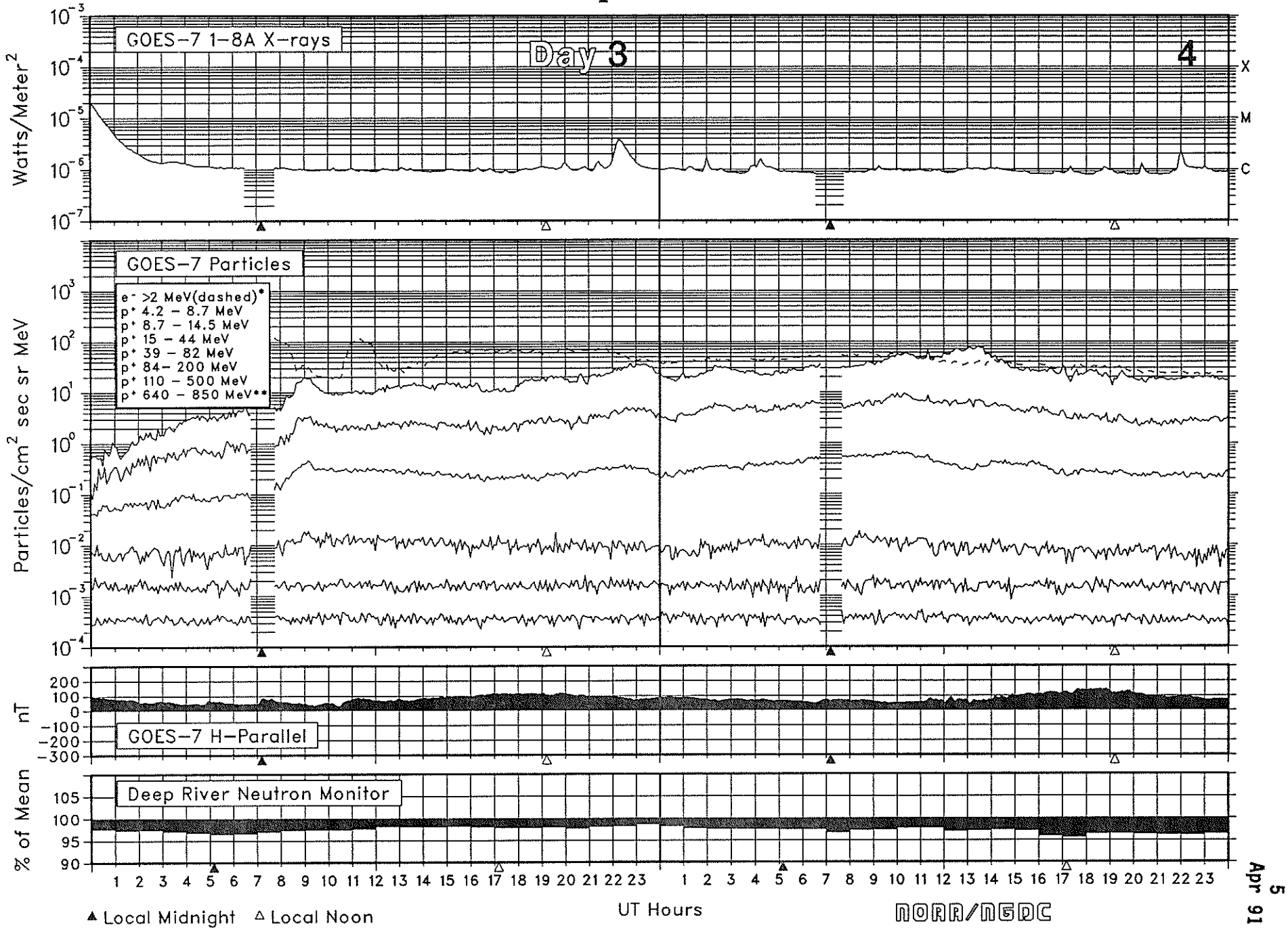
C O N T E N T S

Prompt Reports DATA FOR **APRIL 1991** Number 561 Part I

SOLAR-TERRESTRIAL ENVIRONMENT
April 1991



SOLAR-TERRESTRIAL ENVIRONMENT
April 1991



SOLAR-TERRESTRIAL ENVIRONMENT
April 1991

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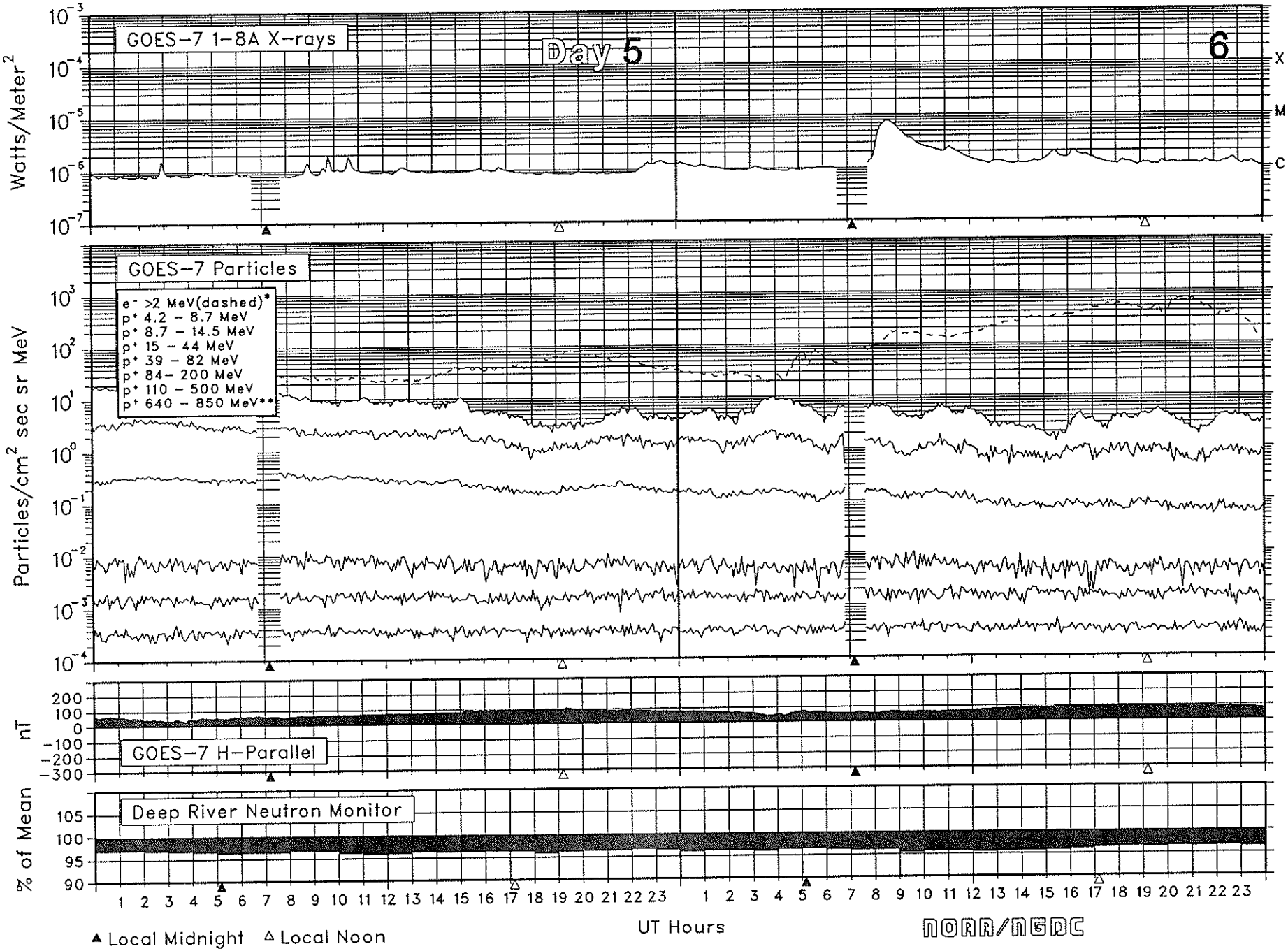

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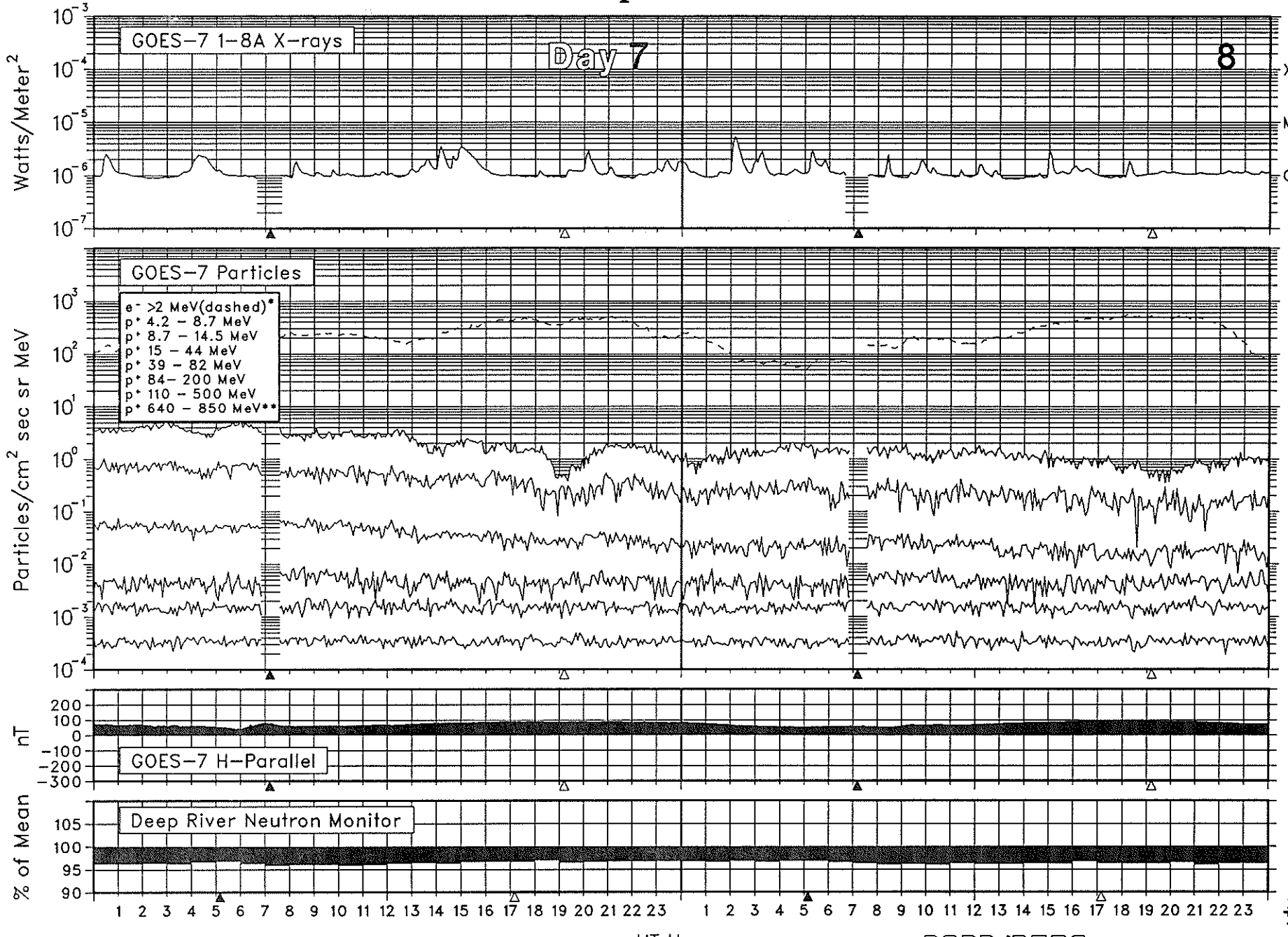

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April 1991

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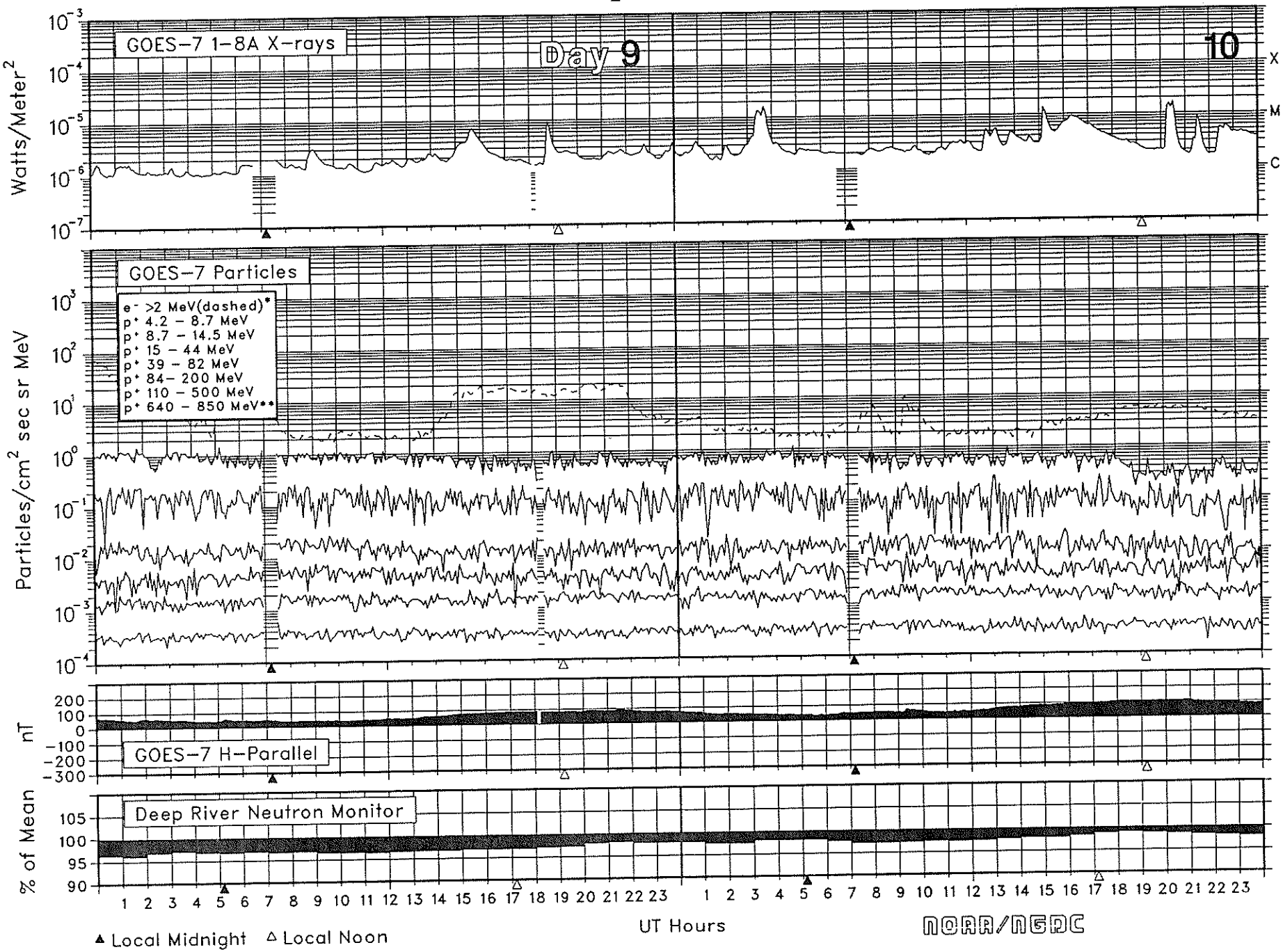

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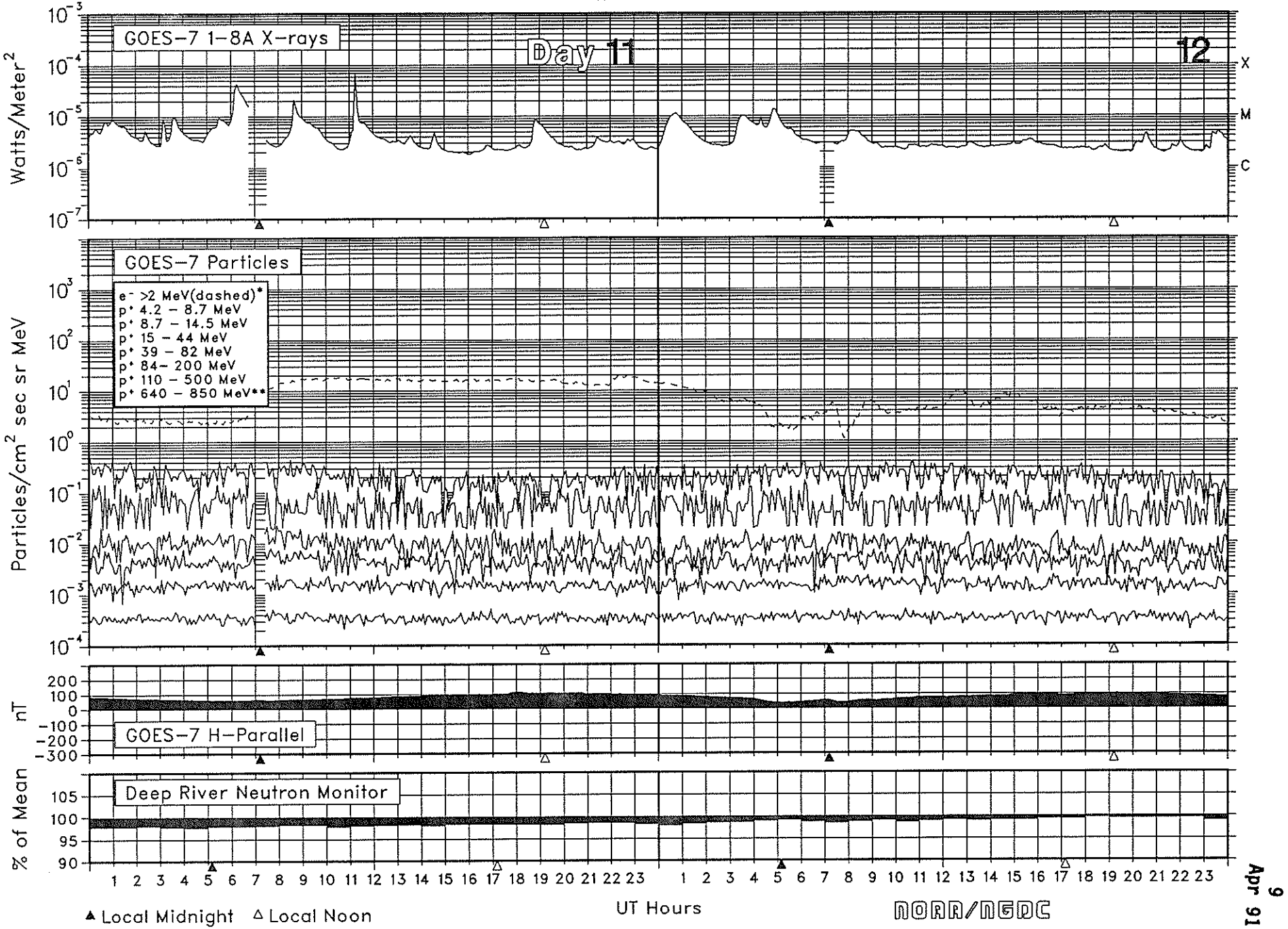

SOLAR-TERRESTRIAL ENVIRONMENT
April 1991

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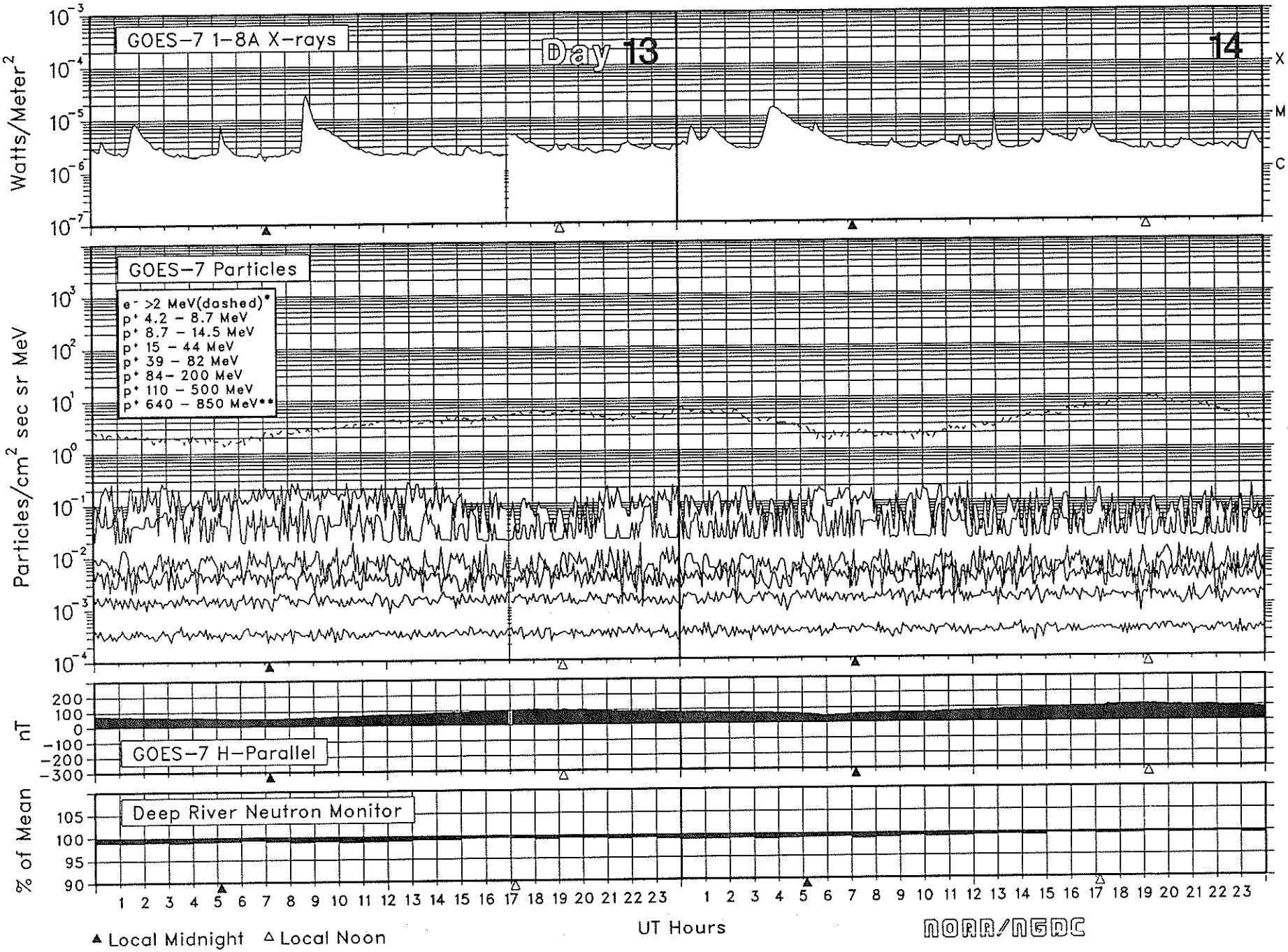

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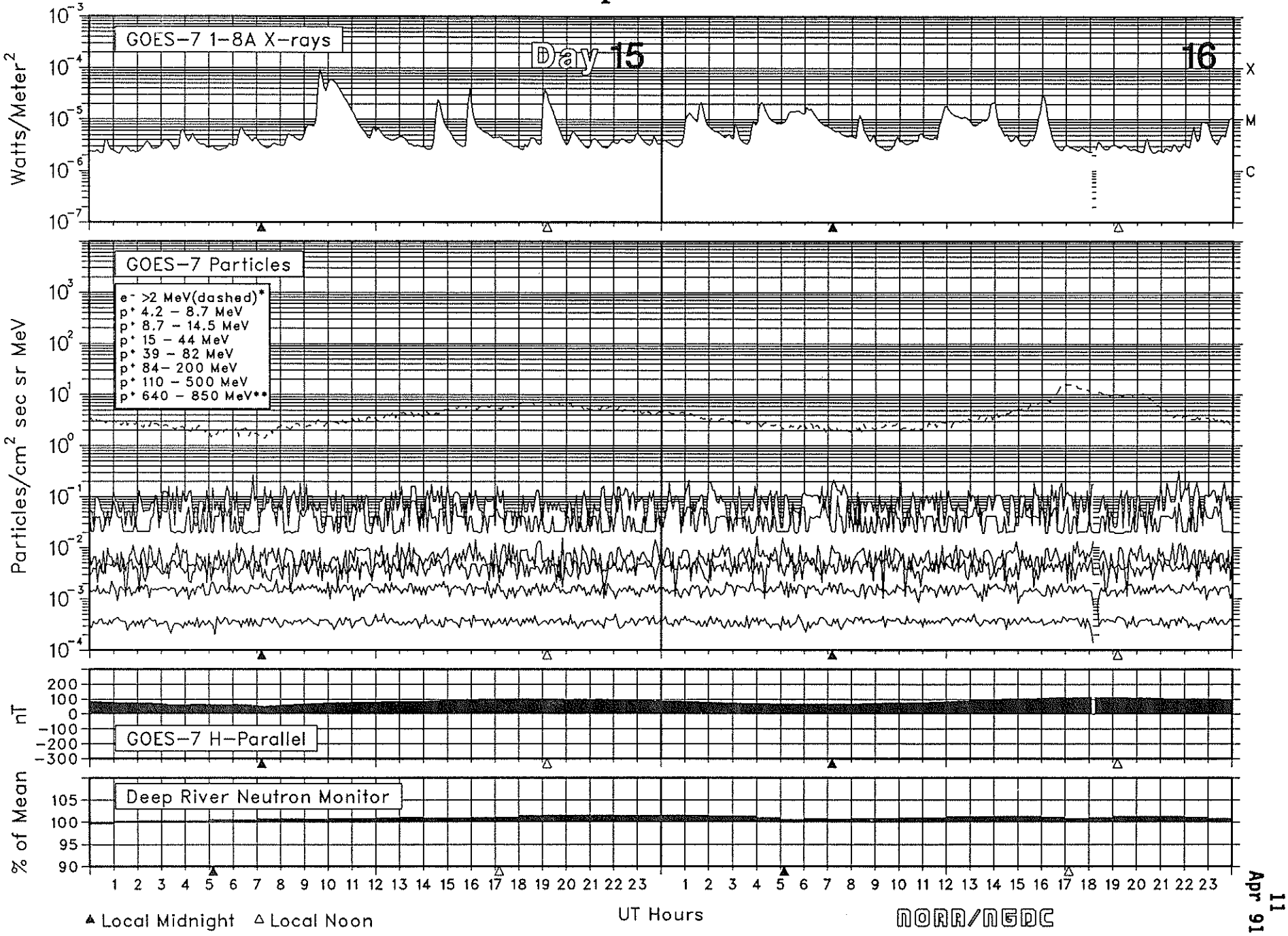

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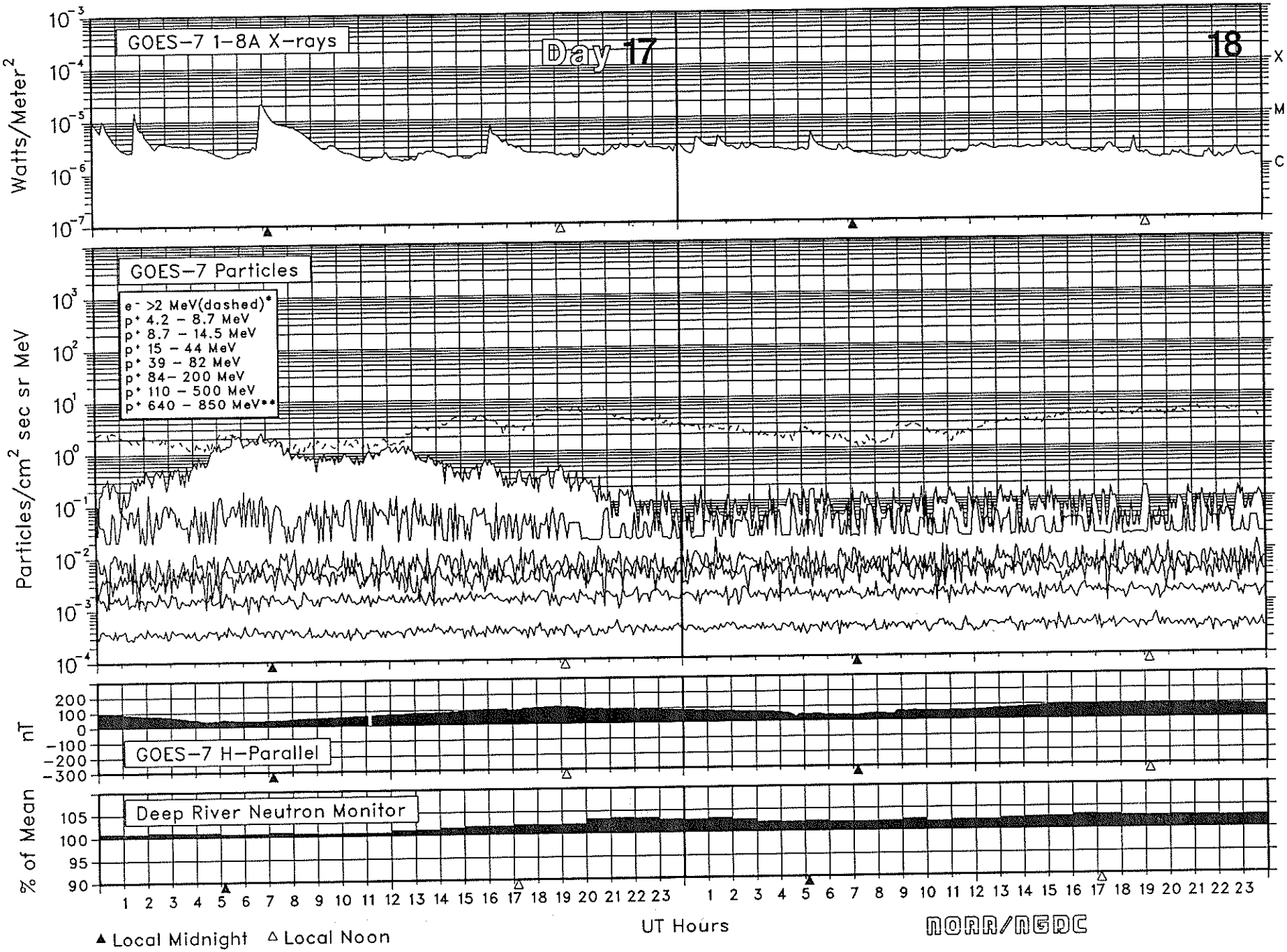

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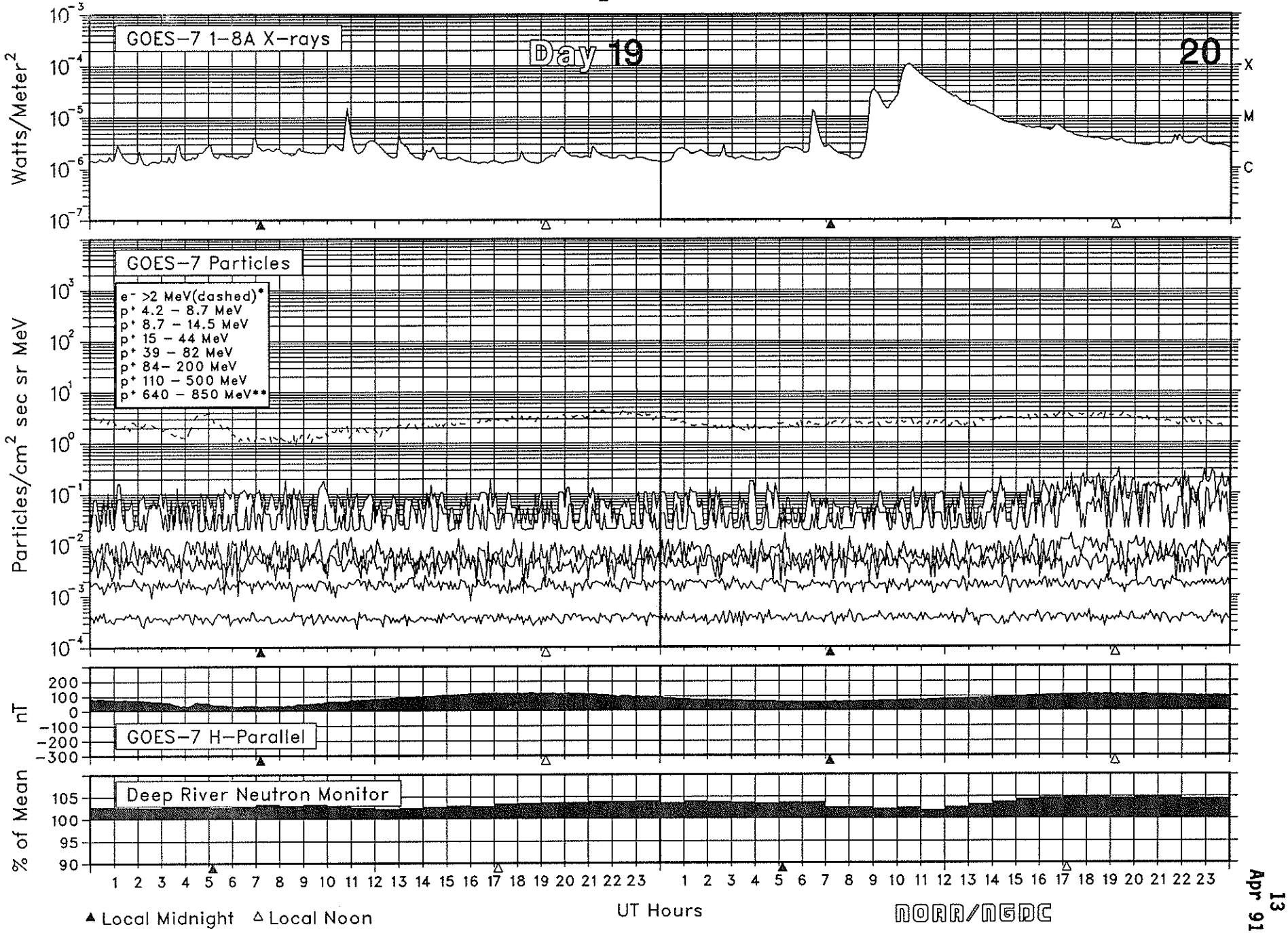

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SOLAR-TERRESTRIAL ENVIRONMENT
April 1991

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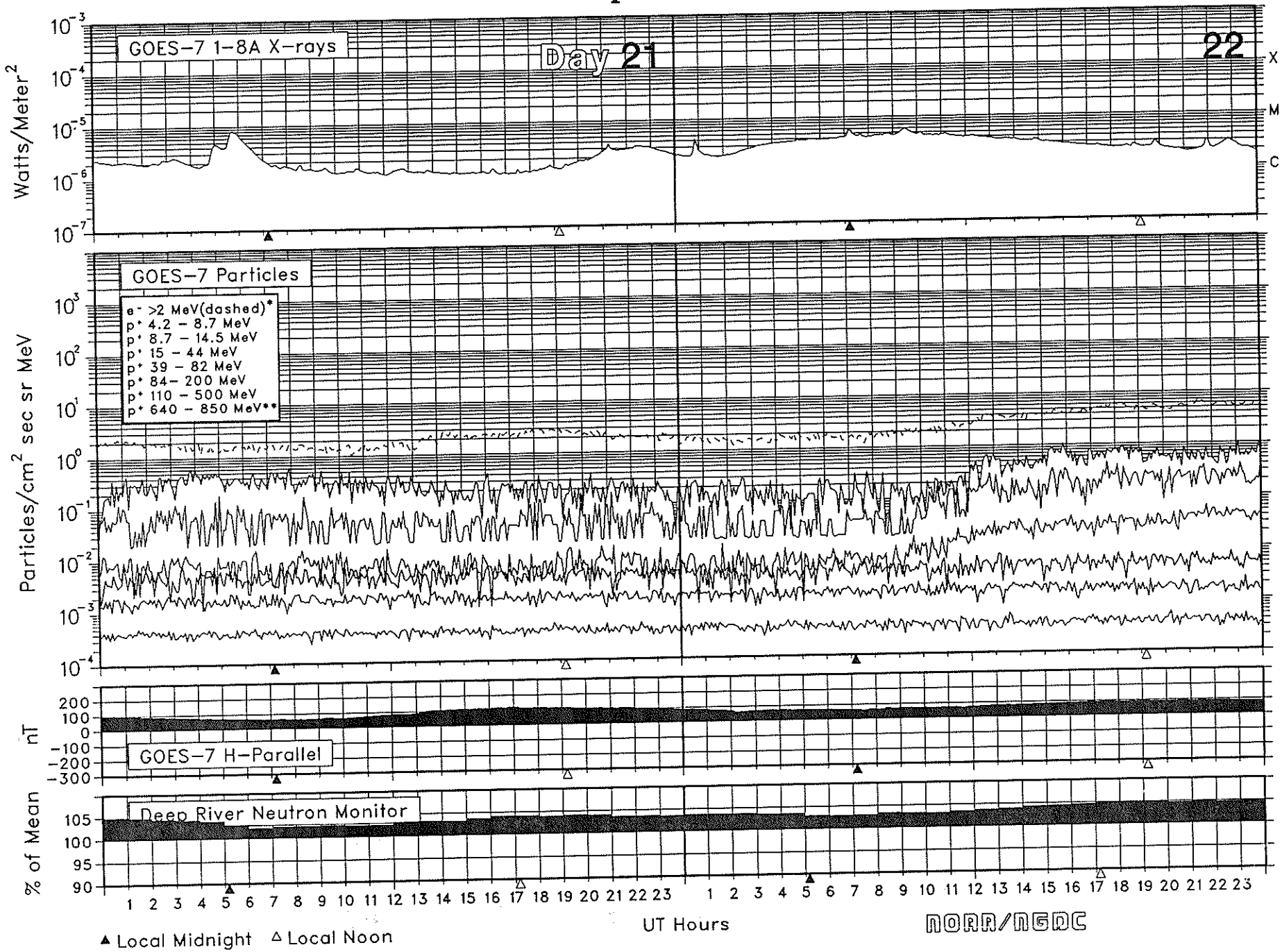

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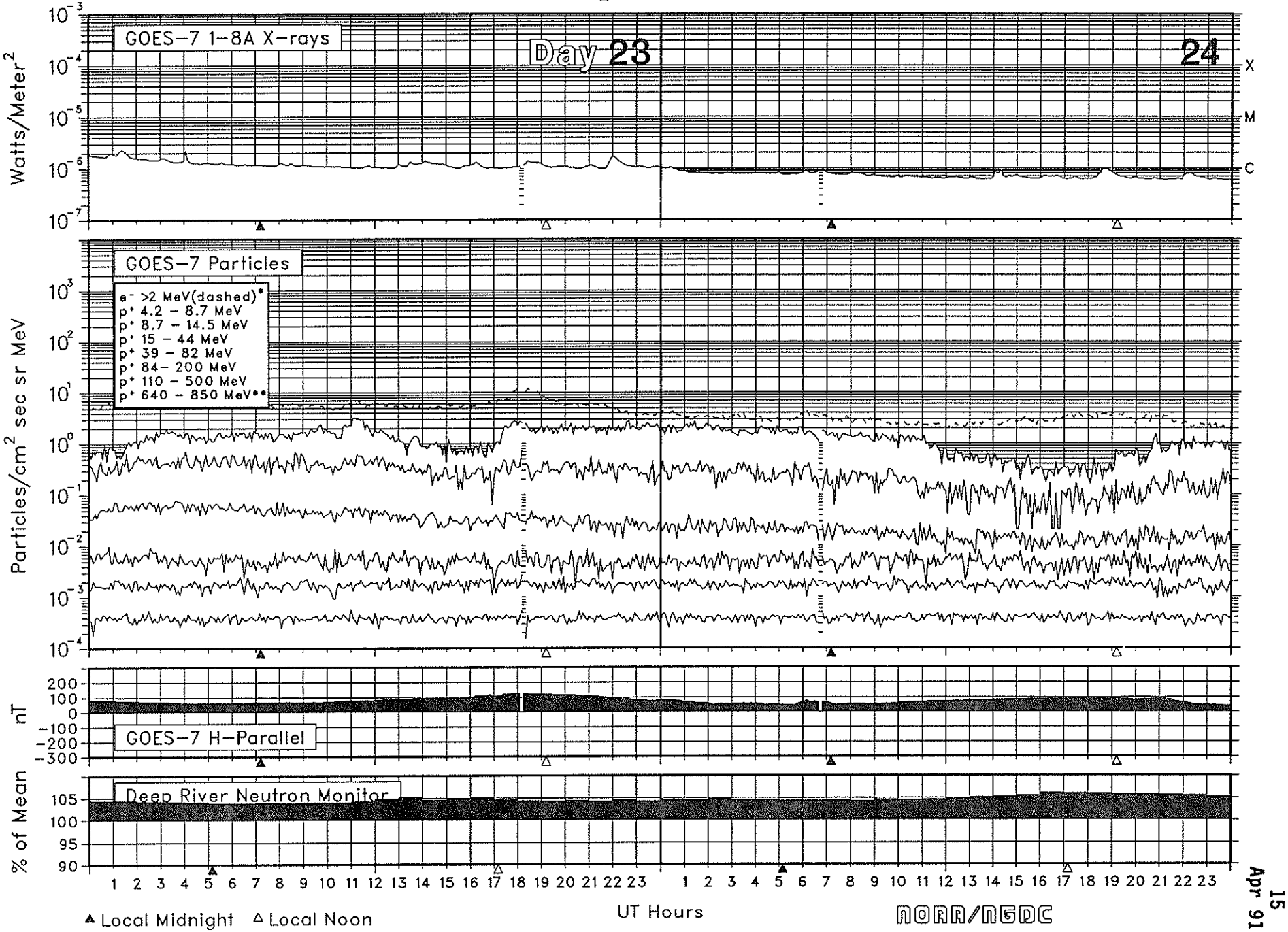

SOLAR-TERRESTRIAL ENVIRONMENT
April 1991

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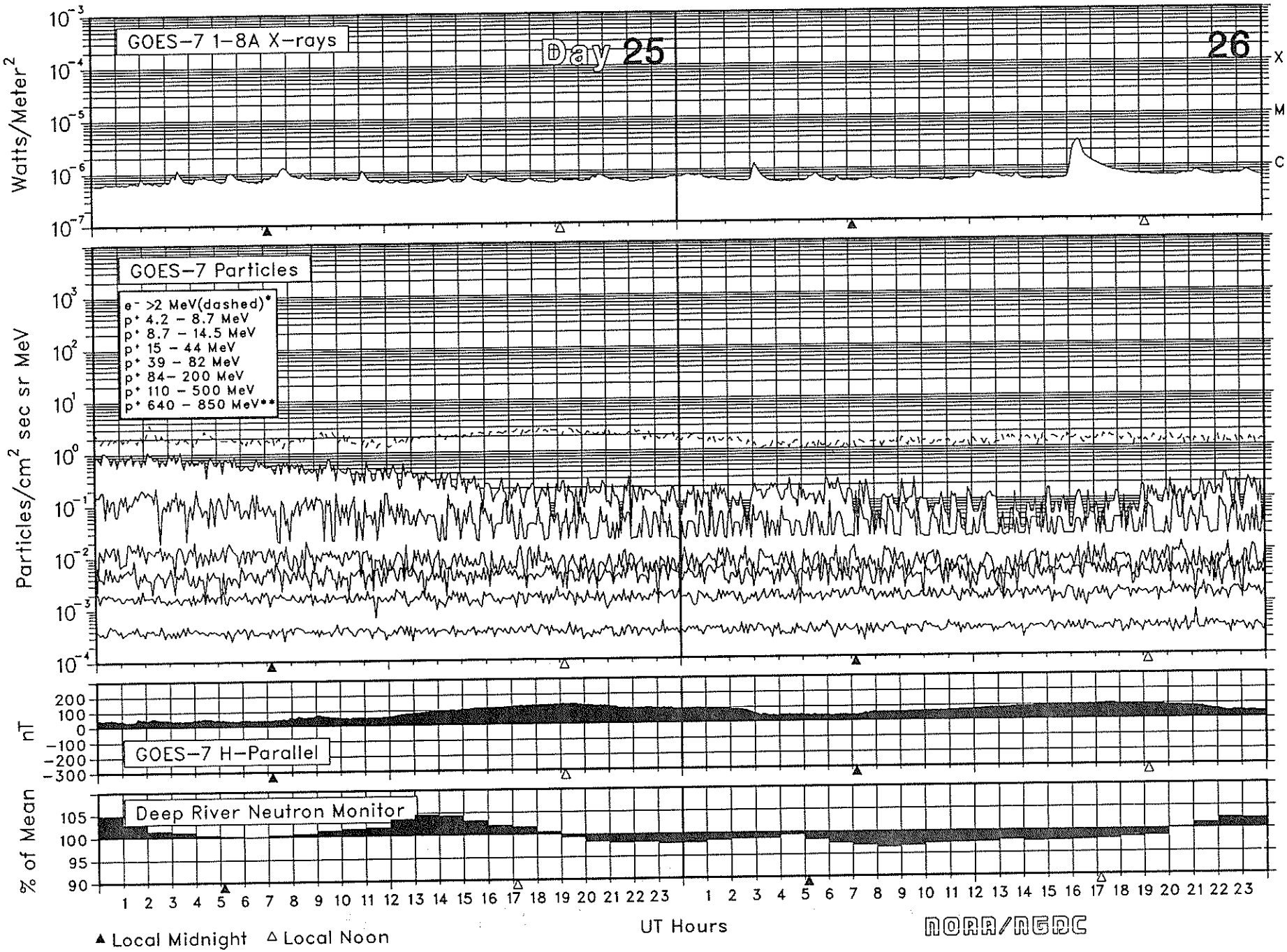

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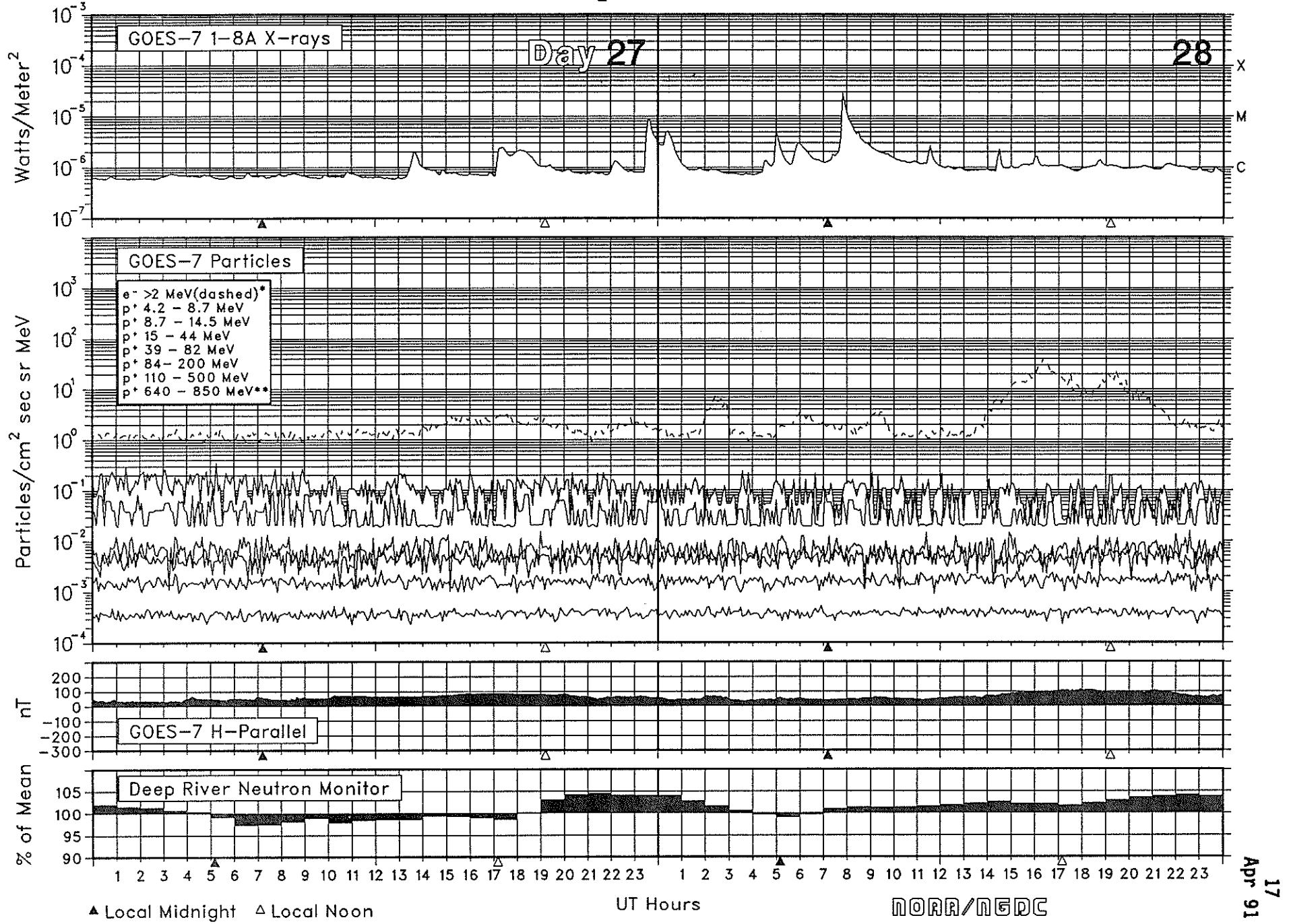
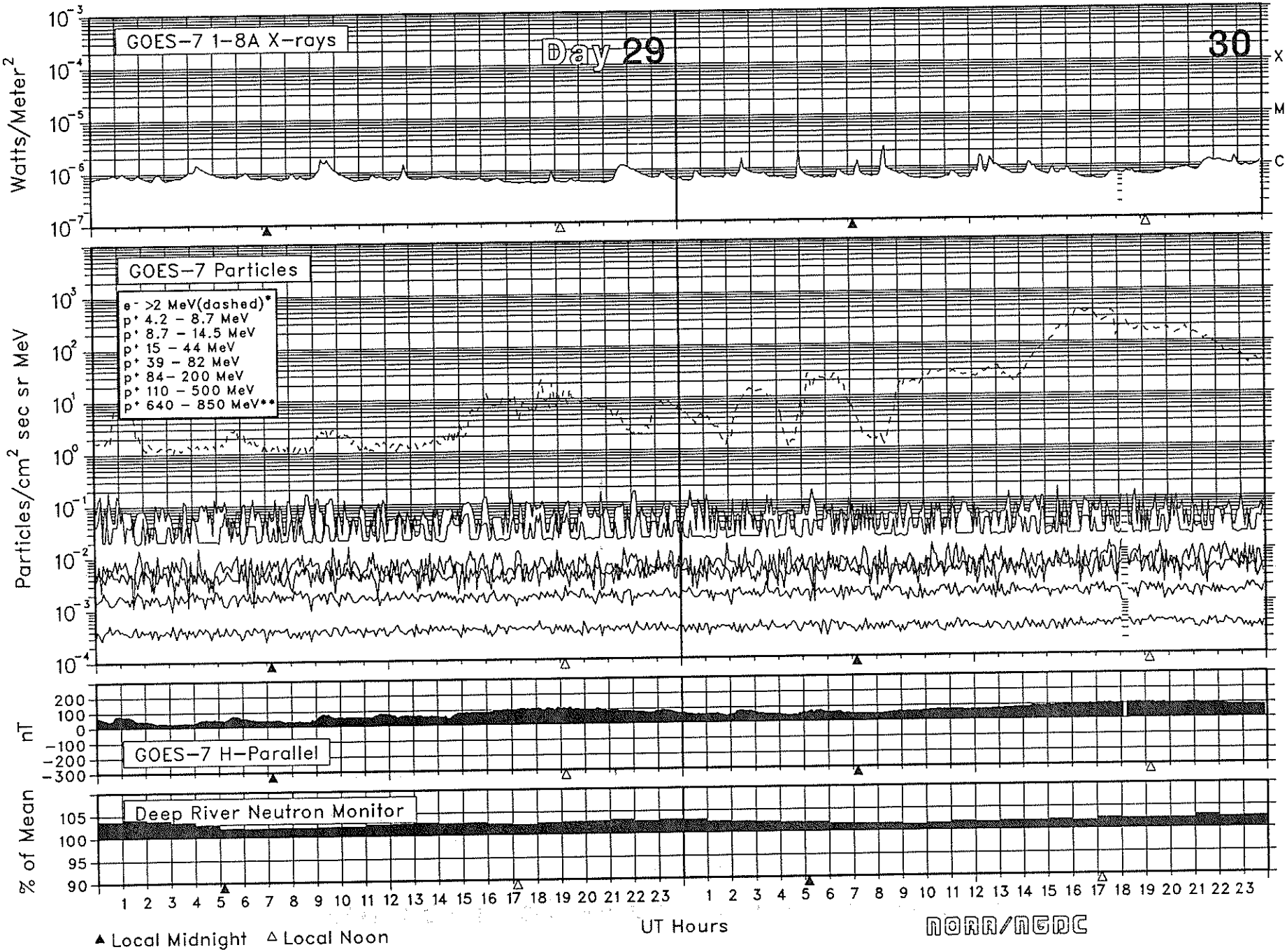


SOLAR-TERRESTRIAL ENVIRONMENT
April 1991

Apr 91 18



ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — APRIL 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		
091	01	31	178	192	9	S23 W95	7	3	1	01	S23 W95	E	Solalert 01,
						S15 W56	2	0	0		S15 W56	Q	Magalert 01 Flare.
						N18 W85	0	0	0		N18 W85	Q	
						S12 W77	0	0	0		S12 W77	Q	
						S08 W91	0	0	0		S08 W91	Q	
						N14 E28	0	0	0		N14 E28	E	
						S10 E31	4	0	0		S10 E31	E	
						N20 W05	0	0	0		N20 W05	Q	
						N09 E57	1	0	0		N09 E57	Q	
		Presto:[2] Boulder				Tenflare 440 flux units 31/1908 UT duration 2 minutes.							
		Boulder				X-ray event X1/0F S21 W98 31/1910 UT duration 11 minutes.							
092	02	01	131	193	21	N14 E15	3	0	0	02	N14 E15	E	Solnil,
						S10 E19	2	0	0		S10 E19	E	Magalert 02.
						N10 E44	3	0	0		N10 E44	E	
093	03	02	151	191	23	N14 E02	4	1	0	03	N14 E02	E	Solquiet,
						S10 E05	0	0	0		S10 E05	E	Magalert 03/XX Flare.
						N10 E31	2	0	0		N10 E31	E	
						S24 E70	0	0	0		S24 E70	Q	
		Presto: Boulder				Tenflare 400 flux units 02/1002 UT duration 11 minutes.							
094	04	03	197	195	22	N15 W10	1	0	0	04	N15 W10	E	Solquiet,
						S10 W08	0	0	0		S10 W08	E	Magalert Minor 04/05
						N10 E18	1	0	0		N10 E18	E	Flare.
						S23 E59	0	0	0		S23 E59	Q	
						S13 E52	1	0	0		S13 E52	Q	
						S08 E60	0	0	0		S08 E60	Q	
						N05 E80	0	0	0		N05 E80	Q	
		Presto: Boulder				Proton event began 03/0815 UT, maximum of 25 particles-cm^{-2}-s-ster at greater than 10 MeV 03/0910 UT in progress.							
095	05	04	196	196	27	N15 W23	4	0	0	05	N15 W23	E	Solquiet,
						S11 W21	1	0	0		S11 W21	E	Magalert 05 Flare.
						N10 E04	2	0	0		N10 E04	E	
						S24 E46	6	0	0		S24 E46	Q	
						S13 E37	0	0	0		S13 E37	Q	
						S10 E47	1	0	0		S10 E47	Q	
						N06 E62	0	0	0		N06 E62	Q	
						S06 E63	0	0	0		S06 E63	Q	
096	06	05	255	197	13	N15 W37	2	0	0	06	N15 W37	E	Solquiet,
						S11 W34	1	0	0		S11 W34	E	Magnil.
						N10 W10	3	0	0		N10 W10	E	
						S23 E32	1	0	0		S23 E32	Q	
						S13 E24	0	0	0		S13 E24	Q	
						S12 E36	0	0	0		S12 E36	Q	
						N06 E48	0	0	0		N06 E48	Q	
						S07 E49	1	0	0		S07 E49	Q	
						S11 W07	0	0	0		S11 W07	Q	
						S19 W04	0	0	0		S19 W04	Q	
						S49 W05	0	0	0		S49 W05	Q	
						N27 E54	0	0	0		N27 E54	Q	
097	07	06	293	198	13	N15 W50	5	0	0	07	N15 W50	E	Solquiet,
						S11 W47	3	0	0		S11 W47	E	Magquiet.
						N09 W22	1	0	0		N09 W22	E	
						S22 E16	1	0	0		S22 E16	Q	
						S12 E11	0	0	0		S12 E11	Q	
						S12 E23	0	0	0		S12 E23	Q	
						N06 E37	0	0	0		N06 E37	Q	
						S07 E35	0	0	0		S07 E35	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — APRIL 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		
097	07	06				S10 W22	1	0	0	07	S10 W22	Q	
						S19 W18	2	0	0		S19 W18	E	
						S48 W16	0	0	0		S48 W16	Q	
						N27 E40	0	0	0		N27 E40	Q	
						S10 W04	0	0	0		S10 W04	Q	
						N23 E18	0	0	0		N23 E18	Q	
						N09 E30	1	0	0		N09 E30	Q	
						S19 E61	1	0	0		S19 E61	Q	
098	08	07	285	192	10	N15 W63	3	0	0	08	N15 W63	E	Solquiet,
						S11 W61	1	0	0		S11 W61	E	Magquiet.
						N09 W36	0	0	0		N09 W36	E	
						S22 E04	0	0	0		S22 E04	Q	
						S12 W03	0	0	0		S12 W03	Q	
						S13 E08	1	0	0		S13 E08	Q	
						N06 E25	0	0	0		N06 E25	Q	
						S07 E21	0	0	0		S07 E21	Q	
						S19 W31	1	0	0		S19 W31	Q	
						S51 W29	0	0	0		S51 W29	Q	
						N27 E25	0	0	0		N27 E25	Q	
						S08 W20	0	0	0		S08 W20	Q	
						N08 E17	0	0	0		N08 E17	Q	
						S19 E48	4	0	0		S19 E48	E	
						N06 E50	1	0	0		N06 E50	Q	
						N29 E69	2	0	0		N29 E69	E	
099	09	08	192	183	9	N15 W78	1	0	0	09	N15 W78	E	Solquiet,
						S12 W76	0	0	0		S12 W76	E	Magquiet.
						N10 W49	3	0	0		N10 W49	E	
						S22 W08	4	0	0		S22 W08	Q	
						S12 W16	0	0	0		S12 W16	Q	
						S13 W07	0	0	0		S13 W07	Q	
						N05 E11	0	0	0		N05 E11	Q	
						S20 W44	2	0	0		S20 W44	Q	
						N08 E03	0	0	0		N08 E03	Q	
						S19 E35	0	0	0		S19 E35	E	
						N06 E35	5	0	0		N06 E35	E	
						N28 E54	13	0	0		N28 E54	E	
100	10	09	243	205	8	N16 W93	0	0	0	10	N16 W93	Q	Solquiet,
						S12 W91	0	0	0		S12 W91	Q	Magquiet.
						N10 W64	2	0	0		N10 W64	E	
						S22 W22	13	1	0		S22 W22	E	
						S11 W30	0	0	0		S11 W30	Q	
						S12 W17	0	0	0		S12 W17	Q	
						N05 W02	0	0	0		N05 W02	Q	
						S08 W02	1	0	0		S08 W02	Q	
						S19 W58	2	0	0		S19 W58	Q	
						N23 W21	0	0	0		N23 W21	Q	
						N08 W10	0	0	0		N08 W10	Q	
						S19 E22	0	0	0		S19 E22	Q	
						N06 E21	1	0	0		N06 E21	E	
						N28 E42	4	0	0		N28 E42	E	
						N15 E60	0	0	0		N15 E60	Q	
						S25 E66	2	0	0		S25 E66	Q	
101	11	10	260	223	8	N09 W82	0	0	0	11	N09 W82	Q	Solquiet,
						S21 W35	7	0	0		S21 W35	E	Magquiet.
						S11 W44	0	0	0		S11 W44	Q	
						S12 W34	0	0	0		S12 W34	Q	
						N05 W16	0	0	0		N05 W16	Q	
						S11 W20	0	0	0		S11 W20	Q	

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages — APRIL 1991

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location	Flares			Date of Forecast	Location	Region Forecast [1]	Geoalerts
						°Lat °Long	Total	M	X		°Lat °Long		
101	11	10				S20 W71	2	0	0	11	S20 W71	Q	
						N09 W21	0	0	0		N09 W21	Q	
						S19 E07	0	0	0		S19 E07	Q	
						N06 E07	0	0	0		N06 E07	Q	
						N29 E28	1	1	0		N29 E28	E	
						N15 E46	1	0	0		N15 E46	E	
						S25 E57	5	0	0		S25 E57	E	
						N10 E73	9	2	0		N10 E73	E	
						S13 W55	3	0	0		S13 W55	Q	
						S26 E45	0	0	0		S26 E45	Q	
						S25 W10	0	0	0		S25 W10	Q	
102	12	11	261	232	5	S21 W49	8	1	0	12	S21 W49	E	Solalert 12/XX,
						S11 W57	0	0	0		S11 W57	Q	Magquiet.
						S12 W48	0	0	0		S12 W48	Q	
						N05 W29	0	0	0		N05 W29	Q	
						S11 W32	3	0	0		S11 W32	Q	
						S21 W83	3	0	0		S21 W83	E	
						S19 W06	0	0	0		S19 W06	Q	
						N06 W07	0	0	0		N06 W07	Q	
						N29 E16	2	1	0		N29 E16	E	
						N15 E31	1	0	0		N15 E31	Q	
						S26 E45	1	0	0		S26 E45	Q	
						N09 E60	9	2	0		N09 E60	A	
						S12 W69	0	0	0		S12 W69	Q	
						S22 W26	0	0	0		S22 W26	Q	
						S26 E70	0	0	0		S26 E70	Q	
		Presto:[2]	Boulder	Tenflare 990 flux units 11/1114 UT duration 9 minutes.									
103	13	12	333	255	9	S21 W61	6	3	0	13	S21 W61	E	Solalert 13/XX,
						S12 W61	0	0	0		S12 W61	Q	Magquiet.
						N05 W42	0	0	0		N05 W42	Q	
						S11 W46	3	0	0		S11 W46	Q	
						N06 W21	0	0	0		N06 W21	Q	
						N29 E03	4	0	0		N29 E03	A	
						N12 E17	0	0	0		N12 E17	Q	
						S25 E31	1	0	0		S25 E31	E	
						N09 E46	7	0	0		N09 E46	A	
						S12 W80	0	0	0		S12 W80	Q	
						S26 E58	0	0	0		S26 E58	Q	
						S02 W15	0	0	0		S02 W15	Q	
						S08 W05	0	0	0		S08 W05	Q	
						S17 E09	0	0	0		S17 E09	Q	
						N09 E26	0	0	0		N09 E26	Q	
						N14 E67	0	0	0		N14 E67	Q	
104	14	13	287	249	4	S21 W75	2	0	0	14	S21 W75	E	Solalert 14/XX,
						N05 W56	0	0	0		N05 W56	Q	Magquiet.
						S11 W59	3	0	0		S11 W59	E	
						N06 W35	0	0	0		N06 W35	Q	
						N29 W10	6	0	0		N29 W10	E	
						N13 E02	0	0	0		N13 E02	Q	
						S26 E16	1	0	0		S26 E16	E	
						N09 E34	5	0	0		N09 E34	A	
						S27 E44	1	0	0		S27 E44	Q	
						S08 W18	0	0	0		S08 W18	Q	
						S15 W04	0	0	0		S15 W04	Q	
						N08 E13	0	0	0		N08 E13	Q	
						N14 E57	0	0	0		N14 E57	Q	
105	15	14	340	268	7	S21 W87	1	0	0	15	S21 W87	Q	Solalert 15/XX,
						N05 W70	0	0	0		N05 W70	Q	Magquiet.

ALERT PERIODS

INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages **APRIL 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		
105	15	14				S11 W72	6	0	0	15	S11 W72	E	
						N06 W48	0	0	0		N06 W48	Q	
						N28 W22	2	0	0		N28 W22	E	
						N12 W10	0	0	0		N12 W10	Q	
						S25 E03	2	1	0		S25 E03	E	
						N08 E21	4	0	0		N08 E21	E	
						S27 E31	1	0	0		S27 E31	Q	
						S11 W29	0	0	0		S11 W29	Q	
						N09 W00	0	0	0		N09 W00	Q	
						N14 E47	5	0	0		N14 E47	Q	
						S11 E70	6	1	0		S11 E70	E	
						S19 E20	4	0	0		S19 E20	E	
106	16	15	346	267	6	N06 W83	0	0	0	16	N06 W83	Q	Solalert 16/XX,
						S10 W85	5	0	0		S10 W85	Q	Magquiet.
						N07 W63	0	0	0		N07 W63	Q	
						N29 W36	7	0	0		N29 W36	E	
						N14 W18	1	0	0		N14 W18	Q	
						S25 W11	3	0	0		S25 W11	E	
						N08 E08	9	1	0		N08 E08	A	
						S27 E18	1	0	0		S27 E18	Q	
						S12 W40	0	0	0		S12 W40	Q	
						N09 W14	0	0	0		N09 W14	Q	
						N13 E35	4	0	0		N13 E35	E	
						S10 E60	10	3	0		S10 E60	A	
						S19 E07	0	0	0		S19 E07	Q	
						S21 E64	0	0	0		S21 E64	Q	
107	17	16	274	268	4	N07 W75	0	0	0	17	N07 W75	Q	Solalert 17/XX,
						N29 W47	17	2	0		N29 W47	A	Magquiet.
						S25 W25	4	1	0		S25 W25	E	
						N09 W06	11	2	0		N09 W06	A	
						S27 E05	0	0	0		S27 E05	Q	
						N09 W27	0	0	0		N09 W27	Q	
						N13 E22	0	0	0		N13 E22	E	
						S09 E47	12	4	0		S09 E47	A	
						S20 W06	1	0	0		S20 W06	Q	
						S22 E59	0	0	0		S22 E59	Q	
		Presto:[2]	Boulder			Tenflare 330 flux units 16/1149 UT duration 3 minutes.							
108	18	17	267	252	11	N29 W61	10	0	0	18	N29 W61	A	Solalert 18/XX,
						S24 W37	0	0	0		S24 W37	E	Magquiet.
						N09 W18	0	0	0		N09 W18	A	
						S27 W07	0	0	0		S27 W07	Q	
						N14 E10	1	0	0		N14 E10	Q	
						S08 E32	9	2	0		S08 E32	A	
						S19 W20	2	0	0		S19 W20	Q	
						S22 E45	0	0	0		S22 E45	Q	
						S08 E16	0	0	0		S08 E16	Q	
109	19	18	281	236	13	N28 W73	7	0	0	19	N28 W73	E	Solalert 19/XX,
						S25 W51	0	0	0		S25 W51	Q	Magquiet.
						N09 W32	5	0	0		N09 W32	E	
						S24 W20	0	0	0		S24 W20	Q	
						N14 W06	3	0	0		N14 W06	E	
						S10 E21	5	0	0		S10 E21	E	
						S19 W33	0	0	0		S19 W33	Q	
						S20 E26	0	0	0		S20 E26	Q	
						S09 E02	0	0	0		S09 E02	Q	
						S13 W11	0	0	0		S13 W11	Q	

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Summary of the Geoalert Messages **APRIL 1991**

Julian Day	Date of Issue	Date of Obser-vation	Wolf No.	10-cm Solar Flux	A-index	Location °Lat	Location °Long	Flares Total	Flares M	Flares X	Date of Forecast	Location °Lat	Location °Long	Region Forecast [1]	Geoalerts
110	20	19	232	229	16	N28	W83	0	0	0	20	N28	W83	E	Solalert 20/XX,
						S25	W65	0	0	0		S25	W65	Q	Magquiet.
						N09	W45	1	0	0		N09	W45	E	
						S26	W23	0	0	0		S26	W23	Q	
						N14	W22	4	0	0		N14	W22	Q	
						S10	E08	2	0	0		S10	E08	E	
						S19	W47	0	0	0		S19	W47	Q	
						S24	E22	0	0	0		S24	E22	Q	
						S09	W14	0	0	0		S09	W14	Q	
111	21	20	240	221	3	S25	W80	1	0	0	21	S25	W80	Q	Solalert 21/XX,
						N09	W59	9	0	1		N09	W59	E	Magalert 21/22 Flare.
						S27	W36	3	0	0		S27	W36	Q	
						N14	W36	6	0	0		N14	W36	Q	
						S11	W05	1	0	0		S11	W05	Q	
						S19	W59	2	0	0		S19	W59	Q	
						S23	W01	0	0	0		S23	W01	Q	
						S24	E09	0	0	0		S24	E09	Q	
						S09	W28	0	0	0		S09	W28	Q	
						S13	W37	1	0	0		S13	W37	Q	
						S16	W18	0	0	0		S16	W18	Q	
		Presto:[2]	Moscow	Tenflare 3000 flux units 20/0847 UT in progress.											
			Boulder	Tenflare 2300 flux units 20/0945 UT duration 69 minutes.											
			Boulder	X-ray event X1/3N N08 W50 20/0950 UT duration 107 minutes.											
112	22	21	201	180	6	S24	W93	0	0	0	22	S24	W93	Q	Solalert 22/23,
						N09	W75	0	0	0		N09	W75	E	Magalert Minor 23
						S27	W50	0	0	0		S27	W50	Q	Flare.
						N14	W50	1	0	0		N14	W50	E	
						S12	W19	3	0	0		S12	W19	E	
						S19	W72	1	0	0		S19	W72	Q	
						S24	W06	0	0	0		S24	W06	Q	
						S08	W38	0	0	0		S08	W38	Q	
						S13	W51	0	0	0		S13	W51	Q	
						S13	W33	0	0	0		S13	W33	Q	
						S20	E13	1	0	0		S20	E13	Q	
113	23	22	151	166	7	N08	W89	1	0	0	23	N08	W89	E	Solnil,
						N15	W65	0	0	0		N15	W65	Q	Magalert Minor 23
						S10	W31	3	0	0		S10	W31	E	Flare.
						S18	W86	0	0	0		S18	W86	Q	
						S20	W25	0	0	0		S20	W25	Q	
						S22	W20	0	0	0		S22	W20	Q	
						S14	W63	1	0	0		S14	W63	Q	
						S19	E01	0	0	0		S19	E01	Q	
114	24	23	104	146	6	N16	W80	0	0	0	24	N16	W80	Q	Solquiet,
						S10	W44	3	0	0		S10	W44	E	Magnil.
						S19	W38	0	0	0		S19	W38	Q	
						S21	W34	0	0	0		S21	W34	Q	
						S15	W75	0	0	0		S15	W75	Q	
						S19	W16	0	0	0		S19	W16	Q	
						S23	W53	0	0	0		S23	W53	Q	
115	25	24	072	135	12	S11	W59	1	0	0	25	S11	W59	Q	Solquiet,
						S21	W52	0	0	0		S21	W52	Q	Magquiet.
						S21	W46	0	0	0		S21	W46	Q	
						S23	W66	1	0	0		S23	W66	Q	
						S29	W12	0	0	0		S29	W12	Q	
116	26	25	083	136	15	S10	W71	0	0	0	26	S10	W71	E	Solquiet,
						S21	W80	1	0	0		S21	W80	Q	Magquiet.

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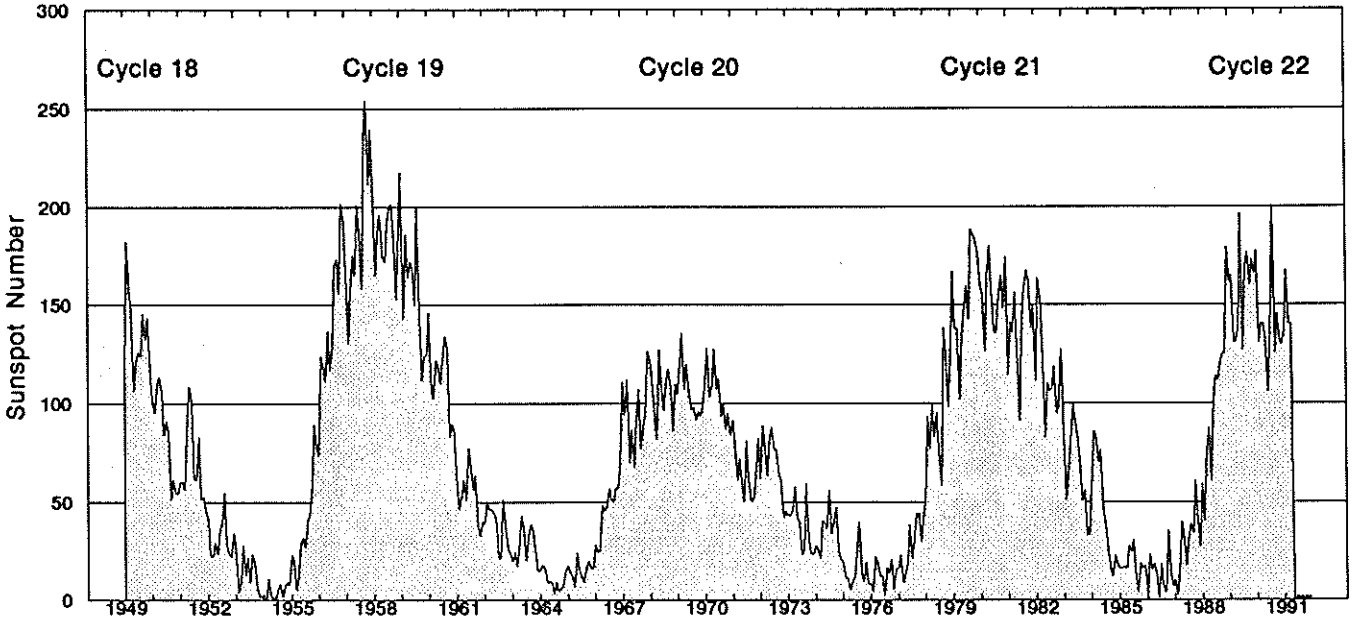
116	26	25				S29	W25	0	0	0	26	S29	W25	Q	
						S21	E54	0	0	0		S21	E54	Q	
						N09	E73	0	0	0		N09	E73	Q	
						N08	W03	0	0	0		N08	W03	Q	
117	27	26	125	142	10	S10	W85	0	0	0	27	S10	W85	E	Solquiet,
						S22	W90	0	0	0		S22	W90	Q	Magquiet.
						S30	W38	2	0	0		S30	W38	Q	
						S22	E41	1	0	0		S22	E41	Q	
						N08	E63	2	0	0		N08	E63	Q	
						N08	W17	0	0	0		N08	W17	Q	
						S42	E38	0	0	0		S42	E38	Q	
						S21	E75	0	0	0		S21	E75	Q	
						S11	W18	0	0	0		S11	W18	Q	
118	28	27	112	143	23	S30	W51	6	0	0	28	S30	W51	E	Solquiet,
						S22	E27	0	0	0		S22	E27	Q	Magquiet.
						N08	E53	2	0	0		N08	E53	E	
						S41	E25	1	0	0		S41	E25	Q	
						S22	E63	0	0	0		S22	E63	Q	
						S13	E59	0	0	0		S13	E59	Q	
						S06	E74	0	0	0		S06	E74	Q	
119	29	28	189	159	30	S29	W64	8	1	0	29	S29	W64	E	Solquiet,
						S22	E12	0	0	0		S22	E12	Q	Magalert Minor 29/30
						N09	E41	0	0	0		N09	E41	E	Coronal Hole.
						N09	W42	0	0	0		N09	W42	Q	
						S40	E09	0	0	0		S40	E09	Q	
						S21	E50	0	0	0		S21	E50	Q	
						S14	E44	0	0	0		S14	E44	Q	
						S06	E61	1	0	0		S06	E61	Q	
						S27	W09	1	0	0		S27	W09	E	
						S14	E13	0	0	0		S14	E13	Q	
						S16	E27	0	0	0		S16	E27	Q	
120	30	29	181	160	49	S29	W75	0	0	0	30	S29	W75	E	Solquiet,
						S21	E01	1	0	0		S21	E01	Q	Magalert 30/01.
						N08	E29	1	0	0		N08	E29	E	
						N08	W57	0	0	0		N08	W57	Q	
						S40	W06	0	0	0		S40	W06	Q	
						S21	E37	2	0	0		S21	E37	Q	
						S14	E30	0	0	0		S14	E30	Q	
						S06	E48	1	0	0		S06	E48	Q	
						S27	W22	1	0	0		S27	W22	E	
						S14	W01	0	0	0		S14	W01	Q	
		Presto:[2]	Boulder	Strong magstorm in progress 29/1800 UT.											
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	

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

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

Monthly Mean Sunspot Numbers Jan 1949 – Apr 1991



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean	
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6	134.7	
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9	
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4	
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5	
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9	
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4	m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0	
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7	
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2	M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8	
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0	
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	112.3	
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9	
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6	
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9	
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2	m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1	
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0	
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8	
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9	M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5	
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5	
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6	
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9	
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0	
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5	
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5	
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6	m
1977	16.4	23.1	8.7	12.9	18.6	38.5	21.4	30.1	44.0	43.8	29.1	43.2	27.5	
1978	51.9	93.6	76.5	99.7	82.7	95.1	70.4	58.1	138.2	125.1	97.9	122.7	92.5	
1979	166.6	137.5	138.0	101.5	134.4	149.5	159.4	142.2	188.4	186.2	183.3	176.3	155.4	M
1980	159.6	155.0	126.2	164.1	179.9	157.3	136.3	135.4	155.0	164.7	147.9	174.4	154.6	
1981	114.0	141.3	135.5	156.4	127.5	90.9	143.8	158.7	167.3	162.4	137.5	150.1	140.4	
1982	111.2	163.6	153.8	122.0	82.2	110.4	106.1	107.6	118.8	94.7	98.1	127.0	115.9	
1983	84.3	51.0	66.5	80.7	99.2	91.1	82.2	71.8	50.3	55.8	33.3	33.4	66.6	
1984	57.0	85.4	83.5	69.7	76.4	46.1	37.4	25.5	15.7	12.0	22.8	18.7	45.9	
1985	16.5	15.9	17.2	16.2	27.5	24.2	30.7	11.1	3.9	18.6	16.2	17.3	17.9	
1986	2.5	23.2	15.1	18.5	13.7	1.1	18.1	7.4	3.8	35.4	15.2	6.8	13.4	m
1987	10.4	2.4	14.7	39.6	33.0	17.4	33.0	38.7	33.9	60.6	39.9	27.1	29.4	
1988	59.0	40.0	76.2	88.0	60.1	101.8	113.8	111.6	120.1	125.1	125.1	179.2	100.2	
1989	161.3	165.1	131.4	130.6	138.5	196.2	126.9	168.9	176.7	159.4	173.0	165.5	157.6	
1990	177.3	130.5	140.3	140.3	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	142.6	
1991	136.9	167.5	140.6	139.9									146.2	

Monthly values are preliminary since Oct 1990. For the yearly means, each "M" marks a sunspot cycle maximum and each "m" a minimum.

INTERNATIONAL RELATIVE SUNSPOT NUMBERS

Day	May 90	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 91†	Feb†	Mar†	Apr†
01	70	96	272	146	120	110	77	127	139	205	120	89
02	59	80	253	175	116	112	81	160	79	209	93	92
03	61	73	264	151	126	140	108	180	93	180	71	118
04	86	77	241	137	134	134	146	186	95	140	55	139
05	80	79	213	128	118	123	154	167	100	127	74	160
06	106	101	186	124	118	124	197	169	119	117	88	159
07	132	107	173	120	112	135	209	182	105	119	131	174
08	138	99	135	136	112	141	208	177	99	118	146	146
09	133	87	102	145	113	148	188	176	94	134	167	172
10	116	107	88	160	121	153	163	175	97	136	159	167
11	126	126	106	161	116	195	167	157	106	140	167	195
12	146	115	110	167	124	192	151	138	113	153	163	227
13	144	122	114	192	142	214	118	117	145	166	145	197
14	141	118	118	215	178	202	119	95	119	163	161	211
15	144	102	98	229	162	218	113	88	114	173	182	227
16	157	110	95	232	156	192	102	104	133	159	188	179
17	167	100	87	269	137	188	110	112	154	142	167	172
18	170	83	57	270	136	181	97	121	127	191	168	171
19	187	79	61	290	151	181	109	134	119	206	142	173
20	187	68	81	295	145	169	98	114	91	192	166	161
21	193	57	123	278	150	136	102	117	107	223	167	115
22	187	71	143	262	141	140	125	99	106	214	171	79
23	160	64	165	281	117	134	114	91	127	200	179	72
24	158	88	201	276	101	131	118	95	135	192	162	33
25	146	94	204	263	94	125	110	101	149	194	128	39
26	134	103	196	220	93	102	117	104	179	187	164	77
27	139	140	177	188	77	111	109	104	220	175	130	82
28	121	184	165	176	113	119	134	111	237	134	122	124
29	118	203	144	186	119	98	144	109	248		128	132
30	90	230	117	181	115	87	153	103	239		141	116
31	101		142	155		77		108	256		115	
Mean	132.2	105.4	149.4	200.3	125.2	145.5	131.4	129.7	136.9	167.5	140.6	139.9

† = 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	May 90	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan 91	Feb	Mar	Apr
01	129.0	140.6	248.3	199.0	171.4	160.5	141.6*	172.6	180.6	307.3	216.5	192.8
02	129.2	141.2	267.6	208.6	168.9	162.8	138.5	178.0	175.8	289.3	207.5	189.1
03	125.2	146.1	253.8	192.4	162.6	177.4*	150.2	187.6	170.0	258.4	206.4	195.9
04	123.6	148.1	238.3*	191.2	158.2*	186.8	154.7	199.3	170.2	239.2	218.9J	195.1
05	130.6	153.7	231.6	180.8	157.5	170.0	169.7	207.0*	172.9	216.5	208.1	196.7
06	151.0	161.4	221.8	174.6	157.6	170.0	196.4	221.0	179.7*	198.7	206.7	199.9
07	155.5	183.6	215.7	172.1	165.1	169.3	214.3	222.0	199.6	192.7	214.5	192.6
08	170.7	195.5	189.6	184.8	163.5	175.9*	211.8	223.6	207.9	192.7	209.1	182.8
09	174.6	203.9*	170.9	183.2	170.4	183.9	201.2	230.3	209.1	174.0	215.7	204.2
10	195.4	207.5*	164.0	186.3	171.2	194.7	191.1	233.4	214.6	169.5	222.8	223.6
11	205.4*	217.2	160.2	187.1	180.6	205.1	195.0	233.4	209.4	176.5	221.9	231.5
12	215.2	221.8*	160.9	188.2	193.3	200.6	191.0	228.0	201.6	181.6	228.7	254.4
13	225.8	208.8	161.5	192.5	198.0	209.4	181.5	219.5	190.5	182.2	239.1	242.6
14	224.2*	206.8	155.4	188.2*	209.4*	220.6	198.0	195.3	184.5	184.0	241.6	269.3
15	246.6	196.3	149.1	199.6	207.3	231.6	207.3	193.2	184.6	191.9	242.2	263.1
16	251.5	189.9	146.5	211.0	205.2	224.6	207.3	186.2	181.8	200.4	258.5	269.1
17	248.9	187.5	147.6	228.4	210.7	193.7	217.1	192.5	202.0	210.2	245.4	254.2
18	271.8	169.5	144.7	246.1	207.5	198.2	198.9	201.6	196.8	259.6	274.8	239.1
19	280.0	163.5	145.3	268.0*	213.8	214.2*	191.2	191.2	192.3	269.8	264.9	232.0
20	272.5	161.2	154.0	288.7	204.0	201.7	186.8	181.6	197.5	283.8	254.2	235.3
21	259.2	155.8	159.2	298.3	203.2	188.7	177.6	185.8	195.9	299.2	253.1	181.6
22	250.0	145.2	166.0*	322.8*	195.3	167.9	177.4	178.1	217.5*	302.6	257.7	168.7
23	239.5	139.1	180.4	322.7	185.4	164.0	171.7	185.6	216.0	311.5	233.4	149.0
24	209.2	143.8	186.6	329.2	178.7	157.5	167.2	184.9	236.8	313.1*	260.5	137.4
25	189.1	149.3	213.6	303.9	167.1	161.8	162.3	185.0	260.9	288.4*	235.2	138.1
26	186.3	154.5	209.9	285.1*	159.6	153.5	153.2	188.1	276.9	271.8	229.4	138.3*
27	164.6	173.4*	197.2	269.2	152.6	162.5	155.0	191.9	293.8J	248.7	203.0	144.6
28	159.3	187.7	193.1	250.2	152.1	150.9	167.1	192.4	313.8	228.0	197.7	158.4
29	144.8	210.8	180.3	225.2	150.1	155.9	163.2	195.5	344.5		192.9	161.0
30	142.5*	226.6	188.3	210.4	157.8	151.1*	169.6	189.6	359.2		201.3	161.7
31	142.5*		183.4	182.9*		141.6		180.6	348.6		194.7	
Mean	194.0	176.3	186.6	228.1	179.3	180.9	180.3	198.5	222.1	237.2	227.6	200.1

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

DAILY SOLAR INDICES

April 1991

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers Int	Sunspot Numbers Amer	Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit — PALE (15400)	PALE (8800)	PALE (4995)	Ottawa (2800)	PALE (2695)	PALE (1415)	PALE (610)	PALE (410)	PALE (245)
01	91	23	89	91	193.1	594	290	242	192.8	189	127	90	42	19
02	92	24	92	102	189.2	519	248	266	189.1	259	163	--	--	--
03	93	25	118	113	195.9	587	275	250	195.9	203	133	93	45	20
04	94	26	139	138	195.0	588	251	233	195.1	194	138	83	44	22
05	95	27	160	157	196.5	589	311	240	196.7	197	143	95	48	28
06	96	1	159	171	199.6	597	271	232	199.9	193	138	97	45	20
07	97	2	174	163	192.2	590	260	227	192.6	188	142	97	44	21
08	98	3	146	129	182.3	587	304	232	182.8	185	138	102	45	20
09	99	4	172	148	203.5	600	336	256	204.2	215	158	91	46	21
10	100	5	167	169	222.7	621	401	264	223.6	217	160	98	47	22
11	101	6	195	181	230.5	607	314	287	231.5	236	168	96	51	23
12	102	7	227	199	253.1	613	344	291	254.4	242	170	95	58	24
13	103	8	197	190	241.2	613	396	314	242.6	253	174	109	50	23
14	104	9	211	214	267.7	603	400	312	269.3	261	177	106	49	23
15	105	10	227	218	261.4	650	454	343	263.1	280	178	102	47	22
16	106	11	179	180	267.1	632	354	309	269.1	264	180	107	48	22
17	107	12	172	172	252.3	615	312	298	254.2	245	177	91	49	23
18	108	13	171	177	237.1	628	310	294	239.1	234	166	94	43	18
19	109	14	173	164	230.0	625	294	274	232.0	218	159	97	43	36
20	110	15	161	142	233.1	616	279	254	235.3	204	145	89	40	17
21	111	16	115	115	179.8	593	402	222	181.6	183	138	91	40	17
22	112	17	79	78	166.9	596	387	215	168.7	169	126	87	43	21
23	113	18	72	60	147.4	577	259	190	149.0	144	110	83	41	19
24	114	19	33	38	135.8	592	---	184	137.4	138	101	79	41	20
25	115	20	39	52	136.4	580	---	181	138.1	134	99	78	41	18
26	116	21	77	71	136.6*	566	---	182	138.3*	135	99	78	41	32
27	117	22	82	82	142.7	585	260	200	144.6	147	101	79	40	19
28	118	23	124	116	156.3	585	271	211	158.4	159	111	84	44	22
29	119	24	132	122	158.7	580	289	210	161.0	161	113	81	42	21
30	120	25	116	118	159.3	589	298	193	161.7	161	115	82	42	23
Mean			139.9	135.7	198.8	597	317	247	200.1	200	142	92	45	22

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 Palehau (PALE) 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	138 (1)	136 (4)
1991	135 (3)	133 (6)	131 (12)	131 (18)	131 (19)	129 (17)	125 (17)	122 (16)	118 (14)	116 (13)	116 (15)	116 (17)
1992	115 (17)	111 (14)	107 (10)	104 (5)	101 (9)	99 (6)	97 (9)	94 (11)	91 (12)	87 (14)	82 (19)	75 (25)

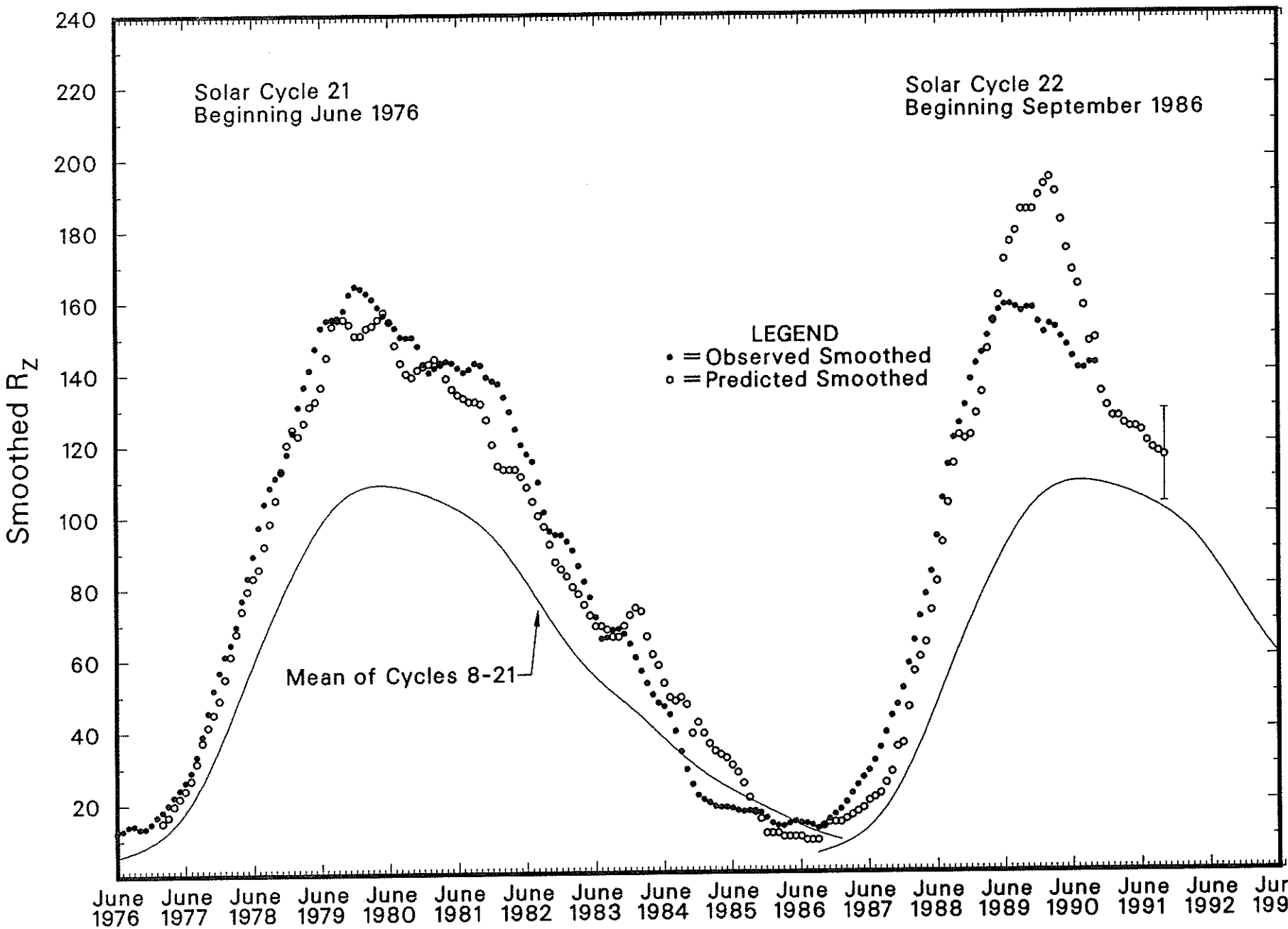
*September 1986 marks the onset of Sunspot Cycle 22.

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 October 1991 prediction. There exists a 90% chance that in October 1991 the actual smoothed sunspot number will fall somewhere between 103 and 129.

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 Apr 91

Hα SOLAR FLARES

APRIL 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
LEAR	01	0121	0123	0143	N09	E58	6565	04	5.4	22	SF		3	E		25		F
LEAR		0344	0352	0356	S10	E28	6563	04	3.2	12	SF		3	E		48		
LEAR		0507	0540	0551	N13	E25	6562	04	3.1	44	SF		3	E		60		
LEAR		0618	0656	0827	S12	W58	6558	03	28.0	129	1F	C 5.1	3	E		187		
LEAR		0706	0716	0749	N13	E25	6562	04	3.2	43	SF		3	E		56		
LEAR		0706	0726	0749	N13	E25	6562			43	SF			E		51		K
GOES		1158	1203	1216						18		C 4.5						
GOES		1239	1243	1249						10		C 4.5						
HOLL		2029E	2029U	2125	N13	E12	6562	04	2.7	56D	SF		3	E		65		F
HOLL		2122	2123	2127	N08	E45	6565	04	5.3	5	SF		3	E		13		
GOES		2126	2134	2142						16		M 1.2						
HOLL		2355		2404	N08	E43	6565	04	5.2	9	SF		3	E		19		
GOES	02	0228	0232	0238						10		C 3.4						
SVTO		0835	0838	0855	N10	E10	6562	04	3.1	20	SF	C 4.1	3	E		35		
GOES		1002	1050	1131						89		C 2.6						
HOLL		1622	1623	1631	N09	E35	6565	04	5.3	9	SF		3	E		23		
HOLL		1805	1807	1820	N15	E07	6562	04	3.3	15	SF		3	E		23		
HOLL		1855	1856	1859	N11	E37	6565	04	5.6	4	SF		3	E		17		
HOLL		2111	2117	2138	N16	E05	6562	04	3.3	27	SF	C 3.1	3	E		30		F
HOLL		2251	2303	2505D	N14	E00	6562			134D	3B			E		508		KT
HOLL		2251	2320	2505D	N14	E00	6562	04	2.9	134D	3B	M 6.1	3	E		886		UYT
LEAR		2259E	2303	2432	N14	E01	6562	04	3.0	93D	2B		3	E		415		F
PALE		2331E	2331U	2458D	N13	E03	6562	04	3.2	87D	1F		3	E		230		
LEAR	03	0751	0753	0806	N13	W01	6562	04	3.2	15	SF		3	E		51		
HOLL		2138E	2138U	2203	N09	E18	6565	04	5.2	25D	SF		2	E		31		
HOLL		2145E	2208U	2303	S12	E43	6567	04	7.1	78D	1F	C 3.8	4	E		140		UF
LEAR	04	0157	0159	0207	S26	E54	6566	04	8.3	10	SF	C 1.8	3	E		74		
PALE		0159	0159	0202	S25	E60	6566	04	8.7	3	SF		3	E		30		
LEAR		0352	0414	0433	N13	W13	6562	04	3.2	41	1F	C 1.8	3	E		117		F
PALE		0414	0415	0428D	N12	W13	6562	04	3.2	14D	SF		1	E		55		F
LEAR		0913	0915	0923	N16	W20	6562	04	2.9	10	SF		3	E		36		F
HOLL		1340E	1341U	1359D	N09	E09	6565	04	5.2	19D	SF		1	E		20		F
RAMY		1722	1722	1743	S20	E44	6566	04	8.1	21	SF	C 1.2	3	E		13		F
HOLL		1906	1907	1915	N09	E06	6565	04	5.2	9	SF	C 1.0	3	E		31		F
HOLL		2006	2011	2014	S10	W19	6563	04	3.4	8	SF		3	E		16		F
HOLL		2020	2020	2023	N15	W21	6562	04	3.2	3	SF	C 1.3	3	E		13		F
HOLL		2137	2137	2142	S21	E44	6566	04	8.3	5	SF		3	E		36		F
HOLL		2143	2144	2148	S21	E43	6566	04	8.2	5	SF		3	E		16		
HOLL		2153	2207	2349	N16	W24	6562	04	3.1	116	SF	C 2.3	3	E		88		F
HOLL		2259	2306	2314	S21	E41	6566	04	8.1	15	SF		3	E		16		FH
HOLL		2315	2316	2321	S21	E43	6566	04	8.3	6	SF		3	E		17		F
LEAR	05	0001	0002	0022	N09	E03	6565	04	5.2	21	SF		3	E		28		F
HOLL		0003	0007	0025	N08	E03	6565	04	5.2	22	SF		3	E		24		F
GOES		0252	0258	0302						10		C 1.7						
LEAR		0332	0333	0343	S24	E43	6566	04	8.5	11	SF		3	E		43		F
LEAR		0825	0853	0856D	S09	W26	6563	04	3.4	31D	1F		4	E		111		F
LEAR		0848	0853	0931	S09	W26	6563	04	3.4	43	1F	C 1.5	3	E		111		F
GOES		0931	0934	0938						7		C 1.3						
GOES		0945	0949	0952						7		C 2.6						
GOES		1032	1036	1038						6		C 2.4						
HOLL		1504	1507	1513	N09	W06	6565	04	5.2	9	SF		3	E		14		F
HOLL		1744	1752	1813	N14	W34	6562	04	3.2	29	SF		3	E		25		F
HOLL		1840	1840	1854	S09	E50	6570	04	9.5	14	SF		3	E		20		F
HOLL		1854	1855	1911	N14	W34	6562	04	3.2	17	SF		3	E		23		
HOLL		2245	2247	2310	N09	W10	6565	04	5.2	25	SF		3	E		14		F
LEAR	06	0114	0133	0145	S20	W04	6572	04	5.7	31	SF		3	E		15		F
LEAR		0655	0657	0702	S11	W39	6563	04	3.3	7	SF		3	E		18		
LEAR		0808	0823	0948	N14	W42	6562	04	3.2	100	1N	C 7.8	3	E		201		
LEAR		0935	0937	0949	S23	E25	6566	04	8.3	14	1N		3	E		121		
LEAR		0949	0950	0958	N09	W49	6562	04	2.7	9	SF		3	E		41		
HOLL		1425	1428	1436	S20	W12	6572	04	5.7	11	SF		3	E		15		F
HOLL		1522	1601	1814	S21	E66				172	SF			E		52		K
HOLL		1522	1706	1814	S21	E66		04	11.7	172	SF		3	E		61		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	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
HOLL	06	1525	1530	1545	S12	W42	6563	04	3.5	20	SF	C 2.1	3	E		19		F
HOLL		1530	1530	1538	N13	W46	6562	04	3.2	8	SF		3	E		26		F
HOLL		1605	1611	1656	N08	W20	6565	04	5.2	51	SF		3	E		39		F
HOLL		1609	1622	1645	N08	E36		04	9.4	36	SF	C 2.1	3	E		27		F
HOLL		1643	1706	1723	N13	W46	6562	04	3.2	40	SF		3	E		21		F
HOLL		1644	1646	1652	N12	E51		04	10.5	8	SF		3	E		16		F
HOLL		1724	1724	1734	N13	W46	6562	04	3.2	10	SF		3	E		20		F
HOLL		1811	1812	1823	N15	W48	6562	04	3.1	12	SF		3	E		19		F
HOLL		1919	1922	1926	S11	W17	6571	04	5.5	7	SF		3	E		12		
LEAR	07	0017	0028	0127	N13	W50	6562	04	3.2	70	SF		3	E		99		F
HOLL		0024	0027	0107D	N14	W50	6562	04	3.2	43D	SF	C 2.5	2	E		75		F
PALE		0027	0027	0039D	N12	W50	6562	04	3.2	12D	SF		3	E		12		F
LEAR		0031	0054	0119	S09	W47	6563	04	3.5	48	SF		3	E		31		
LEAR		0039	0039	0049	S22	E60	6578	04	11.6	10	SF		3	E		33		
HOLL		0039	0040	0045	S22	E60	6578	04	11.6	6	SF		2	E		32		
GOES		0405	0418	0440						35		C 2.5						
SVTO		0727	0730	0735	S20	W22	6572	04	5.6	8	SF		3	E		12		
LEAR		0747	0749	0753	N14	W55	6562	04	3.2	6	SF		3	E		26		
LEAR		0753	0754	0807	S22	E56	6578	04	11.6	14	SF		3	E		18		
SVTO		0753	0754	0820	S19	E58	6578	04	11.7	27	SF	C 1.1	3	E		16		
LEAR		0808	0811	0840	N13	W55	6562	04	3.2	32	SF		3	E		91		F
SVTO		0810	0815	0829	N13	W53	6562	04	3.3	19	SF		3	E		43		
SVTO		0945	0946	0950	S18	E58	6578	04	11.8	5	SF	C 1.4	3	E		19		
SVTO		1254	1301	1308	S14	W55	6563	04	3.4	14	SF		3	E		26		
GOES		1318	1340	1345						27		C 2.2						
SVTO		1406	1409	1420	N31	E73		04	13.3	14	SF	C 3.6	3	E		13		
SVTO		1407	1408	1415	S19	E55	6578	04	11.8	8	SF		3	E		24		
HOLL		1407	1408	1416	S20	E54	6578	04	11.7	9	SN		3	E		37		E
HOLL		1407	1409	1424	N30	E72		04	13.2	17	SF		3	E		16		
GOES		1438	1442	1449						11		C 2.3						
GOES		1450	1503	1519						29		C 3.5						
HOLL		1714	1720	1736	S12	E14	6568	04	8.8	22	SF		4	E		16		
HOLL		2003	2003	2012	N08	E52		04	11.7	9	SF		3	E		21		
HOLL		2007	2010	2046	N30	E71				39	SN			E		63		K
HOLL		2007	2025	2046	N30	E71		04	13.4	39	SN	C 3.1	3	E		75		
RAMY		2010	2010	2016	N28	E65		04	12.9	6	SF		3	E		19		
RAMY		2024	2024	2031	N29	E65		04	12.9	7	SF		3	E		25		
GOES		2058	2108	2111						13		C 1.6						
GOES		2255	2304	2309						14		C 1.4						
GOES		2349	2356	2414						25		C 1.8						
GOES	08	0202	0213	0223						21		C 5.5						
LEAR		0225	0306	0348	N05	E47	6579	04	11.6	83	SF	C 3.0	3	E		73		F
LEAR		0443	0443	0456	N09	W40	6565	04	5.2	13	SF		3	E		53		
LEAR		0456	0522	0542	N29	E65	6580	04	13.3	46	SF		3	E		31		
LEAR		0509	0514	0524	N05	E46	6579	04	11.6	15	SF	C 3.1	3	E		27		
SVTO		0537	0539	0601	S25	E90		04	15.2	24	SF		3	E		67		
LEAR		0538	0549	0621	S26	E90		04	15.2	43	1N	C 2.1	3	E		187		
LEAR		0555	0607	0620	N05	E45	6579	04	11.6	25	SF		3	E		32		
LEAR		0655	0708	0728	S20	W35	6572	04	5.6	33	SF		3	E		28		
LEAR		0701	0703	0719	N29	E64	6580	04	13.3	18	SF		3	E		33		
LEAR		0710	0714	0737	N08	E46	6579	04	11.7	27	SF		3	E		51		
SVTO		0711	0711	0727	N07	E45	6579	04	11.7	16	SF		3	E		15		
LEAR		0728	0743	0754	N28	E61	6580	04	13.1	26	SF		3	E		62		
SVTO		0743	0743	0749	N31	E65	6580	04	13.4	6	SF		3	E		29		
LEAR		0824	0826	0850	N30	E64	6580	04	13.4	26	SF	C 3.3	3	E		97		
SVTO		0825	0827	0840	N28	E60	6580	04	13.0	15	SF		3	E		71		
SVTO		0923	0924	0932	S24	E89		04	15.3	9	SF		3	E		20		
SVTO		0944	0947	1000	N09	W43	6565	04	5.2	16	SF		3	E		25		
SVTO		0949	0950	0952	N31	E63	6580	04	13.4	3	SF	C 2.1	3	E		18		
SVTO		1018	1020	1027	N31	E63	6580	04	13.4	9	SF	C 1.9	3	E		77		
SVTO		1019	1020	1025	N06	E43	6579	04	11.6	6	SF		3	E		13		
SVTO		1030	1037	1043	N31	E61	6580	04	13.2	13	SF		3	E		25		
SVTO		1033	1037	1043	N31	E61	6580	04	13.2	10	SF		3	E		25		
SVTO		1126	1129	1134	N31	E62	6580	04	13.4	8	SF	C 1.8	3	E		35		
GOES		1210	1214	1220						10		C 1.8						
SVTO		1233	1234	1237	N30	E60	6580	04	13.2	4	SF		3	E		17		

Hα SOLAR FLARES

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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	08	1246	1254	1304	S23	W04	6566	04	8.2	18	SF	C 1.3	3	E		24		
RAMY		1457E	1457U	1529D	N29	E61	6580	04	13.4	32D	SF		2	E		87		
SVTO		1458	1504	1538D	N31	E59	6580	04	13.3	40D	1F		3	E		100		
HOLL		1458	1504	1547	N29	E61	6580	04	13.4	49	1N	C 4.1	4	E		139		FE
HOLL		1530	1530	1535	N13	W71	6562	04	3.3	5	SF		3	E		22		
HOLL		1551	1556	1626	S09	E13	6570	04	9.6	35	1F		2	E		101		F
SVTO		1555E	1555U	1615D	S10	E11	6570	04	9.5	20D	SF		2	E		50		F
HOLL		1624	1641	1658	N09	W47	6565	04	5.1	34	SF		3	E		41		
HOLL		1639	1641	1645	N30	E59	6580	04	13.3	6	SF		3	E		32		
HOLL		1811	1816	1857	S23	W07	6566	04	8.2	46	SF	C 2.0	3	E		97		F
HOLL		1825E	1826U	1858	S14	E77		04	14.6	33D	SF		3	E		29		
HOLL		2259	2304	2312D	S20	W10	6566	04	8.2	13D	SF		2	E		25		F
HOLL		2259	2304	2312D	N29	E55	6580	04	13.3	13D	SF		2	E		20		
PALE		2304E	2304U	2309D	N30	E56	6580	04	13.4	5D	SF		3	E		16		
HOLL		2341	2343	2404	S20	W11	6566	04	8.1	23	SN		2	E		78		FE
LEAR		2342	2342	2358	S20	W11	6566	04	8.1	16	SF		3	E		28		F
HOLL		2344	2344	2510	S20	W44	6572	04	5.6	86	SF		2	E		82		F
HOLL		2344	2350	2501	N29	E55	6580	04	13.3	77	SF		2	E		27		F
HOLL		2344	2358	2501	N29	E55	6580			77	SF			E		35		K
HOLL	09	0020	0021	0036	S19	W12	6566	04	8.1	16	SF		3	E		25		F
LEAR		0134	0138	0152	N29	E54	6580	04	13.3	18	SB		3	E		66		
LEAR		0236	0240	0244	N29	E52	6580	04	13.2	8	SN		3	E		22		
LEAR		0317	0317	0327	S22	W13	6566	04	8.1	10	SF	C 1.7	3	E		52		F
LEAR		0529	0536	0626	N06	E33	6579	04	11.7	57	SF		3	E		32		F
SVTO		0534	0542	0617	S21	W13	6566	04	8.2	43	SF		3	E		21		
LEAR		0607	0610	0622	N09	W54	6565	04	5.2	15	SF		3	E		19		
SVTO		0608	0610	0612	N08	W56	6565	04	5.0	4	SF		3	E		12		
LEAR		0619	0625	0645	S20	W50	6572	04	5.4	26	SF		3	E		29		
SVTO		0620	0621	0638	S22	W48	6572	04	5.6	18	SF		3	E		14		
SVTO		0630	0633	0642	N29	E51	6580	04	13.3	12	SF		3	E		12		
GOES		0709	0717	0732						23		C 3.0						
GOES		0854	0910	0925						31		C 3.2						
SVTO		1141	1146	1203	S25	E70		04	14.9	22	SF		3	E		25		F
SVTO		1355	1358	1402	N09	W60	6565	04	5.1	7	SF		3	E		12		
HOLL		1423	1429	1447	N09	W59	6565	04	5.2	24	SF		3	E		26		
HOLL		1438	1511	1534	S20	W21	6566	04	8.0	56	SF		3	E		30		
HOLL		1523	1535	1619	N28	E50	6580	04	13.5	56	1F		3	E		101		F
SVTO		1528	1540	1607	N30	E47	6580	04	13.3	39	1F	C 7.4	3	E		102		F
RAMY		1539E	1542	1551	N29	E49	6580	04	13.5	12D	SF		3	E		36		F
HOLL		1648	1649	1701	S24	W19	6566	04	8.2	13	SF		3	E		22		
HOLL		1654	1654	1703	S10	E02	6570	04	9.8	9	SF		3	E		39		
HOLL		1812	1816	1826	S19	W20	6566	04	8.2	14	SF		3	E		14		F
HOLL		1827	1847	1929	S19	W22	6566	04	8.1	62	1B	M 1.0	3	E		115		F
HOLL		2055	2055	2101	S19	W22	6566	04	8.2	6	SF		3	E		10		F
RAMY		2110	2112	2116	N09	E89		04	16.6	6	SF		3	E		24		
HOLL		2139	2143	2150	S28	E74	6582	04	15.7	11	SF		3	E		21		F
HOLL		2143	2204	2227	S19	W23	6566	04	8.1	44	SF		3	E		21		FE
HOLL		2146	2147	2208	S18	W56	6572	04	5.6	22	SF		3	E		29		F
HOLL		2203	2203	2211	N08	E89		04	16.6	8	SF		3	E		20		
HOLL		2235	2247	2304	S20	W23	6566	04	8.2	29	SF	C 3.4	3	E		16		F
HOLL		2302	2302	2307	N08	E82		04	16.1	5	SN		3	E		27		
LEAR		2320	2355	2533	S20	W24	6566	04	8.1	133	1N		3	E		172		F
HOLL		2329	2330	2413	S18	W25	6566			44	SN			E		18		K
HOLL		2329	2356	2413	S18	W25	6566	04	8.1	44	SN	C 3.6	3	E		65		FE
HOLL		2339	2340	2341	N08	E81		04	16.0	2	SF		3	E		30		
HOLL	10	0021	0022	0028	S19	W24	6566	04	8.2	7	SF		3	E		14		F
HOLL		0022	0024	0031	N07	E80		04	16.0	9	SF		3	E		16		
LEAR		0203	0207	0224	S20	W24	6566	04	8.2	21	SF	C 3.1	3	E		27		F
LEAR		0249	0255	0315	S19	W27	6566	04	8.0	26	SF		3	E		51		F
LEAR		0323	0341	0402	N09	E79		04	16.1	39	1N	M 1.3	3	E		233		
SVTO		1237	1252	1453	N12	E79	6583	04	16.5	136	SF	C 6.0	4	E		55		
RAMY		1246	1252	1302	N09	E79	6583	04	16.5	16	SF		3	E		12		
HOLL		1405	1415	1454	S19	W33	6566	04	8.1	49	SF		3	E		55		F
SVTO		1407	1411	1430	S22	W30	6566	04	8.3	23	SF		4	E		28		
HOLL		1432	1433	1452	S20	W66	6572	04	5.5	20	SN		3	E		34		FE
SVTO		1432	1434	1506	S19	W63	6572	04	5.8	34	SF		4	E		32		F

Hα S O L A R F L A R E S

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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
HOLL	10	1509	1509	1519	N10	E77	6583	04	16.4	10	SF		3	E		12		
HOLL		1513	1516	1527	N27	E35	6580	04	13.4	14	SF	M 1.4	3	E		16		F
GOES		1541	1620	1651						70		C 9.5						
HOLL		1628	1634	1641	S12	W52		04	6.8	13	SF		3	E		10		
HOLL		1702	1711	1728	S27	E64	6582	04	15.7	26	SF		3	E		49		F
HOLL		1708	1716	1723	S12	W53		04	6.7	15	SF		3	E		37		F
HOLL		1710	1718	1756	N08	E77	6583	04	16.5	46	SF		3	E		42		F
HOLL		1823	1823	1831	S19	W35	6566	04	8.1	8	SF		3	E		14		
HOLL		1824	1836	1907	N14	E50	6581	04	14.5	43	SF		3	E		62		
HOLL		1828	1839	1846	N10	E75	6583	04	16.4	18	SF		3	E		36		
HOLL		1829	1829	1836	S26	E62	6582	04	15.6	7	SF		3	E		19		
PALE		1835	1836	1840	N15	E50	6581	04	14.5	5	SF		4	E		14		
HOLL		1841	1856	1925	S18	W71	6572	04	5.4	44	SF		3	E		27		
HOLL		1847	1855	1911	S12	W52	6584	04	6.9	24	SF		3	E		41		
HOLL		1952	1954	1959	S26	E62	6582	04	15.6	7	SF		3	E		44		
HOLL		2000	2016	2045	N10	E75	6583	04	16.5	45	SN		3	E		82		
HOLL		2000	2023	2045	N10	E75	6583			45	SN			E		86		K
PALE		2017	2017	2042	N11	E77	6583	04	16.6	25	SF	M 1.9	4	E		63		
GOES		2117	2123	2128						11		C 3.4						
HOLL		2119	2131	2148	N09	E77	6583	04	16.7	29	1B	C 9.6	4	E		131		
HOLL		2207	2210	2213	S28	E60	6582	04	15.6	6	SF		2	E		35		
HOLL		2218	2224	2254	S19	W35	6566	04	8.2	36	1N	C 6.0	4	E		129		U
HOLL		2220	2221	2235	S19	W17		04	9.6	15	SF		3	E		36		F
HOLL		2228	2254	2316	S26	E60	6582	04	15.6	48	SF		3	E		60		
HOLL		2255	2307	2317	S19	W39	6566	04	8.0	22	SF		3	E		26		
HOLL		2338	2346	2405D	N09	E71	6583	04	16.3	27D	SN		3	E		37		
LEAR		2339	2349	2417	N10	E72	6583	04	16.4	38	SF		3	E		62		
HOLL	11	0023	0025	0030	S11	W20	6570	04	9.5	7	SF		2	E		23		
PALE		0224	0226	0239	S21	W39	6566	04	8.1	15	SF	C 5.9	3	E		43		F
LEAR		0252	0317	0404	N29	E26	6580	04	13.1	72	SF	M 1.2	3	E		71		
PALE		0313E	0313U	0319	S20	W78	6572	04	5.2	6D	SF		3	E		26		
LEAR		0321	0334	0440	S20	W41	6566	04	8.0	79	SN	M 1.0	3	E		69		FE
PALE		0345E	0345U	0414D	S21	W38	6566	04	8.2	29D	SF		3	E		61		F
LEAR		0542	0612	0646	N10	E68	6583	04	16.3	64	1B	M 4.9	3	E		219		
LEAR		0601	0610	0652	S28	E56	6582	04	15.6	51	SF		3	E		90		
LEAR		0654	0655	0700	S21	W74	6572	04	5.6	6	SF		3	E		49		
LEAR		0657	0700	0712	N29	E25	6580	04	13.2	15	SF		3	E		36		
LEAR		0759	0808	0820	N09	E65	6583	04	16.2	21	SF		3	E		21		
LEAR		0823	0842	0954D	N09	E66	6583	04	16.3	91D	1N	M 2.4	3	E		149		
LEAR		0823	0909	0954D	N09	E66	6583			91D	SB			E		46		K
GOES		1103	1117	1201						58		M 9.5						
RAMY		1129E	1130	1147	S18	W43	6566	04	8.2	18D	SF		3	E		17		
RAMY		1302	1304	1307	N09	E65	6583	04	16.4	5	SF		3	E		27		
HOLL		1305E	1305U	1315D	N09	E63	6583	04	16.3	10D	SF		1	E		88		
HOLL		1330E	1330U	1335D	N09	E62	6583	04	16.2	5D	SF		1	E		55		
GOES		1431	1439	1443						12		C 5.0						
HOLL		1629	1630	1650	S21	W47	6566	04	8.1	21	SF		3	E		16		F
HOLL		1630	1631	1637	N09	E68	6583	04	16.8	7	SF		3	E		26		F
HOLL		1744	1758	1827	S22	W45	6566	04	8.3	43	SF		3	E		43		F
HOLL		1744	1811	1827	S22	W45	6566			43	SN			E		36		K
HOLL		1750	1753	1757	S11	W30	6570	04	9.5	7	SF		3	E		15		F
HOLL		1843E	1855U	1956	S10	W31	6570	04	9.4	73D	SN	C 9.8	3	E		92		F
HOLL		1843E	1906	1956	S10	W31	6570			73D	SB			E		63		K
HOLL		1852E	1857U	2000	S19	W50	6566	04	8.0	68D	SN		2	E		52		F
HOLL		1852E	1908	2000	S19	W50	6566			68D	SB			E		51		K
HOLL		1959	2013	2026	N10	E67	6583	04	16.9	27	SF		3	E		25		F
HOLL		2055	2057	2102	N09	E61	6583	04	16.4	7	SF		3	E		18		F
HOLL		2118	2119	2126	S22	W46	6566	04	8.3	8	SF		3	E		19		
HOLL		2121	2126	2155	N15	E33	6581	04	14.4	34	1N		3	E		107		UF
HOLL		2147	2151	2158	N08	E60	6583	04	16.4	11	SF		3	E		23		
GOES	12	0042E	0045	0049D						7D		M 1.2						
GOES		0313E	0329	0418D						65D		M 1.0						
GOES		0421E	0423	0427D						6D		M 1.0						
GOES		0440E		0506D						26D		M 1.4						
HOLL		1337	1340	1343	N07	E55	6583	04	16.7	6	SF		3	E		16		
HOLL		1536	1539	1548	S20	W60	6566	04	8.1	12	SF		3	E		34		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	1541	1542	1550	N30	E07	6580	04	13.2	9	SF		4	E		17		
HOLL		1544	1544	1547	N06	E48	6583	04	16.2	3	SF		4	E		20		
HOLL		1604	1605	1618	N30	E06	6580	04	13.1	14	SF		3	E		13		
HOLL		1637	1637	1658	N30	E06	6580	04	13.2	21	SF		3	E		18		
HOLL		1638	1638	1645	S11	W44	6570	04	9.4	7	SF		3	E		12		
HOLL		1640	1640	1654	N07	E52	6583	04	16.6	14	SF		3	E		16		
HOLL		1747	1753	1759	N06	E53	6583	04	16.7	12	SF		3	E		30		
HOLL		2006	2011	2021	N06	E52	6583	04	16.7	15	SF		3	E		62		F
PALE		2007	2007	2014	N07	E52	6583	04	16.7	7	SF		3	E		15		
RAMY		2008	2008	2015	N06	E52	6583	04	16.7	7	SF		3	E		25		
HOLL		2028	2033	2055	S11	W44	6570	04	9.5	27	1N	C 4.8	3	E		112		H
RAMY		2032	2034	2041	S10	W44	6570	04	9.5	9	SF		3	E		26		
PALE		2032	2035	2043	S10	W40	6570	04	9.8	11	SF		3	E		52		FH
HOLL		2128	2131	2138	N09	E45	6583	04	16.3	10	SF		3	E		35		
HOLL		2136	2142	2155	S19	W60	6566	04	8.3	19	1N		3	E		124		
PALE		2142E	2142U	2147	S21	W60	6566	04	8.3	5D	SF		3	E		15		
LEAR		2317	2334	2412	N09	E45	6583	04	16.3	55	1N		3	E		126		FE
LEAR		2320	2321	2337	S12	W47	6570	04	9.4	17	1N		3	E		104		FE
GOES		2320E	2325	2332D						12D		C 5.5						
HOLL		2347E	2347U	2415D	N08	E44	6583	04	16.3	28D	SF		2	E		52		
GOES	13	0025E	0029	0035D						10D		C 4.8						
LEAR		0135	0142	0211	N07	E47	6583	04	16.6	36	SN		3	E		79		
GOES		0141E	0150	0205D						24D		C 8.5						
LEAR		0251	0252	0301	N09	E42	6583	04	16.3	10	SF		3	E		53		
PALE		0308	0309	0314	N30	W01	6580	04	13.0	6	SF		3	E		12		
PALE		0334	0335U	0353D	S26	W57	6566	04	8.7	19D	SF		3	E		29		
GOES		0519E	0521	0531D						12D		C 9.2						
GOES		0841	0852	1007						86		M 3.1						
HOLL		1351	1355	1408	S12	W55	6570	04	9.4	17	SF		3	E		43		
HOLL		1515	1526	1553	N09	E39	6583	04	16.6	38	SF		3	E		57		F
HOLL		1546	1547	1556	S30	E51	6587	04	17.7	10	SF		3	E		26		
HOLL		1615	1619	1649	S25	W64	6566	04	8.7	34	SF		3	E		34		
RAMY		1659	1711	1730	S08	W58	6570	04	9.3	31	SF		3	E		56		F
HOLL		1703	1710	1743	S10	W54	6570	04	9.6	40	SN	C 5.4	4	E		96		E
PALE		1726E	1726U	1735D	S09	W59	6570	04	9.3	9D	SF		3	E		28		F
HOLL		1755	1758	1808	S10	W51	6570	04	9.9	13	SF		3	E		21		
HOLL		1756	1759	1815	N08	E38	6583	04	16.6	19	SF		3	E		20		
HOLL		1919	1921	1924D	S10	E90		04	20.6	5D	SF		2	E		17		
HOLL		1930	1931	1959	S24	E12	6582	04	14.7	29	SF		3	E		65		F
HOLL		2347E	2347U	2415D	N08	E44	6583	04	17.3	28D	SF		2	E		52		
GOES	14	0042E	0045	0050D						8D		C 6.7						
LEAR		0113E	0127	0156	N06	E34	6583	04	16.6	43D	SF		3	E		41		F
LEAR		0315	0344	0439	S27	E16	6582	04	15.4	84	2N	M 1.5	3	E		382		F
LEAR		0344	0354	0439	S27	E33		04	16.7	55	SF		3	E		89		F
LEAR		0423	0427	0444	S12	W64	6570	04	9.4	21	1N		3	E		183		
LEAR		0541	0542	0604	N07	E28	6583	04	16.3	23	SN	C 8.7	3	E		75		F
SVTO		0844	0846	0854	S09	E86		04	20.8	10	SF	C 4.2	3	E		82		
LEAR		0844	0850	0856	S12	E80		04	20.4	12	SN		3	E		93		
SVTO		0957	0959	1009	S10	E84		04	20.7	12	SF	C 3.2	3	E		87		
SVTO		1027	1029	1033	S07	E81		04	20.5	6	SF		3	E		36		
GOES		1135	1140	1144						9		C 4.6						
HOLL		1258	1301	1310	S09	E80		04	20.5	12	SN		2	E		89		FH
SVTO		1304E	1304U	1310	S05	E82		04	20.7	6D	SF	M 1.7	3	E		83		
SVTO		1434	1434	1443	N14	E43	6592	04	17.8	9	SF	C 3.4	3	E		16		
SVTO		1454	1457	1517	S05	E80		04	20.6	23	SF		3	E		14		
HOLL		1503	1507	1514	S07	E82		04	20.8	11	SF	C 5.4	4	E		25		
HOLL		1516	1517	1522	S18	E25		04	16.5	6	SF		4	E		17		
HOLL		1616	1626	1655	S09	W69	6570	04	9.5	39	SF	C 5.2	3	E		86		
SVTO		1626	1626	1638	S09	W74	6570	04	9.1	12	SF		3	E		10		
RAMY		1629	1629	1639	S07	W72	6570	04	9.3	10	SF		3	E		28		
HOLL		1649	1649	1659	S17	E26		04	16.7	10	SF		3	E		23		
RAMY		1651	1651	1655	N13	E54	6592	04	18.8	4	SF		3	E		25		
PALE		1651E	1651U	1700	N13	E55	6592	04	18.8	9D	SF		3	E		17		
GOES		1658	1703	1708						10		C 7.2						
HOLL		1921	1924	1932	N10	E25	6583	04	16.7	11	SF	C 3.0	3	E		40		F
RAMY		1922	1925	1929	N11	E25	6583	04	16.7	7	SF		3	E		38		

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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	14	2004	2006	2009	N28	W20	6580	04	13.3	5	SF		3	E		11		F
HOLL		2036	2042	2054	N12	E53	6592	04	18.8	18	SF	C 3.4	3	E		38		F
RAMY		2040	2041	2044	N12	E51	6592	04	18.7	4	SF		3	E		21		
HOLL		2040	2043	2103	S11	W71	6570	04	9.5	23	SF		3	E		45		F
HOLL		2121	2131	2136	S32	E66		04	20.1	15	SF		3	E		27		F
HOLL		2205	2207	2211	S19	E22	6594	04	16.6	6	SF		3	E		45		FE
HOLL		2210	2246	2305	N12	E52	6592	04	18.8	55	SF		3	E		45		F
HOLL		2236	2236	2241	S12	E71	6593	04	20.3	5	SF		3	E		12		
HOLL		2253	2254	2303	S20	W83	6566	04	8.6	10	SF		3	E		20		
HOLL		2301	2310	2349	S20	E23	6594	04	16.7	48	SF		3	E		15		F
HOLL		2302	2326	2426	S10	W71	6570	04	9.6	84	SF		3	E		52		F
HOLL		2311	2312	2323	S29	W02	6582	04	14.8	12	SF		3	E		10		F
LEAR		2320	2325	2401	S10	W73	6570	04	9.5	41	SF		3	E		34		
LEAR		2324	2325	2402	N12	E50	6592	04	18.7	38	SF		3	E		30		F
HOLL		2324	2327	2439	N28	W21	6580	04	13.3	75	SF		3	E		18		
HOLL		2325	2326	2332	S12	E77	6593	04	20.8	7	SF		3	E		25		F
HOLL		2329	2335	2358	N06	E20	6583	04	16.5	29	SN	C 4.5	3	E		42		FE
LEAR		2333	2334	2358	N06	E17	6583	04	16.2	25	SF		3	E		22		F
LEAR	15	0020	0021	0027	S12	E73	6593	04	20.5	7	SF		3	E		27		
HOLL		0020	0021	0027	S11	E76	6593	04	20.7	7	SF		3	E		22		F
HOLL		0027	0027	0039	S26	W03	6582	04	14.8	12	SF		3	E		11		
HOLL		0031	0032	0039	S10	W71	6570	04	9.7	8	SF		3	E		12		
LEAR		0040	0041	0052	N13	E50	6592	04	18.8	12	SF		3	E		21		
LEAR		0040	0042	0054	S12	E73	6593	04	20.5	14	SF		3	E		27		
GOES		0041E	0044	0051D						10D		C 4.3						
GOES		0211	0225	0234						23		C 3.8						
PALE		0349	0358	0425D	N06	E16	6583	04	16.3	36D	SF	C 6.4	3	E		24		
GOES		0413E	0417	0420D						7D		C 5.6						
GOES		0607E	0617	0636D						29D		C 7.2						
GOES		0656E	0658	0710D						14D		C 4.6						
GOES		0812	0822	0840						28		C 5.5						
SVTO		0923	1015U	1021D	S11	E70	6593	04	20.6	58D	2F	M 9.8	2	E		334		F
LEAR		0935	0940	0956D	S10	E68	6593	04	20.5	21D	1F		2	E		123		F
SVTO		1155E	1159U	1203	N06	E10	6583	04	16.2	8D	SF	C 8.3	2	E		16		FH
SVTO		1331	1333	1340	N13	E41	6592	04	18.6	9	SF		3	E		17		
HOLL		1355	1407	1509	S12	W77	6570	04	9.8	74	SF		3	E		70		
HOLL		1417	1417	1424	N17	W16	6581	04	14.4	7	SF		3	E		17		F
HOLL		1425	1437	1455	N28	W28	6580	04	13.4	30	SF		3	E		23		F
HOLL		1428	1435	1523	S10	E65	6593	04	20.5	55	2B	M 2.5	3	E		293		FH
SVTO		1429	1434U	1505	S11	E65	6593	04	20.5	36	1F		3	E		167		FH
HOLL		1430	1443	1539	N05	E12	6583	04	16.5	69	SN		3	E		97		FE
SVTO		1434E	1443U	1521	N06	E11	6583	04	16.4	47D	SF		3	E		68		F
RAMY		1451E	1451U	1514D	N05	E11	6583	04	16.4	23D	SF		3	E		36		F
HOLL		1456	1457	1508	N27	W30	6580	04	13.3	12	SF		3	E		14		F
SVTO		1507	1509	1518	S10	E63	6593	04	20.4	11	SF		3	E		21		F
HOLL		1511	1530	1556	S12	W78	6570	04	9.7	45	SF		3	E		46		
HOLL		1518	1523	1552	S24	W12	6582	04	14.7	34	SF		3	E		13		
HOLL		1540	1548	1553	N05	E12	6583	04	16.5	13	SF		3	E		10		
HOLL		1544	1554	1631	S13	E67	6593	04	20.7	47	1B	M 4.2	3	E		146		FH
SVTO		1552	1553U	1608	S11	E66	6593	04	20.6	16	SF		2	E		23		F
RAMY		1553	1555	1618	S13	E69	6593	04	20.9	25	SF		3	E		42		F
HOLL		1558	1602	1619	S11	W81	6570	04	9.6	21	SF		3	E		20		
HOLL		1620	1621	1635	S30	E27	6587	04	17.8	15	SF		3	E		17		F
HOLL		1632	1643	1744	S13	E68	6593			72	SF			E		68		K
HOLL		1632	1714	1744	S13	E68	6593	04	20.8	72	SF		3	E		49		FE
HOLL		1709	1714	1736	N05	E11	6583	04	16.5	27	SF		3	E		27		F
HOLL		1711	1714	1718	S12	W78	6570	04	9.8	7	SF		3	E		12		
HOLL		1739	1741	1747	N05	E11	6583	04	16.5	8	SF		3	E		17		F
HOLL		1739	1741	1753	N28	W31	6580	04	13.3	14	SF		3	E		22		F
HOLL		1810	1812	1816	N05	E10	6583	04	16.5	6	SF		3	E		13		F
HOLL		1815	1818	1823	S11	E64	6593	04	20.6	8	SN	C 3.5	3	E		42		F
PALE		1829E	1830U	1845	N06	E07	6583	04	16.3	16D	SF	C 4.6	3	E		11		F
PALE		1901	1905	1950D	N06	E08	6583	04	16.4	49D	1N	M 3.9	3	E		177		F
HOLL		1903E	1903U	2104D	N06	E08	6583	04	16.4	121D	1N		2	E		140		FE
HOLL		1923	1929	1937	S11	E65	6593	04	20.7	14	SF		3	E		18		
RAMY		1932E		1944D	N06	E10	6583	04	16.6	12D	SF		3	E				F
HOLL		1945	1946	1952	S11	E62	6593	04	20.5	7	SF		3	E		36		

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Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Imp See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
GOES	15	2003	2015	2027						24		C 6.1						
GOES		2113E	2114	2120D						7D		C 4.4						
PALE		2116	2144U	2150D	N29	W31	6580	04	13.4	34D	SF		3	E		15		F
PALE		2215	2220U	2231D	N29	W38	6580	04	12.9	16D	SF		3	E		56		F
PALE		2215	2221U	2232D	S14	E58	6593	04	20.3	17D	SF	C 4.3	3	E		15		F
GOES		2249	2258	2306						17		C 5.8						
LEAR		2323	2344	2430	N29	W33	6580	04	13.4	67	SF		3	E		72		FE
LEAR		2355	2405	2422	S12	E57	6593	04	20.3	27	SF		3	E		22		
GOES	16	0058E	0106D	0135						37D		M 1.3						
GOES		0136	0140	0235						59		M 2.4						
PALE		0245	0310	0338	N26	W35	6580	04	13.4	53	1F	M 1.1	3	E		124		F
GOES		0251E	0253	0256D						5D		C 5.9						
GOES		0345E	0347	0355D						10D		M 1.0						
LEAR		0351	0405	0444	S12	E57	6593	04	20.4	53	SN		3	E		60		FE
PALE		0402	0408	0425	S13	E62	6593	04	20.8	23	SF		3	E		73		
LEAR		0504	0520	0542	S12	E61	6593	04	20.8	38	SN	M 1.5	3	E		99		FE
LEAR		0604	0605	0609	N28	W40	6580	04	13.1	5	SN	M 1.8	3	E		26		FE
SVTO		0606E	0621	0718	N28	W40	6580	04	13.1	72D	SF		3	E		68		
SVTO		0623	0650	0706	S14	E62	6593	04	20.9	43	SF		3	E		28		F
SVTO		0757	0757	0830	N28	W39	6580	04	13.3	33	SF		3	E		22		
SVTO		0757	0824	0905	N06	E02	6583	04	16.5	68	1N		3	E		136		FE
LEAR		0759	0818	0901	N05	E00	6583	04	16.3	62	1N		3	E		127		FE
SVTO		0814	0821	0831	S24	W19	6582	04	14.9	17	SF	M 1.3	3	E		22		
SVTO		0835	0837	0843	N26	W40	6580	04	13.2	8	SF		3	E		23		
SVTO		0852	0855	0913	N28	W40	6580	04	13.2	21	SF		3	E		32		
LEAR		0855	0856	0858	N29	W37	6580	04	13.5	3	SF	C 6.5	3	E		15		FE
SVTO		0941	0958	1019	S24	W20	6582	04	14.8	38	SF	C 5.1	3	E		56		F
SVTO		0944	0953	1007	N28	W41	6580	04	13.2	23	SF		3	E		67		
SVTO		1053	1053	1107	S09	E52	6593	04	20.3	14	SF	C 6.4	4	E		24		
SVTO		1058	1059	1138	N28	W41	6580	04	13.2	40	SF		4	E		16		
RAMY		1109	1116	1126	N29	W38	6580	04	13.5	17	SF		3	E		16		
RAMY		1129	1129	1134	S22	W22	6582	04	14.8	5	SF		3	E		17		F
SVTO		1129	1129	1142	S22	W22	6582	04	14.8	13	SF		4	E		31		F
SVTO		1129	1133	1143	N08	E01	6583	04	16.5	14	SF		4	E		20		
SVTO		1139	1204	1235	S09	E51	6593	04	20.3	56	SF	M 1.8	4	E		92		
SVTO		1139	1213	1220	N29	W45	6580	04	12.9	41	SF		4	E		30		
RAMY		1142	1143	1147	N28	W40	6580	04	13.4	5	SF		3	E		19		
RAMY		1143	1154	1226	S11	E52	6593	04	20.4	43	SF		3	E		40		
SVTO		1237	1329	1406	N28	W44	6580	04	13.1	89	SF		4	E		34		
SVTO		1320	1402	1516	N06	W03	6583	04	16.3	116	1N	M 2.4	4	E		156		
SVTO		1321	1347	1426	S10	E45	6593	04	19.9	65	SF		4	E		21		
RAMY		1324	1351	1439	N06	W02	6583	04	16.4	75	SN		3	E		84		F
RAMY		1324	1400	1439	N06	W02	6583			75	SN			E		98		K
SVTO		1331	1339	1352	S20	E01	6594	04	16.6	21	SF		4	E		15		
HOLL		1333E	1333U	1356D	N29	W45	6580	04	13.0	23D	SF		1	E		19		
HOLL		1339	1353	1440	N06	W02	6583	04	16.4	61	1B		3	E		130		FE
SVTO		1357	1403	1435	S25	W20	6582	04	15.0	38	SN		4	E		83		
RAMY		1359	1359	1406	S11	E52	6593	04	20.5	7	SF		3	E		15		F
RAMY		1402	1404	1416	S22	W24	6582	04	14.7	14	SF		3	E		51		F
HOLL		1403	1403	1413	S23	W23	6582	04	14.8	10	SN		3	E		59		
SVTO		1417	1425	1440	N28	W44	6580	04	13.1	23	SF	C 5.9	4	E		64		
HOLL		1423	1424	1431	N28	W44	6580	04	13.2	8	SF		3	E		48		
SVTO		1445	1449	1513	N28	W45	6580	04	13.1	28	SF	C 4.9	3	E		22		
SVTO		1528	1551	1614	N28	W45	6580	04	13.1	46	SF		3	E		51		
RAMY		1528	1551	1622	N29	W42	6580	04	13.3	54	SF		3	E		65		F
HOLL		1558	1601	1637	N06	W02	6583	04	16.5	39	1B	M 3.3	3	E		141		FE
RAMY		1559	1600	1629	N06	W03	6583	04	16.4	30	SN		3	E		69		F
SVTO		1559	1601	1634D	N06	W04	6583	04	16.4	35D	SN		3	E		88		F
HOLL		1737	1738	1741	S10	E53	6593	04	20.7	4	SF		3	E		17		F
HOLL		1821	1823	1924	N06	W05	6583	04	16.4	63	SF	C 4.6	3	E		70		
RAMY		1822	1823	1836D	N06	W04	6583	04	16.5	14D	SF		3	E		20		
PALE		1848	1852	1916	N06	W04	6583	04	16.5	28	SF		3	E		23		
HOLL		1850	1857	1920	N28	W46	6580	04	13.2	30	SF	C 3.3	3	E		42		
RAMY		1954	1955	1958	N28	W44	6580	04	13.4	4	SF		3	E		12		H
RAMY		2022	2022	2037	N08	W04	6583	04	16.5	15	SF	C 5.1	3	E		43		F
HOLL		2026E	2026U	2034D	N04	W05	6583	04	16.5	8D	SF		2	E		50		F
HOLL		2111	2112	2148D	N05	W06	6583	04	16.4	37D	SF		3	E		37		F

Hα S O L A R F L A R E S

APRIL 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
PALE	16	2129	2130	2143	S09	E47	6593	04	20.4	14	SF		3	E		34		
HOLL		2136	2139	2142	S11	E48	6593	04	20.5	6	SF		3	E		19		
HOLL		2152	2202	2211	S07	E52	6593	04	20.8	19	SF		3	E		18		
HOLL		2217	2224	2244D	N08	W06	6583	04	16.5	27D	1N	C 8.3	3	E		118		FE
PALE		2222E	2224	2241	N05	W07	6583	04	16.4	19D	SF		3	E		52		F
HOLL		2236	2243U	2308D	S13	E44	6593	04	20.3	32D	1N	M 1.0	3	E		168		F
PALE		2238	2240U	2307	S11	E47	6593	04	20.5	29	SF		3	E		85		FH
PALE		2337E	2359U	2410	S10	E46	6593	04	20.4	33D	SF	M 1.1	3	E		13		
GOES	17	0025	0027	0031						6		M 1.2						
PALE		0038E	0038U	0051	S11	E42	6593	04	20.2	13D	SF		3	E		17		F
PALE		0145	0147	0158	S08	E50	6593	04	20.8	13	SN	M 1.7	3	E		84		F
LEAR		0150E	0208U	0212	N29	W47	6580	04	13.4	22D	SF		3	E		79		
PALE		0319E	0321	0326	N27	W50	6580	04	13.2	7D	SF		3	E		16		H
LEAR		0639	0654	0743	S12	E42	6593	04	20.4	64	1N	M 2.2	3	E		168		FE
GOES		0943	0950	0959						16		C 3.5						
RAMY		1202	1205	1209	N28	W52	6580	04	13.4	7	SF		3	E		26		F
SVTO		1322	1323	1327	S09	E27		04	19.6	5	SF		3	E		25		
RAMY		1402	1402	1410	N27	W53	6580	04	13.4	8	SF		3	E		27		
RAMY		1456	1456	1508	N14	W43	6581	04	14.4	12	SF		3	E		20		F
HOLL		1459E	1618	1711	N27	W54	6580	04	13.4	132D	1N		3	E		157		FE
HOLL		1502	1505	1521	N12	W45	6581	04	14.2	19	SF		3	E		41		F
GOES		1616	1622	1628						12		C 8.6						
PALE		1639E	1647	1716D	N28	W55	6580	04	13.4	37D	1F		3	E		130		F
HOLL		1657	1657	1727	S11	E34	6593	04	20.3	30	SF	C 4.5	3	E		22		F
PALE		1657	1658	1719	S11	E33	6593	04	20.2	22	SF		3	E		20		F
HOLL		1711	1715	1757	S19	W17	6594	04	16.4	46	SF		3	E		54		F
HOLL		1813	1814	1820	N28	W56	6580	04	13.4	7	SF		3	E		31		F
HOLL		1850	1858	1902	S11	E33	6593	04	20.3	12	SF		3	E		14		
HOLL		2031	2031	2041	S19	W17	6594	04	16.5	10	SF		3	E		12		
HOLL		2046	2047	2058	S11	E32	6593	04	20.3	12	SF		3	E		17		F
HOLL		2114	2114	2126	N29	W59	6580	04	13.2	12	SF		4	E		17		F
HOLL		2120	2142	2214	S11	E32	6593	04	20.3	54	SN		3	E		50		F
PALE		2149E	2149U	2158	N26	W58	6580	04	13.4	9D	SF		3	E		28		
HOLL		2149	2149	2159	N27	W60	6580	04	13.2	10	SF		3	E		29		
PALE		2149E	2149U	2200	S11	E32	6593	04	20.3	11D	SF		3	E		19		F
HOLL		2235	2241	2252	N27	W60	6580	04	13.3	17	SN	C 4.1	3	E		95		E
PALE		2236E	2237U	2254D	N23	W58	6580	04	13.5	18D	SF		3	E		31		
LEAR		2330	2332	2346	N14	E06	6592	04	18.4	16	SF		3	E		64		
HOLL		2338	2345U	2357D	N28	W60	6580	04	13.3	19D	1N		2	E		101		
HOLL		2356E	2357U	2437D	S10	E31	6593	04	20.3	41D	SF		2	E		35		E
PALE		2357E	2357U	2405	S10	E32	6593	04	20.4	8D	SF		3	E		12		F
LEAR	18	0040	0055	0132	S09	E36	6593	04	20.7	52	SF		3	E		39		
HOLL		0043	0046	0056	N28	W61	6580	04	13.3	13	SN		2	E		89		E
LEAR		0044	0047	0059	N27	W58	6580	04	13.5	15	SN	C 4.3	3	E		76		
PALE		0044	0051	0101	S10	E30	6593	04	20.3	17	SF		3	E		14		F
PALE		0045	0048	0054	N26	W61	6580	04	13.3	9	SF		3	E		80		
PALE		0139	0140	0147	S10	E33	6593	04	20.5	8	SF	C 4.6	3	E		32		F
PALE		0234	0242	0251	N26	W60	6580	04	13.4	17	1F		3	E		139		
LEAR		0529E	0532	0541	S13	E25	6593	04	20.1	12D	SF	C 5.5	2	E		38		F
GOES		0640E	0643	0653D						13D		C 3.4						
SVTO		1021	1023	1025	N26	W65	6580	04	13.4	4	SF		3	E		15		
GOES		1112	1124	1126						14		C 2.4						
SVTO		1121	1139	1200	N04	W30	6583	04	16.2	39	SF		3	E		66		F
RAMY		1123	1123	1132	N06	W27	6583	04	16.4	9	SF		3	E		31		F
RAMY		1136	1141	1150	N06	W26	6583	04	16.5	14	SF		3	E		57		
SVTO		1158	1211	1217	N15	W55	6581	04	14.3	19	SF		3	E		42		
SVTO		1232	1232	1237	N13	W01	6592	04	18.4	5	SF	C 2.9	3	E		24		
HOLL		1347	1357	1400D	N13	W01	6592	04	18.5	13D	SF		3	E		34		F
RAMY		1506	1506	1518	N06	W28	6583	04	16.5	12	SF	C 3.1	3	E		30		F
SVTO		1506	1509	1521	N08	W30	6583	04	16.4	15	SF		3	E		68		
HOLL		1507	1508	1513	N06	W29	6583	04	16.4	6	SF		2	E		41		F
SVTO		1536	1537	1543	S13	E23	6593	04	20.4	7	SF		3	E		31		
HOLL		1720	1722	1734	N12	W32	6583	04	16.3	14	SF		3	E		20		
HOLL		1736	1739	1748	N13	E01	6592	04	18.8	12	SF		3	E		28		F
HOLL		1736	1753	1817	N08	W32	6583	04	16.3	41	SF	C 2.8	3	E		29		F
HOLL		1830	1833	1835	N28	W71	6580	04	13.2	5	SF		3	E		12		

Hα SOLAR FLARES

APRIL 1991

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Xray	See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
PALE	18	1844	1844	1855D	S09	E20	6593	04	20.3	11D	SF	C 4.5	3	E		15		
PALE		2141	2141	2156	N04	W33	6583	04	16.4	15	SF	C 2.0	3	E		26		F
GOES	19	0050	0053	0055						5		C 1.9						
LEAR		0055	0109	0137	N05	W34	6583	04	16.5	42	SF	C 3.0	3	E		34		
PALE		0103	0112	0124	N04	W35	6583	04	16.4	21	SF		3	E		20		F
GOES		0203	0207	0210						7		C 2.5						
PALE		0342	0345	0353	N13	W09	6592	04	18.5	11	SF	C 3.3	3	E		56		F
LEAR		0419	0459U	0538	N12	W09	6592	04	18.5	79	SN	C 3.4	3	E		98		
SVTO		0448	0506	0515	N13	W10	6592	04	18.4	27	SF		2	E		81		
LEAR		0644	0657	0714	N13	W08	6592	04	18.7	30	SN	C 5.7	3	E		51		
SVTO		0700E	0700U	0712	N13	W10	6592	04	18.5	12D	SF		3	E		35		F
GOES		1046	1051	1103						17		M 1.7						
SVTO		1140	1157	1217	N12	W42	6583	04	16.3	37	SF		2	E		16		
SVTO		1259	1303	1401	S09	E14	6593	04	20.6	62	SF		2	E		72		E
RAMY		1300	1302	1329	S10	E16	6593	04	20.7	29	SF	C 5.4	4	E		27		H
HOLL		1301E	1301U	1332	S10	E09	6593	04	20.2	31D	SF		1	E		27		H
HOLL		1417	1420	1431	N15	W21	6592	04	18.0	14	SF	C 2.9	3	E		31		F
HOLL		1624	1628	1632	S10	E09	6593	04	20.3	8	SF		3	E		21		
GOES		1808	1812	1816						8		C 2.3						
GOES		2109	2114	2120						11		C 3.1						
HOLL	20	0029	0032	0104	N15	W39	6592	04	17.1	35	SF	C 2.6	3	E		17		F
PALE		0239	0240	0247	N06	W52	6583	04	16.2	8	SF	C 3.7	3	E		21		
GOES		0619	0629	0644						25		M 1.5						
SVTO		0631	0632	0636	S26	W75	6582	04	14.4	5	SF		3	E		17		
SVTO		0741	0742	0752	N09	W52	6583	04	16.4	11	SF		3	E		18		
SVTO		0827	0852U	1124D	N08	W50	6583	04	16.6	177D	3N	X 1.0	3	E		942		FH
GOES		0842	0901	0934						52		M 3.5						
SVTO		0854	0857	0902	N14	W80	6581	04	14.3	8	SF		3	E		19		
RAMY		1246	1247	1255	N15	W28	6592	04	18.4	9	SF		3	E		24		F
RAMY		1309	1313	1317	N09	W50	6583	04	16.8	8	SF		3	E		16		
HOLL		1339	1343	1352	N14	W39	6592	04	17.6	13	SF		3	E		16		F
RAMY		1358	1358	1410	S12	W29	6599	04	18.4	12	SF		3	E		27		F
HOLL		1434	1437	1440	N13	W25	6592	04	18.7	6	SF		3	E		48		F
RAMY		1634	1636	1649	N16	W30	6592	04	18.4	15	SF		3	E		13		F
HOLL		1634	1636	1707	N14	W31	6592	04	18.3	33	SF		3	E		48		F
RAMY		1641	1642	1650	S19	W48	6594	04	17.0	9	SF	C 7.1	3	E		13		F
HOLL		1724	1736	1740	S12	W09	6593	04	20.0	16	SF		3	E		27		
HOLL		1858	1904	1911	N08	W59	6583	04	16.4	13	SF		3	E		19		
HOLL		1922	1922	1930	N07	W60	6583	04	16.3	8	SF		3	E		12		F
HOLL		2116	2116	2122	N09	W60	6583	04	16.4	6	SF		3	E		21		F
HOLL		2138	2141	2149	N09	W60	6583	04	16.4	11	SF		3	E		63		F
HOLL		2138	2141	2204	S26	W36	6587	04	18.1	26	SF		3	E		26		F
PALE		2142	2142	2147	N06	W61	6583	04	16.3	5	SF		3	E		22		
HOLL		2150	2151	2203	N07	W61	6583	04	16.3	13	SF		3	E		65		F
PALE		2150	2151	2205D	N08	W61	6583	04	16.3	15D	SF		3	E		31		
HOLL		2222	2234	2241	S19	W60	6594	04	16.3	19	SF		3	E		16		F
HOLL		2226	2234	2259	S25	W39	6587	04	17.9	33	1F	C 4.0	3	E		123		F
HOLL		2240	2244	2253	N15	W43	6592	04	17.7	13	SF		3	E		26		F
HOLL		2300	2302	2305	S25	W40	6587	04	17.8	5	SF		3	E		14		F
LEAR	21	0504E	0505	0633	S11	W10				89D	1F			E		153		K
LEAR		0504E	0542	0633	S11	W10	6593	04	20.4	89D	1F	C 8.3	3	E		217		F
LEAR		0733	0737	0742	S16	W63	6594	04	16.5	9	SF		3	E		30		F
LEAR		0744	0753	0824	S23	E15		04	22.5	40	SF		3	E		29		F
GOES		0831	0834	0840						9		C 2.0						
RAMY		1930	1932	1935	S10	W19	6593	04	20.4	5	SF		3	E		19		
HOLL		2056	2057	2109	N14	W48	6592	04	18.2	13	SF		3	E		34		
GOES		2108	2117	2125						17		C 4.9						
HOLL		2219	2221	2233	S05	W14	6593	04	20.9	14	SF		3	E		20		F
GOES	22	0047	0053	0058						11		C 4.4						
LEAR		0514E	0514U	0519	N11	W20	6593	04	20.7	5D	SF		3	E		13		F
SVTO		0707	0708	0718	S28	W90	6582	04	15.3	11	SF	C 5.9	3	E		11		F
SVTO		0738	0740	0747	S13	W24	6593	04	20.5	9	SF		3	E		48		
HOLL		1526	1533	1536	S14	W59	6599	04	18.2	10	SF		3	E		20		F
HOLL		1835	1839	1851	S11	W33	6593	04	20.3	16	SF		3	E		13		F

Hα S O L A R F L A R E S

APRIL 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
GOES	22	1944	1951	1957						13		C 3.1						
HOLL		2156	2156	2204	N10	W72	6583	04	17.5	8	SF		2	E		26		F
GOES	23	0403	0407	0410						7		C 2.5						
HOLL		1327	1330	1337	S14	W41	6593	04	20.5	10	SF		2	E		14		H
HOLL		1403	1406	1424	S13	W47	6593	04	20.0	21	SF		3	E		24		
PALE		1845E	1845U	1931D	S13	W49	6593	04	20.1	46D	SF		3	E		19		
SVTO	24	0533	0534	0538	S14	W50	6593	04	20.4	5	SF		3	E		13		
PALE		1834	1835	1839	S22	W62	6602	04	20.0	5	SF	C 1.0	3	E		21		F
LEAR	25	0201	0201	0209	S12	W73	6600	04	19.6	8	SF	B 9.1	3	E		43		
GOES		0316	0322	0324						8		C 1.1						
GOES		0329	0333	0338						9		C 1.2						
GOES		0416	0420	0422						6		C 1.0						
GOES		1104	1108	1117						13		C 1.1						
HOLL		1525E	1527U	1539	S19	E71		05	1.1	14D	SF		2	E		22		
HOLL		2045	2045	2055	S21	W80	6602	04	19.7	10	SF		3	E		24		
HOLL	26	0052	0054	0101	S29	E32		04	28.5	9	SF		2	E		25		F
HOLL		0056	0058	0106	S28	W26	6603	04	24.0	10	SF		2	E		22		F
LEAR		0305	0316	0355	S29	W29	6603	04	23.8	50	SF	C 1.3	3	E		46		F
HOLL		1351	1354	1404	N07	E79	6605	05	2.5	13	SF		2	E		63		
HOLL		1606	1613	1649	N20	E50				43	1F			E		121		K
HOLL		1606	1623	1649	N20	E50		04	30.5	43	1F	C 3.3	3	E		170		F
RAMY		1610	1612	1629	N20	E52		04	30.6	19	SF		3	E		48		F
HOLL		1620	1635	1643	N08	E76	6605	05	2.4	23	SF		3	E		28		
LEAR	27	0640E	0645U	0720	N08	E61	6605	05	1.8	40D	SF		3	E		40		F
SVTO		1325	1332	1358	S30	W46	6603	04	23.9	33	SF		3	E		19		
HOLL		1328	1339	1353	S30	W47	6603	04	23.9	25	SF		3	E		33		F
RAMY		1338	1343	1346	S30	W46	6603	04	23.9	8	SF	C 2.1	4	E		15		
HOLL		1452	1452	1459	N08	E63	6605	05	2.3	7	SF		3	E		15		F
HOLL		1510	1513	1517	S30	W47	6603	04	23.9	7	SF		3	E		16		F
HOLL		1650	1654	1701	S30	W47	6603	04	24.0	11	SF		3	E		19		F
HOLL		1710	1714	1740	S30	W50	6603	04	23.8	30	SF		3	E		86		FE
HOLL		1710	1720	1740	S30	W50	6603			30	SF			E		71		K
RAMY		1712	1715	1720	S29	W49	6603	04	23.9	8	SF		3	E		27		
PALE		1720	1729	1828	S29	W48	6603	04	23.9	68	SF	C 2.4	3	E		36		F
HOLL		1751	1800	1832	S29	W49	6603	04	23.9	41	SF		3	E		29		
HOLL		1751	1807	1832	S29	W49	6603			41	SN			E		31		K
HOLL		1909	1912	1920	S29	E09		04	28.5	11	SF		3	E		42		
PALE		1924	1925	1928	S29	W49	6603	04	24.0	4	SF		3	E		13		
GOES		2204	2214	2224						20		C 2.3						
PALE		2329	2338	2420D	S28	W53	6603	04	23.8	51D	1F	C 9.7	3	E		107		
HOLL		2335E	2337U	2402D	S29	W53	6603	04	23.8	27D	SN		2	E		87		FE
GOES	28	0019	0025	0036						17		C 5.4						
GOES		0428	0437	0446						18		C 1.4						
SVTO		0453E	0507	0611	S31	W56	6603	04	23.8	78D	1F	C 6.3	3	E		117		F
GOES		0543	0558	0615						32		C 3.1						
LEAR		0607E	0608	0624	S29	W55	6603	04	23.9	17D	1F		3	E		161		F
SVTO		0746	0757	0846	S31	W56	6603	04	23.9	60	1N	M 3.5	4	E		133		FE
SVTO		1117	1122	1130	S31	W58	6603	04	23.9	13	SF		3	E		26		
SVTO		1131	1134	1155	N16	E23		04	30.2	24	1F		3	E		155		UF
RAMY		1132	1133	1144	N15	E24		04	30.3	12	SF		3	E		26		F
SVTO		1132	1137	1152	S31	W57	6603	04	24.0	20	SF	C 2.9	3	E		31		
SVTO		1152	1154	1201	S04	E72	6611	05	3.9	9	SF		3	E		22		
SVTO		1430	1432	1435	S31	W59	6603	04	23.9	5	SF	C 2.9	3	E		20		
SVTO		1555	1603	1647	S30	W62	6603	04	23.8	52	SF	C 1.9	3	E		50		
HOLL		1601	1603	1610	S29	W60	6603	04	24.0	9	SF		3	E		33		
HOLL		1702	1709	1721	S21	W81	6601	04	22.5	19	SF		2	E		50		H
HOLL		1840	1844	1849	S30	W60	6603	04	24.0	9	SF	C 1.6	3	E		43		
PALE		1840	1845	1859	S31	W60	6603	04	24.0	19	SF		3	E		50		
PALE		1849	1856	1900	S31	W04	6612	04	28.5	11	SF		4	E		15		
PALE		2133	2135	2147	S31	W61	6603	04	24.1	14	SF		4	E		34		
LEAR		2338	2341	2348	S28	W59	6603	04	24.4	10	SF		3	E		34		
PALE		2339	2341	2348	S31	W62	6603	04	24.1	9	SF		4	E		37		

Hα S O L A R F L A R E S

APRIL 1991

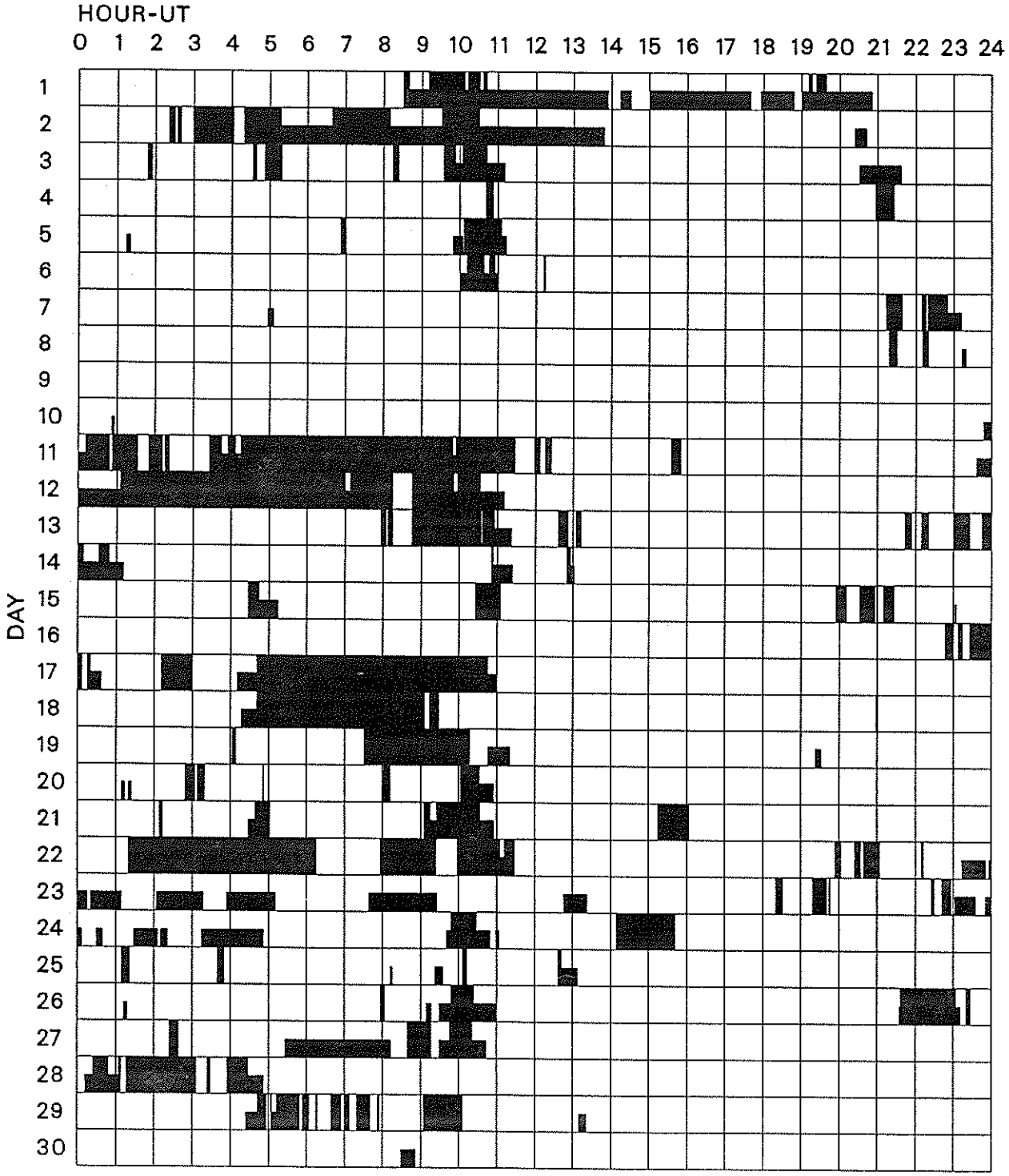
Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	CMP Day	Dur (Min)	Imp Opt	Imp Xray	Obs See	Obs Type	Area Measurement Time (UT)	Area Measurement Apparent (10-6 Disk)	Area Measurement Corr (Sq Deg)	Remarks
LEAR	29	0238	0244	0252	S31	W11	6612	04	28.2	14	SF		3	E		23		
GOES		0409	0423	0431						22		C 1.5						
GOES		0924	0929	0933						9		C 2.0						
GOES		0937	0940	0946						9		C 1.8						
GOES		1248	1252	1256						8		C 1.5						
HOLL		1518	1519	1541	S23	E09	6604	04	30.3	23	SF		3	E		21		
HOLL		1852	1854	1903	S05	E55	6611	05	3.9	11	SF	C 1.0	3	E		12		H
HOLL		2128	2141	2224	S24	E43	6608	05	3.2	56	SF	C 1.2	3	E		57		
PALE		2140	2150	2204	S22	E42	6608	05	3.1	24	SF		3	E		23		F
HOLL		2213	2213	2219	N08	E33	6605	05	2.4	6	SF		3	E		23		
HOLL		2319	2325	2346	N18	E05		04	30.3	27	SF		3	E		24		
LEAR	30	0042	0044	0110	S24	E02	6604	04	30.2	28	SF	B 9.8	3	E		97		F
PALE		0044	0045	0053	S22	E02	6604	04	30.2	9	SF		3	E		24		F
LEAR		0143	0144	0147	S28	W82	6603	04	23.7	4	SF		3	E		54		
LEAR		0234	0240	0246	S29	W80	6603	04	23.8	12	SF		3	E		54		
PALE		0235	0240	0247	S29	W86	6603	04	23.4	12	SF	C 2.6	3	E		45		
LEAR		0501	0502	0506	S28	W85	6603	04	23.6	5	SF	C 4.2	3	E		64		
SVTO		0635	0637	0650	N07	E21	6605	05	1.8	15	SF	B 9.6	3	E		15		
SVTO		0724	0724	0729	S31	W87	6603	04	23.4	5	SF	C 2.1	3	E		15		H
SVTO		0828	0830	0833	S30	W87	6603	04	23.5	5	SF	C 4.2	1	E		36		H
SVTO		0909	0912	0920	S30	W85	6603	04	23.7	11	SF		3	E		17		H
SVTO		1116	1116	1133D	S28	W27	6612	04	28.3	17D	SF	B 9.3	3	E		35		
SVTO		1227	1229	1231	S30	W89	6603	04	23.5	4	SF	C 2.4	3	E		22		
SVTO		1242	1257	1324	N08	E18	6605	05	1.9	42	SF	C 1.5	3	E		29		F
RAMY		1251	1251	1305	N06	E17	6605	05	1.8	14	SF		3	E		32		
HOLL		1257E	1258U	1320D	N06	E19	6605	05	2.0	23D	SF		2	E		25		
RAMY		1306	1306	1308	N05	E17	6605	05	1.8	2	SF		3	E		21		
HOLL		1425	1431	1452	S14	W08	6613	04	30.0	27	SF	C 1.2	3	E		66		F
SVTO		1425	1432	1448	S14	W08	6613	04	30.0	23	SF		3	E		22		F
RAMY		1427	1428	1453	S16	W10	6613			26	SF			E		21		K
RAMY		1427	1437	1453	S16	W10	6613	04	29.8	26	SF		3	E		20		F
HOLL		1507	1510	1513	S29	W83	6603	04	24.1	6	SF		3	E		17		
SVTO		1507	1510	1513	S30	W90	6603	04	23.5	6	SF		3	E		14		
GOES		1522	1525	1528						6		C 1.2						
HOLL		1549	1605	1612	S12	E63		05	5.4	23	SF		3	E		44		
HOLL		2251	2254	2257	S28	W88	6603	04	24.1	6	SF	C 1.7	3	E		39		

"Remarks"

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

INTERVALS OF NO FLARE PATROL OBSERVATION
FOR PRECEDING SOLAR FLARE TABLE

APRIL 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

APRIL 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
01	2695	PALE	8	S	1920.0E	1920.0	1.0D	160.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1920.0E	1920.0	U	26.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1920.0E	1920.0	1.0D	150.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2129.0E	2129.0	1.0D	37.0			QL=2 ST=2 TYP=3
	2695	PALE	8	S	2130.0E	2130.0	1.0D	28.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	2130.0E	2130.0	1.0D	31.0			QL=4 ST=2 TYP=3
02	2695	SVTO	4	S/F	1002.0E	1003.0	11.0D	400.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1002.0E	1003.0	11.0D	210.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	1002.0E	1003.0	838.0D	320.0			QL=2 ST=1 TYP=3
	2695	LEAR	4	S/F	2258.0E	2318.0	44.0D	130.0			QL=2 ST=2 TYP=5
	2695	PALE	20	GRF	2302.0E	2318.0	37.0D	170.0			QL=2 ST=2 TYP=2
	8800	PALE	20	GRF	2311.0E	2337.0	28.0D	65.0			QL=2 ST=2 TYP=2
	8800	LEAR	8	S	2317.0E	2318.0	1.0D	21.0			QL=4 ST=2 TYP=3
05	8800	LEAR	8	S	0253.0E	0254.0	1.0D	58.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0253.0E	0254.0	1.0D	92.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	0947.0E	0947.0	1.0D	49.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0947.0E	0947.0	U	70.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1033.0E	1034.0	1.0D	130.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1034.0E	1034.0	1.0D	73.0			QL=4 ST=2 TYP=3
07	8800	SVTO	8	S	0943.0E	0943.0	1.0D	64.0			QL=4 ST=2 TYP=3
09	2695	LEAR	8	S	0100.0E	0100.0	1.0D	68.0			QL=2 ST=2 TYP=3
	2695	PALE	8	S	0100.0E	0100.0	1.0D	54.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1844.0E	1844.0	1.0D	38.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1844.0E	1845.0	3.0D	33.0			QL=4 ST=2 TYP=3
10	8800	PALE	8	S	2015.0E	2016.0	2.0D	43.0			QL=2 ST=2 TYP=3
11	8800	PALE	8	S	0312.0E	0312.0	U	50.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	0609.0E	0611.0	9.0D	49.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0610.0E	0611.0	6.0D	54.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0839.0E	0840.0	2.0D	58.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0839.0E	0841.0	3.0D	72.0			QL=2 ST=2 TYP=3
	2695	SVTO	8	S	0840.0E	0841.0	2.0D	33.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0841.0E	0841.0	U	21.0			QL=2 ST=2 TYP=3
	8800	SVTO	49	GB	1113.0E	1115.0	9.0D	1600.0			QL=2 ST=2 TYP=6
	8800	SGMR	49	GB	1113.0E	1115.0	13.0D	1500.0			QL=4 ST=2 TYP=6
	2695	SVTO	49	GB	1114.0E	1115.0	9.0D	990.0			QL=4 ST=2 TYP=6
	2695	SGMR	49	GB	1114.0E	1115.0	12.0D	960.0			QL=4 ST=2 TYP=6
13	2695	SVTO	4	S/F	0518.0E	0519.0	4.0D	98.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0519.0E	0520.0	2.0D	230.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0519.0E	0520.0	4.0D	540.0			QL=4 ST=3 TYP=3
	2695	SVTO	4	S/F	0519.0E	0519.0	4.0D	100.0			QL=4 ST=3 TYP=3
	2695	LEAR	8	S	0520.0E	0520.0	2.0D	99.0			QL=2 ST=2 TYP=3
	2695	LEAR	4	S/F	0842.0E	0846.0	8.0D	110.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	0843.0E	0847.0	10.0D	68.0			QL=2 ST=2 TYP=5
	8800	LEAR	4	S/F	0843.0E	0847.0	28.0D	93.0			QL=4 ST=2 TYP=5
14	8800	LEAR	8	S	0541.0E	0542.0	1.0D	51.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	0541.0E	0542.0	1.0D	53.0			QL=2 ST=2 TYP=3
	2695	LEAR	8	S	0542.0E	0542.0	U	14.0			QL=2 ST=2 TYP=3
15	8800	SVTO	4	S/F	0932.0E	0936.0	868.0D	250.0			QL=4 ST=1 TYP=3
	8800	LEAR	4	S/F	0935.0E	0940.0	6.0D	190.0			QL=4 ST=2 TYP=5
	2695	LEAR	4	S/F	0936.0E	0936.0	7.0D	170.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	1032.0E	1032.0	U	52.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	1428.0E	1429.0	2.0D	140.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1428.0E	1429.0	3.0D	130.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1429.0E	1429.0	1.0D	42.0			QL=4 ST=2 TYP=3
	2695	SVTO	8	S	1429.0E	1429.0	1.0D	48.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1550.0E	1552.0	8.0D	240.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1550.0E	1553.0	4.0D	92.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1550.0E	1552.0	7.0D	230.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1551.0E	1553.0	3.0D	93.0			QL=4 ST=2 TYP=3
	8800	PALE	4	S/F	1901.0E	1902.0	7.0D	160.0			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

APRIL 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
15	8800	SGMR	4	S/F	1901.0E	1902.0	7.0D	130.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1901.0E	1902.0	3.0D	38.0			QL=4 ST=2 TYP=3
16	8800	LEAR	4	S/F	0057.0E	0058.0	7.0D	43.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	0058.0E	0058.0	U	50.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0134.0E	0135.0	3.0D	39.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0135.0E	0136.0	2.0D	25.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0306.0E	0306.0	U	51.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0306.0E	0306.0	U	100.0			QL=2 ST=2 TYP=3
	2695	LEAR	8	S	0401.0E	0401.0	U	61.0			QL=2 ST=2 TYP=3
	8800	LEAR	4	S/F	0401.0E	0406.0	7.0D	82.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	0405.0E	0406.0	1.0D	84.0			QL=2 ST=2 TYP=3
	8800	SGMR	8	S	1052.0E	1052.0	1.0D	80.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1052.0E	1052.0	1.0D	86.0			QL=4 ST=2 TYP=3
	2695	SGMR	4	S/F	1149.0E	1151.0	7.0D	360.0			QL=4 ST=2 TYP=5
	2695	SVTO	4	S/F	1149.0E	1151.0	3.0D	330.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	1152.0E	1152.0	5.0D	120.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1155.0E	1155.0	U	270.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	1155.0E	1155.0	3.0D	250.0			QL=4 ST=2 TYP=3
	2695	SGMR	8	S	1156.0E	1156.0	1.0D	160.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1548.0E	1548.0	1.0D	65.0			QL=4 ST=2 TYP=3
	8800	SGMR	8	S	1558.0E	1559.0	2.0D	69.0			QL=4 ST=2 TYP=3
17	8800	LEAR	8	S	0024.0E	0025.0	1.0D	44.0			QL=4 ST=2 TYP=3
	2695	LEAR	8	S	0024.0E	0025.0	1.0D	46.0			QL=2 ST=2 TYP=3
	2695	LEAR	4	S/F	0652.0E	0652.0	6.0D	120.0			QL=2 ST=2 TYP=3
	8800	SVTO	4	S/F	0652.0E	0652.0	4.0D	100.0			QL=2 ST=2 TYP=3
	2695	SVTO	4	S/F	0652.0E	0652.0	7.0D	130.0			QL=4 ST=2 TYP=3
	8800	LEAR	4	S/F	2355.0E	2356.0	5.0D	69.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	2355.0E	2356.0	2.0D	56.0			QL=2 ST=2 TYP=3
18	2695	LEAR	8	S	0024.0E	0025.0	1.0D	46.0			QL=2 ST=2 TYP=3
	8800	LEAR	8	S	0024.0E	0025.0	1.0D	44.0			QL=4 ST=2 TYP=3
	2695	PALE	8	S	1843.0E	1843.0	1.0D	49.0			QL=4 ST=2 TYP=3
	8800	PALE	8	S	1843.0E	1843.0	1.0D	81.0			QL=2 ST=2 TYP=3
	2695	SGMR	8	S	1843.0E	1843.0	1.0D	50.0			QL=4 ST=2 TYP=3
	8800	SGMR	4	S/F	1843.0E	1843.0	317.0D	63.0			QL=2 ST=1 TYP=3
19	8800	SGMR	8	S	1047.0E	1047.0	U	38.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1047.0E	1047.0	1.0D	45.0			QL=4 ST=2 TYP=3
20	8800	LEAR	8	S	0620.0E	0620.0	U	25.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0846.0E	0850.0	12.0D	240.0			QL=2 ST=2 TYP=3
	2695	SVTO	4	S/F	0847.0E	0850.0	9.0D	200.0			QL=4 ST=2 TYP=3
	8800	SVTO	4	S/F	0847.0E	0851.0	12.0D	64.0			QL=4 ST=2 TYP=3
	2695	SVTO	4	S/F	0934.0E	0939.0	11.0D	61.0			QL=4 ST=2 TYP=3
	2695	LEAR	4	S/F	0935.0E	0943.0	12.0D	73.0			QL=2 ST=2 TYP=5
	8800	SVTO	4	S/F	0936.0E	0943.0	11.0D	110.0			QL=4 ST=2 TYP=5
	8800	LEAR	8	S	0937.0E	0938.0	1.0D	56.0			QL=4 ST=2 TYP=3
	8800	SVTO	49	GB	0951.0E	1004.0	81.0D	16000.0			QL=4 ST=3 TYP=7
	2695	SVTO	49	GB	0954.0E	1019.0	69.0D	2300.0			QL=4 ST=2 TYP=7
	2695	SGMR	49	GB	1004.0	1018.0	53.0D	3600.0			QL=2 ST=2 TYP=7
	8800	SGMR	49	GB	1008.0	1018.0	40.0D	15000.0			QL=2 ST=2 TYP=7
	8800	SGMR	8	S	1155.0E	1155.0	2.0D	74.0			QL=4 ST=2 TYP=3
	8800	SVTO	8	S	1155.0E	1155.0	U	82.0			QL=4 ST=2 TYP=3
22	8800	PALE	8	S	0048.0E	0048.0	1.0D	52.0			QL=2 ST=2 TYP=3
24	8800	SVTO	8	S	0629.0E	0629.0	1.0D	74.0			QL=4 ST=2 TYP=3
28	2695	LEAR	8	S	0451.0E	0451.0	1.0D	58.0			QL=4 ST=2 TYP=3
	8800	LEAR	8	S	0749.0E	0749.0	2.0D	56.0			QL=2 ST=2 TYP=3
	8800	SVTO	8	S	0749.0E	0749.0	1.0D	50.0			QL=4 ST=2 TYP=3
29	2695	SVTO	8	S	0433.0E	0433.0	U	40.0			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

APRIL 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
30	2695	LEAR	8 S	0501.0E	0501.0	U	22.0			QL=4 ST=2 TYP=3
	2695	LEAR	8 S	0828.0E	0828.0	1.0D	37.0			QL=4 ST=2 TYP=3
	2695	SVTO	8 S	0828.0E	0828.0	2.0D	34.0			QL=4 ST=2 TYP=3
	8800	SVTO	4 S/F	0828.0E	0828.0	1432.0D	19.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

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

Explanation of Type Code:

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

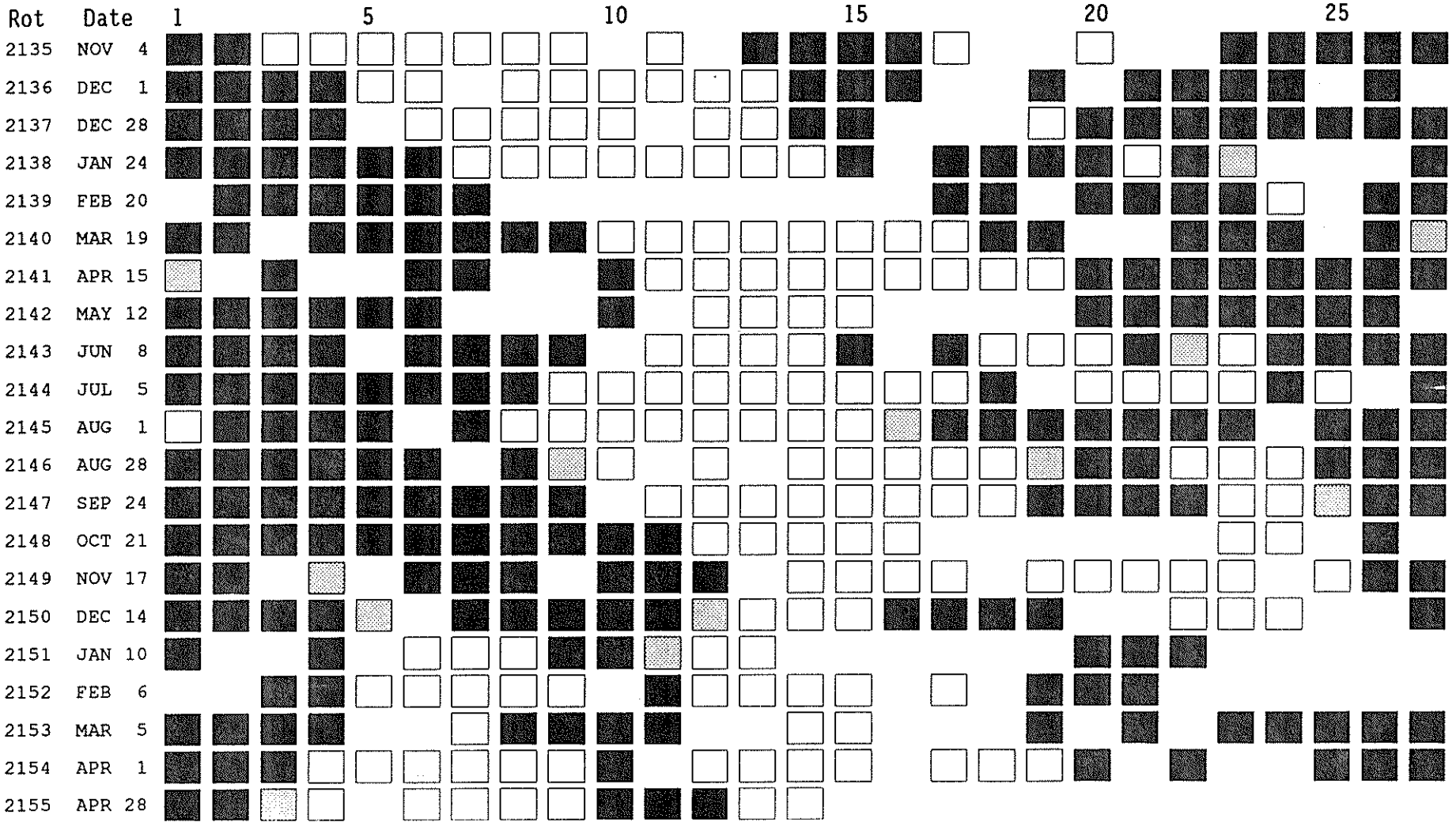
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A

STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

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

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.

CONTENTS

Prompt Reports DATA FOR **MARCH 1991** Number 561 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 1839
(11 February to 11 March 1991)

Dates of Observations Below Days of Year:

Data unavailable at time of publication.

Heliographic Longitude

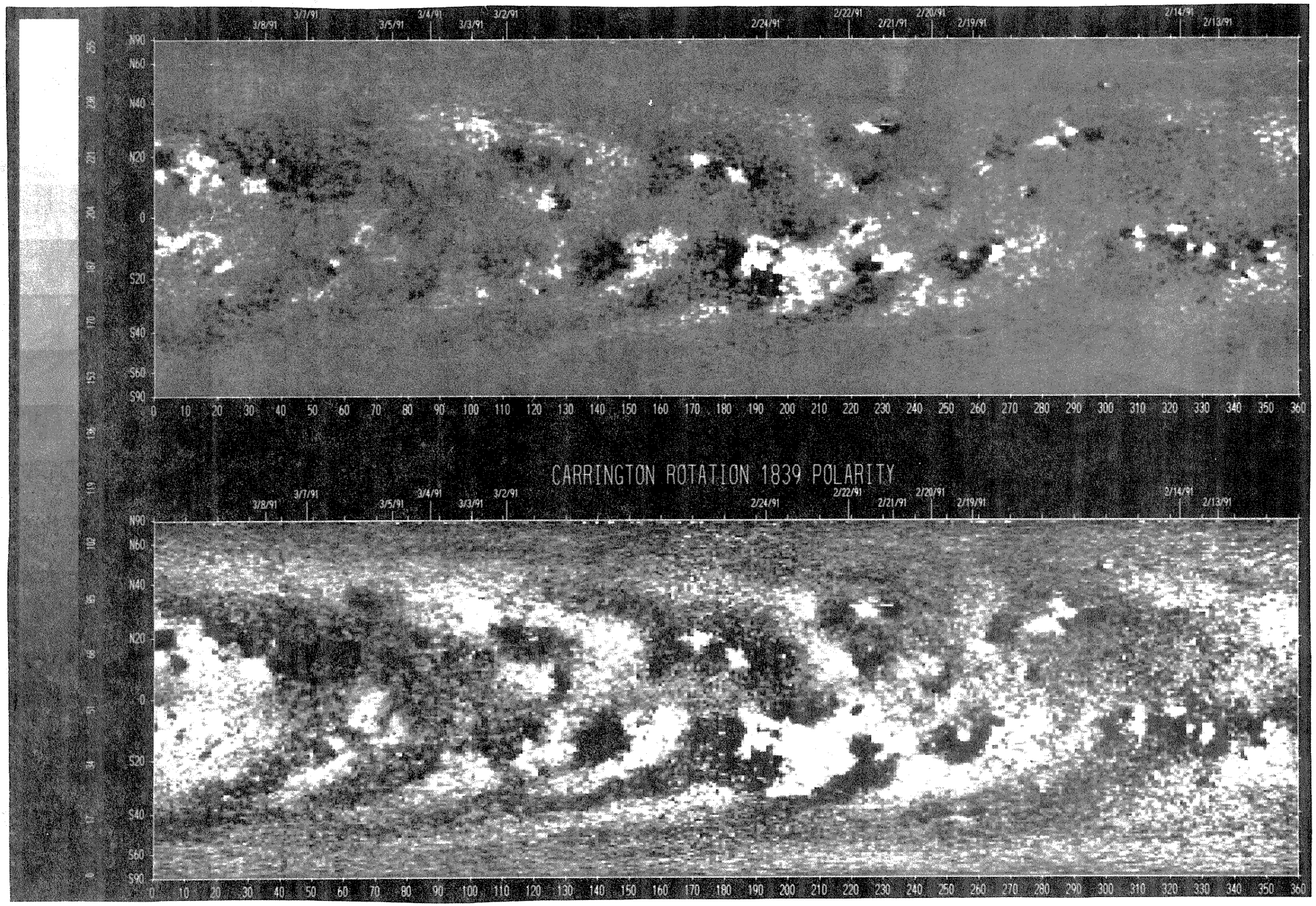
S O L A R M A G N E T I C F I E L D S Y N O P T I C C H A R T

CARRINGTON ROTATION NUMBER 1839

(11 February to 11 March 1991)

National Solar Observatory/Kitt Peak

Dates of Observation



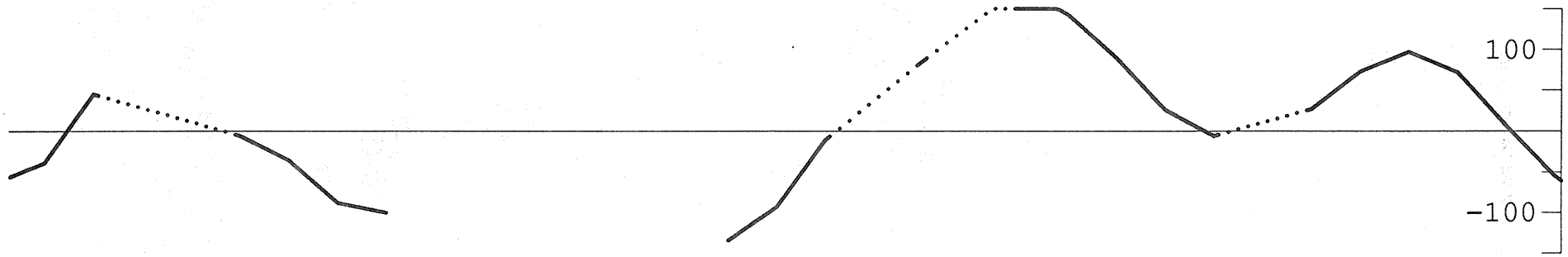
Heliographic Longitude

SOLAR MAGNETIC FIELD SYNOPTIC CHART

CARRINGTON ROTATION NUMBER 1839
(11 February to 11 March 1991)

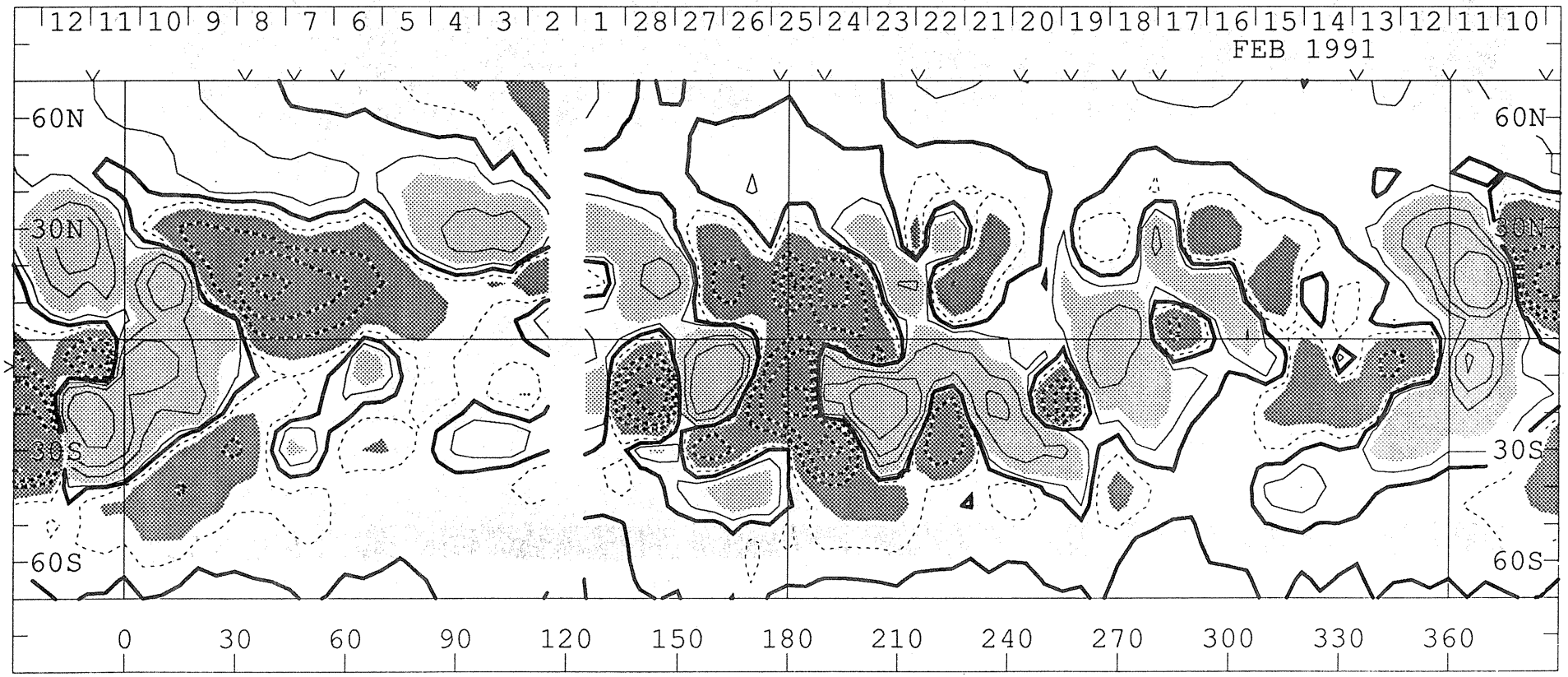
WILCOX SOLAR OBSERVATORY

Mean Field



Photospheric Magnetic Field

0, ±100, 500, 1000, 2000 MicroTesla



Heliographic Longitude

1839

SOLAR MAGNETIC FIELD SYNOPTIC CHART

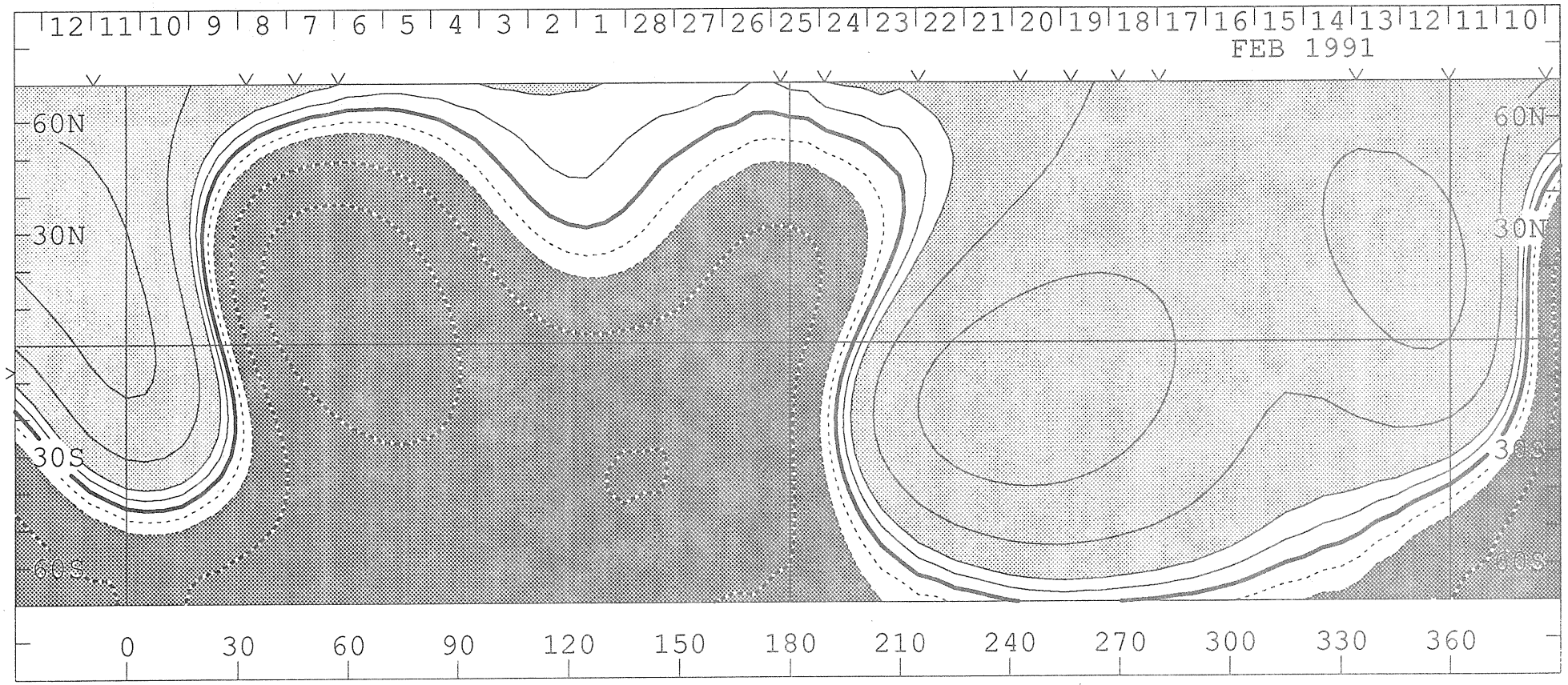
SOURCE SURFACE FIELD

CARRINGTON ROTATION NUMBER 1839

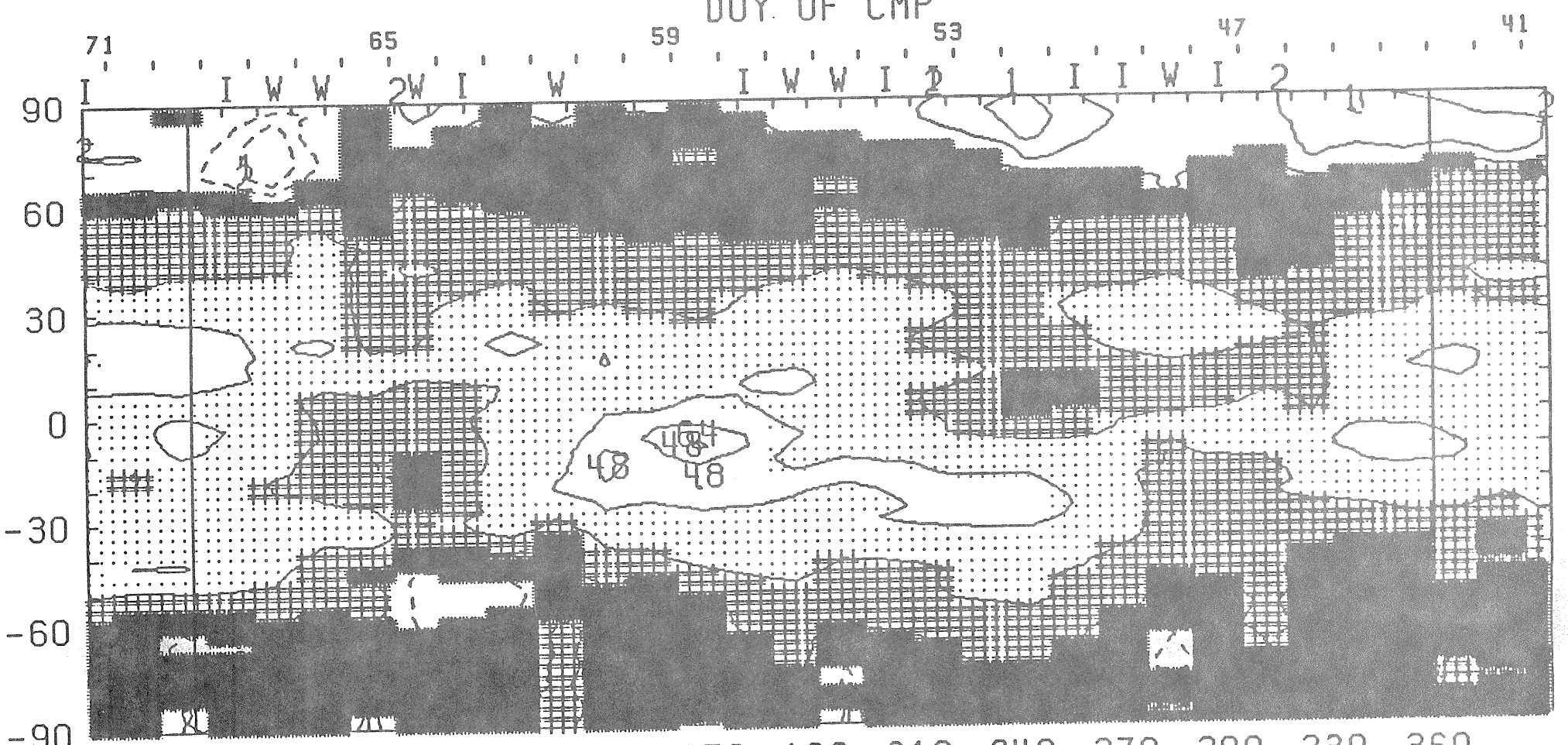
(11 February to 11 March 1991)

Wilcox Solar Observatory

0, ±1, 2, 5, 10, 20 microTesla



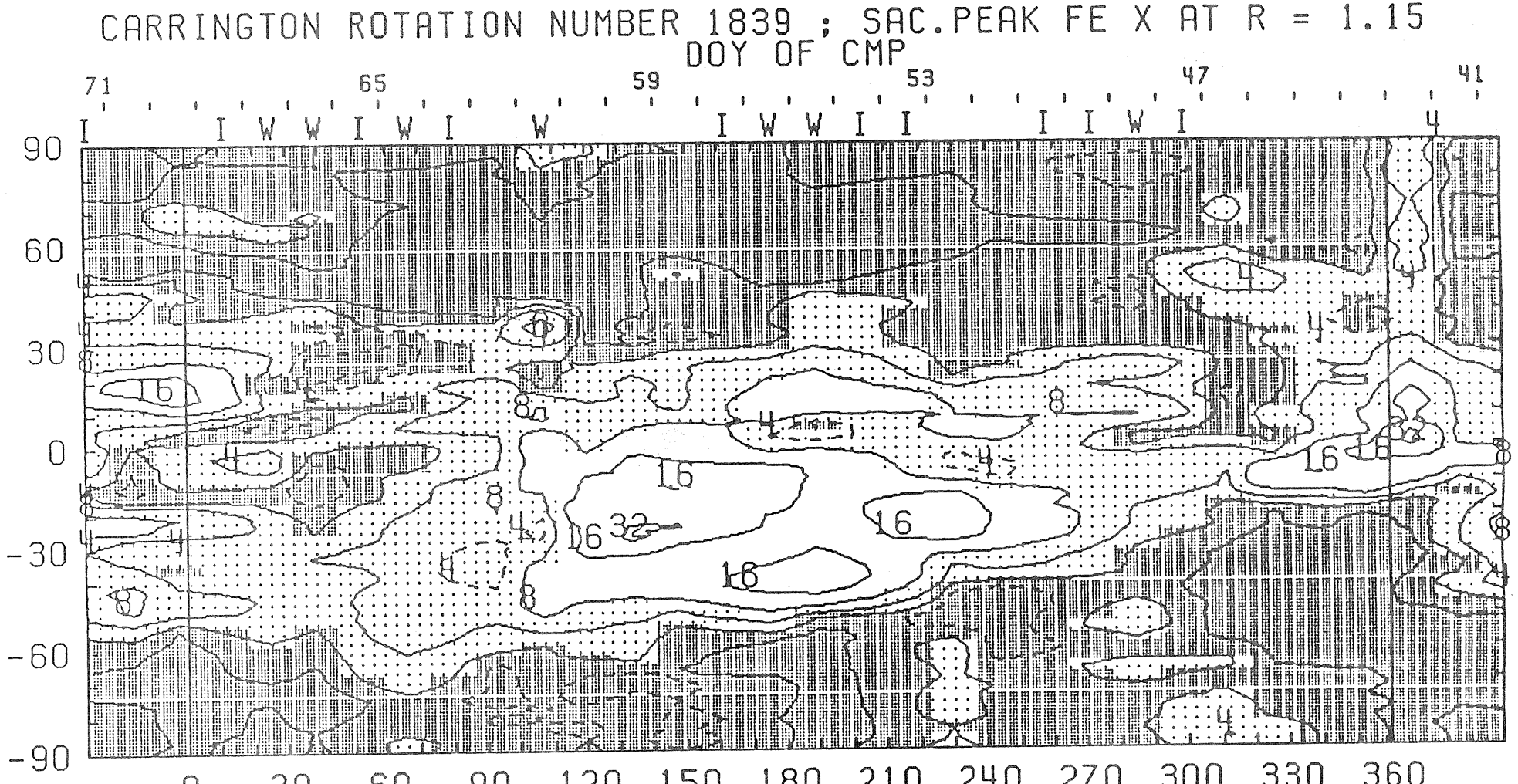
CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK FE XIV AT R = 1.15



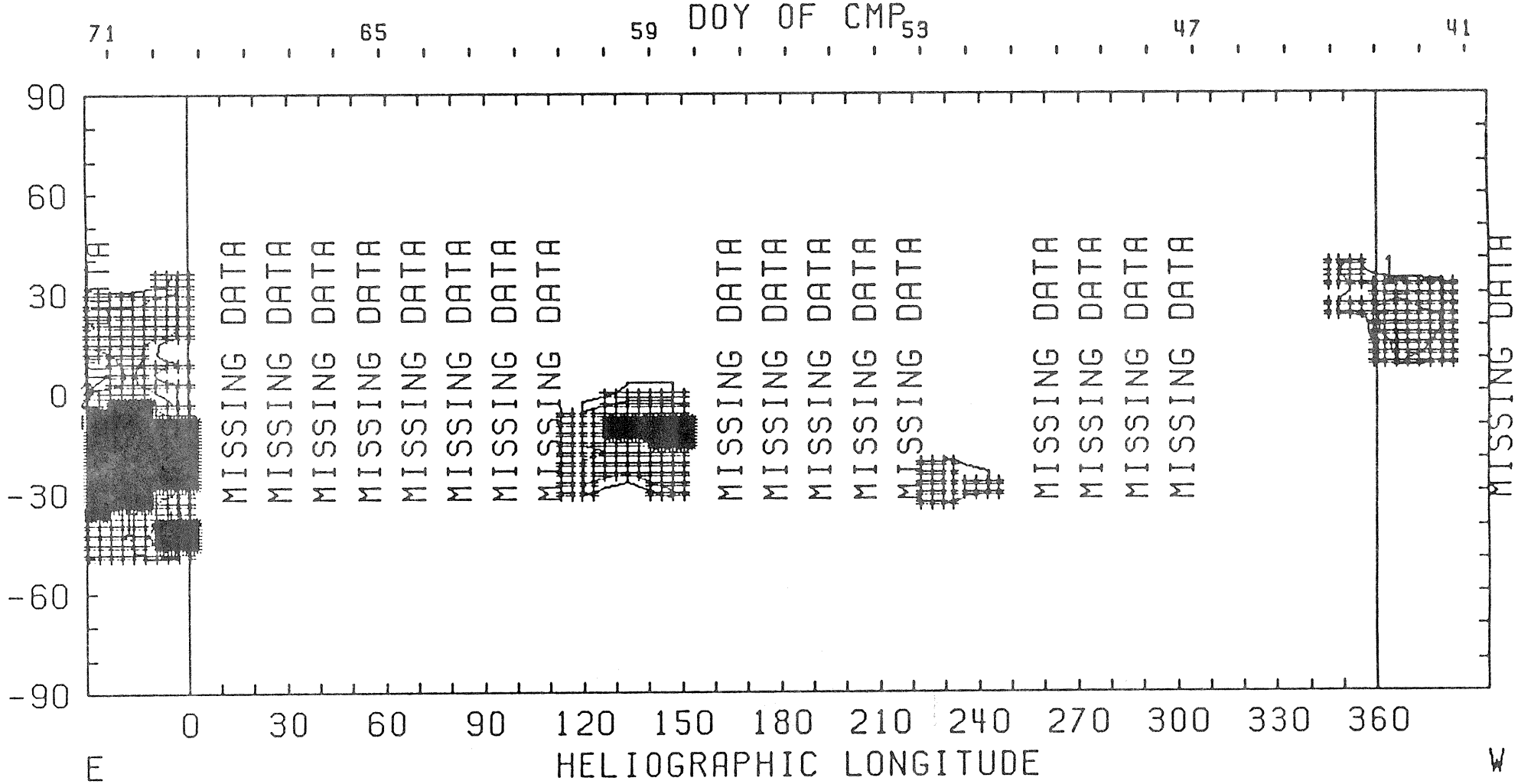
Iave = 13.66μ

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

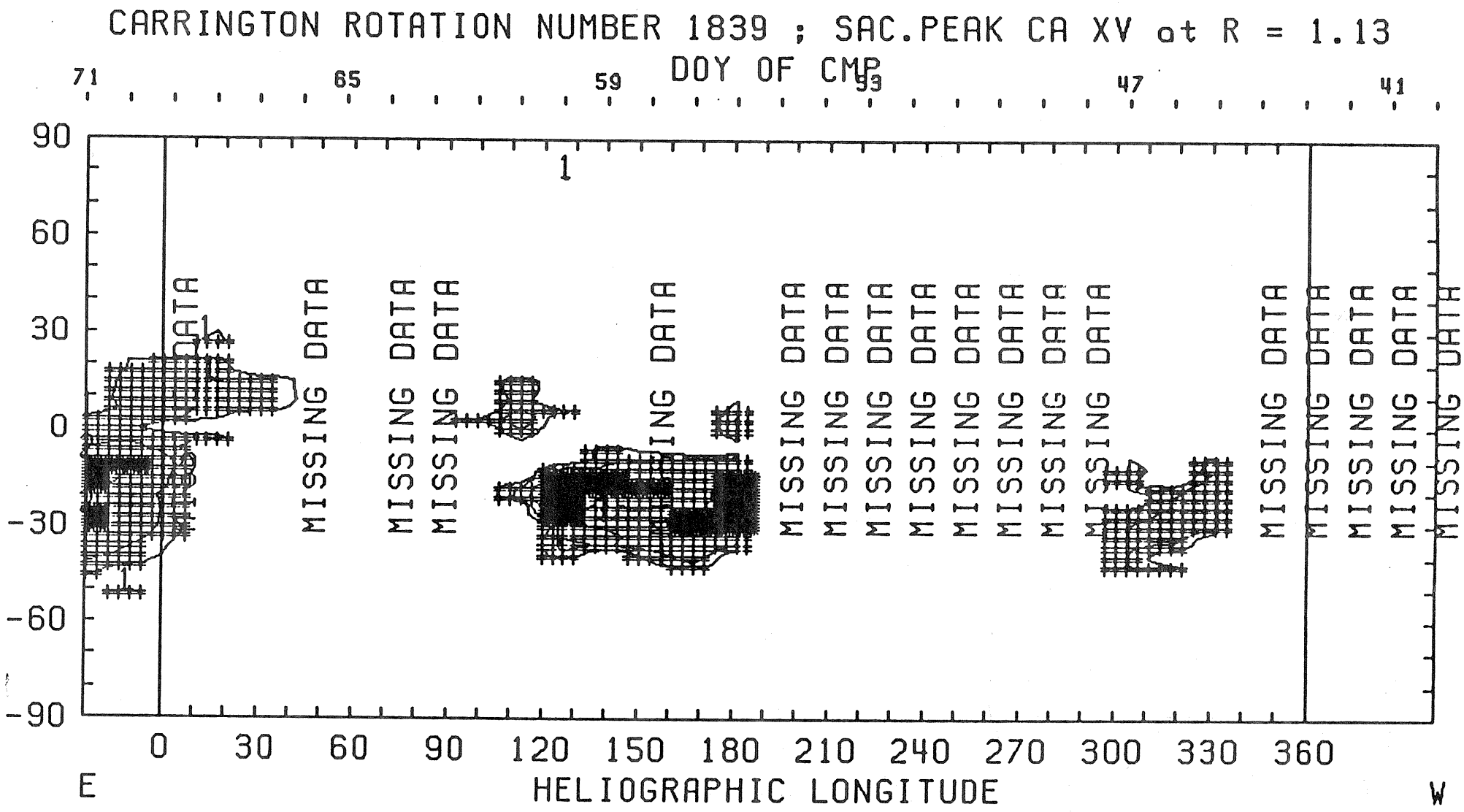
(6-May-91) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK


CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK FE X AT R = 1.15
DOY OF CMP
71
65
59
53
47
41
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
(6-May-91)

CARRINGTON ROTATION NUMBER 1839 ; SAC.PEAK CA XV at R = 1.13



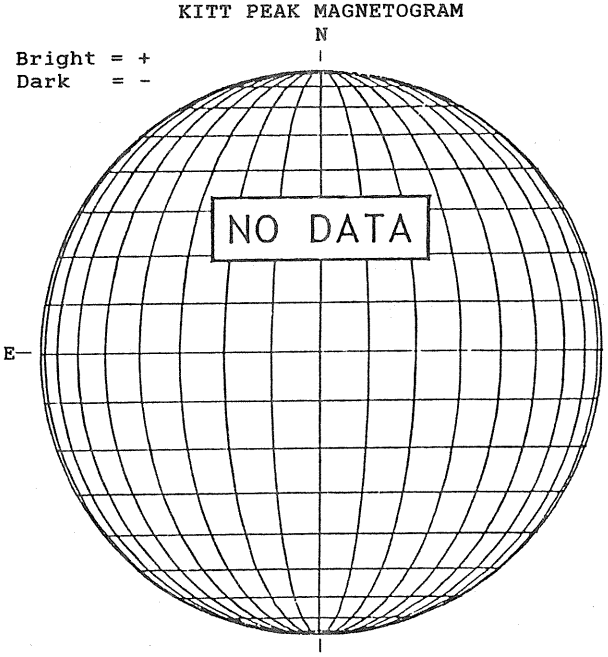
1991 EAST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
(6-May-91)


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 WEST LIMB CONTOURS: YELLOW-MINIMUM,1,2,4,8 MILLIONTHS OF Io
(6-May-91)

MARCH 1, 1991 (P=-21.42, B_o =-7.20, L_o = 135.56)

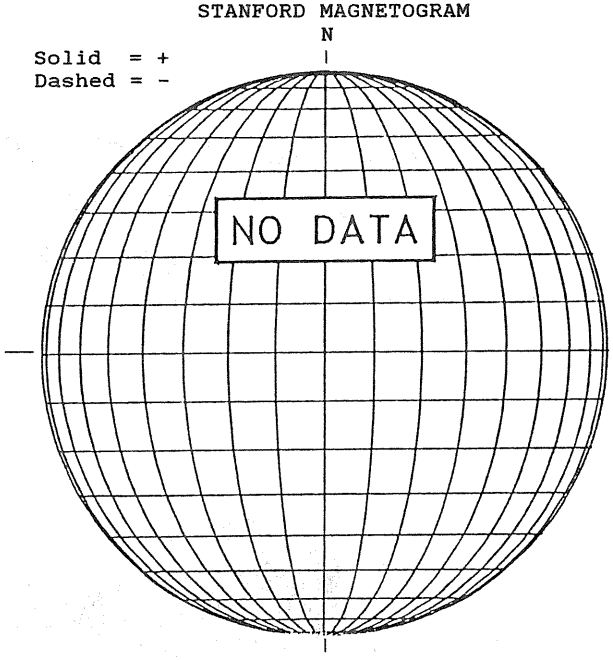
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



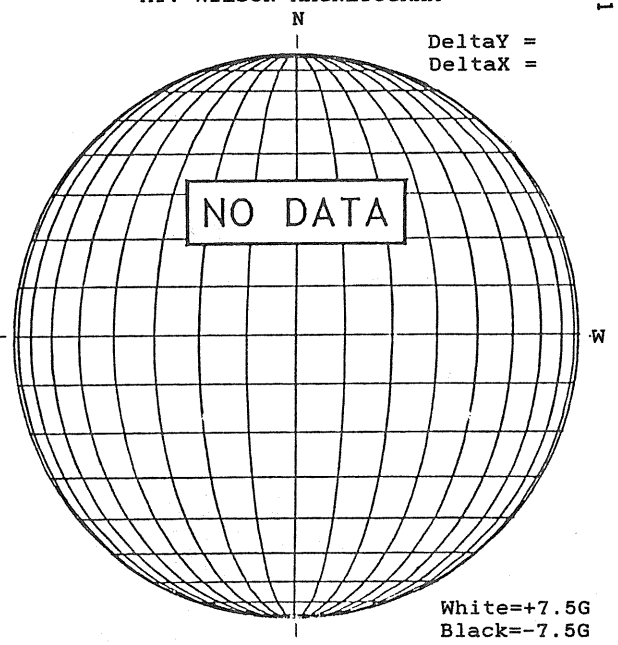
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



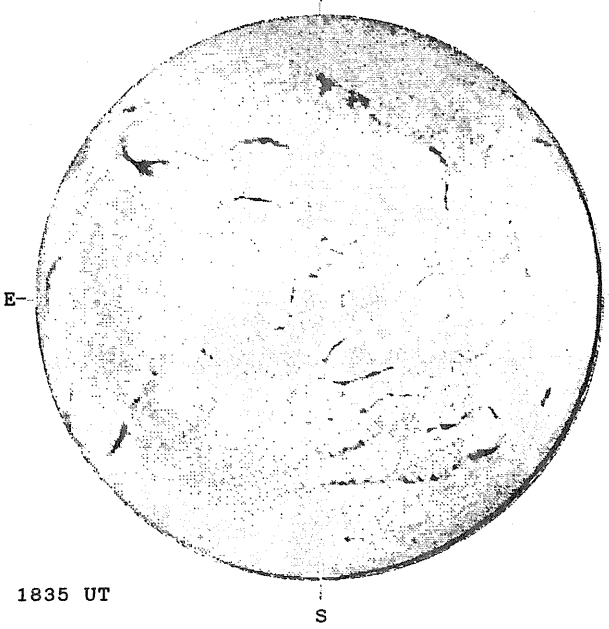
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



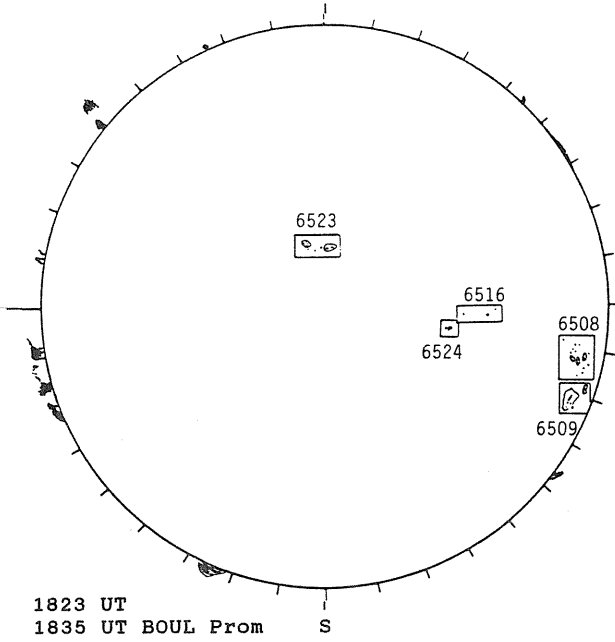
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



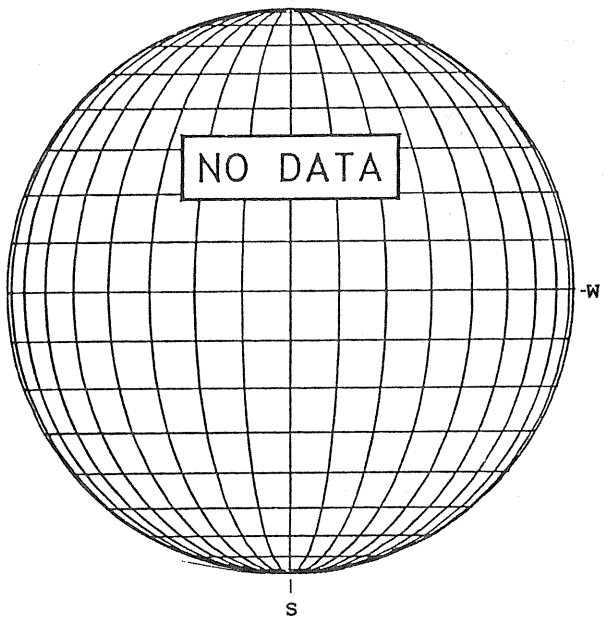
1835 UT

BOULDER SUNSPOT



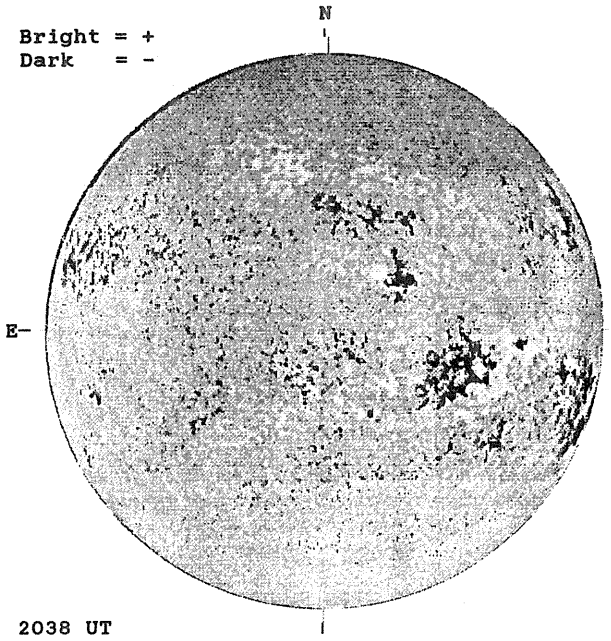
1823 UT
1835 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

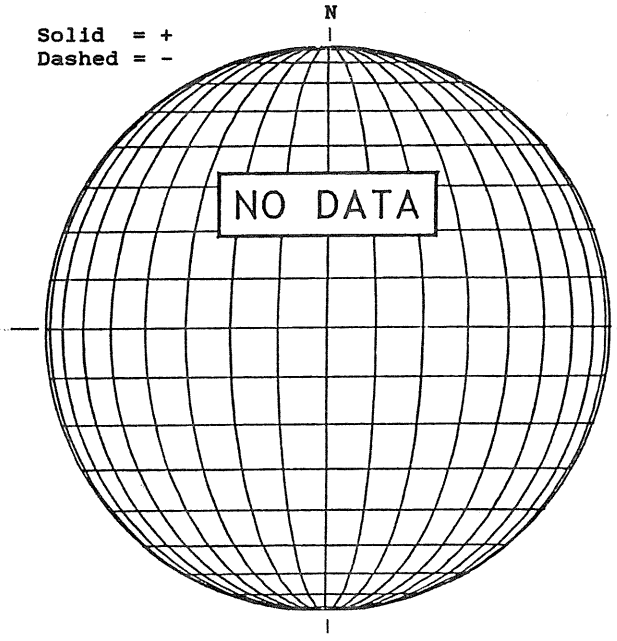


MARCH 2, 1991 (P=-21.68, B_o =-7.21, L_o = 122.38)

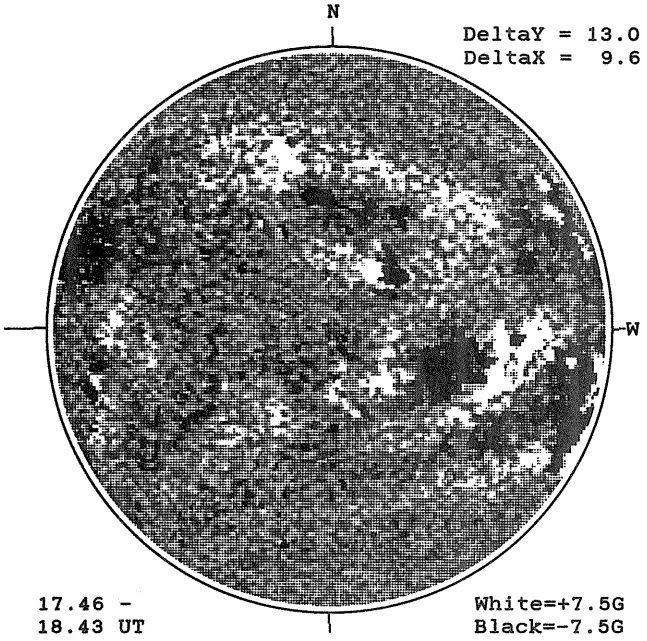
KITT PEAK MAGNETOGRAM



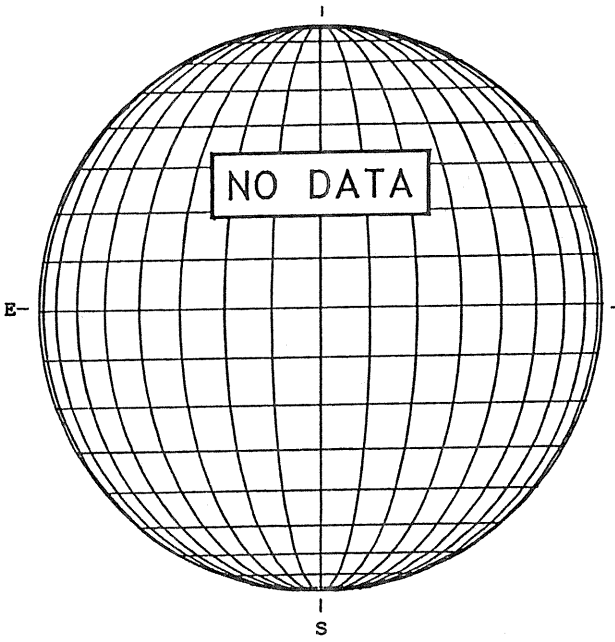
STANFORD MAGNETOGRAM



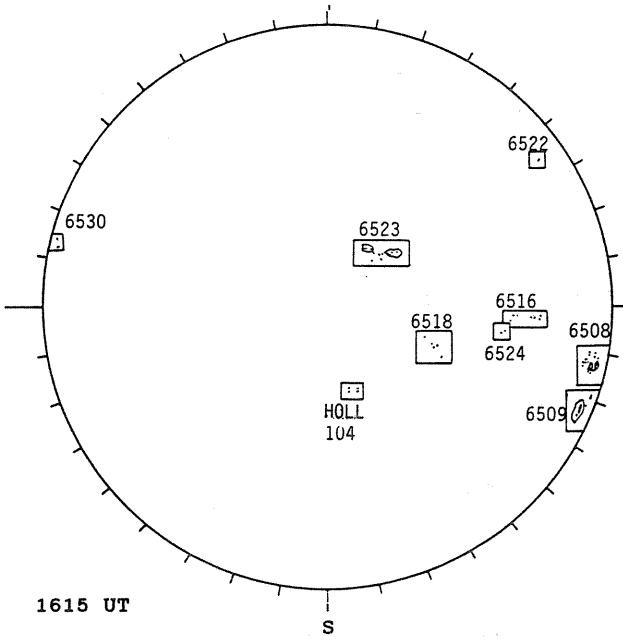
MT. WILSON MAGNETOGRAM



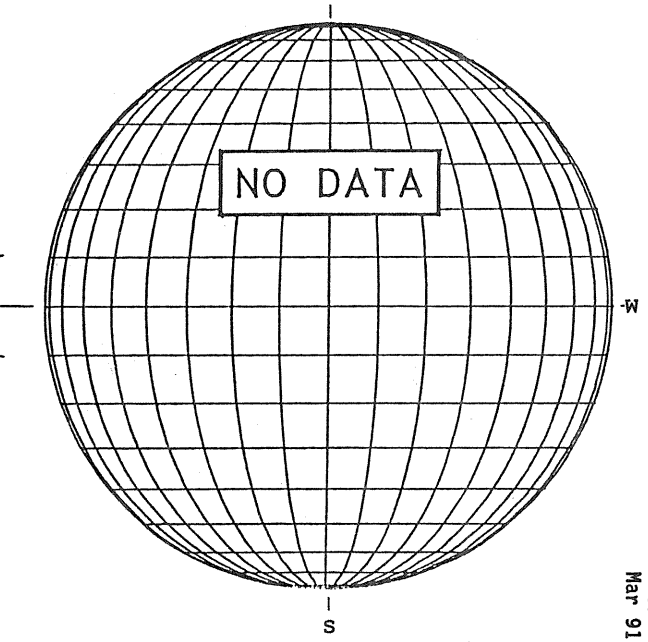
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

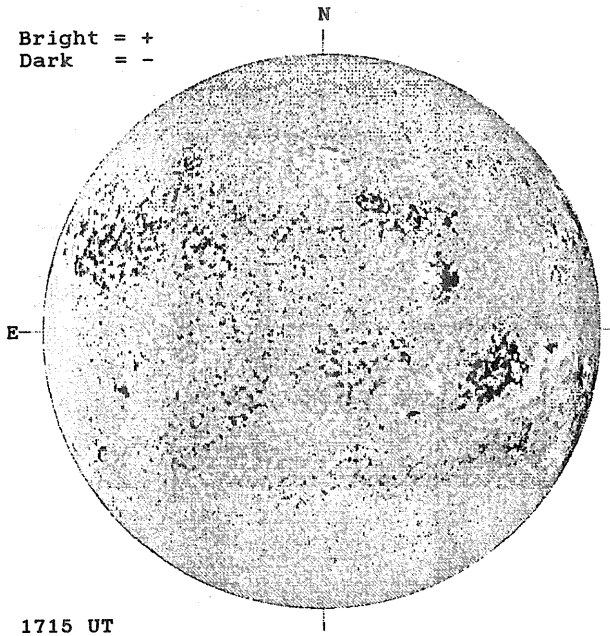


57
Mar 91

MARCH 3, 1991 (P=-21.92, B_o =-7.22, L_o = 109.21)

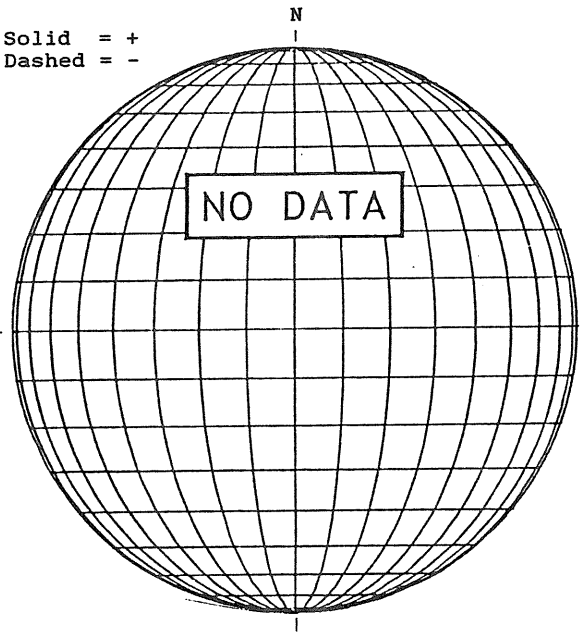
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



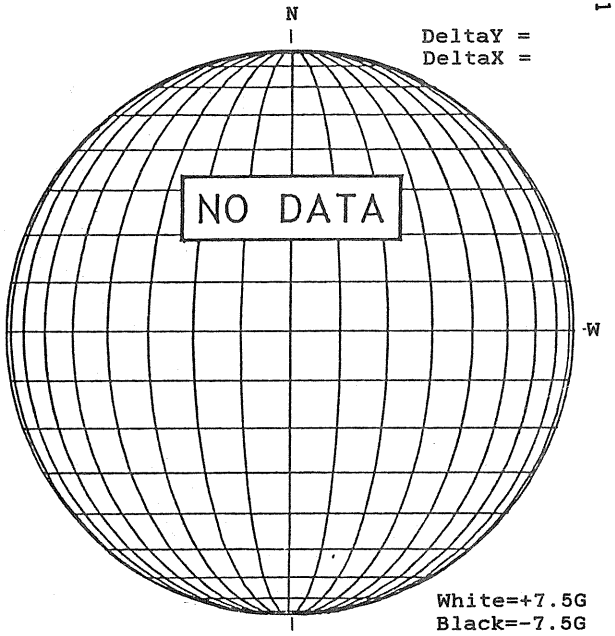
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



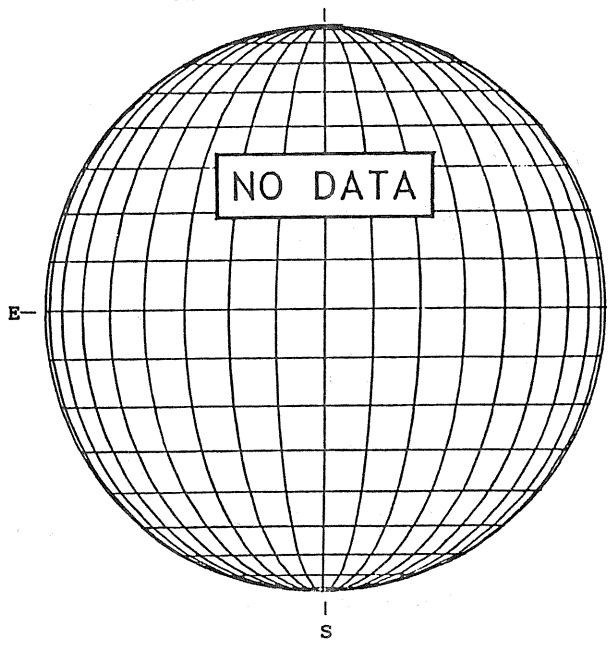
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

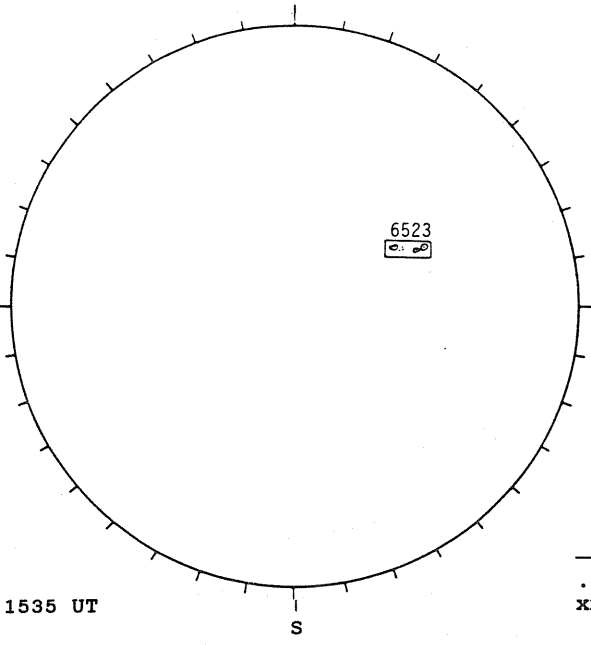


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

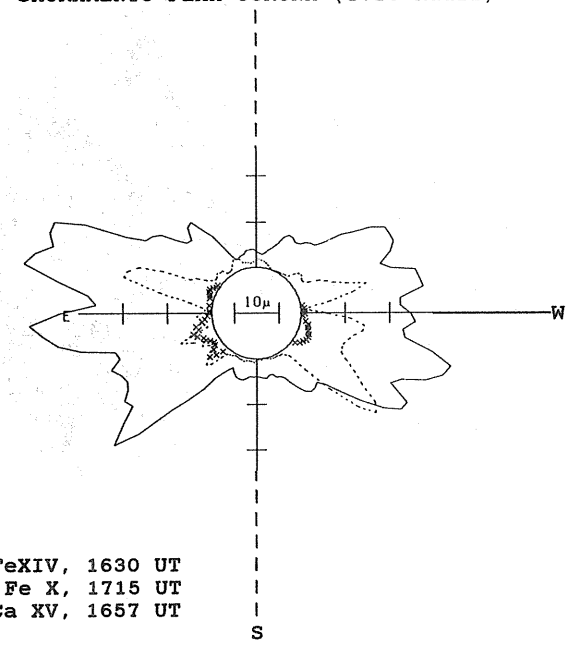


BOULDER SUNSPOT



1535 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

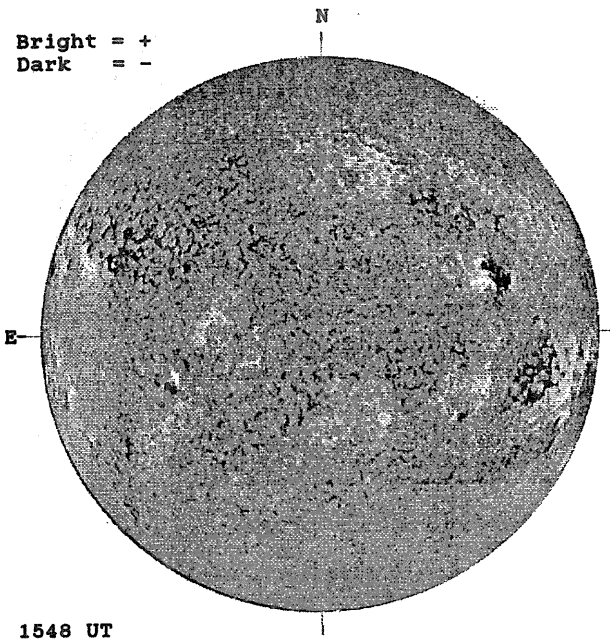


—— FeXIV, 1630 UT
.... Fe X, 1715 UT
xxxx Ca XV, 1657 UT

MARCH 4, 1991 (P=-22.16, B_o =-7.23, L_o = 96.04)

KITT PEAK MAGNETOGRAM

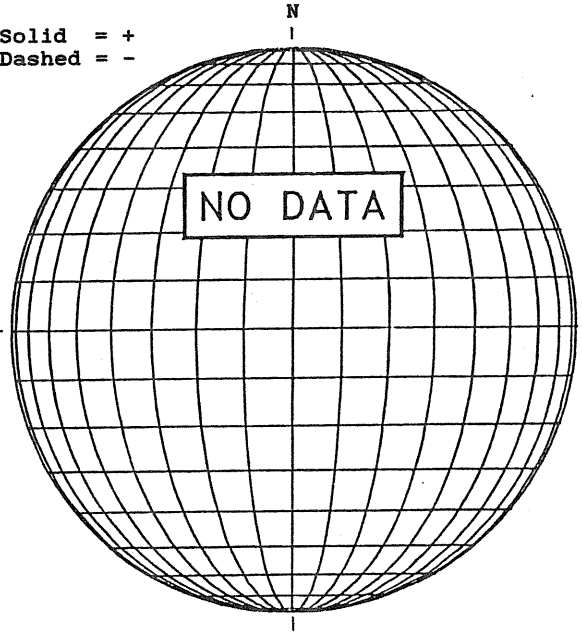
Bright = +
Dark = -



1548 UT

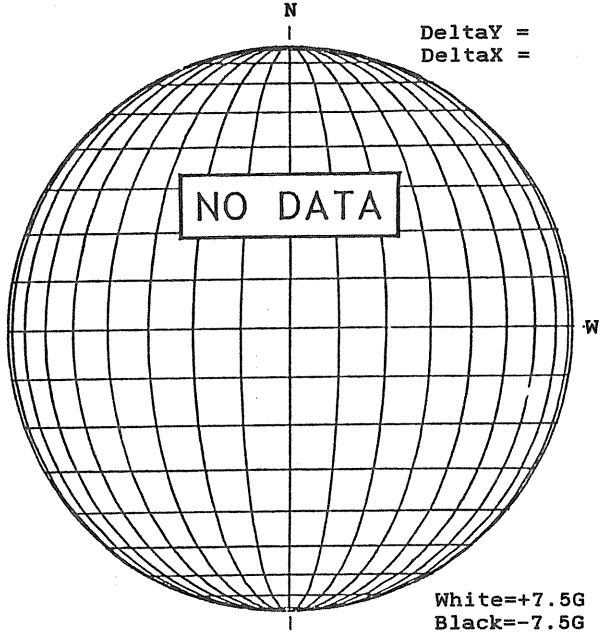
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



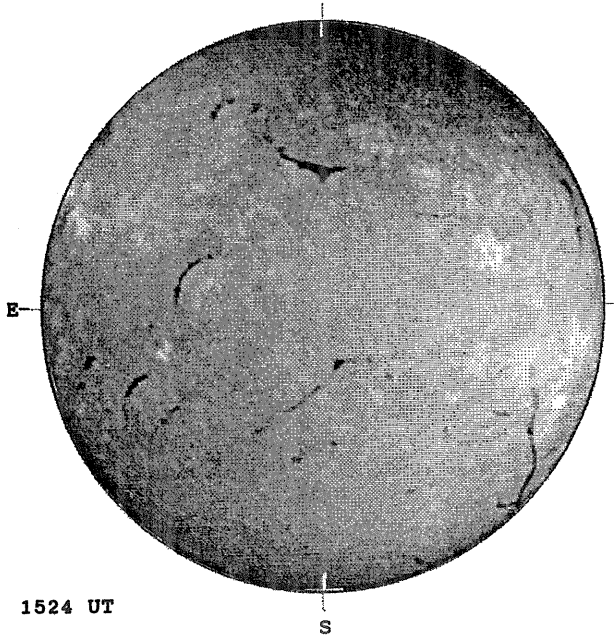
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



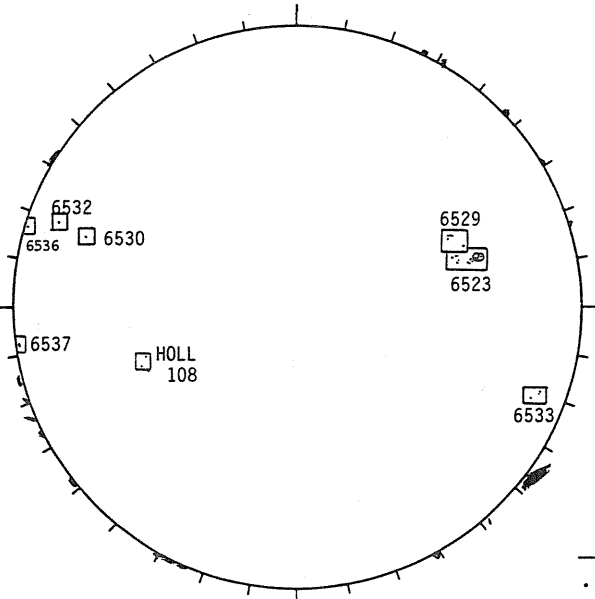
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



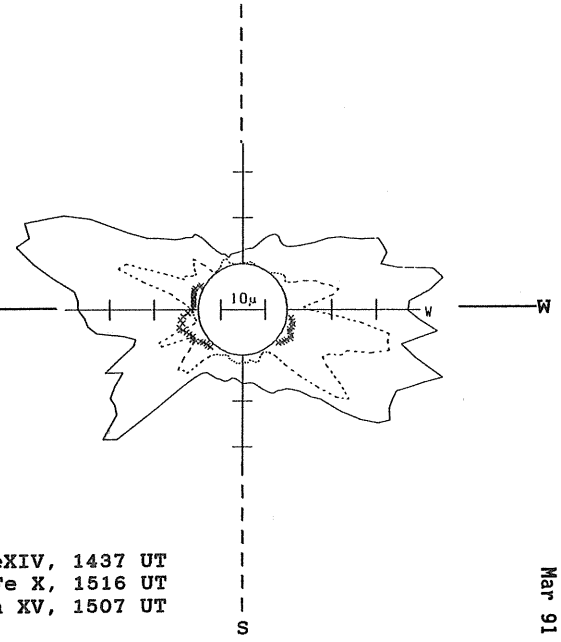
1524 UT

HOLLOMAN SUNSPOT



1515 UT
1524 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1437 UT
.... Fe X, 1516 UT
xxxx Ca XV, 1507 UT

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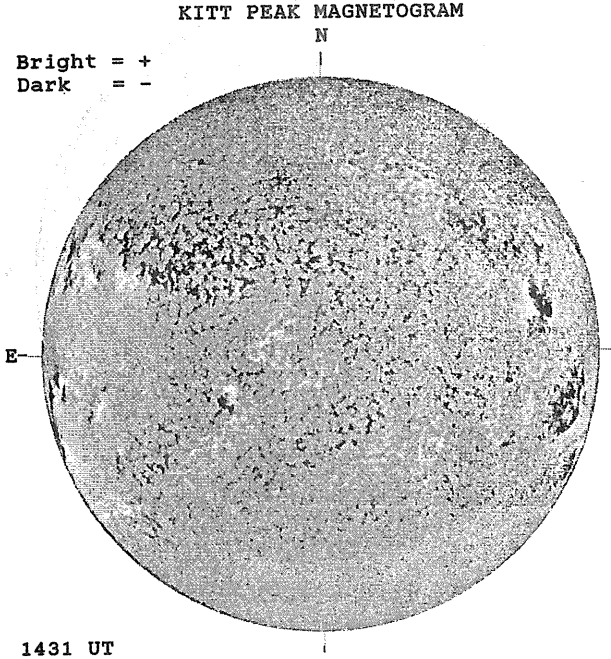
Mar 91

MARCH 5, 1991 (P=-22.39, B_o =-7.23, L_o = 82.86)

KITT PEAK MAGNETOGRAM

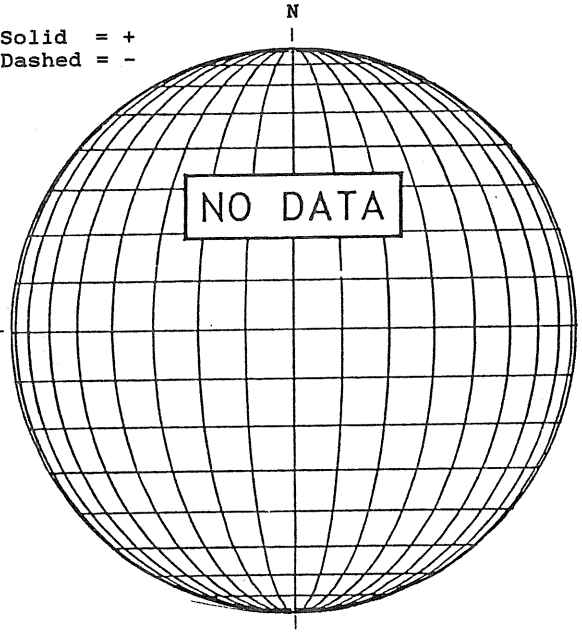
Bright = +
Dark = -



1431 UT

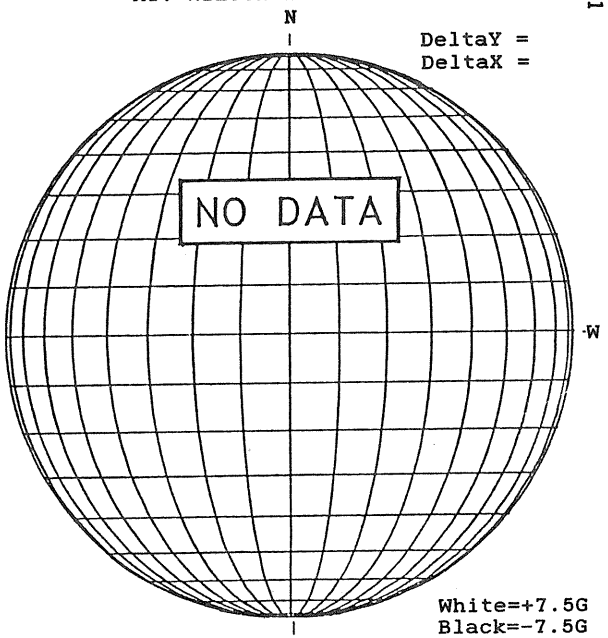
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



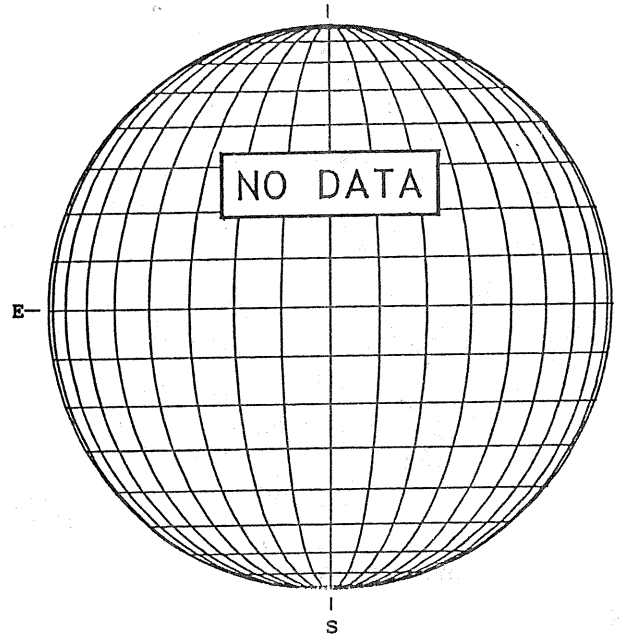
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

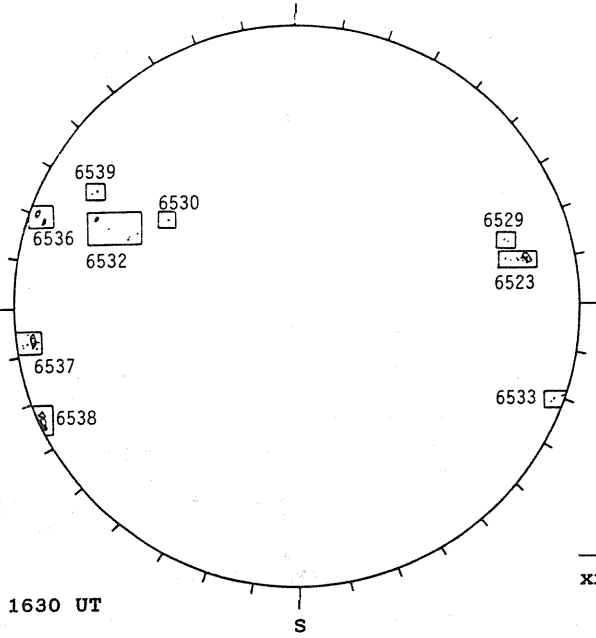


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

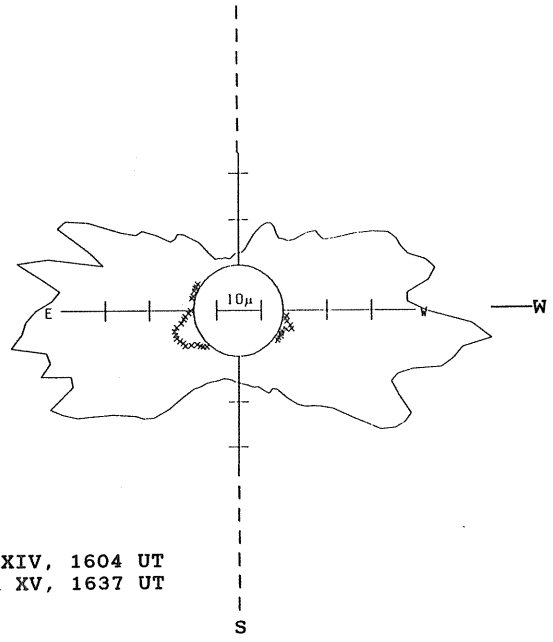


HOLLOMAN SUNSPOT



1630 UT

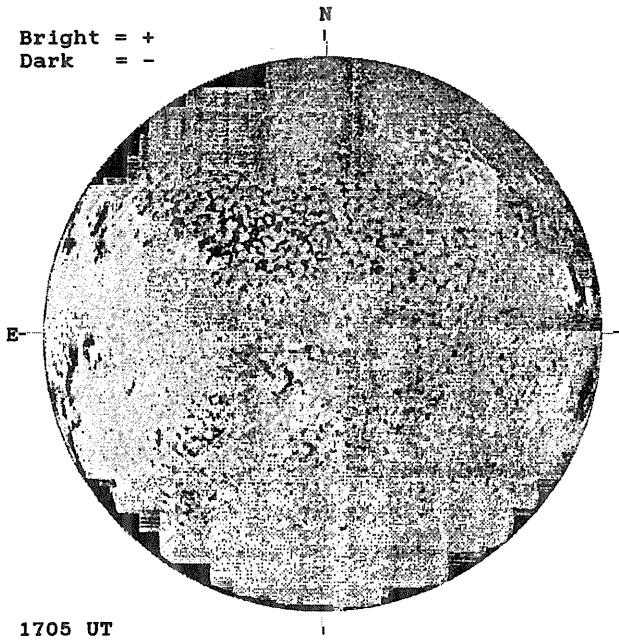
SACRAMENTO PEAK CORONA (1.15 Radii)



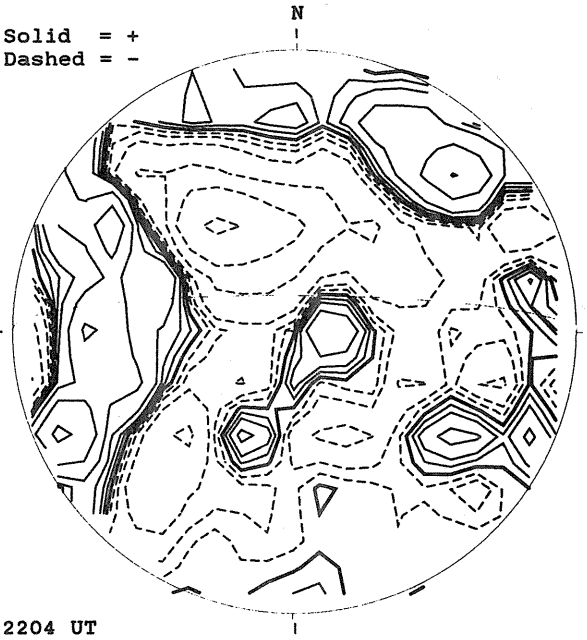
—— FeXIV, 1604 UT
xxxx Ca XV, 1637 UT

MARCH 6, 1991 (P=-22.62, B_o =-7.23, L_o = 69.69)

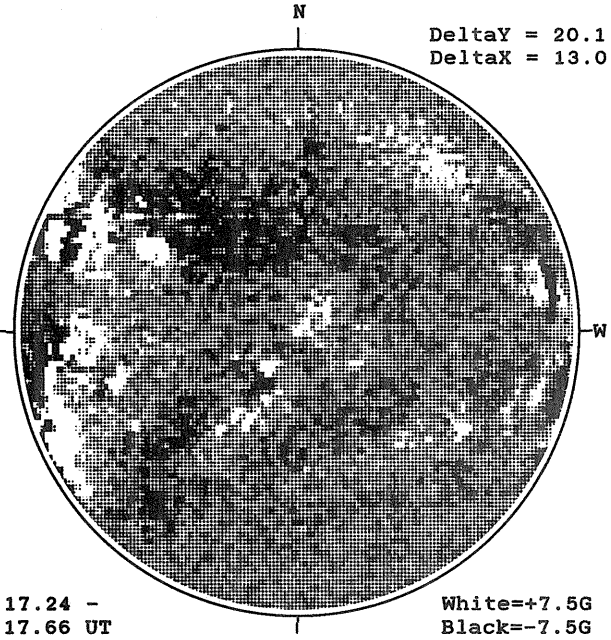
KITT PEAK MAGNETOGRAM



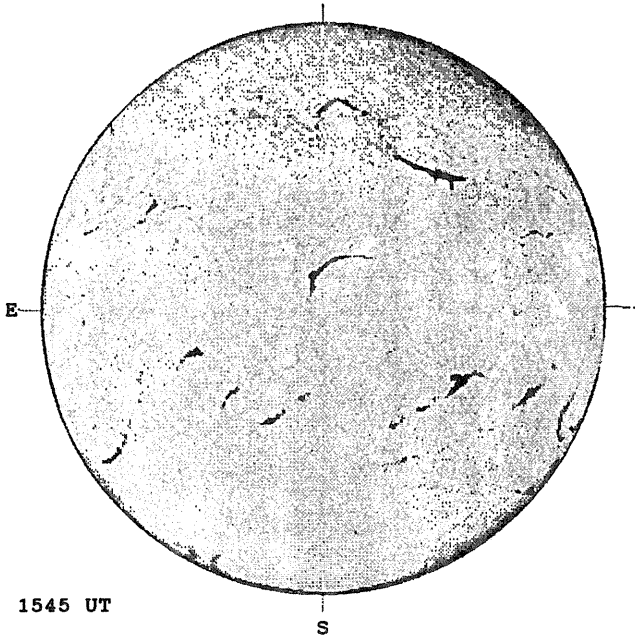
STANFORD MAGNETOGRAM



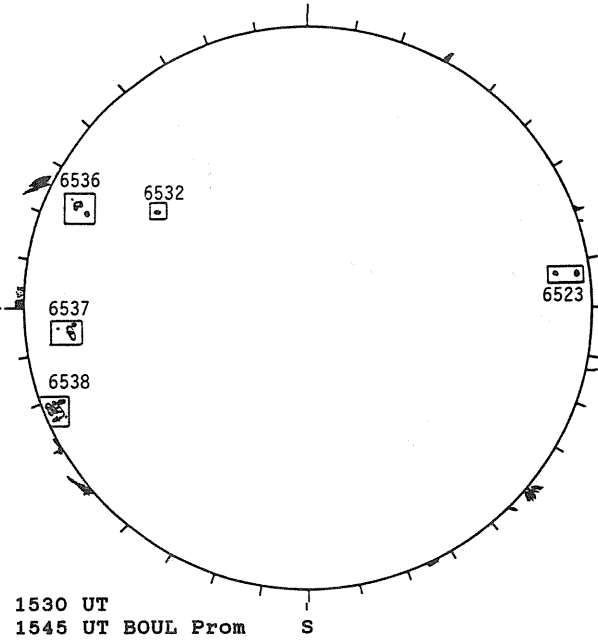
MT. WILSON MAGNETOGRAM



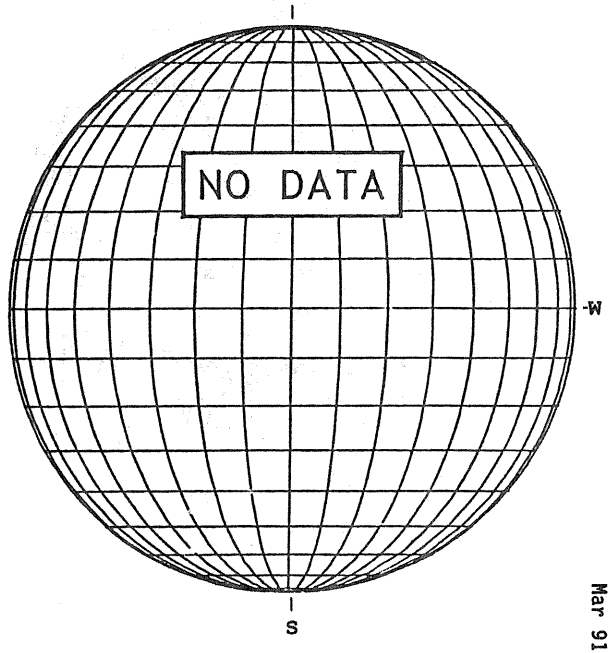
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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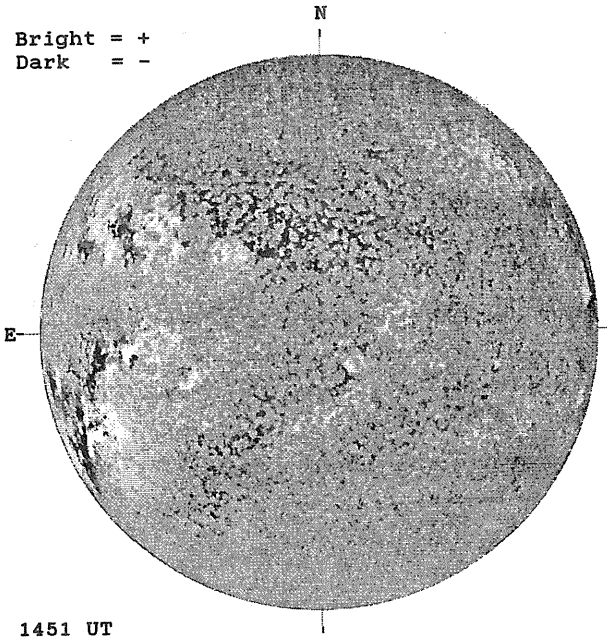
Mar 91

MARCH 7, 1991 (P=-22.84, B_o =-7.23, L_o = 56.51)

62 Mar 91

KITT PEAK MAGNETOGRAM

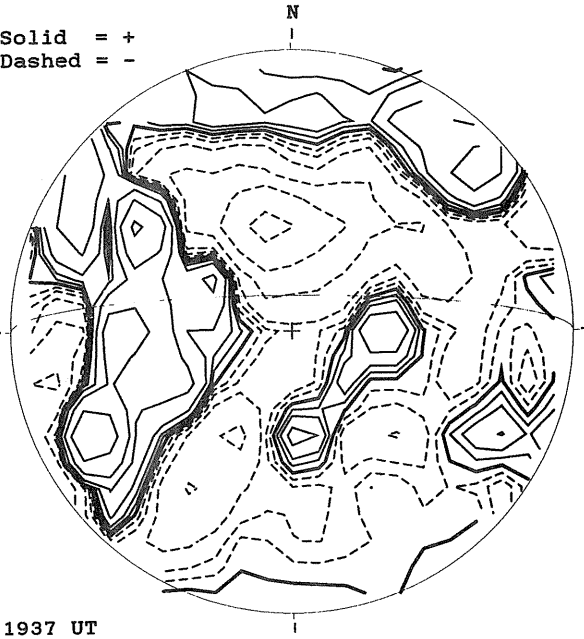
Bright = +
Dark = -



1451 UT

STANFORD MAGNETOGRAM

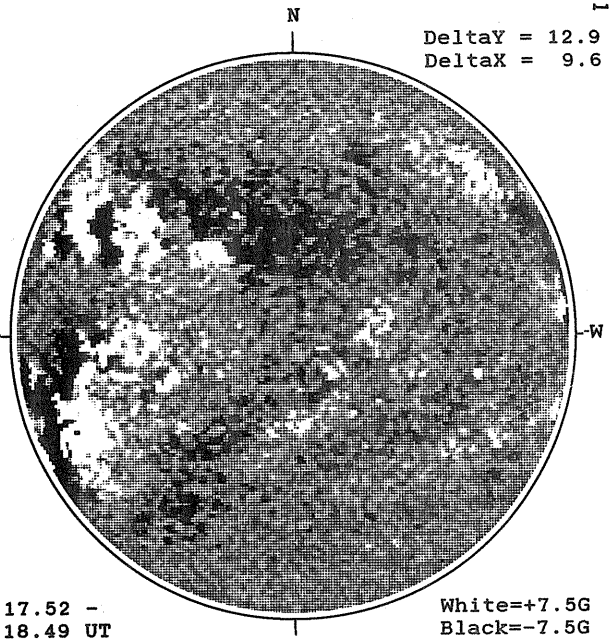
Solid = +
Dashed = -



1937 UT

MT. WILSON MAGNETOGRAM

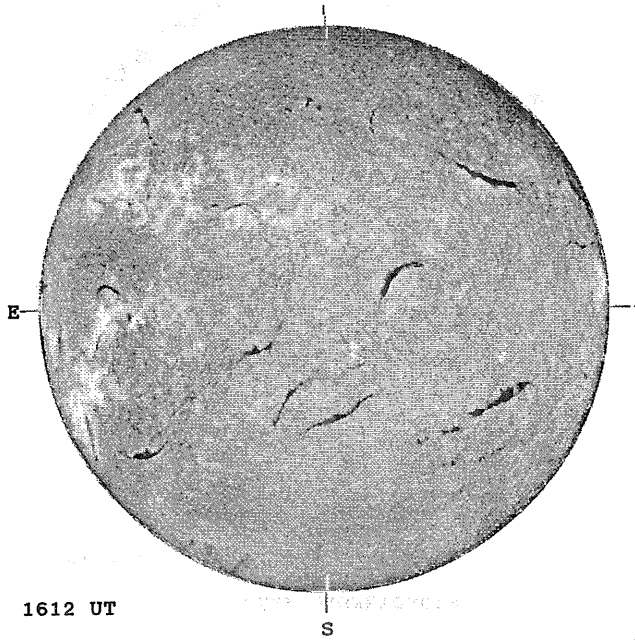
DeltaY = 12.9
DeltaX = 9.6



17.52 -
18.49 UT

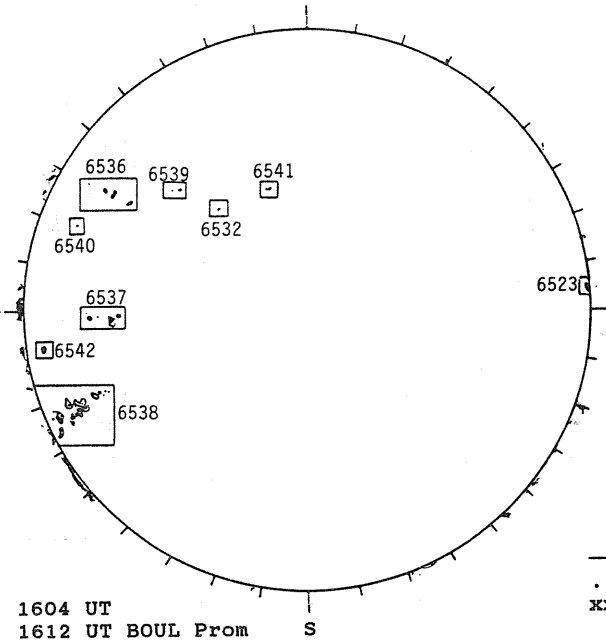
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



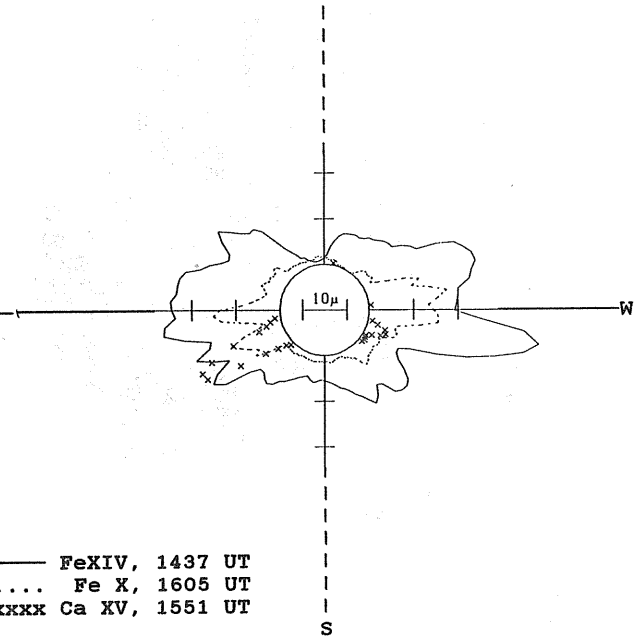
1612 UT

BOULDER SUNSPOT



1604 UT
1612 UT BOUL Prom

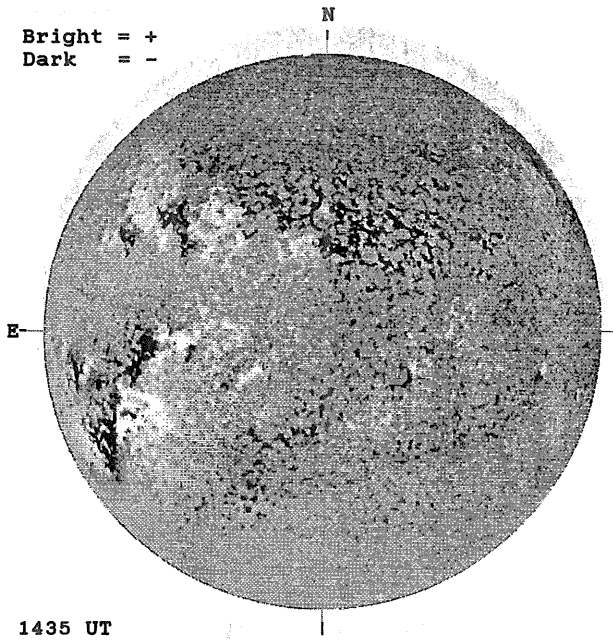
SACRAMENTO PEAK CORONA (1.15 Radii)



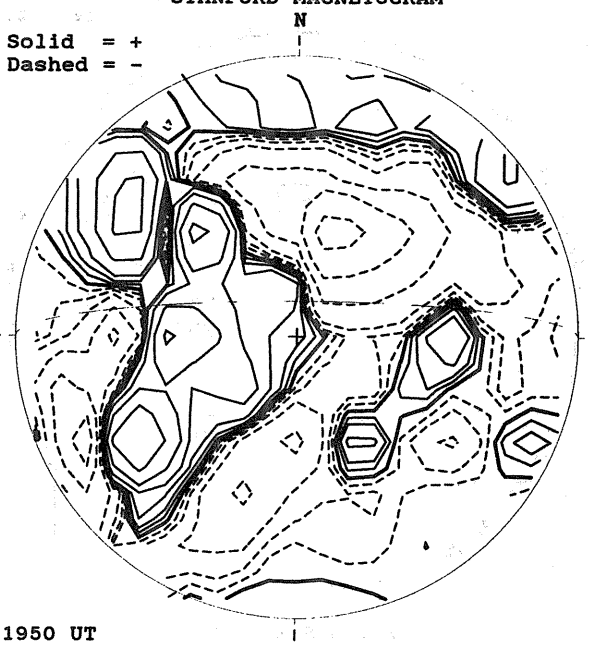
—— FeXIV, 1437 UT
.... Fe X, 1605 UT
xxxx Ca XV, 1551 UT

MARCH 8, 1991 (P=-23.05, B_o =-7.23, L_o = .43.34)

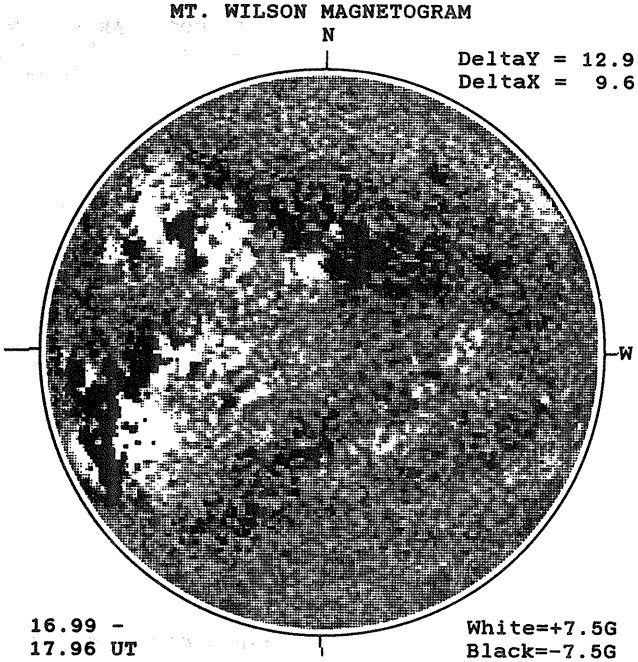
KITT PEAK MAGNETOGRAM



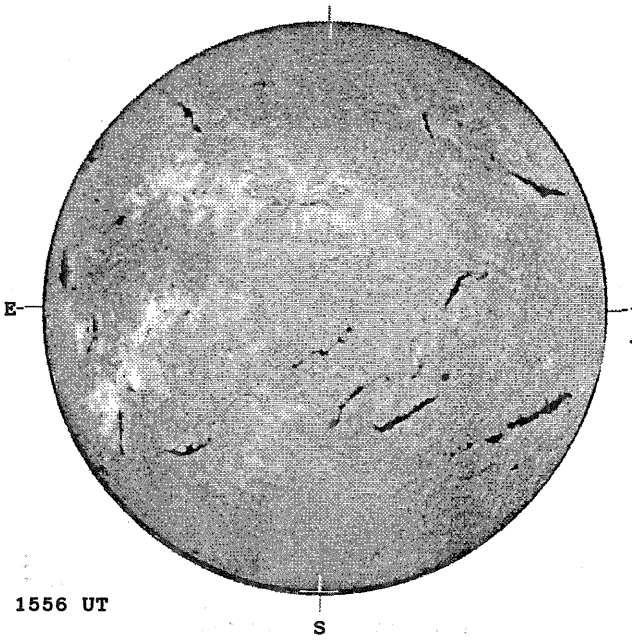
STANFORD MAGNETOGRAM



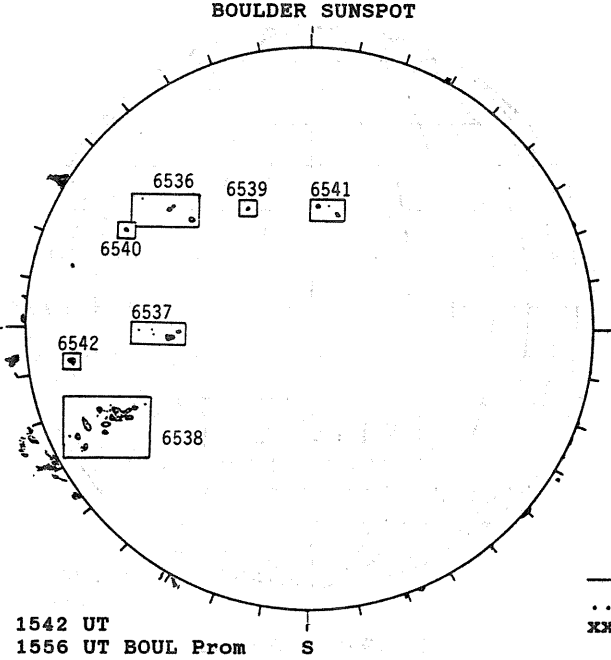
MT. WILSON MAGNETOGRAM



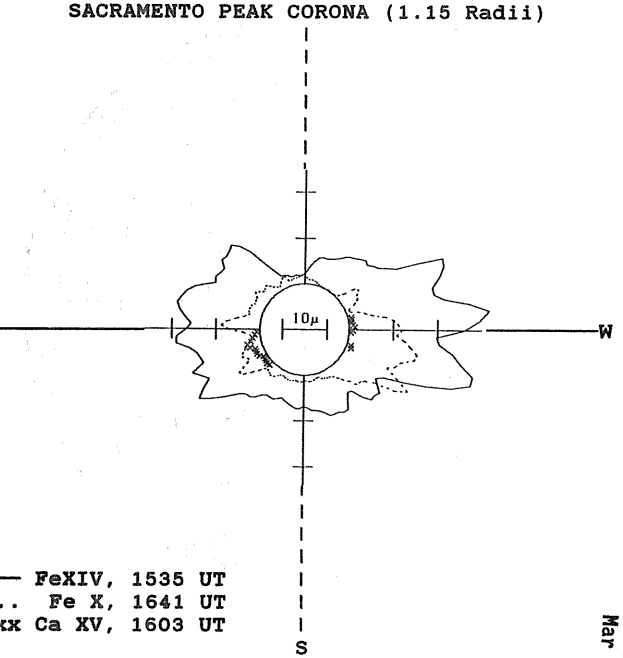
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

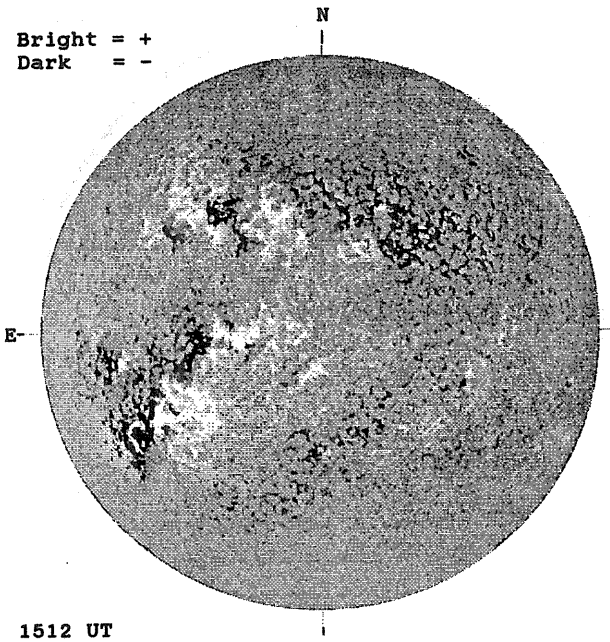


MARCH 9, 1991 (P=-23.26, B_o =-7.23, L_o = 30.16)

64
Mar 91

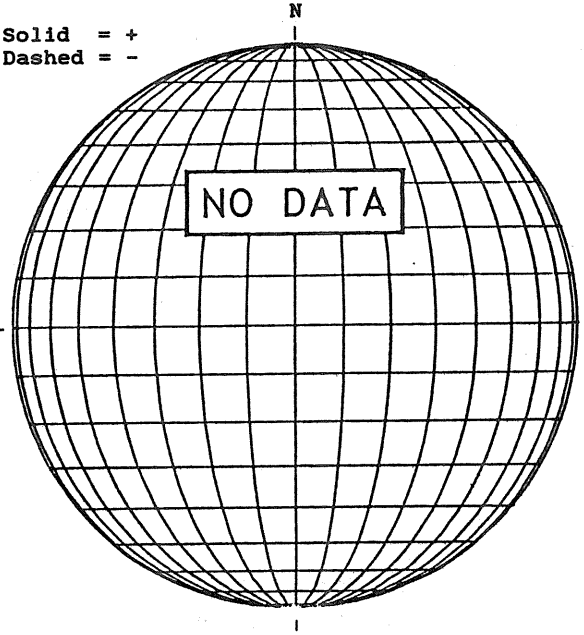
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



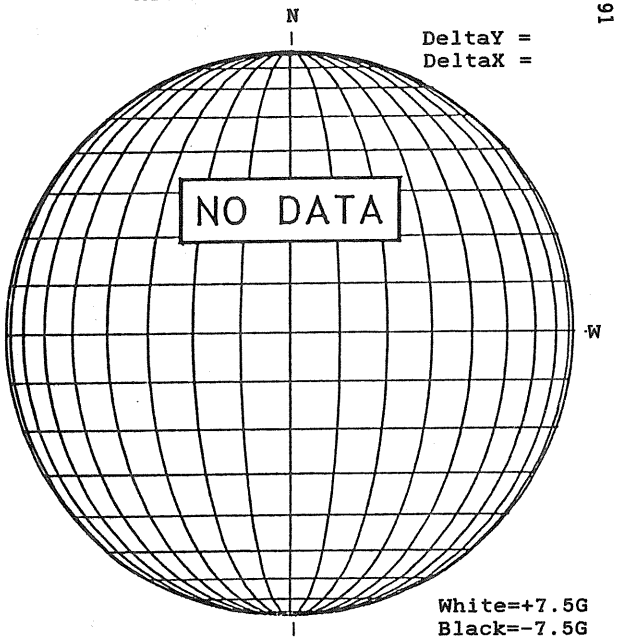
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



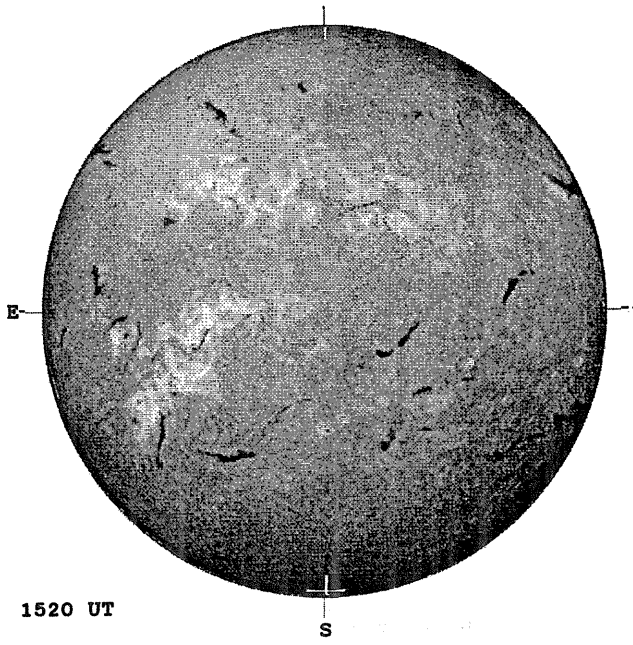
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

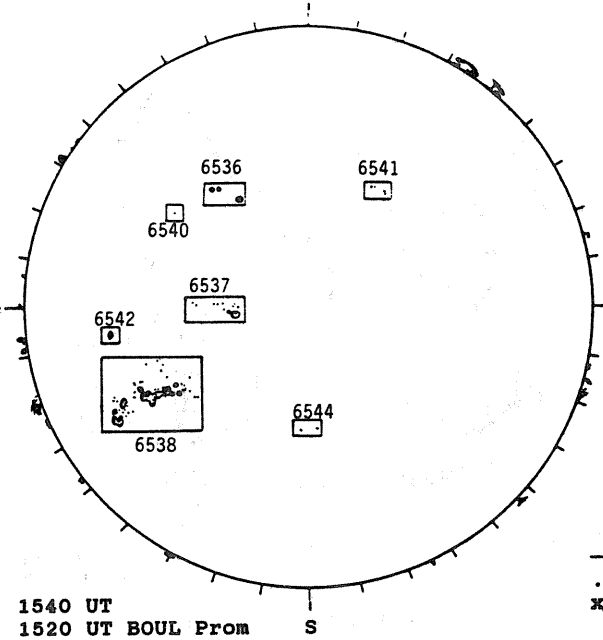


White=+7.5G
Black=-7.5G

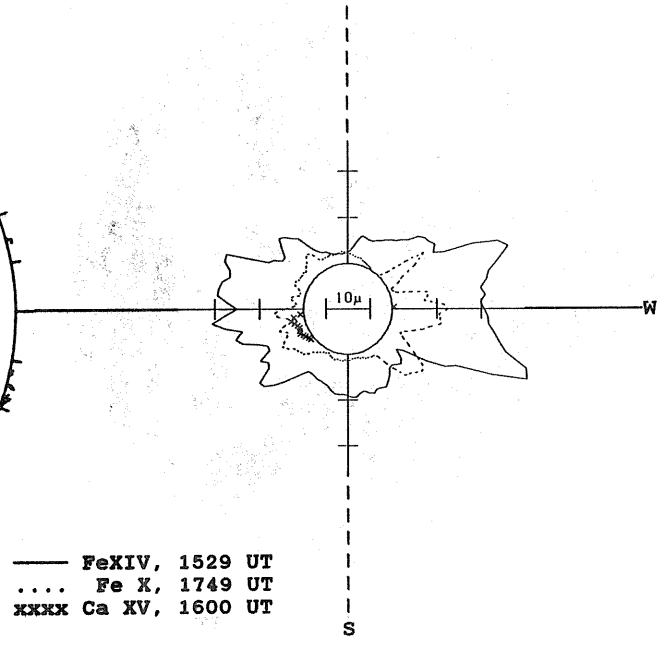
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

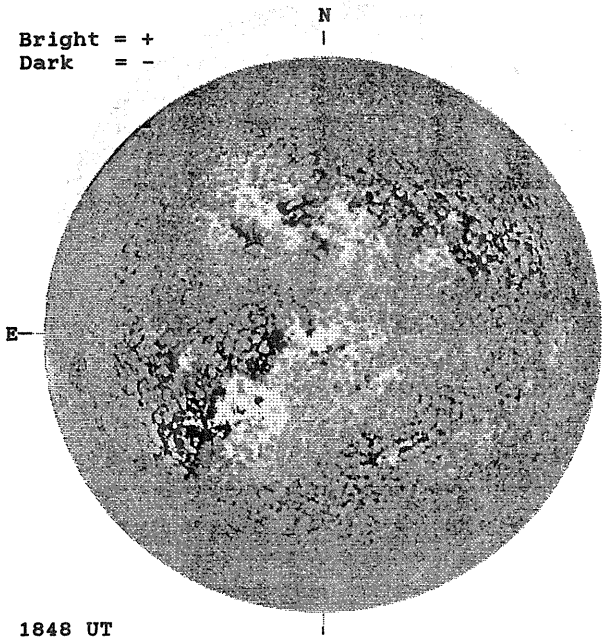


—— FeXIV, 1529 UT
.... Fe X, 1749 UT
xxxx Ca XV, 1600 UT

MARCH 10, 1991 (P=-23.46, B_o =-7.22, L_o = 16.98)

KITT PEAK MAGNETOGRAM

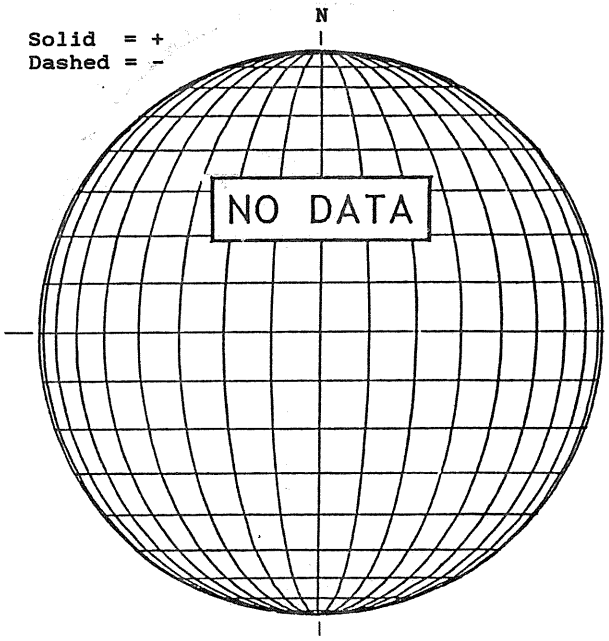
Bright = +
Dark = -



1848 UT

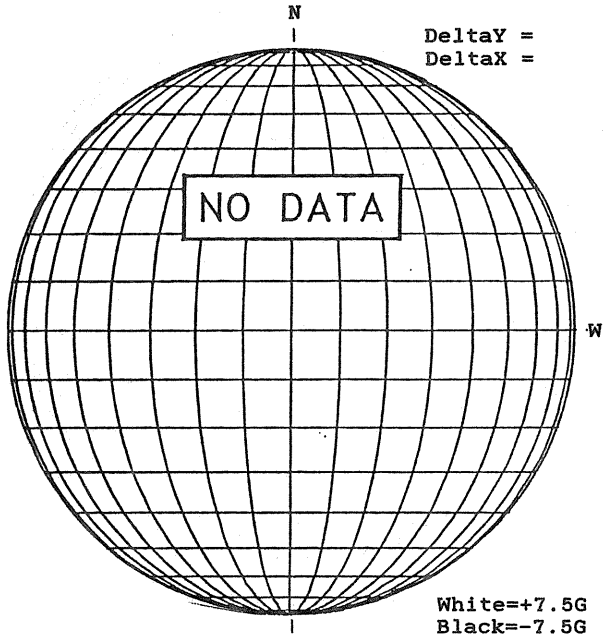
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



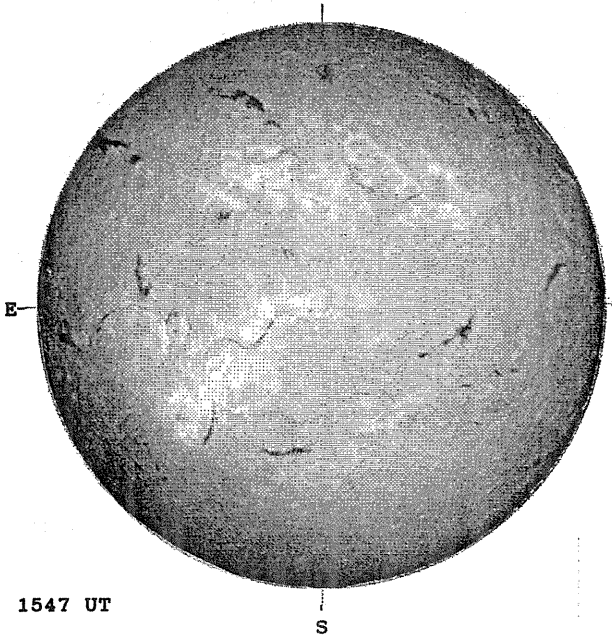
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



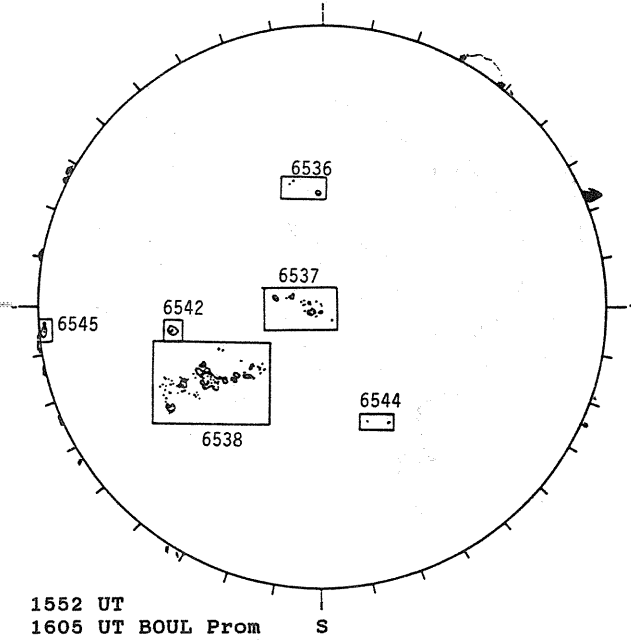
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



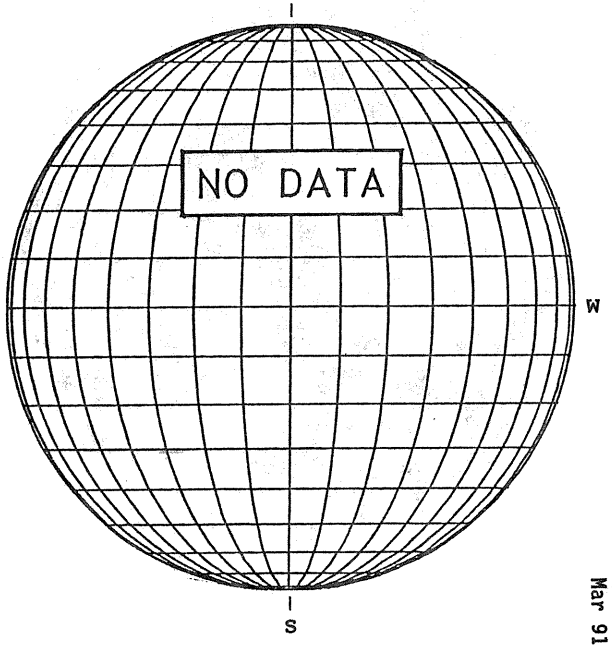
1547 UT

BOULDER SUNSPOT



1552 UT
1605 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



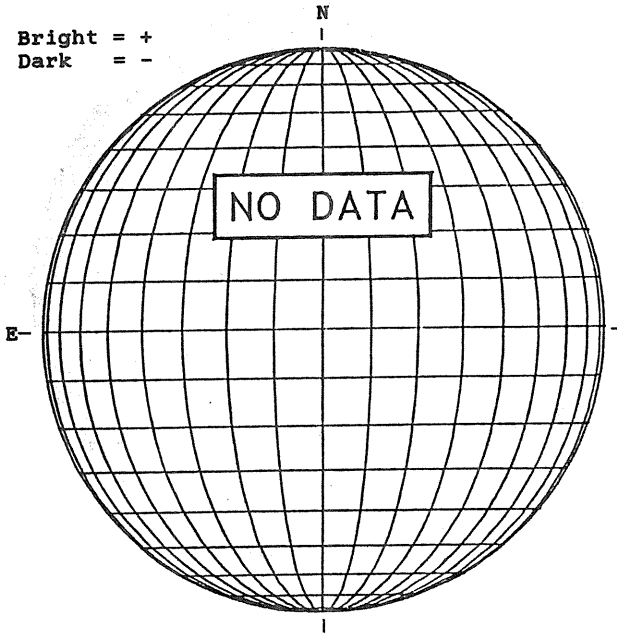
65
Mar 91

MARCH 11, 1991 (P=-23.66, B_o =-7.22, L_o = 3.81)

66
Mar 91

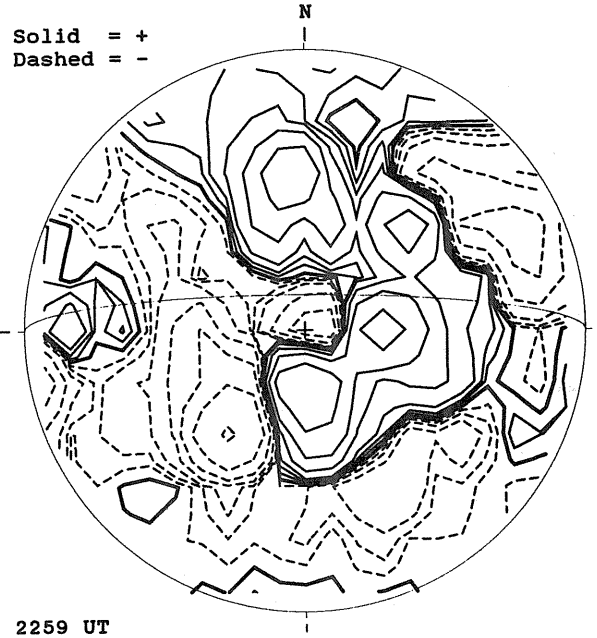
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

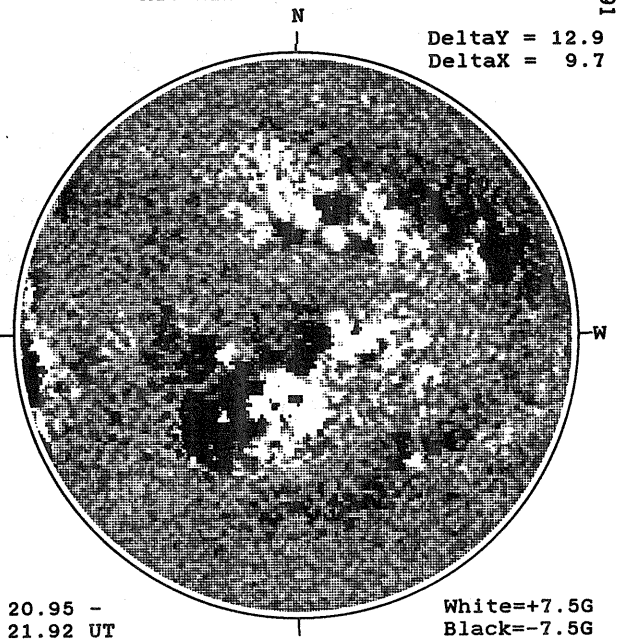
Solid = +
Dashed = -



2259 UT

MT. WILSON MAGNETOGRAM

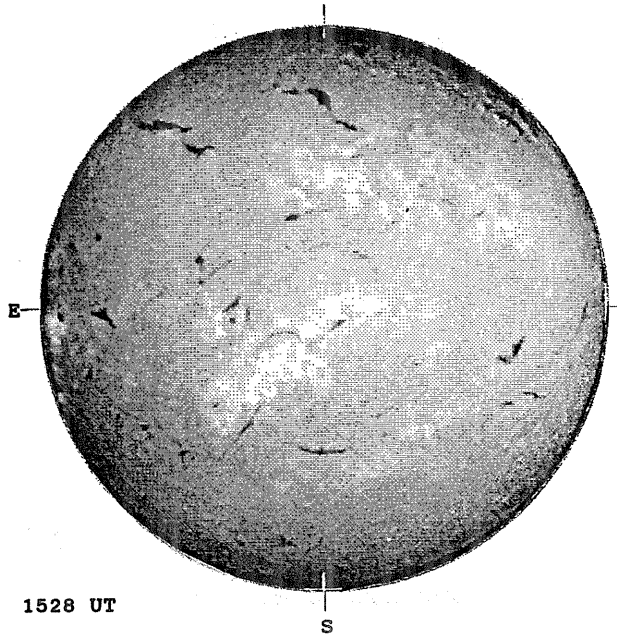
DeltaY = 12.9
DeltaX = 9.7



20.95 -
21.92 UT

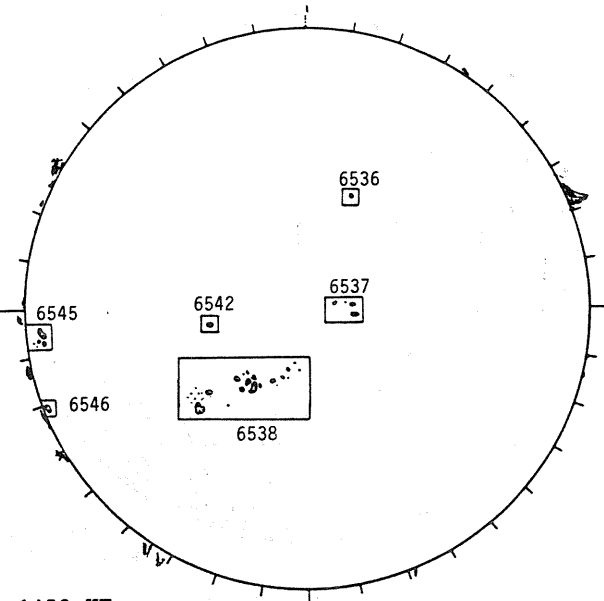
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



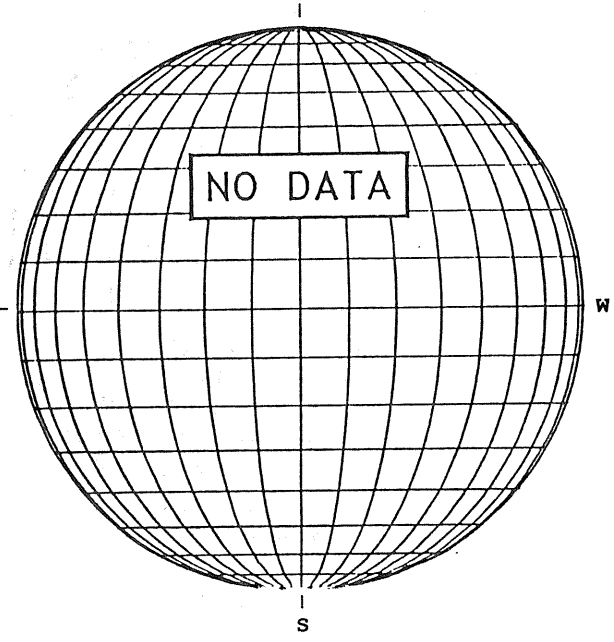
1528 UT

BOULDER SUNSPOT



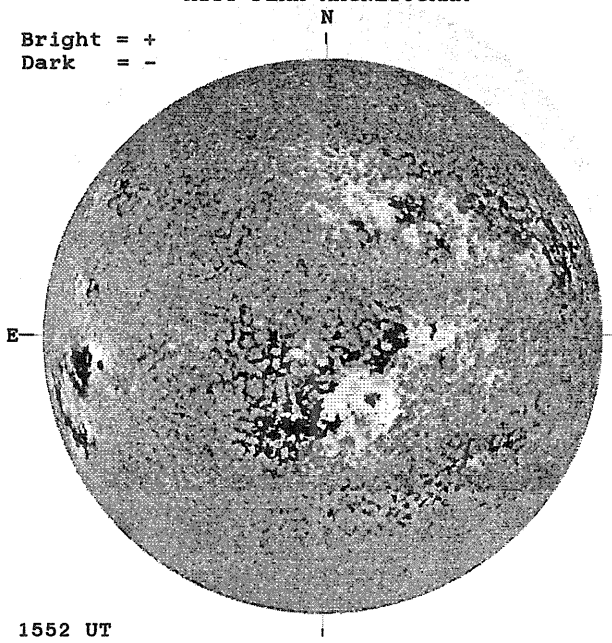
1452 UT
1528 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

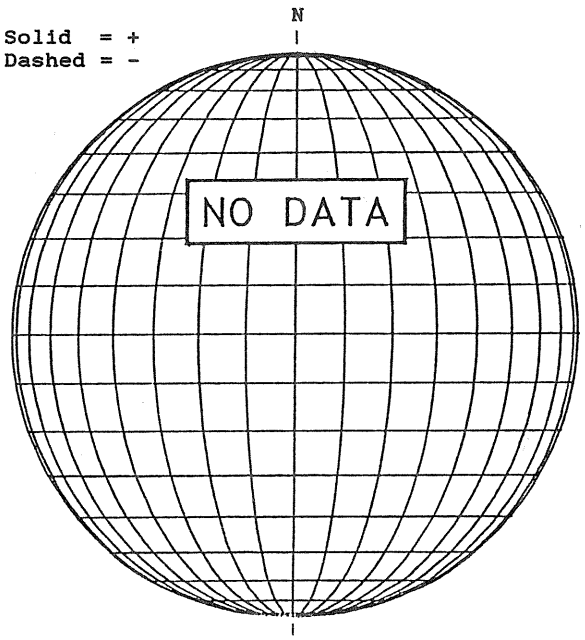


MARCH 12, 1991 (P=-23.84, B_o =-7.20, L_o = 350.63)

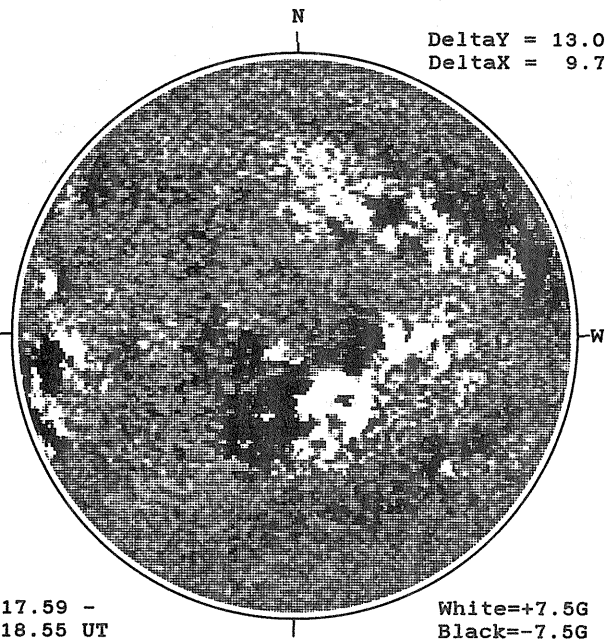
KITT PEAK MAGNETOGRAM



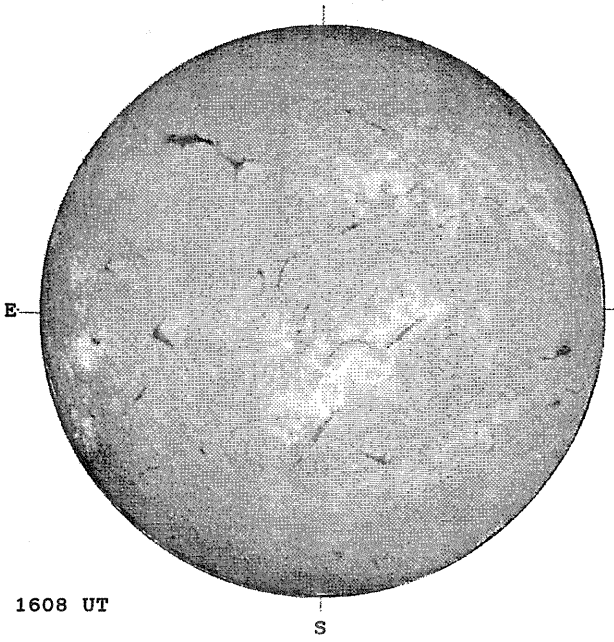
STANFORD MAGNETOGRAM



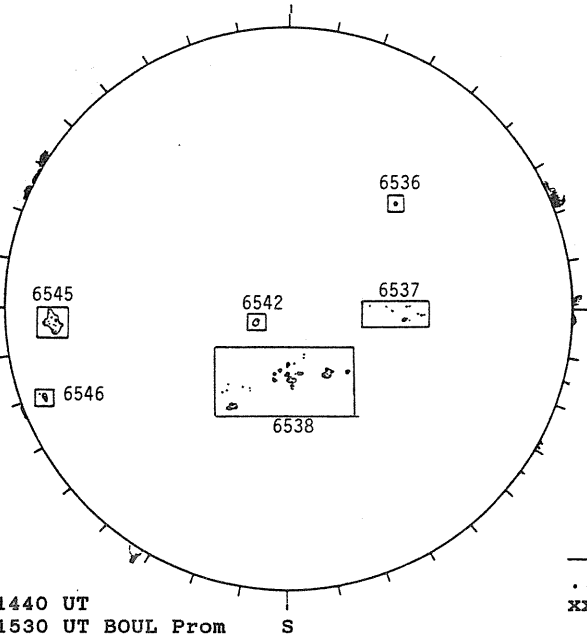
MT. WILSON MAGNETOGRAM



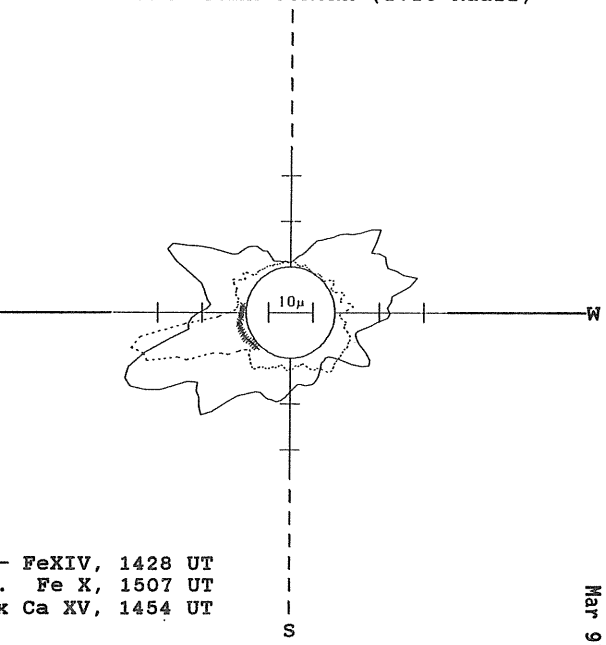
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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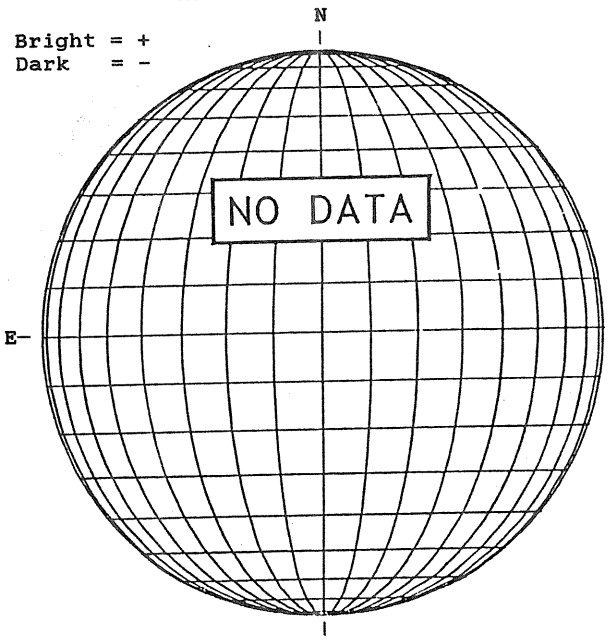
Mar 91

MARCH 13, 1991 (P=-24.02, B_o =-7.19, L_o = 337.45)

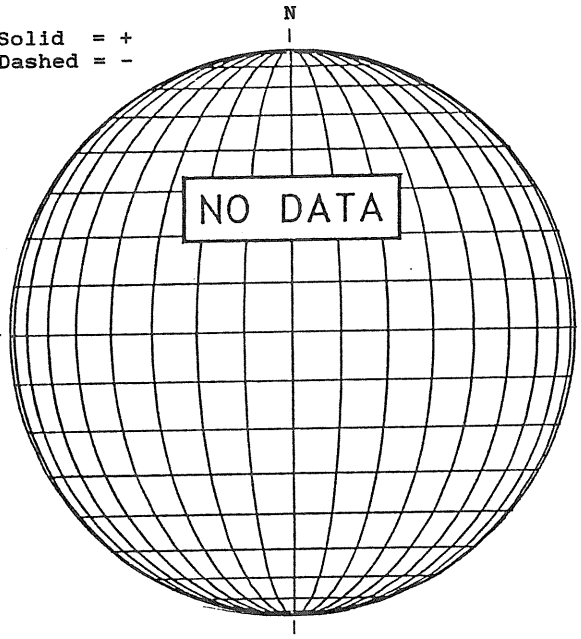
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



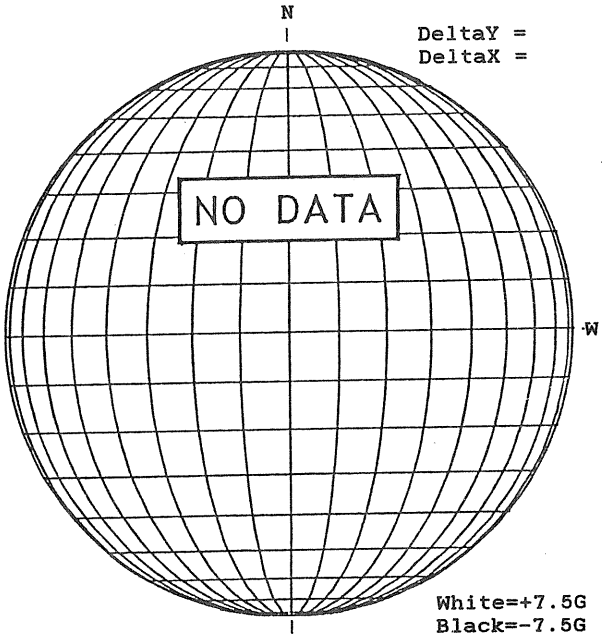
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



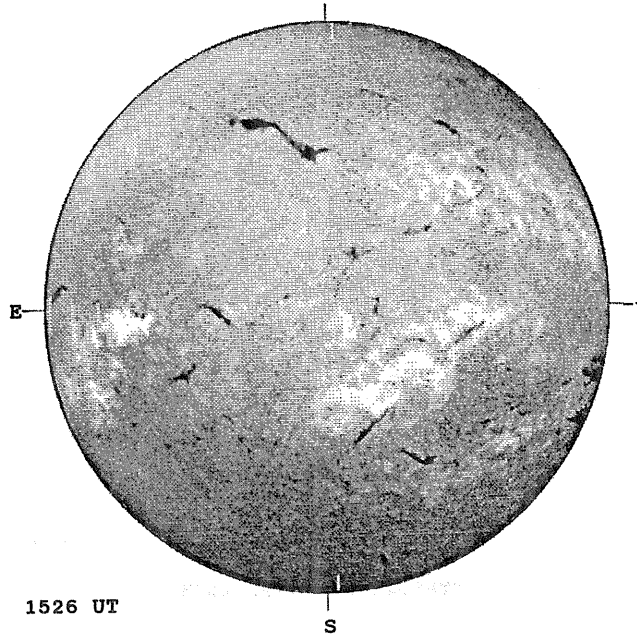
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



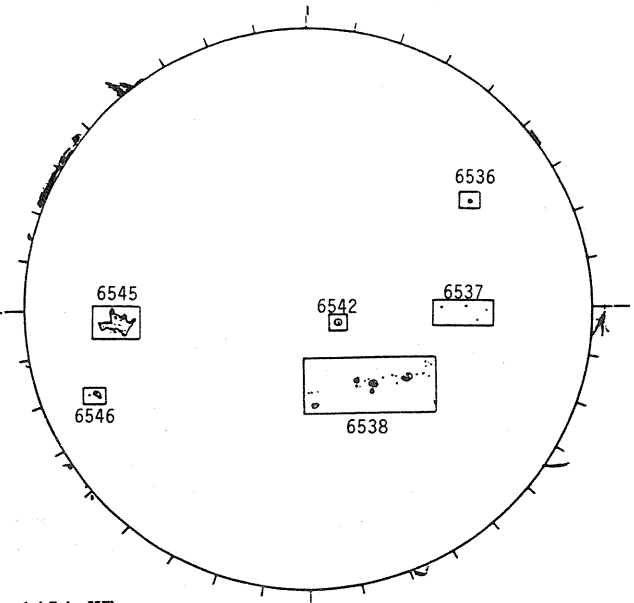
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



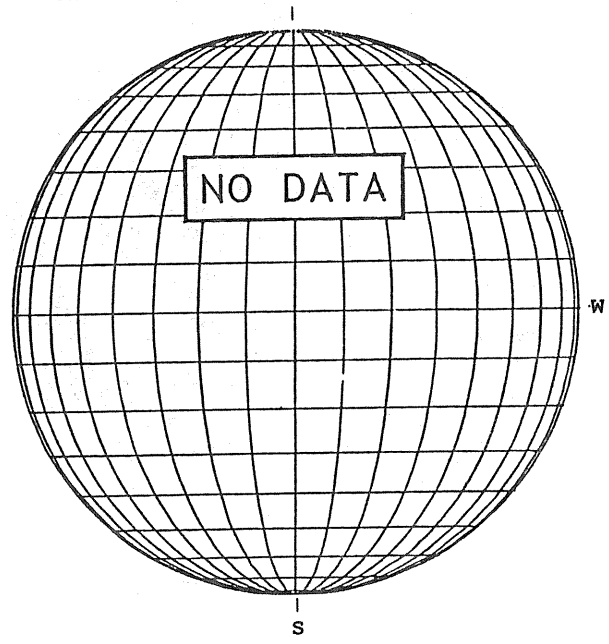
1526 UT

BOULDER SUNSPOT



1454 UT
1526 UT BOUL Prom

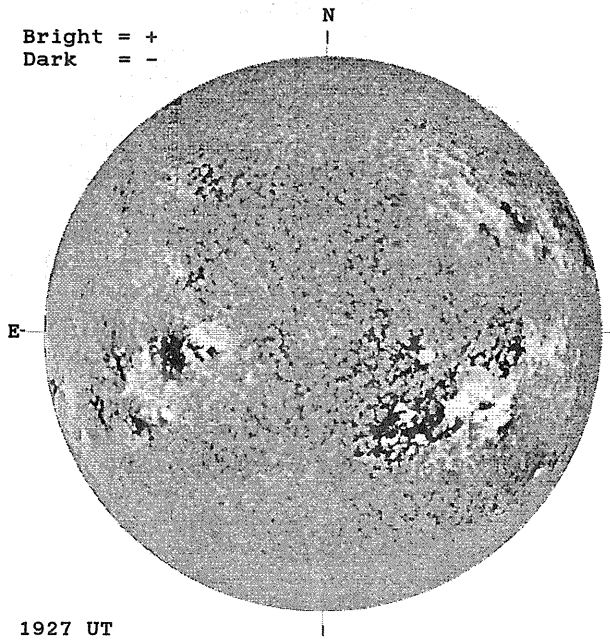
SACRAMENTO PEAK CORONA (1.15 Radii)



MARCH 14, 1991 (P=-24.20, B_o =-7.18, L_o = 324.27)

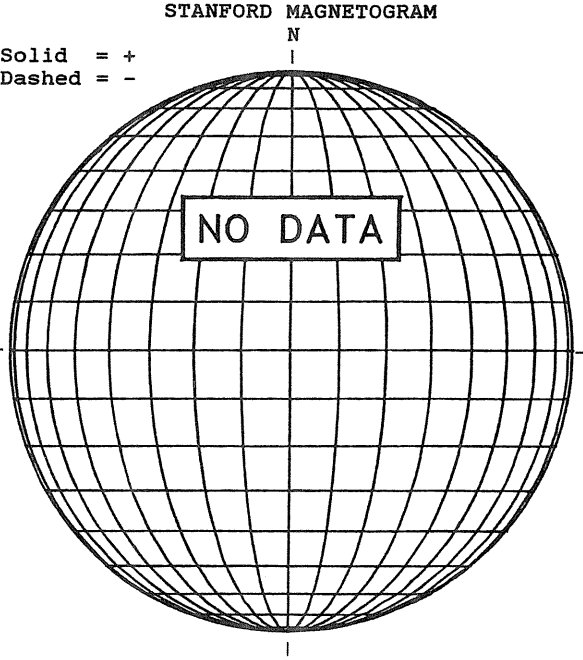
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



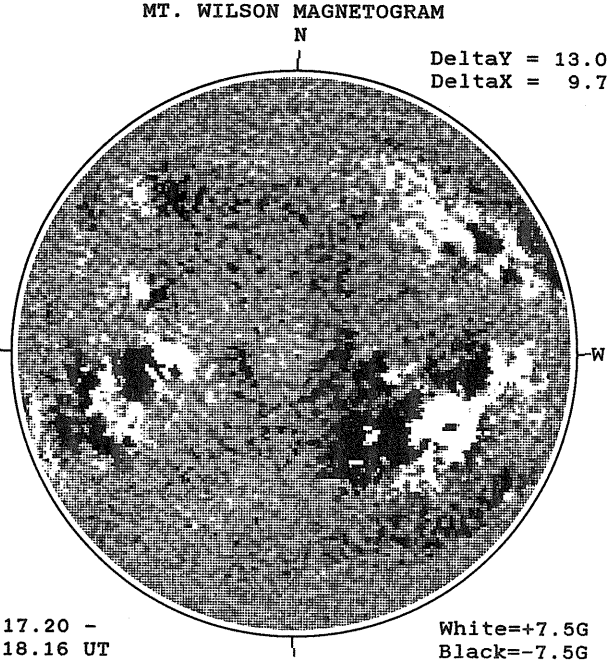
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

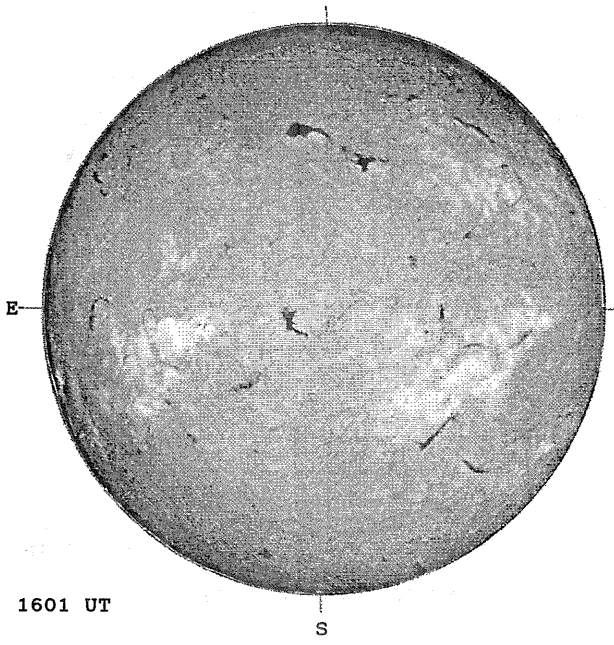


MT. WILSON MAGNETOGRAM

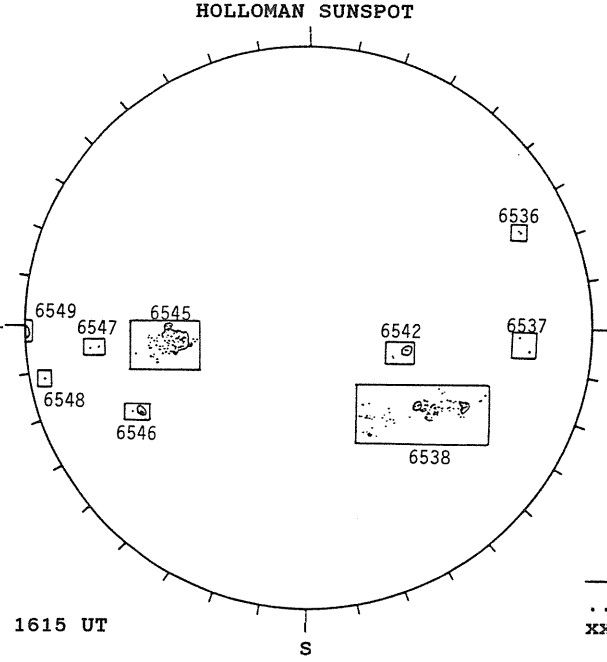
DeltaY = 13.0
DeltaX = 9.7



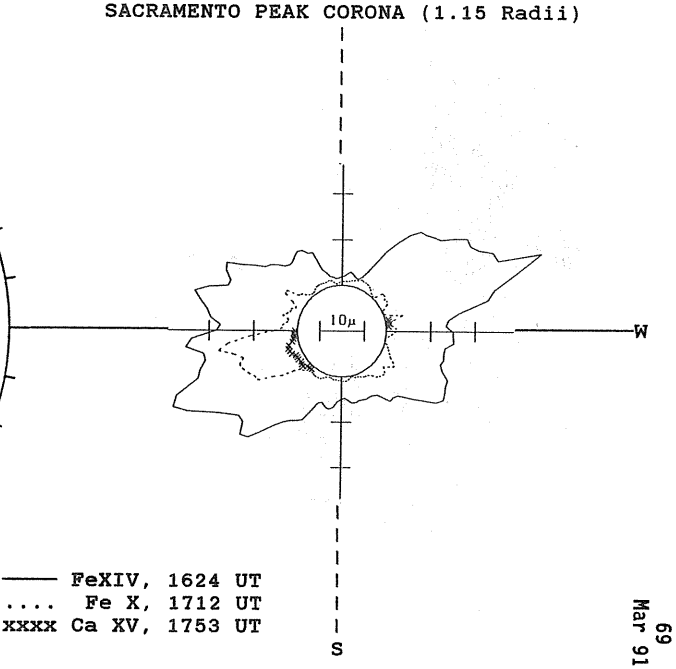
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1624 UT
.... Fe X, 1712 UT
xxxx Ca XV, 1753 UT

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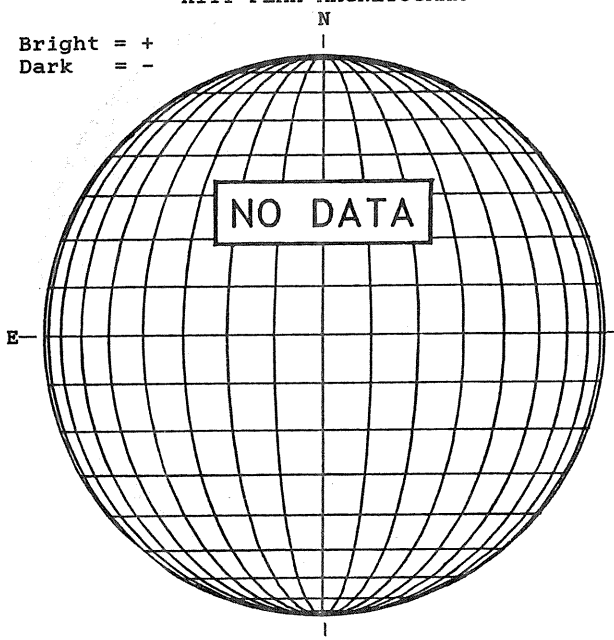
Mar 91

MARCH 15, 1991 (P=-24.36, B_o =-7.16, L_o = 311.09)

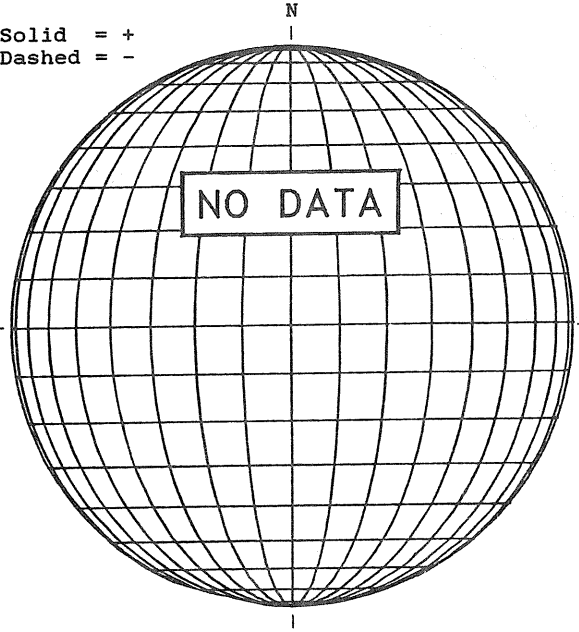
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



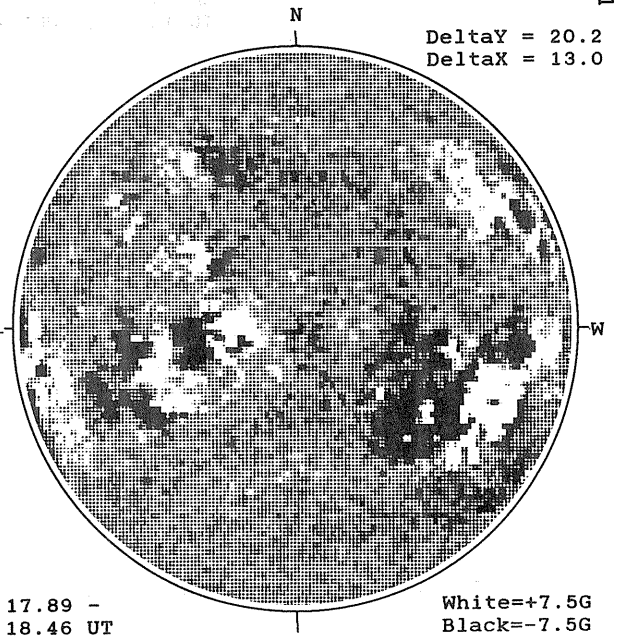
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

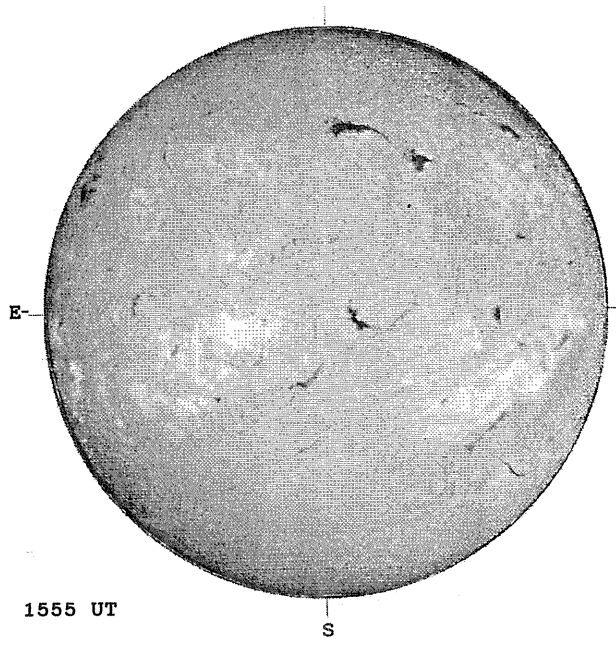
DeltaY = 20.2
DeltaX = 13.0



17.89 -
18.46 UT

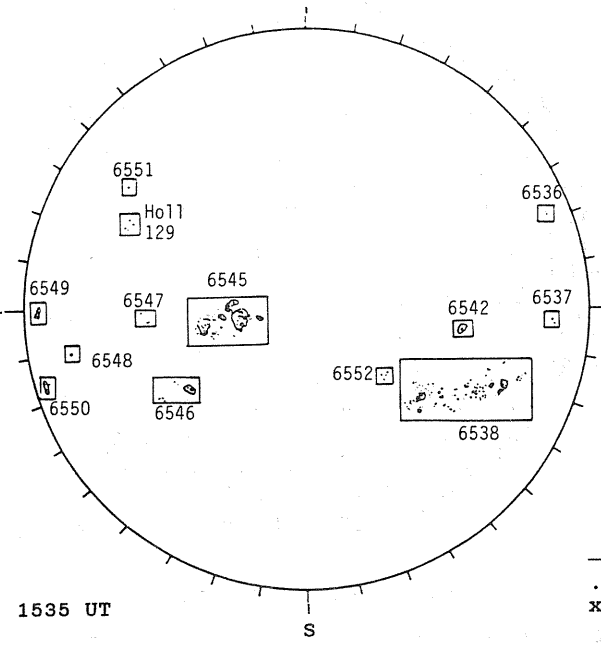
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



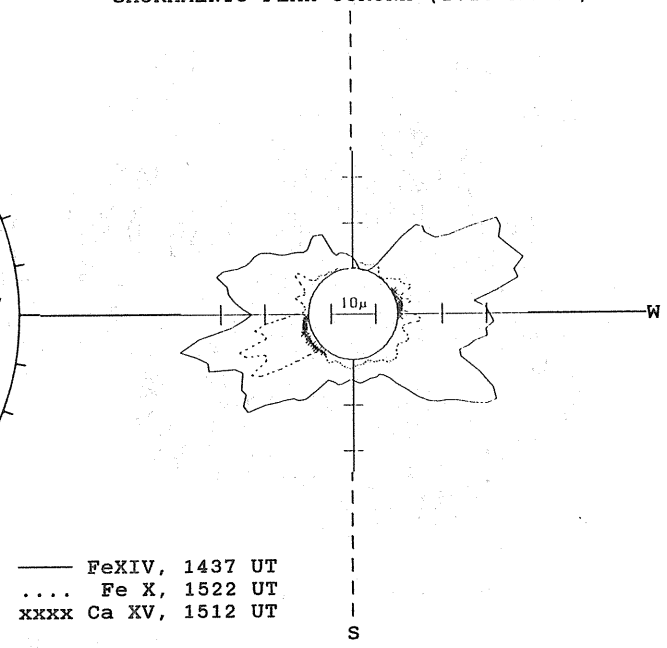
1555 UT

HOLLOMAN SUNSPOT



1535 UT

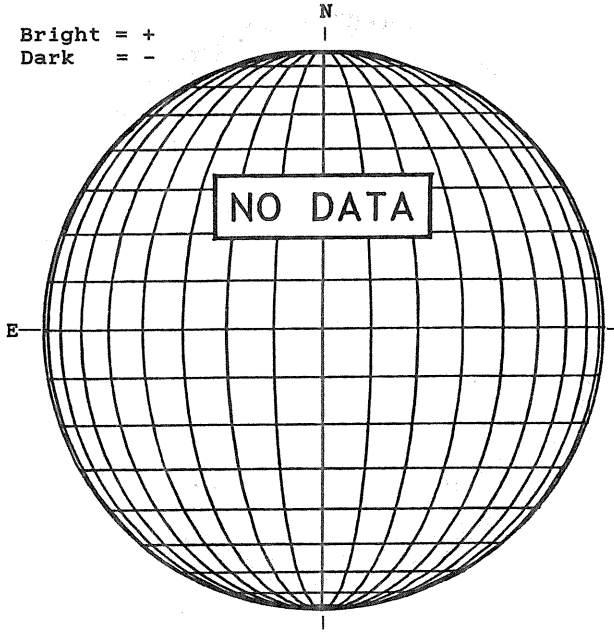
SACRAMENTO PEAK CORONA (1.15 Radii)



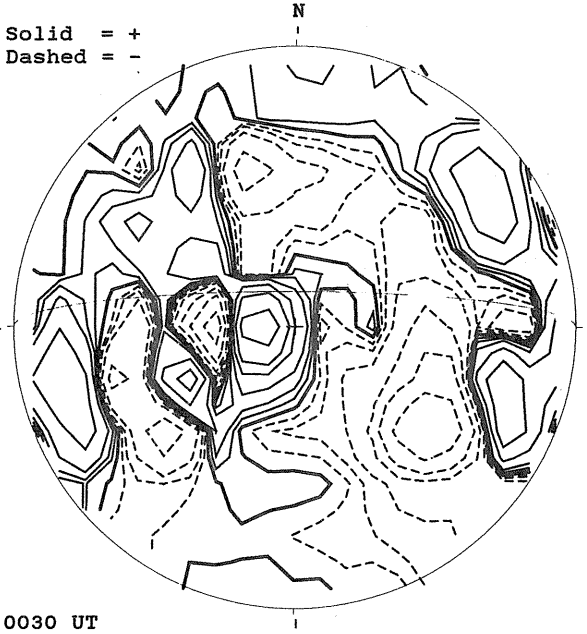
—— FeXIV, 1437 UT
.... Fe X, 1522 UT
xxxx Ca XV, 1512 UT

MARCH 16, 1991 (P=-24.53, B_o =-7.14, L_o = 297.91)

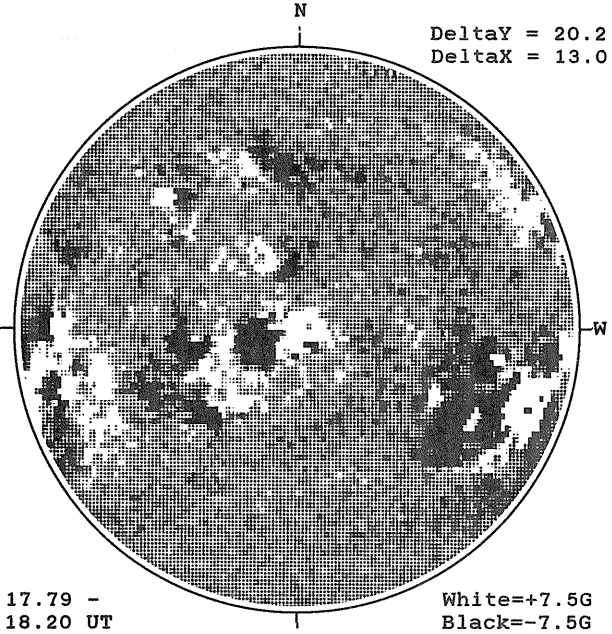
KITT PEAK MAGNETOGRAM



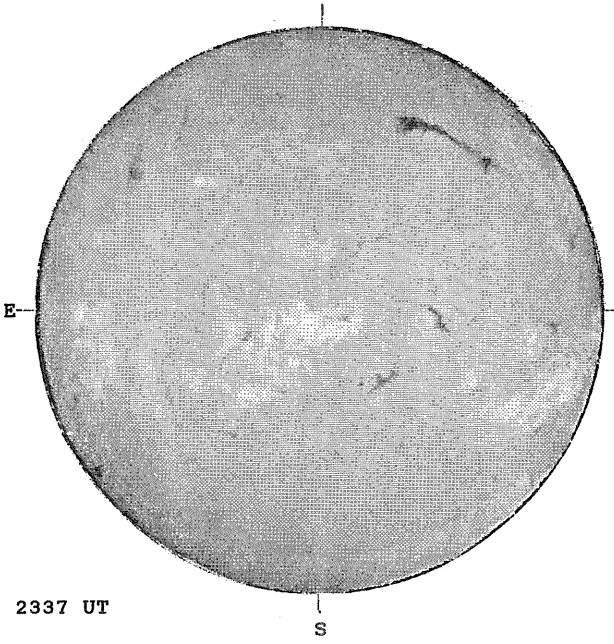
STANFORD MAGNETOGRAM



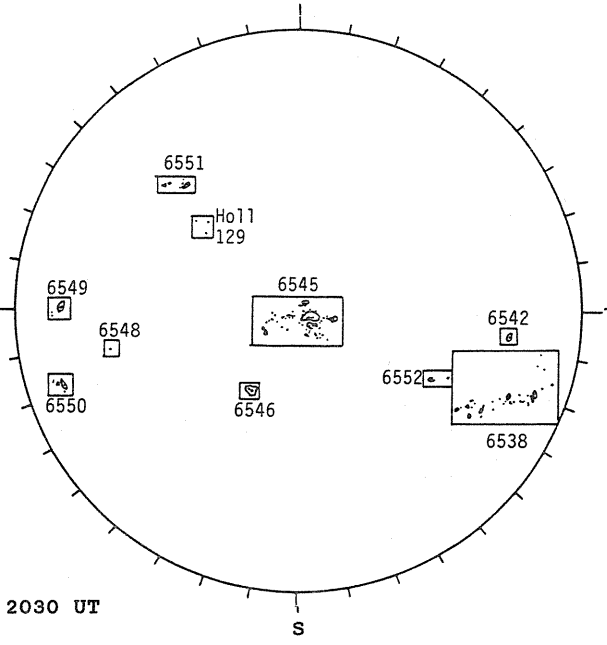
MT. WILSON MAGNETOGRAM



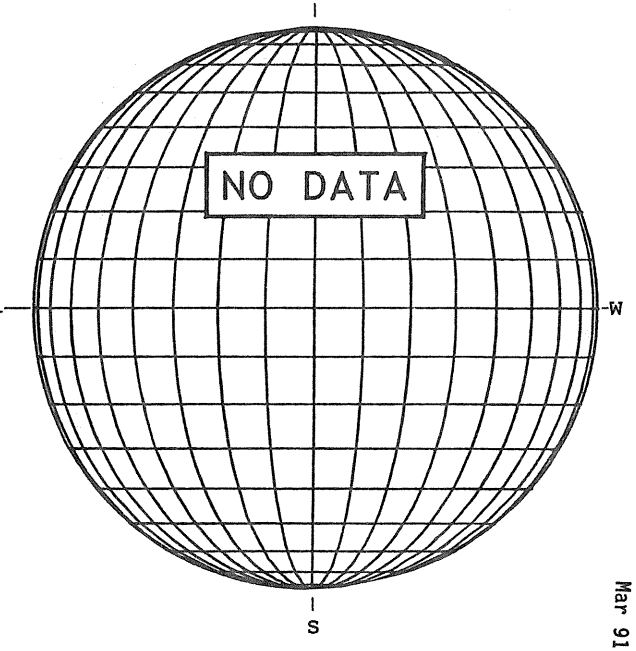
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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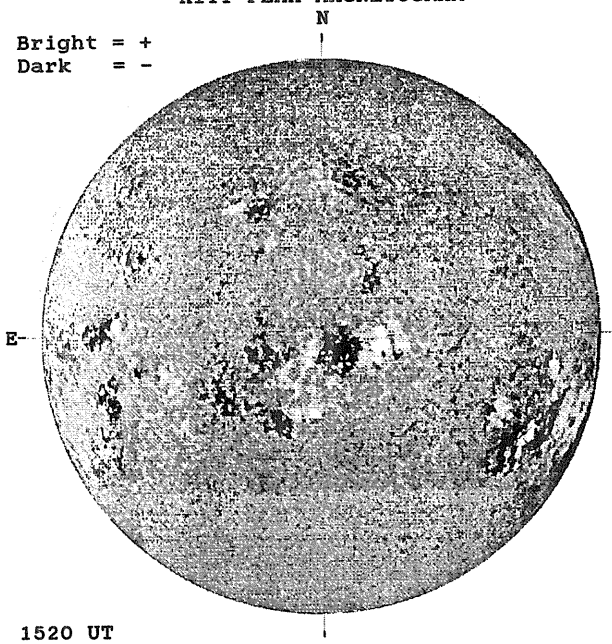
Mar 91

MARCH 17, 1991 (P=-24.68, B_o =-7.12, L_o = 284.73)

KITT PEAK MAGNETOGRAM

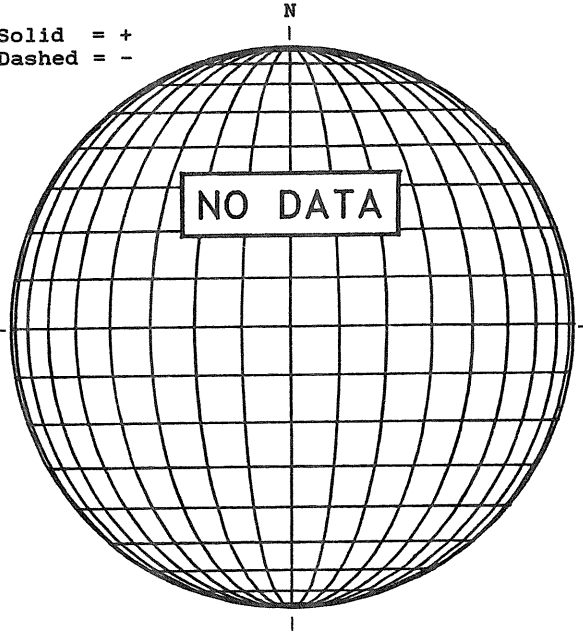
Bright = +
Dark = -



1520 UT

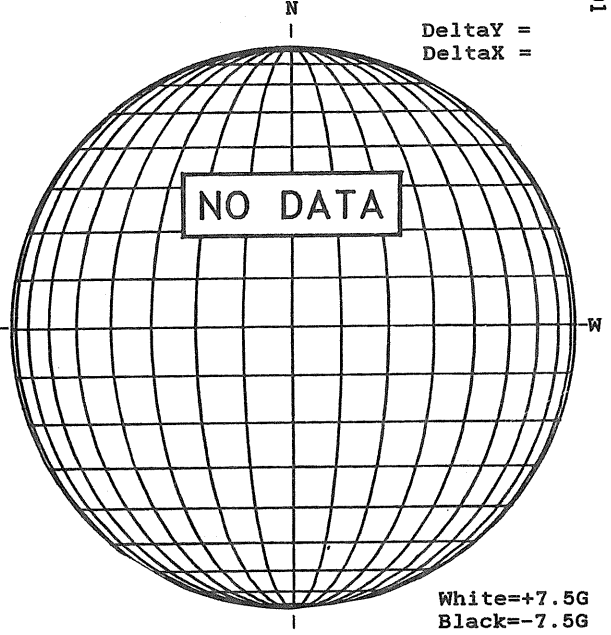
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



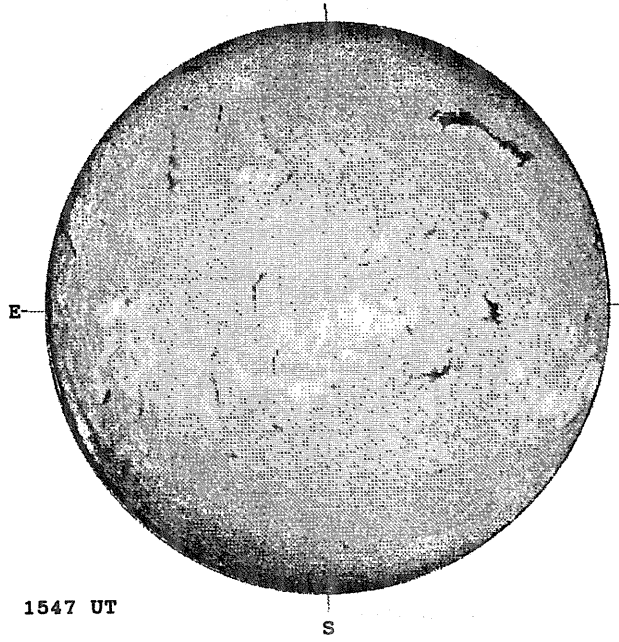
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



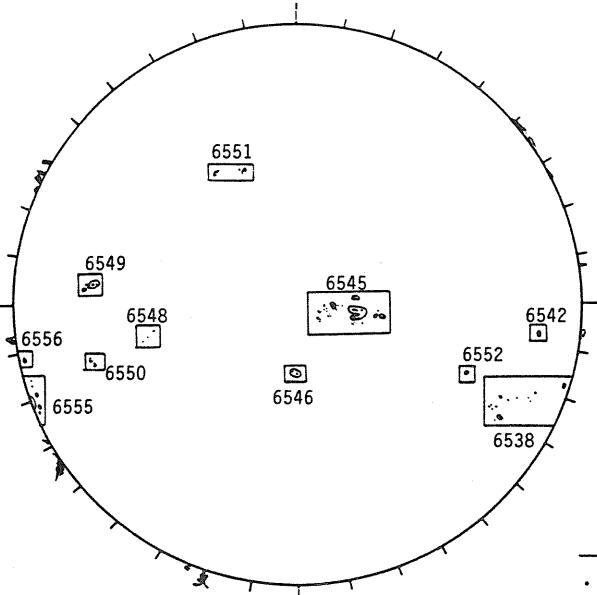
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



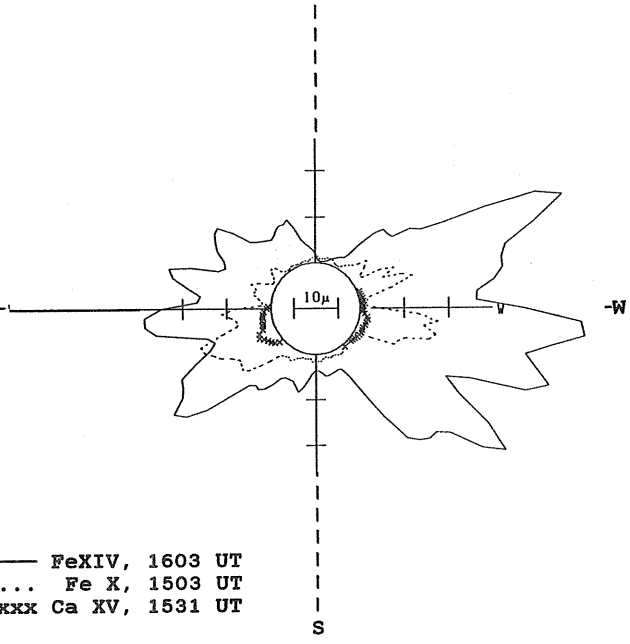
1547 UT

BOULDER SUNSPOT



1545 UT
1520 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

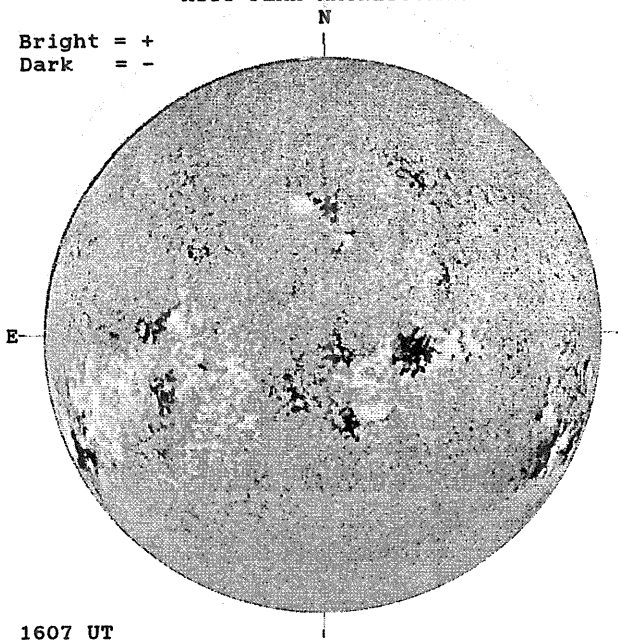


—— FeXIV, 1603 UT
.... Fe X, 1503 UT
xxxx Ca XV, 1531 UT

MARCH 18, 1991 (P=-24.83, B_o =-7.10, L_o = 271.55)

KITT PEAK MAGNETOGRAM

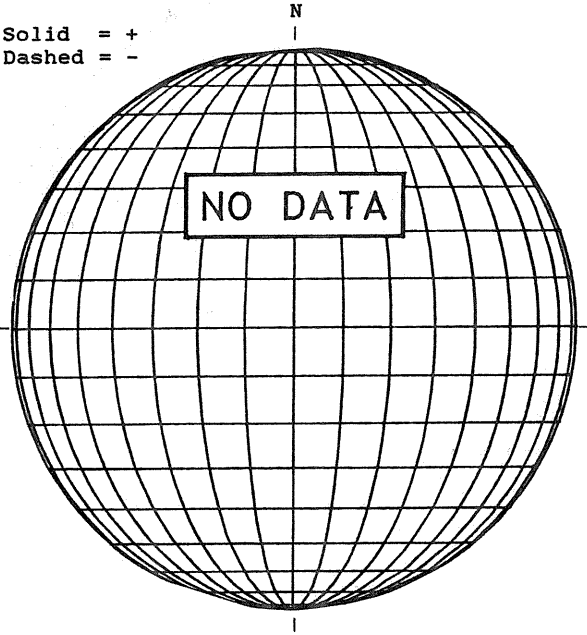
Bright = +
Dark = -



1607 UT

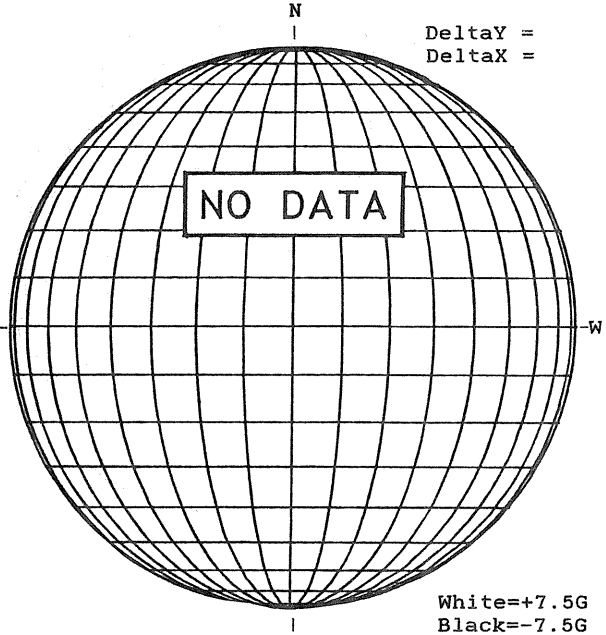
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



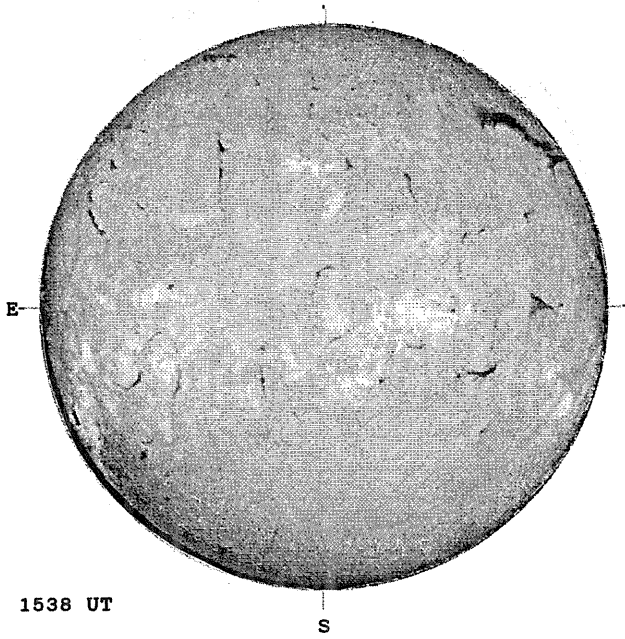
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



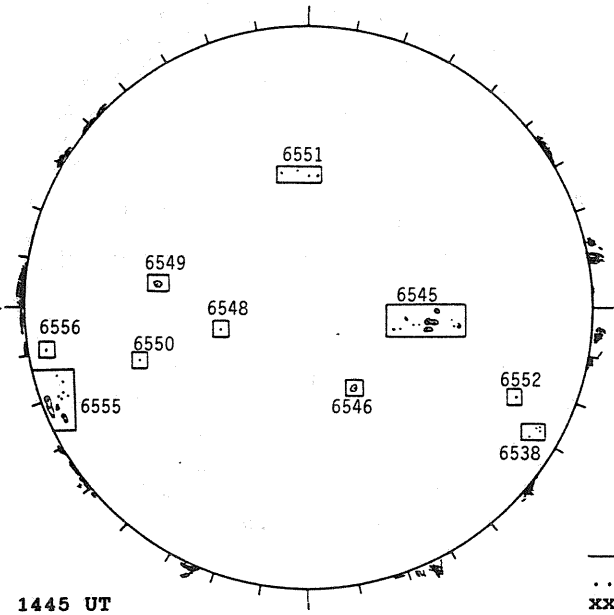
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



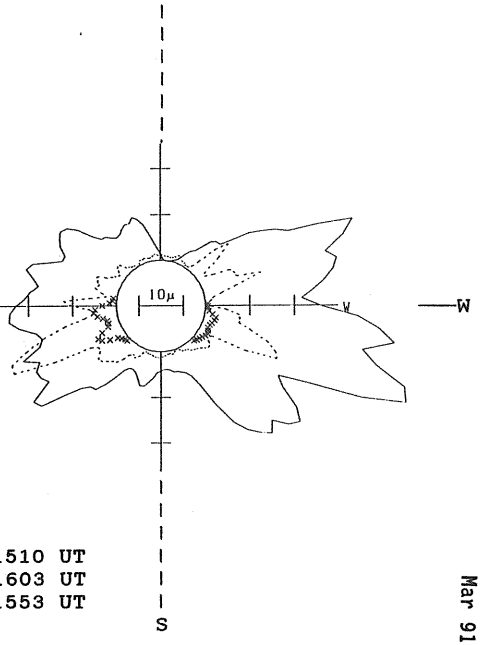
1538 UT

BOULDER SUNSPOT



1445 UT
1618 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1510 UT
.... Fe X, 1603 UT
xxxx Ca XV, 1553 UT

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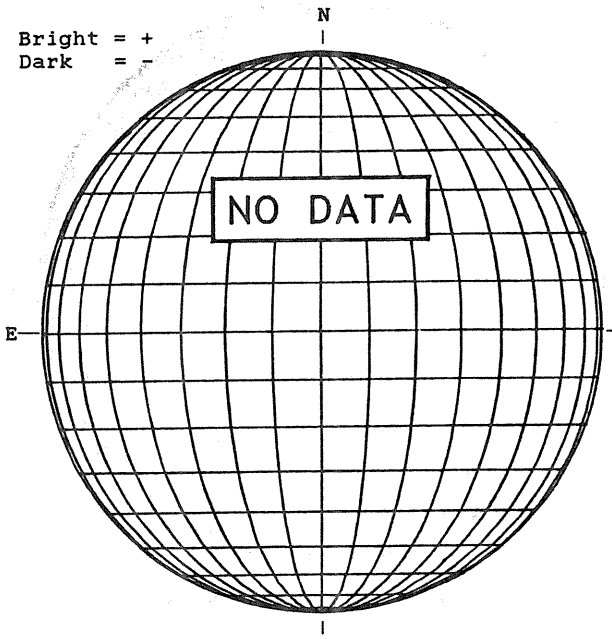
MARCH 19, 1991 (P=-24.97, B_o =-7.07, L_o = 258.37)

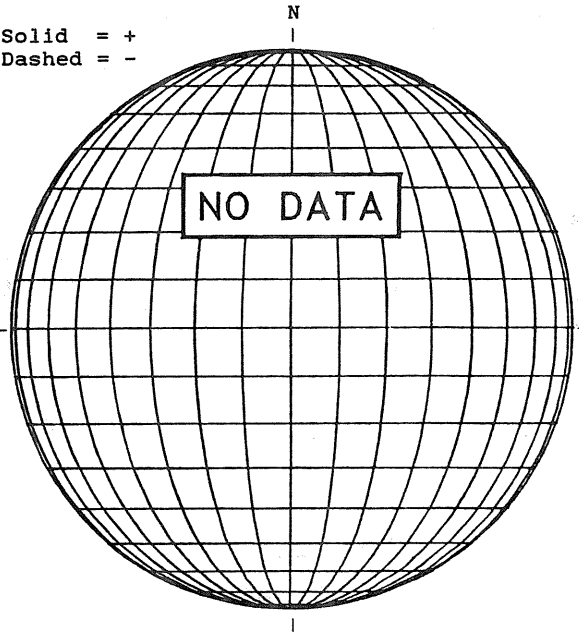
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



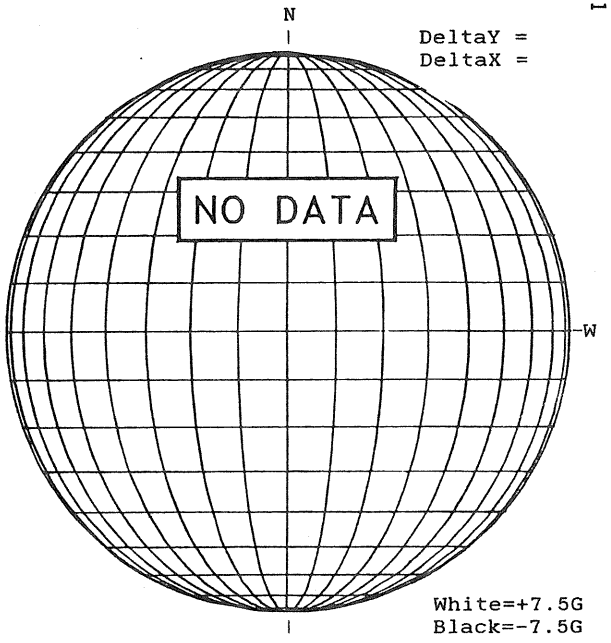
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



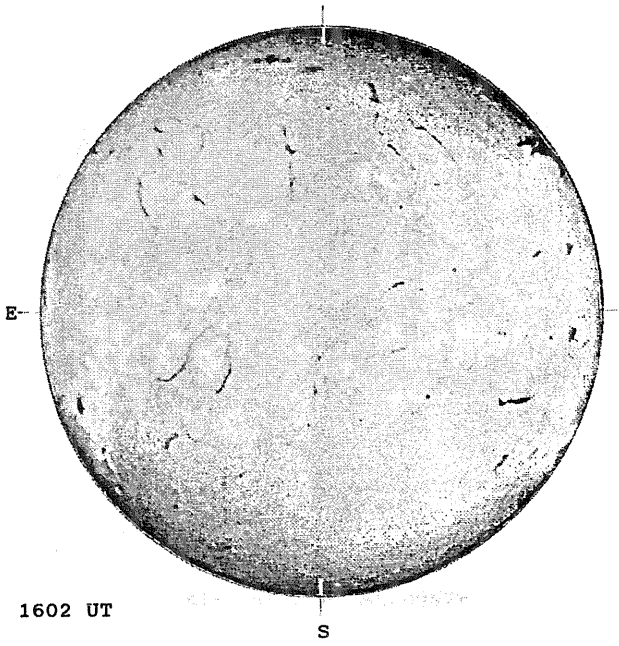
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



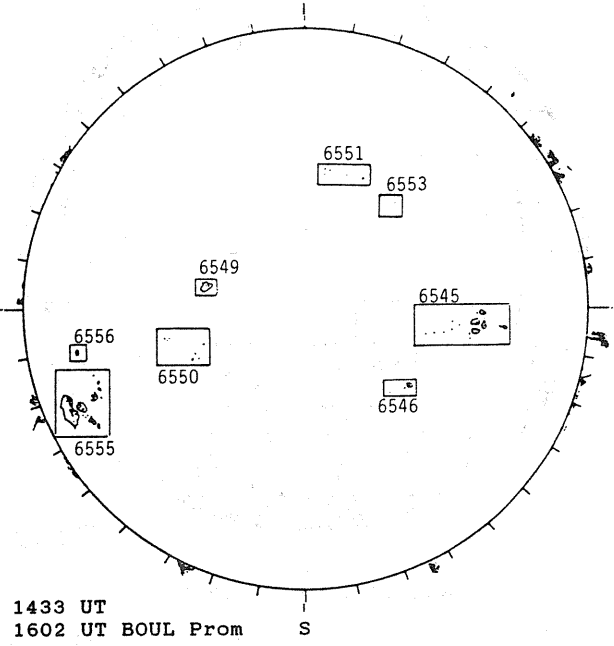
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



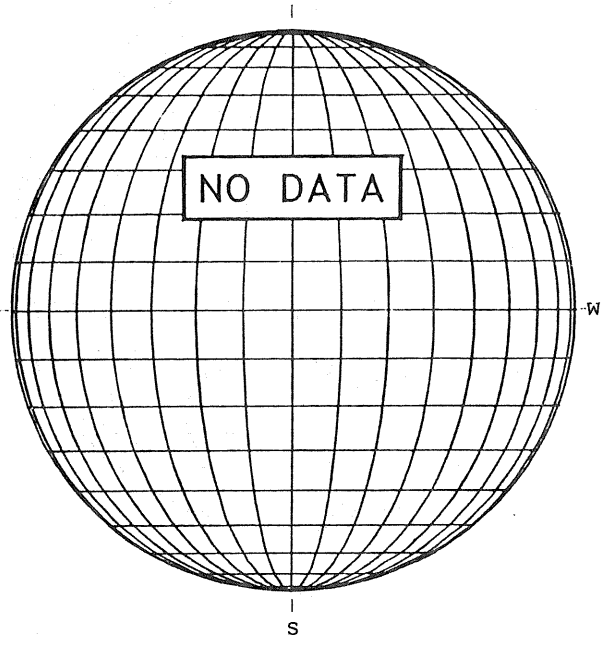
1602 UT

BOULDER SUNSPOT



1433 UT
1602 UT BOUL Prom

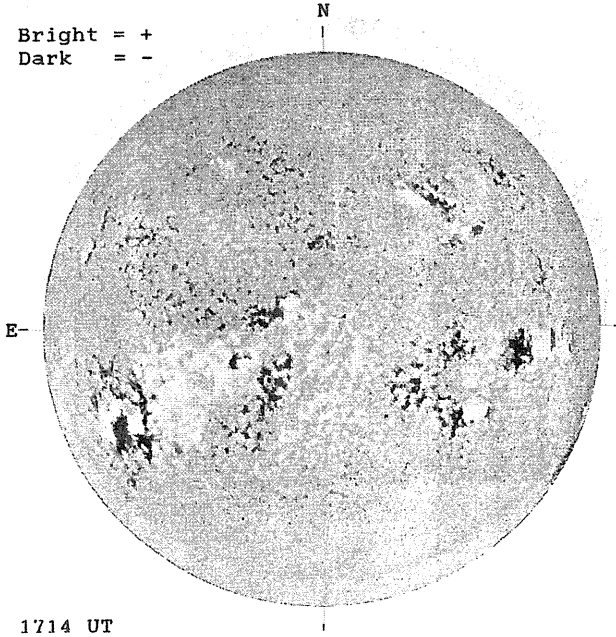
SACRAMENTO PEAK CORONA (1.15 Radii)



MARCH 20, 1991 (P=-25.10, B_o =-7.04, L_o = 245.19)

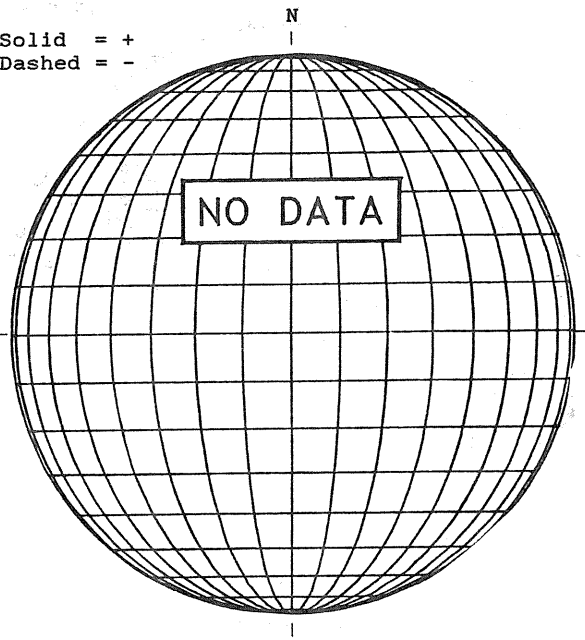
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



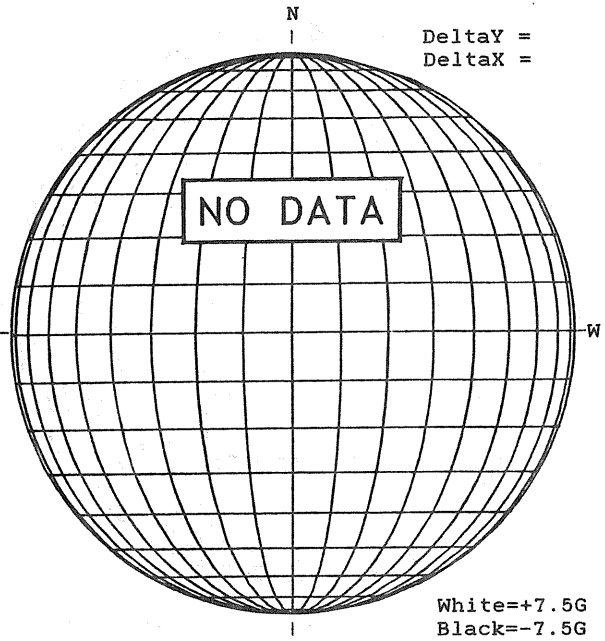
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



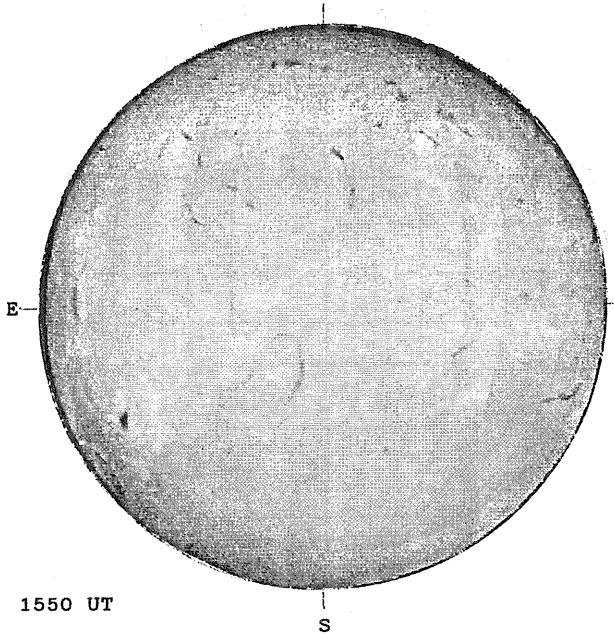
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

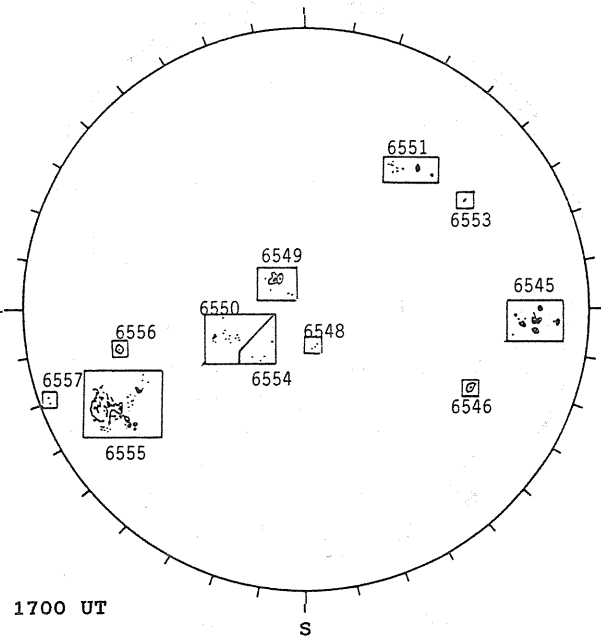


White=+7.5G
Black=-7.5G

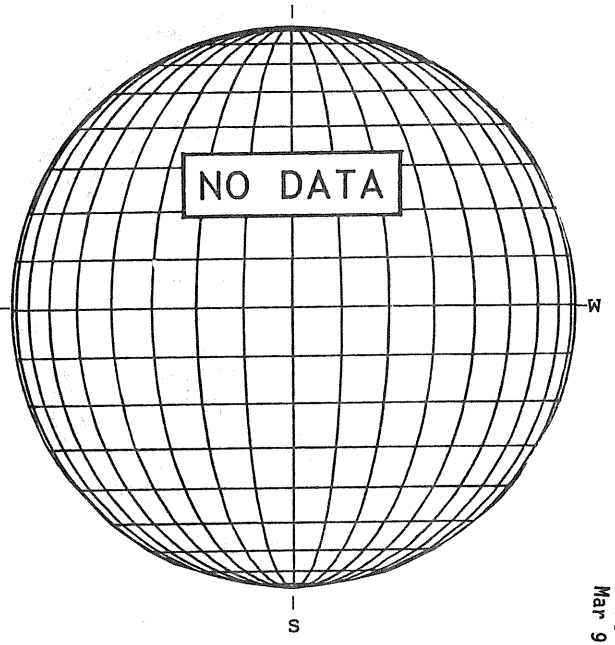
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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Mar 91

MARCH 21, 1991 (P=-25.23, B_o =-7.01, L_o = 232.00)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

N

NO DATA

E

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

NO DATA

MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

N

NO DATA

W

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

E

1550 UT

S

BOULDER SUNSPOT

6551
6553
6549
Boul 2093
6545
6556
6558
6550
6546
6557
6555

1540 UT
1550 UT BOUL Prom

S

SACRAMENTO PEAK CORONA (1.15 Radii)

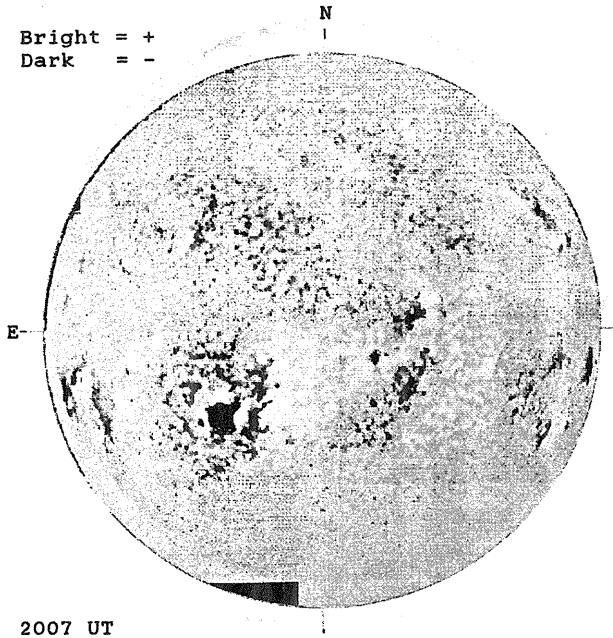
NO DATA

W

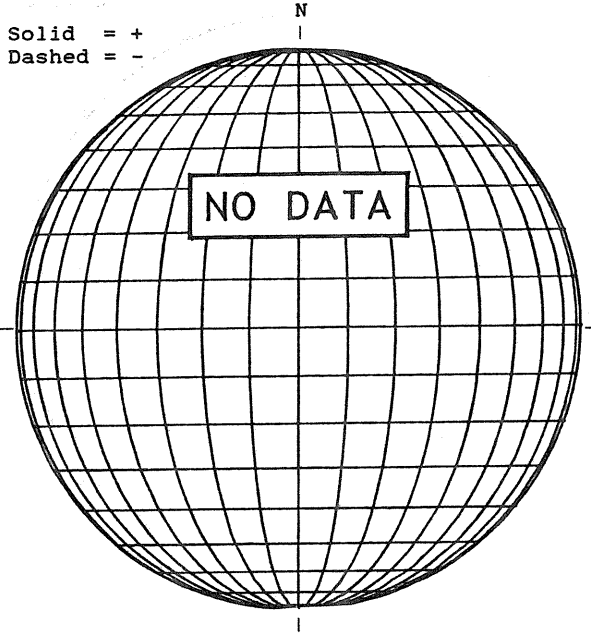
S

MARCH 22, 1991 (P=-25.35, B_o =-6.98, L_o = 218.82)

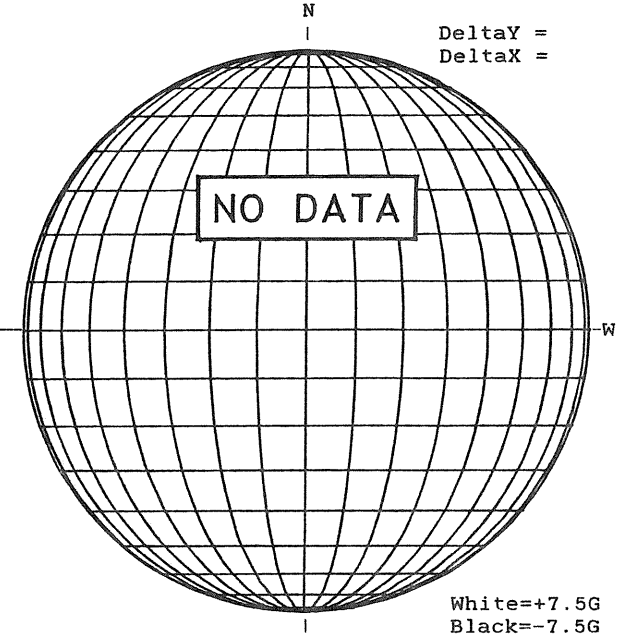
KITT PEAK MAGNETOGRAM



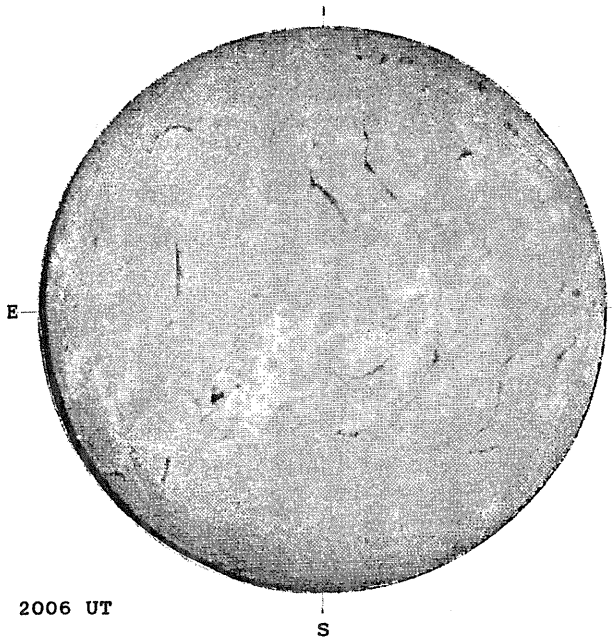
STANFORD MAGNETOGRAM



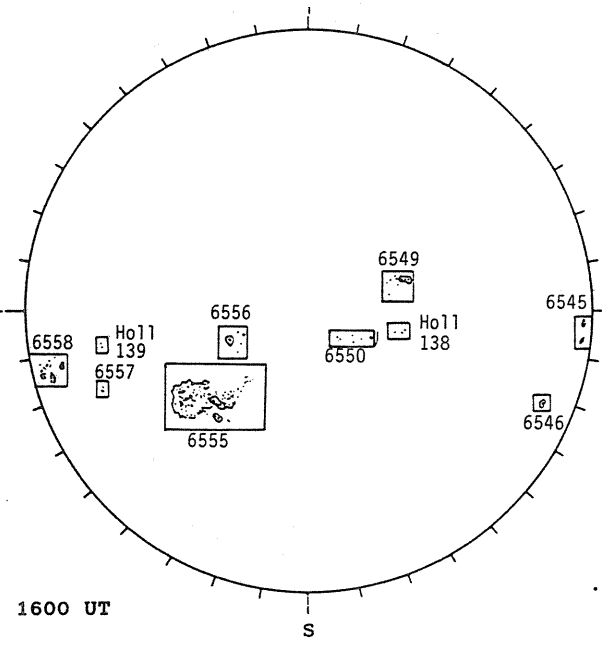
MT. WILSON MAGNETOGRAM



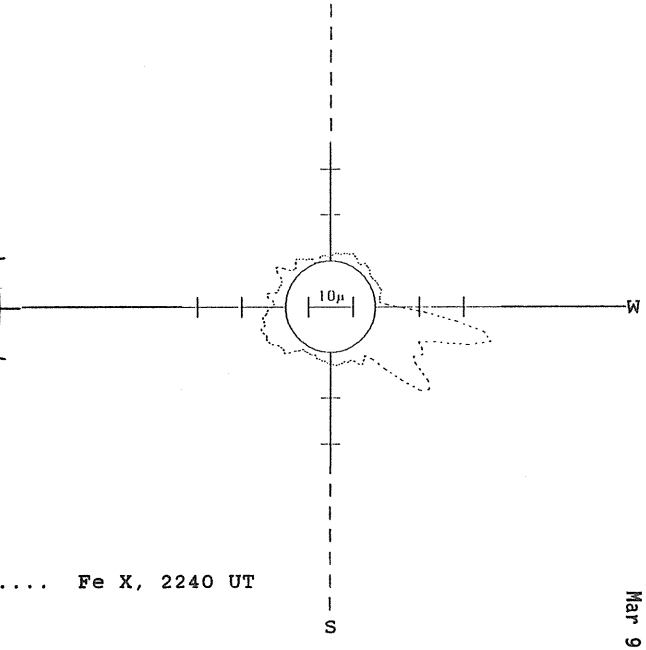
SACRAMENTO PEAK H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



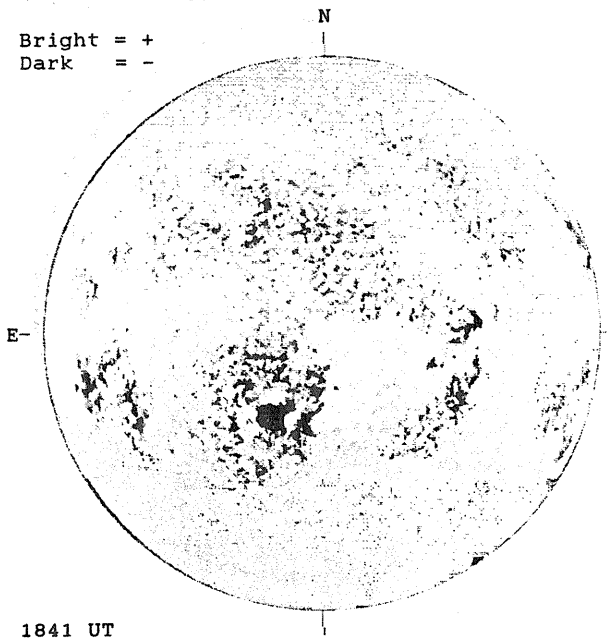
.... Fe X, 2240 UT

77
Mar 91

MARCH 23, 1991 (P=-25.46, B_o =-6.95, L_o = 205.63)

KITT PEAK MAGNETOGRAM

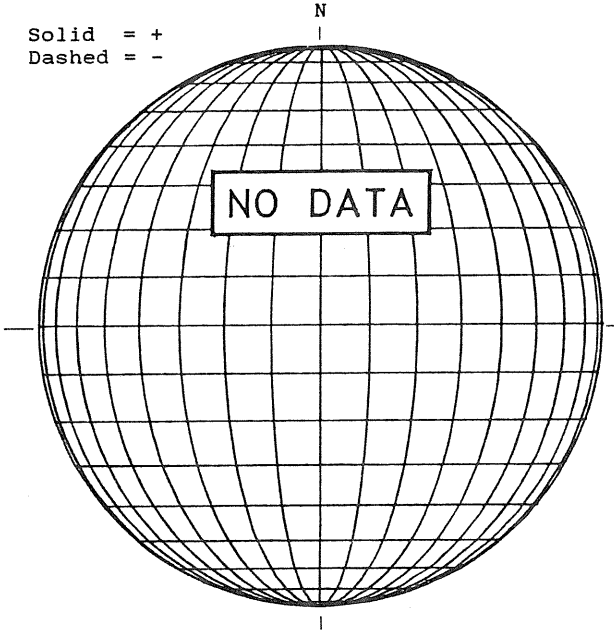
Bright = +
Dark = -



1841 UT

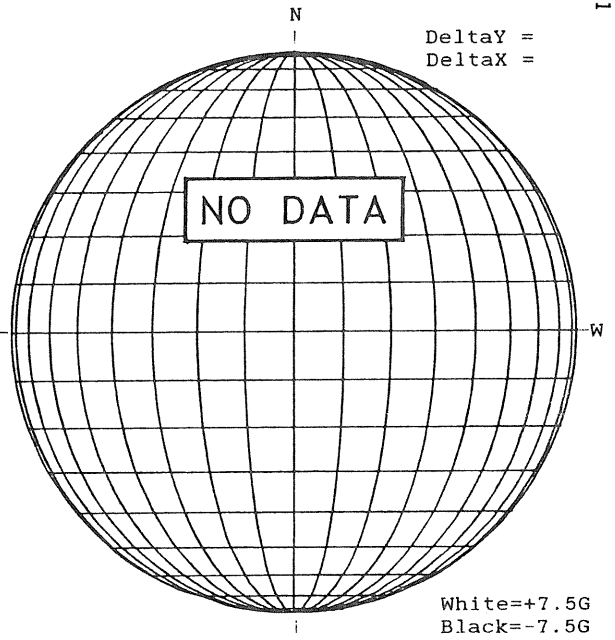
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



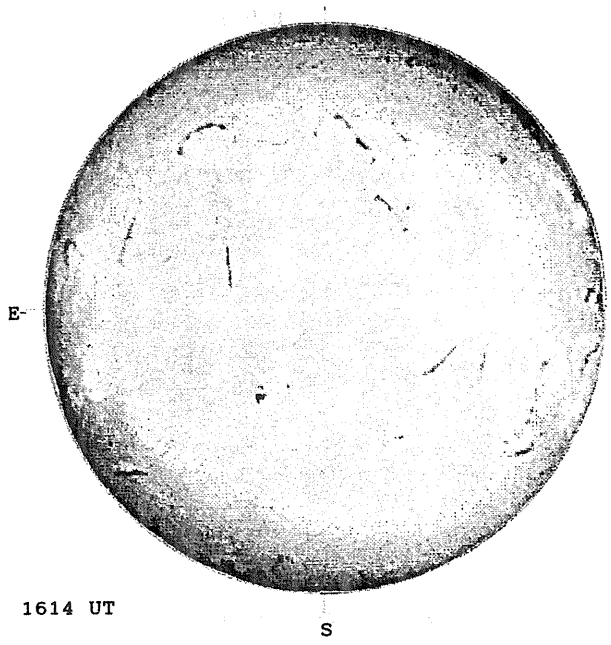
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



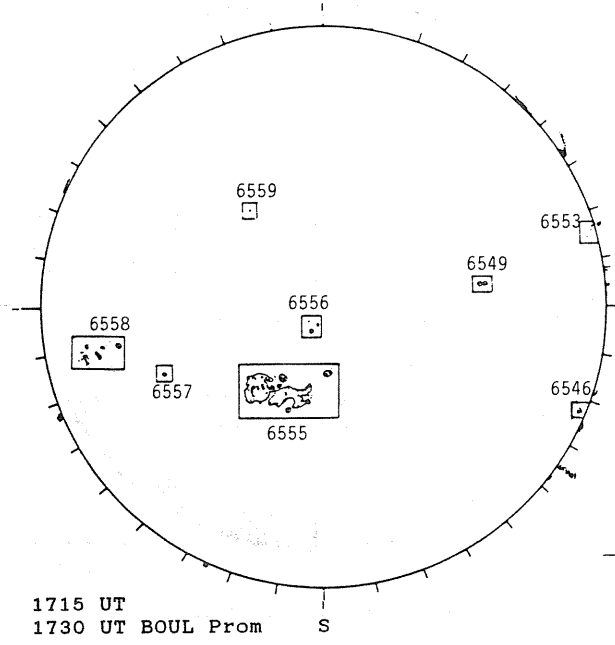
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



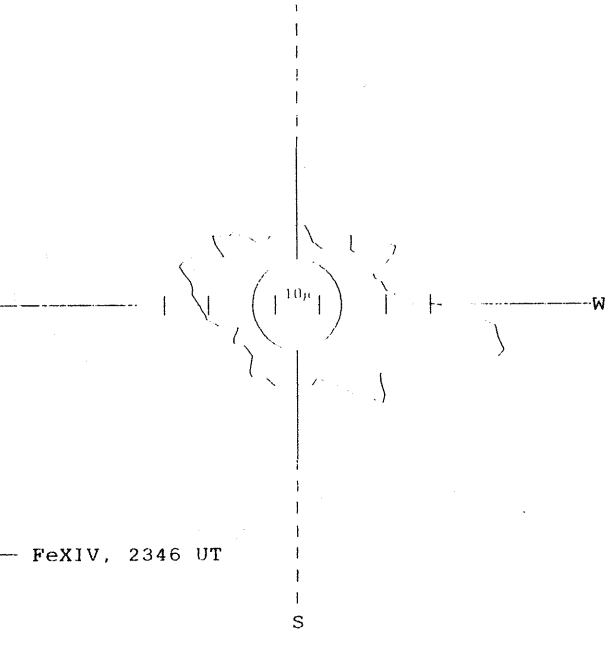
1614 UT

BOULDER SUNSPOT



1715 UT
1730 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

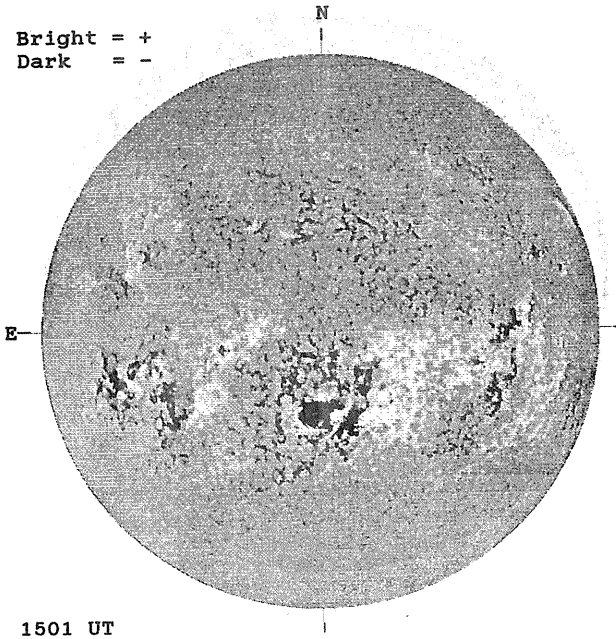


FeXIV, 2346 UT

MARCH 24, 1991 (P=-25.56 B_o =-6.91, L_o = 192.45)

KITT PEAK MAGNETOGRAM

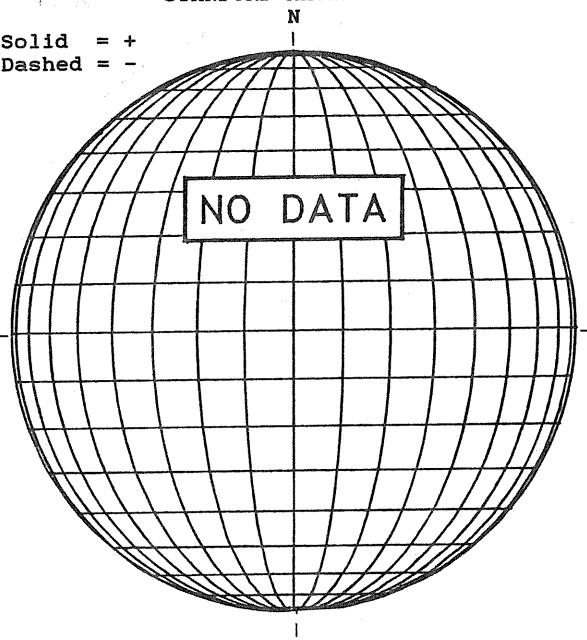
Bright = +
Dark = -



1501 UT

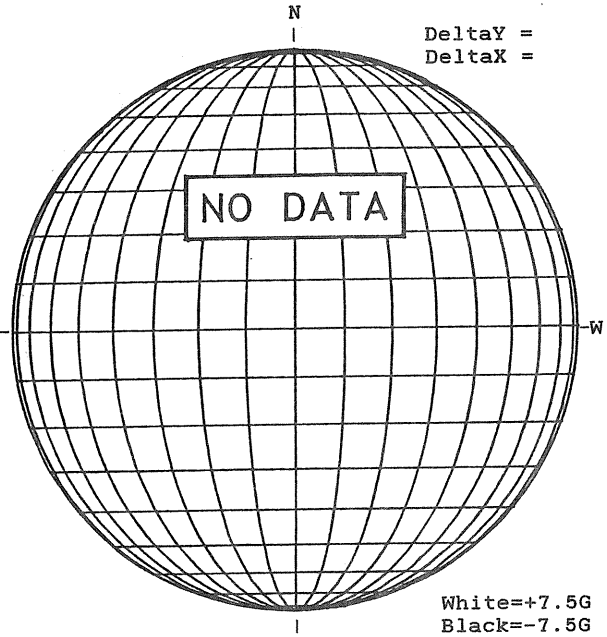
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



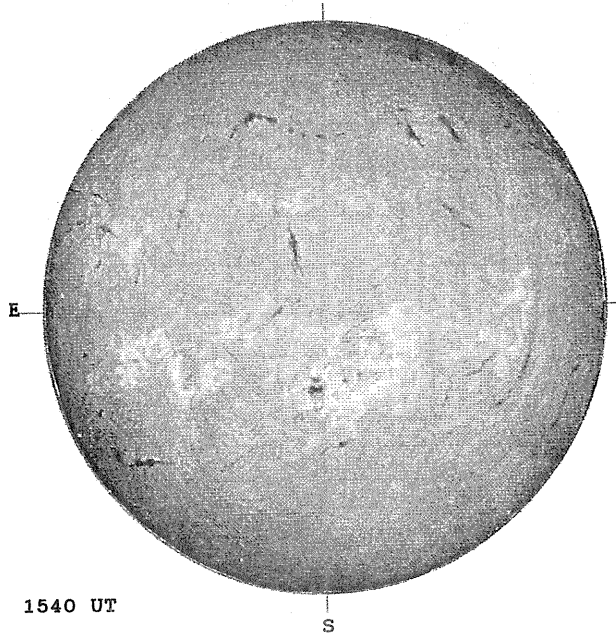
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



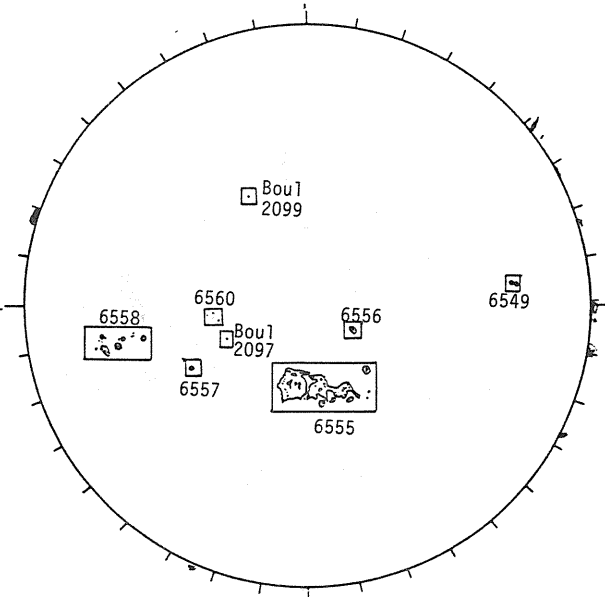
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



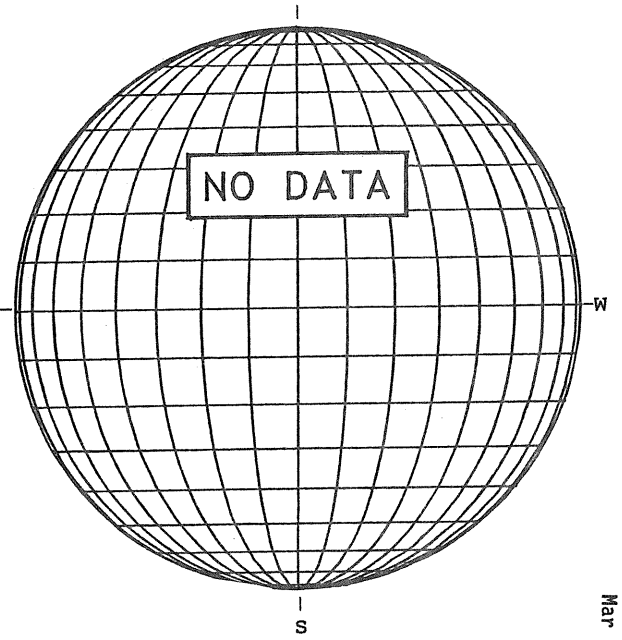
1540 UT

BOULDER SUNSPOT



1545 UT
1520 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

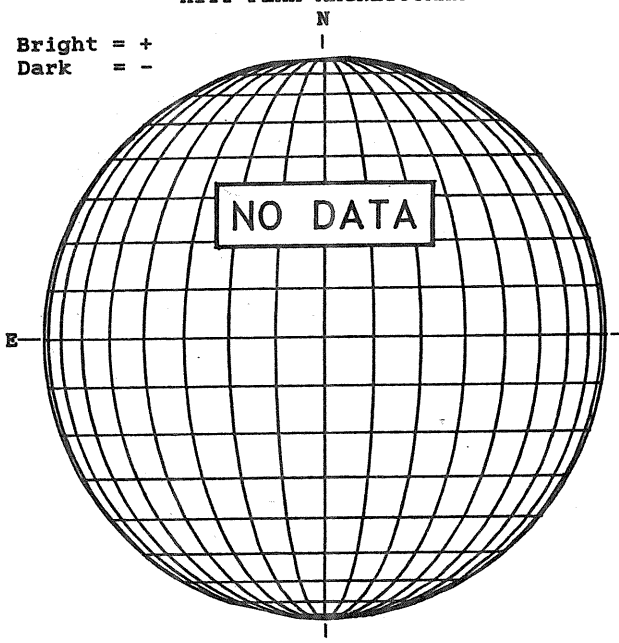


79
Mar 91

MARCH 25, 1991 (P=-25.66, B_o =-6.87, L_o = 179.26)

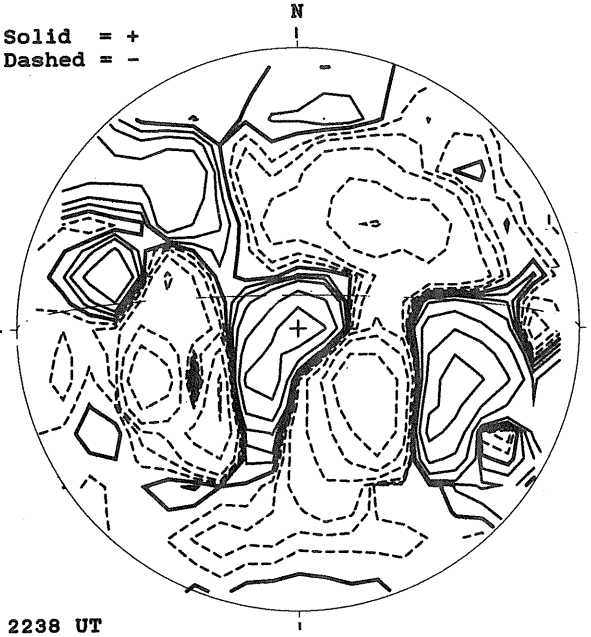
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

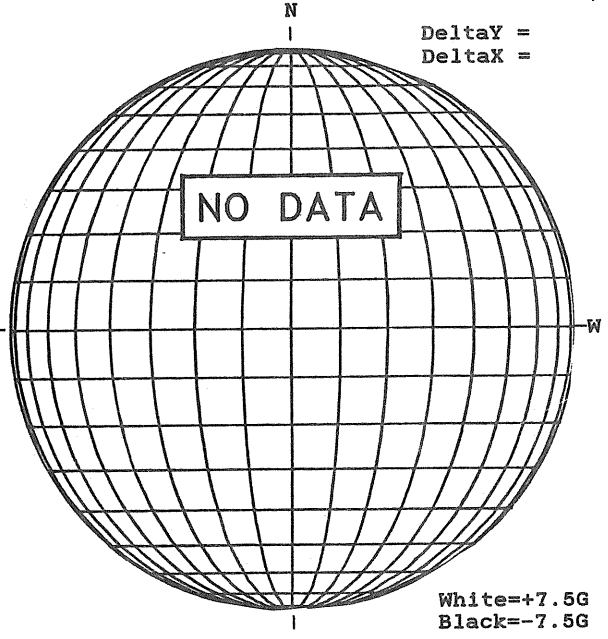
Solid = +
Dashed = -



2238 UT

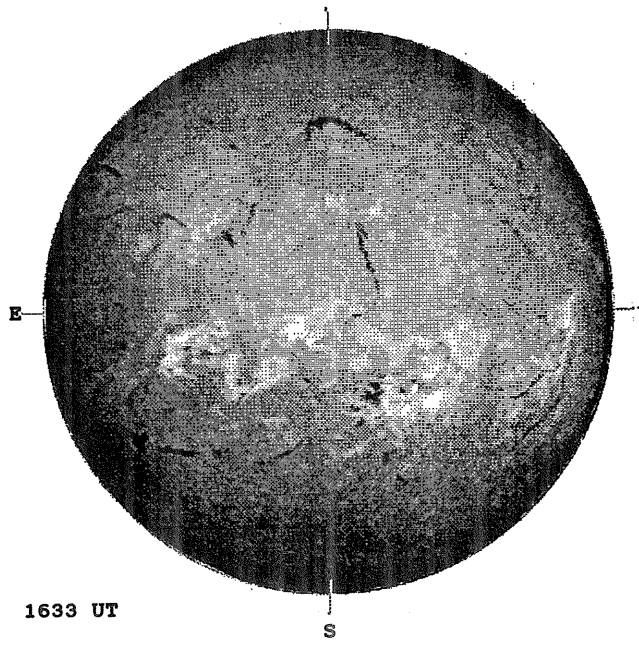
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



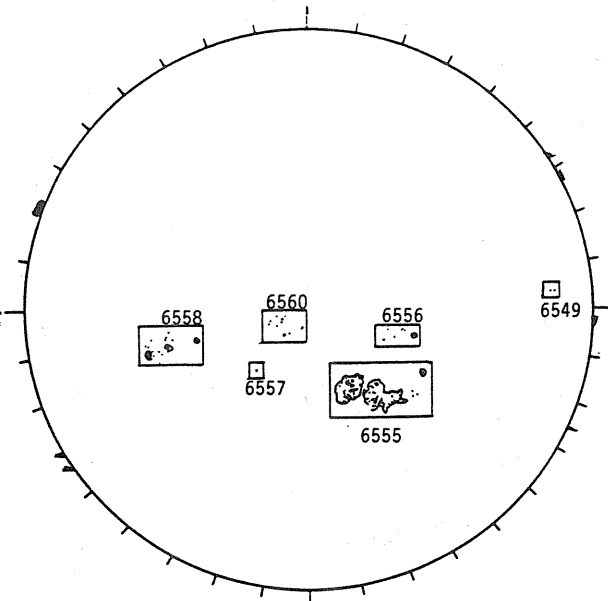
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



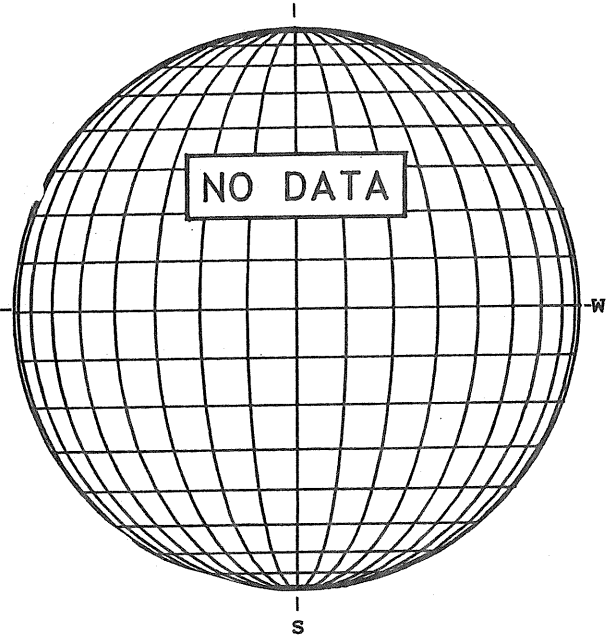
1633 UT

BOULDER SUNSPOT



1515 UT
1633 UT BOUL Prom

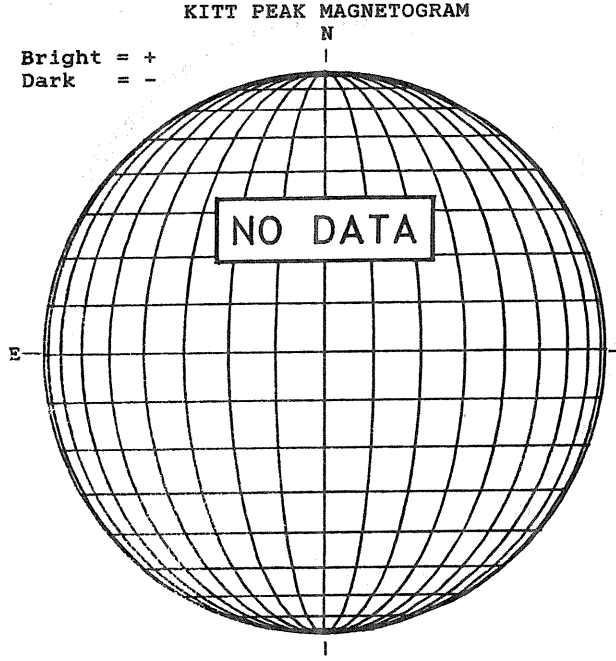
SACRAMENTO PEAK CORONA (1.15 Radii)



MARCH 26, 1991 (P=-25.75, B_o =-6.83, L_o = 166.07)

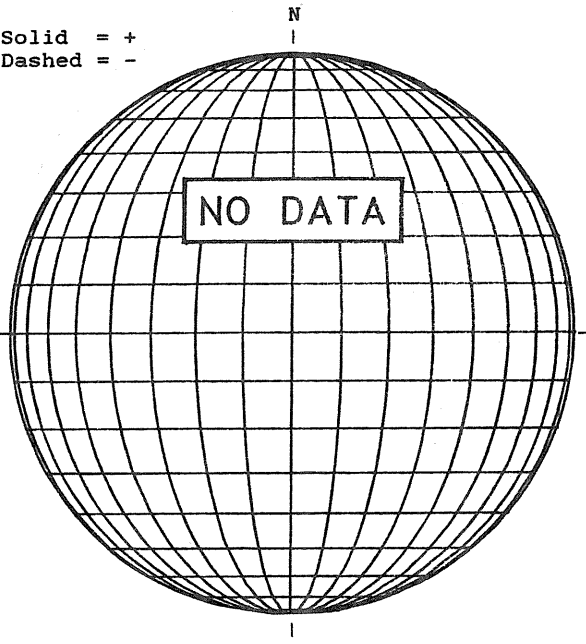
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



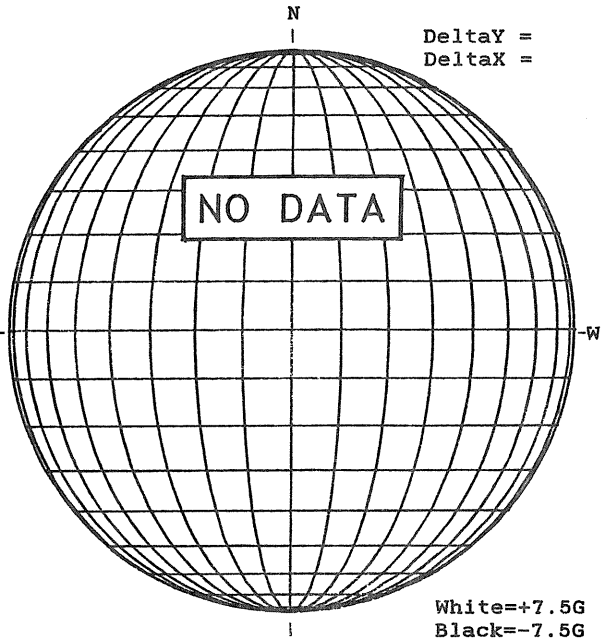
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



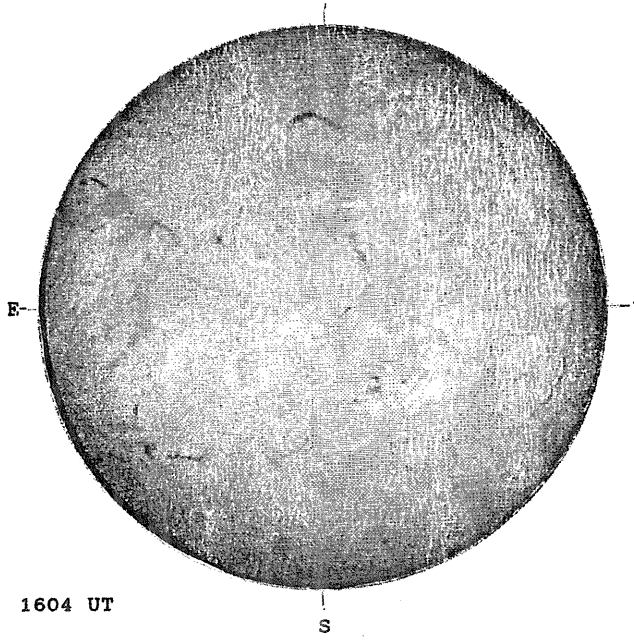
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



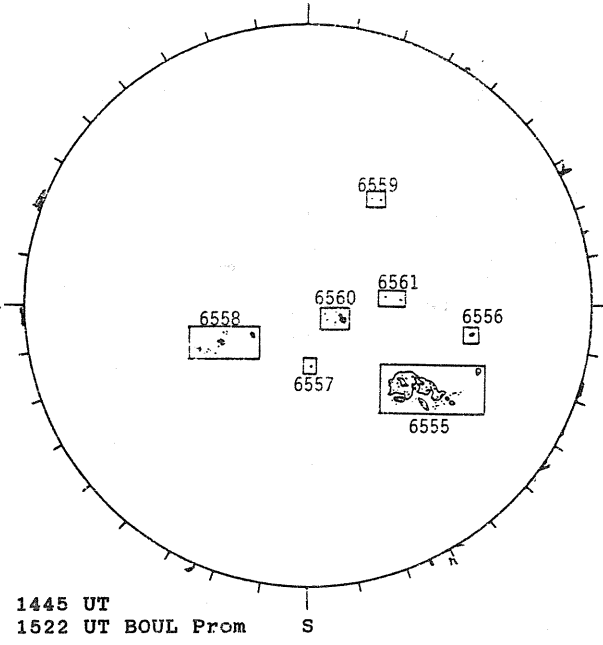
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



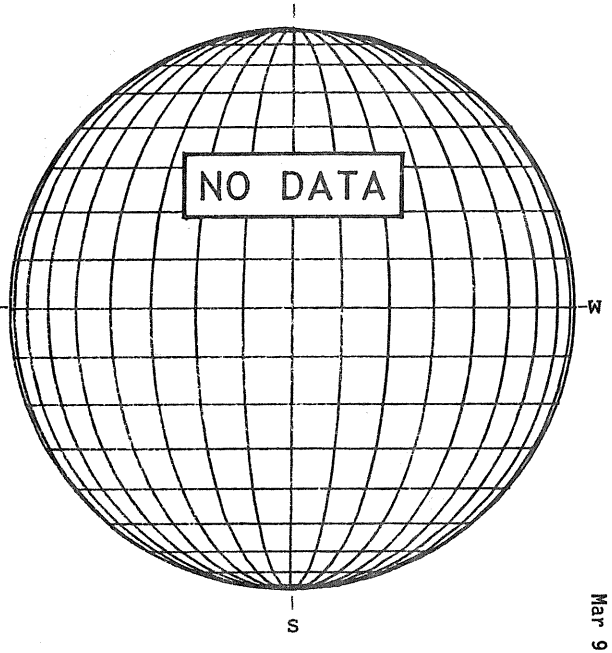
1604 UT

BOULDER SUNSPOT



1445 UT
1522 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

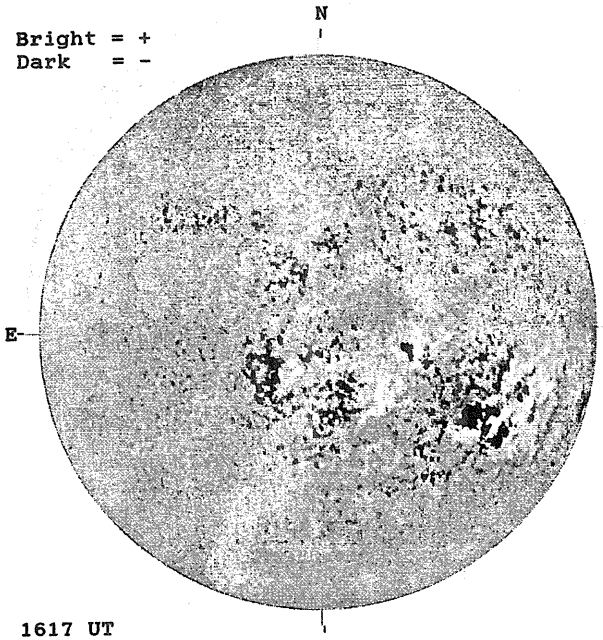


81
Mar 91

MARCH 27, 1991 (P=-25.84, B_o =-6.79, L_o = 152.89)

KITT PEAK MAGNETOGRAM

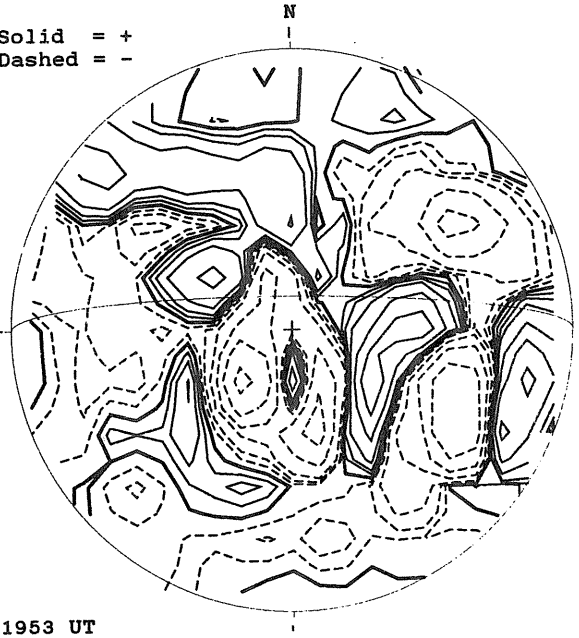
Bright = +
Dark = -



1617 UT

STANFORD MAGNETOGRAM

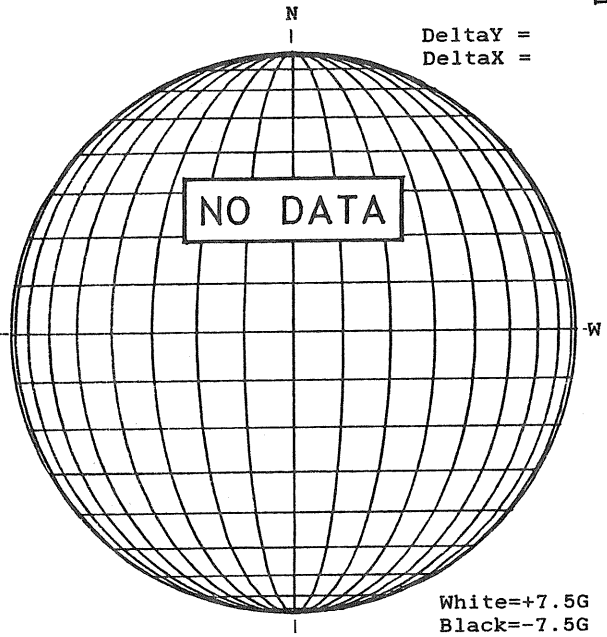
Solid = +
Dashed = -



1953 UT

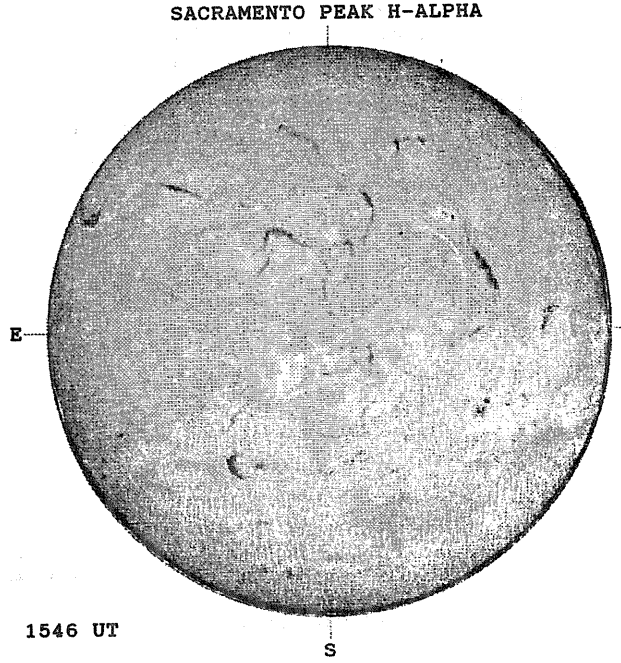
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



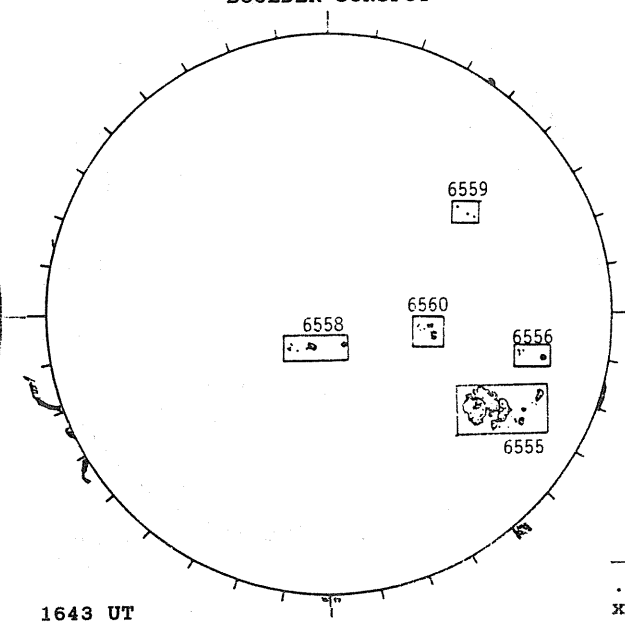
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



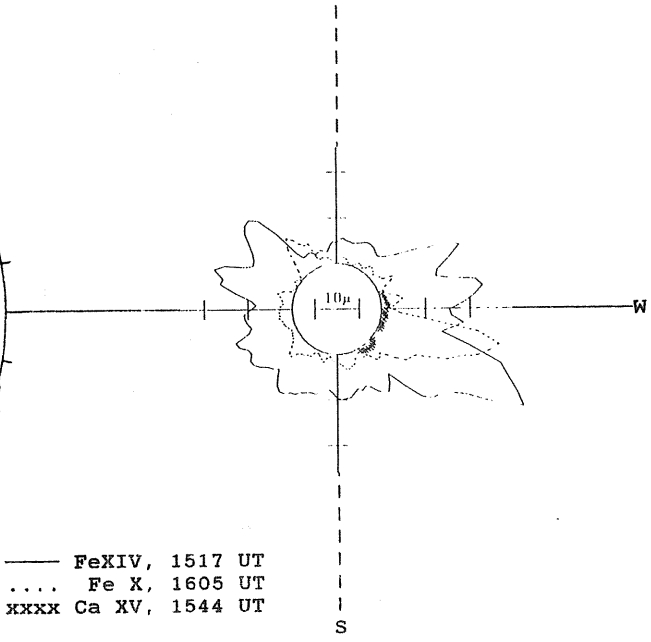
1546 UT

BOULDER SUNSPOT



1643 UT
1717 UT BOUL Prom

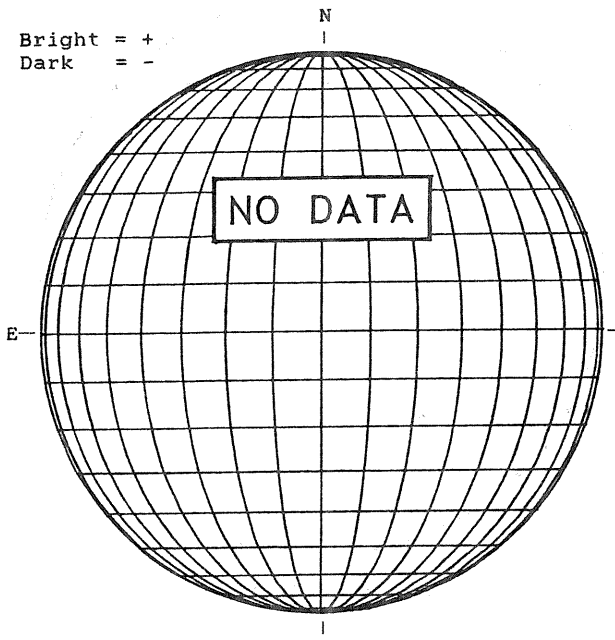
SACRAMENTO PEAK CORONA (1.15 Radii)



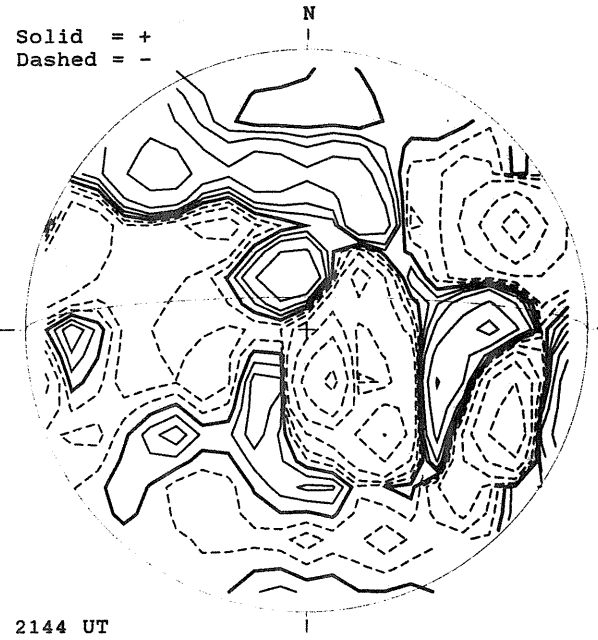
—— FeXIV, 1517 UT
.... Fe X, 1605 UT
xxxx Ca XV, 1544 UT

MARCH 28, 1991 (P=-25.92 B_o =-6.75, L_o = 139.70)

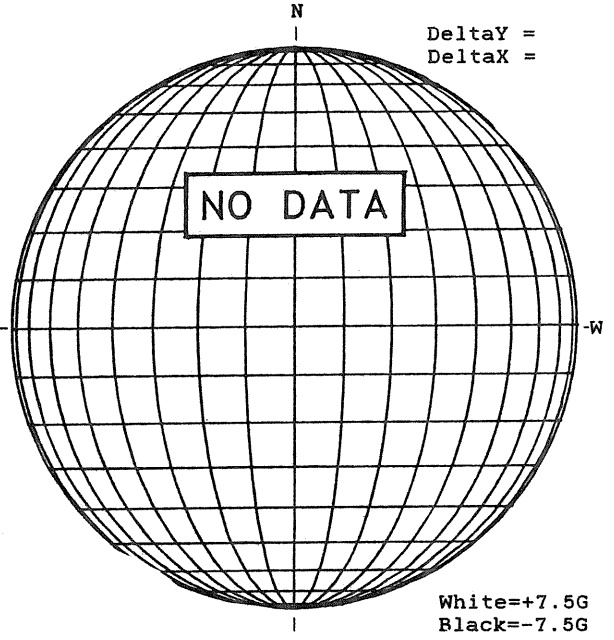
KITT PEAK MAGNETOGRAM



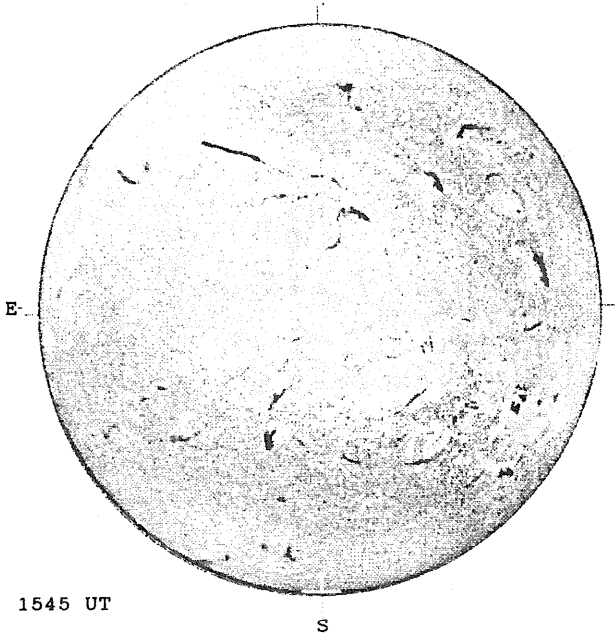
STANFORD MAGNETOGRAM



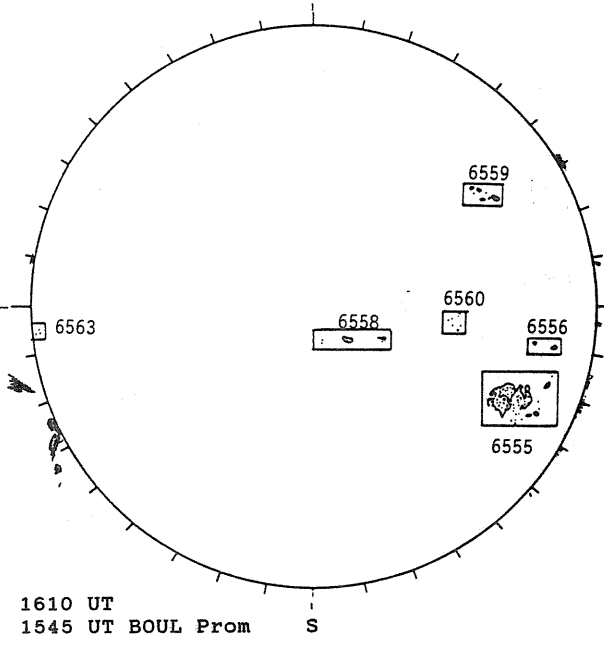
MT. WILSON MAGNETOGRAM



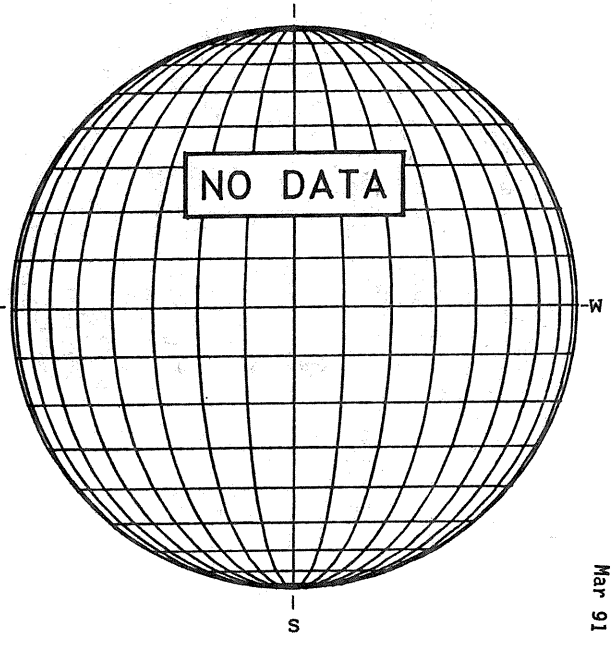
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

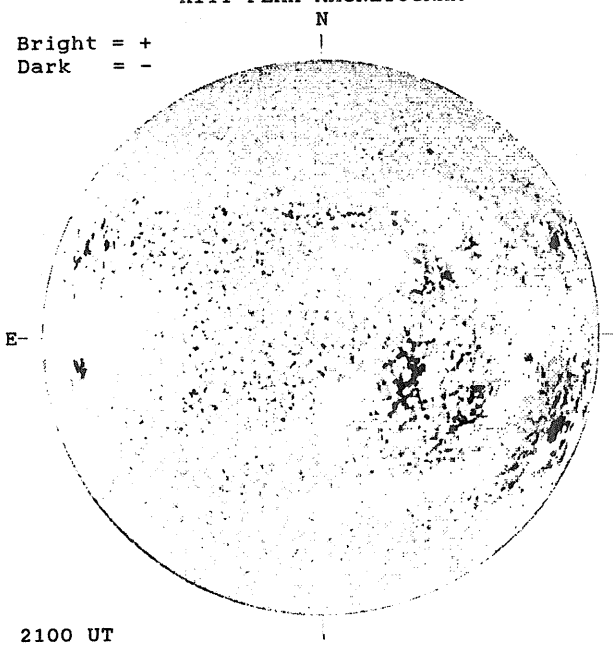


83
Mar 91

MARCH 29, 1991 (P=-25.99, B_o =-6.70, L_o = 126.51)

KITT PEAK MAGNETOGRAM

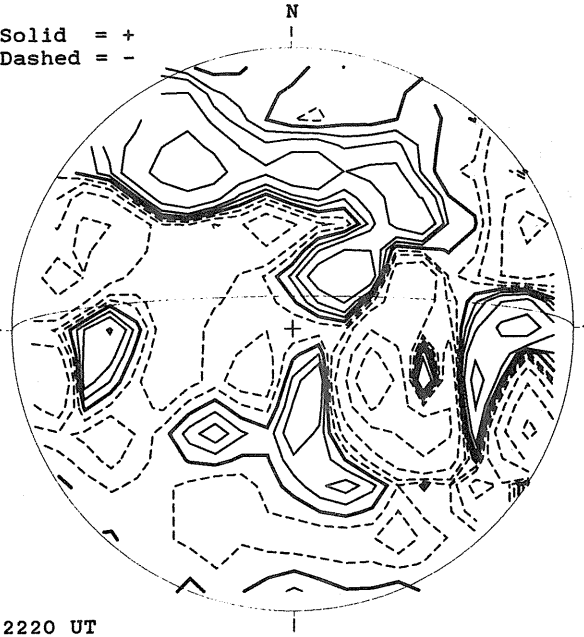
Bright = +
Dark = -



2100 UT

STANFORD MAGNETOGRAM

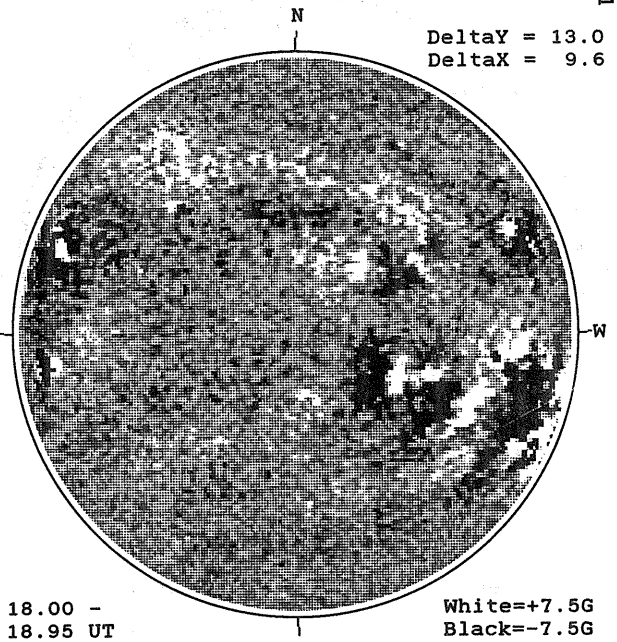
Solid = +
Dashed = -



2220 UT

MT. WILSON MAGNETOGRAM

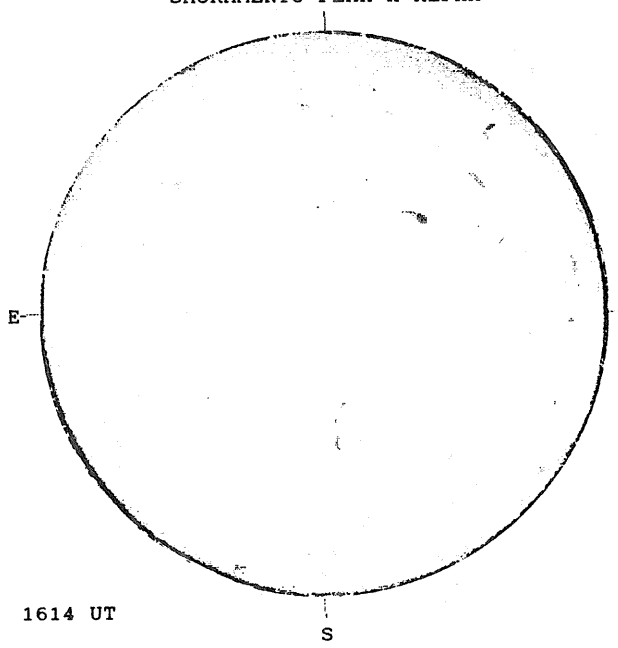
DeltaY = 13.0
DeltaX = 9.6



18.00 -
18.95 UT

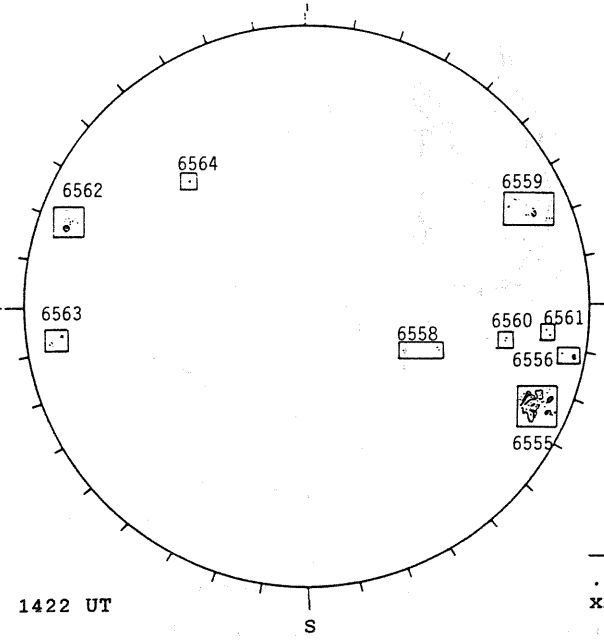
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



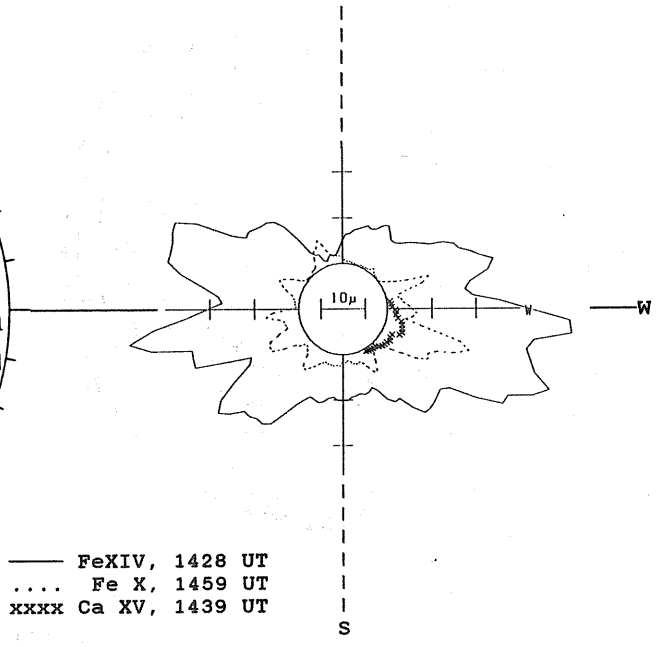
1614 UT

HOLLOMAN SUNSPOT



1422 UT

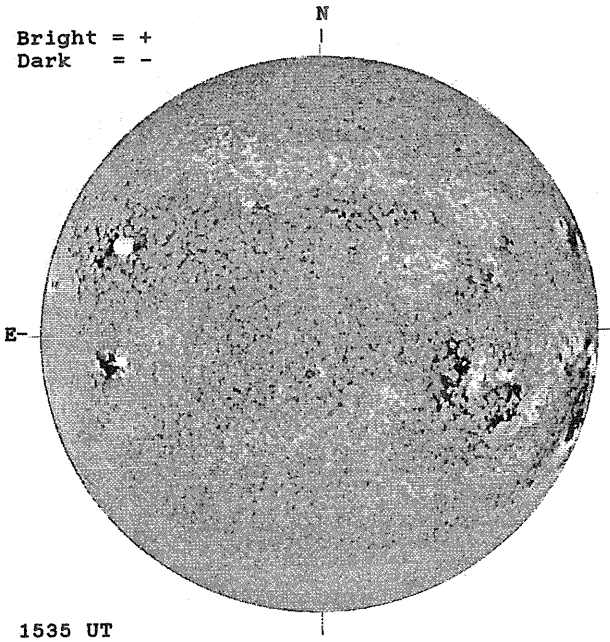
SACRAMENTO PEAK CORONA (1.15 Radii)



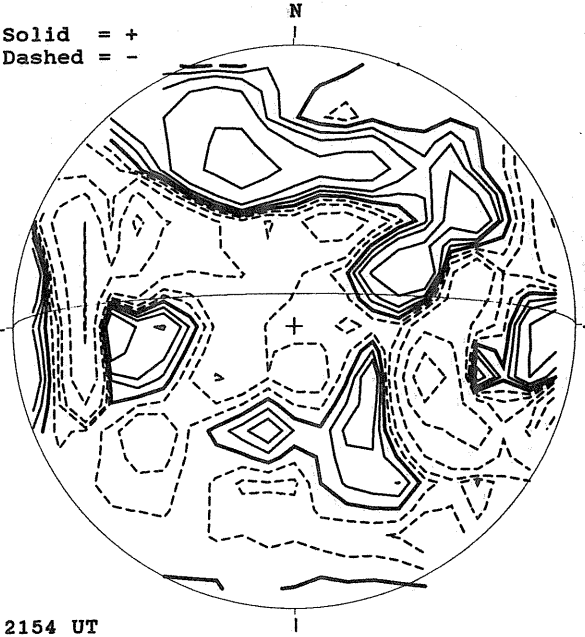
—— FeXIV, 1428 UT
.... Fe X, 1459 UT
xxxx Ca XV, 1439 UT

MARCH 30, 1991 (P=-26.05, B_o =-6.65, L_o = 113.32)

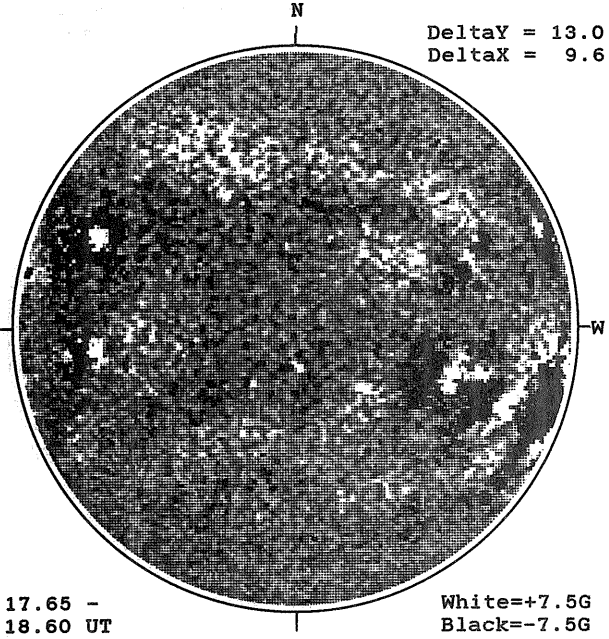
KITT PEAK MAGNETOGRAM



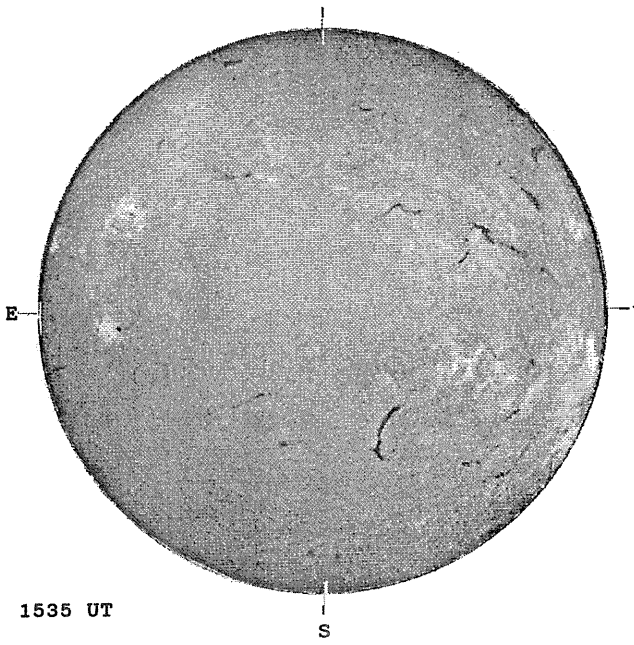
STANFORD MAGNETOGRAM



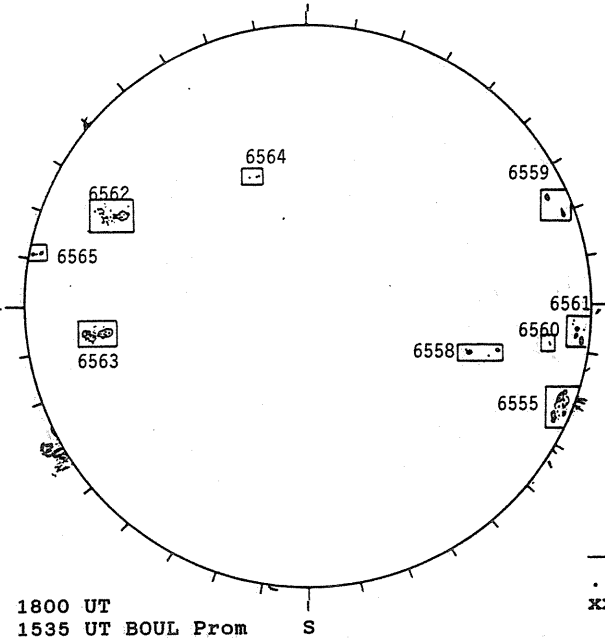
MT. WILSON MAGNETOGRAM



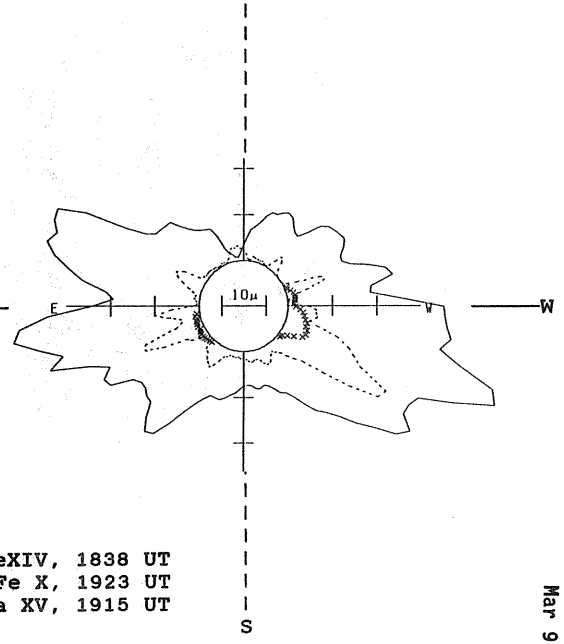
BOULDER H-ALPHA



HOLLOMAN SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



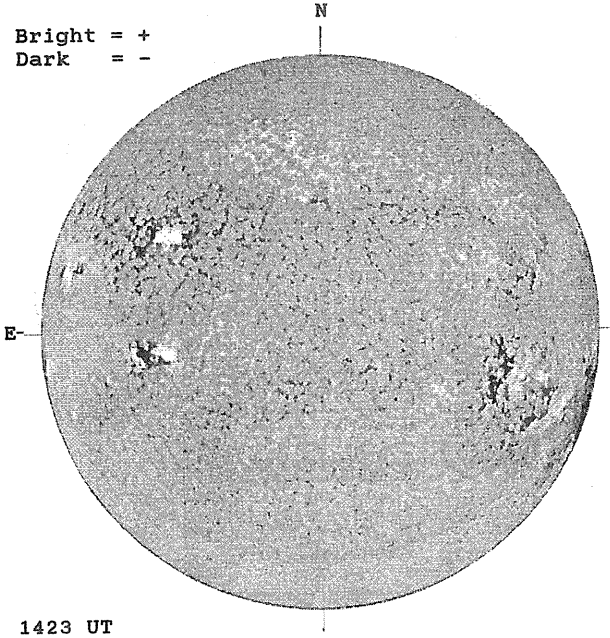
85
Mar 91

MARCH 31, 1991 (P=-26.11, B_o =-6.60, L_o = 100.12)

86 Mar 91

KITT PEAK MAGNETOGRAM

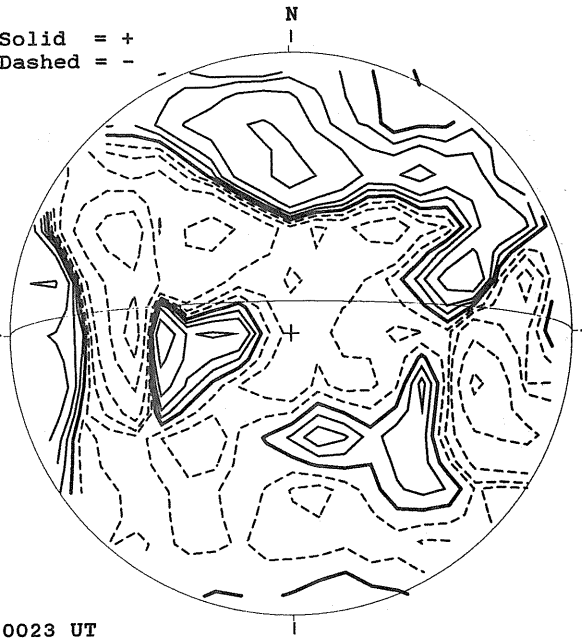
Bright = +
Dark = -



1423 UT

STANFORD MAGNETOGRAM

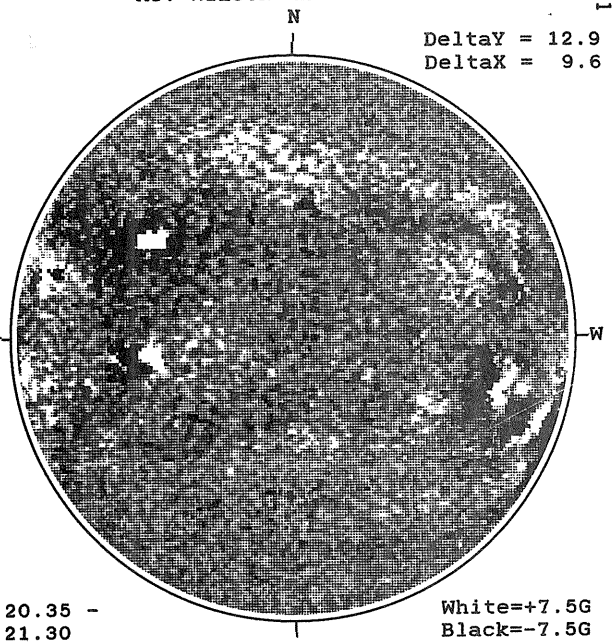
Solid = +
Dashed = -



0023 UT
Apr 01

MT. WILSON MAGNETOGRAM

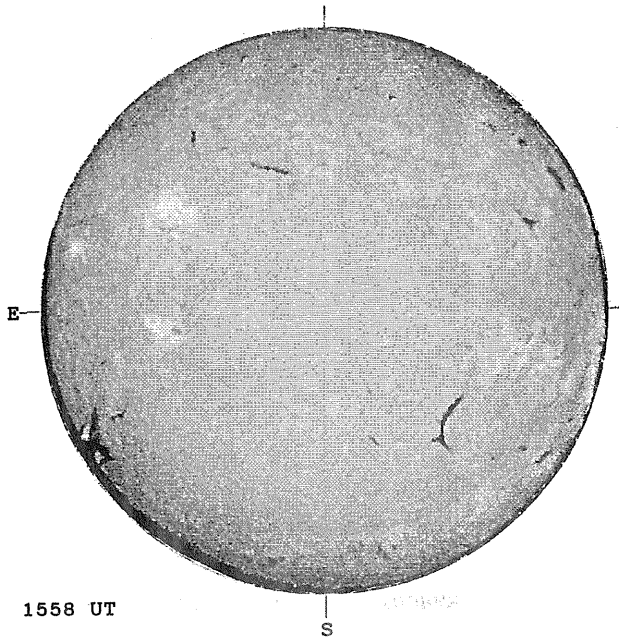
DeltaY = 12.9
DeltaX = 9.6



20.35 -
21.30

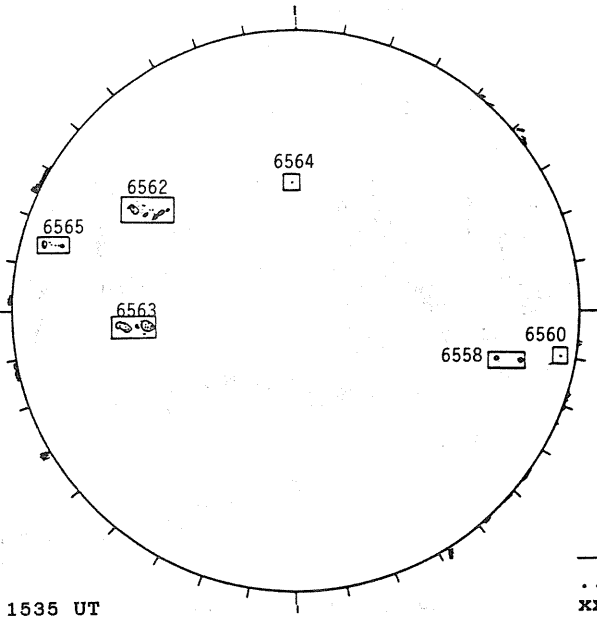
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



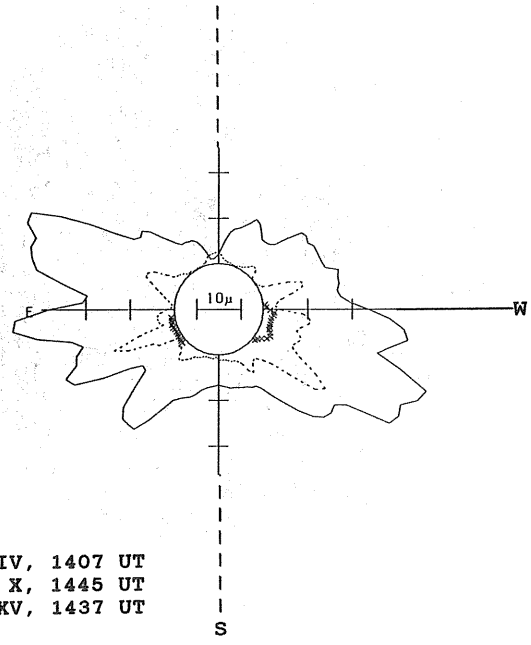
1558 UT

BOULDER SUNSPOT



1535 UT
1520 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1407 UT
.... Fe X, 1445 UT
xxxx Ca XV, 1437 UT

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

MARCH 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
6525A		CULG	03 04	0050	S03 W41	03 1.0		A	AX		4	2	3
6525A		SVTO	03 04	0740	S02 W46	02 28.9		B	BXO	10	3	3	4
6520		SVTO	02 24	0805	N17 E70	03 1.6		B	BXO	10	3	3	5
6520		RAMY	02 24	1247	N17 E68	03 1.7		A	AX	10	1	1	3
6520	26610	MWIL	02 24	1530	N17 E66	03 1.7	4	(AP					
6520		HOLL	02 24	1730	N18 E66	03 1.7		B	BXO	10	3	5	3
6520		PALE	02 25	0140	N18 E62	03 1.8		B	BXO	20	3	6	2
6520		RAMY	02 25	1401	N17 E51	03 1.4		A	AX		1		4
6520	26610	MWIL	02 25	1630	N19 E52	03 1.6	4	(AP)					
6520		HOLL	02 26	1540	N17 E27	02 28.7		A	AX	10	2	2	4
6520		RAMY	02 27	1210	N18 E29	03 1.7		B	BXO	10	3	3	4
6520		RAMY	02 28	1150	N18 E15	03 1.6		A	AX	10	2	1	4
6520		LEAR	03 01	0024	N17 E07	03 1.5		A	AX	10	1	1	3
6520		RAMY	03 01	1242	N18 E01	03 1.6		B	BXO	10	4	3	3
6520A		SVTO	03 02	0900	N10 W06	03 1.9		B	BXO	10	2	3	1
6520B	26616	MWIL	03 02	1630	S17 W10	03 1.9	4	(AP)					
6523		RAMY	02 25	1401	N04 E58	03 1.9		B	BXO	10	2	3	4
6523		BOUL	02 25	1605	N07 E56	03 1.9		B	BXO	10	2	3	1
6523		HOLL	02 25	1625	N03 E58	03 2.0		B	BXO	20	3	3	1
6523	26615	MWIL	02 25	1630	N04 E58	03 2.0	4	(AP)					
6523		PALE	02 25	2216	N03 E53	03 1.9		B	CSO	70	5	4	2
6523		CULG	02 26	0005	N04 E53	03 2.0		B	BXO	10	9	4	2
6523		LEAR	02 26	0035	N05 E51	03 1.8		B	BXO	30	8	4	2
6523		SVTO	02 26	0905	N04 E47	03 1.9		B	DRI	70	8	5	3
6523		RAMY	02 26	1255	N04 E45	03 1.9		B	DAO	90	12	5	4
6523		BOUL	02 26	1449	N04 E42	03 1.7		B	CAI	80	6	4	1
6523		HOLL	02 26	1540	N04 E44	03 1.9		B	DSI	70	11	5	4
6523	26615	MWIL	02 26	1630	N04 E43	03 1.9	5	(B)					
6523		PALE	02 26	1800	N04 E43	03 2.0		B	DAO	120	12	6	4
6523		LEAR	02 27	0032	N05 E39	03 1.9		B	DAO	140	9	8	3
6523		SVTO	02 27	0730	N04 E35	03 1.9		B	DSO	100	13	7	3
6523		RAMY	02 27	1210	N04 E32	03 1.9		B	DAO	130	18	8	4
6523		BOUL	02 27	1547	N04 E28	03 1.7		B	DAO	140	6	4	2
6523		PALE	02 27	2005	N04 E28	03 1.9		B	DAO	100	13	7	4
6523		CULG	02 28	0009	N03 E26	03 1.9		B	DAO	90	12	8	2
6523		LEAR	02 28	0025	N04 E24	03 1.8		B	DAO	80	21	5	3
6523		RAMY	02 28	1150	N03 E18	03 1.8		B	DAO	140	18	6	4
6523		SVTO	02 28	1153	N03 E18	03 1.8		B	DAO	180	10	5	1
6523		BOUL	02 28	1540	N06 E15	03 1.8		B	CAO	70	5	4	2
6523		LEAR	03 01	0024	N04 E12	03 1.9		B	DAO	200	18	8	3
6523		SVTO	03 01	0949	N04 E06	03 1.8		B	DAI	160	10	7	3
6523		RAMY	03 01	1242	N04 E05	03 1.9		B	DAO	170	24	9	3
6523		BOUL	03 01	1823	N05 E03	03 2.0		B	DAO	160	12	7	1
6523		HOLL	03 01	1845	N03 E02	03 1.9		B	DHO	310	7	8	1
6523		PALE	03 01	2000	N04 E01	03 1.9		B	DKO	350	21	7	4
6523		LEAR	03 02	0014	N04 W02	03 1.9		B	DAO	270	24	7	4
6523		CULG	03 02	0150	N04 W02	03 1.9		B	DSO	180	16	7	2
6523		SVTO	03 02	0900	N04 W06	03 1.9		B	DSO	200	19	7	1
6523		RAMY	03 02	1221	N04 W08	03 1.9		B	DAO	240	16	8	4
6523	26615	MWIL	03 02	1630	N04 W12	03 1.8	5	(B)					
6523		PALE	03 02	2005	N04 W14	03 1.8		B	DAO	300	22	8	3
6523		CULG	03 03	0115	N04 W15	03 1.9		B	DAO	280	17	8	3
6523		LEAR	03 03	0424	N05 W21	03 1.6		B	DAO	180	12	8	2
6523		RAMY	03 03	1317	N04 W23	03 1.8		B	DAO	220	13	8	3
6523		SVTO	03 03	1327	N05 W23	03 1.8		B	DAO	200	22	8	3
6523		BOUL	03 03	1535	N06 W24	03 1.8		B	DSO	170	7	8	1
6523		HOLL	03 03	1600	N04 W24	03 1.9		B	DKI	280	28	9	3
6523	26615	MWIL	03 03	1615	N04 W25	03 1.8	5	(BG)					
6523		PALE	03 03	1800	N04 W25	03 1.9		B	DAO	220	16	9	3
6523		CULG	03 04	0050	N06 W29	03 1.9		B	DAI	230	30	9	3
6523		SVTO	03 04	0740	N05 W33	03 1.8		B	DAO	190	20	8	4
6523		HOLL	03 04	1515	N05 W38	03 1.8		B	CAO	160	11	8	3
6523	26615	MWIL	03 04	1530	N04 W37	03 1.9	5	(BP)					
6523		RAMY	03 04	1625	N04 W38	03 1.8		B	CAO	190	13	9	3
6523		PALE	03 04	1830	N05 W38	03 1.9		B	DAO	210	17	9	3

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

MARCH 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
6523		CULG	03	05	0009	N06	W41	03	1.9		B	CAO	150	23	10	3
6523		LEAR	03	05	0052	N05	W42	03	1.9		B	DSO	200	6	8	2
6523		SVTO	03	05	0830	N05	W47	03	1.8		B	DAO	150	10	8	3
6523		RAMY	03	05	1220	N04	W49	03	1.8		B	CAO	170	7	9	3
6523		HOLL	03	05	1630	N04	W50	03	1.9		B	CAO	170	12	9	3
6523		PALE	03	05	2043	N07	W54	03	1.8		B	CAO	120	5	7	3
6523		CULG	03	06	0022	N05	W56	03	1.8		B	CSO	80	8	9	2
6523		LEAR	03	06	0025	N06	W56	03	1.8		B	CSO	150	3	7	3
6523		RAMY	03	06	1155	N04	W62	03	1.9		B	CAO	120	4	9	4
6523		SVTO	03	06	1345	N05	W62	03	1.9		B	CAO	120	4	7	3
6523		BOUL	03	06	1530	N04	W65	03	1.8		B	DAO	240	2	10	1
6523	26615	MWIL	03	06	1530	N04	W67	03	1.6	4	(BP)					
6523		HOLL	03	06	2040	N07	W72	03	1.5		A	HS	170	1	1	1
6523		PALE	03	06	2107	N05	W69	03	1.7		A	HA	110	1	1	3
6523		CULG	03	07	0110	N05	W75	03	1.4		A	HS	80	2	2	3
6523		LEAR	03	07	0330	N03	W72	03	1.8		A	HA	60	1	1	3
6523		RAMY	03	07	1225	N05	W80	03	1.5		B	CAO	60	2	3	3
6523	26615	MWIL	03	07	1500	N05	W82	03	1.5	3	(AP)					
6523		HOLL	03	07	1555	N05	W80	03	1.7		A	HS	60	1	2	3
6523		BOUL	03	07	1604	N04	W89	03	1.0		A	HA	60	1	2	2
6529		RAMY	03	02	1221	N10	W08	03	1.9		B	BXO	10	3	3	4
6529		LEAR	03	03	0424	N09	W18	03	1.8		B	BXO	60	9	5	2
6529		RAMY	03	03	1317	N08	W20	03	2.0		B	BXO		3	2	3
6529		HOLL	03	03	1600	N08	W22	03	2.0		A	AX	10	2	2	3
6529	26620	MWIL	03	03	1615	N08	W22	03	2.0	4	(AF)					
6529		PALE	03	03	1800	N09	W24	03	1.9		A	HS	10	2	2	3
6529		SVTO	03	04	0740	N08	W30	03	2.1		B	BXO	20	7	2	4
6529		HOLL	03	04	1515	N08	W34	03	2.1		B	BXO	20	5	5	3
6529	26620	MWIL	03	04	1530	N08	W35	03	2.0	4	(AF)					
6529		RAMY	03	04	1625	N08	W36	03	2.0		B	BXO	10	5	5	3
6529		PALE	03	04	1830	N09	W37	03	2.0		B	BXO	10	4	3	3
6529		SVTO	03	05	0830	N08	W44	03	2.0		B	BXO	10	4	6	3
6529		RAMY	03	05	1220	N08	W45	03	2.1		B	BXO	10	4	3	3
6529		HOLL	03	05	1630	N08	W48	03	2.1		B	BXO	10	3	3	3
6529		PALE	03	05	2043	N09	W52	03	2.0		A	AX		1		3
6529		RAMY	03	06	1155	N08	W60	03	2.0		A	AX	10	3	2	4
6529		RAMY	03	07	1225	N08	W76	03	1.8		A	AX	10	1	1	3
6529A		RAMY	03	01	1242	S19	E06	03	2.0		A	AX	10	3	2	3
6531	26617	MWIL	03	02	1630	S25	W07	03	2.1	4	(BG)					
6531		PALE	03	02	2005	S24	W09	03	2.1		A	BRO	20	6	3	3
6531		RAMY	03	03	1317	S24	W18	03	2.2		A	AX		1		3
6531		HOLL	03	03	1600	S23	W20	03	2.1		A	AX		1		3
6531	26617	MWIL	03	03	1615	S24	W20	03	2.1	4	(AF)					
6531		PALE	03	03	1800	S23	W22	03	2.0		A	AX		1		3
6527		LEAR	03	01	0024	S17	E21	03	2.6		B	BXO	20	2	3	3
6527		SVTO	03	01	0949	S16	E15	03	2.5		A	AX		1		3
6527		RAMY	03	01	1242	S17	E13	03	2.5		B	CRO	10	2	3	3
6527		CULG	03	03	0115	S18	W08	03	2.4		B	BXO		3	3	3
6527A		CULG	03	03	0115	S23	E10	03	3.8		B	BXO		4	4	3
6527B		PALE	03	05	2043	N04	W23	03	4.1		A	AX		1		3
6527C		HOLL	03	07	1555	S14	W41	03	4.6		A	AX	10	1	1	3
6527D		PALE	03	05	2043	S18	W01	03	5.8		A	AX		1		3
6527E		PALE	03	03	1800	N07	E41	03	6.8		A	AX		1		3
6535		HOLL	03	04	1515	S17	E34	03	7.2		B	BXO	10	2	3	3
6535	26623	MWIL	03	04	1530	S17	E34	03	7.2	4	(B)					
6535		RAMY	03	04	1625	S17	E32	03	7.1		B	BXO	10	3	3	3
6535		PALE	03	04	1830	S17	E32	03	7.2		B	BXO	10	5	3	3
6535		CULG	03	05	0009	S16	E29	03	7.2		B	BXO	10	2	2	3
6535		LEAR	03	05	0052	S17	E28	03	7.2		B	BXO	30	3	4	2

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

MARCH 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
6535		SVTO	03	05	0830	S16	E23	03	7.1		B	BXO	10	4	3	3
6535		RAMY	03	05	1220	S16	E22	03	7.2		B	BXO	10	6	4	3
6530		SVTO	03	02	0900	N11	E80	03	8.4		A	HS	30	1	1	1
6530		RAMY	03	02	1221	N11	E79	03	8.4		B	DAO	60	3	6	4
6530	26618	MWIL	03	02	1630	N12	E74	03	8.3	4	(AP)					
6530		CULG	03	03	0115	N11	E74	03	8.6		A	AX		1		3
6530		LEAR	03	03	0424	N11	E64	03	8.0		A	AX	30	2	2	2
6530		RAMY	03	03	1317	N11	E63	03	8.3		A	HR	10	2	1	3
6530		SVTO	03	03	1327	N10	E64	03	8.4		A	AX	10	1		3
6530		HOLL	03	03	1600	N10	E62	03	8.3		A	AX		1	1	3
6530	26618	MWIL	03	03	1615	N11	E62	03	8.3	4	(AP)					
6530		PALE	03	03	1800	N09	E60	03	8.2		A	AX	10	1	1	3
6530		CULG	03	04	0050	N11	E57	03	8.3		A	AX		2		3
6530		SVTO	03	04	0740	N10	E54	03	8.4		A	AX	10	2		4
6530		HOLL	03	04	1515	N10	E48	03	8.2		A	AX	20	1	1	3
6530	26618	MWIL	03	04	1530	N10	E48	03	8.2	4	(AP)					
6530		RAMY	03	04	1625	N09	E50	03	8.4		B	BXO	20	7	4	3
6530		PALE	03	04	1830	N09	E49	03	8.4		B	BXO	10	4	3	3
6530		CULG	03	05	0009	N11	E45	03	8.4		B	BXO	10	2	3	3
6530		LEAR	03	05	0052	N09	E42	03	8.2		A	AX	10	1	1	2
6530		SVTO	03	05	0830	N10	E39	03	8.3		B	BXO	10	3	3	3
6530		RAMY	03	05	1220	N09	E38	03	8.4		A	AX	10	2	2	3
6530		HOLL	03	05	1630	N12	E37	03	8.5		A	AX		1		3
6530		PALE	03	05	2043	N08	E34	03	8.4		A	AX	10	3	2	3
6530		CULG	03	06	0022	N11	E32	03	8.4		B	BXO	10	2	2	2
6530		LEAR	03	06	0025	N09	E30	03	8.3		B	BXO	20	2	3	3
6530		RAMY	03	08	1229	N11	W04	03	8.2		A	AX	10	1	1	4
6541		RAMY	03	07	1225	N18	E12	03	8.4		B	BXO	10	6	3	3
6541	26628	MWIL	03	07	1500	N19	E10	03	8.4	3	(AP)					
6541		HOLL	03	07	1555	N18	E11	03	8.5		B	BXO	10	6	4	3
6541		BOUL	03	07	1604	N19	E08	03	8.3		B	CSO	20	2	2	2
6541		PALE	03	07	2300	N19	E08	03	8.6		B	CRO	20	8	4	2
6541		CULG	03	08	0050	N19	E07	03	8.6		B	DRO	20	9	4	3
6541		LEAR	03	08	0225	N18	E06	03	8.5		B	BXO	30	6	5	3
6541		RAMY	03	08	1229	N19	W01	03	8.4		B	DAO	30	5	5	4
6541	26628	MWIL	03	08	1500	N19	W02	03	8.5	4	(B)					
6541		BOUL	03	08	1542	N18	W04	03	8.3		B	DSO	40	3	5	1
6541		PALE	03	09	0220	N19	W07	03	8.6		B	DAO	30	6	5	2
6541		LEAR	03	09	0230	N19	W08	03	8.5		B	DKO	30	4	5	3
6541		RAMY	03	09	1210	N19	W12	03	8.6		B	DRO	20	6	3	4
6541		BOUL	03	09	1540	N18	W14	03	8.6		B	BXO	10	4	4	3
6541		HOLL	03	09	1600	N19	W16	03	8.4		B	BXO	20	6	3	3
6541		PALE	03	09	2200	N19	W16	03	8.7		B	BXO	10	7	7	2
6541	26628	MWIL	03	09	2200	N19	W18	03	8.5	3	(BG)					
6541		LEAR	03	10	0007	N18	W17	03	8.7		B	BXO	20	7	7	3
6541		CULG	03	10	0115	N19	W20	03	8.5		B	BXO		5	5	3
6541		SVTO	03	10	0912	N19	W25	03	8.5		B	BXO	10	4	4	1
6541		RAMY	03	10	1150	N18	W26	03	8.5		B	BXO	10	4	4	3
6541		HOLL	03	10	1600	N19	W26	03	8.7		A	AX	10	3	1	2
6543		PALE	03	07	2300	N11	E10	03	8.7		B	CRO	10	3	3	2
6543		CULG	03	08	0050	N12	E10	03	8.8		B	DRO	20	9	3	3
6543		RAMY	03	08	1229	N12	E03	03	8.7		B	BXO	20	9	4	4
6543	26631	MWIL	03	08	1500	N11	E01	03	8.7	4	(B)					
6543		RAMY	03	09	1210	N12	W11	03	8.7		B	BXO	10	3	4	4
6543		HOLL	03	09	1600	N11	W12	03	8.8		B	BXO	10	3	3	3
6532		LEAR	03	03	0424	N15	E75	03	8.9		A	HA	70	1	2	2
6532		RAMY	03	03	1317	N15	E73	03	9.1		A	HA	20	2	1	3
6532		SVTO	03	03	1327	N14	E75	03	9.2		A	HR	20	1	1	3
6532		HOLL	03	03	1600	N14	E72	03	9.1		A	HA	20	2	2	3
6532	26621	MWIL	03	03	1615	N15	E73	03	9.2	4	(AP)					
6532		PALE	03	03	1800	N14	E70	03	9.0		A	HS	30	1	2	3
6532		CULG	03	04	0050	N15	E69	03	9.2		A	HA	30	2	1	3
6532		SVTO	03	04	0740	N14	E65	03	9.2		A	HR	30	1	2	4
6532		HOLL	03	04	1515	N14	E60	03	9.2		A	AX	20	2	2	3
6532	26621	MWIL	03	04	1530	N15	E59	03	9.1	5	(AP)					

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

MARCH 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
6532		RAMY	03	04	1625	N14	E59	03	9.1		A	HA	30	3	2	3
6532		PALE	03	04	1830	N14	E58	03	9.1		A	HS	40	1	2	3
6532		CULG	03	05	0009	N15	E55	03	9.2		A	HS	10	1	1	3
6532		LEAR	03	05	0052	N14	E53	03	9.0		A	HS	40	1	2	2
6532		SVTO	03	05	0830	N15	E51	03	9.2		A	HS	20	1	2	3
6532		RAMY	03	05	1220	N14	E49	03	9.2		A	HA	20	2	2	3
6532		HOLL	03	05	1630	N11	E41	03	8.8		B	CAO	60	6	13	3
6532		PALE	03	05	2043	N13	E45	03	9.2		A	AX	10	1		3
6532		CULG	03	06	0022	N15	E42	03	9.2		A	HS	10	1	1	2
6532		LEAR	03	06	0025	N14	E41	03	9.1		A	HS	30	1	2	3
6532		RAMY	03	06	1155	N14	E36	03	9.2		A	HA	10	1	1	4
6532		SVTO	03	06	1345	N14	E35	03	9.2		A	HS	20	2	1	3
6532		BOUL	03	06	1530	N14	E33	03	9.1		A	HS	30	1	1	1
6532	26621	MWIL	03	06	1530	N15	E34	03	9.2	5	(AP)					
6532		HOLL	03	06	2040	N14	E31	03	9.2		A	HS	20	1	1	1
6532		PALE	03	06	2107	N14	E32	03	9.3		A	HA	20	1	1	3
6532		CULG	03	07	0110	N14	E29	03	9.2		A	HR	10	2	1	3
6532		LEAR	03	07	0330	N14	E26	03	9.1		A	HA	20	1	1	3
6532		RAMY	03	07	1225	N13	E22	03	9.2		A	HA	10	1	2	3
6532	26621	MWIL	03	07	1500	N14	E21	03	9.2	3	(AP)					
6532		HOLL	03	07	1555	N14	E21	03	9.2		A	HR	10	1	1	3
6532		BOUL	03	07	1604	N14	E18	03	9.0		A	HS	10	1	1	2
6532		PALE	03	07	2300	N14	E16	03	9.2		A	HR	10	1	1	2
6532		CULG	03	08	0050	N15	E17	03	9.3		A	HR	10	1	1	3
6532		LEAR	03	08	0225	N13	E11	03	8.9		B	CSO	40	6	8	3
6532		RAMY	03	08	1229	N15	E09	03	9.2		A	HA	10	1	1	4
6532	26621	MWIL	03	08	1500	N15	E08	03	9.2	4	(AP)					
6532		PALE	03	09	0220	N14	E03	03	9.3		A	AX		1		2
6532		RAMY	03	09	1210	N15	W02	03	9.3		A	AX		1	1	4
6532		HOLL	03	09	1600	N16	W08	03	9.0		A	AX		1		3
6532		RAMY	03	10	1150	N16	W20	03	9.0		A	AX		1	1	3
6532		CULG	03	11	0115	N16	W27	03	9.0		A	AX		1		2
6532A		HOLL	03	05	1630	N19	E49	03	9.4		B	BXO	10	3	3	3
6532B	26633	MWIL	03	09	2200	N23	W06	03	9.4	3	(AP)					
6544		RAMY	03	09	1210	S32	E01	03	9.6		B	BXO	10	8	3	4
6544		BOUL	03	09	1540	S32	E00	03	9.6		B	BXO		2	4	3
6544		HOLL	03	09	1600	S32	W01	03	9.6		B	BXO	10	6	4	3
6544		PALE	03	09	2200	S31	W06	03	9.4		B	BXO	10	5	8	2
6544	26634	MWIL	03	09	2200	S33	W03	03	9.7	4	(BG)					
6544		LEAR	03	10	0007	S32	W04	03	9.7		B	BXO	10	6	8	3
6544		CULG	03	10	0115	S32	W06	03	9.6		B	BXO		5	6	3
6544		SVTO	03	10	0912	S32	W09	03	9.7		B	CXO	20	5	6	1
6544		RAMY	03	10	1150	S32	W11	03	9.6		B	CAO	10	3	6	3
6544		BOUL	03	10	1552	S31	W13	03	9.6		B	BXO	10	2	6	3
6544		HOLL	03	10	1600	S32	W13	03	9.6		B	BXO	10	3	5	2
6544	26634	MWIL	03	10	2000	S33	W15	03	9.6	4	(B)					
6544		PALE	03	10	2000	S33	W16	03	9.6		B	DSO	20	3	6	2
6544		LEAR	03	11	0044	S33	W16	03	9.7		B	BXO	20	3	6	3
6544		CULG	03	11	0115	S32	W18	03	9.6		B	BXO		3	6	2
6544		SVTO	03	11	0925	S32	W21	03	9.7		B	BXO	10	4	6	1
6544		PALE	03	11	1952	S33	W30	03	9.4		A	AX		1		2
6544		LEAR	03	12	0007	S33	W32	03	9.5		A	AX	10	1	1	3
6544		CULG	03	12	0040	S33	W31	03	9.6		A	AX		1		3
6544		CULG	03	14	0215	S33	W60	03	9.3		A	AX		1		2
6539		RAMY	03	04	1625	N20	E60	03	9.3		A	AX	10	2	1	3
6539		PALE	03	04	1830	N20	E60	03	9.3		A	AX		2	1	3
6539		RAMY	03	05	1220	N20	E51	03	9.4		A	AX	10	3	2	3
6539		PALE	03	05	2043	N19	E47	03	9.4		A	AX		1		3
6539		CULG	03	06	0022	N21	E46	03	9.5		B	BXO	10	2	3	2
6539		LEAR	03	06	0025	N20	E42	03	9.2		B	BXO	30	2	3	3
6539		RAMY	03	06	1155	N20	E38	03	9.4		B	BXO	10	2	3	4
6539	26629	MWIL	03	07	1500	N18	E30	03	9.9	3	(B)					
6539		HOLL	03	07	1555	N19	E30	03	9.9		B	BXO	10	3	3	3
6539		BOUL	03	07	1604	N19	E29	03	9.9		B	BXO	10	2	3	2
6539		PALE	03	07	2300	N19	E28	03	10.1		B	CAO	20	3	4	2

S U N S P O T G R O U P S
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MARCH 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
6539		LEAR	03 08 0225	N18 E23	03 9.8		B	CAO	30	2	3	3
6539		RAMY	03 08 1229	N19 E19	03 10.0		B	CRO	10	5	5	4
6539	26629	MWIL	03 08 1500	N19 E17	03 9.9	5	(B)					
6539		BOUL	03 08 1542	N18 E13	03 9.6		A	HS	20	1	1	1
6539		PALE	03 09 0220	N19 E12	03 10.0		B	CSO	10	2	6	2
6539		LEAR	03 09 0230	N18 E09	03 9.8		A	HS	10	1	1	3
6539		RAMY	03 09 1210	N19 E07	03 10.0		B	BXO	20	9	6	4
6539		HOLL	03 09 1600	N19 E01	03 9.7		A	AX		3	1	3
6539		PALE	03 09 2200	N19 E03	03 10.1		A	AX		5		2
6539		LEAR	03 10 0007	N21 W08	03 9.4		A	AX	10	1	1	3
6539		SVTO	03 10 0912	N18 W03	03 10.1		A	AX		1		1
6539		RAMY	03 10 1150	N21 W04	03 10.2		B	BXO	10	5	7	3
6539		PALE	03 10 2000	N18 W08	03 10.2		A	AX	20	2	1	2
6539	26629	MWIL	03 10 2000	N18 W08	03 10.2	3	(AF)					
6539A		PALE	03 03 1800	S26 E78	03 9.8		A	AX	10	1	1	3
6539B		CULG	03 08 0050	N19 E27	03 10.1		B	CRO	20	4	3	3
6539C		RAMY	03 10 1150	N10 W01	03 10.4		A	AX		2	2	3
6539D		RAMY	03 10 1150	S10 E00	03 10.5		B	BXO	10	3	2	3
6536		HOLL	03 04 1515	N17 E80	03 10.7		A	AX	30	1	1	3
6536		RAMY	03 04 1625	N16 E80	03 10.7		A	HA	30	1	2	3
6536		PALE	03 04 1830	N15 E79	03 10.7		A	HA	60	1	2	3
6536		CULG	03 05 0009	N18 E79	03 11.0		B	CSO	20	3	7	3
6536		LEAR	03 05 0052	N17 E75	03 10.7		B	CSO	150	3	5	2
6536		SVTO	03 05 0830	N17 E73	03 10.9		B	DAO	120	5	8	3
6536		RAMY	03 05 1220	N17 E70	03 10.8		B	DAO	150	5	9	3
6536		HOLL	03 05 1630	N17 E69	03 10.9		B	DAI	180	7	8	3
6536		PALE	03 05 2043	N16 E67	03 10.9		B	CAO	90	9	5	3
6536		CULG	03 06 0022	N18 E68	03 11.2		B	DSO	80	6	9	2
6536		LEAR	03 06 0025	N17 E63	03 10.8		B	DAO	260	8	6	3
6536		SVTO	03 06 1345	N18 E60	03 11.1		B	HAI	160	8	17	3
6536		BOUL	03 06 1530	N17 E57	03 11.0		B	DAO	220	5	8	1
6536	26625	MWIL	03 06 1530	N18 E58	03 11.1	5	(BG)					
6536		HOLL	03 06 2040	N18 E58	03 11.3		B	EAI	150	10	14	1
6536		PALE	03 06 2107	N17 E54	03 11.0		B	CAO	70	11	10	3
6536		CULG	03 07 0110	N17 E52	03 11.0		B	DAO	130	8	10	3
6536		LEAR	03 07 0330	N18 E54	03 11.2		B	DSO	110	5	9	3
6536		RAMY	03 07 1225	N18 E49	03 11.2		B	FAO	170	11	17	3
6536	26625	MWIL	03 07 1500	N19 E47	03 11.2	5	(BG)					
6536		HOLL	03 07 1555	N19 E48	03 11.3		B	FSI	110	9	16	3
6536		BOUL	03 07 1604	N20 E48	03 11.3		B	FSO	110	5	16	2
6536		PALE	03 07 2300	N19 E44	03 11.3		B	FSO	110	8	17	2
6536		CULG	03 08 0050	N18 E44	03 11.4		B	FSO	100	9	16	3
6536		LEAR	03 08 0225	N18 E42	03 11.3		B	FSO	110	6	16	3
6536		RAMY	03 08 1229	N18 E36	03 11.3		B	FHO	100	13	18	4
6536	26625	MWIL	03 08 1500	N19 E35	03 11.3	5	(BG)					
6536		BOUL	03 08 1542	N18 E33	03 11.2		B	EAO	80	4	15	1
6536		PALE	03 09 0220	N19 E31	03 11.5		B	FSO	100	5	17	2
6536		LEAR	03 09 0230	N19 E29	03 11.3		B	CSO	50	6	16	3
6536		RAMY	03 09 1210	N17 E21	03 11.1		B	DAO	70	11	8	4
6536		BOUL	03 09 1540	N17 E17	03 10.9		B	DSO	70	3	8	3
6536		HOLL	03 09 1600	N16 E18	03 11.0		B	CSO	90	11	8	3
6536		PALE	03 09 2200	N17 E15	03 11.0		B	DAO	70	6	9	2
6536	26625	MWIL	03 09 2200	N17 E15	03 11.0	5	(B)					
6536		LEAR	03 10 0007	N17 E15	03 11.1		B	CAO	60	6	8	3
6536		CULG	03 10 0115	N17 E14	03 11.1		B	DSO	70	7	8	3
6536		SVTO	03 10 0912	N16 E09	03 11.1		B	CSO	70	4	8	1
6536		RAMY	03 10 1150	N17 E07	03 11.0		B	DAO	70	8	7	3
6536		HOLL	03 10 1600	N16 E06	03 11.1		B	CSO	90	8	8	2
6536		PALE	03 10 2000	N16 E03	03 11.1		B	DSO	90	5	7	2
6536	26625	MWIL	03 10 2000	N17 E03	03 11.1	4	(BP)					
6536		LEAR	03 11 0044	N15 E01	03 11.1		B	CSO	50	7	5	3
6536		CULG	03 11 0115	N17 E01	03 11.1		B	CSO	70	6	8	2
6536		SVTO	03 11 0925	N16 W04	03 11.1		B	CSO	30	3	7	1
6536		BOUL	03 11 1452	N17 W10	03 10.8		A	HS	30	10	1	1

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MARCH 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
6536	26625	MWIL	03	11	1545	N16	W11	03	10.8	4	(AF)					
6536		PALE	03	11	1952	N19	W10	03	11.1		B	CSO	20	2	6	2
6536		HOLL	03	11	2320	N18	W11	03	11.1		B	CSO	50	3	9	1
6536		LEAR	03	12	0007	N17	W12	03	11.1		B	CSO	30	3	5	3
6536		CULG	03	12	0040	N17	W12	03	11.1		B	CSO	50	2	6	3
6536		SVTO	03	12	0725	N17	W17	03	11.0		B	CSO	20	2	7	3
6536		RAMY	03	12	1345	N17	W22	03	10.9		A	HA	20	1	2	3
6536		BOUL	03	12	1440	N15	W24	03	10.8		A	HS	20	1	1	1
6536		HOLL	03	12	1500	N16	W24	03	10.8		A	HS	40	1	1	3
6536	26625	MWIL	03	12	1545	N16	W24	03	10.8	5	(AF)					
6536		LEAR	03	13	0008	N16	W28	03	10.9		A	HA	20	1	2	3
6536		CULG	03	13	0240	N17	W29	03	10.9		A	HS	20	3	1	2
6536		SVTO	03	13	1140	N16	W36	03	10.7		A	HA	20	1	1	3
6536		BOUL	03	13	1454	N18	W37	03	10.8		A	HS	10	1	1	1
6536		RAMY	03	13	1457	N16	W36	03	10.9		A	HA	30	1	2	2
6536		PALE	03	13	1830	N17	W38	03	10.9		A	HS	30	1	2	2
6536		LEAR	03	14	0012	N15	W41	03	10.9		B	CAO	30	4	3	3
6536		CULG	03	14	0215	N16	W43	03	10.8		B	CAO	20	5	8	2
6536		SVTO	03	14	1010	N16	W46	03	10.9		A	HA	20	1	1	3
6536		RAMY	03	14	1224	N14	W48	03	10.9		A	HA	20	1	1	4
6536	26625	MWIL	03	14	1530	N15	W49	03	10.9	4	(AF)					
6536		HOLL	03	14	1615	N17	W50	03	10.9		A	AX	20	2	1	3
6536		PALE	03	14	2030	N16	W52	03	10.9		A	AX	20	1	1	2
6536		LEAR	03	15	0018	N16	W52	03	11.1		A	HA	20	2	1	3
6536		RAMY	03	15	1347	N17	W62	03	10.9		A	AX	10	1	1	2
6536		HOLL	03	15	1535	N17	W63	03	10.9		A	AX	10	2	1	4
6536	26625	MWIL	03	15	1615	N16	W62	03	11.0	4	(AF)					
6536		PALE	03	15	2030	N16	W65	03	10.9		A	AX	10	1	1	2
6536		LEAR	03	16	0022	N16	W66	03	11.0		A	AX	30	1	1	3
6536		CULG	03	16	0025	N16	W66	03	11.0		A	AX		1		3
6537		HOLL	03	04	1515	S08	E86	03	11.1		A	HS	120	1	2	3
6537	26624	MWIL	03	04	1530	S08	E86	03	11.1	5	AP					
6537		RAMY	03	04	1625	S09	E82	03	10.8		A	HK	120	2	4	3
6537		PALE	03	04	1830	S10	E83	03	11.0		A	HK	210	3	4	3
6537		CULG	03	05	0009	S08	E79	03	10.9		A	HK	80	4	5	3
6537		LEAR	03	05	0052	S09	E77	03	10.8		B	CSO	180	2	4	2
6537		SVTO	03	05	0830	S09	E74	03	10.9		A	HK	240	2	3	3
6537		RAMY	03	05	1220	S09	E74	03	11.1		B	CKO	290	8	9	3
6537		HOLL	03	05	1630	S09	E72	03	11.1		B	CHO	260	7	11	3
6537		PALE	03	05	2043	S10	E71	03	11.2		B	CAO	180	7	8	3
6537		CULG	03	06	0022	S08	E69	03	11.2		B	CKO	280	11	10	2
6537		LEAR	03	06	0025	S09	E65	03	10.9		B	DKO	370	13	6	3
6537		RAMY	03	06	1155	S08	E62	03	11.1		B	CAO	220	19	11	4
6537		SVTO	03	06	1345	S09	E62	03	11.2		B	CAI	250	14	10	3
6537	26624	MWIL	03	06	1530	S08	E58	03	11.0	5	(BG)					
6537		BOUL	03	06	1530	S09	E60	03	11.1		B	DHO	300	3	7	1
6537		HOLL	03	06	2040	S09	E56	03	11.1		B	EKI	300	12	11	1
6537		PALE	03	06	2107	S08	E56	03	11.1		B	CAO	110	8	6	3
6537		CULG	03	07	0110	S08	E55	03	11.2		B	CKO	180	19	10	3
6537		LEAR	03	07	0330	S08	E52	03	11.0		B	DKO	140	9	7	3
6537		RAMY	03	07	1225	S08	E49	03	11.2		B	EKO	230	31	12	3
6537	26624	MWIL	03	07	1500	S08	E45	03	11.0	5	(BP)					
6537		HOLL	03	07	1555	S08	E47	03	11.2		BG	DAI	190	19	10	3
6537		BOUL	03	07	1604	S07	E47	03	11.2		B	DAO	210	5	9	2
6537		PALE	03	07	2300	S08	E42	03	11.1		B	DAI	170	18	8	2
6537		CULG	03	08	0050	S08	E42	03	11.2		B	CAO	140	32	10	3
6537		LEAR	03	08	0225	S08	E39	03	11.0		B	DAO	120	9	7	3
6537		RAMY	03	08	1229	S08	E34	03	11.1		B	EHO	160	33	12	4
6537	26624	MWIL	03	08	1500	S08	E32	03	11.0	5	(BP)					
6537		BOUL	03	08	1542	S07	E32	03	11.0		B	DAO	120	5	10	1
6537		PALE	03	09	0220	S08	E28	03	11.2		B	EAO	150	10	12	2
6537		LEAR	03	09	0230	S08	E27	03	11.1		B	EAO	90	9	12	3
6537		RAMY	03	09	1210	S07	E26	03	11.4		B	CAO	200	47	18	4
6537		BOUL	03	09	1540	S07	E19	03	11.1		B	DAO	90	12	10	3
6537		HOLL	03	09	1600	S09	E20	03	11.2		B	CKI	190	32	12	3
6537		PALE	03	09	2200	S08	E15	03	11.0		B	DAO	160	24	10	2
6537	26624	MWIL	03	09	2200	S08	E15	03	11.0	5	(BG)					
6537		LEAR	03	10	0007	S08	E15	03	11.1		B	EAO	110	32	13	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
6537		CULG	03 10 0115	S08 E16	03 11.2		B	EAO	130	20	11	3
6537		SVTO	03 10 0912	S08 E08	03 11.0		B	EAI	160	26	14	1
6537		RAMY	03 10 1150	S08 E05	03 10.9		BG	EAO	210	28	11	3
6537		BOUL	03 10 1552	S07 E03	03 10.9		B	EAI	190	19	12	3
6537		HOLL	03 10 1600	S09 E05	03 11.0		BG	EHI	220	36	13	2
6537		PALE	03 10 2000	S08 E02	03 11.0		B	EAO	320	36	13	2
6537	26624	MWIL	03 10 2000	S08 E02	03 11.0	5	(BG)					
6537		LEAR	03 11 0044	S08 E04	03 11.3		B	EAO	250	32	16	3
6537		CULG	03 11 0115	S08 E01	03 11.1		BG	EAO	190	26	13	2
6537		SVTO	03 11 0925	S08 W04	03 11.1		BG	ESI	140	46	13	1
6537		BOUL	03 11 1452	S06 W08	03 11.0		B	DAO	100	6	6	1
6537	26624	MWIL	03 11 1545	S07 W09	03 11.0	4	(BP)					
6537		PALE	03 11 1952	S07 W08	03 11.2		B	DAO	110	24	12	2
6537		HOLL	03 11 2320	S07 W09	03 11.3		B	EAI	130	23	13	1
6537		LEAR	03 12 0007	S07 W12	03 11.1		B	EAO	180	26	13	3
6537		CULG	03 12 0040	S08 W11	03 11.2		B	EAO	150	26	14	3
6537		SVTO	03 12 0725	S08 W15	03 11.2		B	EAO	70	33	13	3
6537		RAMY	03 12 1345	S07 W19	03 11.1		BG	EAO	110	29	11	3
6537		BOUL	03 12 1440	S07 W23	03 10.9		B	CSI	60	11	12	1
6537		HOLL	03 12 1500	S08 W20	03 11.1		B	CSO	90	24	14	3
6537	26624	MWIL	03 12 1545	S07 W22	03 11.0	5	(BG)					
6537		LEAR	03 13 0008	S08 W27	03 11.0		B	EAO	30	17	11	3
6537		CULG	03 13 0240	S08 W27	03 11.1		B	EAO	40	15	12	2
6537		SVTO	03 13 1140	S06 W32	03 11.1		B	EAO	50	9	13	3
6537		BOUL	03 13 1454	S07 W34	03 11.1		B	BXO	20	4	11	1
6537		RAMY	03 13 1457	S08 W33	03 11.1		B	EAO	50	6	12	2
6537		PALE	03 13 1830	S07 W36	03 11.1		B	EAO	50	7	12	2
6537		LEAR	03 14 0012	S08 W39	03 11.1		B	EAO	50	15	13	3
6537		CULG	03 14 0215	S08 W42	03 10.9		B	ERO	30	9	11	2
6537		SVTO	03 14 1010	S08 W45	03 11.0		B	CAO	30	9	12	3
6537		RAMY	03 14 1224	S08 W44	03 11.2		B	EAO	40	12	13	4
6537	26624	MWIL	03 14 1530	S07 W48	03 11.0	4	(AP)					
6537		HOLL	03 14 1615	S08 W50	03 10.9		B	BXO	20	2	7	3
6537		PALE	03 14 2030	S06 W52	03 11.0		A	AX	10	1	1	2
6537		LEAR	03 15 0018	S07 W52	03 11.1		A	AX	20	1	1	3
6537		RAMY	03 15 1347	S06 W60	03 11.1		A	AX		1		2
6537		HOLL	03 15 1535	S05 W62	03 11.0		B	BXO	10	2	2	4
6537	26624	MWIL	03 15 1615	S06 W61	03 11.1	4	(AP)					
6537		PALE	03 15 2030	S06 W64	03 11.1		A	AX		1		2
6537		LEAR	03 16 0022	S06 W66	03 11.1		A	AX	20	1	1	3
6537		CULG	03 16 0025	S07 W64	03 11.2		A	AX		1		3
6540		CULG	03 06 0022	N15 E86	03 12.5		A	AX	10	1	1	2
6540		LEAR	03 06 0025	N13 E73	03 11.5		A	AX	30	1	1	3
6540		RAMY	03 06 1155	N14 E72	03 11.9		A	AX	10	1	1	4
6540	26626	MWIL	03 06 1530	N14 E71	03 12.0	5	(AP)					
6540		HOLL	03 06 2040	N13 E67	03 11.9		A	HR	30	1	1	1
6540		PALE	03 06 2107	N12 E67	03 11.9		A	AX		1		3
6540		CULG	03 07 0110	N14 E65	03 12.0		B	BXO		3	3	3
6540		LEAR	03 07 0330	N14 E62	03 11.8		A	AX	20	1	1	3
6540		RAMY	03 07 1225	N13 E50	03 11.3		B	CAO	20	3	3	3
6540	26626	MWIL	03 07 1500	N14 E57	03 11.9	3	(AP)					
6540		HOLL	03 07 1555	N14 E56	03 11.9		A	AX	10	2	1	3
6540		BOUL	03 07 1604	N14 E56	03 11.9		A	AX	20	1	1	2
6540		PALE	03 07 2300	N13 E52	03 11.9		A	HA	20	2	1	2
6540		CULG	03 08 0050	N13 E53	03 12.0		A	AX		2		3
6540		LEAR	03 08 0225	N13 E50	03 11.9		A	AX	20	1	1	3
6540		RAMY	03 08 1229	N13 E44	03 11.8		A	AX	10	2	1	4
6540	26626	MWIL	03 08 1500	N13 E44	03 11.9	4	(AP)					
6540		BOUL	03 08 1542	N15 E42	03 11.8		A	HS	30	1	1	1
6540		PALE	03 09 0220	N12 E38	03 12.0		A	HS	10	1	1	2
6540		LEAR	03 09 0230	N13 E36	03 11.8		A	HS	10	1	1	3
6540		RAMY	03 09 1210	N14 E33	03 12.0		B	CAO	10	3	4	4
6540		BOUL	03 09 1540	N14 E29	03 11.8		A	AX		1		3
6540		HOLL	03 09 1600	N13 E29	03 11.8		A	AX	10	1		3
6540		PALE	03 09 2200	N13 E26	03 11.9		A	HS	10	1	1	2
6540	26626	MWIL	03 09 2200	N13 E26	03 11.9	3	(AP)					
6540		LEAR	03 10 0007	N13 E25	03 11.9		A	AX	10	1	1	3
6540		CULG	03 10 0115	N13 E25	03 11.9		A	AX		1		3

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6540		CULG	03 11 0115	N13 E12	03 11.9		A	AX		1		2
6540A		CULG	03 06 0022	N22 E80	03 12.2		A	AX	10	1	1	2
6540A		RAMY	03 09 1210	N22 E33	03 12.0		A	AX	10	4	2	4
6540A		HOLL	03 09 1600	N21 E30	03 12.0		A	AX	10	1		3
6540A		CULG	03 12 0040	N22 E01	03 12.1		B	BXO	60	4	2	3
6540B		CULG	03 07 0110	N21 E63	03 11.9		A	AX		1		3
6540B		CULG	03 08 0050	S17 E56	03 12.3		A	AX		1		3
6540B	26632	MWIL	03 08 1500	S17 E47	03 12.2	4	(AP)					
6540B		CULG	03 10 0115	S17 E30	03 12.3		B	BXO		3	2	3
6538		SVTO	03 05 0830	S22 E86	03 12.0		A	HA	60	1	2	3
6538		RAMY	03 05 1220	S23 E82	03 11.8		B	DAO	120	3	9	3
6538		HOLL	03 05 1630	S24 E82	03 12.0		B	DKO	210	11	10	3
6538		PALE	03 05 2043	S25 E82	03 12.2		B	DKO	270	10	12	3
6538		CULG	03 06 0022	S22 E85	03 12.5		B	EKO	150	7	13	2
6538		LEAR	03 06 0025	S24 E85	03 12.6		B	EKI	690	20	11	3
6538		RAMY	03 06 1155	S23 E78	03 12.5		B	FKO	740	21	18	4
6538		SVTO	03 06 1345	S24 E74	03 12.3		B	EKI	980	16	12	3
6538		BOUL	03 06 1530	S24 E74	03 12.4		B	EKO	780	12	13	1
6538	26627	MWIL	03 06 1530	S24 E74	03 12.4	5	(D)					
6538		HOLL	03 06 2040	S24 E71	03 12.3		B	FKI	310	14	15	1
6538		PALE	03 06 2107	S23 E72	03 12.4		B	EKI	570	23	15	3
6538		CULG	03 07 0110	S23 E68	03 12.3		B	EKI	570	30	15	3
6538		LEAR	03 07 0330	S24 E70	03 12.5		B	FKI	600	24	23	3
6538	26627	MWIL	03 07 1500	S24 E62	03 12.4	5	(D)					
6538		HOLL	03 07 1555	S24 E63	03 12.5		BG	FKI	800	61	26	3
6538		BOUL	03 07 1604	S24 E62	03 12.4		BG	FKI	1180	38	29	2
6538		PALE	03 07 2300	S25 E60	03 12.6		BG	FAI	820	42	26	2
6538		CULG	03 08 0050	S25 E59	03 12.6		BG	FKI	640	64	26	3
6538		LEAR	03 08 0225	S26 E58	03 12.6		BG	FKI	740	43	25	3
6538		RAMY	03 08 1229	S25 E55	03 12.8		BG	FKI	900	85	28	4
6538	26627	MWIL	03 08 1500	S23 E50	03 12.5	5	(D)					
6538		BOUL	03 08 1542	S25 E54	03 12.8		B	FKI	1030	35	30	1
6538		PALE	03 09 0220	S25 E45	03 12.6		BG	FAI	700	45	26	2
6538		LEAR	03 09 0230	S24 E44	03 12.5		BG	FKI	1070	60	28	3
6538		RAMY	03 09 1210	S22 E38	03 12.4		BG	FKI	810	0	27	4
6538		BOUL	03 09 1540	S24 E36	03 12.4		BG	FKI	810	65	25	3
6538		HOLL	03 09 1600	S23 E38	03 12.6		BG	FKC	700	0	25	3
6538		PALE	03 09 2200	S22 E34	03 12.5		BG	FKI	910	0	29	2
6538	26627	MWIL	03 09 2200	S24 E38	03 12.8	5	(BG)					
6538		LEAR	03 10 0007	S23 E35	03 12.7		BG	FKI	680	0	31	3
6538		CULG	03 10 0115	S23 E32	03 12.5		BG	FKI	680	82	26	3
6538		SVTO	03 10 0912	S23 E29	03 12.6		BG	FKI	1130	74	25	1
6538		RAMY	03 10 1150	S22 E28	03 12.6		BG	FAI	900	0	30	3
6538		BOUL	03 10 1552	S21 E25	03 12.6		BGD	FKI	1040	89	26	3
6538	26627	MWIL	03 10 2000	S23 E23	03 12.6	5	(BG)					
6538		PALE	03 10 2000	S25 E19	03 12.3		BG	FKI	1070	0	19	2
6538		LEAR	03 11 0044	S24 E20	03 12.6		BG	EKI	1220	0	25	3
6538		CULG	03 11 0115	S23 E19	03 12.5		BG	FKI	870	0	26	2
6538		SVTO	03 11 0925	S24 E17	03 12.7		BG	FKI	710	0	29	1
6538		BOUL	03 11 1452	S23 E14	03 12.7		BG	FKO	400	34	16	1
6538	26627	MWIL	03 11 1545	S24 E15	03 12.8	5	(D)					
6538		PALE	03 11 1952	S22 E10	03 12.6		BG	FKO	800	0	30	2
6538		HOLL	03 11 2320	S23 E09	03 12.7		BGD	FKC	1030	71	29	1
6538		LEAR	03 12 0007	S23 E08	03 12.6		BG	FKI	1210	0	29	3
6538		CULG	03 12 0040	S23 E08	03 12.6		BG	FKO	660	0	32	3
6538		SVTO	03 12 0725	S23 E03	03 12.5		BG	FAI	650	0	28	3
6538		RAMY	03 12 1345	S23 W01	03 12.5		BG	FKI	940	0	32	3
6538		BOUL	03 12 1440	S22 E02	03 12.8		BG	FKI	550	30	28	1
6538		HOLL	03 12 1500	S22 E00	03 12.6		BGD	FKC	810	0	30	3
6538	26627	MWIL	03 12 1545	S24 E02	03 12.8	5	(D)					
6538		LEAR	03 13 0008	S23 W05	03 12.6		BG	FAO	600	0	29	3
6538		CULG	03 13 0240	S23 W07	03 12.6		BGD	FKI	430	0	30	2
6538		SVTO	03 13 1140	S23 W12	03 12.6		BGD	FAI	680	0	30	3
6538		BOUL	03 13 1454	S23 W15	03 12.5		B	FAC	350	37	28	1
6538		RAMY	03 13 1457	S23 W17	03 12.3		BGD	FKI	510	86	29	2
6538		PALE	03 13 1830	S22 W15	03 12.6		BG	FAI	670	0	30	2

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6538		LEAR	03 14 0012	S24 W19	03 12.5		BGD	FKI	430	0	30	3
6538		CULG	03 14 0215	S23 W20	03 12.5		BGD	FAI	310	88	31	2
6538		SVTO	03 14 1010	S23 W24	03 12.6		BGD	FAI	440	93	30	3
6538		RAMY	03 14 1224	S24 W23	03 12.7		BGD	FAI	420	0	31	4
6538	26627	MWIL	03 14 1530	S24 W24	03 12.8	5	(D)					
6538		HOLL	03 14 1615	S23 W25	03 12.7		BG	FAI	360	0	32	3
6538		PALE	03 14 2030	S23 W28	03 12.7		BG	FAI	420	49	28	2
6538		LEAR	03 15 0018	S23 W30	03 12.7		BGD	FKI	420	98	36	3
6538		RAMY	03 15 1347	S24 W36	03 12.8		BGD	FAI	380	86	31	2
6538		HOLL	03 15 1535	S23 W39	03 12.6		BG	FAI	450	0	32	4
6538	26627	MWIL	03 15 1615	S24 W36	03 12.9	5	(D)					
6538		PALE	03 15 2030	S23 W41	03 12.7		BG	FAI	320	45	31	2
6538		LEAR	03 16 0022	S21 W42	03 12.8		BG	FAO	780	0	32	3
6538		CULG	03 16 0025	S22 W39	03 13.0		BGD	FAI	160	84	31	3
6538		RAMY	03 16 1318	S24 W48	03 12.8		B	FAI	400	63	33	4
6538	26627	MWIL	03 16 1615	S23 W50	03 12.8	4	(D)					
6538		HOLL	03 16 2030	S21 W52	03 12.9		BG	FAI	330	53	37	2
6538		CULG	03 17 0005	S24 W52	03 13.0		BG	FAO	110	62	34	2
6538		LEAR	03 17 0011	S22 W55	03 12.8		B	FAO	560	60	33	3
6538		RAMY	03 17 1200	S23 W60	03 12.9		BG	FAO	160	45	33	4
6538		BOUL	03 17 1545	S24 W63	03 12.8		B	FSO	80	11	30	3
6538		HOLL	03 17 1555	S23 W58	03 13.2		BG	FAI	180	16	32	3
6538	26627	MWIL	03 17 1745	S24 W60	03 13.1	4	(BG)					
6538		CULG	03 18 0030	S24 W65	03 13.0		B	BXO	20	15	30	3
6538		LEAR	03 18 0115	S24 W65	03 13.0		B	BXO	160	16	28	3
6538		BOUL	03 18 1445	S29 W64	03 13.6		B	BXO	20	4	5	1
6538		HOLL	03 18 1556	S24 W63	03 13.8		B	DRI	40	29	8	4
6538		LEAR	03 19 0012	S26 W69	03 13.6		B	BXO	30	8	8	3
6538		CULG	03 19 0100	S24 W74	03 13.3		B	BXO	10	9	8	3
6538A	26637	MWIL	03 12 1545	S13 E02	03 12.8	4	(B)					
6542		RAMY	03 06 1155	S11 E87	03 13.0		A	HA	30	1	2	4
6542		HOLL	03 06 2040	S12 E81	03 13.0		A	HS	120	1	2	1
6542		PALE	03 06 2107	S11 E85	03 13.3		A	AX	30	1	1	3
6542		CULG	03 07 0110	S12 E79	03 13.0		A	HS	80	1	2	3
6542		LEAR	03 07 0330	S11 E75	03 12.8		A	HA	60	1	2	3
6542		RAMY	03 07 1225	S11 E75	03 13.2		B	DAO	120	5	7	3
6542	26630	MWIL	03 07 1500	S12 E70	03 12.9	4	(AP)					
6542		HOLL	03 07 1555	S11 E73	03 13.1		B	CSO	100	2	6	3
6542		BOUL	03 07 1604	S10 E69	03 12.8		A	HS	110	1	2	2
6542		PALE	03 07 2300	S11 E68	03 13.1		B	CSO	120	3	5	2
6542		CULG	03 08 0050	S11 E69	03 13.2		B	CSO	100	4	5	3
6542		LEAR	03 08 0225	S11 E67	03 13.1		B	CAO	40	2	6	3
6542		RAMY	03 08 1229	S11 E62	03 13.2		B	DAO	140	4	7	4
6542	26630	MWIL	03 08 1500	S11 E60	03 13.1	5	(BP)					
6542		BOUL	03 08 1542	S11 E58	03 13.0		A	HA	110	1	3	1
6542		PALE	03 09 0220	S12 E56	03 13.3		B	CSO	130	2	6	2
6542		LEAR	03 09 0230	S11 E51	03 12.9		A	HA	60	1	2	3
6542		RAMY	03 09 1210	S11 E49	03 13.2		B	CAO	170	7	5	4
6542		BOUL	03 09 1540	S10 E45	03 13.0		A	HS	90	1	2	3
6542		HOLL	03 09 1600	S11 E45	03 13.0		A	HS	140	2	2	3
6542		PALE	03 09 2200	S11 E42	03 13.1		A	HS	140	2	3	2
6542	26630	MWIL	03 09 2200	S12 E42	03 13.1	5	(BP)					
6542		LEAR	03 10 0007	S11 E42	03 13.2		B	CAO	120	4	4	3
6542		CULG	03 10 0115	S11 E40	03 13.1		B	CSO	130	2	2	3
6542		SVTO	03 10 0912	S11 E37	03 13.2		A	HS	120	1	2	1
6542		RAMY	03 10 1150	S11 E35	03 13.1		A	HS	120	1	2	3
6542		BOUL	03 10 1552	S11 E32	03 13.1		A	HS	110	1	2	3
6542		HOLL	03 10 1600	S11 E32	03 13.1		A	HH	130	1	3	2
6542		PALE	03 10 2000	S12 E29	03 13.0		A	HS	170	1	2	2
6542	26630	MWIL	03 10 2000	S12 E30	03 13.1	5	(AP)					
6542		LEAR	03 11 0044	S11 E27	03 13.1		A	HS	110	1	2	3
6542		CULG	03 11 0115	S11 E27	03 13.1		A	HS	110	1	2	2
6542		SVTO	03 11 0925	S11 E24	03 13.2		B	CSO	110	2	3	1
6542		BOUL	03 11 1452	S09 E20	03 13.1		A	HS	60	1	2	1
6542	26630	MWIL	03 11 1545	S12 E18	03 13.0	5	(AP)					
6542		PALE	03 11 1952	S11 E17	03 13.1		B	CSO	100	2	4	2
6542		HOLL	03 11 2320	S12 E15	03 13.1		A	HS	130	1	2	1

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

MARCH 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
6542		LEAR	03	12	0007	S11	E14	03	13.0		A	HS	100	1	2	3
6542		CULG	03	12	0040	S11	E15	03	13.1		B	CSO	90	2	2	3
6542		SVTO	03	12	0725	S10	E08	03	12.9		B	CSO	110	6	8	3
6542		RAMY	03	12	1345	S12	E05	03	12.9		B	CAO	130	4	5	3
6542		BOUL	03	12	1440	S10	E06	03	13.1		A	HS	80	1	2	1
6542		HOLL	03	12	1500	S12	E03	03	12.8		B	CSO	180	5	6	3
6542	26630	MWIL	03	12	1545	S11	E06	03	13.1	5	(AP)					
6542		LEAR	03	13	0008	S11	E02	03	13.1		B	CAO	100	3	8	3
6542		CULG	03	13	0240	S11	W03	03	12.9		B	CSO	150	5	7	2
6542		SVTO	03	13	1140	S10	W07	03	13.0		B	CSO	120	2	2	3
6542		BOUL	03	13	1454	S10	W07	03	13.1		A	HS	60	1	2	1
6542		RAMY	03	13	1457	S11	W07	03	13.1		A	HA	100	1	2	2
6542		PALE	03	13	1830	S11	W09	03	13.1		A	HS	120	1	2	2
6542		LEAR	03	14	0012	S12	W12	03	13.1		A	HA	100	1	3	3
6542		CULG	03	14	0215	S11	W15	03	13.0		B	CSO	120	4	4	2
6542		SVTO	03	14	1010	S11	W15	03	13.3		B	CSO	110	5	7	3
6542		RAMY	03	14	1224	S12	W15	03	13.4		B	CAO	120	7	8	4
6542	26630	MWIL	03	14	1530	S12	W21	03	13.1	5	(BP)					
6542		HOLL	03	14	1615	S11	W19	03	13.2		B	CSO	110	2	3	3
6542		PALE	03	14	2030	S11	W23	03	13.1		A	HS	80	1	2	2
6542		LEAR	03	15	0018	S12	W29	03	12.8		B	CAO	90	5	9	3
6542		RAMY	03	15	1347	S10	W33	03	13.1		A	HA	110	1	2	2
6542		HOLL	03	15	1535	S10	W34	03	13.1		A	HS	100	1	2	4
6542	26630	MWIL	03	15	1615	S11	W34	03	13.1	5	(AP)					
6542		PALE	03	15	2030	S11	W36	03	13.1		A	HS	120	1	2	2
6542		LEAR	03	16	0022	S11	W37	03	13.2		B	CSO	80	5	3	3
6542		CULG	03	16	0025	S12	W37	03	13.2		B	CSO	100	3	2	3
6542		RAMY	03	16	1318	S12	W45	03	13.2		A	HA	80	1	2	4
6542	26630	MWIL	03	16	1615	S11	W47	03	13.1	5	(AP)					
6542		HOLL	03	16	2030	S10	W48	03	13.2		A	HS	60	2	2	2
6542		CULG	03	17	0005	S11	W51	03	13.2		A	HS	60	2	2	2
6542		LEAR	03	17	0011	S12	W51	03	13.2		A	HS	60	1	2	3
6542		RAMY	03	17	1200	S11	W57	03	13.2		A	HA	30	2	2	4
6542		BOUL	03	17	1545	S10	W59	03	13.2		A	HS	40	1	1	3
6542		HOLL	03	17	1555	S10	W59	03	13.2		A	HS	70	1	2	3
6542	26630	MWIL	03	17	1745	S11	W61	03	13.1	5	(AP)					
6542		CULG	03	18	0030	S11	W64	03	13.2		A	HA	20	3	2	3
6542		LEAR	03	18	0115	S11	W63	03	13.3		A	HS	20	1	1	3
6542		HOLL	03	18	1556	S10	W72	03	13.2		A	AX	10	3	1	4
6542B		SVTO	03	06	1345	S20	E89	03	13.4		A	HA	120	1	2	3
6542A		HOLL	03	06	2040	S29	E85	03	13.5		A	HS	180	1	2	1
6542A		PALE	03	06	2107	S27	E84	03	13.4		A	AX	70	5	2	3
6542A		CULG	03	07	0110	S27	E79	03	13.2		B	CAO	100	7	5	3
6542A		RAMY	03	07	1225	S29	E78	03	13.6		B	CAO	210	8	8	3
6552		PALE	03	15	2030	S21	W19	03	14.4		B	BXO	10	3	3	2
6552		LEAR	03	16	0022	S20	W21	03	14.4		B	BXO	20	5	3	3
6552		CULG	03	16	0025	S20	W20	03	14.5		B	BXO	10	6	3	3
6552		RAMY	03	16	1318	S21	W27	03	14.5		B	CAO	30	5	5	4
6552	26645	MWIL	03	16	1615	S20	W30	03	14.4	4	(B)					
6552		HOLL	03	16	2030	S20	W32	03	14.4		B	CAO	40	8	5	2
6552		CULG	03	17	0005	S20	W33	03	14.5		B	CRO	10	6	5	2
6552		LEAR	03	17	0011	S21	W34	03	14.4		B	CSO	50	8	4	3
6552		RAMY	03	17	1200	S21	W39	03	14.5		B	CAO	40	7	5	4
6552		BOUL	03	17	1545	S21	W39	03	14.7		A	HS	30	1	1	3
6552		HOLL	03	17	1555	S20	W43	03	14.4		B	CSO	40	5	6	3
6552	26645	MWIL	03	17	1745	S21	W43	03	14.4	5	(B)					
6552		CULG	03	18	0030	S20	W45	03	14.6		B	CSO	10	6	6	3
6552		LEAR	03	18	0115	S22	W45	03	14.6		A	HS	30	1	1	3
6552		BOUL	03	18	1445	S23	W51	03	14.7		A	AX		1		1
6552		HOLL	03	18	1556	S19	W55	03	14.5		B	BXO	10	5	5	4
6552		LEAR	03	19	0012	S21	W57	03	14.6		B	BXO	20	2	1	3
6552		CULG	03	19	0100	S20	W59	03	14.5		B	BXO		5	5	3
6552		CULG	03	20	0110	S21	W73	03	14.4		B	BXO		2	3	3
6552A		RAMY	03	16	1318	N08	W23	03	14.8		A	AX		2	2	4

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MARCH 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
6545		SVTO	03	10	0912	S09	E89	03	17.1		A	HK	330	1	4	1
6545		RAMY	03	10	1150	S08	E85	03	16.9		A	HK	150	1	4	3
6545		BOUL	03	10	1552	S06	E78	03	16.5		A	HK	240	4	3	3
6545		HOLL	03	10	1600	S08	E85	03	17.0		A	HH	300	5	5	2
6545	26635	MWIL	03	10	2000	S08	E80	03	16.8	4	(AP)					
6545		PALE	03	10	2000	S09	E76	03	16.5		A	HS	600	1	3	2
6545		LEAR	03	11	0044	S08	E75	03	16.6		B	CKO	450	7	7	3
6545		CULG	03	11	0115	S09	E75	03	16.7		A	HK	330	2	5	2
6545		SVTO	03	11	0925	S09	E75	03	17.0		B	DKO	470	8	9	1
6545		BOUL	03	11	1452	S07	E70	03	16.9		B	DKI	450	6	9	1
6545	26635	MWIL	03	11	1545	S07	E68	03	16.7	5	(B)					
6545		PALE	03	11	1952	S08	E65	03	16.7		B	DAI	420	13	9	2
6545		HOLL	03	11	2320	S11	E64	03	16.8		B	EKC	600	18	14	1
6545		LEAR	03	12	0007	S09	E64	03	16.8		B	DKO	770	16	10	3
6545		CULG	03	12	0040	S08	E64	03	16.8		B	DKO	440	8	10	3
6545		SVTO	03	12	0725	S08	E60	03	16.8		B	DKO	400	15	10	3
6545		RAMY	03	12	1345	S08	E58	03	16.9		B	DKI	990	33	10	3
6545		BOUL	03	12	1440	S07	E56	03	16.8		B	CKO	700	12	8	1
6545		HOLL	03	12	1500	S10	E56	03	16.8		BD	DKC	800	44	10	3
6545	26635	MWIL	03	12	1545	S07	E56	03	16.8	5	(D)					
6545		LEAR	03	13	0008	S09	E51	03	16.8		B	EKI	740	25	12	3
6545		CULG	03	13	0240	S09	E50	03	16.9		B	DKC	810	36	10	2
6545		SVTO	03	13	1140	S08	E45	03	16.9		BGD	EKI	800	67	12	3
6545		BOUL	03	13	1454	S08	E43	03	16.8		B	DKO	730	19	10	1
6545		RAMY	03	13	1457	S08	E43	03	16.8		B	DKO	830	37	11	2
6545		PALE	03	13	1830	S09	E42	03	16.9		BD	EKC	830	36	13	2
6545		LEAR	03	14	0012	S09	E38	03	16.9		BGD	EKI	490	39	11	3
6545		CULG	03	14	0215	S08	E36	03	16.8		BGD	EKI	650	37	11	2
6545		SVTO	03	14	1010	S09	E32	03	16.8		BGD	EKI	700	40	12	3
6545		RAMY	03	14	1224	S08	E31	03	16.8		BG	EKI	640	52	12	4
6545	26635	MWIL	03	14	1530	S08	E28	03	16.7	6	(D)					
6545		HOLL	03	14	1615	S09	E31	03	17.0		BD	FKC	630	56	15	3
6545		PALE	03	14	2030	S09	E28	03	16.9		BD	EKC	780	32	12	2
6545		LEAR	03	15	0018	S09	E24	03	16.8		BGD	EKI	630	55	14	3
6545		RAMY	03	15	1347	S09	E17	03	16.8		BG	EKI	790	35	14	2
6545		HOLL	03	15	1535	S09	E18	03	17.0		BGD	FKC	900	84	20	4
6545	26635	MWIL	03	15	1615	S09	E15	03	16.8	6	(D)					
6545		PALE	03	15	2030	S09	E14	03	16.9		BGD	FKC	750	60	20	2
6545		LEAR	03	16	0022	S09	E13	03	17.0		BGD	FKI	960	0	19	3
6545		CULG	03	16	0025	S07	E14	03	17.1		BGD	FKI	770	97	20	3
6545		RAMY	03	16	1318	S08	E04	03	16.8		B	FKI	860	69	17	4
6545	26635	MWIL	03	16	1615	S08	W00	03	16.7	6	(D)					
6545		HOLL	03	16	2030	S08	E00	03	16.8		BG	FKI	650	74	16	2
6545		CULG	03	17	0005	S08	W01	03	16.9		BGD	FKI	520	84	16	2
6545		LEAR	03	17	0011	S09	W03	03	16.8		BG	FKI	940	91	16	3
6545		RAMY	03	17	1200	S08	W07	03	17.0		BGD	FKI	700	86	18	4
6545		BOUL	03	17	1545	S09	W11	03	16.8		B	EKI	490	38	14	3
6545		HOLL	03	17	1555	S08	W09	03	17.0		B	FKI	640	84	17	3
6545	26635	MWIL	03	17	1745	S08	W14	03	16.7	5	(D)					
6545		CULG	03	18	0030	S08	W15	03	16.9		BGD	FKI	450	59	16	3
6545		LEAR	03	18	0115	S10	W14	03	17.0		BG	FKI	620	44	19	3
6545		BOUL	03	18	1445	S09	W24	03	16.8		B	EAI	340	11	14	1
6545		HOLL	03	18	1556	S08	W25	03	16.8		B	FKI	750	80	16	4
6545		LEAR	03	19	0012	S09	W30	03	16.7		BG	FKI	350	29	18	3
6545		CULG	03	19	0100	S09	W29	03	16.9		BG	FKI	440	56	18	3
6545		BOUL	03	19	1433	S08	W35	03	17.0		B	FAI	400	19	18	1
6545		HOLL	03	19	1840	S07	W43	03	16.5		B	FAI	260	15	18	1
6545		CULG	03	20	0110	S09	W44	03	16.7		BG	FKI	330	41	18	3
6545		LEAR	03	20	0203	S08	W45	03	16.7		B	EAI	320	21	14	3
6545		SVTO	03	20	1505	S08	W54	03	16.6		B	FAI	360	15	16	2
6545		HOLL	03	20	1700	S06	W55	03	16.6		B	FSI	420	11	17	4
6545		CULG	03	21	0115	S09	W58	03	16.7		B	FAI	170	18	17	2
6545		LEAR	03	21	0147	S09	W59	03	16.6		B	FAO	320	17	16	2
6545		SVTO	03	21	0900	S08	W64	03	16.6		B	FAO	200	14	18	3
6545		BOUL	03	21	1540	S07	W72	03	16.2		B	FSO	210	6	16	4
6545		LEAR	03	22	0020	S08	W70	03	16.8		B	ESO	290	11	12	4
6545		CULG	03	22	0055	S08	W72	03	16.6		B	ESO	240	4	13	3
6545		SVTO	03	22	0750	S06	W77	03	16.6		B	CSO	60	7	13	4
6545		HOLL	03	22	1600	S05	W78	03	16.8		B	DSO	150	2	5	3

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6545A	26640	MWIL	03 15 1615	S12 E27	03 17.7	4	(AP)					
6546		LEAR	03 11 0044	S24 E83	03 17.4		A	HS	90	1	4	3
6546		SVTO	03 11 0925	S23 E84	03 17.9		A	HS	90	3	4	1
6546		BOUL	03 11 1452	S22 E80	03 17.8		A	HS	120	2	3	1
6546	26636	MWIL	03 11 1545	S23 E79	03 17.7	5	(AP)					
6546		PALE	03 11 1952	S22 E75	03 17.6		B	CAO	130	3	5	2
6546		HOLL	03 11 2320	S25 E73	03 17.6		A	HS	110	2	3	1
6546		LEAR	03 12 0007	S23 E72	03 17.5		B	CAO	290	4	5	3
6546		CULG	03 12 0040	S22 E74	03 17.7		B	DAI	140	4	5	3
6546		SVTO	03 12 0725	S22 E68	03 17.5		B	DAO	80	4	5	3
6546		RAMY	03 12 1345	S23 E66	03 17.6		B	DAO	180	3	5	3
6546		BOUL	03 12 1440	S22 E66	03 17.7		B	CAO	140	2	3	1
6546		HOLL	03 12 1500	S23 E65	03 17.6		B	DSO	250	2	4	3
6546	26636	MWIL	03 12 1545	S23 E68	03 17.9	5	(BP)					
6546		LEAR	03 13 0008	S23 E60	03 17.6		B	CAO	140	2	6	3
6546		CULG	03 13 0240	S23 E58	03 17.6		B	DAO	150	2	5	2
6546		SVTO	03 13 1140	S23 E56	03 17.8		B	CAO	180	2	4	3
6546		BOUL	03 13 1454	S22 E55	03 17.8		B	CSO	110	3	4	1
6546		RAMY	03 13 1457	S21 E53	03 17.7		B	DAO	140	3	5	2
6546		PALE	03 13 1830	S23 E52	03 17.8		B	DSO	210	4	5	2
6546		LEAR	03 14 0012	S23 E48	03 17.7		B	CKO	150	2	7	3
6546		CULG	03 14 0215	S23 E47	03 17.7		B	CAO	230	4	5	2
6546		SVTO	03 14 1010	S22 E43	03 17.7		B	CAO	130	2	5	3
6546		RAMY	03 14 1224	S22 E45	03 18.0		B	DKO	160	6	10	4
6546	26636	MWIL	03 14 1530	S23 E40	03 17.7	5	(BP)					
6546		HOLL	03 14 1615	S22 E41	03 17.8		B	CSO	130	3	5	3
6546		PALE	03 14 2030	S23 E40	03 17.9		B	CAO	180	3	8	2
6546		LEAR	03 15 0018	S22 E35	03 17.7		B	CAO	120	6	6	3
6546		RAMY	03 15 1347	S23 E32	03 18.0		B	CAO	140	3	9	2
6546		HOLL	03 15 1535	S23 E30	03 18.0		B	CSO	170	8	8	4
6546	26636	MWIL	03 15 1615	S23 E26	03 17.7	5	(AP)					
6546		PALE	03 15 2030	S23 E23	03 17.6		A	HS	90	2	2	2
6546		LEAR	03 16 0022	S23 E22	03 17.7		B	CSO	110	4	4	3
6546		CULG	03 16 0025	S22 E21	03 17.6		A	HS	150	2	3	3
6546		RAMY	03 16 1318	S23 E15	03 17.7		A	HA	130	2	3	4
6546	26636	MWIL	03 16 1615	S23 E14	03 17.7	5	(BP)					
6546		HOLL	03 16 2030	S22 E11	03 17.7		A	HA	140	4	3	2
6546		CULG	03 17 0005	S21 E13	03 18.0		B	CSO	120	9	9	2
6546		LEAR	03 17 0011	S23 E10	03 17.8		B	CSO	160	4	6	3
6546		RAMY	03 17 1200	S22 E04	03 17.8		B	CAO	200	4	4	4
6546		BOUL	03 17 1545	S22 E01	03 17.7		A	HA	120	2	3	3
6546		HOLL	03 17 1555	S23 E01	03 17.7		A	HA	120	2	2	3
6546	26636	MWIL	03 17 1745	S23 W00	03 17.7	5	(AP)					
6546		CULG	03 18 0030	S24 E00	03 18.0		B	CSO	130	6	9	3
6546		LEAR	03 18 0115	S23 W05	03 17.7		A	HS	80	2	2	3
6546		BOUL	03 18 1445	S23 W09	03 17.9		A	HS	70	1	2	1
6546		HOLL	03 18 1556	S24 W10	03 17.9		B	CSO	80	6	7	4
6546		LEAR	03 19 0012	S23 W17	03 17.7		A	HA	100	2	2	3
6546		CULG	03 19 0100	S24 W16	03 17.8		B	CSO	110	4	8	3
6546		BOUL	03 19 1433	S22 W21	03 18.0		B	CSO	70	4	5	1
6546		HOLL	03 19 1840	S22 W28	03 17.6		A	HS	80	1	2	1
6546		CULG	03 20 0110	S23 W30	03 17.7		B	CSO	100	4	3	3
6546		LEAR	03 20 0203	S24 W27	03 18.0		B	CSO	100	5	9	3
6546		SVTO	03 20 1505	S23 W35	03 17.9		B	CSO	130	4	8	2
6546		HOLL	03 20 1700	S22 W39	03 17.7		A	HS	100	1	2	4
6546		CULG	03 21 0115	S23 W43	03 17.7		A	AX	60	3	2	2
6546		LEAR	03 21 0147	S23 W43	03 17.8		B	CSO	70	2	3	2
6546		SVTO	03 21 0900	S22 W47	03 17.8		A	HS	60	5	3	3
6546		BOUL	03 21 1540	S23 W51	03 17.7		A	HA	60	1	2	4
6546		LEAR	03 22 0020	S24 W52	03 18.0		B	CSO	110	7	6	4
6546		CULG	03 22 0055	S23 W55	03 17.8		A	HS	70	2	2	3
6546		SVTO	03 22 0750	S22 W60	03 17.7		A	HS	50	2	2	4
6546		HOLL	03 22 1600	S22 W64	03 17.7		A	HS	80	1	2	3
6546		CULG	03 23 0130	S23 W68	03 17.8		A	HS	60	1	2	3
6546		LEAR	03 23 0132	S23 W68	03 17.8		A	HA	50	1	2	2
6546		SVTO	03 23 1000	S23 W74	03 17.7		A	HS	40	1	2	3
6546		RAMY	03 23 1300	S23 W75	03 17.8		B	CAO	90	3	8	3
6546		BOUL	03 23 1715	S24 W78	03 17.7		A	HS	30	1	2	2

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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
6546		HOLL	03 23 2245	S22 W80	03 17.8		A	HS	60	1	1	1
6546		CULG	03 24 0222	S23 W81	03 17.8		A	AX		1	1	3
6546		LEAR	03 24 0245	S23 W81	03 17.9		A	AX	30	1	1	3
6546		SVTO	03 24 0805	S23 W86	03 17.7		A	HA	50	1	2	4
6546A	26646	MWIL	03 17 1745	S16 E05	03 18.1	4	(AP)					
6547		CULG	03 14 0215	S08 E56	03 18.3		A	AX		1		2
6547		SVTO	03 14 1010	S08 E52	03 18.3		A	AX		1		3
6547		RAMY	03 14 1224	S08 E52	03 18.4		B	DRO	20	2	3	4
6547	26638	MWIL	03 14 1530	S07 E50	03 18.4	4	(B)					
6547		HOLL	03 14 1615	S08 E50	03 18.4		B	BXO	10	2	3	3
6547		LEAR	03 15 0018	S08 E43	03 18.2		B	BXO	10	3	5	3
6547		HOLL	03 15 1535	S08 E35	03 18.3		B	BXO	10	3	4	4
6547	26638	MWIL	03 15 1615	S08 E34	03 18.2	3	(AP)					
6547		LEAR	03 16 0022	S09 E30	03 18.3		B	BXO	20	5	4	3
6547		CULG	03 16 0025	S08 E30	03 18.3		A	AX		1		3
6547A		HOLL	03 15 1535	N12 E39	03 18.6		B	BXO	10	4	3	4
6547A	26641	MWIL	03 15 1615	N12 E38	03 18.5	3	(AF)					
6547A		LEAR	03 16 0022	N12 E33	03 18.5		A	AX	10	1	1	3
6547A	26641	MWIL	03 16 1615	N13 E23	03 18.4	3	(AF)					
6547A		HOLL	03 16 2030	N11 E21	03 18.4		B	BXO	10	3	3	2
6547A		LEAR	03 17 0011	N12 E18	03 18.4		A	AX	10	1	1	3
6553		HOLL	03 18 1556	N15 W04	03 18.4		A	AX	10	1	1	4
6553		LEAR	03 19 0012	N14 W08	03 18.4		B	BXO	50	8	5	3
6553		CULG	03 19 0100	N13 W09	03 18.4		B	BXO	10	9	4	3
6553		BOUL	03 19 1433	N15 W18	03 18.2		B	BXO		5	4	1
6553		HOLL	03 19 1840	N16 W21	03 18.2		A	HR	20	1	1	1
6553		CULG	03 20 0110	N15 W24	03 18.2		B	CAO	10	6	6	3
6553		LEAR	03 20 0203	N15 W25	03 18.2		B	CRO	30	5	4	3
6553		HOLL	03 20 1700	N18 W37	03 17.9		A	AX	10	1	1	4
6553		CULG	03 21 0115	N15 W38	03 18.2		B	BXO	20	7	4	2
6553		LEAR	03 21 0147	N16 W40	03 18.0		B	BXO	30	3	3	2
6553		BOUL	03 21 1540	N16 W49	03 17.9		B	BXO	20	2	2	4
6553		LEAR	03 22 0020	N14 W49	03 18.3		B	BXO	30	5	6	4
6553		CULG	03 22 0055	N16 W53	03 18.0		B	BXO	10	4	8	3
6553		LEAR	03 23 0132	N14 W60	03 18.5		B	BXO	20	2	5	2
6553		SVTO	03 23 1000	N14 W67	03 18.3		B	CSO	30	3	4	3
6553		RAMY	03 23 1300	N12 W69	03 18.3		B	DAO	70	6	5	3
6553		BOUL	03 23 1715	N13 W75	03 18.0		B	BXO	30	4	9	2
6553		LEAR	03 24 0245	N13 W76	03 18.4		B	BXO	40	2	3	3
6553		SVTO	03 24 0805	N14 W80	03 18.3		B	CRO	40	3	4	4
6551		RAMY	03 15 1347	N21 E43	03 18.9		A	AX	10	1	1	2
6551		HOLL	03 15 1535	N21 E42	03 18.9		A	AX	10	1	1	4
6551	26642	MWIL	03 15 1615	N20 E42	03 18.9	4	(AP)					
6551		PALE	03 15 2030	N21 E40	03 18.9		B	CSO	30	3	3	2
6551		LEAR	03 16 0022	N21 E37	03 18.8		B	CAO	70	5	4	3
6551		CULG	03 16 0025	N21 E39	03 19.0		B	BXO	20	4	3	3
6551		RAMY	03 16 1318	N21 E31	03 18.9		B	DAO	80	9	5	4
6551	26642	MWIL	03 16 1615	N21 E29	03 18.9	5	(B)					
6551		HOLL	03 16 2030	N21 E27	03 18.9		B	DAO	70	10	7	2
6551		CULG	03 17 0005	N22 E24	03 18.8		B	DAO	30	13	6	2
6551		LEAR	03 17 0011	N20 E24	03 18.8		B	DSO	110	10	6	3
6551		RAMY	03 17 1200	N21 E18	03 18.9		B	DAO	50	12	9	4
6551		BOUL	03 17 1545	N22 E14	03 18.7		B	DSO	70	8	7	3
6551		HOLL	03 17 1555	N22 E16	03 18.9		B	DAO	60	12	8	3
6551	26642	MWIL	03 17 1745	N22 E15	03 18.9	5	(B)					
6551		CULG	03 18 0030	N22 E11	03 18.9		B	DAO	50	14	9	3
6551		LEAR	03 18 0115	N21 E10	03 18.8		B	DAO	110	8	9	3
6551		BOUL	03 18 1445	N22 E02	03 18.8		B	BXO	20	4	8	1
6551		HOLL	03 18 1556	N21 E04	03 19.0		B	DSI	110	25	9	4
6551		LEAR	03 19 0012	N22 W01	03 18.9		B	DAO	20	12	9	3
6551		CULG	03 19 0100	N21 W03	03 18.8		B	DAO	40	20	9	3
6551		BOUL	03 19 1433	N22 W08	03 19.0		B	DRI	40	8	9	1
6551		HOLL	03 19 1840	N22 W10	03 19.0		B	BXO	130	10	10	1
6551		CULG	03 20 0110	N22 W15	03 18.9		B	DAO	50	16	10	3

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6551		LEAR	03 20	0203	N22 W15	03 18.9		B	CRO	10	13	10	3
6551		SVTO	03 20	1505	N22 W22	03 18.9		B	DAI	60	10	9	2
6551		HOLL	03 20	1700	N23 W24	03 18.8		B	CSO	90	10	12	4
6551		CULG	03 21	0115	N22 W28	03 18.9		B	DAO	40	12	10	2
6551		LEAR	03 21	0147	N22 W28	03 18.9		B	CSO	60	7	10	2
6551		SVTO	03 21	0900	N23 W36	03 18.6		B	CAO	30	4	4	3
6551		BOUL	03 21	1540	N22 W40	03 18.6		B	BXO	20	2	3	4
6551		LEAR	03 22	0020	N21 W42	03 18.8		B	BXO	30	3	3	4
6551		CULG	03 22	0055	N22 W44	03 18.6		A	AX		1	1	3
6551		SVTO	03 22	0750	N24 W48	03 18.6		A	AX	10	3	1	4
6551		CULG	03 23	0130	N22 W59	03 18.5		B	BXO		2	2	3
6551		CULG	03 24	0222	N22 W74	03 18.4		A	AX		1		3
6551B	26651	MWIL	03 24	1540	N08 W62	03 20.0	3	X					
6548		PALE	03 13	1830	S09 E60	03 18.3		A	AX		1	1	2
6548		CULG	03 14	0215	S13 E78	03 20.0		A	AX		1		2
6548		SVTO	03 14	1010	S12 E76	03 20.1		A	HS	10	1	1	3
6548		RAMY	03 14	1224	S12 E75	03 20.2		A	HA	20	1	1	4
6548	26639	MWIL	03 14	1530	S13 E72	03 20.1	4	(AP)					
6548		HOLL	03 14	1615	S12 E72	03 20.1		A	AX	10	1	1	3
6548		PALE	03 14	2030	S13 E69	03 20.1		A	AX	30	1	1	2
6548		LEAR	03 15	0018	S13 E67	03 20.1		A	AX	20	1	1	3
6548		RAMY	03 15	1347	S13 E59	03 20.0		A	AX	10	1	1	2
6548		HOLL	03 15	1535	S12 E58	03 20.0		A	AX	10	1	1	4
6548	26639	MWIL	03 15	1615	S14 E58	03 20.1	4	(AP)					
6548		PALE	03 15	2030	S11 E61	03 20.4		B	CSO	20	2	11	2
6548		LEAR	03 16	0022	S13 E58	03 20.4		B	BXO	40	3	9	3
6548		CULG	03 16	0025	S12 E55	03 20.2		A	AX	10	2	1	3
6548		RAMY	03 16	1318	S12 E47	03 20.1		A	HA	10	1	1	4
6548	26639	MWIL	03 16	1615	S13 E45	03 20.1	4	(AP)					
6548		HOLL	03 16	2030	S13 E42	03 20.0		A	AX	10	1	1	2
6548		CULG	03 17	0005	S11 E40	03 20.0		A	AX	10	1	1	2
6548		LEAR	03 17	0011	S13 E39	03 19.9		A	AX	10	1	1	3
6548		RAMY	03 17	1200	S13 E35	03 20.1		B	CAO	20	5	5	4
6548		BOUL	03 17	1545	S13 E33	03 20.1		B	BXO	10	3	3	3
6548		HOLL	03 17	1555	S13 E33	03 20.1		A	AX	10	3	3	3
6548	26639	MWIL	03 17	1745	S13 E31	03 20.1	5	(AP)					
6548		CULG	03 18	0030	S12 E27	03 20.0		A	AX	10	1	1	3
6548		LEAR	03 18	0115	S12 E27	03 20.1		A	AX	10	1	1	3
6548		BOUL	03 18	1445	S11 E18	03 20.0		A	AX		1		1
6548		HOLL	03 18	1556	S13 E20	03 20.2		B	BXO	10	7	4	4
6548		LEAR	03 19	0012	S12 E14	03 20.1		A	AX	10	1	1	3
6548		CULG	03 19	0100	S12 E15	03 20.2		B	BXO		4	3	3
6548		CULG	03 20	0110	S11 E01	03 20.1		A	AX		2	1	3
6548		SVTO	03 20	1505	S15 W01	03 20.5		A	AX		1		2
6548		HOLL	03 20	1700	S15 W03	03 20.5		B	BXI	20	3	2	4
6551A	26647	MWIL	03 17	1745	S21 E19	03 19.2	4	(AF)					
6551A		CULG	03 20	0110	S23 E01	03 20.1		A	AX		1		3
6549		HOLL	03 14	1615	S02 E87	03 21.2		A	HS	60	1	2	3
6549		LEAR	03 15	0018	S04 E78	03 20.8		A	HA	120	1	5	3
6549		RAMY	03 15	1347	S03 E73	03 21.0		A	HS	110	1	2	2
6549		HOLL	03 15	1535	S03 E72	03 21.0		A	HS	170	3	2	4
6549	26643	MWIL	03 15	1615	S03 E71	03 21.0	5	(AP)					
6549		PALE	03 15	2030	S03 E69	03 21.0		A	HA	160	1	2	2
6549		LEAR	03 16	0022	S04 E67	03 21.0		B	CAO	220	7	5	3
6549		CULG	03 16	0025	S02 E69	03 21.2		B	CAO	120	5	5	3
6549		RAMY	03 16	1318	S03 E61	03 21.1		BG	DAO	200	4	7	4
6549	26643	MWIL	03 16	1615	S03 E60	03 21.2	5	(BP)					
6549		HOLL	03 16	2030	S03 E57	03 21.1		B	DAO	200	4	5	2
6549		CULG	03 17	0005	S02 E55	03 21.1		B	CSO	150	4	4	2
6549		LEAR	03 17	0011	S04 E54	03 21.0		B	CSO	200	5	4	3
6549		RAMY	03 17	1200	S02 E50	03 21.2		B	CAO	240	11	5	4
6549		BOUL	03 17	1545	S02 E47	03 21.2		B	DAO	170	5	5	3
6549		HOLL	03 17	1555	S03 E47	03 21.2		B	CAO	200	8	5	3
6549	26643	MWIL	03 17	1745	S02 E45	03 21.1	5	(D)					
6549		CULG	03 18	0030	S02 E42	03 21.1		B	CSO	190	10	6	3

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6549		LEAR	03 18	0115	S03 E41	03 21.1		B	CHO	130	6	3	3
6549		BOUL	03 18	1445	S01 E32	03 21.0		A	HS	90	1	2	1
6549		HOLL	03 18	1556	S03 E34	03 21.2		B	CSO	220	7	4	4
6549		LEAR	03 19	0012	S02 E29	03 21.2		B	CKO	170	3	5	3
6549		CULG	03 19	0100	S02 E29	03 21.2		B	CSO	220	8	3	3
6549		BOUL	03 19	1433	S02 E21	03 21.2		A	HA	150	2	2	1
6549		HOLL	03 19	1840	S03 E19	03 21.2		A	HA	210	1	3	1
6549		CULG	03 20	0110	S01 E16	03 21.2		B	CAO	160	9	4	3
6549		LEAR	03 20	0203	N02 E13	03 21.0		B	CAI	160	5	4	3
6549		SVTO	03 20	1505	S02 E07	03 21.1		B	DAO	130	7	4	2
6549		HOLL	03 20	1700	S02 E06	03 21.1		B	DSC	250	7	6	4
6549		CULG	03 21	0115	S01 E01	03 21.1		B	CAO	120	13	4	2
6549		LEAR	03 21	0147	S03 E04	03 21.4		B	CAO	150	15	8	2
6549		SVTO	03 21	0900	S01 W03	03 21.1		A	HA	110	6	3	3
6549		BOUL	03 21	1540	S02 W07	03 21.1		A	HA	90	5	4	4
6549		LEAR	03 22	0020	S03 W08	03 21.4		B	CAO	150	18	8	4
6549		CULG	03 22	0055	S01 W09	03 21.4		B	CAO	110	12	7	3
6549		SVTO	03 22	0750	S03 W13	03 21.3		B	CAO	80	16	7	4
6549		HOLL	03 22	1600	S02 W18	03 21.3		B	CAO	150	8	5	3
6549		CULG	03 23	0130	S02 W22	03 21.4		B	CAO	100	7	6	3
6549		LEAR	03 23	0132	S03 W25	03 21.2		B	CAO	80	5	6	2
6549		SVTO	03 23	1000	S01 W30	03 21.2		A	HS	40	3	2	3
6549		RAMY	03 23	1300	S01 W31	03 21.2		B	CAO	130	9	6	3
6549		BOUL	03 23	1715	S02 W34	03 21.2		B	DSO	50	2	3	2
6549		HOLL	03 23	2245	N00 W36	03 21.2		A	HS	50	5	2	1
6549		CULG	03 24	0222	S01 W38	03 21.3		B	DSO	80	3	3	3
6549		LEAR	03 24	0245	S01 W40	03 21.1		B	DSO	50	2	2	3
6549		SVTO	03 24	0805	N00 W43	03 21.1		A	HA	80	3	2	4
6549		RAMY	03 24	1420	S01 W44	03 21.3		B	CAO	70	6	4	3
6549	26643	MWIL	03 24	1540	S01 W48	03 21.1	5	AP					
6549		BOUL	03 24	1545	S01 W47	03 21.1		B	DSO	50	2	3	2
6549		HOLL	03 24	1630	S01 W46	03 21.2		B	CAO	50	7	5	2
6549		LEAR	03 25	0014	S01 W50	03 21.3		B	DAO	30	3	3	3
6549		SVTO	03 25	0910	S01 W54	03 21.3		B	DAO	30	3	3	2
6549		RAMY	03 25	1200	S01 W57	03 21.2		B	DAO	40	4	3	4
6549		BOUL	03 25	1515	S01 W59	03 21.2		B	BXO	130	2	2	1
6549		HOLL	03 25	1620	N02 W60	03 21.2		A	HR	40	2	2	1
6549		PALE	03 25	1815	S01 W61	03 21.2		B	CAO	30	5	3	4
6549		CULG	03 26	0040	S01 W64	03 21.2		A	HA	10	4	2	3
6549		LEAR	03 26	0048	S01 W63	03 21.3		B	BXO	40	2	3	2
6549		SVTO	03 26	0732	S01 W68	03 21.2		B	CAO	30	2	3	3
6549		RAMY	03 26	1227	S01 W72	03 21.1		A	HA	20	1	1	4
6554A		CULG	03 16	0025	S10 E65	03 20.9		A	AX		1		3
6554A		RAMY	03 16	1318	S11 E56	03 20.8		A	AX		1		4
6554A		HOLL	03 22	1600	S11 W19	03 21.2		B	BXO	10	3	3	3
6550		LEAR	03 15	0018	S18 E80	03 21.1		B	CAO	60	2	2	3
6550		RAMY	03 15	1347	S18 E77	03 21.4		B	CAO	120	4	3	2
6550		HOLL	03 15	1535	S17 E76	03 21.4		B	CSO	180	6	7	4
6550	26644	MWIL	03 15	1615	S18 E76	03 21.5	4	AF					
6550		PALE	03 15	2030	S17 E75	03 21.5		B	CKO	150	6	5	2
6550		LEAR	03 16	0022	S17 E69	03 21.2		B	DAO	180	8	6	3
6550		CULG	03 16	0025	S16 E73	03 21.5		B	CHO	70	7	7	3
6550		RAMY	03 16	1318	S17 E65	03 21.5		B	DAO	110	6	4	4
6550	26644	MWIL	03 16	1615	S18 E63	03 21.5	4	(BF)					
6550		HOLL	03 16	2030	S19 E61	03 21.5		B	DAO	120	7	4	2
6550		CULG	03 17	0005	S17 E57	03 21.3		B	CAO	50	9	6	2
6550		LEAR	03 17	0011	S18 E58	03 21.4		B	DAO	140	7	4	3
6550		RAMY	03 17	1200	S17 E52	03 21.4		B	DAO	60	12	4	4
6550		BOUL	03 17	1545	S17 E49	03 21.4		B	DSO	50	3	3	3
6550		HOLL	03 17	1555	S17 E49	03 21.4		B	DAO	60	8	5	3
6550	26644	MWIL	03 17	1745	S17 E50	03 21.5	5	(BG)					
6550		CULG	03 18	0030	S17 E46	03 21.5		B	CAO	20	7	3	3
6550		LEAR	03 18	0115	S17 E44	03 21.4		B	CSO	40	3	2	3
6550		BOUL	03 18	1445	S15 E38	03 21.5		A	AX	10	1		1
6550		HOLL	03 18	1556	S18 E38	03 21.5		B	CRO	20	9	5	4
6550		LEAR	03 19	0012	S19 E33	03 21.5		B	BXO	10	6	4	3
6550		CULG	03 19	0100	S17 E33	03 21.5		B	CAO	10	7	3	3

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6550		BOUL	03 19 1433	S14 E25	03 21.5		B	BXO		8	5	1
6550		HOLL	03 19 1840	S16 E26	03 21.7		B	BXO	110	9	11	1
6550		CULG	03 20 0110	S16 E19	03 21.5		B	BXO	10	7	5	3
6550		LEAR	03 20 0203	S15 E20	03 21.6		B	BXO	20	24	11	3
6550		SVTO	03 20 1505	S15 E16	03 21.8		B	CAI	70	17	9	2
6550		HOLL	03 20 1700	S12 E16	03 21.9		B	CXI	40	14	6	4
6550		CULG	03 21 0115	S11 E08	03 21.6		B	DRO	20	13	6	2
6550		LEAR	03 21 0147	S13 E11	03 21.9		B	BXO	70	14	8	2
6550		SVTO	03 21 0900	S17 E01	03 21.4		B	BXO	10	5	4	3
6550		LEAR	03 22 0020	S13 W01	03 21.9		B	CAO	50	11	7	4
6550		CULG	03 22 0055	S11 W08	03 21.4		B	CRO	50	9	9	3
6550		HOLL	03 22 1600	S12 W10	03 21.9		B	BXO	40	7	7	3
6550		CULG	03 23 0130	S12 W17	03 21.8		B	BXO	20	10	13	3
6550		LEAR	03 23 0132	S12 W16	03 21.8		B	BXO	20	13	8	2
6550		SVTO	03 23 1000	S12 W20	03 21.9		B	BXO	10	7	7	3
6550		RAMY	03 23 1300	S12 W21	03 21.9		B	BXO	40	25	12	3
6550		HOLL	03 23 2245	S13 W25	03 22.1		B	BXO	10	6	7	1
6550		CULG	03 24 0222	S12 W27	03 22.1		B	BXO	10	6	9	3
6550		HOLL	03 24 1630	S11 W41	03 21.6		A	AX		2	1	2
6550A		RAMY	03 23 1300	S19 W28	03 21.4		A	AX	10	3	2	3
6550A		PALE	03 24 0245	S20 W35	03 21.4		B	BXO	10	4	3	4
6550A		SVTO	03 24 0805	S18 W34	03 21.7		A	AX	10	2	1	4
6550B		BOUL	03 21 1540	S05 W02	03 21.5		A	AX	10	2	1	4
6550C		CULG	03 20 0110	S11 E26	03 22.0		B	CRO	10	1	5	3
6550C		CULG	03 22 0055	S10 E08	03 22.6		A	AX		1		3
6550D		CULG	03 20 0110	S29 E44	03 23.5		A	AX		2		3
6556		RAMY	03 17 1200	S13 E84	03 23.8		A	HA	60	2	2	4
6556		BOUL	03 17 1545	S13 E80	03 23.7		A	HS	60	1	3	3
6556		HOLL	03 17 1555	S14 E79	03 23.6		B	DHO	60	3	4	3
6556	26649	MWIL	03 17 1745	S13 E81	03 23.8	5	X					
6556		CULG	03 18 0030	S12 E78	03 23.9		A	HS	40	1	2	3
6556		BOUL	03 18 1445	S11 E70	03 23.9		A	HS	50	1	1	1
6556		HOLL	03 18 1556	S14 E69	03 23.9		B	CSO	100	3	1	4
6556		LEAR	03 19 0012	S13 E65	03 23.9		A	HA	90	1	2	3
6556		CULG	03 19 0100	S13 E65	03 23.9		A	HS	50	2	1	3
6556		BOUL	03 19 1433	S12 E56	03 23.8		A	HS	70	1	2	1
6556		HOLL	03 19 1840	S14 E55	03 23.9		A	HS	70	1	2	1
6556		CULG	03 20 0110	S13 E51	03 23.9		A	HS	60	1	2	3
6556		LEAR	03 20 0203	S13 E49	03 23.8		A	HS	90	1	2	3
6556		SVTO	03 20 1505	S14 E42	03 23.8		A	HA	100	1	2	2
6556		HOLL	03 20 1700	S13 E42	03 23.9		A	HS	130	1	2	4
6556		CULG	03 21 0115	S13 E37	03 23.8		A	HS	70	1	2	2
6556		LEAR	03 21 0147	S13 E37	03 23.9		A	HS	90	1	2	2
6556		BOUL	03 21 1540	S13 E29	03 23.8		A	HS	60	3	3	4
6556		LEAR	03 22 0020	S12 E27	03 24.0		B	CSO	140	18	11	4
6556		CULG	03 22 0055	S13 E23	03 23.8		B	CSI	70	8	5	3
6556		HOLL	03 22 1600	S13 E16	03 23.9		B	CSO	130	6	5	3
6556		CULG	03 23 0130	S13 E11	03 23.9		B	CSO	80	10	6	3
6556		LEAR	03 23 0132	S13 E11	03 23.9		B	CAO	70	10	6	2
6556		SVTO	03 23 1000	S12 E03	03 23.6		B	CSO	90	17	13	3
6556		RAMY	03 23 1300	S12 W01	03 23.5		B	CAO	150	41	13	3
6556		BOUL	03 23 1715	S11 E03	03 23.9		B	DSO	50	3	3	2
6556		HOLL	03 23 2245	S12 W01	03 23.9		B	CSO	90	6	6	1
6556		CULG	03 24 0222	S12 W02	03 23.9		B	CSO	90	13	10	3
6556		LEAR	03 24 0245	S11 W04	03 23.8		B	CAO	50	5	3	3
6556		PALE	03 24 0245	S12 W01	03 24.0		B	CSO	130	15	12	4
6556		SVTO	03 24 0805	S13 W04	03 24.0		B	CAO	100	9	13	4
6556		RAMY	03 24 1420	S13 W09	03 23.9		B	EAO	100	11	13	3
6556	26649	MWIL	03 24 1540	S12 W10	03 23.9	5	X					
6556		BOUL	03 24 1545	S12 W09	03 24.0		A	HS	60	1	2	2
6556		HOLL	03 24 1630	S13 W13	03 23.7		B	CSO	100	4	6	2
6556		LEAR	03 25 0014	S13 W10	03 24.2		B	CAO	70	14	8	3
6556		SVTO	03 25 0910	S13 W15	03 24.2		B	DSO	40	7	7	2
6556		RAMY	03 25 1200	S12 W17	03 24.2		B	CAO	80	13	8	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
6556		BOUL	03	25	1515	S12	W18	03	24.3		B	CSO	50	4	7	1
6556		HOLL	03	25	1620	S12	W20	03	24.2		B	CSO	130	8	8	1
6556		PALE	03	25	1815	S12	W21	03	24.2		B	CSO	80	7	9	4
6556		CULG	03	26	0040	S12	W23	03	24.3		B	CSO	40	12	9	3
6556		LEAR	03	26	0048	S13	W24	03	24.2		B	CSO	70	4	8	2
6556		SVTO	03	26	0732	S13	W28	03	24.2		B	CSO	70	6	8	3
6556		RAMY	03	26	1227	S12	W30	03	24.2		B	CAO	60	5	8	4
6556		BOUL	03	26	1445	S12	W36	03	23.9		A	HS	40	1	1	1
6556		PALE	03	26	1715	S13	W37	03	23.9		A	HA	70	1	2	3
6556		HOLL	03	26	1920	S11	W38	03	23.9		A	AX	20	1	2	1
6556		SVTO	03	27	0910	S12	W43	03	24.1		B	DAO	60	4	7	3
6556		RAMY	03	27	1221	S12	W46	03	24.0		B	CAO	80	3	7	3
6556		BOUL	03	27	1643	S14	W47	03	24.1		B	CSO	80	4	7	2
6556		HOLL	03	27	1710	S12	W49	03	24.0		B	CKO	50	3	5	2
6556		PALE	03	27	2020	S11	W49	03	24.2		B	DSO	60	3	9	1
6556		CULG	03	28	0100	S12	W52	03	24.1		B	CSO	60	3	6	3
6556		RAMY	03	28	1336	S13	W58	03	24.2		B	DAO	70	12	7	4
6556		BOUL	03	28	1610	S12	W58	03	24.3		B	DAO	80	5	7	3
6556		PALE	03	28	2010	S12	W62	03	24.2		B	DAO	160	9	9	2
6556	26649	MWIL	03	28	2145	S13	W62	03	24.2	5	B					
6556		HOLL	03	28	2315	S11	W64	03	24.1		B	DSO	50	2	9	2
6556		LEAR	03	29	0010	S13	W61	03	24.4		B	DAO	40	6	9	3
6556		CULG	03	29	0120	S12	W65	03	24.1		B	DAO	80	2	8	3
6556		SVTO	03	29	0825	S12	W69	03	24.1		B	CAO	70	4	9	4
6556		RAMY	03	29	1407	S09	W67	03	24.5		B	CAO	70	4	16	3
6556		HOLL	03	29	1422	S13	W70	03	24.3		B	CSO	60	2	11	3
6556	26649	MWIL	03	29	1600	S12	W72	03	24.2	5	(B)					
6556		PALE	03	29	1850	S10	W70	03	24.5		B	EAO	50	4	13	3
6556		LEAR	03	30	0043	S13	W76	03	24.3		B	BXO	30	3	8	3
6556		RAMY	03	30	1250	S08	W71	03	25.2		B	DAO	200	13	10	3
6556		RAMY	03	31	1200	S07	W87	03	25.0		B	DAO	200	4	10	3
6556A	26648	MWIL	03	17	1745	S18	E78	03	23.7	4	(B)					
6555		RAMY	03	17	1200	S23	E84	03	24.0		B	EAO	140	13	11	4
6555		BOUL	03	17	1545	S21	E80	03	23.8		B	ESO	190	5	13	3
6555		HOLL	03	17	1555	S23	E80	03	23.8		B	EAI	360	22	13	3
6555	26650	MWIL	03	17	1745	S25	E82	03	24.1	4	(AP					
6555		CULG	03	18	0030	S22	E79	03	24.1		B	FKO	240	15	28	3
6555		LEAR	03	18	0115	S20	E79	03	24.1		B	FKO	600	15	16	3
6555		BOUL	03	18	1445	S20	E71	03	24.0		B	FKI	900	12	16	1
6555		HOLL	03	18	1556	S24	E73	03	24.3		B	FKC	1890	34	16	4
6555		LEAR	03	19	0012	S22	E68	03	24.2		B	FKI	1210	16	19	3
6555		CULG	03	19	0100	S22	E67	03	24.2		B	FKI	1750	35	20	3
6555		BOUL	03	19	1433	S21	E60	03	24.2		B	FKI	1400	24	18	1
6555		HOLL	03	19	1840	S26	E59	03	24.4		B	FKC	1950	41	22	1
6555		CULG	03	20	0110	S23	E55	03	24.3		B	FKI	2400	71	20	3
6555		LEAR	03	20	0203	S25	E51	03	24.0		B	FKI	2220	57	23	3
6555		SVTO	03	20	1505	S25	E48	03	24.3		B	FKI	2130	63	17	2
6555		HOLL	03	20	1700	S26	E47	03	24.3		BGD	FKC	2100	47	23	4
6555		CULG	03	21	0115	S24	E41	03	24.2		B	FKI	1800	89	20	2
6555		LEAR	03	21	0147	S24	E42	03	24.3		B	FKI	2210	87	18	2
6555		BOUL	03	21	1540	S25	E35	03	24.4		B	FKI	1980	41	20	4
6555		LEAR	03	22	0020	S23	E30	03	24.3		B	FKI	260	0	18	4
6555		CULG	03	22	0055	S24	E31	03	24.4		B	FKI	1200	85	20	3
6555		HOLL	03	22	1600	S21	E25	03	24.6		BGD	FKC	2640	81	20	3
6555		CULG	03	23	0130	S23	E20	03	24.6		BGD	FKI	2110	95	20	3
6555		LEAR	03	23	0132	S25	E18	03	24.4		BGD	FKI	1550	64	21	2
6555		SVTO	03	23	1000	S23	E11	03	24.3		GD	FKI	2230	89	20	3
6555		RAMY	03	23	1300	S24	E12	03	24.5		BGD	FKC	2390	0	25	3
6555		BOUL	03	23	1715	S24	E07	03	24.2		B	FKI	1900	57	20	2
6555		HOLL	03	23	2245	S25	E06	03	24.4		BGD	FKC	2600	81	20	1
6555		CULG	03	24	0222	S24	E04	03	24.4		BGD	FKI	2130	94	26	3
6555		LEAR	03	24	0245	S23	E02	03	24.3		BGD	FKI	2200	84	25	3
6555		SVTO	03	24	0805	S23	W01	03	24.2		BGD	FKC	2620	0	22	4
6555		RAMY	03	24	1420	S25	W02	03	24.4		BGD	FKC	2930	0	23	3
6555	26650	MWIL	03	24	1540	S23	W02	03	24.5	6	D *					
6555		BOUL	03	24	1545	S24	W04	03	24.3		B	FKC	2040	53	21	2
6555		HOLL	03	24	1630	S24	W05	03	24.3		BGD	FKC	2550	0	20	2

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6555		LEAR	03 25 0014	S25 W08	03 24.4		B	FKI	2200	68	21	3
6555		SVTO	03 25 0910	S24 W13	03 24.4		BGD	FKC	1830	47	19	2
6555		RAMY	03 25 1200	S24 W12	03 24.6		BGD	FKC	2990	0	21	4
6555		BOUL	03 25 1515	S24 W14	03 24.5		B	FKC	2190	62	18	1
6555		HOLL	03 25 1620	S23 W13	03 24.7		BGD	FKC	2200	57	18	1
6555		PALE	03 25 1815	S24 W17	03 24.4		BGD	FKC	2840	0	21	4
6555		CULG	03 26 0040	S24 W21	03 24.4		BGD	FKC	2560	0	20	3
6555		LEAR	03 26 0048	S23 W22	03 24.3		BGD	FKI	2540	82	21	2
6555		SVTO	03 26 0732	S24 W26	03 24.3		BGD	FKC	1900	72	21	3
6555		RAMY	03 26 1227	S23 W26	03 24.5		BGD	FKC	2880	0	22	4
6555		BOUL	03 26 1445	S23 W26	03 24.6		B	FKC	1850	42	18	1
6555		PALE	03 26 1715	S25 W30	03 24.4		BGD	FKC	2280	96	20	3
6555		HOLL	03 26 1920	S25 W28	03 24.6		BGD	FKC	2600	32	20	1
6555		SVTO	03 27 0910	S23 W40	03 24.3		BGD	FKC	1950	0	22	3
6555		RAMY	03 27 1221	S23 W40	03 24.4		BGD	FKC	2290	99	21	3
6555		BOUL	03 27 1643	S23 W43	03 24.4		B	FKC	2150	94	21	2
6555		HOLL	03 27 1710	S24 W42	03 24.5		BGD	FKC	2900	57	18	2
6555		PALE	03 27 2020	S22 W47	03 24.2		BGD	FKC	2800	82	23	1
6555		CULG	03 28 0100	S24 W47	03 24.4		BGD	FKI	1800	83	19	3
6555		RAMY	03 28 1336	S24 W52	03 24.5		BGD	FKC	2200	53	25	4
6555		BOUL	03 28 1610	S24 W53	03 24.6		B	FKC	1870	91	19	3
6555		PALE	03 28 2010	S22 W61	03 24.1		BGD	FKC	2190	65	23	2
6555	26650	MWIL	03 28 2145	S23 W56	03 24.6	5	D *					
6555		HOLL	03 28 2315	S21 W59	03 24.4		BGD	FKC	1730	69	22	2
6555		LEAR	03 29 0010	S24 W58	03 24.5		BGD	FKI	1260	51	24	3
6555		CULG	03 29 0120	S24 W60	03 24.4		BGD	FKC	1900	17	17	3
6555		SVTO	03 29 0825	S23 W68	03 24.1		BGD	FKI	1870	47	22	4
6555		RAMY	03 29 1407	S23 W62	03 24.8		BGD	FKC	1970	38	21	3
6555		HOLL	03 29 1422	S22 W65	03 24.6		BGD	FKC	1560	62	24	3
6555	26650	MWIL	03 29 1600	S24 W65	03 24.6	5	(D)					
6555		PALE	03 29 1850	S23 W70	03 24.4		BGD	FKI	1120	51	22	3
6555		LEAR	03 30 0043	S23 W71	03 24.5		BGD	FKI	1130	34	18	3
6555		SVTO	03 30 0655	S23 W75	03 24.5		BGD	FKI	1200	26	19	3
6555		RAMY	03 30 1250	S22 W72	03 25.0		BG	EKI	960	34	12	3
6555	26650	MWIL	03 30 1530	S24 W77	03 24.7	5	B)					
6555		HOLL	03 30 1800	S22 W75	03 25.0		BG	EKC	990	22	11	3
6555		LEAR	03 31 0018	S24 W82	03 24.7		B	FKI	720	18	16	3
6555		CULG	03 31 0025	S23 W82	03 24.7		BGD	EKI	950	16	15	3
6555		RAMY	03 31 1200	S23 W88	03 24.7		BG	DAO	240	5	9	3
6555	26650	MWIL	03 31 1545	S24 W88	03 24.8	4	X					
6559C		RAMY	03 25 1200	N14 W07	03 25.0		B	BXO	10	4	3	4
6559C		PALE	03 25 1815	N13 W10	03 25.0		A	AX		1		4
6559C		RAMY	03 26 1227	N13 W19	03 25.1		A	AX	10	2	1	4
6561		SVTO	03 26 0732	S06 W13	03 25.3		B	BXO	10	4	4	3
6561		RAMY	03 26 1227	S06 W16	03 25.3		B	DAO	30	7	5	4
6561		BOUL	03 26 1445	S05 W17	03 25.3		B	BXO		2	3	1
6561		PALE	03 26 1715	S06 W20	03 25.2		B	BXO	20	4	5	3
6561		HOLL	03 26 1920	S05 W22	03 25.2		A	AX	20	1	1	1
6561		SVTO	03 27 0910	S06 W32	03 25.0		A	AX		1		3
6561		RAMY	03 27 1221	S07 W32	03 25.1		A	HA	10	1	1	3
6561		HOLL	03 27 1710	S08 W36	03 25.0		A	AX	10	1		2
6561		HOLL	03 29 1422	S09 W60	03 25.1		B	BXO	20	2	3	3
6561	26658	MWIL	03 29 1600	S08 W63	03 24.9	4	(B)					
6561		LEAR	03 30 0043	S08 W68	03 24.9		B	CAO	70	3	4	3
6561		SVTO	03 30 0655	S08 W71	03 25.0		B	DAI	160	7	8	3
6561	26658	MWIL	03 30 1530	S07 W74	03 25.1	5	(D)					
6561		HOLL	03 30 1800	S08 W76	03 25.0		B	ESI	250	4	11	3
6561		LEAR	03 31 0018	S08 W77	03 25.2		B	CAO	150	5	6	3
6561		CULG	03 31 0025	S07 W80	03 25.0		B	DAO	170	11	8	3
6561	26658	MWIL	03 31 1545	S07 W88	03 25.1	4	X					
6559		CULG	03 21 0115	N12 E55	03 25.2		B	BXO		2	3	2
6559		SVTO	03 21 0900	N11 E49	03 25.1		A	AX	10	1		3
6559		LEAR	03 22 0020	N13 E39	03 24.9		A	AX	10	1	1	4
6559		CULG	03 22 0055	N12 E42	03 25.2		A	AX		1		3
6559		CULG	03 23 0130	N12 E31	03 25.4		B	BXO		2	2	3
6559		LEAR	03 23 0132	N13 E27	03 25.1		B	BXO	10	2	5	2

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6559		SVTO	03	23	1000	N14 E23	03	25.1		B	BXO	10	2	3	3
6559		RAMY	03	23	1300	N13 E21	03	25.1		B	BXO	20	8	6	3
6559		BOUL	03	23	1715	N14 E15	03	24.8		A	AX		1		2
6559		HOLL	03	23	2245	N12 E16	03	25.1		A	AX	10	1	1	1
6559		CULG	03	24	0222	N13 E15	03	25.2		B	CSO	10	2	3	3
6559		PALE	03	24	0245	N13 E10	03	24.9		A	AX	10	2	1	4
6559		LEAR	03	24	0245	N13 E11	03	24.9		A	AX	10	1	1	3
6559		SVTO	03	24	0805	N14 E12	03	25.2		B	CRO	20	4	8	4
6559		RAMY	03	24	1420	N15 E13	03	25.6		B	CRO	20	4	3	3
6559	26652	MWIL	03	24	1540	N16 E12	03	25.6	4	X					
6559		BOUL	03	24	1545	N16 E12	03	25.6		A	AX		1		2
6559		HOLL	03	24	1630	N14 E13	03	25.7		A	AX	10	2	2	2
6559		LEAR	03	25	0014	N15 E08	03	25.6		B	BXO	10	3	2	3
6559		SVTO	03	25	0910	N15 E02	03	25.5		B	CAO	10	2	3	2
6559		RAMY	03	25	1200	N15 E02	03	25.6		B	CRO	20	7	3	4
6559		HOLL	03	25	1620	N17 W02	03	25.5		A	AX	20	2	2	1
6559		PALE	03	25	1815	N16 W03	03	25.5		A	AX		2	1	4
6559		CULG	03	26	0040	N16 W06	03	25.6		A	AX	10	2	2	3
6559		LEAR	03	26	0048	N15 W07	03	25.5		B	BXO	10	2	3	2
6559		SVTO	03	26	0732	N16 W09	03	25.6		B	BXO	10	7	5	3
6559		RAMY	03	26	1227	N17 W12	03	25.6		B	DRO	20	6	4	4
6559		BOUL	03	26	1445	N14 W14	03	25.5		B	BXO	10	2	2	1
6559		PALE	03	26	1715	N15 W14	03	25.6		B	DSO	30	6	6	3
6559		HOLL	03	26	1920	N17 W18	03	25.4		A	AX	20	2	2	1
6559		SVTO	03	27	0910	N16 W26	03	25.4		B	BXO	10	2	1	3
6559		RAMY	03	27	1221	N15 W26	03	25.5		B	DRO	20	7	5	3
6559		BOUL	03	27	1643	N15 W30	03	25.4		B	DSO	30	3	4	2
6559		HOLL	03	27	1710	N15 W31	03	25.4		B	BXO	30	3	4	2
6559		PALE	03	27	2020	N17 W32	03	25.4		B	DAO	120	8	6	1
6559		CULG	03	28	0100	N17 W34	03	25.4		B	DAO	100	9	5	3
6559		RAMY	03	28	1336	N15 W41	03	25.5		B	DAO	200	13	7	4
6559		BOUL	03	28	1610	N17 W40	03	25.6		B	DSO	170	12	6	3
6559		PALE	03	28	2010	N17 W44	03	25.5		B	DAO	240	9	10	2
6559	26652	MWIL	03	28	2145	N16 W46	03	25.4	5	B					
6559		HOLL	03	28	2315	N17 W45	03	25.5		B	DSI	240	9	7	2
6559		LEAR	03	29	0010	N16 W45	03	25.6		B	DAO	140	9	8	3
6559		CULG	03	29	0120	N16 W47	03	25.5		B	DAO	160	6	7	3
6559		SVTO	03	29	0825	N18 W51	03	25.5		B	DSI	260	8	8	4
6559		RAMY	03	29	1407	N17 W55	03	25.4		B	DAO	190	10	8	3
6559		HOLL	03	29	1422	N17 W57	03	25.3		B	CSO	190	19	22	3
6559	26652	MWIL	03	29	1600	N17 W55	03	25.5	5	(B)					
6559		PALE	03	29	1850	N17 W55	03	25.6		B	DAO	130	9	7	3
6559		LEAR	03	30	0043	N17 W59	03	25.5		B	DSO	180	8	9	3
6559		SVTO	03	30	0655	N18 W64	03	25.4		B	DAO	150	6	9	3
6559	26652	MWIL	03	30	1530	N17 W68	03	25.5	5	(B)					
6559		HOLL	03	30	1800	N17 W69	03	25.5		B	ESO	130	2	11	3
6559		LEAR	03	31	0018	N17 W70	03	25.7		B	DAO	120	3	9	3
6559		CULG	03	31	0025	N17 W74	03	25.4		B	DAO	110	5	10	3
6559		RAMY	03	31	1200	N19 W77	03	25.6		A	AX	10	2	1	3
6559	26652	MWIL	03	31	1545	N17 W81	03	25.5	4	AF)					
6559		PALE	03	31	1815	N19 W79	03	25.7		A	AX	10	2	1	3
6559A		PALE	03	24	0245	S06 E21	03	25.7		A	AX		1		4
6559B		BOUL	03	24	1545	S14 E17	03	25.9		A	AX		1		2
6560		HOLL	03	22	1600	S12 E48	03	26.3		A	AX	10	2	1	3
6560		SVTO	03	24	0805	S10 E23	03	26.1		B	BXO	10	5	5	4
6560		RAMY	03	24	1420	S11 E18	03	25.9		B	DRO	30	16	6	3
6560	26653	MWIL	03	24	1540	S10 E19	03	26.1	4	X					
6560		BOUL	03	24	1545	S08 E19	03	26.1		A	AX		2	2	2
6560		HOLL	03	24	1630	S12 E17	03	26.0		B	BXO	20	10	6	2
6560		LEAR	03	25	0014	S10 E14	03	26.1		B	BXO	10	7	7	3
6560		SVTO	03	25	0910	S11 E08	03	26.0		B	DAO	50	9	7	2
6560		RAMY	03	25	1200	S11 E08	03	26.1		BG	DRO	50	21	7	4
6560		BOUL	03	25	1515	S10 E05	03	26.0		B	BXO	30	10	7	1
6560		HOLL	03	25	1620	S12 E05	03	26.0		B	BXO	70	13	8	1
6560		PALE	03	25	1815	S10 E05	03	26.1		B	DAO	70	21	7	4
6560		CULG	03	26	0040	S10 E01	03	26.1		B	DAO	80	25	8	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
6560		LEAR	03 26 0048	S11 E00	03 26.0		B	DAO	170	18	8	2
6560		SVTO	03 26 0732	S11 W04	03 26.0		B	DAO	120	12	9	3
6560		RAMY	03 26 1227	S10 W05	03 26.1		BG	DAO	130	22	9	4
6560		BOUL	03 26 1445	S10 W06	03 26.2		B	DAI	110	10	4	1
6560		PALE	03 26 1715	S10 W08	03 26.1		B	DAO	140	13	6	3
6560		HOLL	03 26 1920	S09 W08	03 26.2		B	DAC	10	6	6	1
6560		SVTO	03 27 0910	S09 W16	03 26.2		B	CAO	100	14	5	3
6560		RAMY	03 27 1221	S10 W18	03 26.2		BG	DAO	100	14	5	3
6560		BOUL	03 27 1643	S10 W21	03 26.1		B	DAO	110	8	4	2
6560		HOLL	03 27 1710	S10 W20	03 26.2		B	BXI	60	6	4	2
6560		PALE	03 27 2020	S09 W23	03 26.1		B	DAO	90	13	5	1
6560		CULG	03 28 0100	S11 W24	03 26.2		B	DAO	100	10	4	3
6560		RAMY	03 28 1336	S10 W31	03 26.2		B	CRO	40	17	5	4
6560		BOUL	03 28 1610	S10 W32	03 26.3		B	CAO	30	7	4	3
6560		PALE	03 28 2010	S10 W36	03 26.1		B	DSO	540	6	5	2
6560	26653	MWIL	03 28 2145	S11 W36	03 26.2	4	X					
6560		HOLL	03 28 2315	S09 W38	03 26.1		B	CAO	30	7	5	2
6560		LEAR	03 29 0010	S11 W37	03 26.2		B	CAO	10	4	4	3
6560		CULG	03 29 0120	S11 W37	03 26.3		B	CAO	60	3	3	3
6560		SVTO	03 29 0825	S10 W43	03 26.1		B	CRO	10	3	3	4
6560		RAMY	03 29 1407	S11 W45	03 26.2		A	AX	10	2	1	3
6560		HOLL	03 29 1422	S11 W45	03 26.2		B	BXO	30	3	4	3
6560	26653	MWIL	03 29 1600	S12 W47	03 26.1	4	(AP)					
6560		PALE	03 29 1850	S12 W48	03 26.2		A	AX	10	2		3
6560		LEAR	03 30 0043	S12 W52	03 26.1		A	AX	10	2	2	3
6560		SVTO	03 30 0655	S10 W56	03 26.1		A	HR	20	2	1	3
6560		RAMY	03 30 1250	S11 W58	03 26.2		A	AX	20	4	2	3
6560	26653	MWIL	03 30 1530	S12 W60	03 26.1	4	(AP)					
6560		HOLL	03 30 1800	S11 W61	03 26.2		A	AX	10	2	1	3
6560		LEAR	03 31 0018	S12 W64	03 26.2		A	AX	20	2	2	3
6560		CULG	03 31 0025	S12 W66	03 26.0		A	AX		2	1	3
6560		RAMY	03 31 1200	S12 W71	03 26.1		A	AX		1		3
6560		BOUL	03 31 1535	S12 W71	03 26.3		A	AX	10	1	1	4
6560	26653	MWIL	03 31 1545	S12 W74	03 26.1	4	(AP)					
6560		PALE	03 31 1815	S11 W74	03 26.2		A	AX	10	1	1	3
6560		CULG	04 01 0050	S12 W80	03 26.1		A	AX		1		3
6557		LEAR	03 20 0203	S21 E80	03 26.2		A	HR	20	1	1	3
6557		SVTO	03 20 1505	S22 E77	03 26.5		A	HA	50	1	1	2
6557		HOLL	03 20 1700	S21 E75	03 26.4		B	BXI	30	2	2	4
6557		CULG	03 21 0115	S21 E70	03 26.4		A	HA	60	3	1	2
6557		LEAR	03 21 0147	S21 E70	03 26.4		A	AX	50	2	2	2
6557		BOUL	03 21 1540	S21 E63	03 26.5		A	AX	10	1	1	4
6557		LEAR	03 22 0020	S21 E60	03 26.6		B	CSO	40	2	3	4
6557		CULG	03 22 0055	S21 E60	03 26.6		A	HS	50	2	2	3
6557		HOLL	03 22 1600	S21 E51	03 26.6		A	AX	20	2	2	3
6557		CULG	03 23 0130	S21 E47	03 26.7		A	HS	30	2	2	3
6557		LEAR	03 23 0132	S20 E45	03 26.5		B	BXO	10	2	2	2
6557		SVTO	03 23 1000	S20 E41	03 26.5		B	CSO	20	5	5	3
6557		RAMY	03 23 1300	S20 E40	03 26.6		B	CAO	50	12	8	3
6557		BOUL	03 23 1715	S19 E36	03 26.5		A	HS	20	1	1	2
6557		HOLL	03 23 2245	S21 E36	03 26.7		A	AX	10	1	1	1
6557		CULG	03 24 0222	S21 E33	03 26.6		B	CSO		3	3	3
6557		LEAR	03 24 0245	S19 E32	03 26.5		A	AX	10	1	1	3
6557		PALE	03 24 0245	S21 E32	03 26.6		B	CSO	30	6	3	4
6557		SVTO	03 24 0805	S20 E30	03 26.6		B	CRO	30	5	4	4
6557		RAMY	03 24 1420	S21 E26	03 26.6		A	HA	20	5	2	3
6557	26654	MWIL	03 24 1540	S20 E25	03 26.6	4	X					
6557		BOUL	03 24 1545	S19 E26	03 26.6		A	HS	10	1	1	2
6557		HOLL	03 24 1630	S22 E24	03 26.5		B	CRO	20	3	2	2
6557		LEAR	03 25 0014	S21 E21	03 26.6		B	BXO	10	2	3	3
6557		SVTO	03 25 0910	S21 E15	03 26.5		B	CSO	10	2	3	2
6557		RAMY	03 25 1200	S20 E15	03 26.6		B	CRO	20	15	3	4
6557		BOUL	03 25 1515	S20 E11	03 26.5		A	AX		1		1
6557		HOLL	03 25 1620	S21 E11	03 26.5		A	AX	10	1	1	1
6557		PALE	03 25 1815	S21 E11	03 26.6		B	CSO	20	8	4	4
6557		CULG	03 26 0040	S20 E10	03 26.8		A	AX	10	7	3	3
6557		LEAR	03 26 0048	S22 E08	03 26.6		B	BXO	30	4	3	2
6557		SVTO	03 26 0732	S21 E04	03 26.6		B	CRO	20	10	5	3

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6557		RAMY	03 26	1227	S21 E02	03 26.7		B	CRO	10	5	3	4
6557		BOUL	03 26	1445	S19 W01	03 26.5		A	AX		1		1
6557		PALE	03 26	1715	S20 W03	03 26.5		A	AX	10	1	1	3
6557		RAMY	03 27	1221	S21 W12	03 26.6		B	BXO	10	5	4	3
6577A		RAMY	03 27	1221	N14 E03	03 27.7		A	AX	10	2	1	3
6558		CULG	03 21	0115	S13 E87	03 27.6		A	HS	40	1	1	2
6558		SVTO	03 21	0900	S14 E80	03 27.4		A	HS	30	1	2	3
6558		BOUL	03 21	1540	S14 E79	03 27.6		B	CAO	90	2	5	4
6558		LEAR	03 22	0020	S15 E75	03 27.7		B	DSO	270	8	10	4
6558		CULG	03 22	0055	S13 E73	03 27.5		B	DSO	120	3	8	3
6558		HOLL	03 22	1600	S13 E70	03 27.9		B	EHI	330	26	15	3
6558		CULG	03 23	0130	S14 E63	03 27.8		B	DSI	200	12	13	3
6558		LEAR	03 23	0132	S14 E63	03 27.8		B	FAO	240	24	18	2
6558		SVTO	03 23	1000	S14 E62	03 28.1		BG	FSI	270	20	16	3
6558		RAMY	03 23	1300	S14 E59	03 28.0		B	FAO	430	47	18	3
6558		BOUL	03 23	1715	S14 E54	03 27.8		B	FAO	280	14	16	2
6558		HOLL	03 23	2245	S16 E55	03 28.1		B	EAO	260	22	15	1
6558		CULG	03 24	0222	S14 E52	03 28.0		B	EAO	270	14	15	3
6558		LEAR	03 24	0245	S13 E50	03 27.9		B	EAO	270	21	15	3
6558		PALE	03 24	0245	S15 E51	03 28.0		B	FAI	360	27	16	4
6558		SVTO	03 24	0805	S14 E50	03 28.1		B	FAI	440	29	16	4
6558		RAMY	03 24	1420	S14 E43	03 27.8		B	FAO	410	31	16	3
6558	26655	MWIL	03 24	1540	S14 E44	03 28.0	5	X					
6558		BOUL	03 24	1545	S14 E43	03 27.9		B	EAO	300	17	15	2
6558		HOLL	03 24	1630	S16 E42	03 27.9		BG	FAI	310	33	18	2
6558		LEAR	03 25	0014	S15 E40	03 28.0		B	FKO	230	26	17	3
6558		SVTO	03 25	0910	S14 E33	03 27.9		B	EAI	240	14	14	2
6558		RAMY	03 25	1200	S13 E32	03 27.9		BG	EAO	350	51	13	4
6558		BOUL	03 25	1515	S13 E30	03 27.9		B	EAO	180	18	13	1
6558		HOLL	03 25	1620	S15 E30	03 27.9		BG	EAI	230	25	11	1
6558		PALE	03 25	1815	S13 E29	03 27.9		BG	EAI	310	43	13	4
6558		CULG	03 26	0040	S14 E26	03 28.0		BG	EAO	220	32	13	3
6558		LEAR	03 26	0048	S15 E25	03 27.9		B	EAO	240	24	14	2
6558		SVTO	03 26	0732	S14 E22	03 28.0		BG	EAI	180	33	15	3
6558		RAMY	03 26	1227	S15 E20	03 28.0		BG	EAO	170	25	13	4
6558		BOUL	03 26	1445	S14 E17	03 27.9		B	EAI	130	13	13	1
6558		PALE	03 26	1715	S14 E17	03 28.0		BG	EAI	180	21	14	3
6558		HOLL	03 26	1920	S17 E15	03 27.9		BG	EAI	200	6	10	1
6558		SVTO	03 27	0910	S15 E11	03 28.2		BG	FAO	130	16	17	3
6558		RAMY	03 27	1221	S14 E07	03 28.0		B	EAO	150	23	13	3
6558		BOUL	03 27	1643	S14 E03	03 27.9		B	EAO	120	9	12	2
6558		HOLL	03 27	1710	S13 E04	03 28.0		BG	EAO	130	8	14	2
6558		PALE	03 27	2020	S15 W01	03 27.8		B	ESO	170	10	14	1
6558		CULG	03 28	0100	S13 E01	03 28.1		B	EAO	100	9	15	3
6558		RAMY	03 28	1336	S16 W07	03 28.0		B	EAO	90	13	14	4
6558		BOUL	03 28	1610	S15 W08	03 28.1		B	EAO	90	8	12	3
6558		PALE	03 28	2010	S13 W13	03 27.8		B	EAO	90	10	14	2
6558	26655	MWIL	03 28	2145	S15 W13	03 27.9	5	BP					
6558		HOLL	03 28	2315	S15 W16	03 27.7		B	DAO	90	9	10	2
6558		LEAR	03 29	0010	S15 W15	03 27.9		B	DAO	50	7	14	3
6558		CULG	03 29	0120	S14 W13	03 28.1		B	EAO	90	11	14	3
6558		SVTO	03 29	0825	S15 W19	03 27.9				80	8	12	4
6558		RAMY	03 29	1407	S14 W25	03 27.7		B	DAO	70	4	9	3
6558		HOLL	03 29	1422	S16 W24	03 27.8		B	CSO	60	5	8	3
6558	26655	MWIL	03 29	1600	S15 W24	03 27.8	5	(BP)					
6558		PALE	03 29	1850	S15 W24	03 28.0		B	EAO	60	8	14	3
6558		LEAR	03 30	0043	S15 W29	03 27.8		B	DSO	50	6	10	3
6558		SVTO	03 30	0655	S14 W34	03 27.7		B	DAO	40	3	8	3
6558		RAMY	03 30	1250	S14 W38	03 27.7		B	DAO	50	5	9	3
6558	26655	MWIL	03 30	1530	S15 W37	03 27.8	5	(BP)					
6558		HOLL	03 30	1800	S15 W4i	03 27.6		B	DSO	30	4	8	3
6558		LEAR	03 31	0018	S16 W43	03 27.7		B	CSO	30	3	8	3
6558		CULG	03 31	0025	S15 W44	03 27.7		B	CRO	10	3	10	3
6558		RAMY	03 31	1200	S15 W50	03 27.7		B	DAO	50	3	10	3
6558		BOUL	03 31	1535	S15 W51	03 27.8		B	DSO	20	2	7	4
6558	26655	MWIL	03 31	1545	S15 W51	03 27.8	5	(BP)					
6558		PALE	03 31	1815	S14 W54	03 27.7		B	DSO	30	2	8	3

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6558		LEAR	04 01	0026	S14 W52	03 28.2		A	HS	30	1	1	3
6558		CULG	04 01	0050	S15 W57	03 27.8		B	BXO	10	4	9	3
	26665	MWIL	04 02	1530	N04 W60	03 29.3	4	(AP)					
6558A		RAMY	04 01	1140	N04 W44	03 29.3		A	AX		1	1	3
6558A		HOLL	04 01	1630	N03 W46	03 29.3		A	AX		1		4
6558A		CULG	04 02	0105	N08 W52	03 29.2		A	AX		1		2
6558A		HOLL	04 02	1640	N03 W58	03 30.2		A	AX		1		4
6558E	26663	MWIL	03 31	1545	N20 W14	03 30.6	4	(AP)					
6558B		RAMY	03 31	1200	N19 W11	03 30.7		A	AX		1		3
6558C		SVTO	03 30	0655	S15 E06	03 30.7		A	AX	10	2	2	3
6558D	26660	MWIL	03 30	1530	S16 E03	03 30.9	3	(AF)					
6564		PALE	03 28	2010	N20 E37	03 31.7		A	AX	10	1	1	2
6564		HOLL	03 28	2315	N20 E35	03 31.6		A	AX		1		2
6564		LEAR	03 29	0010	N20 E34	03 31.6		A	AX	10	1	1	3
6564		CULG	03 29	0120	N19 E36	03 31.8		A	AX		1		3
6564		RAMY	03 29	1407	N21 E28	03 31.7		A	AX	10	2	3	3
6564		HOLL	03 29	1422	N21 E28	03 31.7		B	BXO	30	2	3	3
6564	26659	MWIL	03 29	1600	N21 E26	03 31.7	4	(B)					
6564		PALE	03 29	1850	N21 E24	03 31.6		A	AX	10	1		3
6564		LEAR	03 30	0043	N21 E21	03 31.6		A	AX	10	1	1	3
6564	26659	MWIL	03 30	1530	N21 E12	03 31.6	4	(AP)					
6564		HOLL	03 30	1800	N20 E11	03 31.6		B	BXO	10	3	3	3
6564		LEAR	03 31	0018	N19 E08	03 31.6		B	BXO	20	2	4	3
6564		CULG	03 31	0025	N21 E08	03 31.6		B	BXO		2	3	3
6564		RAMY	03 31	1200	N20 E02	03 31.6		B	BXO	10	2	3	3
6564		BOUL	03 31	1535	N20 E01	03 31.7		A	AX		1		4
6564	26659	MWIL	03 31	1545	N21 W02	03 31.5	4	(AP)					
6564		PALE	03 31	1815	N21 W02	03 31.6		B	BXO	10	2	4	3
6564		CULG	04 01	0050	N21 W05	03 31.6		B	BXO		2	4	3

Stations reporting:

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

MARCH 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
01	0239	0248	0314	1-	1			1			0255E	C3.0	
01	0438	0501	0710	3	5	1		1		1	0436	M2.0	6514
01	1138	1200	1228	1	3	1			1	1	No flare		
01	1215	1221	1314	2+	1					1	No flare		
01	1436	1440	1445	1-	5	1	1		1	7	1434	C3.7	
01	1518	1525	1529	0	5	1			1	9	1519	C3.3	
01	1741	1744	1806	1	3					8	1743	C4.6	6509
01	1944	1946	1958	1-	1					1	1946	C1.8	6508
01	2042	2045	2055	1-	3					5	2041	C2.4	
01	2053	2100	2112	1-	5			1		2	2056	C5.0	6508
01	2314	2319	2325D	1-	5			1		1	2319E		6509
01	2327E	2341	2447	2-	5			1		2	2321	C4.0	6509
02	0127	0131	0239	1	5	1		1		1	0127	C7.5	6509
02	0454	0503	0512D	1-	1			1			0453	C2.7	6508
02	0512E	0522	0649	2	5	1		1		1	0513E	C8.8	
02	0702	0714	0814	1+	5			1	1	2	0703	C7.1	6509
02	0837	0857	0922	1-	1			1			*		
02	1348	1356	1410	1	5	1	3		1	10	1346	M1.1	
02	1405	1449	1615	3	3					4	1402	M1.8	
02	1553	1558	1623	2-	5					5	1554		6509
02	1630	1632	1650	1	1					1	1627		6514
02	1815	1819	1840	1	5					9	1813	C7.7	
02	2119	2125	2135	1-	5			1		8	2118	C8.1	
02	2210	2219	2245	1-	5			1		3	2209	C7.6	
03	0135	0159	0209D	1-	1			1			No flare		
03	0210E	0300	0508	2	5	1	1	1			0211	M1.1	
03	0607	0630	0751	1-	1			1			0625E	C5.0	
03	1229	1231	1304D	2	1					1	No flare		
03	1310	1323	1403	1-	5	4	4	1	1	12	1318	M2.9	6508
03	1408	1413	1425	1-	3					3	1409		6509
03	1538	1548	1619	2	3					3	1546	C5.0	6530
03	1636	1639	1659	1	3					2	No flare		
03	1719	1727	1802	2-	5					11	1720	C5.7	
03	1837	1841	1914	2-	3					2	1842	M1.1	
03	1844	1853	2009	2	3					10	1842	M1.1	
03	2114	2122	2140	1-	5			1		1	No flare		
03	2331	2346	2359U	1+	1					1	No flare		
04	0019	0042	0135	2	5	1		1		1	No flare		
04	0135E	0142	0312	2-	3	1		1			0136	C9.3	
04	0421	0444	0518D	1	1			1			No flare		
04	0518E	0535	0758	3	5	1		1		3	0518	M2.5	
04	0908	0916	0942	1-	5	1		1	1	1	No flare		
04	1032	1043	1133D	1	5	3	4	1	1	5	1020	C8.2	
04	1133E	1142	1236	1-	5	3	4	1	1	4	1132	M1.4	
04	1344	1352	1352D	1-	5		2		1	2	No flare		
04	1359	1406	1454	1	5	4	4	1	1	9	1356	X7.1	
04	1549	1558	1620	1-	5	1			1	8	1556E	M2.7	
04	1745	1750	1834	2-	5					10	1743	M1.3	6529
04	1914	1929	2031	2+	3					8	1914	M2.0	
04	2007	2017	2100	2	3					4	No flare		
04	2107	2114	2127D	1	1					1	No flare		
04	2127	2131	2144	1-	1					1	2134		
04	2156	2204	2218	1-	5			1		2	2151		
04	2241	2257	2314D	1-	5			1		1	No flare		
04	2323	2345	2400D	1+	1			1			No flare		
05	0000E	0013	0035D	3	5	2		1		1	2359	M6.7	
05	0035	0042	0116D	2+	3	2		1			No flare		
05	0116E	0137	0159D	1+	3	1		1			0116		6537
05	0159E	0205	0217D	1-	1			1			No flare		
05	0217E	0228	0257D	2+	5	2		1			0219	M1.5	
05	0256E	0314	0438D	3	5	2		1			0256	X1.5	
05	0438E	0444	0455D	1-	1			1			No flare		
05	0455E	0505	0610D	3	5	2		1			0458	M9.3	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 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
05	0607	0612	0612D	1-	1					1	0615	M1.4	
05	0610E	0632	0743D	3-	5	2	1	1	1	1	0615	M1.4	
05	0807E	0812	0831D	2	5	1		1	1	4	0812	C8.6	
05	0831E	0839	0908D	2	5	1	2	1	1	4	0831	C8.9	
05	0908E	0915	1136	3	5	3	4	1	1	6	0910	X2.0	
05	0912	1000U	1026	3+	1	1					0910	X2.0	
05	1055	1057	1113	1-	1					1	No flare		
05	1139	1141	1153	1-	1					1	No flare		
05	1410	1413	1425	1-	1					1	1415		6533
05	1532	1538	1550	1-	5	1	1		1	8	1520	C7.2	
05	1715	1724	1810	1	5	1		1	1	7	1716	X1.4	6537
05	1915	1916	1932D	1-	1					1	No flare		
05	1938	1944	1951	1-	5			1		2	No flare		
05	1952	1956	2030	2	3					4	No flare		
05	2030	2040	2106	1-	5			1		6	No flare		
05	2135	2143	2206	1-	5	1		1		5	2135	C5.4	6529
05	2254	2307	2325D	1-	5			1		1	No flare		
05	2325E	2331	2516	3	5	1		1		1	2326	M6.2	6538
06	0204	0218	0251D	2	5	1		1		1	0205	C7.1	6538
06	0252E	0302	0337D	1+	3	1		1			0253	C9.9	6536
06	0337E	0339	0418	1-	1			1			0337E	C7.3	
06	0525	0536	0713	2+	5	1		1		3	0520	C8.7	6538
06	0607	0613	0705	1	1					1	No flare		
06	0635	0640	0646	1+	1	1					No flare		
06	0709	0710	0727	1-	1	1					No flare		
06	0741	0752	0909	3	5	1	3	1	1	4	0740	M1.3	6538
06	1016	1021	1037	1	1		1				No flare		
06	1038	1057	1214	2-	5	2	3	1	1	2	1036	M1.0	
06	1404	1406	1415	1-	5				1	3	1403	C2.7	
06	1450	1454	1520	1+	5					2	No flare		
06	1457	1506	1525	1+	5	1	3		1	11	1502	C7.3	6536
06	1744	1750	1816	1+	3					9	1742	C4.6	
06	1833	1838	1849	1-	5			1		9	1826	C9.2	
06	2030	2039	2101	2-	1					1	2033	C2.8	6538
06	2245	2250	2301D	1-	1					1	2246E	M1.3	
06	2304	2310	2318	1-	3	1				1	2246E	M1.3	
07	0142	0158	0214D	1-	1			1			0142	C3.6	
07	0214E	0226	0312	1-	1			1			0214	C3.7	6538
07	0347	0352	0409	1-	1			1			0339	C2.4	
07	0614	0630	0700D	2-	5	1		1		2	0611	X5.5	6538
07	0700E	0711	0744D	2-	5	1	1	1	1	4	0700	C7.2	
07	0744E	0754	0918	3	5	3	3	1	1	5	0746		
07	0950	1002	1030	2	1					1	0949		6538
07	1034	1038	1048	1-	5					3	1034	M3.3	
07	1252	1300	1330	1	5	2	3		1	7	1248	M3.5	
07	1338	1342	1400	1-	5	2	3		1	10	1336	M4.5	6538
07	1404	1408	1430	1-	5	2	3		1	11	1403	M5.0	6538
07	1637	1644	1707	1+	5					8	1638		6538
07	1718	1722	1730	1-	5	1			1	9	1716	M2.9	6537
07	1846	1848	1914	1	3					3	1839		6538
07	1926	1929	1953	1	1					1	1925		6538
07	2015	2018	2035	1-	3					6	2011	C6.2	6538
07	2039	2042	2054	1	3	1				8	2039	M1.5	6538
07	2103	2106	2215	2+	1						No flare		
07	2220	2226	2248	1-	5	1		1		5	2208	C7.5	6538
07	2316	2319	2456	3	5	2		1		6	2314E	X2.5	6538
08	0142	0146	0207	1-	1			1			0141	M1.0	6538
08	0227	0234	0323	2-	5	1		1		1	0227		6538
08	0338	0349	0438	1-	3	1		1			0308	C3.6	6538
08	0814	0819	0837	1-	5			1	1	2	0727		6537
08	0909	0920	0956	1-	5	2	1	1	1	3	0911	C5.3	
08	1057	1103	1125	1-	5	1		1	1	1	1048	C4.7	
08	1144	1153	1247	1+	5	3	3	1	1	5	1133	M1.5	6538
08	1330E	1335	1344	1-	1					1	1330		6538

* = no flare patrol.

MARCH 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	1514	1524	1550	2	5		3		1	13	1509	C5.5	6538
08	1618	1625	1645	3	5		3		1	12	1612	M1.2	6538
08	1818	1828	1843	1	3					2	No flare		
08	1920	1930	1949	1-	5			1		9	1922E	C7.5	6538
08	2024	2032	2213	3	5	2		1		10	2020	X1.7	
08	2138	2146	2155	1	1	1					No flare		
09	0549	0657	0843D	3-	5	1		1		1	0609	M1.4	6537
09	0843E	0848	0930	1	5			1	1	1	*		
09	1025	1032	1055	1-	1					1	*		
09	1113	1123	1144	1-	3	1			1	1	No flare		
09	1243	1248	1319	1-	5	2	4	1	1	11	1243	M1.3	6538
09	1315	1316	1414D	2+	1					1	No flare		
09	1416	1423	1500	1	5	1	4		1	13	1411	M1.4	6538
09	1639	1641	1656	1-	3					3	No flare		
09	1905	1914	1933	1	3					2	1903	C4.0	6536
09	2137	2147	2242	2	5			1		9	2137E	M1.4	6538
10	0139	0147	0225D	1-	3	1		1			0124	C3.4	6536
10	0225E	0232	0303	1-	1			1			0209	C3.6	6538
10	0522	0530	0544	1-	1			1			0520	C2.1	
10	0601	0609	0631	1-	1			1			0558E	C2.4	
10	0634	0651	0707D	2	5	1	1	1	1	1	0651	C7.4	
10	0707	0712	0832	1+	5			1	1	2	0708	C4.8	
10	1102	1108	1140	1-	5	2		1	1	3	1101	C5.0	
10	1243	1305	1340	1	5		2		1	1	1303	C3.0	6538
10	1508	1517	1540	1+	5		3		1	14	1509	C5.8	6538
10	1755	1800	1812	1-	3					8	1759		6536
10	1811	1816	1910	2	3					9	1807E	C9.9	6538
10	2008	2011	2025	1-	1						2006		6538
10	2237	2245	2305	1-	5			1		4	2240	C5.1	6538
11	0033	0040	0100	1-	1			1			0035	C3.0	6538
11	0316	0324	0346	1-	1			1			0319	C2.6	
11	0732E	0737	0857	3	5	3	3	1	1	4	0734	M3.6	6538
11	0845	0849	0900	1-	3				1	1	0842	C5.3	6537
11	0910	0913	0925	1-	3	1			1	2	0904	C5.5	6538
11	1038	1043	1054	1-	5	1	1	1	1	2	1039	C4.2	6545
11	1718	1720	1732	1-	5					5	1715	C3.2	
11	1735	1741	1807	1+	3					4	1735	C2.8	
11	1859	1901	1917	1-	3					6	1859E	C3.9	6538
11	1954	1958	2015	1	1					1	1954E	C2.5	6545
11	2213	2219	2251	1-	5	1		1		6	2215	C8.0	6537
12	0052	0055	0110	1-	1			1			0049	C4.2	
12	0130	0134	0156	1-	1			1			0132	C5.6	6538
12	0253	0258	0321	1-	1			1			0254	C4.5	
12	0420	0428	0439D	1	5			1		1	0419	C7.6	
12	0439E	0449	0516D	1	1			1			0437	C6.6	
12	0516E	0522	0533	1-	1			1			*		
12	0754	0759	0812	1-	5			1		1	*		
12	1148	1202U	1243	1	1		1				1148		6545
12	1242	1250	1406	2	5	4	5	1	1	12	1228	X1.7	6545
12	1827	1835	1902	1+	3					4	1818	C3.2	6538
12	2034	2038	2100	1+	1					1	2037	C2.3	6545
12	2224	2229	2254	1-	5			1		2	2227	C3.7	6545
13	0002	0012	0029D	1-	1			1			No flare		
13	0029E	0032	0039D	1-	1			1			0028	C2.2	
13	0039E	0103	0215	1	5	1		1		1	0048	C5.7	6538
13	0145	0155	0211	1-	1			1			No flare		
13	0232	0236	0245D	1-	1			1			*		
13	0245E	0306	0451	3	5	2		1			0253E	M9.7	
13	0730	0740	0801	3	5	4	2	1	1	6	0730E	M1.4	

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 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	0801E	0809	0930	3	5	4	4	1	1	5	0734E	X1.3	6545
13	0855	0900	0920	1-	3	1			1	2	0853	C4.1	
13	1211	1229	1300	1+	3	1	3		1	1	1219	C5.9	6545
13	1410	1414	1425	1-	5		2		1	4	1400	C3.0	
13	1511	1518	1518D	1-	5	1			1	2	*		
13	1524	1527	1535	1-	5				1	3	1528E	X3.9	6545
13	1542	1550	1626	1+	5	4	4	1	1	15	1528E	X3.9	6545
13	1710	1718	1752	2-	3					4	1717	C3.4	
13	1820	1823	1844	1	3					9	1820E	C3.7	6545
13	1857	1906	1937	2-	3					8	1858	C4.2	
13	2041	2047	2100	1-	5			1		7	2042	C3.4	6545
13	2107	2110	2128	1	1					1	2107		6545
13	2331	2335	2343	1-	1			1			No flare		
14	0052	0055	0107	1-	1			1			No flare		
14	0203	0205	0218	1-	1			1			0201	C2.6	6545
14	0425	0429	0438D	1-	1			1			0425		6545
14	0519	0523	0542	1-	1			1			0520	C3.1	6545
14	0607	0610	0620	1-	1					1	No flare		
14	0630	0634	0640	1-	1					1	No flare		
14	0710	0712	0715	1-	3				1	2	0707	C3.4	
14	0735	0738	0750	1-	3					2	0736	C3.3	6545
14	0827	0835	0840	1-	3				1	1	0827		6545
14	0908	0911	0920	1-	3	1			1	2	No flare		
14	0946	0954	1002	1-	3				1	1	No flare		
14	1021	1025	1025D	1-	3	1			1	3	1021	C4.7	6545
14	1027	1032	1040	1-	1		1		1		1021	C4.7	6545
14	1120	1125	1135	1-	3	1	2		1	2	1119	C3.9	
14	1130	1142	1152	0	3	1			1	1	1119	C3.9	
14	1238	1243	1250	1-	3				1	1	No flare		
14	1300	1302	1310	1-	3	1			1		No flare		
14	1329	1338	1400	1-	5	1	4		1	12	1328	C5.2	6545
14	1408	1413	1425	1-	5	1	3		1	9	1403	C4.0	6545
14	1429	1430	1437	1-	1					1	No flare		
14	1451	1452	1507	1	1		1				1454	C6.4	6545
14	1505	1515	1530	1+	5	1	4		1	14	1454	C6.4	6545
14	1540	1544	1601	1	5					2	No flare		
14	1610	1612	1621	1-	5					3	No flare		
14	1700	1704	1718	1-	3					5	No flare		
14	1735	1742	1806	1-	5			1		10	1736	M2.1	6545
14	1813	1818	1846	2	5	2		1		7	1812	X1.8	6545
14	2104	2111	2126	1-	5			1		6	2110	C3.4	6545
14	2140	2146	2234	2-	5	1		1		8	2142	C9.7	6545
14	2242	2248	2257	1-	1			1			2239		6545
14	2303E	2307	2324	1-	5			1		1	2302	C3.3	
14	2354	2359	2412	1-	1					1	No flare		
15	0016	0020	0028	1-	5			1		1	0013	C2.9	6545
15	0032	0035	0041	1-	1			1			0032E		6538
15	0103	0110	0202	1+	5	1		1		1	0056	C7.7	6544
15	0217	0234	0247D	1-	5			1		1	0212	M1.6	6545
15	0247E	0305	0328D	1	1			1			0257		
15	0328E	0332	0403D	2	5	2		1			0327E	M1.0	
15	0403E	0410	0448D	2+	5	1		1		1	No flare		
15	0448E	0451	0529	1-	1			1			0445		6538
15	0530	0539	0600	1-	1			1			0531	C5.6	6545
15	0606	0612	0624D	1-	5			1		2	0559E		6545
15	0624E	0634	0655D	1-	5			1		1	0622	C5.5	6548
15	0655E	0703	0723	1-	5			1		1	0642		6538
15	0739	0746	0842	2+	5	1	3	1	1	5	0734	M1.0	6545
15	0808	0811	0815	1-	3	1			1	2	0806	C3.7	
15	0952	0956	1016	1-	5	1		1	1	2	0921	C4.0	6545
15	1215	1218	1240D	1	1					1	1212		6538
15	1240	1247	1300	1-	5	2	1		1	9	1240	C5.7	
15	1346	1350	1404	1-	1					1	1346	C2.1	
15	1531	1536	1545	1-	5				1	9	1533	C3.2	6538
15	1534	1602	1606	1	1	1					1533	C3.2	6538

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

MARCH 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
15	1628	1632	1635	1-	5	1	3		1	8	1626	C3.8	6545
15	1737	1745	1758	1	3					2	No flare		
15	1804	1807	1837	1+	3					10	1800	C5.8	6545
15	1844	1847	1900	1-	3					4	1842		6545
15	1902	1913	1947	2	3					2	1856		6538
15	2037	2043	2055	1-	5			1		8	2036	C3.4	6545
15	2116	2118	2130	1-	1					1	2105E		6538
15	2205	2211	2219	1	1			1			No flare		
15	2226	2235	2347	2+	5	3		1		6	2233E	M2.1	6545
16	0007	0014	0034	1-	5			1		1	0007	C3.6	6545
16	0046E	0053	0257	3	5	3		1		3	0047	X1.8	6545
16	0305	0322	0356	1-	1			1			No flare		
16	0409	0410	0428	1-	1					1	0355		
16	0423	0436	0554D	1+	5	1		1		1	0421	C6.8	6545
16	0553	0600	0633	1-	5			1		1	No flare		
16	0944E	0952	1010	1-	5	1	2	1	1		No flare		
16	1049	1057	1239D	2	5	4	4	1	1	6	1052E	M4.8	6545
16	1239E	1249	1310	1-	5	2	4	1	1	11	1241	C9.2	6545
16	1457	1459	1518	1	1					1	No flare		
16	1720	1725	1738	1-	5					7	1720	C3.5	6538
16	1748	1750	1803	1-	3					8	1751	C4.8	6538
16	1803	1811	1832	1-	5			1		8	1801	M1.1	6545
16	1900	1905	1915	1-	1					1	1900E		6545
16	1947	1954	2004	1-	3					3	1952		
16	1956	2002	2012	1-	3					4	1952		
16	2006	2017	2019D	1-	5			1		4	2006	C8.0	6538
16	2019E	2026	2047D	1	5			1		8	2021	C7.9	6538
16	2047E	2058	2135D	2+	5	1		1		8	2046	M1.9	6538
16	2135E	2147	2151D	2-	5	1		1		5	2144	M6.0	6545
16	2152E	2202	2314	3	5	2		1		6	2144	M6.0	6545
17	0017	0021	0026D	1-	5			1		1	0016	C3.2	6545
17	0043E	0052	0119D	1-	1			1			No flare		
17	0117	0127	0140D	1-	1			1			No flare		
17	0129E	0150	0203D	2-	5	1		1		1	0142	M1.1	6538
17	0200E	0225	0305D	2+	5	1		1		1	0200	C8.5	
17	0304E	0308	0409D	1	1			1			0301E	C7.3	
17	0409E	0414	0432	1-	1			1			0406	C4.4	6545
17	0452	0510	0523D	3	5	2		1		5	0453	M1.8	
17	0523E	0537	0706D	2+	5	1		1		2	0538	M1.4	6538
17	0543	0555	0620	1+	1					1	0538	M1.4	6538
17	0706E	0722	0814	1-	5		2	1	1	2	No flare		
17	0820	0827	0855	1-	5	1		1	1	3	0824	C4.5	6546
17	0926	0936	1013D	2+	5	4	3	1	1	6	0926	M2.1	
17	1013E	1019	1048	1-	5	1	3	1	1	5	1013	C6.3	
17	1108	1113	1130	1-	5	1	3	1	1	2	1105	C4.8	
17	1244	1247	1255	1-	3	1	1		1		No flare		
17	1330	1340U	1342	0	5	1	1		1	4	1331E		
17	1412	1418	1430	1-	5				1	3	1411		6545
17	1434	1445	1515	3	5	4	3		1	14	1435	M2.3	
17	1547	1554	1600	1-	5				1	9	1600	C4.7	6545
17	1646	1653	1720D	3	1					1	No flare		
17	1720	1720	1745D	1	1					1	No flare		
17	1746	1755	1804	2+	5	1				12	1740	M2.4	6545
17	1856	1905	1928	2-	3					10	1854		6555
17	1956	1956	2004	1-	1					1	1956		6538
17	2035	2041	2108	1+	3					8	2033	C6.5	6555
17	2057	2101	2119D	1	1					1	2054	X1.0	6545
17	2119	2131	2248	3	5	3		1		9	2054	X1.0	6545
17	2153	2153	2201	1-	1					1	2150		6555
17	2245	2253	2310	1-	3					2	2230		6555
17	2307	2315	2327D	1	1					1	2304		6550
17	2316	2334	2334D	1-	5	1		1		2	2322	C8.6	6555

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

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Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type SWF	SEA	SPA	LF-SPA	SES	Flare (UT)	X-ray Class	NOAA Region
18	0130	0136	0146	1-	1					1	0133		6555
18	0200	0212	0242D	1-	3	1		1			0151	C5.6	6555
18	0242E	0246	0400	1-	3	1		1			0218		6551
18	0430	0436	0452	1-	1			1			0419		6555
18	0501	0521	0553	1-	1			1			0443		6555
18	0605	0617	0704	1-	1			1			0550		6555
18	0720	0734	0757	2	3		1			1	0722		6555
18	0813	0819	0837	1-	1	1		1	1	2	0752		6545
18	0908	0910	0958	1+	3					2	0849		6555
18	0917	0924	0939D	1-	1			1			No flare		
18	0939E	0948	1027D	1-	5	1	1	1	1	3	0936	C8.0	6545
18	1034E	1038	1213	1	5	1	2	1	1	5	1026	C9.6	
18	1156	1203	1225	1-	3	1	2		1	1	*		
18	1256	1301	1316	1-	5	3	4	1	1	8	1245	M1.6	
18	1323	1326	1340	1-	3					2	1320		6545
18	1351	1355	1415	1-	1				1		*		
18	1433	1439	1455	1-	5	1	3		1	5	1427		6555
18	1509	1513	1522	1-	3					2	1506		6555
18	1620	1634	1640	1	1					1	1620		6555
18	1652	1656	1712	1	5	1				2	1652		6555
18	1702	1710	1715	1-	5				1	6	1703	M1.0	
18	1730	1738	1809	1+	5	2	1	1	1	8	1713	M5.3	6545
18	1915	1920	1943	1	3					3	1915		6555
18	1959	2003	2032	2-	3					4	1952		6555
18	2035	2047	2101	1-	5	1		1		7	2035	C9.8	
18	2106	2112	2200	2+	1					1	2118		6555
18	2130	2145	2227D	2	5	1		1		6	2138	M1.4	6545
18	2224E	2239	2303D	2-	5	1		1		3	2211	M1.0	6555
19	0116	0125	0154D	3	5	3		1		1	0115	M3.6	
19	0156E	0203	0325D	3	5	3		1		2	0147	M6.7	6545
19	0326E	0330	0408	1-	1			1			No flare		
19	0439	0458	0527D	1-	1			1			No flare		
19	0527E	0536	0555D	1-	1			1			No flare		
19	0555	0609	0611D	2	5			1		2	No flare		
19	0611E	0617	0733D	2+	5	1		1	1	3	0612	M1.2	6545
19	0806	0816	0828D	1-	5	1		1	1	4	0805		6545
19	0828E	0836	0915	2	5	1	2	1	1	6	0829	C9.4	6555
19	0922	0926	0935	1-	3	1			1	1	0921		6550
19	1102	1107	1221	1	5	4	3	1	1	4	1100	M1.7	
19	1253	1259	1259D	1-	5	2	2		1	4	1241	C5.1	
19	1340	1346	1346D	1-	5		1		1	2	1336	C6.8	
19	1352	1405	1435	1-	5		3		1	6	*		
19	1502	1503	1516D	1-	1					1	*		
19	1516	1518	1540	1	1					1	*		
19	1541	1544	1550	1-	5		2		1	9	1538	C6.5	
19	1608	1620	1650	2	5		2		1	8	1609	C8.4	
19	2219	2237	2317	1-	1			1			No flare		
19	2347	2417	2544	2+	5	2		1			2351E		6555
20	0245	0252	0320	1-	1			1			0245	C3.6	
20	0316	0320	0348	1+	1					1	No flare		
20	0328	0339	0339D	2+	5	1		1		1	0326	M1.9	
20	0401E	0401	0440D	3	3	1		1			0346	M2.5	
20	0440E	0443	0503D	1+	1			1			No flare		
20	0503	0507	0526D	1-	5			1		1	No flare		
20	0525E	0551	0613D	3	5	1		1		3	0535E	M7.0	6555
20	0613E	0618	0709D	3	5	3	4	1	1	4	0604		6555
20	0709E	0713	0836	1	5	1		1	1		No flare		
20	0847	0852	0911	1-	5	1		1	1	1	0829E	C2.8	
20	0930	0932	0940	0	3	1			1		0915	C3.7	
20	1015	1020	1020D	1-	1					1	*		
20	1024	1039	1105	2	3		2				1035	M1.7	
20	1055E	1103	1225	1+	5	4	3	1	1	4	1052	M1.1	
20	1141	1155U	1200	1	3	1	2		1		No flare		
20	1311	1321	1335	1-	5	1	1		1	3	1300	C5.8	
20	1417	1423	1423D	1-	5		4		1	12	1417E	C6.1	

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20	1605	1608	1622	1-	3					2	1607E		6555
20	1729	1732	1750	1-	5					10	1724	C4.5	6545
20	1740	1743	1813	2	1					1	*		
20	1817	1819	1839	1	3					9	1812	M1.1	6555
20	1846	1857	1924	2-	3					10	1845	C9.7	
20	1946	1951	2012	1	3					9	1914	C6.0	6555
20	2029	2040	2053	1-	5			1		7	2023	C4.3	
20	2111	2122	2200	1+	5	1		1		10	2100	C8.3	6555
20	2124	2128U	2130	1-	1					1	No flare		
20	2303	2309	2329	1-	5			1		2	2301	C5.9	
20	2332E	2344	2406D	2-	5	1		1		1	2333E	C9.5	
21	0006E	0012	0037D	1	5	1		1		1	*		
21	0048E	0059	0215D	2+	5	2		1		1	0036E	M1.5	
21	0215E	0229	0300D	1	3	1		1			0218	C6.7	
21	0300E	0311	0334D	1-	3	1		1			0254E		6555
21	0333	0336	0400	1-	1			1			No flare		
21	0422	0430	0504	1-	1			1			0425	C4.7	6555
21	0547	0559	0651D	3	5	1	4	1	1	6	0558	M1.6	
21	0651E	0659	0728D	1+	5		2	1	1	4	0651	C5.5	
21	0728E	0740	0806D	1+	5		2	1	1	3	0723E	C5.8	
21	0806E	0820	0945	3	5	4	3	1	1	7	0803E	M2.7	6545
21	0958E	1002	1030D	1-	5	1	1	1	1	2	0949	C8.0	6555
21	1030E	1037	1214	2-	5	3	3	1	1	6	1029	M2.6	6555
21	1058	1100	1116	1-	1					1	1053		6555
21	1127	1132	1138	1-	3				1	1	1124		
21	1149	1157	1212	1-	3		1		1	1	1147		6555
21	1216	1232	1253	1+	5					3	1214	M1.1	6555
21	1244	1247	1302	1-	5	3	3	1	1	9	1214	M1.1	6555
21	1339	1351	1420	2	5	4	4		1	12	1333	C9.4	6555
21	1510	1519	1555	3	5	2	5		1	13	1503	M1.7	6555
21	1624	1626	1630	1-	5	1			1	8	1622	C3.6	
21	1705	1710	1737	1+	5					8	1706	C5.4	
21	1830	1833	1845	1	3					3	1829	C4.5	
21	1849	1857	1921	1-	5			1		6	1849	C9.1	
21	1950	1958	2021D	1+	1					1	*		
21	2019	2032	2131	3	5	3		1		9	2020E	X1.0	6555
21	2337	2346	2446D	3	5	2		1		2	2337	M5.4	6555
22	0056E	0102	0138	1	5			1		1	0052E	C8.0	
22	0148	0158	0206	1+	1	1					No flare		
22	0232	0237	0250	1-	1			1			No flare		
22	0330	0340	0358	1-	1			1			0333E	C5.3	
22	0500	0508	0517	1-	1			1			0504	C3.5	6555
22	0518E	0528	0554D	2-	5			1		3	0504	C3.5	6555
22	0554E	0609	0634D	3	5	2	1	1	1	4	0558		6555
22	0634E	0643	0807	2+	5		1	1	1	3	0629		6558
22	0813	0818	0830	1-	5		1	1	1	2	0810	C4.3	
22	0832	0844	0933D	3	5	3	4	1	1	6	0830	M6.3	6555
22	0933E	0936	1017	2	5	1	1	1	1	4	0928	M1.0	6555
22	1147	1152	1240	1-	5	4	4	1	1	6	1144	M1.3	6555
22	1312	1316	1330	1-	5	1	2		1	10	1313	C4.8	6545
22	1349	1358	1405	1-	5	1	2		1	6	1346	C2.9	
22	1450E	1504	1531	2	1					1	1444		6555
22	1518	1520	1525	1-	5		2		1	1	1500		6555
22	1746	1750	1815	1+	3					10	1746	C5.3	6556
22	1830	1837	1845	1-	1					1	1829		6555
22	1903	1928	2003	2+	3					7	1903	M2.5	6555
22	2007	2023	2037D	2+	5	2		1		9	No flare		
22	2037E	2044	2107D	2	5			1		4	No flare		
22	2122	2129	2144	1	3					2	2126		
22	2242	2249	2450	3	5	3		1		9	2243	X9.4	6555
22	2346	2448	2452D	1-	1			1			No flare		
23	0126	0134	0139D	1-	1			1			No flare		
23	0139	0159	0236D	3-	5	2		1		1	0149	M3.3	
23	0236E	0342	0727D	3	3	1		1			*		

* = no flare patrol.

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23	0335	0400	0940	3+	1					1	0348E		6549
23	0635	0656U	0800	1	1		1				*		
23	0727E	0734	0948E	2+	5		1	1	1	2	0726		6553
23	0752E	0802	0845	2+	1					1	0738		6555
23	1009	1015	1025	1-	3	1			1		1001		6549
23	1049	1100	1115	1-	1		1		1		1046E	M1.3	
23	1120	1130	1159	1-	5	1	3	1	1		1113	M1.3	6553
23	1230	1239	1346	1	5	4	4	1	1	16	1229	M6.8	6555
23	1330	1334	1344	1	5	1	2		1	7	1327	C8.2	
23	1437	1448	1505	1+	5	1	3		1	12	1437	C6.8	6555
23	1538	1549	1612	1+	5				1	5	1536	C6.5	
23	1643	1646	1650	1-	5				1	11	1640	C7.5	6555
23	1737	1743	1758	1	5					8	1726	C5.8	6555
23	1813	1818	1847	2-	3					9	1816	C8.8	
23	1858	1911	1916D	1	5	1		1		9	1853E	M1.5	6555
23	1916E	1922	1944	1	5	1		1		7	1917E	M1.6	6555
23	2103	2104	2123	1	1					1	2044		6555
23	2158	2205	2243	2-	3					3	*		
23	2202	2222	2304D	3	5	2		1		5	2218E	M5.6	6555
23	2304E	2321	2414D	3	5	3		1		1	2305		6555
24	0000	0007	0015	1-	3					2	0004		6549
24	0014E	0054	0239D	2	1			1			0010		6550
24	0241	0252	0338D	3	5	2		1		1	0239	M3.2	6558
24	0338E	0349	0405D	2	1			1			0313		6559
24	0405E	0409	0457D	1+	1			1			0402		6555
24	0457E	0512	0628	1-	5			1		2	0501	C6.1	6555
24	0738	0742	0755	1-	1					1	No flare		
24	0838	0845	0900	1-	1					1	0838	C2.7	
24	1008	1029	1226	3-	5	4	2	1	1	6	1008	M3.0	
24	1055	1057	1120D	1	1					1	No flare		
24	1120	1125	1145	1	1					1	No flare		
24	1144	1149U	1211	1	1		1				No flare		
24	1236	1250	1330	1	1		1				1228		6555
24	1409	1420	1510	3	5	4	4		1	12	1357	M3.7	6555
24	1716	1720	1749	1+	5					9	1718	C5.0	6555
24	1833	1842	1856	1	3					8	1841	C5.2	
24	1937	1952U	2034	1	5	1		1		10	1937	M1.4	
24	2050	2054	2100U	1-	1					1	2051		6560
24	2134	2141	2151D	1-	1					1	No flare		
24	2148	2157	2229	2	3					2	No flare		
24	2158	2217	2238	1-	5	1				1	No flare		
24	2310	2319	2341	1-	5			1		1	2308	C3.8	
25	0005	0025	0250	3	5	2		1		1	0007	X1.1	6555
25	0306	0311	0325	1-	5			1		1	No flare		
25	0331	0341	0403	1-	3	1		1			0327E	C3.7	
25	0411	0416	0427	1-	1			1			0410E	C2.8	
25	0439	0444	0453	1-	1			1			0440	C2.9	6555
25	0527	0539	0721	3-	5	2		1	1	1	0527	M1.5	6555
25	0802	0812	0934D	3	5	4	4	1	1	5	0801E	X5.3	6555
25	0905	0910	1005	2+	1					1	No flare		
25	0936	0938	1008	2+	5	1	2	1	1	3	0935	C4.6	6555
25	0957	1010	1028	1	1		1				No flare		
25	1121	1139	1233	1-	5	2	4	1	1	2	1124	C8.3	6555
25	1203	1212	1223	1	1					1	1156E		6555
25	1347	1410	1426	2	1		1				1337	C1.8	6558
25	1430	1436	1510	1+	5	2	3		1	8	1431	C7.9	6555
25	1521	1524	1530	1-	5				1	6	1520	C3.0	
25	1549	1553	1610	2	5		2		1	11	1546	C9.0	6555
25	1551	1630U	1706	3	1	1					1551E		6555
25	1918	1928	2005	2	3					4	1920	C8.6	
25	2027E	2035	2045	1-	5			1		5	2051E		6558
25	2142	2209	2215D	1-	5			1		1	2150E	C6.3	6549
25	2215E	2229	2334	1-	5	1		1		1	2216		6555
25	2331	2346	2400	1+	1					1	No flare		

* = no flare patrol.

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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
26	0108	0120	0133	1-	1			1			No flare		
26	0140	0148	0215	1-	1			1			0133E	C2.0	
26	0316	0325	0342	1-	1			1			0315E	C2.0	
26	0512	0525	0542	1-	1			1			0520	C2.1	
26	0644	0649	0705	1-	1					1	No flare		
26	0822	0826	0838	1-	5			1	1	1	0819	C2.4	6555
26	0925	0937	0950	1-	3				1	1	0924	C2.8	6555
26	1020	1023	1040	1-	1					1	1019	C2.2	
26	1421	1429	1435	1-	5		2		1	1	1409	C3.2	6558
26	1453	1456	1500	1-	5	1			1	1	No flare		
26	1524	1529	1535	1-	1				1		No flare		
26	1616	1624	1650	1+	3	1	3		1	9	1614	M1.0	6555
26	2007	2015	2027	1-	3					3	2011	C3.3	6555
26	2025	2034	2223	3	5	1		1		7	2026	X4.7	6555
27	0038	0052	0118	1-	1			1			*		
27	0455	0513	0539	1-	1			1			0446	C2.0	
27	1240	1246	1310	1-	3				1	1	1241	C2.3	6555
27	1453	1455	1515	1	1		1				1451	C2.0	6558
27	1602	1605	1625	1	3					2	1559	C2.6	6555
27	1753	1758	1818	1	3					6	1752	C3.1	6555
27	1831	1834	1848	1-	3					5	1831	C2.4	
27	1929	1937	1955	1+	1					1	No flare		
27	2005	2008	2016	1-	3					2	2007		6555
27	2119	2135	2200D	1-	5			1		1	2118		6558
27	2200	2215	2308D	2+	5	2		1		6	2202	M2.1	6555
27	2308E	2318	2515	1	5			1		1	No flare		
28	0154	0157	0218	1-	1			1			0153	C2.3	
28	0327	0334	0403	1-	1			1			0321	C2.4	
28	0506	0512	0534	1-	1			1			*		
28	1914	1917	1944	1+	1					1	1916	C3.3	6559
28	2048	2100	2127	1-	5			1		3	2047	C4.7	6559
28	2135	2144	2204	1-	5			1		1	No flare		
28	2218	2225	2258	1-	1			1			2219		6555
29	0203	0216	0312D	1+	3	1		1			0203	C6.0	6559
29	0313E	0319	0349	1-	1			1			No flare		
29	0419	0430	0458D	1-	1			1			0422	C3.3	6559
29	0458E	0520	0536D	1-	1			1			*		
29	0536E	0601	0641D	2	5			1		3	0526	C4.8	6555
29	0641E	0652	0905	3	5	4	3	1	1	6	0642	X2.4	6555
29	1039	1050	1228	1	5	2	4	1	1	5	1037	M1.1	
29	1140	1145	1245	2+	1					1	1127		6559
29	1153	1220	1259	1	3		2				No flare		
29	1359	1402	1420	1-	5		2		1	3	1357	C4.7	
29	1451	1455	1508	1-	1					1	1453		6561
29	1801	1807	1820	1	3					2	No flare		
29	1850	1905	1959	2+	3					2	No flare		
29	2053	2103	2117	1	3					2	No flare		
29	2118	2126	2144	1	3					2	2125		6563
29	2150	2155	2207	1-	3					4	2157		6562
29	2213	2217	2228	1-	1			1			No flare		
29	2235E	2241	2251D	1-	1			1			2237		6555
29	2251E	2255	2334	1-	5			1		1	2250	C4.6	
30	0020	0024	0041	1-	1			1			No flare		
30	0236	0246	0303	1-	1			1			0231		6563
30	0319	0332	0423D	3-	3	1		1			0259	M1.2	6555
30	0423E	0531	0905D	2+	1			1			0419		6560
30	0905E	0909	0923	1-	5	1		1	1		0904	C7.7	6555
30	2025	2030	2044	1-	3					2	2014		6561
30	2031	2037	2047	1-	5			1		1	2031	C5.4	
30	2129	2138	2216	1-	5			1		1	2131	C4.7	
30	2302	2307	2330	1-	5			1		2	2301	C3.3	
30	2357	2400	2407	1-	1			1			No flare		

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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
31	0012E	0021	0028D	1-	1			1			No flare		
31	0028E	0041	0158	2	5	2		1		1	0030	C3.1	6555
31	0124	0127	0145	1+	1	1					0115		6558
31	0248	0304	0353	1	1			1			0249	C4.2	6555
31	0417	0427	0440	1-	1			1			No flare		
31	0610	0617	0641	1-	1			1			0608		6563
31	0648	0654	0713D	1-	5			1		1	*		
31	0713E	0717	0732	1-	5			1		1	*		
31	0813	0823	0956	2+	5	1	4	1	1	5	0812	M1.5	6555
31	1031	1054	1104	1	1		1				*		
31	1123	1134	1235	1-	5	2	3	1	1	4	1125	C8.7	
31	1348	1353	1415	1	5	1	2		1	6	1345	C5.2	
31	1442	1504U	1552	1	1		1				No flare		
31	1651	1655	1713	1-	5	2	4	1	1	12	1659	M2.4	6555
31	1907	1913	1936	2+	5	1		1		9	1911	X1.0	6555
31	1946	2129	2129D	2	3	1				2	1927	M6.3	

* = no flare patrol.

OBSERVATORIES REPORTING FOR MARCH 1991

Amherst, New Hampshire, USA	SES	LaCrescenta, California, USA	SES
Athens, Georgia, USA	SES	Latrobe, Pennsylvania, USA	SES
Boksburg, Rep of S. Africa	SES	Locust Grove, Georgia, USA	SES
Cleveland, Ohio, USA	SES	Madison, Wisconsin, USA	SES
Cypress, Texas, USA	SES	Manahawkin, New Jersey, USA	SES
Darmstadt, Germany	SWF	Maui, Hawaii, USA	SWF
Edenvale, Rep of S. Africa	SES	Nerja, Spain	SES
Euclid, Ohio, USA	SES	Panska Ves, Czechoslovakia	SES, SEA, SWF
Farsta, Sweden	SES	Paterson, New Jersey, USA	SES
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

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

MARCH 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
1			LEAR				0151.0	0152.0	1				III
			LEAR				0444.0	0452.0	3				III
	0000	0744	CULG				0448.0	0449.5	1	0448.0	0449.5	1	IIIB
			CULG				0454.0	0501.0	1				II B
			LEAR				0455.0	0520.0	2				II
			CULG				0506.0	0506.0	1				IIIB
			LEAR				0635.0	0637.0	2				III
			CULG				0707.0	0708.0	1				IIIB
	0657	1000	POTS				0838.4	0838.6	2				IIIG
			POTS				0853.7	0906.2	2				IIIGG,UG
			LEAR				0855.0	0906.0	2				III
	0706	1403	ONDR				0902.0	0905.8	1				I,N
			LEAR				0917.0	0921.0	1				III
			SGMR				1442.0	1443.0	1				III
			SGMR				1456.0	1456.0	1				III
			SGMR				1527.0	1528.0	1				V
			SGMR				1539.0	1541.0	1				III
			SGMR				1618.0	1620.0	2				V
			PALE				1858.0	1912.0	2				S
			SGMR				1902.0	1912.0	2				V
	2044	2400	CULG										
2			LEAR				0138.0	0138.0	2				III
	0000	0744	CULG				0558.0	0558.0	1				IIIB
			CULG				0603.0	0603.0	1				IIIB
			LEAR				0603.0	0603.0	1				III
	0633	1417	POTS				0639.9	0700.2	3				IIIGG,RS
			LEAR				0651.0	0653.0	2				III
			LEAR				0704.0	0705.0	1				III
	0706	1402	ONDR										
			LEAR				0710.0	1035.0	1				CONT
			SVTO				0720.0	0800.0	2				CONT
			POTS				0728.7	0729.3	1				UNCLF
			POTS				0735.2	0736.7	1				II ?UNCLF
			POTS				0750.2	0750.3	1				IIIB
			POTS				0754.0	0754.4	2				IIIG
			POTS				0914.8	0915.0	1				UNCLF
			SVTO				0943.0	1044.0	2				CONT
			POTS				0952.1	0953.0	1				IIIG
			POTS				1037.1	1037.4	2				UG
			POTS				1040.8	1041.0	2				UNCLF
			POTS				1110.3	1112.2	2				UG
			POTS				1131.2	1131.5	1				IIIG
			SGMR				1352.0	1352.0	1				III
			POTS				1358.4	1402.5	2				IIIGG
			SGMR				1400.0	1424.0	2				II
			SVTO				1403.0	1422.0	2				II
	2044	2400	CULG										
03	0000	0744	CULG				0210.0	0213.0	2				IIIB
			CULG				0211.0	0227.0	2				II
			LEAR				0608.0	0612.0	2				III
	0641	1447	POTS				0646.8	0654.1	2				IIIGG,I
			CULG				0649.0	0649.0	1				IIIB
			POTS				0655.5	0655.6	1				U
			POTS				0739.7	0739.8	1				UNCLF
			POTS				1206.8	1211.2	2				IIIG
			POTS				1244.1	1244.3	1				IIIG
			SGMR				1926.0	1926.0	1				III
			PALE				1927.0	1927.0	1				III
			PALE				1951.0	1951.0	2				III
			SGMR				1951.0	1951.0	2				III
			PALE				2011.0	2012.0	2				III
			SGMR				2011.0	2012.0	2				III
			PALE				2031.0	2038.0	2				III
			SGMR				2033.0	2038.0	2				III
			PALE				2124.0	2125.0	1				III
			PALE				2140.0	2140.0	1				III
			PALE				2156.0	2158.0	1				III

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Spectral Observations

MARCH 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
03			PALE				2232.0	2233.0	1				III
	2044	2400	CULG				2233.0	2233.0	1				IIIB
04	0000	0744	CULG				0002.5	0003.0	1				IIIPAIR
			LEAR				0031.0	0031.0	1				III
			PALE				0031.0	0031.0	1				III
			CULG				0031.5	0031.5	1				IIIB
			CULG				0106.0	0106.0	1				IIIB
			LEAR				0106.0	0106.0	1				III
			PALE				0131.0	0131.0	1				III
			LEAR				0410.0	0411.0	1				III
			CULG				0411.0	0411.0	1				IIIB
			LEAR				0513.0	0534.0	2				S
			CULG				0514.0	0534.0	1				IIIN
	0633	1533	POTS				0633.0E	1533.0U	2				I,S,DC,IIIGG
			LEAR				0659.0	0700.0	1				III
			POTS				0711.5	0713.0	2				IIIG
			LEAR				0712.0	0713.0	2				III
			POTS				0953.1	0953.3	1				UNCLF
			POTS				1204.4	1204.5	1				UNCLF
			POTS				1236.0	1236.1	2				IIIG
			POTS				1305.5	1305.9	2				UG
	0705	1404	ONDR	1359.0	1404.0	3	1359.0	1404.0	3				II
			POTS				1359.5	1413.8	3				II UGG
			POTS				1359.5	1413.8	3				IV HARM,H
			SVTO				1403.0	1416.0	3				II
			SGMR				1404.0	1412.0	1				II
			SGMR				1412.0	1414.0	2				III
			SVTO				1412.0	1412.0	3				III
			SGMR				1458.0	1509.0	1				S
			SVTO				1553.0	1554.0	3				III
			SGMR				1623.0	1624.0	2				III
			PALE				1822.0	1822.0	1				III
			SGMR				1822.0	1822.0	1				III
			PALE				1843.0	1845.0	2				III
			SGMR				1926.0	1931.0	2				III
			SGMR				1926.0	1942.0	1				II
			PALE				1938.0	1948.0	2				II
			SGMR				1938.0	1948.0	1				II
			PALE				2026.0	2027.0	2				III
			SGMR				2026.0	2028.0	2				III
			PALE							2041.0	2045.0	1	III
	2044	2400	CULG				2044.5	2044.5	1				IIIB
			SGMR				2048.0	2049.0	1				III
05			LEAR				0113.0	0124.0	2				S
	0000	0743	CULG				0114.0	0124.5	1				IIIN
			LEAR				0301.0	0304.0	2				III
			CULG				0302.0	0304.5	1				IIIG
			CULG				0502.5	0503.0	1				IIIG
			LEAR				0525.0	0526.0	1				III
			CULG				0614.5	0622.0	1				IIIN
			LEAR				0615.0	0619.0	1				III
	0639	1443	POTS				0659.5	0701.9	1				IIIG,RS
			POTS				0710.1	0714.5	3				IIIG,C
			POTS				0749.0	0749.1	1				UNCLF
			POTS				0755.7	0755.8	1				IIIB
			POTS				0900.0	0900.1	3				IIIB
			POTS	0910.6	0911.1	3							DCIM
	0706	1403	ONDR	0910.7	0911.1	2							IIIG
			POTS				0910.8	0919.9	3				IIIG,UG,C
			ONDR				0911.8	0913.8	3				IIIGG
			POTS				0924.5	0924.6	2				U
			POTS				0929.0U	0951.0U	1				IIIGG,I,S,C
			LEAR				0940.0	0942.0	2				III
			POTS				0940.9	0943.5	3				II
			SVTO				0941.0	0943.0	2				III
			POTS				0957.2	1003.5	1				I
			SVTO				1000.0	1000.0	1				III

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

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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
		POTS				1023.8	1223.9	1				IIIB
		POTS				1041.6	1041.8	1				UNCLF
		POTS				1100.3	1100.5	1				UNCLF
		POTS				1109.6	1110.5	1				IIIG
		POTS				1147.7	1150.4	3				IIIG,V
		POTS				1215.9	1217.0	2				IIIG,C
		POTS				1253.1	1253.5	3				IIIG
		POTS				1309.5	1309.6	2				UNCLF
		POTS				1317.8	1317.9	1				IIIB
		POTS				1334.9	1343.8	3				IIIGG
		SGMR				1335.0	1342.0	2				III
		POTS				1424.9	1425.4	2				IIIG
		PALE				1717.0	1719.0	2				III
		SGMR				1717.0	1736.0	3				S
		PALE				1729.0	1731.0	1				III
		PALE				1920.0	1921.0	1				III
		SGMR				1920.0	1921.0	1				III
		PALE				1941.0	1941.0	1				III
2043	2400	CULG				2059.0	2059.5	2				IIIB
		CULG				2106.5	2400.0D	1				IIIN
		SGMR				2116.0	2117.0	1				III
		PALE				2117.0	2117.0	1				III
		PALE				2150.0	2151.0	1				III
		SGMR				2150.0	2151.0	1				III
		PALE				2203.0	2203.0	1				III
0000	0743	CULG				0000.0E	0743.5D	1				IIIN
		LEAR				0024.0	0024.0	1				III
		LEAR				0032.0	0037.0	2				III
		PALE				0037.0	0037.0	1				III
		LEAR				0056.0	0100.0	2				III
		LEAR				0131.0	0139.0	3				III
		PALE				0137.0	0139.0	2				V
		CULG				0137.5	0139.5	2	0137.5	0139.5	1	IIIG
		LEAR				0204.0	0220.0	3				V
		PALE				0204.0	0207.0	3				V
		CULG				0204.5	0212.0	2	0206.0	0207.0	1	IIIG
		CULG				0224.0	0225.5	1	0224.0	0225.0	1	IIIG
		LEAR				0237.0	0238.0	1				III
		LEAR				0254.0	0255.0	2				III
		LEAR				0313.0	0313.0	1				III
		CULG				0336.0	0339.5	3	0336.5	0337.5	1	IIIG
		LEAR				0336.0	0339.0	3				III
		PALE				0336.0	0337.0	3				V
		LEAR				0432.0	0433.0	2				III
		LEAR				0439.0	0440.0	2				III
		CULG				0505.5	0506.5	2				III/VB
		LEAR				0506.0	0508.0	3				III
		LEAR				0639.0	0642.0	3				III
		SVTO				0639.0	0641.0	2				V
		CULG				0639.5	0642.0	3				III/VG
0647	1509	POTS				0657.0	0657.2	3				IIIB,V
		POTS				0710.0	0713.5	2				IIIG
		POTS				0726.2	0726.3	1				IIIB
		POTS				0738.2	0746.4	3				IIIGG,RSG
		POTS				0738.2	0746.4	3				IV
		LEAR				0739.0	0746.0	3				III
		CULG				0739.5	0743.5D	3				IIIG
0706	1402	ONDR	0740.9	0743.1	3	0740.9	0743.1	3				IIIGG
		POTS				0757.7	0757.9	3				IIIB,U
		ONDR				0757.8	0757.9	2				IIIG
		POTS				0813.9	0814.0	1				IIIB
		POTS				0915.9	0916.0	2				IIIB
		LEAR				0933.0	0933.0	2				III
		SVTO				0933.0	0933.0	2				III
		POTS				1014.5	1014.6	1				IIIB
		POTS				1039.9	1040.0	1				IIIB
		POTS				1054.2	1054.3	1				IIIB
		POTS				1118.4	1118.5	1				IIIB

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06		SGMR				1208.0	1212.0	1				III
		POTS				1209.1	1212.0	1				IIIG
		SGMR				1254.0	1256.0	2				III
		SVTO				1255.0	1255.0	3				III
		POTS				1255.2	1255.7	3				IIIG,V
		POTS				1318.2	1318.3	1				U
		SGMR				1337.0	1339.0	2				III
		SVTO				1337.0	1338.0	3				V
		POTS				1337.2	1344.2	3				IIIGG
		SGMR				1339.0	1447.0	2				III
		SVTO				1339.0	1347.0	3				III
		SGMR				1354.0	1356.0	2				III
		SGMR				1402.0	1404.0	3				V
		SVTO				1402.0	1405.0	3				V
		POTS				1402.8	1408.3	3				IIIGG,V
		POTS				1439.9	1449.8	3				IIIGG,V
		SGMR				1621.0	1629.0	1				III
		PALE				1713.0	1713.0	1				III
		SGMR				1740.0	1746.0	3				V
		PALE				1839.0	1839.0	1				III
		SGMR				1839.0	1840.0	2				III
		PALE				2000.0	2001.0	1				III
		SGMR				2000.0	2001.0	1				III
		SGMR				2031.0	2031.0	1				III
	2043	2400 CULG				2122.0	2122.0	2				IIIB
		PALE				2122.0	2122.0	1				III
		SGMR				2122.0	2122.0	1				III
		CULG				2131.0	2132.0	2				IIIG
		CULG				2138.0	2158.0	1				IIIN
		PALE				2140.0	2142.0	3				V
		SGMR				2141.0	2142.0	2				III
		PALE				2149.0	2158.0	1				III
		CULG				2318.0	2318.0	1				IIIB
		LEAR				2318.0	2318.0	2				III
		PALE				2318.0	2318.0	2				III
07		LEAR				0034.0	0036.0	2				III
	0000	0743 CULG				0143.0	0159.0	1				IIIN
		LEAR				0153.0	0201.0	3				III
		PALE				0156.0	0158.0	2				III
		CULG				0238.0	0238.0	1				IIIB
		LEAR				0238.0	0238.0	2				III
		PALE				0238.0	0238.0	1				III
		CULG				0337.0	0451.5	1				IIIN
		LEAR				0404.0	0421.0	2				S
		LEAR				0452.0	0456.0	3				III
		CULG				0452.5	0455.5	2				IIIG
		CULG				0518.0	0615.0	2				IIIN
		LEAR				0518.0	0520.0	2				III
		LEAR				0538.0	0546.0	2				III
		SVTO				0544.0	0545.0	2				III
		LEAR				0558.0	0615.0	2				S
		SVTO				0606.0	0614.0	2				III
		LEAR				0624.0	0625.0	1				III
	0621	1500 POTS				0631.9	0656.1	3				IIIGG,C
		CULG				0633.0	0634.0	1				IIIG
		LEAR				0633.0	0641.0	3				III
		SVTO				0636.0	0639.0	3				III
		CULG				0636.5	0641.0	2				IIIGG
		CULG				0648.0	0656.0	1				IIIN
		LEAR				0651.0	0656.0	1				III
		POTS				0711.0	0711.2	3				IIIB
		POTS				0719.3	0732.3	2				RS,IIIGG
		CULG				0740.0	0741.5	1				IIIG
		LEAR				0740.0	0741.0	2				III
		SVTO				0740.0	0740.0	2				III
		POTS				0740.7	0742.1	2				IIIG,U
	0705	0928 ONDR	0746.6	0753.6	3	0746.6	0753.6	3				V,U
		POTS				0747.3	1500.0U	3				HARM,P,I,DC

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		POTS				0747.3	1500.0U	3				II
		POTS				0747.3	1500.0U	3				IIIGG,UGG
		POTS				0747.3	1500.0U	3				IV
		LEAR				0756.0	0812.0	3				II
		SVTO				0756.0	0801.0	2				II
		LEAR				0800.0	1031.0	2				IV
		SVTO				0801.0	0813.0	2				IV
		SVTO				0826.0	1059.0	2				CONT
		SVTO				0853.0	0853.0	2				III
		LEAR				0926.0	0930.0	3				III
		SVTO				0926.0	0930.0	3				V
		SVTO				1033.0	1037.0	3				III
		SGMR				1242.0	1245.0	1				III
		SGMR				1248.0	1303.0	2				III
		SVTO				1258.0	1258.0	2				III
		SGMR				1303.0	2115.0	1				CONT
		SGMR				1333.0	1339.0	2				III
		SVTO				1336.0	1339.0	2				III
1047	1402	ONDR	1336.3	1339.2	3	1336.3	1339.2	3				IIIGG
		SVTO				1405.0	1405.0	2				III
		SGMR				1512.0	1513.0	2				III
		SVTO				1512.0	1512.0	3				III
		SGMR				1715.0	1732.0	3				S
		PALE				1716.0	1725.0	3				V
		PALE				1727.0	1732.0	2				II
		SGMR				1727.0	1730.0	2				II
		PALE				2026.0	2028.0	1				III
		PALE				2037.0	2039.0	1				III
2043	2400	CULG				2104.0	2104.0	1				IIIB
		CULG				2146.0	2146.0	2				IIIB
		PALE				2146.0	2146.0	2				III
		SGMR				2146.0	2146.0	2				III
		CULG				2216.5	2218.0	1				IIIG
		PALE				2316.0	2324.0	3				V
		CULG				2317.0	2318.0	3	2317.0	2318.0	1	IIIG
		LEAR				2317.0	2324.0	3				III
		CULG				2318.0	2325.0	1				IIIN
3		LEAR				0006.0	0007.0	2				III
		PALE				0006.0	0007.0	2				III
0000	0743	CULG				0006.5	0007.0	2				IIIPAIR
		LEAR				0024.0	0024.0	2				III
		LEAR				0049.0	0053.0	2				III
		CULG				0050.0	0053.0	1				IIIG
		PALE				0050.0	0053.0	1				III
		CULG				0130.0	0154.5	2				IIIN
		LEAR				0130.0	0223.0	3				S
		LEAR				0223.0	0223.0	2				III
		LEAR				0235.0	0236.0	2				III
		CULG				0235.5	0235.5	1				IIIB
		LEAR				0331.0	0339.0	1				III
		CULG				0339.0	0339.0	1				IIIB
		LEAR				0345.0	0345.0	1				III
		LEAR				0534.0	0534.0	2				III
		LEAR				0604.0	0604.0	2				III
		CULG				0604.5	0605.0	1				IIIG
0633	1500	POTS				0633.0E	1500.0U	2				I,S,C,DC
		CULG				0657.0	0657.0	1				IIIB
		LEAR				0657.0	0703.0	2				III
		CULG				0703.0	0703.0	1				IIIB
		LEAR				0719.0	0719.0	1				III
		POTS				0732.8	0739.9	3				IIIGG,C
		CULG				0733.0	0734.0	2				IIIG
		LEAR				0733.0	0741.0	3				III
0705	1403	ONDR				0733.0	0733.6	3				V
		SVTO				0733.0	0734.0	3				III
		CULG				0734.5	0740.0	1				IIIN
		ONDR				0734.5	0940.3	1				I,N
		LEAR				0811.0	0811.0	2				III

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08		SVTO				0811.0	0811.0	2				III
		POTS				0811.3	0811.7	2				IIIG
		POTS				0859.2	0901.1	3				IIIG
		POTS	0911.1U	0913.0	3							DCIM
		POTS				0918.2	0921.9	3				IIIG
		LEAR				0921.0	0921.0	2				III
		LEAR				0939.0	0940.0	2				III
		SVTO				0939.0	0940.0	2				III
		POTS				0939.7	0940.6	3				IIIG
		ONDR				0940.0	0940.3	3				IIIG
		POTS				0956.9	0957.3	1				IIIG
		LEAR				0958.0	0959.0	1				III
		POTS				1024.8	1024.9	1				IIIB
		POTS				1100.7	1109.3	3				IIIGG,U
		ONDR				1106.6	1106.7	2				V
		ONDR	1108.3	1109.1	3	1108.2	1109.1	3				V
		POTS				1130.8	1130.9	3				IIIB
		POTS				1142.3	1150.9	2				UG,IIIG,RSG
		ONDR	1142.5	1144.7	2	1142.5	1144.7	2				IIIGG,U
		POTS				1205.0	1205.1	1				IIIB
		POTS				1218.7	1219.9	1				IIIG
		POTS	1229.8	1230.0	2							IIIG
		ONDR	1229.9	1403.0	1	1229.9	1403.0	1				I,N
		POTS	1255.6	1255.9	2							IIIG
		POTS				1300.1	1300.3	1				U
		POTS				1306.4	1306.5	1				IIIB
		POTS				1324.8	1325.4	1				IIIG
		POTS				1325.0	1325.1	1				UNCLF
		POTS				1358.5	1358.6	2				IIIB
		SGMR				1418.0	1419.0	1				III
		SVTO				1418.0	1419.0	2				III
		POTS				1418.7	1419.4	2				IIIG
		POTS				1429.4	1430.5U	1				IIIG
		SGMR				1437.0	1438.0	1				III
		POTS				1437.5	1438.0	1				UNCLF
		SGMR				1509.0	1510.0	1				III
		SVTO				1509.0	1509.0	2				III
		SGMR				1634.0	1635.0	1				III
		SGMR				1642.0	1644.0	2				III
		PALE				2024.0	2026.0	2				III
	2043	CULG				2046.0	2047.0	1				IIIPAIR
		LEAR				2338.0	2338.0	2				III
		PALE				2338.0	2339.0	1				III
09		LEAR				0007.0	0008.0	2				III
	0000	CULG				0007.5	0008.5	1				IIIG
		PALE				0008.0	0008.0	1				III
		LEAR				0034.0	0035.0	2				III
		CULG				0035.0	0035.0	1				IIIB
		PALE				0035.0	0035.0	1				III
		CULG				0104.5	0105.5	1				IIIG
		LEAR				0147.0	0152.0	2				III
		CULG				0148.5	0151.5	1				IIIG
		CULG				0224.0	0225.5	1				IIIG
		LEAR				0224.0	0225.0	1				III
		PALE				0303.0	0320.0	1				S
		LEAR				0304.0	0306.0	3				III
		CULG				0305.0	0306.5	2				IIIG
		CULG				0319.0	0324.5	1				IIIN
	0649	POTS				0649.0E	1500.0U	3				I,S,C,DC,P
	1500	LEAR				0714.0	0936.0	2				CONT
		SVTO				0717.0	0918.0	2				CONT
		POTS				0730.5	0735.5	2				IIIBG
		POTS				0830.0	0830.3	2				IIIB,V
		SVTO				0830.0	0830.0	3				III
	0706	ONDR	0842.3	0842.9	3						II	
	1403	POTS	0842.4	0843.0	2							DCIM
		LEAR				0943.0	0945.0	2				III
		SVTO				0944.0	0945.0	2				III

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09		LEAR				1000.0	1001.0	2				III
		SVTO				1000.0	1001.0	2				III
		ONDR	1000.8	1403.0	1	1000.8	1403.0	1				I,N
		POTS				1000.8	1001.4	2				IIIB
		POTS				1023.5	1024.4	2				IIIG
		SVTO				1038.0	1458.0	2				CONT
		SGMR				1140.0	1140.0	1				III
		POTS				1205.1	1208.5	2				IIIGG
		SGMR				1223.0	2220.0	1				CONT
		POTS				1223.4	1226.0	2				IIIG,RS
		ONDR	1244.8	1248.0	3	1244.8	1248.0	3				IIIGG
		POTS				1244.9	1249.7	2				IIIGG,U
		POTS				1259.0	1259.2	1				UNCLF
		POTS				1306.3	1306.6	1				UNCLF
		POTS	1412.0	1412.9	2							DCIM
		SGMR				1417.0	1419.0	2				III
		POTS				1418.0	1418.3	1				IIIG
		POTS				1438.1	1438.4	1				UNCLF
		PALE				1905.0	1912.0	1				III
		PALE				2003.0	2009.0	1				III
		PALE				2049.0	2049.0	1				III
	2042	2400 CULG				2101.0	2101.0	1				IIIG
		CULG				2106.0	2106.0	1				IIIG
		PALE				2201.0	2205.0	1				V
		LEAR				2330.0	1029.0	1				CONT
10		LEAR				0114.0	0115.0	2				III
		PALE				0114.0	0115.0	1				III
	0000	0742 CULG				0115.0	0115.0	1				IIIB
		CULG				0127.0	0129.0	1				IIIG
		LEAR				0127.0	0129.0	2				III
		PALE				0127.0	0135.0	2				V
		CULG				0133.0	0136.0	1				IIIGG
		LEAR				0133.0	0136.0	3				III
		CULG				0155.0	0200.0	1				IIIG
		LEAR				0157.0	0159.0	2				III
		PALE				0157.0	0159.0	2				III
		CULG				0227.0	0227.0	1				IIIB
		CULG				0306.0	0307.0	1				IIIG
		LEAR				0306.0	0316.0	2				III
		CULG				0310.0	0311.0	1				IIIG
		CULG				0313.0	0316.0	1				IIIG
		CULG				0319.0	0319.0	1				IIIB
		LEAR				0423.0	0424.0	1				III
		LEAR				0558.0	0559.0	2				III
		SVTO				0559.0	0559.0	1				III
		LEAR				0605.0	0605.0	1				III
		SVTO				0620.0	0628.0	2				III
		CULG				0628.0	0628.0	1				IIIPAIR
		LEAR				0628.0	0644.0	2				S
		SVTO				0628.0	0628.0	2				III
	0631	1435 POTS				0631.0E	1435.0U	3				I,S,C,DC
		POTS				0633.3	0635.4	2				IIIG
		POTS				0653.9	0654.2	2				IIIG
		LEAR				0655.0	0700.0	2				III
		CULG				0658.0	0658.0	1				IIIB
		CULG				0659.0	0659.0	1				IIIB
		SVTO				0659.0	0700.0	2				III
		POTS				0659.9	0700.5	2				IIIG
		LEAR				0715.0	0715.0	2				III
		POTS				0715.0	0715.3	2				IIIB
		SVTO				0715.0	0715.0	1				III
		POTS				0732.4	0732.7	2				IIIG
		POTS				0736.5	0736.6	2				IIIB
		POTS				0741.7	0741.9	2				IIIG
		POTS				0800.6	0801.1	2				IIIG
	0706	1402 ONDR	0838.0	1402.0	1	0838.0	1402.0	1				I,N
		POTS				0843.8	0844.0	2				IIIG
		POTS				0851.0	0853.3	2				P

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10		POTS				0936.9	0938.5	2				P
		POTS				0950.0	0953.0	1				IIIG
		POTS				0956.9	0957.0	1				IIIB
		SVTO				1003.0	1030.0	1				CONT
		POTS				1025.2	1025.5	1				IIIG,U
		ONDR				1107.1	1107.3	3				IIIG
		POTS				1107.1	1107.8	3				IIIG,V
		POTS				1123.8	1124.3	2				IIIG
		SGMR				1137.0	1139.0	1				III
		SVTO				1137.0	1138.0	2				V
		POTS				1138.4	1138.7	1				UNCLF
		POTS				1152.1	1157.0	3				IIIG
		SGMR				1156.0	1156.0	1				III
		POTS				1230.3	1230.4	2				IIIB
		POTS				1246.3	1246.8	1				IIIG
		POTS				1253.2	1253.3	2				IIIB
		POTS				1300.2	1303.8	2				IIIG
		POTS				1306.5	1314.7	2				IIIGG
		SVTO				1309.0	1323.0	2				S
		ONDR				1312.9	1313.2	3				V
		SGMR				1314.0	1314.0	2				III
		POTS				1323.7	1323.8	2				IIIB
		POTS				1337.2	1338.0	2				IIIG
		SGMR				1354.0	2222.0	1				CONT
		POTS				1406.8	1407.2	1				IIIG
		POTS				1413.7	1415.5	2				IIIG
		SGMR				1455.0	1455.0	2				III
		SVTO				1455.0	1455.0	2				III
		SGMR				1547.0	1548.0	2				III
		SGMR				1717.0	1717.0	2				III
		SGMR				1757.0	1801.0	2				III
		PALE				1758.0	1800.0	2				V
		SGMR				1818.0	1818.0	2				III
		PALE				1945.0	1946.0	2				III
		SGMR				1945.0	1946.0	2				III
		SGMR				2004.0	2007.0	3				V
		PALE				2005.0	2007.0	3				V
		PALE				2100.0	2101.0	1				III
	2042	2400 CULG				2236.0	2241.0	1				IIIGG
		PALE				2236.0	2240.0	1				V
		CULG				2246.0	2246.0	1				IIIB
11	0000	0742 CULG				0031.0	0035.0	1				IIIG
		PALE				0031.0	0035.0	1				V
		LEAR				0101.0	0101.0	1				III
		PALE				0131.0	0135.0	1				V
		LEAR				0237.0	0244.0	3				III
		CULG				0237.5	0242.5	1				IIIGG
		PALE				0240.0	0242.0	2				V
		LEAR				0322.0	0349.0	2				S
		CULG				0327.0	0327.0	1				IIIB
		CULG				0328.0	0328.0	1				IIIPAIR
		CULG				0335.0	0335.0	1				IIIPAIR
		CULG				0339.5	0339.5	1				IIIB
		LEAR				0402.0	0407.0	3				III
		CULG				0403.0	0406.0	1				IIIGG
		PALE				0405.0	0405.0	2				V
		LEAR				0450.0	0513.0	2				S
		CULG				0456.5	0458.0	1				IIIG
		CULG				0508.5	0508.5	1				IIIB
		CULG				0512.0	0512.5	1				IIIG
		LEAR				0531.0	0533.0	2				III
		CULG				0532.0	0532.5	1				IIIG
		LEAR				0551.0	0604.0	2				S
	0630	1507 POTS				0630.0E	1507.0U	1				IIIGG,RS,I,S,C
		LEAR				0639.0	0700.0	3				S
		SVTO				0640.0	0656.0	2				S
		SVTO				0703.0	0924.0	2				CONT
	0705	1402 ONDR	0732.1	0733.0	3	0732.1	0733.0	3				IIIGG

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		POTS	0732.2	0733.0	2							DCIM,U
		ONDR	0741.8	1402.0	1	0741.8	1402.0	1				I,N
		SVTO				0758.0	0807.0	2				III
		ONDR	0805.9	0806.2	2	0805.9	0806.2	2				IIIG
		LEAR				0841.0	0849.0	3				III
		SVTO				0841.0	0847.0	3				V
		LEAR				0916.0	1922.0	2				III
		SVTO				0916.0	0920.0	3				V
		LEAR				0937.0	0938.0	1				III
		ONDR	1037.5	1039.0	3	1037.5	1039.0	3				IIIGG
		SVTO				1104.0	1107.0	2				III
		ONDR	1152.0	1154.9	3	1152.0	1154.9	3				II
		POTS	1152.0	1153.2	2							DCIM,RS
		SGMR				1226.0	1238.0	2				S
		POTS	1226.3	1226.6	1							IIIG
		SVTO				1235.0	1238.0	2				III
		POTS	1237.4	1237.7	2							DCIM
		SGMR				1257.0	1258.0	1				III
		SVTO				1257.0	1258.0	2				III
		SVTO				1302.0	1353.0	2				III
		SVTO				1310.0	1314.0	2				III
		SGMR				1314.0	1314.0	1				III
		SGMR				1352.0	1358.0	2				III
		SVTO				1352.0	1353.0	2				III
		SGMR				1409.0	1411.0	1				III
		SGMR				1438.0	1439.0	1				III
		SGMR				1448.0	1457.0	2				III
		SGMR				1618.0	1624.0	1				III
		PALE				1852.0	1858.0	2				III
		SGMR				1857.0	1858.0	2				III
		PALE				1913.0	1914.0	1				III
		LEAR				2259.0	2300.0	2				III
		PALE				2259.0	2300.0	2				III
2042	2400	CULG				2259.5	2259.5	1				IIIB
2		LEAR				0050.0	0058.0	3				III
0000	0742	CULG				0050.5	0051.5	1				IIIG
		PALE				0051.0	0055.0	3				V
		CULG				0053.5	0054.0	2				IIIG
		LEAR				0108.0	0119.0	2				III
		CULG				0109.5	0112.0	1				IIIG
		CULG				0118.5	0118.5	1				IIIG
		LEAR				0219.0	0221.0	2				III
		PALE				0220.0	0220.0	2				III
		CULG				0257.5	0258.0	1				IIIG
		LEAR				0258.0	0258.0	1				III
		LEAR				0434.0	0440.0	2				III
		CULG				0434.5	0434.5	1				IIIB
		CULG				0439.0	0439.0	1				IIIG
		LEAR				0619.0	0625.0	2				III
		CULG				0619.5	0625.5	1				IIIGG
		SVTO				0620.0	0625.0	2				III
0645	1502	POTS				0645.0E	1502.0U	3				I,S,C,DC
		POTS				0657.2	0657.3	1				IIIB
		POTS				0735.7	0736.5	1				IIIG
		POTS				0753.5	0753.7	2				IIIG
0705	1403	ONDR	0756.3	0756.6	2							IIIG
		POTS				0809.3	0833.0	3				IIIGG
		ONDR				0811.9	0813.0	2				IIIGG
		ONDR	0811.9	1403.0	1	0811.9	1403.0	1				I,N
		POTS				0927.9	0928.1	2				IIIG
		LEAR				0936.0	0941.0	2				III
		SVTO				0936.0	0945.0	2				III
		POTS				0936.1	0945.4	3				IIIGG
		POTS				1010.1	1010.3	2				IIIG
		POTS				1037.0	1040.1	2				IIIG
		POTS				1138.7	1152.7	2				IIIGG
		ONDR	1145.3	1145.5	2	1145.3	1145.5	2				IIIG
		POTS				1213.9	1214.0	1				IIIB

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12		POTS				1223.2	1231.2U	3				IIIGG
		POTS				1237.5	1257.1	3				II
		POTS				1237.5	1257.1	3				IIIGG,H,RS
		POTS				1237.5	1257.1	3				IV U,HARM
		ONDR	1242.0	1249.0	3	1242.0	1249.0	3				IV
		SVTO				1242.0	1248.0	3				V
		SVTO				1245.0	1256.0	3				II
		SGMR				1246.0	1257.0	3				II
		SGMR				1302.0	1619.0	1				CONT
		POTS				1333.9	1336.7	2				IIIG
		SVTO				1404.0	1404.0	2				III
		POTS				1404.6	1408.8	3				IIIG
		SVTO				1427.0	1427.0	2				III
		POTS				1440.8	1442.8	3				IIIGG
		SGMR				1458.0	1607.0	2				V
		SVTO				1528.0	1528.0	2				III
		SGMR				1623.0	1624.0	1				III
		PALE				1757.0	1757.0	1				III
		SGMR				1757.0	1822.0	2				S
		PALE				1809.0	1809.0	1				III
		PALE				1822.0	1822.0	1				III
		PALE				1923.0	1924.0	1				III
		SGMR				1923.0	1924.0	1				III
		PALE				2031.0	2052.0	1				S
	2042	2400 CULG				2113.0	2113.0	1				IIIG
		PALE				2113.0	2116.0	1				III
		PALE				2156.0	2156.0	1				III
		PALE				2208.0	2210.0	1				III
		CULG				2302.0	2306.0	1				IIIGG
		PALE				2302.0	2305.0	1				III
		LEAR				2317.0	0103.0	1				CONT
13	0000	0741 CULG				0031.0	0031.0	1				IIIPAIR
		CULG				0123.0	0127.0	1				IIIGG
		LEAR				0123.0	0127.0	2				III
		PALE				0125.0	0130.0	1				III
		PALE				0149.0	0157.0	1				III
		LEAR				0151.0	0152.0	2				III
		CULG				0151.5	0152.5	1				IIIG
		LEAR				0206.0	0212.0	2				III
		LEAR				0231.0	0233.0	3				III
		CULG				0231.5	0233.0	1				III/VB
		PALE				0234.0	0235.0	2				III
		LEAR				0249.0	0305.0	3				S
		CULG				0249.5	0305.0	2	0249.5	0303.0	1	IIIN
		PALE				0252.0	0307.0	3				S
		CULG				0303.0	0306.0	2				II
		LEAR				0310.0	0441.0	2				IV
		CULG				0418.5	0418.5	1				IIIB
		LEAR				0547.0	0550.0	2				III
		SVTO				0617.0	0617.0	2				III
	0633	1505 POTS				0633.0E	1505.0U	1				I,S,C
		POTS				0642.9	0643.1	2				IIIB
		CULG				0658.0	0658.0	1				IIIB
		LEAR				0658.0	0659.0	1				III
		POTS				0706.8	0721.1	2				IIIGG
		LEAR				0707.0	0714.0	1				III
		LEAR				0717.0	0718.0	1				III
		LEAR				0729.0	0736.0	3				III
		POTS				0729.4	0800.0U	3				IIIGG,U
		POTS				0729.4	0800.0U	3				IV
		CULG				0730.0	0736.0	2	0732.0	0734.0	1	IIIGG
		SVTO				0732.0	0735.0	3				V
	0706	1403 ONDR	0732.5	0733.0	3	0732.5	0733.0	3				V,U
		ONDR	0735.0	1403.0	1	0735.0	1403.0	1				I,N
		LEAR				0736.0	1026.0	2				IV
		SVTO				0755.0	0755.0	2				III
		LEAR				0803.0	0806.0	3				III
		SVTO				0803.0	0808.0	3				V

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13		POTS				0803.3	0826.5U	3				IV IIIGG
		ONDR	0803.5	0806.3	3	0803.5	0806.3	3				IV
		POTS				0913.2	0913.4	1				IIIB,V
		SVTO				1003.0	1031.0	2				CONT
		POTS				1055.0	1055.1	1				IIIB
		SGMR				1110.0	1110.0	1				III
		POTS				1121.9	1125.4	2				IIIG
		SGMR				1158.0	1159.0	1				III
		POTS				1158.8	1159.3	1				IIIG
		POTS				1218.8	1223.0	3				IIIGG
		ONDR	1220.7	1221.0	3	1220.7	1221.0	3				IIIG
		SGMR				1304.0	1306.0	2				III
		SVTO				1304.0	1306.0	3				III
		POTS				1304.1	1304.4	1				IIIG
		POTS				1305.8	1306.7	2				IIIG
		POTS				1328.4	1341.8	2				IIIGG
		POTS				1406.7	1406.8	1				IIIB
		SGMR				1409.0	1413.0	2				III
		SVTO				1409.0	1409.0	2				III
		POTS				1410.1	1410.5	1				IIIG
		POTS				1433.9	1437.5	1				IIIG
		SGMR				1457.0	2225.0	1				CONT
		SGMR				1524.0	1538.0	1				S
		SGMR				1544.0	1557.0	3				S
		SVTO				1544.0	1558.0	3				S
		SVTO				1621.0	1625.0	3				III
		SGMR				1625.0	1626.0	2				V
		PALE				1855.0	1856.0	2				III
		SGMR				1855.0	1857.0	2				V
		PALE				2022.0	2022.0	2				III
		SGMR				2022.0	2022.0	2				III
		PALE				2121.0	2123.0	2				III
	2041	CULG				2121.5	2123.0	1				IIIG
	2400	LEAR				2251.0	0415.0	2				CONT
14	0000	CULG				0035.0	0317.0	1				IIIS
		CULG				0343.0	0344.0	1				IIIG
		LEAR				0507.0	1025.0	1				CONT
		CULG				0537.0	0741.0D	1				IIIN
		LEAR				0537.0	0539.0	2				III
		LEAR				0621.0	0640.0	2				S
		SVTO				0621.0	0622.0	2				III
	0631	POTS				0631.0E	1503.0U	2				I,S,C,DC
	1503	POTS				0631.7	0653.8	2				IIIGG
		LEAR				0707.0	0710.0	2				III
		POTS				0716.1	0716.2	2				RS
		POTS				0735.3	0748.0U	2				IIIGG
		LEAR				0749.0	0756.0	2				III
		POTS				0753.1	0756.0	2				UG,C,P
		SVTO				0754.0	0755.0	2				III
		LEAR				0803.0	0803.0	2				III
		POTS				0842.1	0844.9	3				IIIGG
	0706	ONDR				0844.3	1401.1	1				I,N
	1401	POTS				0929.2	0929.3	1				IIIB
		POTS				0935.6	0936.5	2				RSG,U
		LEAR				0940.0	0940.0	2				III
		POTS				0940.3	0940.7	1				IIIB
		SVTO				0956.0	1048.0	1				CONT
		POTS				1011.1	1031.0	3				IIIGG
		ONDR				1013.8	1014.0	3				V
		LEAR				1019.0	1020.0	2				III
		ONDR				1019.7	1019.9	3				IIIG
		POTS				1105.7	1108.0	2				IIIG
		POTS				1123.7	1123.8	1				IIIB
		POTS				1135.3	1142.4	2				IIIG
		POTS				1155.4	1155.6	1				RSG
		SGMR				1200.0	1209.0	2				III
		POTS				1208.9	1209.7	2				IIIG
		POTS				1241.0	1242.4	3				IIIG,V

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14		SVTO				1241.0	1242.0	2				III
		ONDR				1241.1	1241.6	2				IIIGG
		POTS	1241.1	1241.6	1							DCIM
		ONDR	1330.5	1332.0	3	1330.5	1332.0	3				II U
		POTS				1330.6	1344.0	3				IIIGG,RS
		SGMR				1331.0	1338.0	2				V
		SVTO				1331.0	1338.0	3				III
		POTS				1356.0	1409.3U	2				IIIGG
		SGMR				1359.0	2226.0	1				CONT
		POTS	1404.7	1405.4	3							DCIM
		SVTO				1405.0	1409.0	2				III
		POTS				1418.8	1421.6	3				IIIGG,U
		SVTO				1430.0	1431.0	2				III
		POTS				1454.8	1455.2	3				IIIG
		SGMR				1641.0	1642.0	2				V
		PALE				1812.0	1822.0	3				S
		SGMR				1812.0	1829.0	3				IV
		PALE				1830.0	0424.0	1				CONT
		SGMR				1849.0	1911.0	2				II
		PALE				2048.0	2053.0	3				V
		SGMR				2048.0	2053.0	3				V
	2041	CULG				2049.0	2052.0	1				III/VB
		LEAR				2355.0	2356.0	1				III
		CULG				2356.0	2356.0	1				IIIB
15		LEAR				0045.0	1024.0	2				CONT
	0000	CULG				0049.0	0049.0	1				IIIB
		CULG				0251.0	0653.0	1				IIIN
		PALE				0251.0	0251.0	2				III
		CULG				0436.0	0438.0	1				IIIG
		LEAR				0436.0	0443.0	3				III
		SVTO				0645.0	0652.0	1				III
	0650	ONDR										
	0714	POTS				0714.0E	1557.0U	3				I,S,C,DC
		SVTO				0746.0	0818.0	1				S
	1000	ONDR				1000.0	1100.0	1				I,N
		SVTO				1002.0	1014.0	2				S
		POTS	1012.7	1012.9	1							DCIM
		ONDR				1022.1	1022.5	3				IIIG
		SVTO				1054.0	1056.0	2				III
		SGMR				1203.0	1214.0	1				S
		ONDR	1300.3	1302.0	2	1300.3	1302.0	2				IIIG,U
		SGMR				1315.0	1315.0	1				III
		SGMR				1333.0	2228.0	1				CONT
		SGMR				1346.0	1348.0	3				V
		SVTO				1346.0	1347.0	3				V
		POTS	1346.7	1347.1	2							DCIM
		SGMR				1432.0	1433.0	2				III
		SVTO				1432.0	1433.0	2				III
		SGMR				1446.0	1448.0	3				V
		SGMR				1510.0	1515.0	2				III
		SVTO				1510.0	1515.0	2				III
		SGMR				1624.0	1633.0	2				III
		SVTO				1624.0	1630.0	2				III
		PALE				1709.0	1710.0	2				III
		SGMR				1709.0	1710.0	3				III
		PALE				1724.0	1727.0	1				III
		SGMR				1724.0	1728.0	2				III
		PALE				1845.0	1845.0	2				III
		PALE				1936.0	1936.0	1				III
		SGMR				2036.0	2037.0	2				III
	2041	CULG				2041.0E	2306.0	1				IC
		CULG				2117.0	2117.5	1				IIIG
		PALE				2117.0	2132.0	1				III
		CULG				2119.5	2209.5	1				IIIN
		PALE				2208.0	2209.0	2				III
		CULG				2225.0	2228.0	2				IIIG
		PALE				2226.0	2228.0	3				V
		CULG				2232.0	2302.5	1				IIIS

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15		LEAR				2321.0	0045.0	2				CONT
16 0000	0741	CULG				0006.0	0009.5	2	0006.0	0009.5	1	III/VG
		LEAR				0006.0	0009.0	3				III
		PALE				0006.0	0009.0	3				V
		CULG				0018.0	0022.5	1				IIIG
		PALE				0018.0	0018.0	1				III
		CULG				0043.5	0044.0	1				IIIG
		LEAR				0045.0	0953.0	3				IV
		CULG				0046.0	0051.0	3	0046.0	0051.0	1	IIIGG
		PALE				0046.0	0054.0	3				II
		PALE				0046.0	0425.0	3				IV
		LEAR				0051.0	0106.0	3				II
		CULG				0051.5	0105.5	3				IIIB
		CULG				0106.0	0116.0	1				IV C
		CULG				0116.0	0320.0	2				IV C
		CULG				0116.0	0439.5	1				IC
		CULG				0223.0	0449.5	1				IIIS
		LEAR				0254.0	0255.0	2				III
		LEAR				0354.0	0355.0	2				III
		LEAR				0355.0	0357.0	2				III
		LEAR				0409.0	0410.0	2				III
		LEAR				0421.0	0432.0	3				S
		CULG				0426.5	0427.5	1	0426.5	0427.5	1	IIIG
		CULG				0439.5	0741.0D	1				IC
		CULG				0449.5	0600.0	1				IIIS
		LEAR				0524.0	0524.0	2				III
		SVTO				0541.0	0543.0	2				III
		LEAR				0543.0	0543.0	2				III
		CULG				0600.0	0741.0D	1				IIIN
		POTS				0641.0E	1501.0U	3				IIIG,IIIGG
0641	1501	POTS				0641.0E	1501.0U	3				I,S,C,DC,V
		LEAR				0706.0	0706.0	2				III
		SVTO				0706.0	0706.0	2				III
0650	1403	ONDR	0732.6	0758.0	3	0732.6	0758.0	3				V
		LEAR				0735.0	0737.0	3				III
		SVTO				0735.0	0814.0	2				S
		CULG				0735.5	0737.0	2				IIIG
		LEAR				0744.0	0748.0	2				III
		LEAR				0753.0	0754.0	2				III
		LEAR				0808.0	0814.0	2				III
		SVTO				0816.0	0818.0	2				III
		LEAR				0854.0	0855.0	2				III
		ONDR	0854.0	1403.0	1	0854.0	1403.0	1				I,N
		SVTO				0855.0	0855.0	2				III
		LEAR				0911.0	0922.0	2				S
		SVTO				0913.0	0927.0	2				S
		LEAR				0924.0	0927.0	3				III
		ONDR	0958.4	0959.0	3	0958.4	0958.0	3				V
		POTS				1047.9	1105.7	3				II IIIGG
		POTS				1047.9	1105.7	3				IV
		POTS				1047.9	1105.7	3				SPIKES,C,Z
		SVTO				1050.0	1053.0	3				V
		ONDR	1050.9	1105.0	2	1050.9	1105.0	2				II
		POTS	1140.3	1140.5	2							RS
		SGMR				1220.0	1227.0	1				III
		SVTO				1220.0	1220.0	2				III
		SGMR				1239.0	1243.0	3				III
		POTS				1239.1	1259.2	3				II ? P,SPIKES
		POTS				1239.1	1259.2	3				IV IIIGG
		SVTO				1240.0	1243.0	3				III
		ONDR	1240.3	1249.7	2	1240.3	1249.7	2				IIIGG
		SGMR				1255.0	1259.0	2				III
		ONDR	1255.2	1255.3	3	1255.2	1255.3	3				IIIG
		POTS	1255.2	1255.4	2							RS
		SVTO				1258.0	1259.0	2				III
		SGMR				1434.0	1452.0	1				S
		SGMR				1517.0	1517.0	2				III
		SVTO				1517.0	1517.0	2				III

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

MARCH 1991

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band Start (UT)	End (UT)	Int (1-3)	Metric Band Start (UT)	End (UT)	Int (1-3)	Dekametric Band Start (UT)	End (UT)	Int (1-3)	Spectral Type
16			SGMR				1531.0	1557.0	2				S
			SVTO				1538.0	1539.0	2				III
			PALE				1703.0	1706.0	2				V
			SGMR				1703.0	1707.0	3				V
			SGMR				1707.0	1854.0	1				CONT
			SGMR				1802.0	1807.0	3				III
	2041	2400	CULG				2134.5	2223.0	2	2140.0	2216.5	1	IIIN
			PALE				2139.0	2216.0	3				S
			LEAR				2257.0	0920.0	2				CONT
			PALE				2315.0	2316.0	1				III
			CULG				2315.5	2316.0	2	2315.5	2316.0	1	IIIB
			PALE				2318.0	0000.0	1				CONT
17	0000	0740	CULG				0012.0	0018.0	2	0012.0	0018.0	1	IIIG
			PALE				0014.0	0016.0	3				III
			LEAR				0015.0	0017.0	3				III
			CULG				0018.0	0227.0	1				IIIS
			CULG				0025.5	0027.5	1				IIIG
			PALE				0059.0	0100.0	1				III
			CULG				0227.0	0525.5	1				IIIN
			CULG				0325.0	0325.5	2	0325.0	0325.5	1	IIIB
			LEAR				0325.0	0325.0	3				III
			PALE				0325.0	0325.0	1				III
			CULG				0458.0	0459.5	1				IIIG
			CULG				0530.0	0534.0	1				IIIG
			LEAR				0530.0	0535.0	3				III
			SVTO				0530.0	0533.0	2				III
			SVTO				0602.0	0716.0	2				CONT
			POTS				0701.0E	1515.0U	3				IIIG,IIIGG
	0701	1515	POTS				0701.0E	1515.0U	3				I,S,C,DC,V
			CULG				0716.0	0716.5	1				IIIG
			LEAR				0746.0	0749.0	2				III
			SVTO				0747.0	0749.0	2				III
	0650	1402	ONDR	0819.4	0819.6	2							IIIG
			POTS	0819.4	0819.6	2							DCIM
			SVTO				0824.0	0833.0	2				III
			LEAR				0830.0	0833.0	2				III
			ONDR				0834.0	1402.0	1				I,N
			LEAR				0845.0	0848.0	2				III
			SVTO				0848.0	0848.0	2				III
			LEAR				0917.0	0920.0	2				III
			SVTO				0917.0	0920.0	2				III
			SVTO				1000.0	1000.0	2				III
			ONDR	1012.5	1037.0	3	1012.5	1037.0	3				II
			POTS	1012.6	1025.2	2							IIIGG
			POTS				1120.3	1131.0U	3				RSGG
			SVTO				1122.0	1123.0	2				III
			ONDR	1125.5	1137.2	3							IV
			SGMR				1212.0	1214.0	2				III
			SVTO				1212.0	1214.0	3				III
			POTS				1212.8	1220.0	3				C,P,Z
			ONDR	1212.9	1218.5	2							IV
			ONDR	1321.0	1338.0	2	1321.0	1338.0	2				IV
			SVTO				1323.0	1324.0	2				III
			POTS	1323.7	1325.3	1							DCIM
			SGMR				1324.0	1325.0	1				III
			POTS	1333.1	1333.3	3							IIIGG
			ONDR	1333.2	1333.3	2							IIIG
			SGMR				1339.0	1340.0	1				III
			SGMR				1406.0	1413.0	3				III
			SVTO				1406.0	1407.0	2				III
			POTS				1408.9	1425.7	3				IIIGG,P,Z
			POTS				1408.9	1425.7	3				IV
			SVTO				1409.0	1413.0	3				III
			SVTO				1415.0	1416.0	2				III
			SGMR				1416.0	1443.0	1				S
			SVTO				1443.0	1443.0	1				III
			SGMR				1458.0	1758.0	1				CONT
			SVTO				1507.0	1511.0	2				III

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

MARCH 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
17			SGMR				1534.0	1537.0	3				III
			SVTO				1534.0	1536.0	3				III
			SGMR				1558.0	1608.0	2				III
			SVTO				1558.0	1607.0	2				III
			PALE				1745.0	1755.0	3				S
			SGMR				1745.0	1755.0	3				V
			PALE				1821.0	1821.0	1				III
			SGMR				1821.0	1821.0	2				III
			SGMR				1854.0	1855.0	1				III
			SGMR				1906.0	1907.0	1				III
			PALE				1915.0	1917.0	1				III
			SGMR				1915.0	1917.0	2				III
	2040	2400	CULG				2123.0	2151.5	2				IIIN
			PALE				2123.0	2151.0	3				S
			SGMR				2123.0	2134.0	3				S
			SGMR				2141.0	2141.0	3				III
			CULG				2309.0	2318.5	1				IIIN
			LEAR				2309.0	2316.0	2				III
			PALE				2309.0	2316.0	2				III
18			LEAR				0010.0	1021.0	2				CONT
			LEAR				0023.0	0025.0	3				III
			PALE				0023.0	0024.0	3				III
	0000	0740	CULG				0024.0	0025.5	2	0024.0	0024.5	1	IIIG
			CULG				0054.0	0154.0	1				IIIN
			LEAR				0234.0	0235.0	2				III
			PALE				0234.0	0235.0	2				III
			CULG				0234.5	0235.0	2				IIIB
			SVTO				0608.0	0614.0	2				III
			CULG				0612.0	0644.5	1				IIIN
			SVTO				0631.0	1530.0	2				CONT
	0635	1507	POTS				0635.0E	1507.0U	3				I,S,C,DC,IIIG
	0650	1402	ONDR	0804.5	1402.0	1	0804.5	1402.0	1				I,N
			POTS				0804.5	0815.8	3				IIIGG,RS
			ONDR	0942.2	0942.8	2							IIIG
			POTS	1027.6	1028.6	2							DCIM
			SGMR				1111.0	2018.0	1				CONT
			ONDR	1253.8	1256.8	3	1253.8	1256.8	3				IIIGG
			POTS	1253.8	1259.4	3							IIIGG,SPIKES
			POTS	1253.8	1259.4	3							IV
			ONDR				1256.6	1300.5	3				IV
			POTS				1319.6	1320.9	2				RSG
			POTS				1330.3	1338.4	3				IIIGG,V
			POTS	1338.1	1338.2	1							IIIB
			SGMR				1430.0	1430.0	1				III
			PALE				1728.0	1729.0	3				III
			SGMR				1728.0	1731.0	3				V
			PALE				1812.0	1813.0	1				III
	2040	2400	CULG				2300.0	2308.0	1				IIIGG
			LEAR				2300.0	2300.0	2				III
			PALE				2300.0	2301.0	2				V
			CULG				2313.0	2314.0	2				UNCLF
			LEAR				2313.0	2314.0	2				III
19	0000	0740	CULG				0117.5	0121.0	3				III/VG
			LEAR				0118.0	0126.0	3				V
			PALE				0123.0	0147.0	2				II
			CULG				0124.5	0147.0	3				II B
			LEAR				0126.0	0144.0	2				II
			LEAR				0144.0	0153.0	2				IV
			CULG				0158.0	0158.5	2	0158.0	0158.5	1	IIIB
			LEAR				0158.0	0206.0	3				III
			PALE				0158.0	0205.0	2				III
			CULG				0158.5	0202.0	2				II B
			CULG				0203.0	0216.0	1				IIIN
			CULG				0344.0	0345.0	1				IIIG
			LEAR				0345.0	0345.0	2				III
			LEAR				0611.0	0624.0	3				V
			SVTO				0611.0	0612.0	3				III

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

MARCH 1991

Observation Day	Start (UT)	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
19			CULG				0611.5	0612.5	3				IIIB
	0625	1503	POTS				0625.0E	1503.0U	1				I,S,C,IIIG
			LEAR				0657.0	0700.0	1				III
			CULG				0658.0	0740.0D	1				IIIN
			LEAR				0732.0	0739.0	2				III
			POTS				0732.7	0739.0U	2				IIIGG
	0650	1401	ONDR				0732.9	0733.0	2				IIIG
			LEAR				0803.0	0805.0	2				III
			POTS				0803.8	0807.0U	2				IIIGG
			ONDR	0803.9	0804.5	3	0803.9	0804.5	3				IIIG
			SVTO				0804.0	0805.0	2				III
			LEAR				0921.0	0923.0	2				III
			SVTO				0921.0	0923.0	2				III
			POTS	0921.4	0922.0	2							IIIGG
			ONDR	0921.5	0922.0	1							IIIG
			LEAR				1011.0	1011.0	1				III
			SVTO				1011.0	1011.0	2				III
			POTS				1011.4	1011.7	3				U,IIIB
			POTS	1102.6	1103.0U	2							DCIM
			ONDR	1102.8	1103.6	3	1102.8	1103.6	3				IIIGG
			POTS				1253.6	1254.5	2				IIIGG
			SVTO				1254.0	1254.0	2				III
			SVTO				1304.0	1311.0	1				III
			ONDR				1310.5	1311.5	2				IIIG
			POTS				1310.5	1312.7	3				IIIGG
			POTS				1326.6	1329.7	2				IIIGG
			SGMR				1430.0	1430.0	1				III
			SGMR				1521.0	1524.0	2				V
			SGMR				1810.0	1811.0	1				III
			PALE				2008.0	2009.0	1				III
			PALE				2037.0	2038.0	1				III
			SGMR				2037.0	2038.0	2				III
			PALE				2046.0	2046.0	1				III
			PALE				2117.0	2123.0	1				III
	2040	2400	CULG				2118.0	2118.0	1				IIIB
			CULG				2123.0	2123.0	1				IIIB
			PALE				2210.0	2210.0	1				III
			CULG				2216.0	2216.0	2				IIIB
			CULG				2218.0	2304.0	1				IIIN
			PALE				2241.0	2242.0	1				III
20	0000	0739	CULG				0004.0	0048.0	2				IIIN
			LEAR				0004.0	0022.0	2				S
			PALE				0004.0	0048.0	2				S
			LEAR				0036.0	0048.0	2				S
			SVTO				0129.0	0941.0	2				S
			LEAR				0206.0	0213.0	2				III
			PALE				0312.0	0329.0	1				S
			CULG				0313.0	0316.0	1				IIIG
			LEAR				0313.0	0330.0	3				S
			CULG				0326.0	0337.0	1				IIIN
			CULG				0336.0	0357.0	2			II	B
			LEAR				0340.0	0404.0	2			II	
			PALE				0345.0	0349.0	1			II	
			CULG				0404.0	0408.0	2				IIIGG
			LEAR				0404.0	0413.0	3				III
			CULG				0410.0	0415.0	1				IIIG
			CULG				0428.0	0428.0	1				IIIB
			CULG				0449.0	0453.0	1				III/VB
			LEAR				0449.0	0525.0	2				S
			CULG				0456.0	0739.0D	1				IIIN
			LEAR				0534.0	0546.0	3				S
			CULG				0534.5	0536.5	1				UNCLF
			SVTO				0545.0	0546.0	3				III
			CULG				0545.5	0547.0	2				IIIG
			LEAR				0550.0	1019.0	2				CONT
			SVTO				0606.0	0718.0	3				S
			CULG				0606.5	0723.0	2				IIIS
			POTS				0627.0E	1504.0U	3				IIIB,IIIG

SOLAR RADIO EMISSION
Spectral Observations

MARCH 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
20	0627	1504	POTS				0627.0E	1504.0U	3				I,S,C,P,V
			LEAR				0638.0	0645.0	3				III
			LEAR				0717.0	0718.0	3				III
			SVTO				0750.0	0751.0	2				III
			SVTO				0808.0	0814.0	2				III
	0650	1403	ONDR	0808.8	0809.1	1							IIIG
			SVTO				0835.0	0900.0	2				CONT
			POTS				0835.6U	0859.0U	3				IIIGG
			LEAR				0843.0	0854.0	3				S
			ONDR	0853.3	0854.2	3	0853.3	0854.2	3				IIIG,U
			SVTO				0929.0	0941.0	2				S
			SVTO				1010.0	1016.0	2				III
			ONDR	1015.5	1017.0	3	1015.5	1017.0	3				IIIGG
			POTS				1015.6	1115.0U	3				IIIGG,RS,V
			SVTO				1043.0	1107.0	2				S
			ONDR	1044.8	1055.6	3	1044.8	1055.6	3				IV P
			SGMR				1107.0	1107.0	1				III
			SVTO				1128.0	1229.0	3				III
			SGMR				1227.0	1251.0	2				S
			POTS				1227.6	1232.0	3				IIIGG,V
			POTS				1246.9	1251.2U	3				IIIGG,V
			SVTO				1247.0	1251.0	3				III
			SVTO				1313.0	1355.0	2				S
			SGMR				1317.0	1331.0	1				S
			SGMR				1339.0	1434.0	2				S
			POTS				1349.4	1420.0U	3				IIIGG,V
			SGMR				1400.0	1407.0	3				III
			SVTO				1400.0	1405.0	3				III
			ONDR	1400.9	1401.3	3	1400.9	1401.3	3				IIIG
			SVTO				1405.0	1611.0	2				S
			SGMR				1507.0	1704.0	2				S
			SGMR				1737.0	1745.0	2				V
			PALE				1739.0	1741.0	1				III
			PALE				1814.0	1850.0	2				S
			PALE				1931.0	0000.0	2				CONT
			SGMR				2003.0	2003.0	2				III
	2039	2400	CULG				2101.0	2101.0	1				IIIB
			CULG				2113.0	2125.0	2				IIIN
			PALE				2122.0	0000.0	3				III
			CULG				2203.0	2400.0D	1				IIIN
			SGMR				2204.0	2205.0	1				III
			LEAR				2302.0	0007.0	2				S
			CULG				2343.0	2345.0	1				IIIG
21	0000	0739	CULG				0000.0E	0128.0	1				IIIN
			LEAR				0007.0	1019.0	2				CONT
			LEAR				0022.0	0100.0	3				S
			CULG				0025.0	0027.0	2	0035.0	0037.0	1	IIIG
			CULG				0038.0	0043.5	2	0040.5	0043.5	1	IIIGG
			CULG				0047.0	0245.0	2				IIIN
			LEAR				0110.0	0135.0	3				S
			LEAR				0148.0	0153.0	2				III
			LEAR				0227.0	0245.0	3				S
			LEAR				0304.0	0306.0	3				III
			CULG				0304.5	0305.0	1				IIIB
			LEAR				0328.0	0340.0	2				III
			CULG				0330.0	0658.0	1				IIIN
			LEAR				0417.0	0429.0	3				III
			LEAR				0503.0	0505.0	3				III
			LEAR				0547.0	0606.0	3				S
			SVTO				0548.0	0552.0	3				V
			SVTO				0552.0	1640.0	2				CONT
			POTS				0625.0E	1507.0U	2				IIIB,IIIG
	0625	1507	POTS				0625.0E	1507.0U	2				I,S,C,DC
			LEAR				0654.0	0657.0	3				III
			POTS				0654.2	0656.9	2				IIIGG
			LEAR				0730.0	0733.0	3				III
			POTS				0731.9	0732.5	3				IIIGG,V
			LEAR				0811.0	0823.0	2				S

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21 0650	1402	ONDR	0811.2	0811.9	1	0811.5	0811.9	1				IIIG
		POTS				0838.6	0858.8	3				IIIGG
		ONDR	0838.8	0858.8	3	0838.8	0858.8	3				IIIGG
		LEAR				0839.0	0852.0	3				S
		SVTO				0839.0	0852.0	3				S
		SVTO				0941.0	1006.0	3				S
		POTS				0941.2	1006.3	3				IIIGG
		LEAR				0949.0	0952.0	3				III
		ONDR	0949.2	0959.9	3	0949.2	0959.9	3				IIIGG
		ONDR	1020.1	1020.3	3	1020.1	1020.3	3				V
		ONDR	1020.1	1402.0	2	1020.1	1402.0	2				I,N
		POTS				1020.1	1036.0	3				IIIGG,V
		SVTO				1029.0	1034.0	3				III
		POTS	1034.8	1035.7	3							DCIM
		SGMR				1106.0	2015.0	1				CONT
		POTS	1143.7	1144.2	2							DCIM
		ONDR	1143.9	1144.1	1							IIIG
		SGMR				1240.0	1242.0	3				III
		SVTO				1240.0	1243.0	3				III
		POTS				1240.3	1242.0	3				IIIGG,P
		ONDR	1240.5	1242.0	3	1240.5	1242.0	3				IV P
		SVTO				1246.0	1252.0	3				III
		SGMR				1328.0	1330.0	2				III
		POTS				1342.4	1352.0	3				IIIGG,V
		ONDR	1342.8	1351.6	3	1342.8	1351.6	3				IIIGG,U
		SGMR				1346.0	1352.0	3				III
		SVTO				1346.0	1346.0	3				III
		SVTO				1346.0	1352.0	3				III
	1427	1713 WEIS				1445.9	1446.2	2				IIIG
		SGMR				1446.0	1446.0	2				III
		WEIS				1453.2	1453.3	2				IIIG
		SVTO				1503.0	1523.0	3				S
		WEIS				1503.2	1515.7	3				IIIGG
		SGMR				1510.0	1522.0	3				S
		WEIS				1517.6	1524.5	3				IIIGG
		WEIS				1550.2	1550.3	2				IIIB
		WEIS	1557.4	1557.7	1							IIIG
		WEIS				1606.5	1607.0	1				IIIG
		PALE				1731.0	0427.0	1				CONT
		PALE				1741.0	1747.0	1				III
		PALE				1830.0	1831.0	2				III
		PALE				1850.0	1859.0	3				III
		SGMR				1850.0	1859.0	2				V
		PALE				1931.0	0427.0	2				CONT
		PALE				1940.0	1942.0	2				V
		SGMR				1940.0	1942.0	2				V
		PALE				1953.0	1953.0	3				III
		SGMR				1953.0	1954.0	2				III
		PALE				2022.0	2047.0	3				S
	2039	2400 CULG				2041.0	2042.5	1				IIIG
		PALE				2130.0	2131.0	2				III
		CULG				2131.0	2137.5	1				IIIG
		PALE				2218.0	2222.0	2				V
		CULG				2220.5	2222.0	1				IIIG
		PALE				2240.0	2249.0	2				V
		LEAR				2244.0	2337.0	1				CONT
		LEAR				2337.0	1018.0	3				IV
		CULG				2337.5	2342.5	2				VB
22 0000	0739	CULG				0018.5	0041.5	1				IIIN
		CULG				0046.0	0047.5	1				IIIG
		SVTO				0511.0	0701.0	2				CONT
		POTS				0627.0E	1509.0U	2				IIIB,IIIG
	0627	1509 POTS				0627.0E	1509.0U	2				I,S,C,DC,P
		POTS				0632.9	0646.1	3				IIIGG,V
	0559	1143 WEIS				0633.7	0635.5	2				IIIG
		WEIS				0637.2	0638.7	3				IIIG
		WEIS				0645.3	0646.2	3				IIIG
		WEIS				0651.0	1521.0	2				IIIN

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22			WEIS				0657.9	0658.0	1				IIIB
	0650	1402	ONDR	0658.0	1402.0	2	0658.0	1402.0	2				I,N
			SVTO				0701.0	1641.0	3				CONT
			ONDR	0701.4	0702.2	3	0701.4	0702.2	3				V
			WEIS				0701.4	0702.3	3				IIIG,RS
			WEIS	0703.7	0703.9	2							IIIG
			WEIS				0742.0	1438.0	2				I,N
			POTS				0828.8	0850.3	3				II IIIGG
			POTS				0828.8	0850.3	3				IV H
			WEIS				0830.0	1542.0					Cont
			WEIS				0832.2	0832.5	2				IIIG
			ONDR				0833.1	0833.7	3				V
			ONDR	0836.2	0850.3	3	0836.2	0850.3	3				IV
			WEIS				0836.3	0851.3	3				IIIGG
			POTS				0909.4	0917.1	3				IIIGG
			ONDR	0912.0	0917.0	3	0912.0	0917.0	3				IV P
			WEIS				0912.0	0913.2	3				IIIG
			WEIS				0915.4	0916.4	3				IIIG
			SGMR				1104.0	2236.0	2				IV
			POTS				1146.1	1203.5	3				II ? IIIGG
			POTS				1146.1	1203.5	3				IV V
			WEIS				1158.5	1159.3	2				DCIM
			WEIS				1203.0	1203.3	2				IIIG
			POTS				1241.8	1244.6	3				IIIGG
			WEIS				1243.8	1244.2	2				IIIG
			POTS				1244.0	1257.0	2				UNCLF
			POTS				1431.4	1439.7	2				IIIGG
			POTS				1441.2	1443.0	1				UNCLF
			WEIS				1507.2	1507.3	3				IIIG
			WEIS				1518.3	1518.5	3				IIIG
			PALE				1651.0	0427.0	3				CONT
			PALE				2033.0	2037.0	3				III
	2039	2400	CULG				2203.5	2203.5	1				IIIB
			CULG				2227.0	2228.0	1				IIIG
			LEAR				2228.0	2255.0	1				CONT
			LEAR				2247.0	2255.0	2				II
			PALE				2249.0	2251.0	2				II
23			LEAR				0151.0	0152.0	3				III
			PALE				0151.0	0152.0	3				III
	0000	0739	CULG				0151.5	0152.5	1				IIIG
			CULG				0417.0	0417.0	1				IIIB
			CULG				0428.0	0429.5	1				IIIG
			LEAR				0435.0	0435.0	2				III
			CULG				0503.0	0515.0	1	0503.0	0515.0	1	IIIGG
			SVTO				0507.0	0512.0	1				III
			LEAR				0511.0	0513.0	3				III
			SVTO				0524.0	1243.0	1				CONT
			CULG				0611.0	0616.5	1				IIIN
	0639	1501	POTS				0639.0E	1501.0U	2				I,S,C,DC,IIIB,IIIG
			LEAR				0647.0	0651.0	3				III
	0557	1142	WEIS				0647.0	1638.0	2				IIIN
	0650	0755	ONDR				0650.0	0755.0	2				I,N
			CULG				0650.5	0651.0	1				IIIG
			WEIS				0650.5	0650.6	2				IIIB
			POTS				0653.8	0653.9	2				RS
			LEAR				0743.0	0744.0	3				III
			SVTO				0743.0	0745.0	3				III
			WEIS				0743.8	0744.2	2				IIIG
			SVTO				0817.0	0817.0	3				III
			SVTO				0840.0	1230.0	2				S
			POTS				0912.0U	0917.8	2				IIIGG
			WEIS				0925.8	0928.6	3				IIIGG
			POTS				0926.0	0935.3	3				IIIGG,SPIKES,RS
			WEIS				1047.8	1048.0	1				IIIB
			POTS				1047.9	1054.0	3				IIIGG
	0959	1401	ONDR				1048.0	1401.0	2				I,N
			ONDR	1050.1	1050.2	3	1050.1	1050.2	3				V
			WEIS				1050.2	1050.3	3				IIIB

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23			WEIS				1053.8	1054.1	2				IIIB
			SGMR				1102.0	1621.0	1				CONT
			SGMR				1108.0	1110.0	2				III
			WEIS				1108.3	1109.8	2				IIIG
	1155	1718	WEIS										
			POTS				1227.0U	1247.0	3				II ? IIIGG
			POTS				1227.0U	1247.0	3				IV P,Z,F
			SGMR				1228.0	1236.0	3				III
			WEIS				1228.1	1235.4	2				IIIGG
			ONDR	1229.0	1247.5	3	1229.0	1247.5	3				IV V
			SVTO				1230.0	1242.0	3				S
			WEIS				1233.7	1241.0	2				Cont
			SVTO				1243.0	1450.0	2				CONT
			WEIS	1244.6	1247.0	2							IIIGG
			SGMR				1300.0	1301.0	2				III
			SGMR				1436.0	1442.0	3				III
			POTS				1440.0U	1444.2	2				IIIGG
			SVTO				1450.0	1642.0	3				CONT
			PALE				1650.0	0428.0	3				CONT
	2038	2400	CULG										
24	0000	0738	CULG										
			SVTO				0506.0	1643.0	3				CONT
	0641	1521	POTS				0641.0E	1521.0U	2				I,S,C,P,IIIB,IIIG
	0650	1403	ONDR				0739.2	0739.4	3				V
			WEIS				0739.2	0739.4	2				IIIG
			ONDR				0750.9	0751.2	3				V
			WEIS				0751.0	0751.2	2				IIIB
	0555	1710	WEIS				0830.0	1525.0	2				IIIN
			POTS	0852.6	0857.9	2							IIIG
			ONDR	0852.7	0858.0	2							IIIG
			WEIS	0857.7	0857.9	1							IIIG
			ONDR	1000.6	1403.0	1	1000.6	1403.0	1				I,N
			POTS				1006.1	1036.5	3				IV IIIGG,U,RS
			WEIS				1033.0	1036.0	3				IIIGG
			ONDR	1035.5	1036.0	3	1035.5	1036.0	3				V
			SGMR				1100.0	2238.0	2				CONT
			WEIS				1207.6	1207.7	1				IIIB
			POTS	1209.9	1221.8	2							DCIM,P
			ONDR	1234.6	1237.7	3	1234.6	1237.7	3				V
			WEIS				1234.7	1234.8	2				IIIG
			WEIS				1237.5	1237.7	2				IIIG
			ONDR				1348.7	1353.9	3				V
			WEIS				1348.7	1349.0	2				IIIG
			WEIS				1351.2	1351.3	1				IIIB
			WEIS				1353.6	1353.7	2				IIIG
			POTS				1408.1	1408.4	3				U?
			WEIS				1408.2	1408.4	2				IIIG
			WEIS				1411.8	1412.0	1				IIIB
			POTS				1427.7	1433.9	2				IIIGG
			WEIS				1428.1	1429.9	2				IIIGG
			WEIS				1539.7	1540.0	2				IIIG
			WEIS				1611.8	1611.9	1				IIIB
			WEIS				1645.9	1646.0	2				IIIG
			PALE				1649.0	0000.0	1				CONT
	2038	2400	CULG										
			LEAR				2231.0	0001.0	1				CONT
25			LEAR				0001.0	1015.0	3				IV
			SVTO				0504.0	1644.0	3				CONT
	0627	1525	POTS				0627.0E	1525.0U	2				I,S,C,P,IIIB,IIIG
			ONDR	0702.0	1402.0	2	0702.0	1402.0	2				I,N
	0650	1402	ONDR				0702.0	0703.1	3				II
	0553	0903	WEIS				0702.4	0703.2	2				IIIG
			POTS				0727.7	0727.9	2				U
			POTS				0802.2	0823.0U	3				IV IIIGG,U,Z,P
			SVTO				0805.0	0809.0	3				V
			WEIS				0805.1	0815.6	3				IIIGG
			WEIS				0807.7	0811.4	3				II H

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25			ONDR	0808.8	0813.0	3	0808.8	0813.0	3				IV
			SVTO				0809.0	0811.0	3				II
			WEIS				0821.6	0822.8	1				IIIGG
			POTS				0838.4	0838.6	2				U
			WEIS				0845.3	0847.4	2				IIIG
	0925	1719	WEIS										
			POTS				1051.8	1051.9	2				RS
			WEIS				1052.0	1102.0	2				IIIGG
			SGMR				1059.0	1135.0	1				CONT
			WEIS				1111.6	1112.6	2				II HB
			WEIS				1113.5	1115.6	2				IIIG
			SGMR				1135.0	2239.0	2				CONT
			WEIS				1344.0	1610.0	2				Cont
			POTS				1426.7	1436.0	3				IIIGG
			WEIS				1427.0	1430.7	2				IIIGG
			WEIS				1432.6	1435.9	2				IIIGG,Spikes
			POTS	1435.2	1435.9	2							SPIKES,P
			POTS				1458.3	1459.8	3				IIIGG
			WEIS				1458.4	1459.1	2				IIIG
			WEIS				1546.7	1548.4	2				IIIGG,Spikes
			WEIS				1549.7	1550.3	1				IIIG
			WEIS				1635.3	1636.8	2				IIIG,Spikes
			PALE				1648.0	0428.0	3				CONT
	2038	2400	CULG										
26	0000	0738	CULG										
			SVTO				0503.0	1645.0	3				CONT
	0533	1722	WEIS				0610.0	1625.0	2				Cont
	0630	1509	POTS				0630.0E	1509.0U	2				I,S,C,DC,P
			POTS				0630.1	0630.2	2				U
			POTS				0647.4	0647.5	2				U
	0650	1402	ONDR	0650.0	1402.0	1	0650.0	1402.0	1				I
			POTS				0654.9	0655.9	3				IIIG
			WEIS				0654.9	0655.7	2				IIIG,Spikes
			WEIS				0700.0	1605.0	2				I,N
			POTS				0709.8	0710.6	1				UNCLF
			POTS				0807.4	0808.0	2				IIIG
			POTS	0807.6	0807.7	1							RS
			WEIS				0807.6	0807.8	1				IIIG
			POTS				0823.0	0825.3	3				IIIGG,U
			ONDR	0823.4	0824.2	3	0823.4	0824.2	3				IIIGG
			WEIS				0823.4	0824.2	3				IIIG
			POTS	0946.9	0947.1	1							DCIM
			SGMR				1057.0	1417.0	2				CONT
			POTS				1149.2	1149.4	2				UNCLF
			POTS				1402.6	1402.7	3				RS
			POTS				1402.6	1403.2	1				IIIG
			WEIS				1402.6	1403.7	1				RS
			SGMR				1417.0	2240.0	3				CONT
			WEIS				1417.8	1433.8	3				IIIGG,RS
			POTS				1418.5	1428.6	3				UNCLF,P?
			PALE				1650.0	0428.0	3				CONT
			PALE				2028.0	2031.0	3				III
			SGMR				2028.0	2030.0	3				III
	2037	2400	CULG										
			LEAR				2245.0	1013.0	3				CONT
27	0000	0737	CULG				0057.0	0057.0	1				IIIG
			SVTO				0501.0	1646.0	3				CONT
	0548	1723	WEIS				0550.0	1320.0	2				Cont
	0638	1224	POTS				0638.0E	1505.0U	2				I,S,C,DC,P
			POTS				0710.2	0710.4	2				IIIG
			WEIS				0710.3	0710.6	3				IIIG
			POTS				0735.7	0736.1	2				IIIG
			POTS				0853.7	0853.9	2				UNCLF
			WEIS				0853.7	0853.8	2				U
	0650	1401	ONDR	0853.9	0855.7	3	0853.9	0855.7	3				V
			POTS				0855.6	0855.7	2				U
			WEIS	0855.6	0855.7	1							IIIB

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27		WEIS				1032.0	1629.0	2				I,S
		SGMR				1055.0	2241.0	2				CONT
		POTS				1141.0U	1149.0U	2				P
		POTS				1213.7	1214.0	2				UNCLF
		WEIS	1213.7	1213.9	1							IIIG
		ONDR	1213.8	1214.0	2							IIIG
1251	1505	POTS				1404.3	1404.8	2				UNCLF
		WEIS	1404.3	1404.7	2							IIIG
		WEIS				1536.4	1536.7	1				IIIG
		WEIS				1539.3	1539.6	1				IIIG
		PALE				1650.0	0429.0	2				CONT
		PALE				1831.0	1834.0	3				III
		PALE				1953.0	1953.0	3				III
		LEAR				2246.0	1012.0	2				CONT
2037	2400	CULG				2311.0	2311.0	1				IIIB
28		PALE				0148.0	0148.0	2				III
		LEAR				0624.0	0624.0	3				III
		SVTO				0624.0	0627.0	3				III
0547	1423	WEIS				0624.4	0624.6	1				IIIB
		WEIS				0627.1	0627.2	1				IIIB
0645	1513	POTS				0645.0E	1513.0U	2				I,S,C,DC
0650	1403	ONDR										
0000	0737	CULG				0726.5	0726.5	1				IIIB
		POTS				0812.6	0812.7	1				IIIB
		POTS				0830.9	0831.0	1				IIIB
		POTS				0843.1	0843.4	2				IIIG
		POTS				0934.8	0935.0	1				IIIB,RS
		POTS				0939.7	0939.8	1				IIIB
		POTS				1029.6	1029.8	2				IIIB
		POTS				1047.9	1048.4	2				IIIG
		SGMR				1107.0	2243.0	1				CONT
		POTS				1234.0	1237.4	2				IIIG
		SGMR				1234.0	1237.0	2				III
		WEIS				1234.0	1234.3	1				IIIG
		SVTO				1235.0	1236.0	2				III
		WEIS				1235.7	1235.8	1				IIIB
		POTS				1239.0	1254.6	2				IIIG
		POTS				1355.0	1401.5	2				IIIG
		POTS				1435.5	1438.8	2				IIIG
		POTS				1502.0	1502.2	3				IIIB
		SGMR				1502.0	1502.0	2				III
		SVTO				1502.0	1502.0	2				III
1505	1724	WEIS				1515.8	1516.0	1				IIIG
		SVTO				1630.0	1630.0	2				III
		PALE				1859.0	0429.0	1				CONT
		PALE				2137.0	2157.0	2				S
2037	2400	CULG				2138.0	2138.0	1				IIIB
		LEAR				2314.0	2314.0	1				III
		PALE				2314.0	2331.0	1				S
		CULG				2314.5	2314.5	1				IIIPAIR
		LEAR				2354.0	2354.0	1				III
		LEAR				2356.0	0930.0	2				CONT
29		LEAR				0052.0	0053.0	2				III
		PALE				0052.0	0052.0	1				III
0000	0737	CULG				0052.5	0052.5	1				IIIB
		LEAR				0210.0	0216.0	2				III
		PALE				0210.0	0210.0	1				III
		CULG				0210.5	0210.5	1				IIIPAIR
		CULG				0216.5	0216.5	1				IIIB
		LEAR				0249.0	0250.0	2				III
		PALE				0249.0	0249.0	1				III
		CULG				0249.5	0249.5	1				IIIB
		LEAR				0318.0	0319.0	2				III
		PALE				0318.0	0318.0	1				III
		CULG				0318.5	0319.0	1				IIIG
		CULG				0423.0	0426.0	1				IIIG
		LEAR				0456.0	0457.0	2				III

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

MARCH 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
29			CULG				0456.5	0457.0	1				IIIG
			LEAR				0514.0	0519.0	3				III
			SVTO				0514.0	0515.0	3				III
			CULG				0514.5	0515.0	1	0514.0	0515.0	1	IIIG
			CULG				0519.5	0519.5	1				IIIG
			LEAR				0529.0	0530.0	2				III
			SVTO				0529.0	0530.0	1				III
	0629	1447	POTS				0629.0E	1447.0U	1				I,S
			CULG				0629.5	0629.5	1	0629.5	0629.5	1	IIIB
			POTS				0641.8	0701.1	3				II IIIGG
			POTS				0641.8	0701.1	3				IV SPIKES
			POTS				0641.8	0701.1	3				U,HARM,H
	0546	1727	WEIS				0644.3	0647.4	2				IIIGG,U
			CULG				0645.0	0646.0	1				IIIG
			CULG				0645.0	0700.0	2				II B
			WEIS				0647.3	0656.4	3				II H
			LEAR				0649.0	0700.0	2				II
			SVTO				0649.0	0701.0	3				II
			POTS				0711.0	0711.6	1				IIIG
			SVTO				0711.0	0711.0	2				III
			CULG				0711.5	0712.5	1				IIIG
			POTS				0720.3	0726.6	1				IIIG
			SVTO				0725.0	0726.0	1				III
			CULG				0736.5	0736.5	1				IIIB
			SVTO				0739.0	0758.0	1				CONT
			POTS				0839.9	0840.2	2				UNCLF
			POTS				0841.2	0841.4	1				UNCLF
			SVTO				0919.0	0920.0	2				III
			POTS				0919.5	0919.8	2				IIIB
			POTS				0951.8	0953.3	2				IIIG
	0650	1403	ONDR				0957.2	0957.3	2				V
			POTS				0957.2	0957.4	3				UNCLF
			WEIS				0957.3	0957.4	1				IIIB
			POTS				1021.3	1025.1	1				IIIGG
			POTS				1109.5	1109.6	1				RS
			POTS				1223.5	1223.6	1				IIIB
			POTS				1238.6	1238.9	2				UNCLF
			POTS				1243.3	1243.7	1				IIIG
			POTS				1246.1	1246.4	2				UNCLF
			POTS				1300.8	1300.9	1				U
			POTS	1306.0	1306.3	1							DCIM
			POTS				1310.3	1310.5	2				UNCLF
			POTS				1315.1	1315.2	2				IIIB
			SGMR				1325.0	2044.0	1				CONT
			POTS				1328.5	1328.7	1				IIIB
			POTS				1330.9	1331.0	1				UNCLF
			POTS				1351.9	1352.0	1				UNCLF
			ONDR	1358.4	1400.0	2	1358.4	1400.0	2				IIIG
			POTS				1358.5	1400.5	2				IIIGG
			WEIS				1358.5	1358.8	2				IIIG
			SGMR				1743.0	1744.0	2				III
			PALE				1744.0	1745.0	1				III
			PALE				1911.0	1911.0	1				III
			PALE				2039.0	0429.0	2				CONT
	2036	2400	CULG				2112.0	2127.5	1				IIIGG
			SGMR				2115.0	2128.0	2				S
			CULG				2128.0	2128.0	1				IIIG
			CULG				2251.5	2259.0	1				IIIG
			LEAR				2329.0	1010.0	2				CONT
30	0000	0736	CULG				0159.0	0159.0	1				IIIB
			LEAR				0315.0	0318.0	2				III
			CULG				0315.5	0315.5	1				IIIB
			CULG				0318.0	0318.5	1				IIIG
			LEAR				0416.0	0416.0	2				III
			CULG				0416.5	0416.5	1				IIIB
			LEAR				0432.0	0433.0	2				III
			CULG				0433.0	0433.0	1				IIIPAIR
			LEAR				0439.0	0442.0	2				III

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

MARCH 1991

Observation Day	Start (UT)	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
30			CULG				0441.5	0442.5	1				IIIG
	0543	1153	WEIS				0612.1	0612.2	1				IIIB
			LEAR				0637.0	0638.0	2				III
			SVTO				0637.0	0638.0	2				III
			WEIS				0637.2	0638.3	2				IIIG,U
			CULG				0637.5	0637.5	1				IIIB
			SVTO				0640.0	1042.0	1				CONT
	0643	1443	POTS										
			POTS				0643.0E	1417.0	1				I,S,W
	0650	1402	ONDR				0731.1	0731.2	3				V
			POTS				0731.1	0734.7	3				IIIG
			WEIS				0731.1	0731.2	2				IIIG
			WEIS				0734.3	0734.4	1				IIIB
			POTS				0840.1	0840.2	1				IIIB
			POTS				0902.5	0926.2	3				IV IIIGG,U
			WEIS				0902.5	0910.7	3				IIIGG,DP
			ONDR	0902.6	0911.0	3	0902.6	0911.0	3				IIIGG
			LEAR				0903.0	0909.0	2				III
			SVTO				0904.0	0905.0	2				III
			SVTO				0907.0	0910.0	3				III
			POTS				1014.0	1014.1	1				IIIB
			POTS				1028.7	1029.1	2				IIIG
			POTS				1127.3	1133.0	3				IIIG,UG
			WEIS				1129.9	1130.1	2				IIIG
			ONDR	1130.0	1131.0	3	1130.0	1131.0	3				IIIGG
			SGMR				1133.0	2045.0	1				CONT
			POTS	1148.7	1149.0	1							UG
			POTS				1159.4	1206.8	3				IIIGG
			ONDR	1204.4	1205.2	3	1204.4	1205.2	3				IIIGG
			SGMR				1247.0	1248.0	2				III
			SVTO				1247.0	1247.0	2				III
			POTS				1259.1	1301.0	1				IIIG
			POTS				1341.1	1341.3	1				IIIB
			POTS				1422.3	1427.9	2				IIIG
	1716	1728	WEIS										
			PALE				1845.0	0000.0	1				CONT
			SGMR				1932.0	1933.0	2				III
	2036	2400	CULG				2108.0	2108.0	1				IIIB
			CULG				2122.5	2122.5	1				IIIB
			CULG				2236.0	2242.0	1				IIIG
			CULG				2325.0	2325.0	1				IIIB
31	0000	0736	CULG				0002.0	0004.5	1				IIIG
			LEAR				0002.0	0004.0	2				III
			PALE				0002.0	0013.0	2				III
			LEAR				0012.0	0013.0	3				III
			CULG				0012.5	0013.0	2	0012.5	0013.0	1	IIIB
			LEAR				0035.0	0041.0	2				III
			PALE				0035.0	0041.0	2				III
			CULG				0036.0	0036.0	2				IIIB
			CULG				0038.0	0043.0	2				IIIGG
			LEAR				0100.0	1009.0	2				CONT
			CULG				0104.5	0104.5	1				IIIB
			CULG				0202.0	0202.0	1				IIIB
			LEAR				0227.0	0228.0	2				III
			PALE				0227.0	0228.0	1				III
			LEAR				0300.0	0300.0	2				III
	0629	1457	POTS				0629.0E	1457.0U	1				I,S,C,W
			POTS				0633.2	0637.9	1				IIIG
	0650	0734	ONDR										
			POTS				0710.7	0716.0	2				IIIGG
			POTS				0730.9	0731.3	1				IIIG
			POTS				0751.3	0751.4	1				IIIB
			POTS				0833.3	0834.5	1				IIIG
			POTS				0839.6	0839.7	1				IIIB
			POTS				0850.8	0851.6	3				IIIG
			LEAR				0918.0	0918.0	2				III
			POTS				0918.0	0918.3	2				IIIG
			SVTO				0918.0	0918.0	2				III

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

MARCH 1991

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
31		POTS	0951.2	0951.3	1							DCIM
		POTS				1009.4	1009.8	1				IIIG
	0541	1728 WEIS				1122.1	1122.2	2				IIIB
		POTS				1123.9	1235.0U	3				IV ? IIIGG
		POTS	1126.2	1127.4	1							DCIM
		WEIS				1126.7	1126.8	1				IIIG
		WEIS				1129.2	1129.4	2				IIIG
		SGMR				1133.0	2116.0	1				CONT
		POTS				1327.7	1328.2	1				IIIG
		SVTO				1338.0	1350.0	1				S
		POTS				1338.5	1338.7	1				IIIB
		POTS				1425.8	1433.1	2				IIIG,RS
		WEIS				1428.2	1428.3	2				IIIG
		WEIS				1650.1	1651.8	2				Spikes,U,RS
		PALE				1654.0	1654.0	1				III
		SGMR				1654.0	1657.0	2				V
		WEIS				1654.7	1654.9	1				IIIG
		WEIS				1656.9	1657.0	1				IIIB
		WEIS				1701.1	1701.2	2				IIIB,U
		SGMR				1909.0	1914.0	3				III
		PALE				1941.0	2019.0	2				II
		SGMR				1941.0	2017.0	2				II
		PALE				2202.0	2202.0	1				III
		SGMR				2202.0	2202.0	1				III
	2036	2400 CULG				2202.5	2202.5	1				IIIB
		CULG				2308.0	2309.0	1				IIIPAIR
		LEAR				2308.0	2309.0	2				III
		PALE				2324.0	2324.0	1				III

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

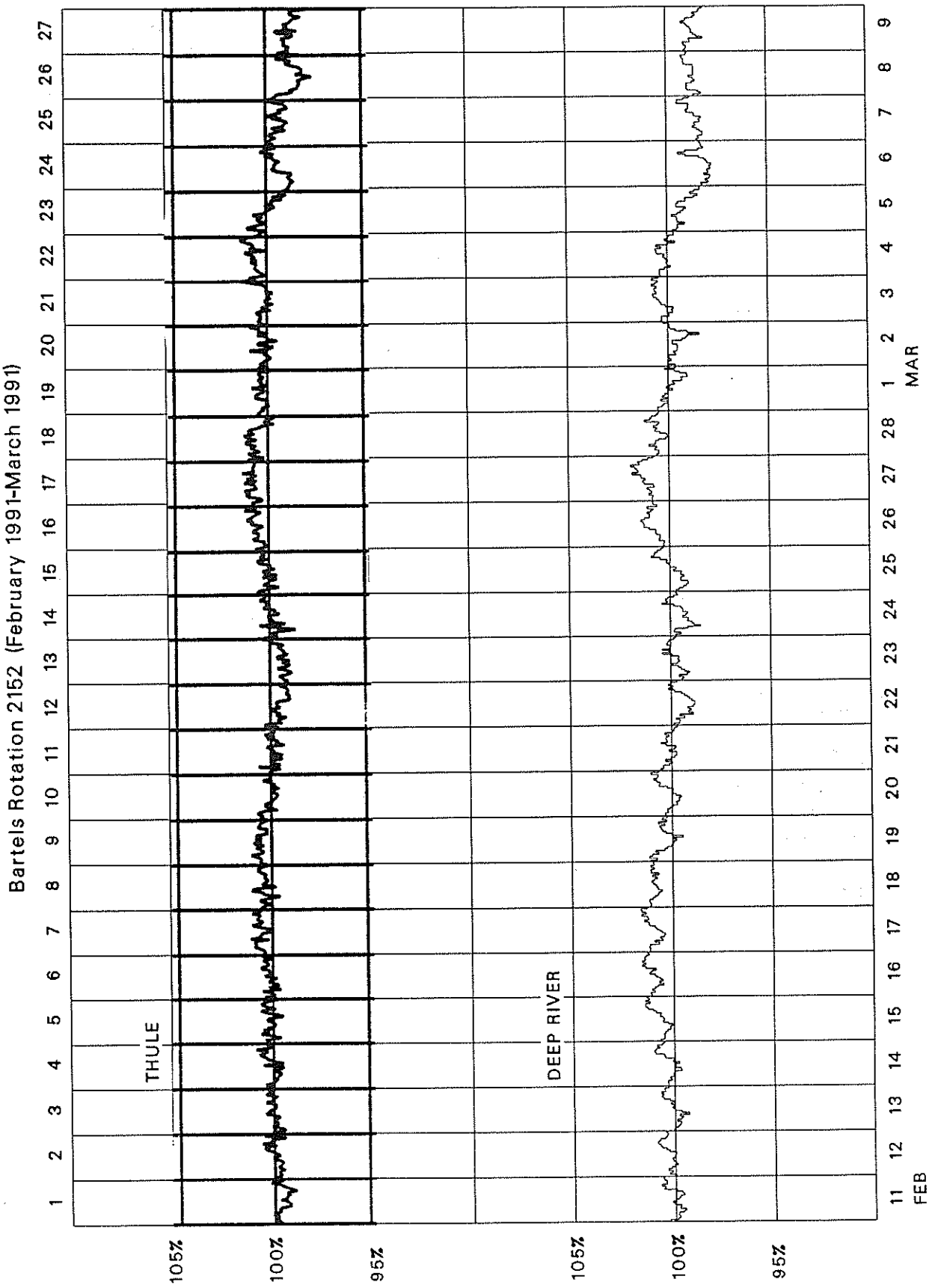
RS = Reverse slope burst
DP = Drifting pairs
DC = Drifting Chains
H = Herringbone
W = Weak
P = Pulsations
CONT = Continuum
UNCLF = Unclassified activity
DCIM = Fast drift

Stations Reporting:

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

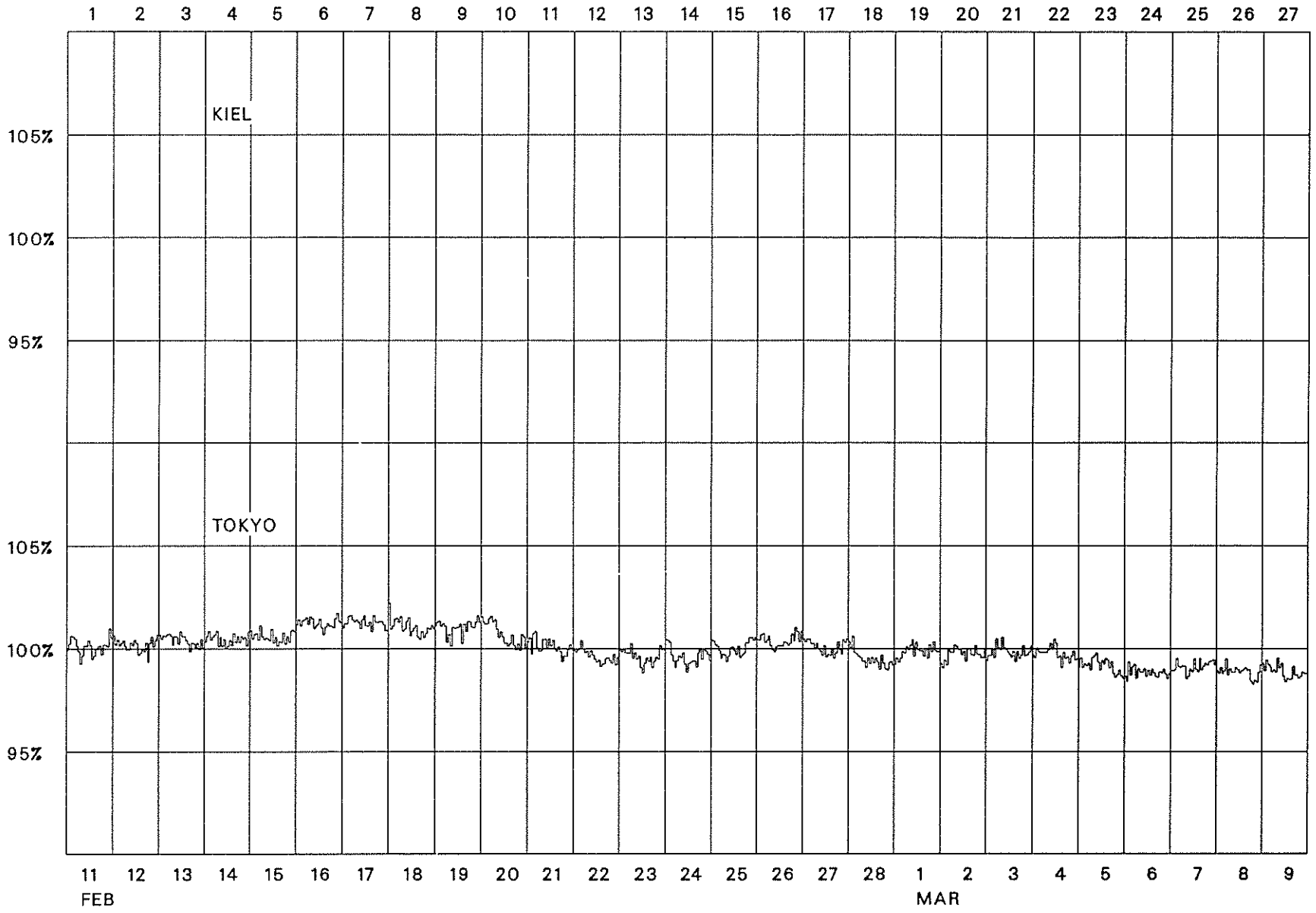
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2152 (February 1991-March 1991)



COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2152 (February 1991-March 1991)



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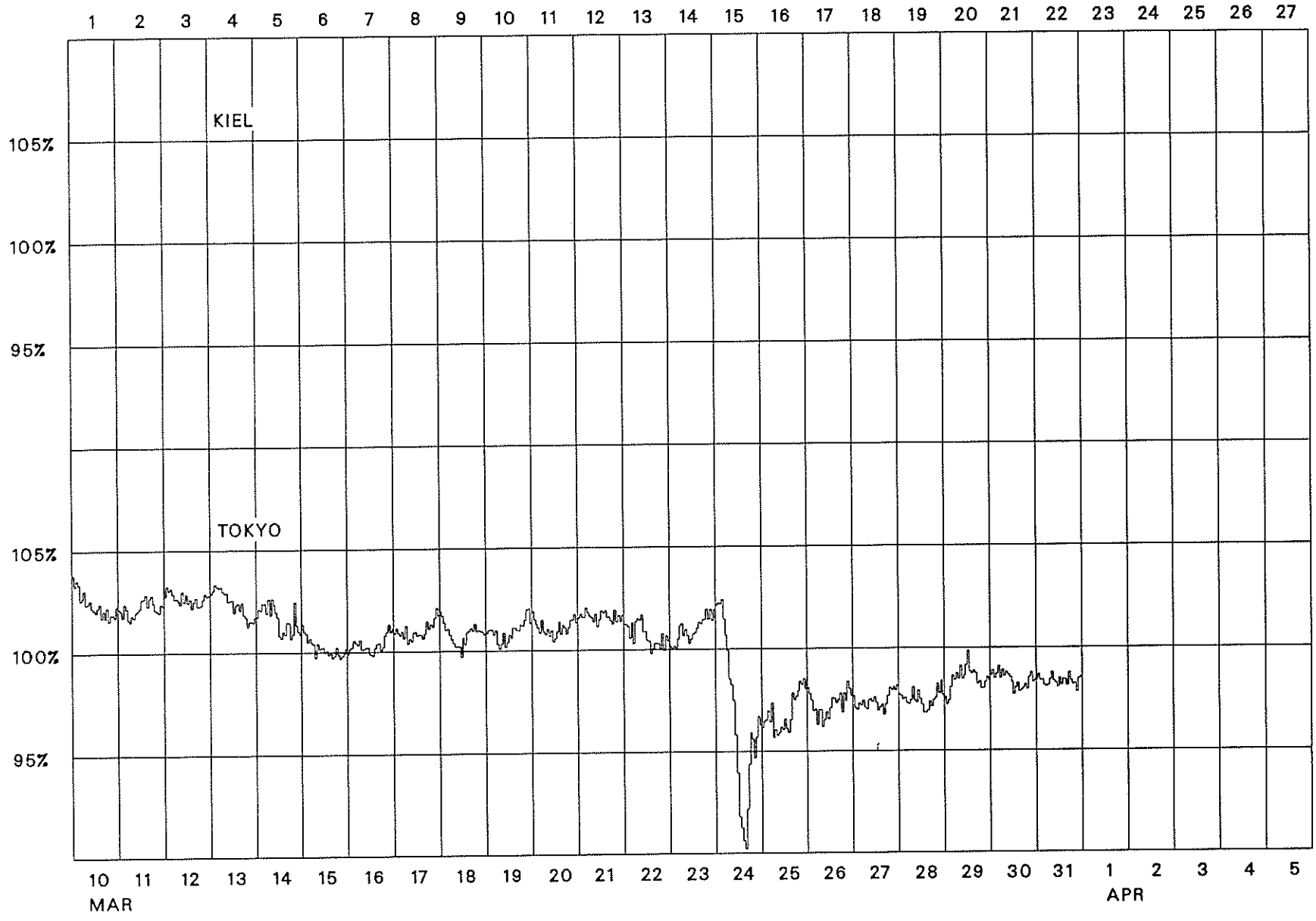
COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2153 (March 1991-April 1991)

COSMIC RAY INDICES
(Neutron Monitor)

Bartels Rotation 2153 (March 1991-April 1991)



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Mar 91

C O S M I C R A Y I N D I C E S
(Neutron Monitor)

MARCH 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	3939	6376.7	5744.7		3494.4	
2	3935	6359.2	5740.5		3490.1	
3	3935	6406.7	5743.2		3493.6	
4	3956	6392.4	5730.8		3490.6	
5	3927	6331.6	5680.0		3470.0	
6	3901	6269.5	5649.7		3458.2	
7	3904	6298.5	5661.8		3468.2	
8	3870	6307.3	5644.0		3459.3	
9	3880	6304.1	5636.5		3460.4	
10	3753	6137.1	5495.1		3411.2	
11	3752	6145.0	5476.9		3404.2	
12	3780	6114.0	5481.5		3420.0	
13	3709	6011.8	5400.5		3411.1	
14	3615	5886.0	5279.1		3385.7	
15	3618	5854.5	5264.7		3338.5	
16	3630	5887.7	5273.6		3343.6	
17	3632	5922.7	5298.4		3365.2	
18	3634	5887.0	5278.1		3359.5	
19	3639	5897.7	5285.9		3363.0	
20	3632	5886.4	5285.0		3368.8	
21	3643	5948.3	5324.5		3385.7	
22	3583	5896.8	5295.1		3355.1	
23	3634	5932.8	5341.7		3363.5	
24	3361	5522.0	4855.6		3221.0	
25	3370	5415.5	4875.3		3227.1	
26	3427	5519.7	4968.0		3241.3	
27	3429	5507.8	5000.8		3246.3	
28	3415	5540.7	5059.5		3249.0	
29	3476	5658.8	5102.2		3280.4	
30	3468	5688.4	5096.8		3279.6	
31	3429	5629.0	5052.3		3277.0	
Mean	3673	5965.7	5355.5		3373.6	

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

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	Am	aa Provisional N	S	M
1		3- 3- 3- 2+	3- 2+ 3+ 3+	22	13	0.7						
2	Q10A	3+ 2+ 2- 2	2+ 3- 2+ 1+	18	9	0.5						
3	Q4	3- 1 2- 1+	1 1 2 2+	13	6	0.3						
4	Q8A	2 2- 1- 1+	2 3- 3+ 3	17-	9	0.5						
5		3- 3+ 4- 5-	4 4+ 3- 3+	29-	22	1.1						
6		3 3 4- 4	3- 4 5 4	29+	24	1.2						
7		3+ 3+ 4 4-	4- 3+ 4+ 5-	30+	24	1.2						
8		4- 3 2 4-	2+ 4- 3+ 4-	25+	17	0.9						
9		4+ 4 3 4-	4+ 3+ 3- 5-	30	25	1.2						
10		5 6- 3- 2+	3 2+ 2- 0+	23	21	1.1						
11	Q2	0+ 0+ 1+ 1	2 1+ 1 2	9+	4	0.2						
12		2 3- 3+ 3	3 3 4 4	25	17	0.9						
13		6+ 4 5 3-	2+ 3+ 1+ 0+	25+	27	1.2						
14	Q5A	3 2+ 3- 2	1- 1- 1+ 1-	13+	7	0.4						
15	Q3	1+ 0+ 1- 2+	3- 2+ 1- 1-	11	6	0.3						
16	Q6A	1- 0+ 1- 2-	1 3- 4 2-	13-	8	0.4						
17		3- 3+ 2+ 3-	2 2+ 3+ 4-	22+	13	0.8						
18	Q7A	4 3+ 3- 2-	1- 1 0+ 0	14-	9	0.5						
19		1- 2+ 2- 2+	3- 3+ 4 3	20	12	0.7						
20		2+ 4- 3+ 3	3- 2- 2 1	20-	12	0.7						
21		1 2 3 3+	7- 4 3- 3+	26	26	1.2						
22		3- 3+ 4 4	4- 2- 2+ 5-	26+	20	1.0						
23		4- 3 2 3-	3- 2 2 2-	20-	11	0.6						
24	D1	3 9- 8 7+	5+ 5 8 9-	54	161	2.0						
25	D2	8- 9- 5 6	8- 6- 5+ 7	53	130	1.9						
26	D3	7 7+ 7 7-	8 6 5+ 5-	52	114	1.9						
27	D4	4 4+ 4 4	5- 4+ 4 5-	34	31	1.3						
28		4 4+ 4- 3	4- 4- 3 1	26+	20	1.0						
29	Q1	1 1+ 1 1+	0+ 1- 1- 2+	9-	4	0.2						
30	D5	1+ 3+ 4- 4+	4+ 5- 4 4+	30	26	1.2						
31	Q9A	3- 3- 2+ 2+	1- 1- 1 4-	16	9	0.5						
Mean					27	0.89				. .	.	.

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							216.5	120	114	172	
2							207.5	93	97	162	
3							206.4	71	84	161	
4							218.9*	55	80	174	
5							208.1	74	92	163	
6							206.7	88	90	161	
7							214.5	131	130	170	
8							209.1	146	139	164	
9							215.7	167	168	171	
10							222.8	159	163	179	
11							221.9	167	153	178	
12							228.7	163	162	185	
13							239.1	145	158	196	
14							241.6	161	174	199	
15							242.2	182	190	200	
16							258.5	188	202	217	
17							245.4	167	188	203	
18							274.8	168	168	235	
19							264.9	142	150	224	
20							254.2	166	173	213	
21							253.1	167	171	211	
22							257.7	171	176	216	
23							233.4	179	183	190	
24							260.5	162	179	219	
25							235.2	128	171	192	
26							229.4	164	164	186	
27							203.0	130	142	157	
28							197.7	122	129	152	
29							192.9	128	130	146	
30							201.3	141	142	155	
31							194.7	115	118	148	
Mean			.			.	227.6	140.6	147.7	183.8	

D A I L Y A V E R A G E I N D I C E S Ap

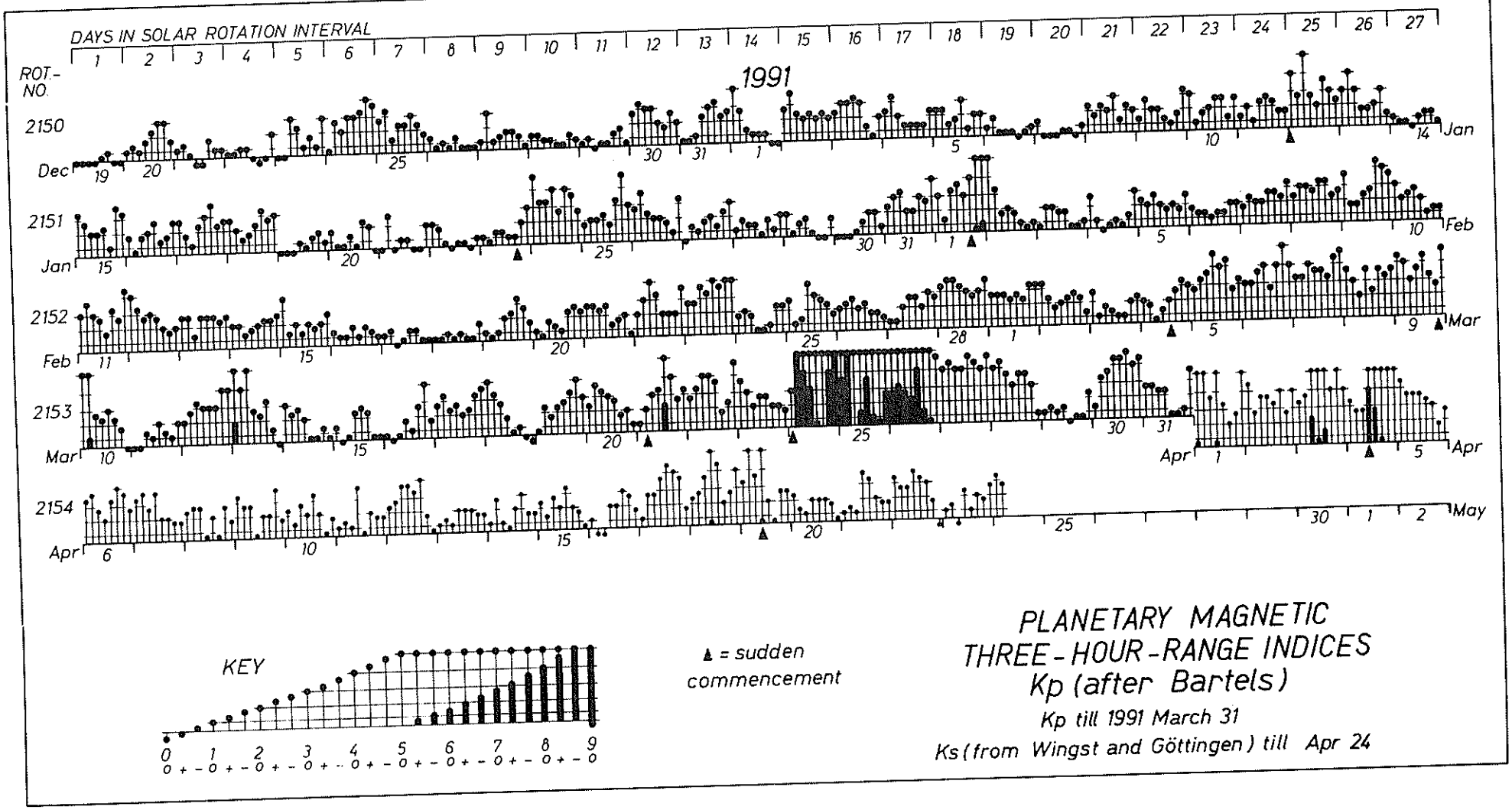
April 1990 to March 1991

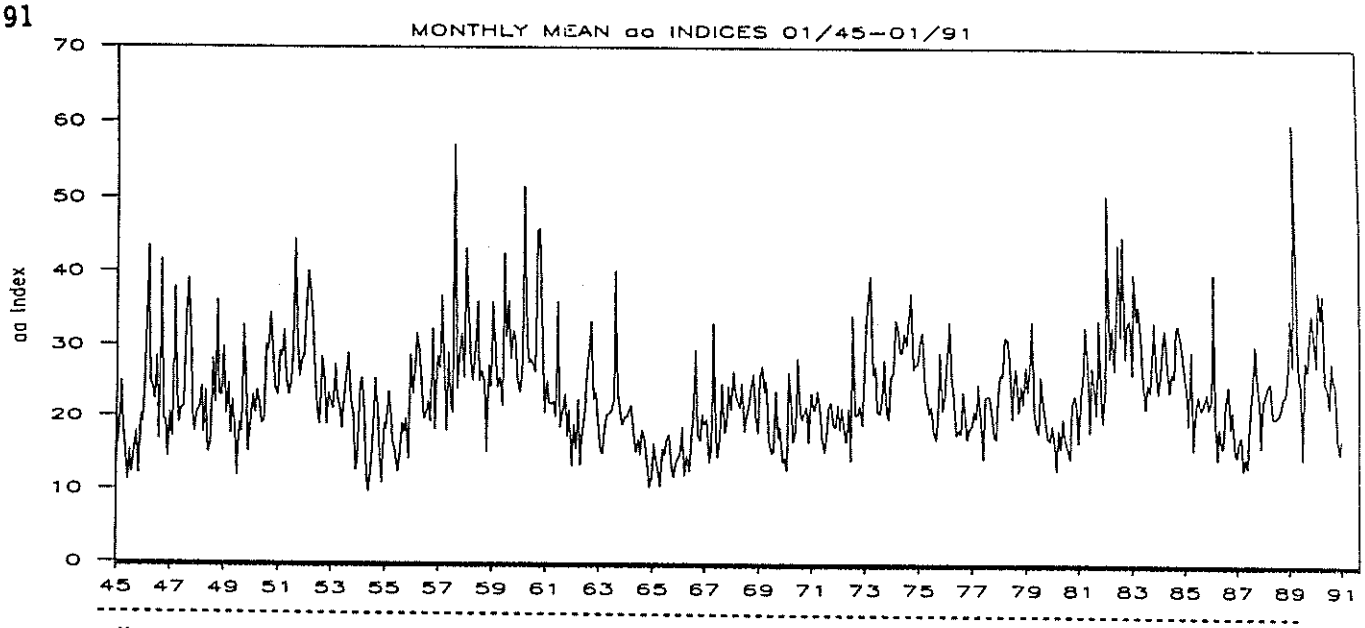
DAY	1990 APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	1991 JAN	FEB	MAR
1	6	8	10	5	26	26	2	9	5	8	28	13
2	11	10	6	6	9	2	5	10	5	10	12	9
3	17	18	6	7	11	4	10	6	6	11	5	6
4	10	12	5	8	6	8	16	3	17	8	6	9
5	10	10	5	10	5	11	10	2	13	8	8	22
6	7	5	10	7	9	12	12	2	7	4	6	24
7	8	7	22	6	7	14	8	6	4	3	10	24
8	6	11	16	10	6	8	4	8	8	8	14	17
9	34	16	32	5	5	10	12	12	5	8	17	25
10	124	33	17	14	6	11	48	12	2	9	8	21
11	64	24	11	7	9	25	42	12	2	7	16	4
12	99	7	89	8	7	19	31	5	7	19	13	17
13	38	11	70	13	12	19	16	3	15	12	11	27
14	45	3	79	12	19	19	17	1	8	4	8	7
15	24	5	9	8	26	22	26	3	6	12	9	6
16	10	3	5	7	25	23	10	17	8	7	5	8
17	40	4	3	6	15	12	5	16	6	11	4	13
18	24	31	10	8	12	19	5	15	5	10	4	9
19	9	18	6	16	14	16	9	10	2	4	8	12
20	18	20	2	16	19	16	23	7	8	5	6	12
21	13	22	5	7	38	15	11	10	3	4	8	26
22	16	32	6	6	49	20	10	3	3	4	14	20
23	37	11	7	4	77	13	10	4	7	6	21	11
24	30	8	8	4	24	13	25	2	15	22	6	161
25	19	20	7	4	6	11	9	4	10	13	11	130
26	16	47	7	14	63	12	10	9	4	11	8	114
27	15	45	12	9	15	8	8	45	6	7	9	31
28	20	7	7	102	6	9	4	18	4	5	18	20
29	30	10	8	75	11	7	10	5	4	4		4
30	19	23	4	12	26	5	20	8	12	4		26
31		11		6	16		25		9	14		9
MEAN	27	16	16	14	19	14	15	9	7	8	10	27

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

Kp through March 31, 1991

University of Göttingen





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												

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

MARCH 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)
BJI	28.5N	04	1620	SC	.3	18	2	05(6)	-	11	109	37	05	22
HYB	07.6N	04	1620	SC	- .3	12	- 1	05(5,6)	5	5	154	27	05	23
GUA	04.0N	04	1619	..	..	..	..	05(1)	5	10	100	50	05	04
ETT	00.6S	04	1619	SC	- .3	10	10		-	4	263	59	05	22
KGL	56.5S	04	1619	SC	4	16	6	05(7)	5	28	168	177	06	01
UJJ	13.5N	05	0900	..	..	..	..		-	5	106	33	06	21
ABG	09.5N	05	0900	..	..	..	..	05(5,6) 06(6)	5	4	123	35	06	21
ANN	01.5N	05	0900	..	..	..	..		-	3	205	63	06	21
HYB	07.6N	06	0500	..	..	..	..	06(4) 07(7)	5	5	122	26	09	19
GUA	04.0N	06	04--	..	..	..	..	06(3)	5	--	80	30	06	18
ETT	00.6S	06	0400	..	..	..	..		-	5	228	58	09	21
HER	33.7S	06	19--	..	..	..	..	06(7)	5	18	57	64	07	01
GUA	04.0N	07	23--	..	..	..	..	08(1)	5	--	120	30	08	15
GUA	04.0N	07	12--	..	..	..	..	07(4)	5	--	50	10	07	21
FRD	49.6N	09	2244	SC*	3.3	50	- 8	10(1)	5	14	92	19	10	06
UJJ	13.5N	09	2242	SC	- .9	31	- 8		-	6	56	39	10	20
ABG	09.5N	09	2242	SC	- 1.1	25	- 10	09(8) 10(1)	4	6	71	47	10	20
HYB	07.6N	09	2244	SC	- .7	25	- 2	09(8) 10(1)	4	6	72	24	10	21
GUA	04.0N	09	00--	..	..	..	..	09(1)	5	10	160	50	09	15
GUA	04.0N	09	2244	SC*	- .7	22	- 8	10(1)	5	--	120	30	10	16
ANN	01.5N	09	2242	SC	- 1.5	33	21		-	5	101	73	10	20
ETT	00.6S	09	2244	SC	- .7	20	22		-	5	162	56	10	21
HER	33.7S	09	2244	SC	2	35	24	09(8)	5	26	90	73	10	16
KGL	56.5S	09	2245	SC	2	32	8	09(8) 10(1)	5	35	200	188	10	09
FRD	49.6N	12	20--	..	..	..	..	13(1)	6	27	81	69	13	17
UJJ	13.5N	12	1900	..	..	..	..		-	6	97	47	13	21
ABG	09.5N	12	1900	..	..	..	..	12(8) 13(1,2)	5	6	117	54	13	21
HYB	07.6N	12	0100	..	..	..	..	13(1,2)	5	6	136	35	13	19
GUA	04.0N	12	20--	..	..	..	..	13(2)	5	--	110	30	13	14
ANN	01.5N	12	1900	..	..	..	..		-	5	222	87	13	21
ETT	00.6S	12	0100	..	..	..	..		-	7	274	93	13	20
HER	33.7S	12	20--	..	..	..	..	13(1)	6	34	79	121	13	18
CNB	43.9S	12	19--	..	..	..	..	12(8) 13(1,2)	5	13	129	27	13	13
KGL	56.5S	12	0453	SC	1	16	- 5	13(1)	7	63	240	336	13	14
HYB	07.6N	16	1556	SC	- .2	5	0	16(7) 17(4)	4	7	115	39	18	05
ETT	00.6S	16	1559	SC	- .2	5	6		-	5	217	79	18	12
GUA	04.0N	17	0037	..	..	..	..	17(2)	5	--	130	30	17	11
HYB	07.6N	19	0500	..	..	..	..	19(7) 20(2)	4	6	149	30	20	23
ETT	00.6S	19	1404	SC	- .1	2	3		-	6	278	90	20	19
KGL	56.5S	19	1404	SC	1	8	5	19(7)	5	20	124	192	20	06
GUA	04.0N	20	0247	..	..	..	..	20(2)	5	--	130	60	20	14
FRD	49.6N	21	0601	SC	- 1.2	21	- 3	21(5)	6	23	140	27	21	16
BJI	28.5N	21	0600	SC	1.6	29	2	21(5,7)	-	7	178	37	21	23
ABG	09.5N	21	0600	SC	- .6	26	- 3	21(5)	6	8	233	62	22	22
HYB	07.6N	21	0600	SC	- .3	28	- 1	21(5)	7	7	246	47	22	24
GUA	04.0N	21	0600	SC*	.4	27	- 8	21(5)	6	--	180	30	21	16
ETT	00.6S	21	0601	SC*	1.1	42	28		-	6	406	97	23	21
HER	33.7S	21	06--	..	..	..	..	21(5)	5	36	154	122	21	16
KGL	56.5S	21	0601	SC	2	17	5	21(4)	5	40	172	152	22	15
GUA	04.0N	23	00--	..	..	..	..	23(1)	5	10	80	20	23	06
COL	64.6N	24	0342	SC*	- 63	-512	- 98	24(2)	9	543	3790	2700	27	00
FRD	49.6N	24	0341	SC*	35.3	292	- 62	24(2) 25(2)	8	84	680	442	28	11
BJI	28.5N	24	0341	SC	6	68	25	24(2,9)	-	35	411	88	27	20
ABG	09.5N	24	0300	..	..	..	..	24(2,8)	7	--	--	--	27	24
HYB	07.6N	24	0341	SC*	- 1	160	- 13	24(2)	9	16	504	47	25	06
GUA	04.0N	24	0341	SC	2.2	319	- 82	24(2)	9	10	580	130	24	16
GUA	04.0N	24	2045	SC	- 1.4	- 33	13	25(2)	8	10	220	90	25	09

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

MARCH 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)
ETT	00.6S	24	0341	SC	- 3.8	115	..		-	16	523	205	28	21
HER	33.7S	24	0346	SC	38	142	153	24(2,8)	8	109	409	359	28	21
GNA	43.2S	24	0341	SC*	- 22 *	-100	- 84 *	24(2,8)	8	60	430	390	28	18
CNB	43.9S	24	0342	SC*	- 9	50 *	10	24(2,8) 25(2) 26(5)	7	47	494	145	26	18
KGL	56.5S	24	0342	SC	- 19	104	32	24(7,8) 26(5)	9	294	1600	1530	28	20
HYB	07.6N	25	0808	SC	- 1.1	25	7	25(5) 26(5,6)	7	8	288	34	27	22
GUA	04.0N	25	21--	..	..	..	..	26(1)	5	--	100	30	26	03
GUA	04.0N	25	12--	..	..	..	..	25(5)	6	--	100	10	25	19
KGL	56.5S	29	2122	SC	- 1	5	2	30(8)	6	35	152	160	31	11

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 561 Part I

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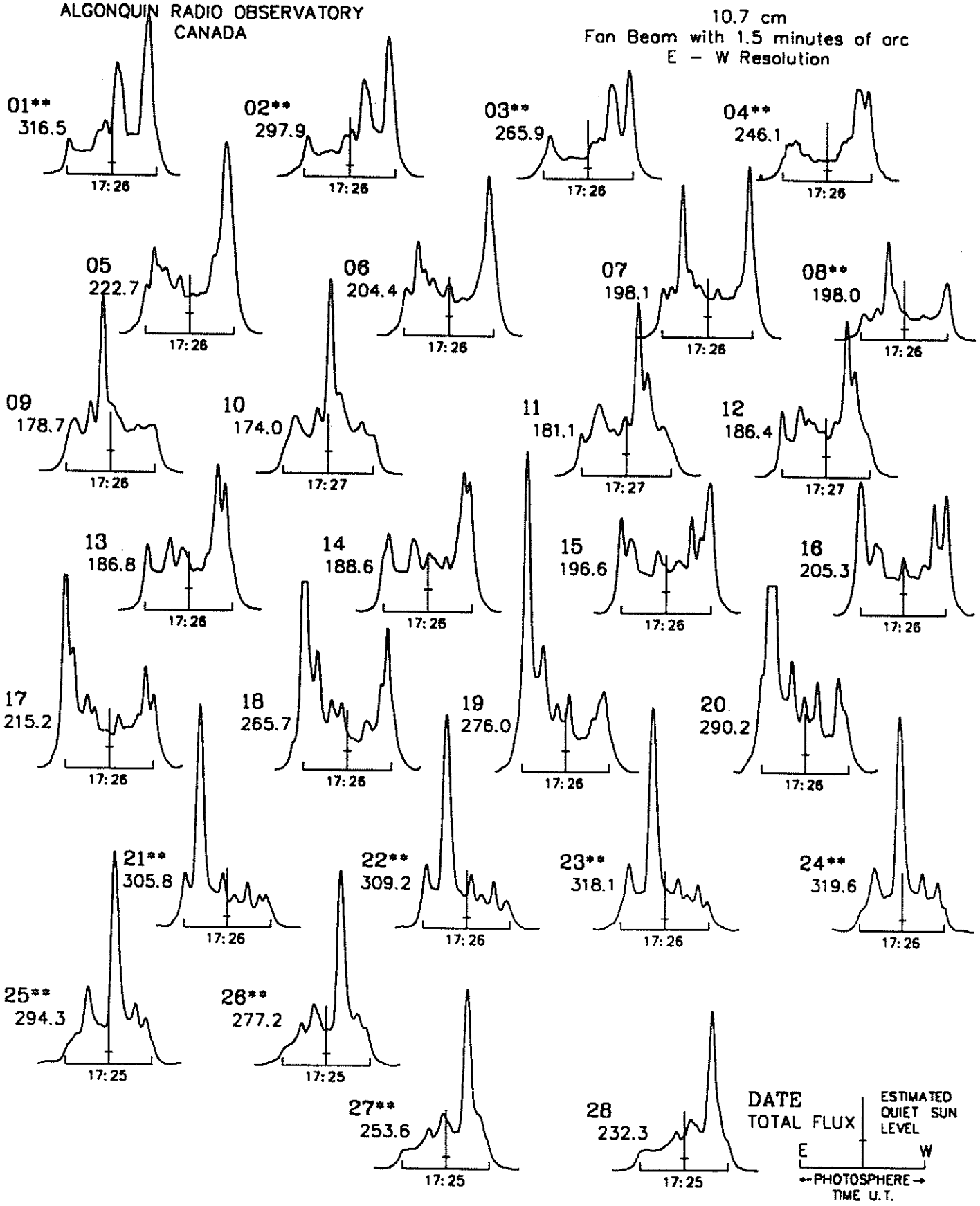
Late
Feb 91

EAST – WEST SOLAR SCANS
FEBRUARY 1991

ALGONQUIN RADIO OBSERVATORY
CANADA

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



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

AUGUST 1990

Storm Sudden Commencements (ssc)

Day	Time	Quality: Station Group*
01	0741	A: SOD* DOB NUR WNG* NAG* COI* BJI TEN LNP HYB ETT
		B: VAL BDV CLF* GCK EBR KNY AMS CZT* KGL* DUM
		C: NGK* MMB* FRD* KAK
13	1027	B: WNG*
		C: NUR* BDV* GCK* SPT ETT
26	0543	A: DOB* VAL* GCK COI BJI SPT TEN* LNP HYB ETT KGL
		B: WNG* NGK* NAG MMB* EBR* FRD* KAK KNY GNA CNB AMS CZT
		C: CLF*
29	1122	A: SOD* WNG* NAG* COI BJI SPT* LNP
		B: DOB NUR* VAL* GCK* TEN* HYB ETT CZT* KGL
		C: NGK* CLF* AMS*
30	1056	B: SOD* WNG*
		C: VAL* KGL

Solar Flare Effects (sfe)

Day	Begin-End	Station(s)	
02	0604-0614	LNP	
09	1528-1537	TEN	
13	1028-1035	HYB	
20	1059-1105	HYB	
21	0443-0448	LNP	
22	0404-0409	LNP	
23	0133-0136	LNP	
24	2358-0002	LNP	
25	0825-0845	SOD	WNG
28	0901-0935	BDV	
28	1016-1045	BDV	
29	0430-0436	LNP	
30	0157-0203	LNP	
31	0409-0415	LNP	

Reporting Observatories: (up to the 2nd of October)

SOD DOB NUR WNG NGK VAL BDV CLF NAG GCK MMB EBR COI BJI
SPT FRD KAK KNY TEN LNP HYB ETT GNA CNB AMS CZT KGL DUM

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

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Late
Sep 90

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

SEPTEMBER 1990

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
01	1024	B: WNG HRB NAG AQU BJI SPT	01	0708-0713	LNP
		C: BDV CLF GCK EBR FRD LNP HYB	01	1702-1712	TEN
			03	0217-0221	LNP
01	1239	A: NAG* COI* HYB ETT	03	0942-1020	WNG BDV
		B: DOB WNG* BDV* QUE TEN* KGL*	05	0405-0411	LNP
		C: EBR	11	0915-0934	TEN
			14	0059-0102	LNP
11	0537	B: BJI KNY LNP	14	0408-0416	LNP
		C: EBR SPT HYB	15	0429-0436	LNP
			15	0754-0759	LNP
			17	0558-0604	LNP
			17	2154-2210	KNY
			18	1454-1502	CLF TEN
			22	0312-0319	LNP
			23	1308-1320	TEN
			25	0221-0230	LNP
			28	0151-0157	LNP

Reporting Observatories: (up to the 3rd of November)

SOD DOB NUR WNG NGK BDV CLF HRB NAG GCK MMB AQU EBR COI
BJI SPT FRD KAK KNY QUE TEN LNP HYB ETT GNA CNB AMS CZT
KGL DUM

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

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

OCTOBER 1990

Storm Sudden Commencements (ssc) Day	Time	Quality: Station Group*	Solar Flare Effects (sfe) Day	Begin-End	Station(s)
09	1316	B: DOB WNG* COI* C: BDV* GCK EBR* SPT	30	1252-1312	CLF
26	1134	A: SOD* WNG* VAL* NAG* EBR* COI* BJI SPT* PEN TEN* B: NUR* BDV* CLF* AQU* HYB ETT CNB* AMS* CZT* KGL* C: NGK*			
29	2011	A: WNG* NAG AQU* EBR* COI SPT PEN B: VAL* BDV* CLF GCK* HYB ETT KGL C: NGK BJI FRD* AMS CZT			

Reporting Observatories: (up to the 3rd of December)

SOD DOB NUR WNG NGK VAL BDV CLF NAG GCK MMB AQU EBR COI
BJI SPT FRD PEN KAK HTY KNY TEN HYB ETT GNA CNB AMS CZT
KGL DUM

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

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Late
Nov 90

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

NOVEMBER 1990

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
26	2332	A: NAG* COI MPO	03	1115-1124	MPO
		B: WNG* NGK CLF* EBR* SPT* FRD* QUE	07	1049-1056	CLF NAG
		C NUR	14	1117-1137	CLF NAG
			15	0639-0706	MPO
			29	0718-0730	MPO

Reporting Observatories: (up to the 10th of January 1991)

SOD DOB NUR WNG NGK CLF NAG EBR COI SPT FRD QUE MPO CNB
KGL

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

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

DECEMBER 1990

Storm Sudden Commencements (ssc) Day	Time	Quality: Station Group*
08	1425	A: DOB* COI BJI
		B: WNG* NAG* GCK SPT* PEN CZT* KGL* DUM*
		C: BDV* CLF EBR* QUE HYD ETT CNB
21	1724	B: WNG*
		C: BDV EBR* COI QUE

Solar Flare Effects (sfe) Day	Begin-End	Station(s)
02	1238-1245	NAG
04	0157-0210	LNP
05	0723-0732	ETT
15	0541-0548	LNP
16	0444-0450	GNA
18	0152-0203	LNP
22	2240-2310	CNB (ssc: COI SPT GNA)
23	0038-0051	LNP
25	0918-0929	CLF
26	1359-1417	BDV CLF EBR
30	1016-1036	CLF NAG EBR (ssc: GCK SPT QUE ETT)

Reporting Observatories (up to the 2nd of February 1991):

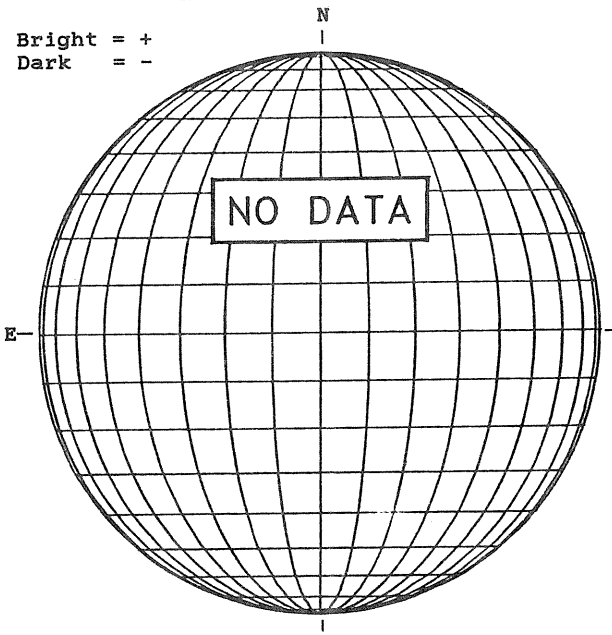
SOD DOB NUR WNG BDV CLF NAG GCK MMB EBR COI BJI SPT FRD
PEN KAK HTY KNY QUE LNP HYD ETT GNA CNB AMS CZT KGL DUM

Three-letter codes identify each observatory. Reporting stations have been grouped by the character of the observed event. The letter A means very remarkable; B means fair, ordinary, but unmistakable; and C means very poor, doubtful.

JANUARY 1, 1991 (P= 2.26, B_o =-2.98, $_o$ = 192.47)

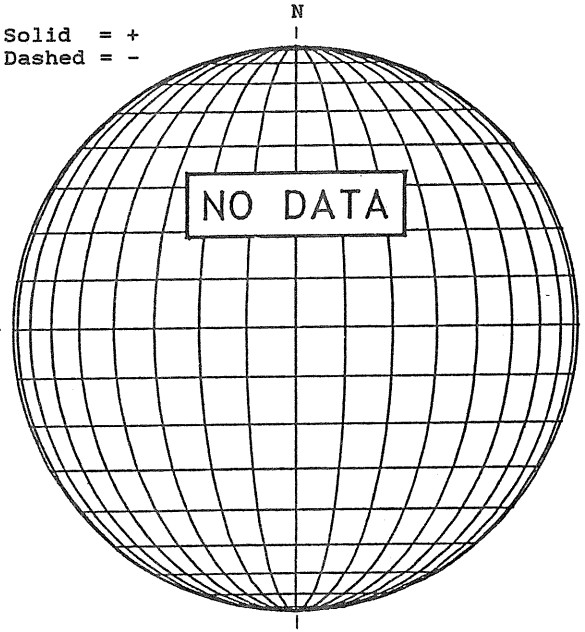
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



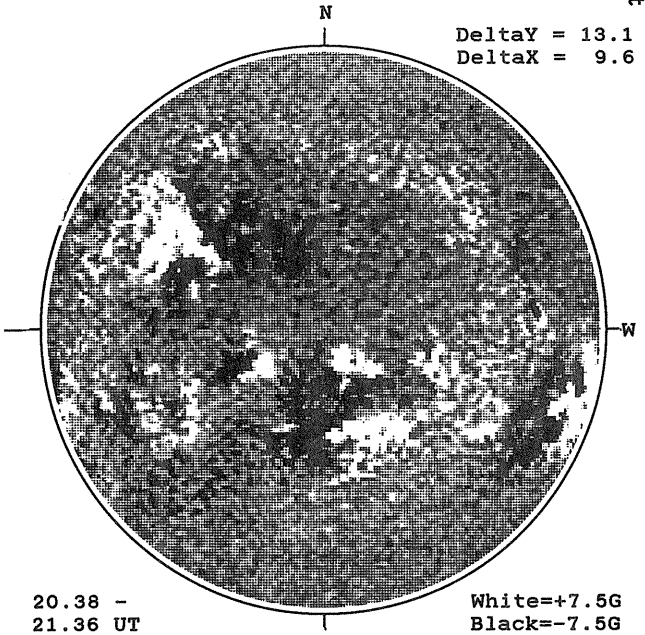
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

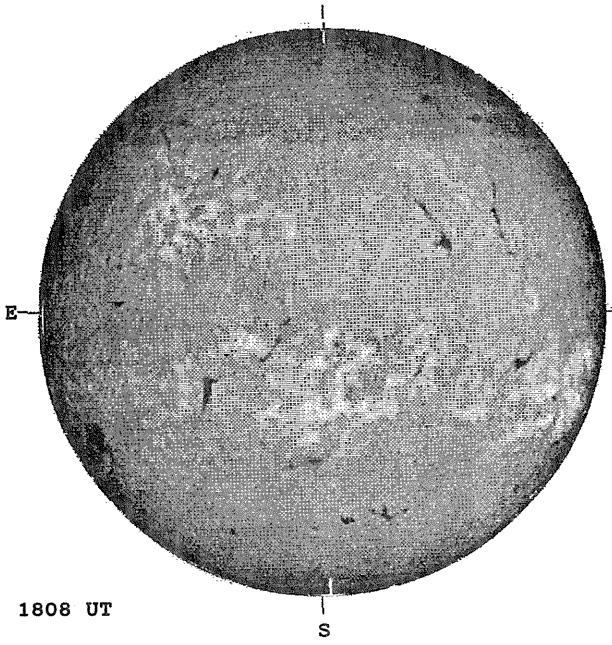
DeltaY = 13.1
DeltaX = 9.6



20.38 -
21.36 UT

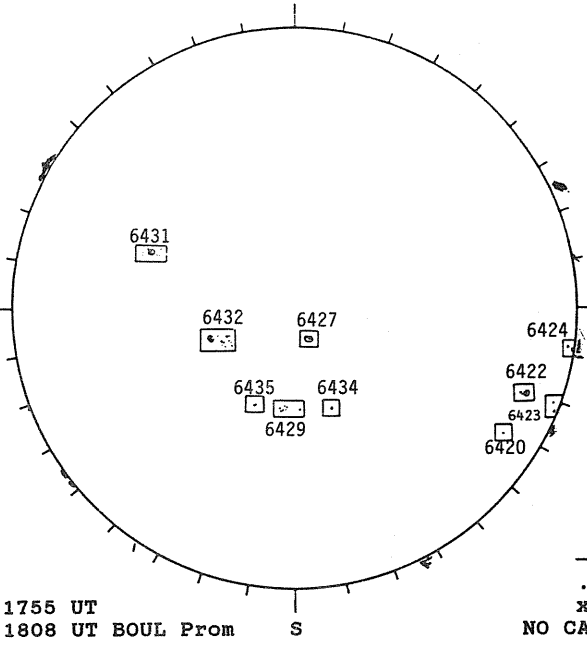
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



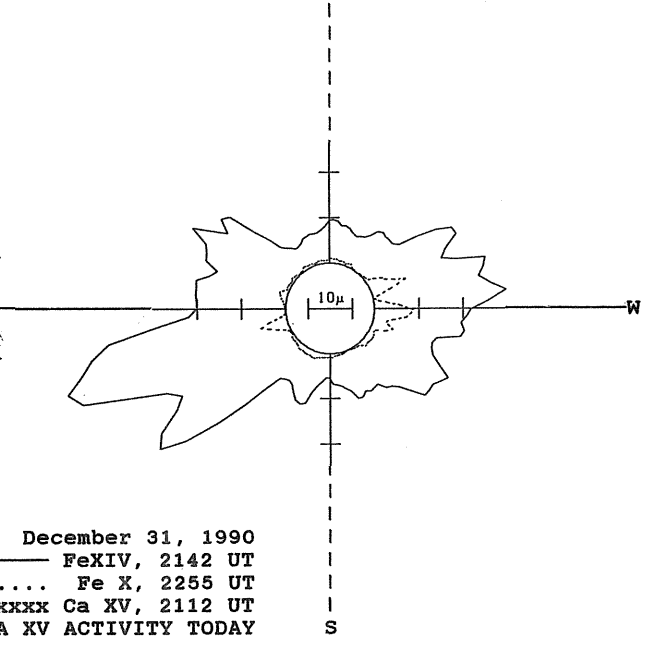
1808 UT

BOULDER SUNSPOT



1755 UT
1808 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

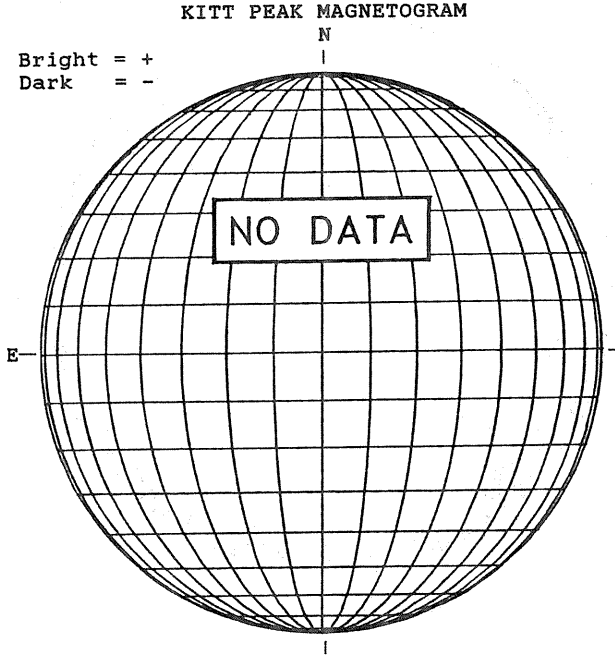


December 31, 1990
—— FeXIV, 2142 UT
.... Fe X, 2255 UT
xxxx Ca XV, 2112 UT
NO CA XV ACTIVITY TODAY

JANUARY 2, 1991 (P= 1.78, B_o =-3.10, L_o = 179.30)

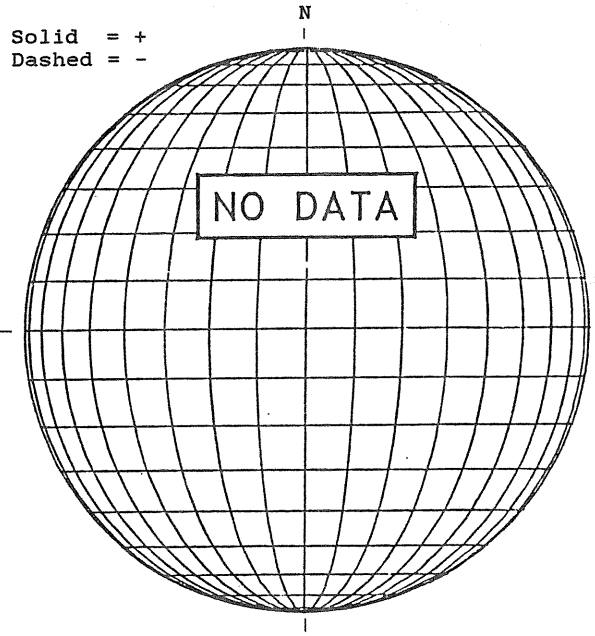
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



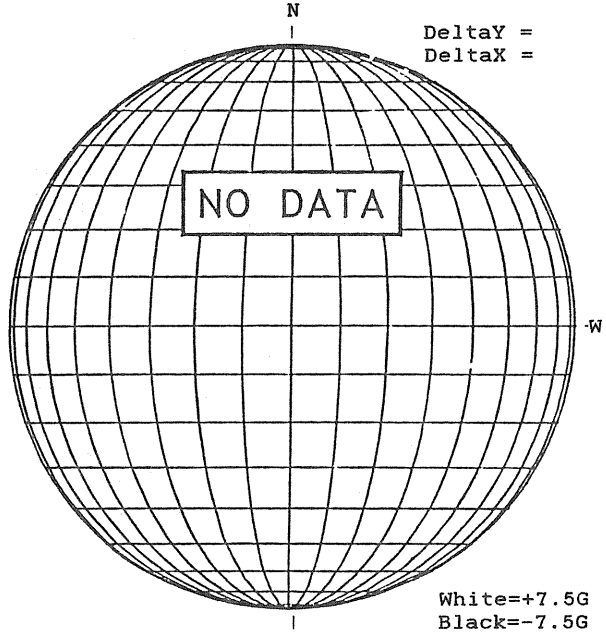
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



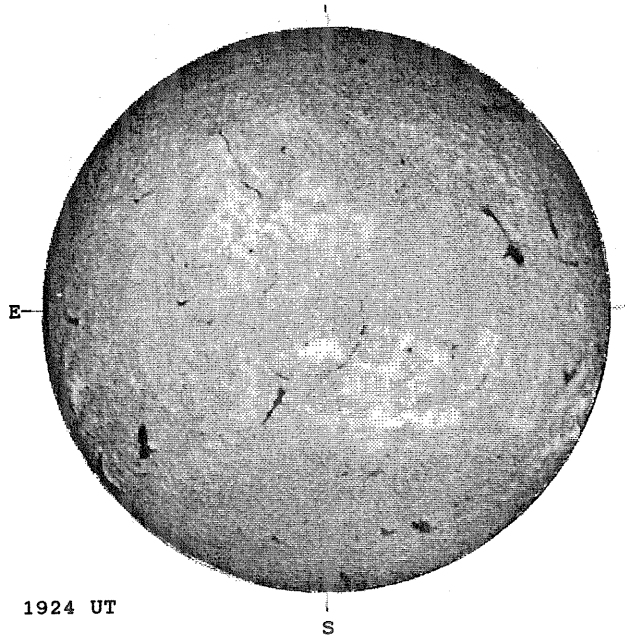
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



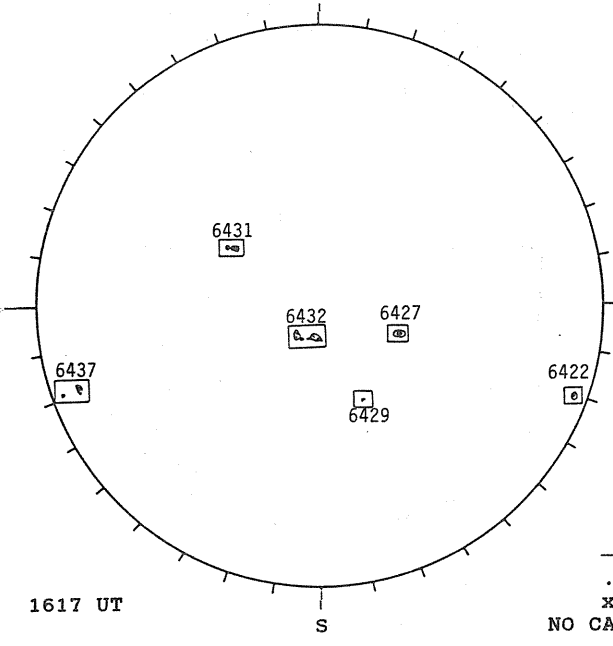
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



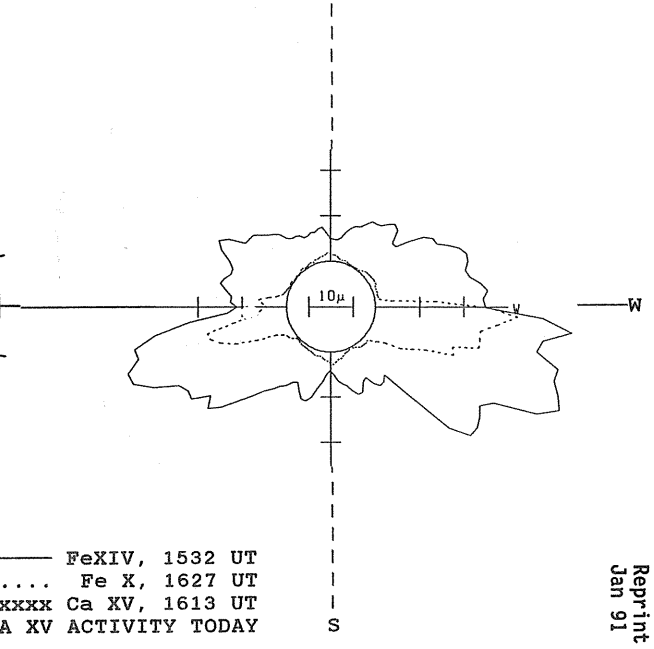
1924 UT

BOULDER SUNSPOT



1617 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1532 UT
.... Fe X, 1627 UT
xxxx Ca XV, 1613 UT
NO CA XV ACTIVITY TODAY

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JANUARY 3, 1991 (P= 1.29, B_o =-3.21, L_o = 166.13)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

N

NO DATA

E

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

NO DATA

MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

N

NO DATA

W

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

E

1558 UT

S

RAMEY SUNSPOT

6431
6432
6427
6430
6438
6422
6437
6429
6435

1318 UT

S

SACRAMENTO PEAK CORONA (1.15 Radii)

NO DATA

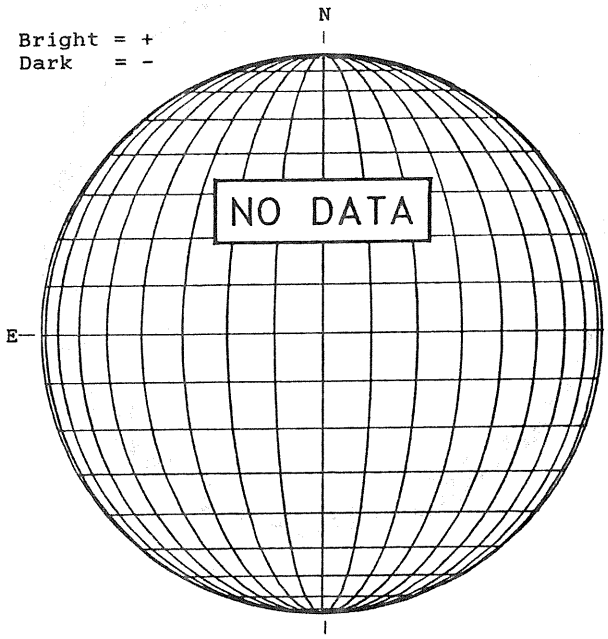
W

S

JANUARY 4, 1991 (P= 0.81, B_o =-3.33, L_o = 152.96)

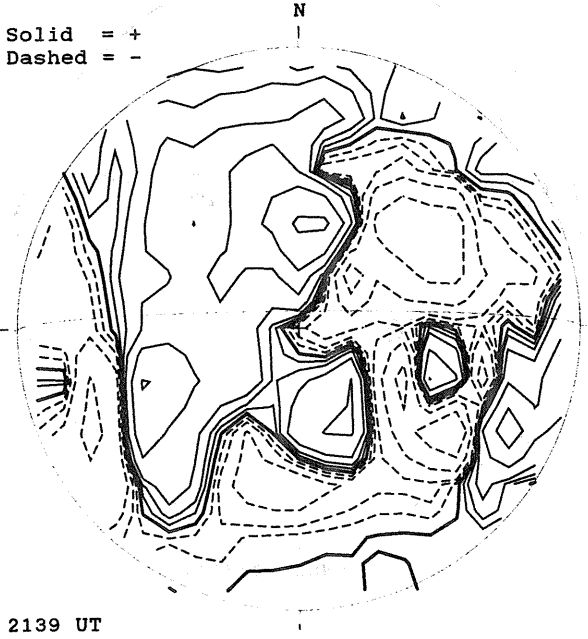
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

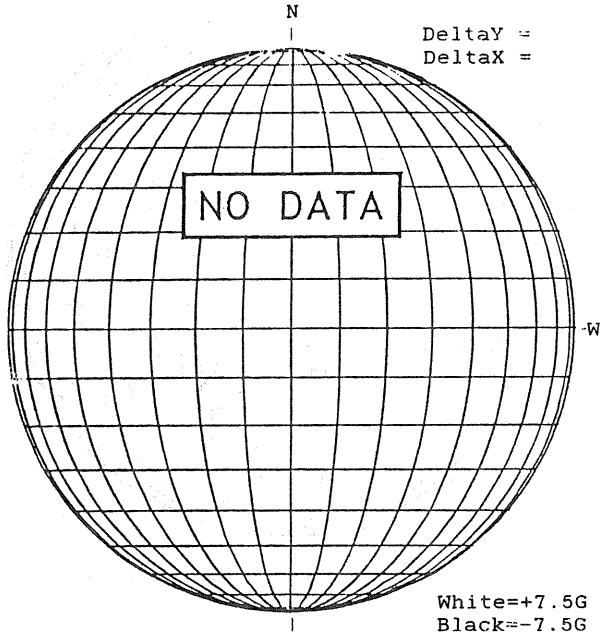
Solid = +
Dashed = -



2139 UT

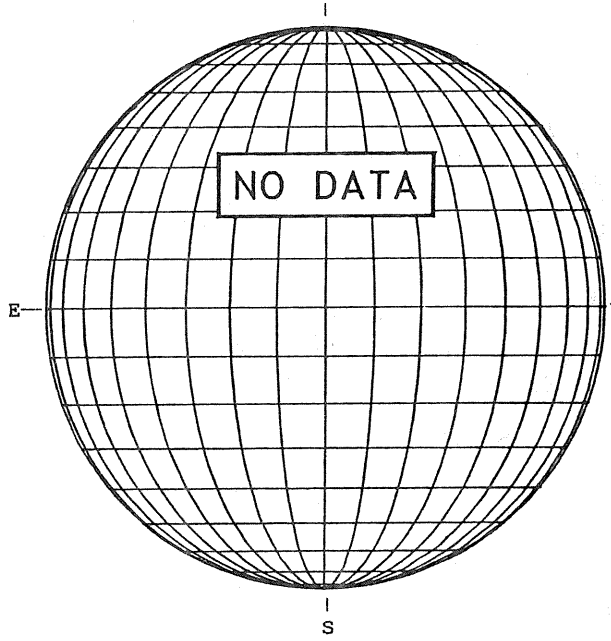
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

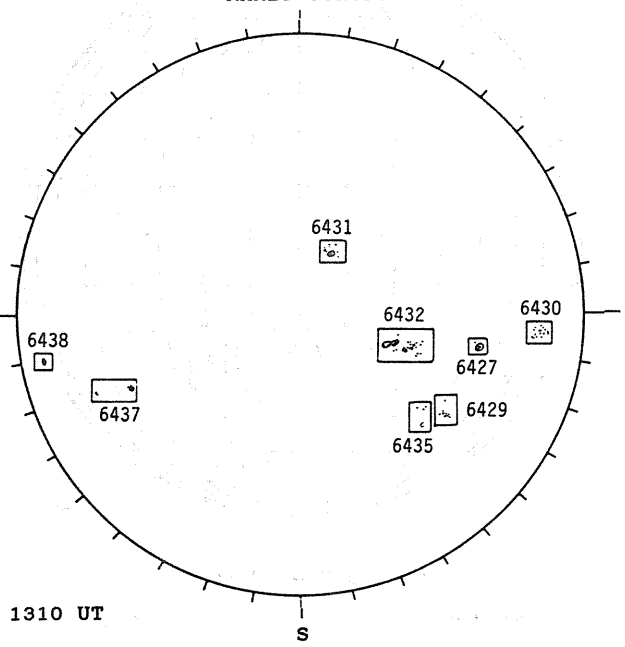


White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

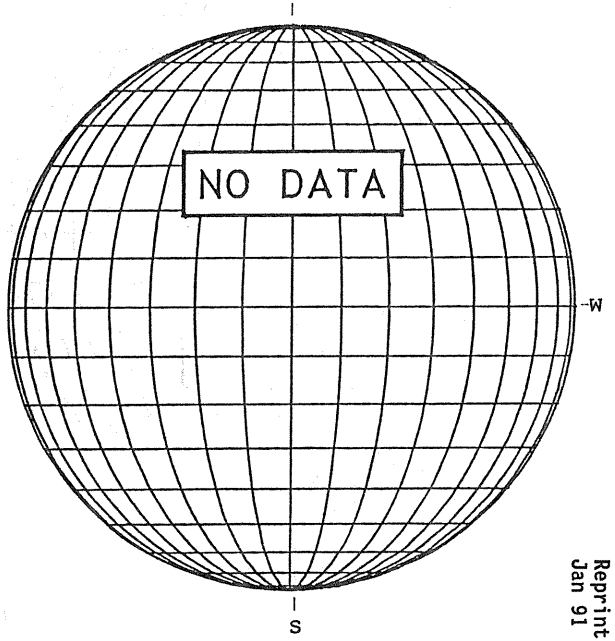


RAMEY SUNSPOT



1310 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



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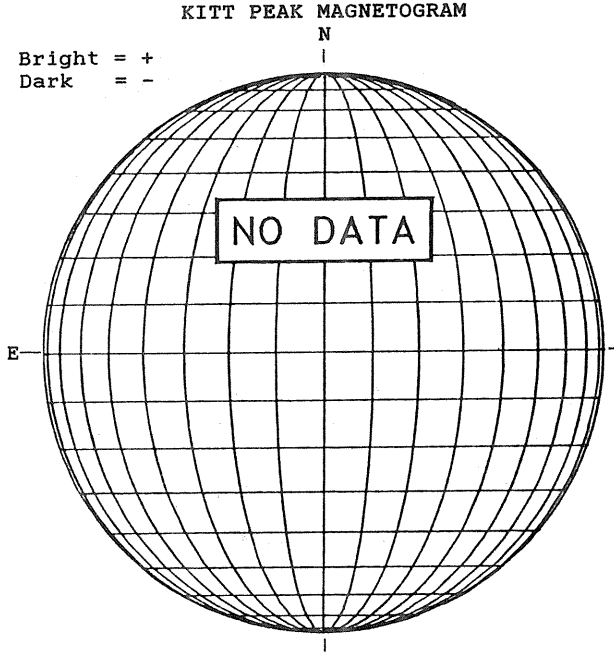
Jan 91

JANUARY 5, 1991 (P= 0.32, B_o =-3.44, L_o = 139.79)

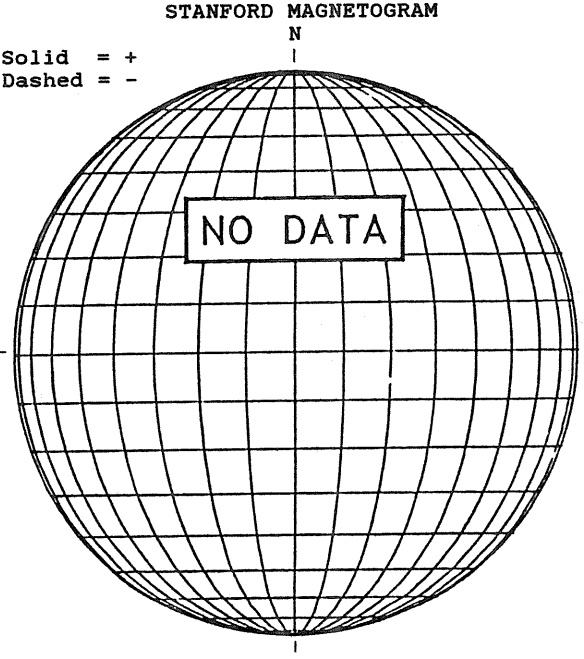
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



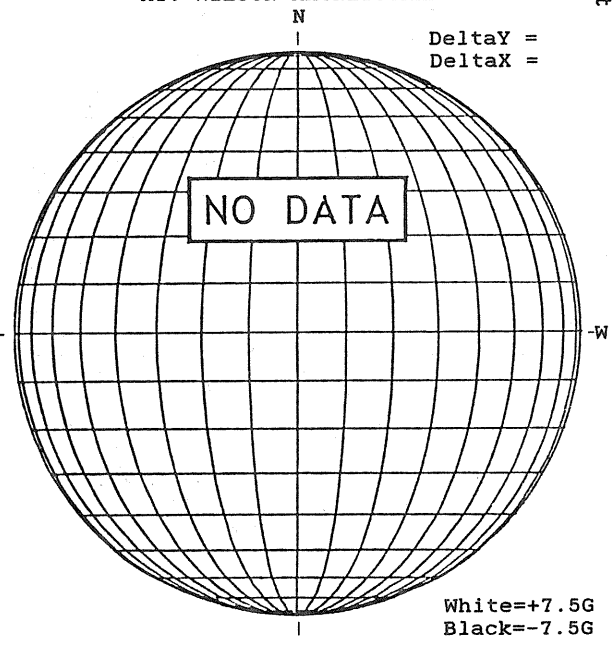
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



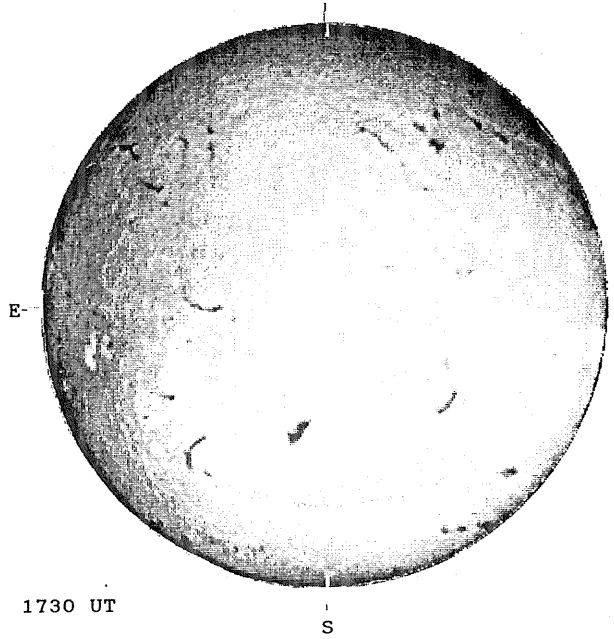
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



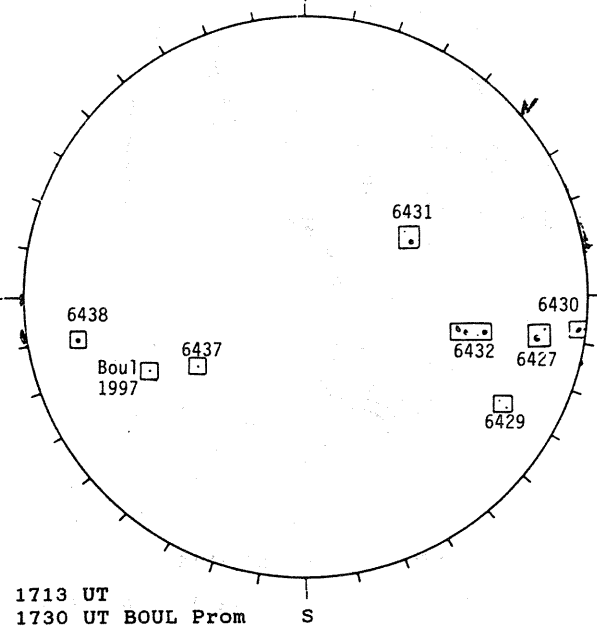
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



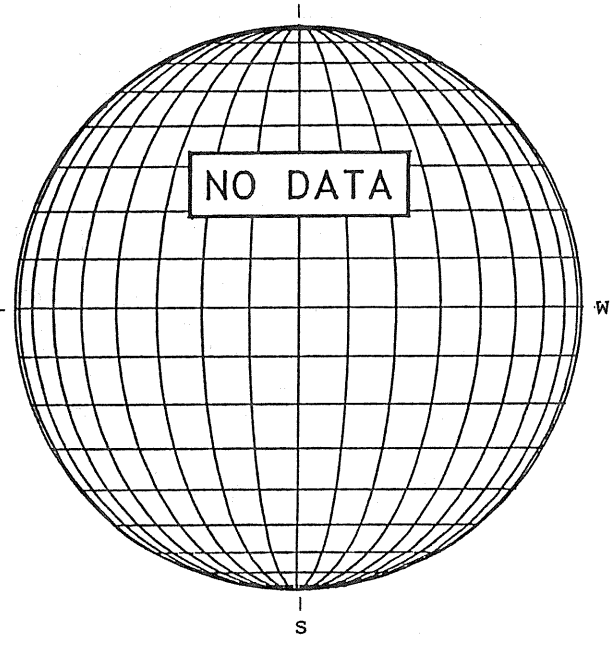
1730 UT

BOULDER SUNSPOT



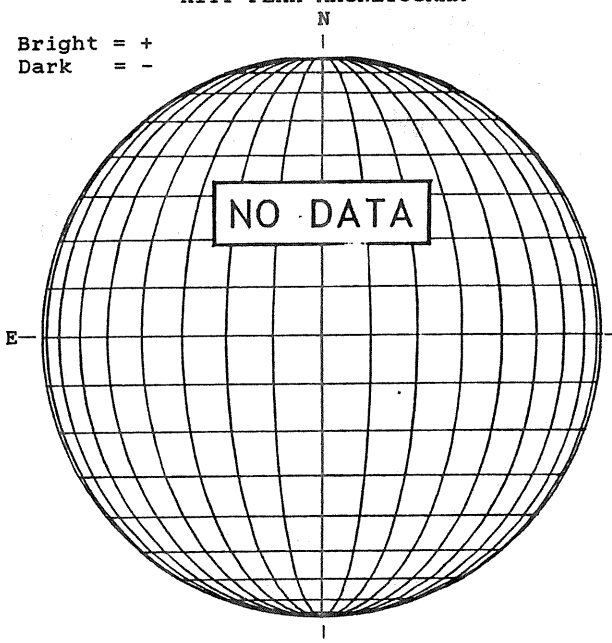
1713 UT
1730 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

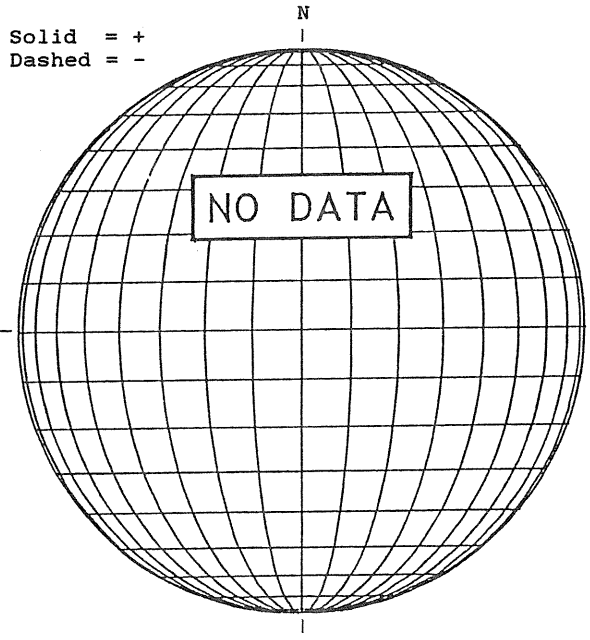


JANUARY 6, 1991 (P= -0.16, B_o =-3.55, L_o = 126.62)

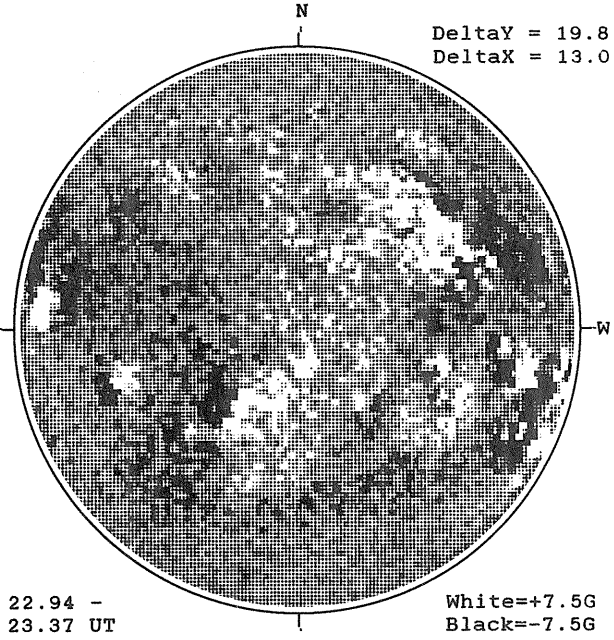
KITT PEAK MAGNETOGRAM



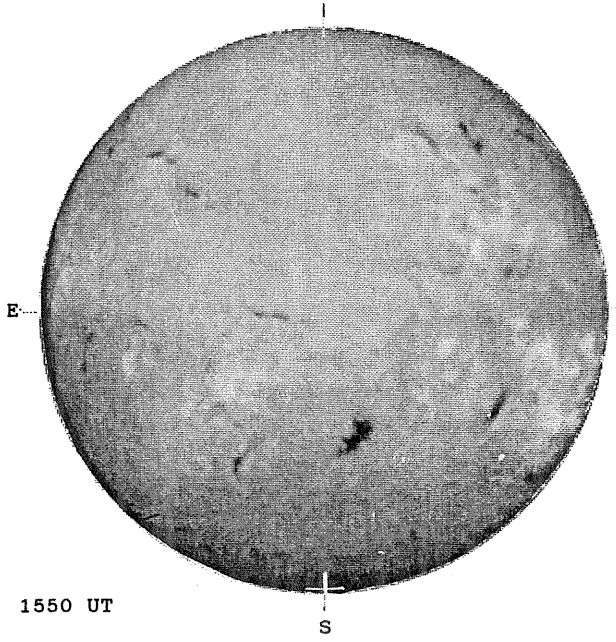
STANFORD MAGNETOGRAM



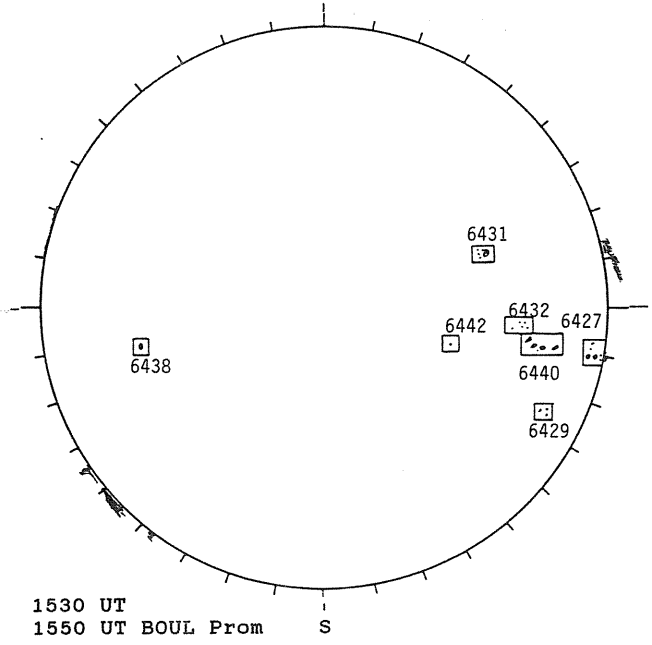
MT. WILSON MAGNETOGRAM



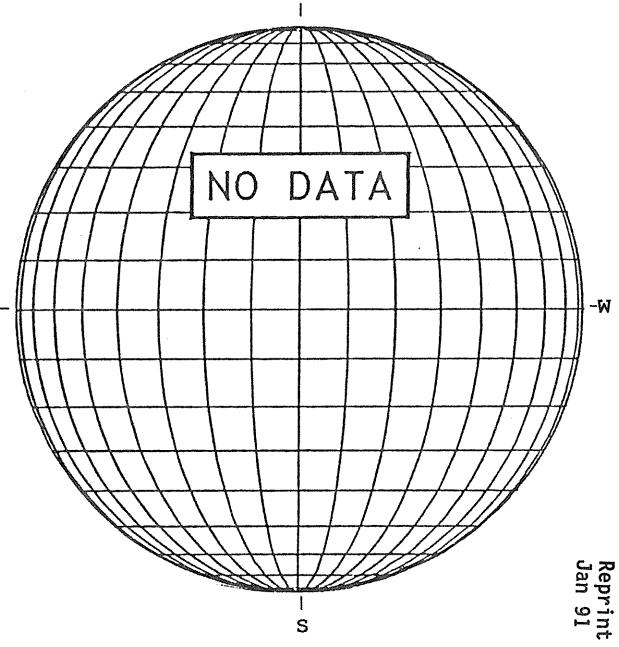
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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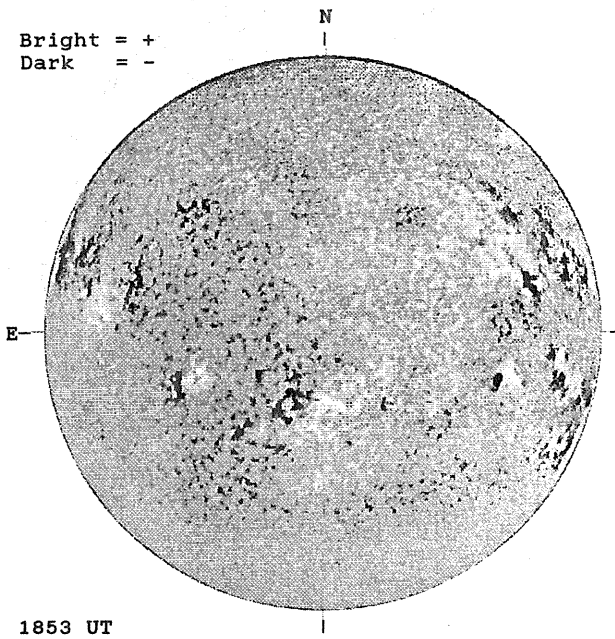
JANUARY 7, 1991 (P= -0.64, B_o =-3.66, L_o = 113.45)

KITT PEAK MAGNETOGRAM

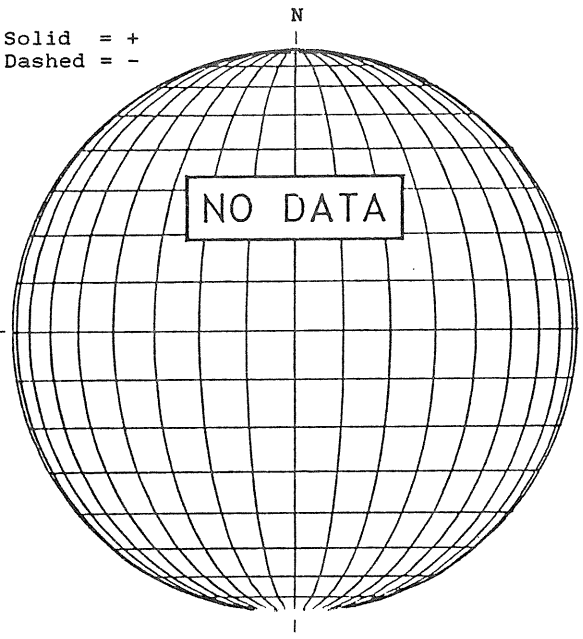
Bright = +
Dark = -



1853 UT

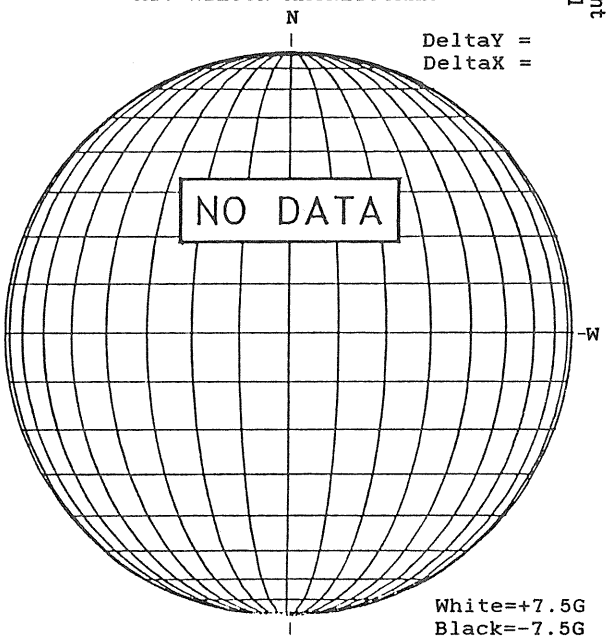
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



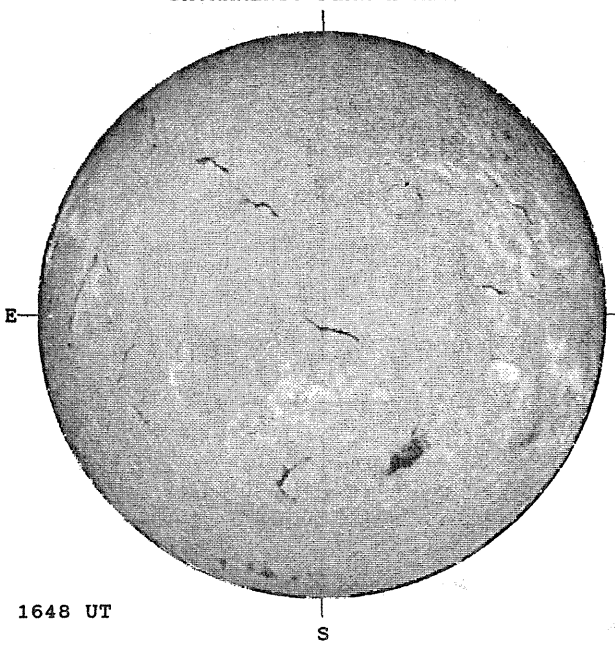
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



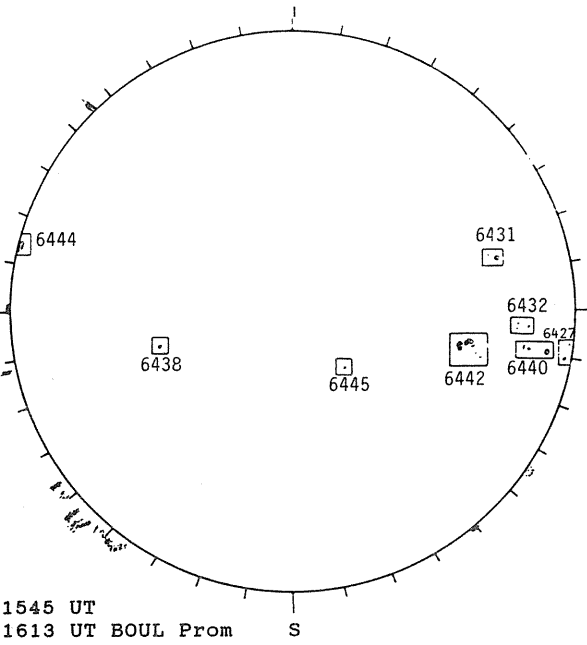
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



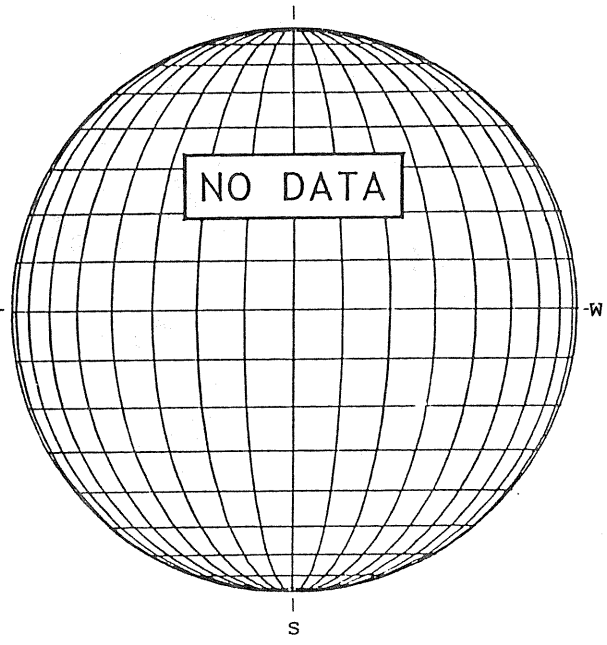
1648 UT

BOULDER SUNSPOT



1545 UT
1613 UT BOUL Prom

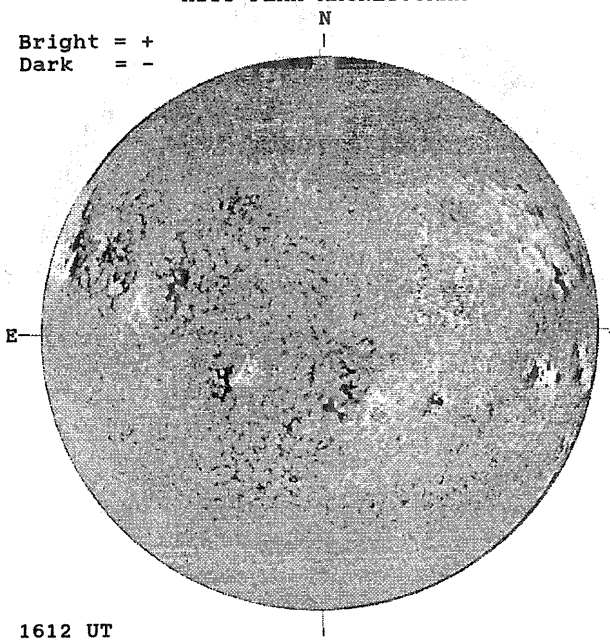
SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 8, 1991 (P= -1.13, B_o =-3.78, L_o = 100.28)

KITT PEAK MAGNETOGRAM

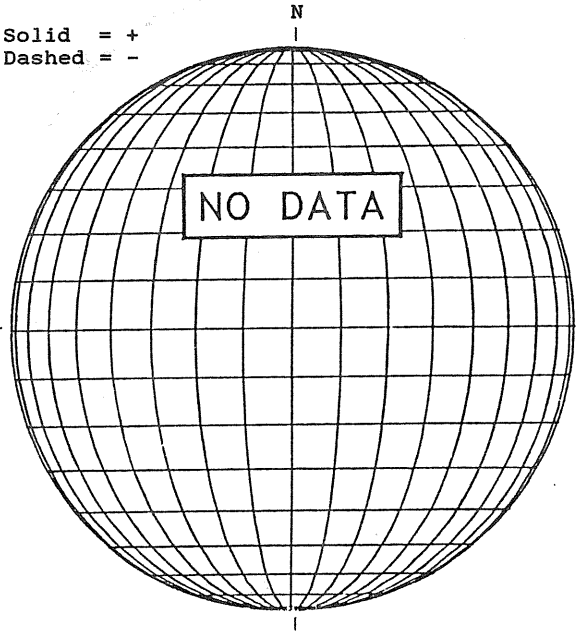
Bright = +
Dark = -



1612 UT

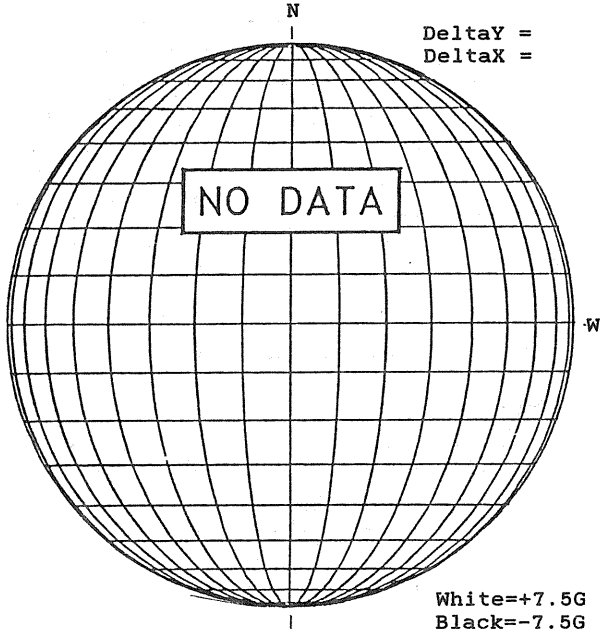
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



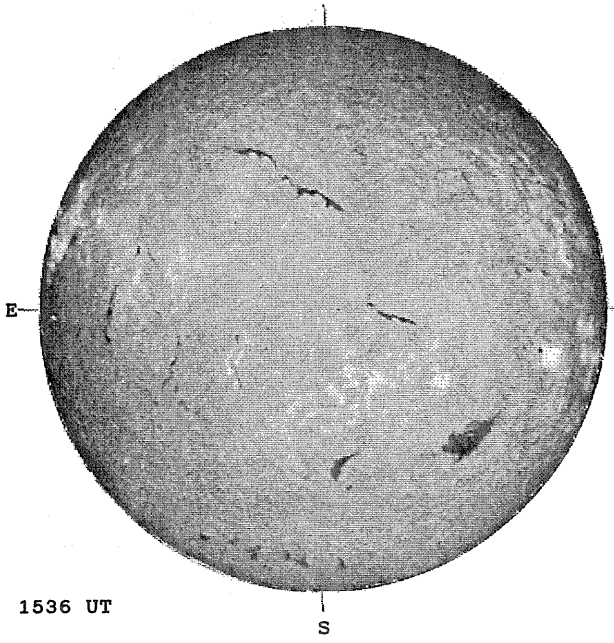
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



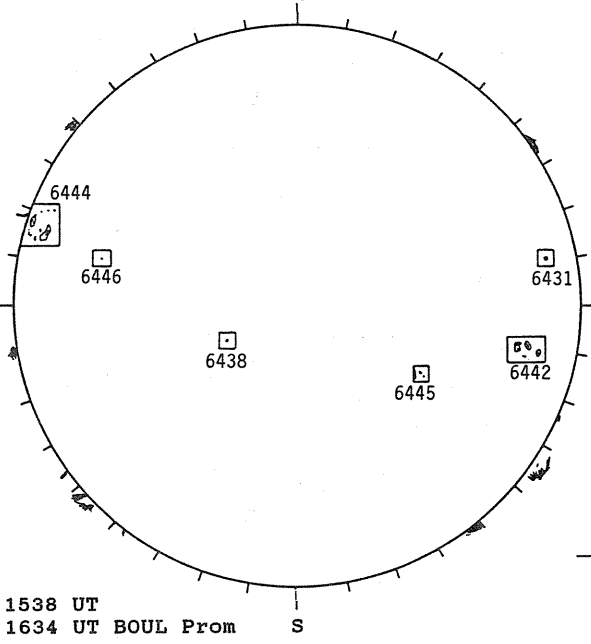
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



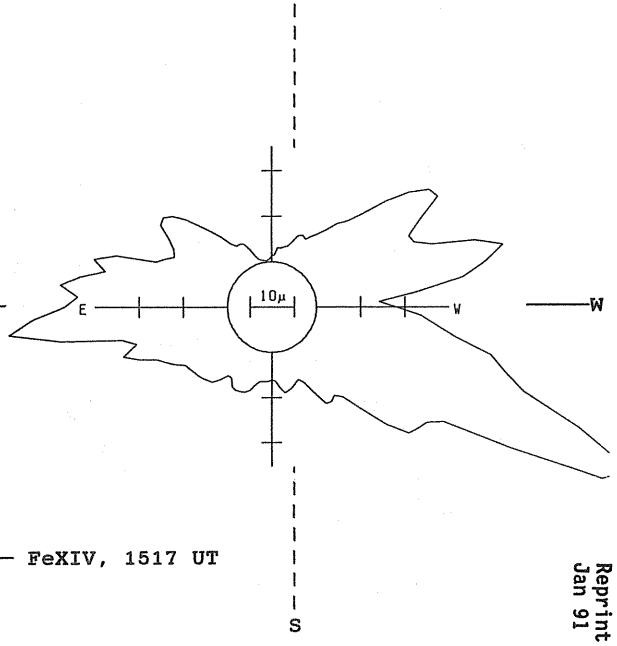
1536 UT

BOULDER SUNSPOT



1538 UT
1634 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



FeXIV, 1517 UT

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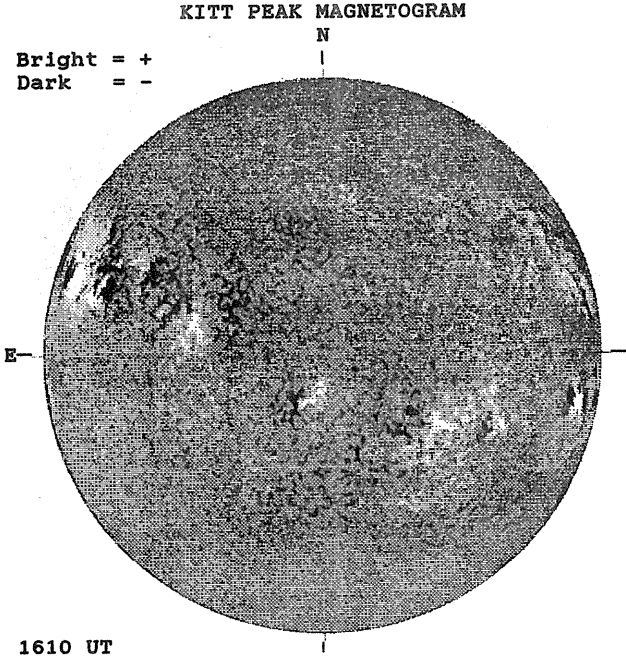
JANUARY 9, 1991 (P= -1.61, B_o =-3.88, L_o = 87.11)

KITT PEAK MAGNETOGRAM

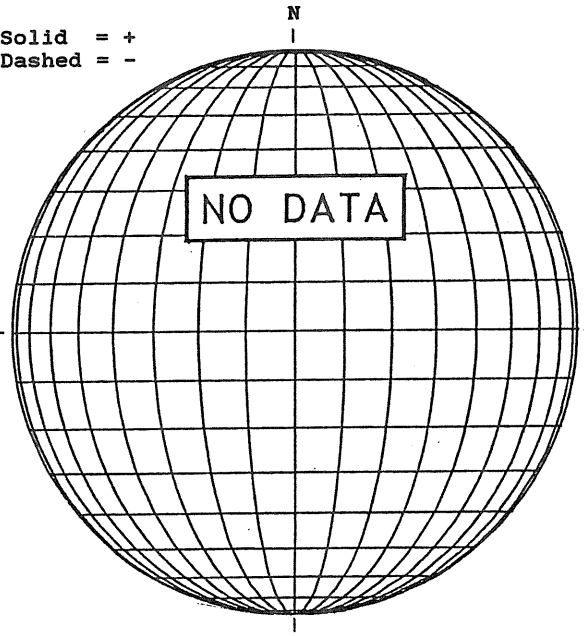
Bright = +
Dark = -



1610 UT

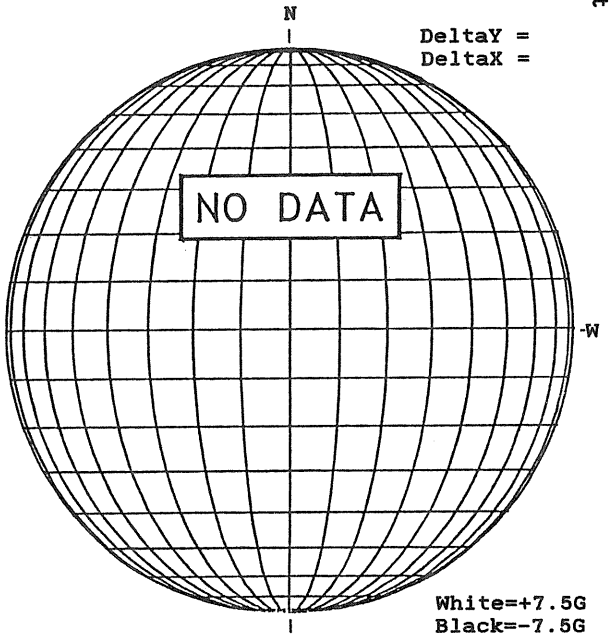
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



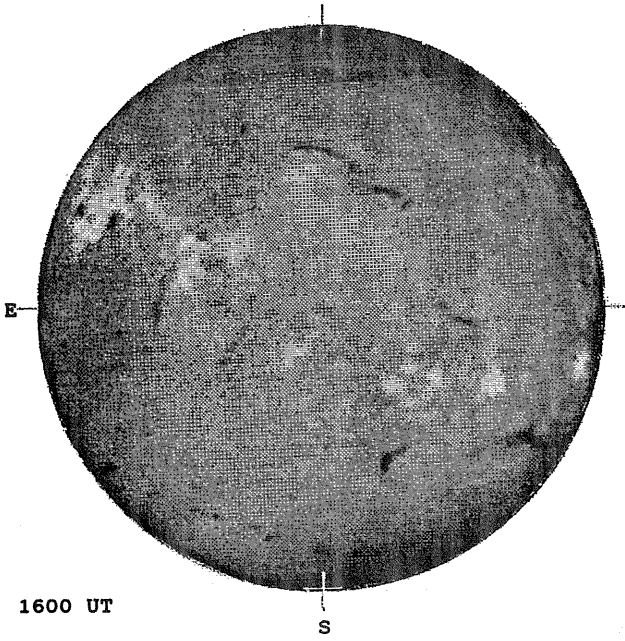
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



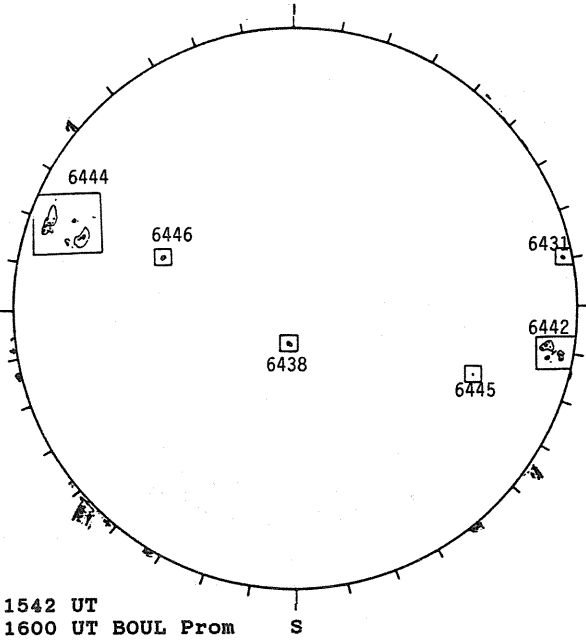
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



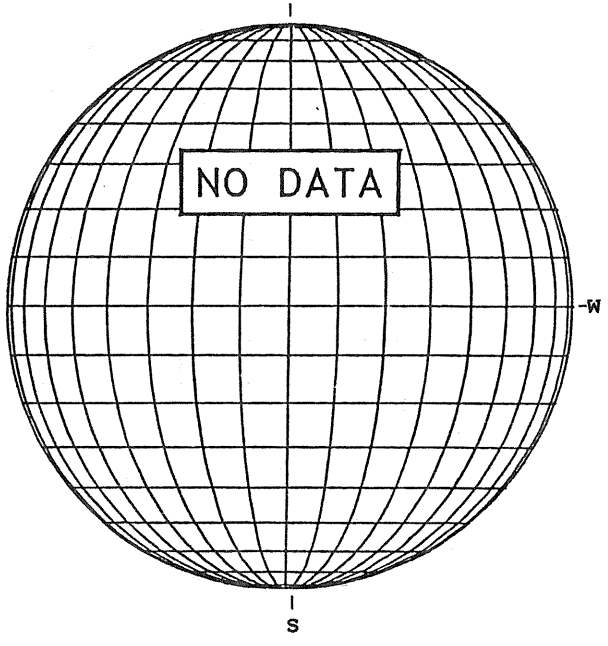
1600 UT

BOULDER SUNSPOT



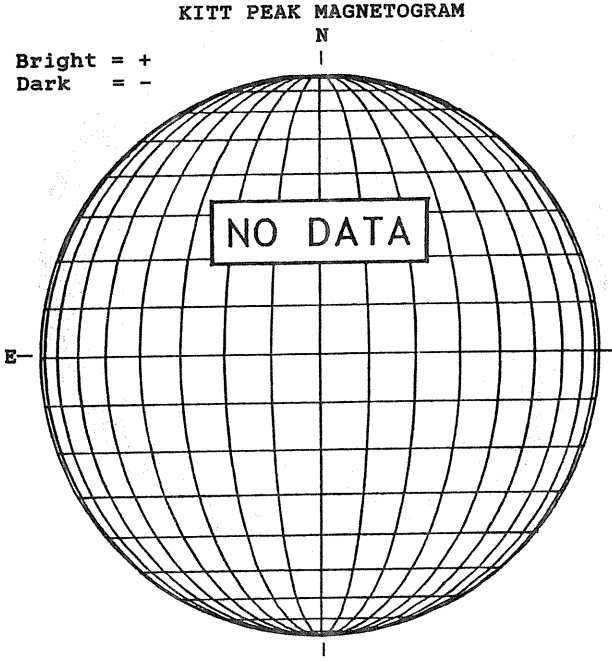
1542 UT
1600 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

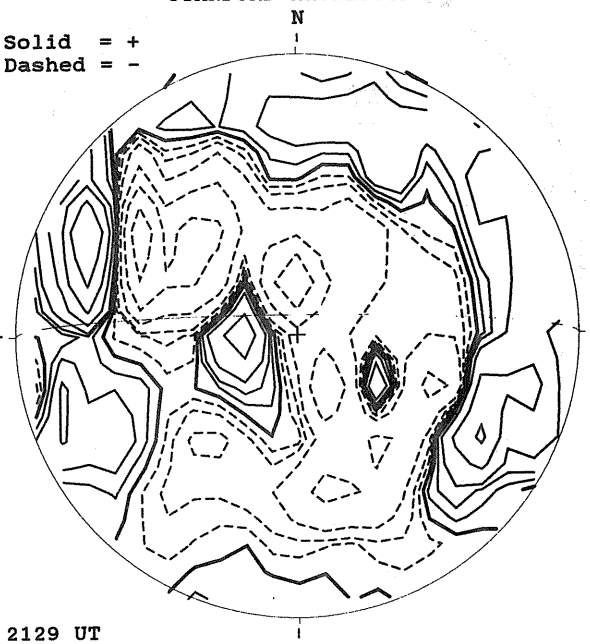


JANUARY 10, 1991 (P= -2.09, B_o =-3.99, L_o = 73.95)

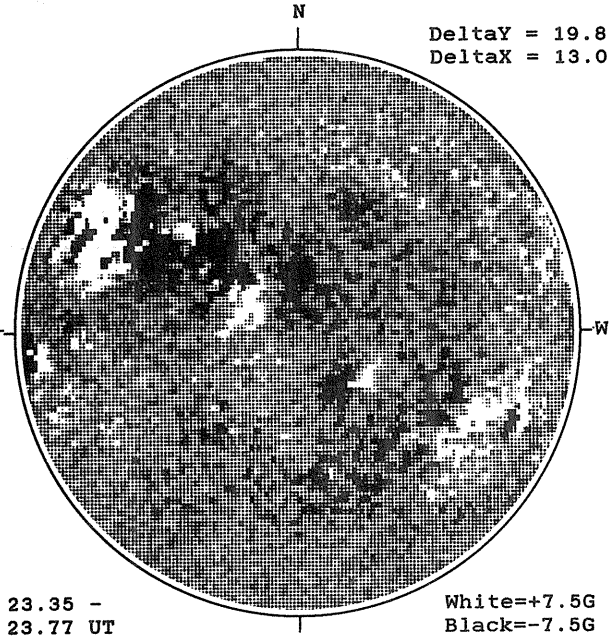
KITT PEAK MAGNETOGRAM



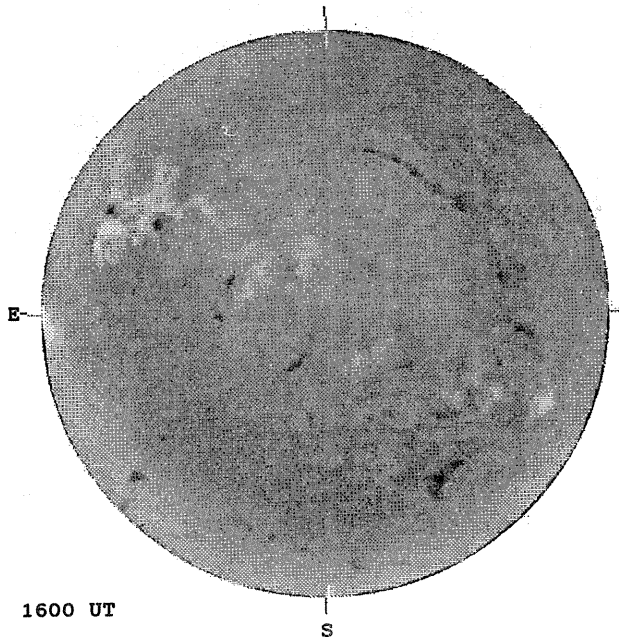
STANFORD MAGNETOGRAM



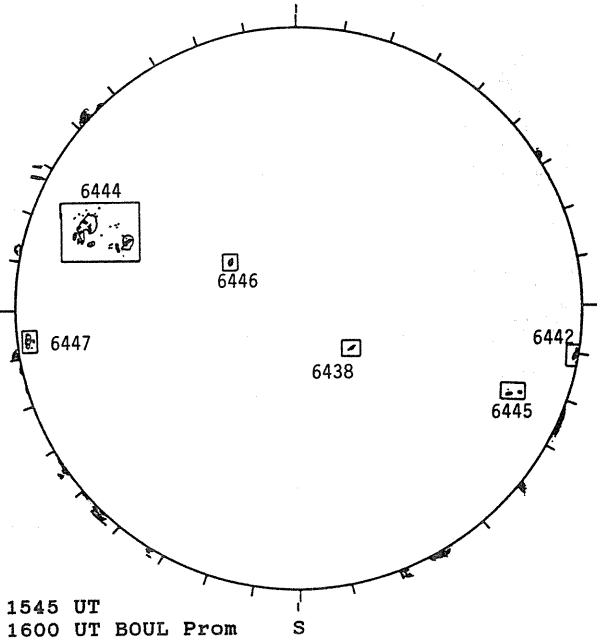
MT. WILSON MAGNETOGRAM



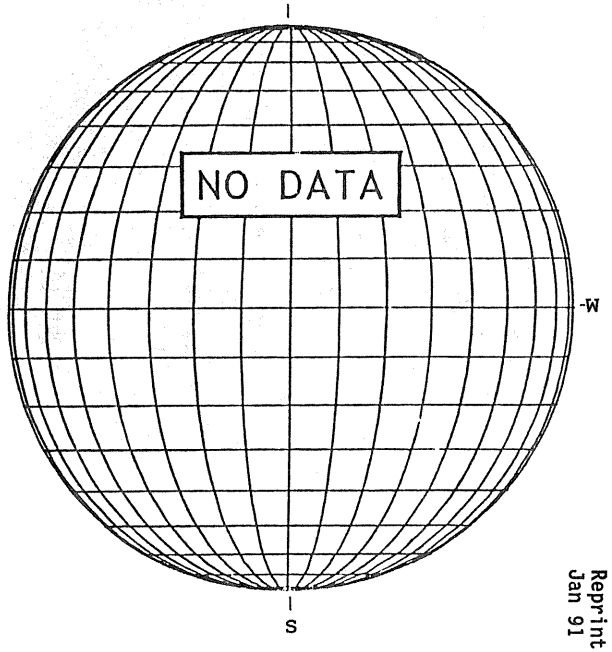
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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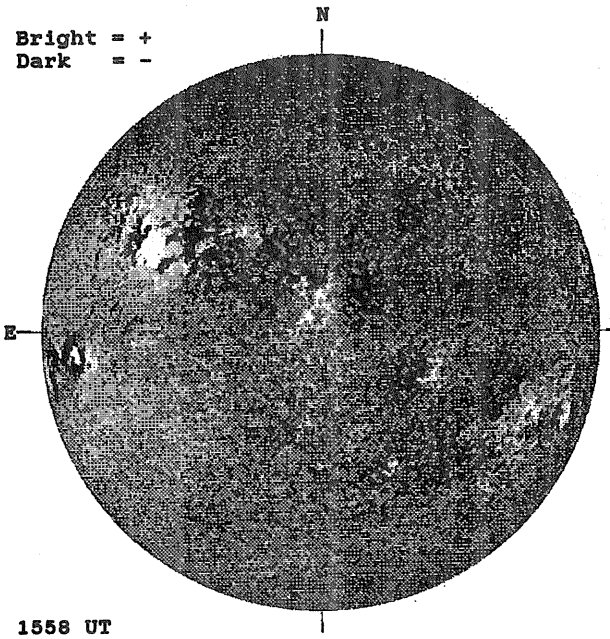
JANUARY 11, 1991 (P= -2.57, B_o =-4.10, L_o = 60.78)

KITT PEAK MAGNETOGRAM

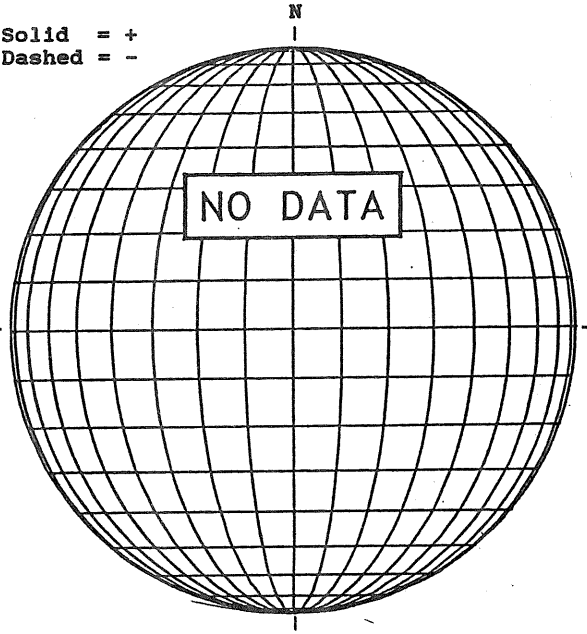
Bright = +
Dark = -



1558 UT

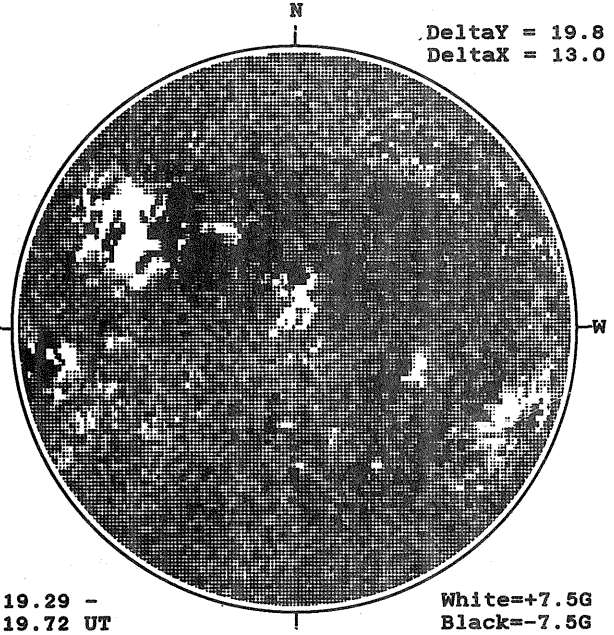
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

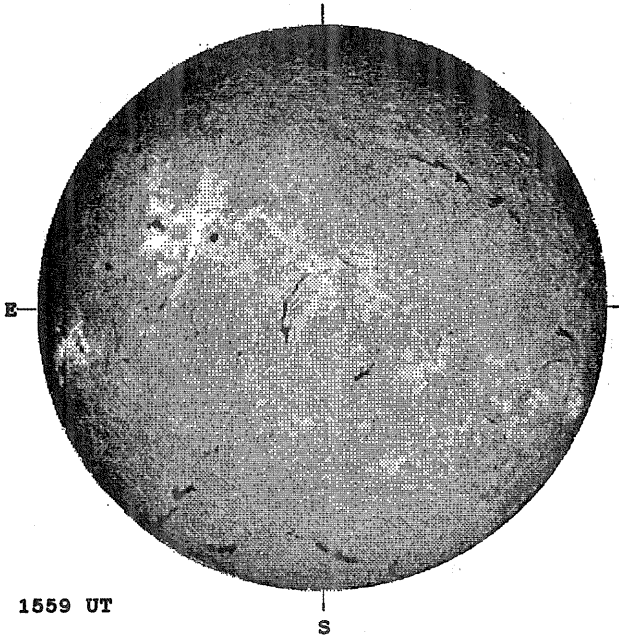
DeltaY = 19.8
DeltaX = 13.0



19.29 -
19.72 UT

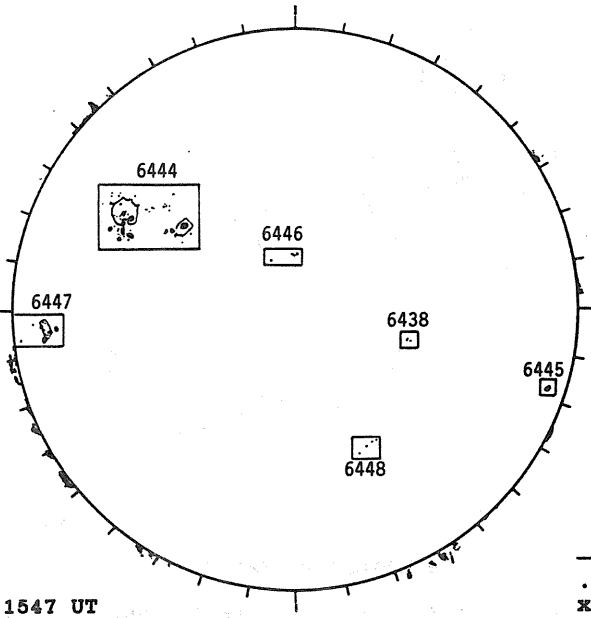
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



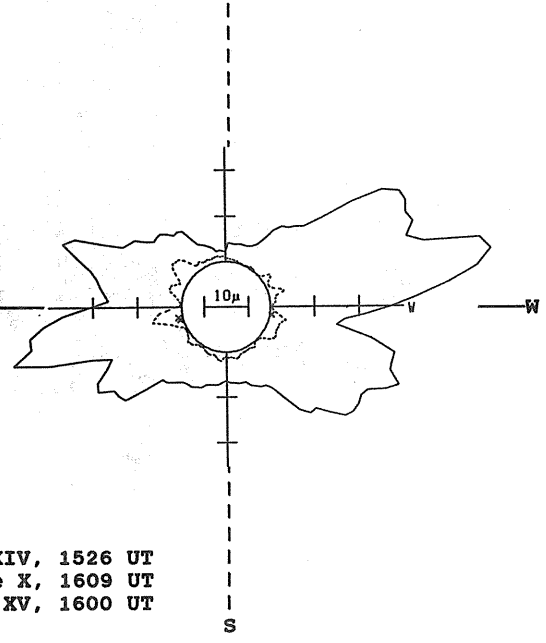
1559 UT

BOULDER SUNSPOT



1547 UT
1616 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

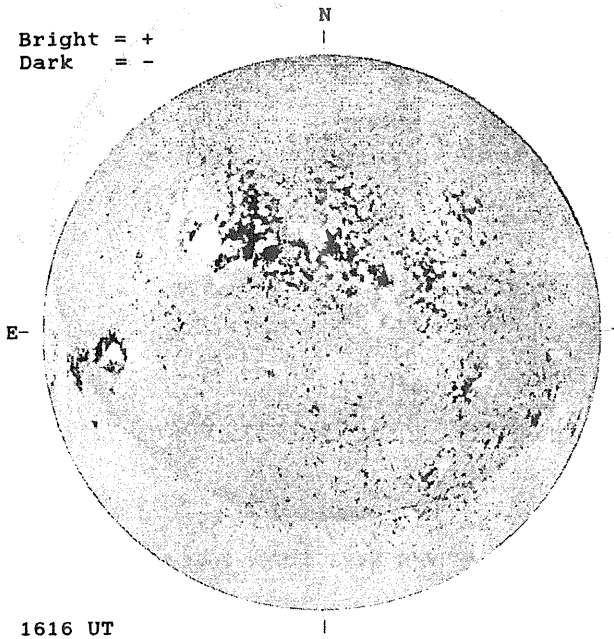


—— FeXIV, 1526 UT
.... Fe X, 1609 UT
xxxx Ca XV, 1600 UT

JANUARY 12, 1991 (P= -3.05, B_o =-4.20, L_o = 47.61)

KITT PEAK MAGNETOGRAM

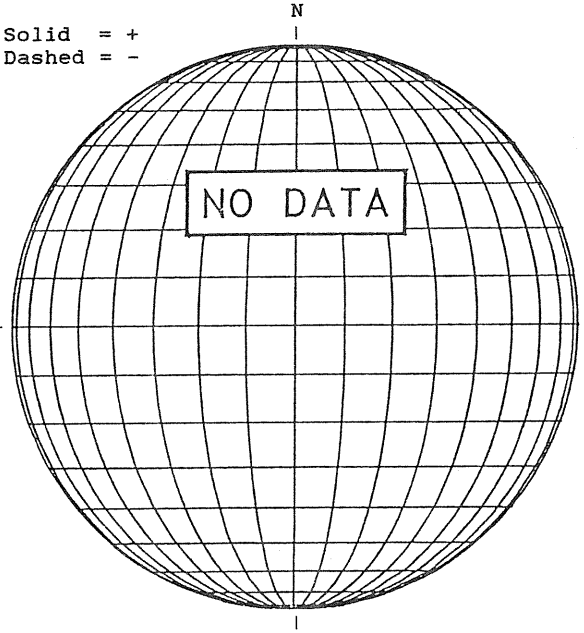
Bright = +
Dark = -



1616 UT

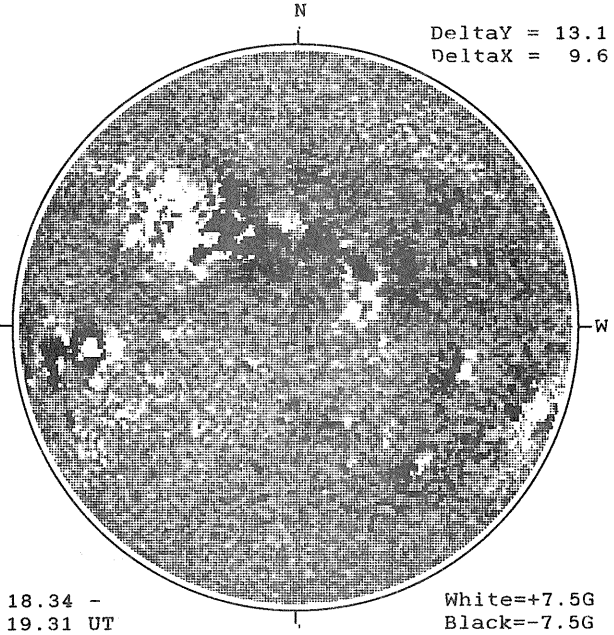
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

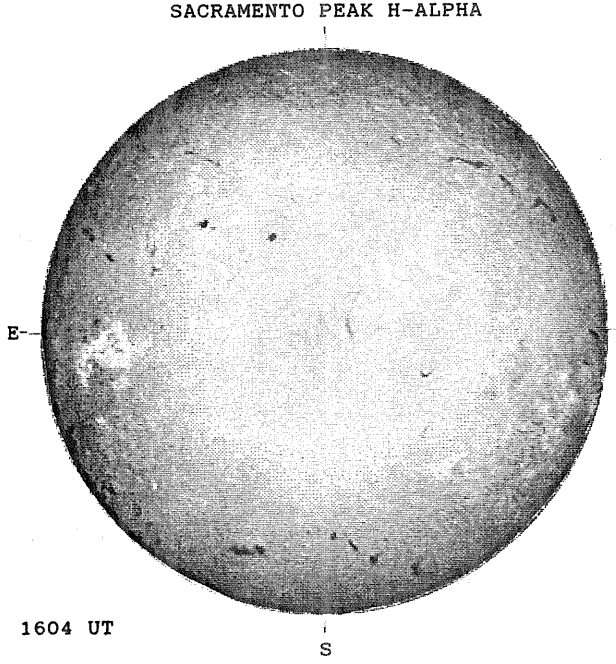
DeltaY = 13.1
DeltaX = 9.6



18.34 -
19.31 UT

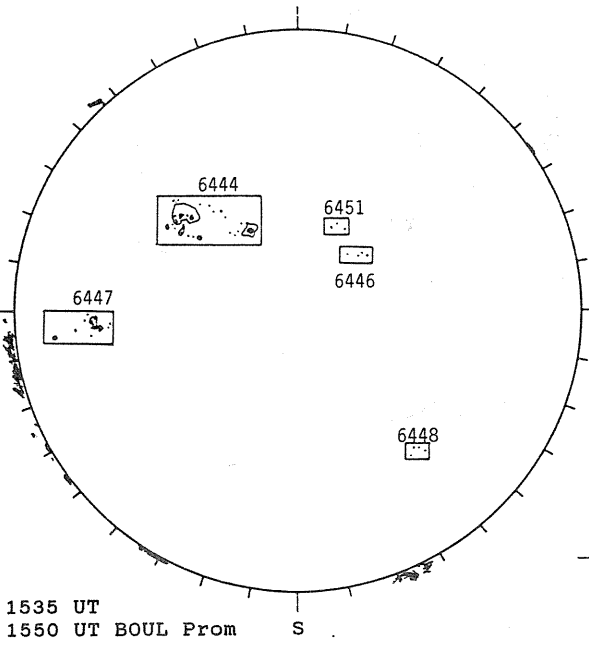
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



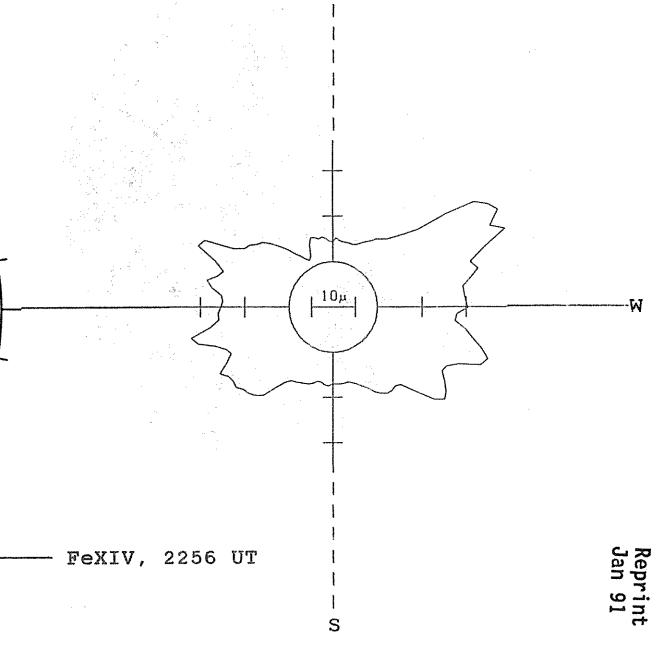
1604 UT

BOULDER SUNSPOT



1535 UT
1550 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



FeXIV, 2256 UT

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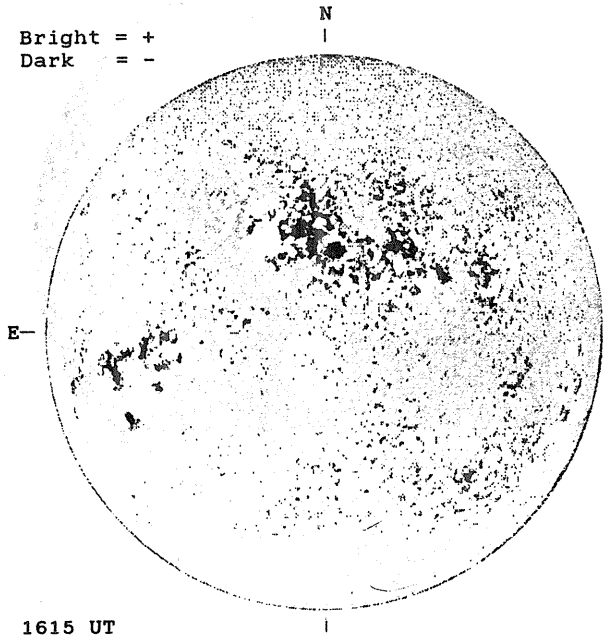
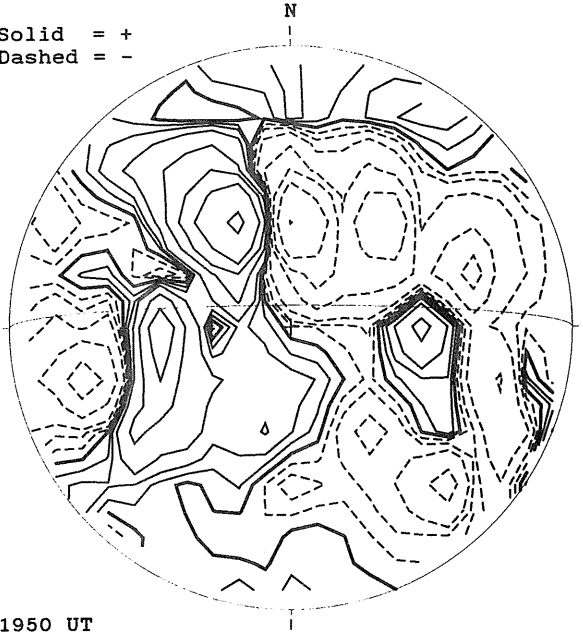
JANUARY 13, 1991 (P= -3.52, B_o =-4.31, L_o = 34.44)

KITT PEAK MAGNETOGRAM



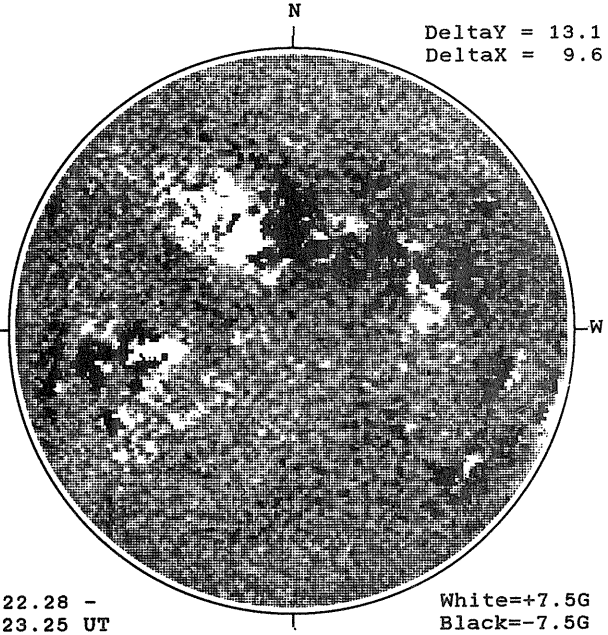
1615 UT

STANFORD MAGNETOGRAM



1950 UT

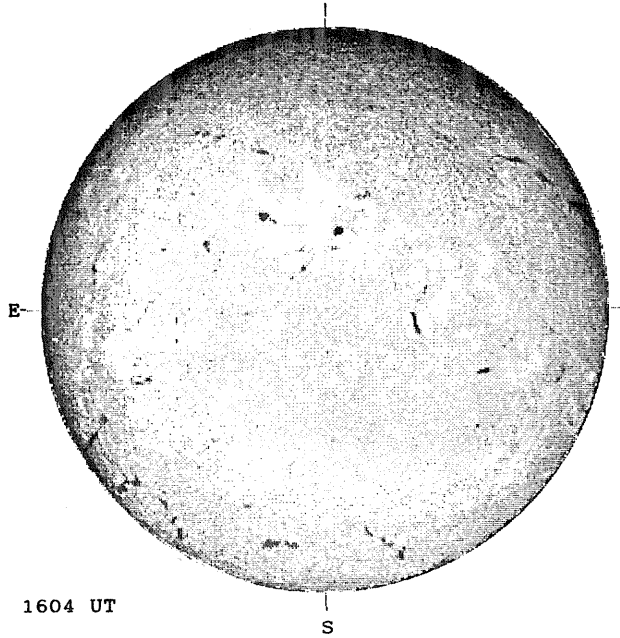
MT. WILSON MAGNETOGRAM



22.28 -
23.25 UT

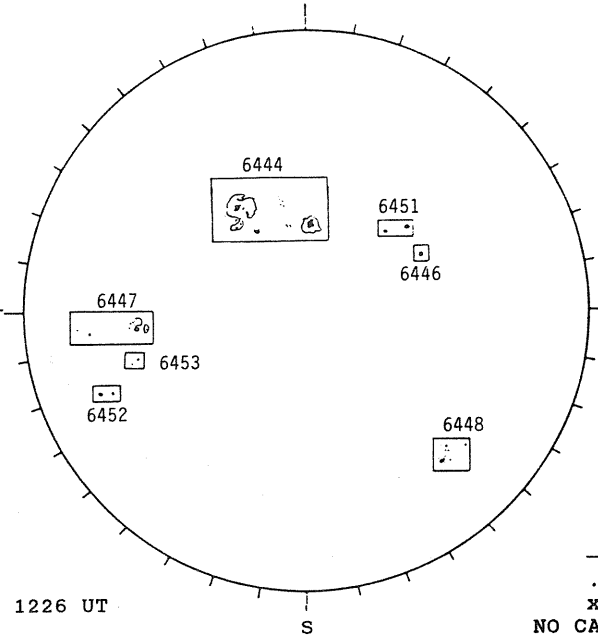
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



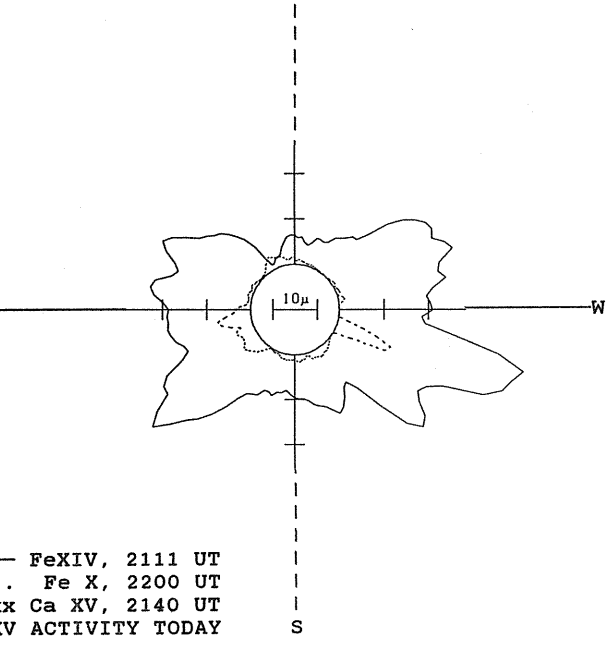
1604 UT

RAMEY SUNSPOT



1226 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

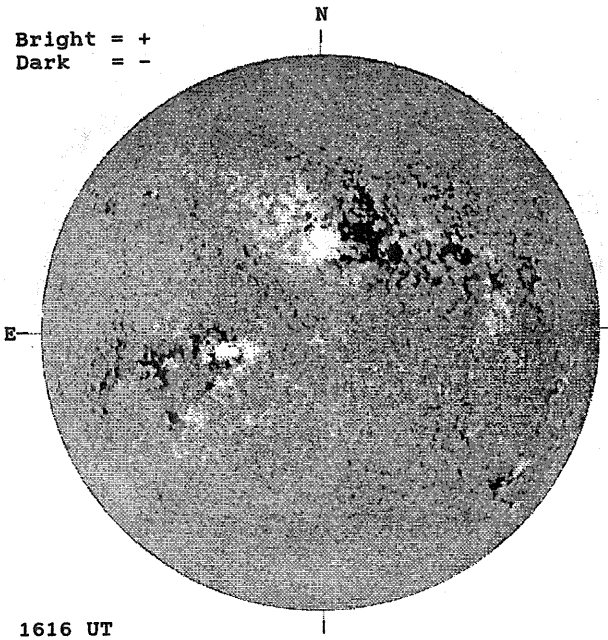


—— FeXIV, 2111 UT
.... Fe X, 2200 UT
xxxx Ca XV, 2140 UT
NO CA XV ACTIVITY TODAY

JANUARY 14, 1991 (P= -3.99, B_o =-4.41, L_o = 21.27)

KITT PEAK MAGNETOGRAM

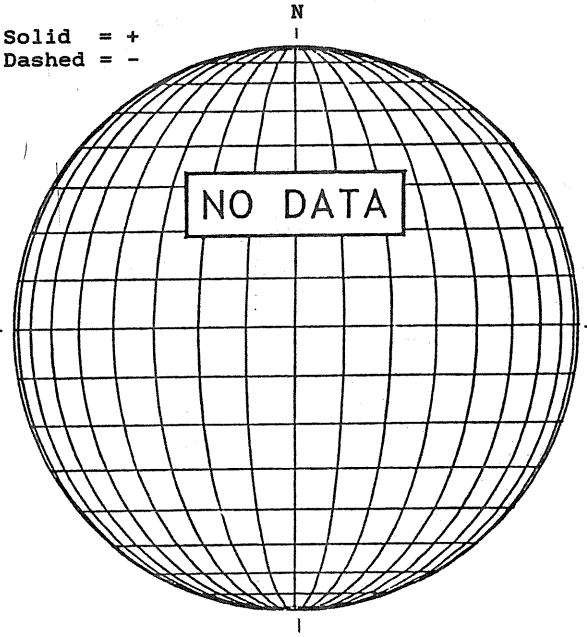
Bright = +
Dark = -



1616 UT

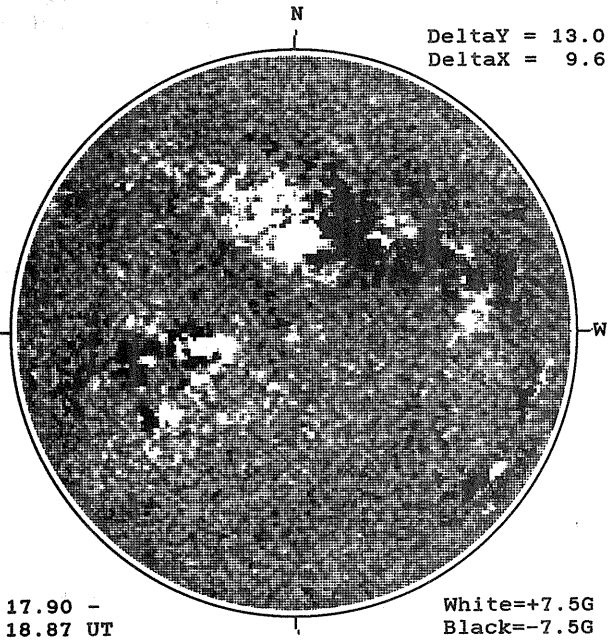
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

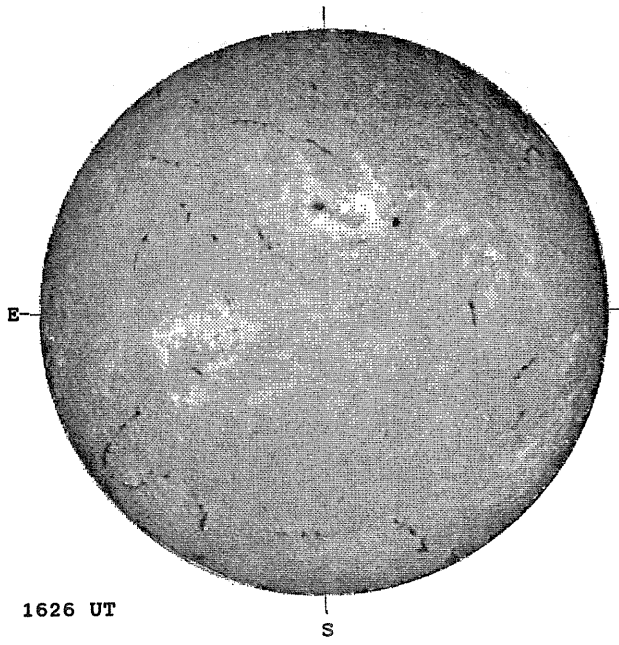
DeltaY = 13.0
DeltaX = 9.6



17.90 -
18.87 UT

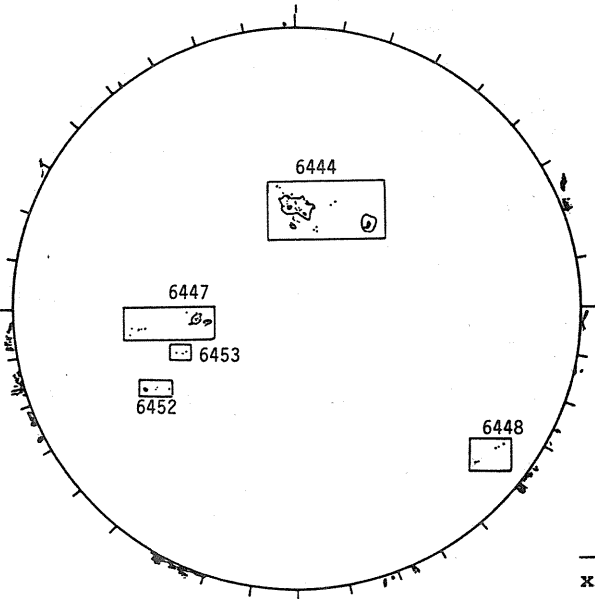
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



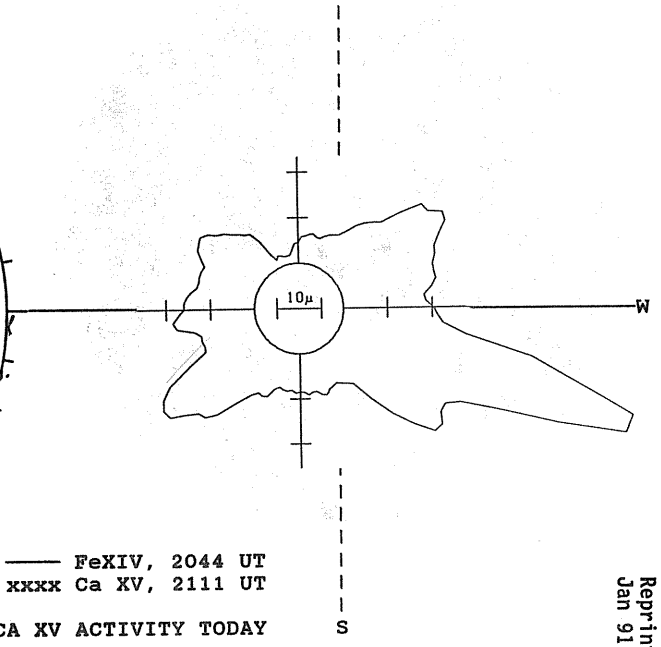
1626 UT

BOULDER SUNSPOT



1613 UT
1626 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 2044 UT
xxxx Ca XV, 2111 UT

NO CA XV ACTIVITY TODAY

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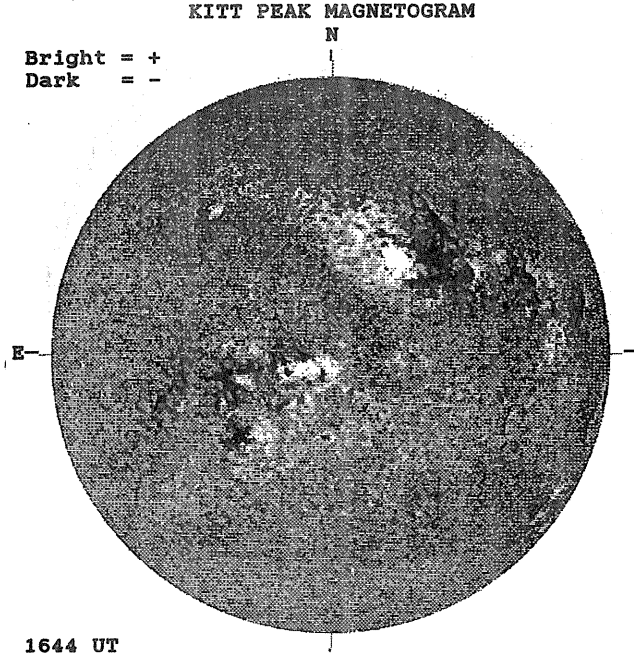
JANUARY 15, 1991 (P= -4.47, B_o =-4.51, L_o = 8.11)

KITT PEAK MAGNETOGRAM

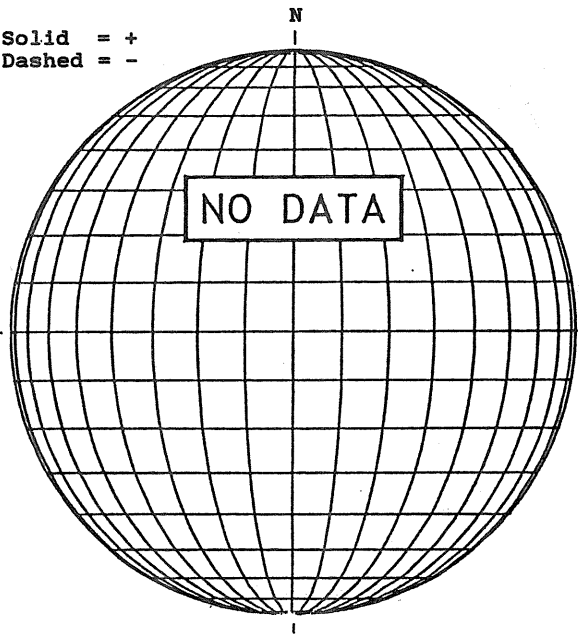
Bright = +
Dark = -



1644 UT

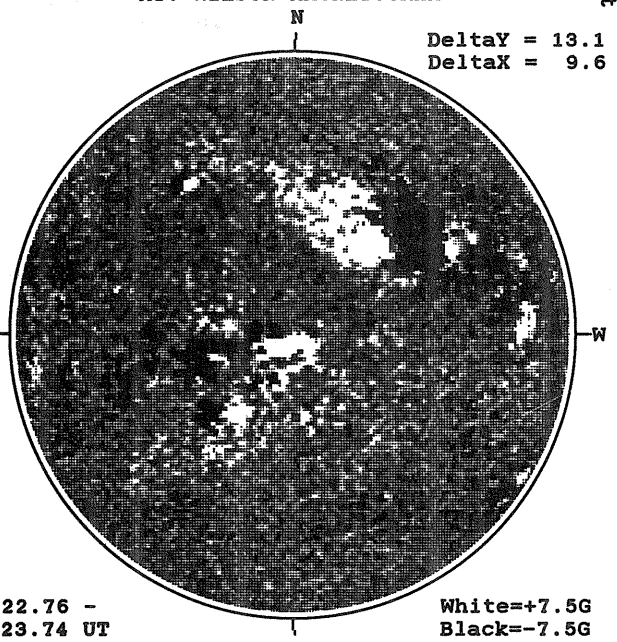
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

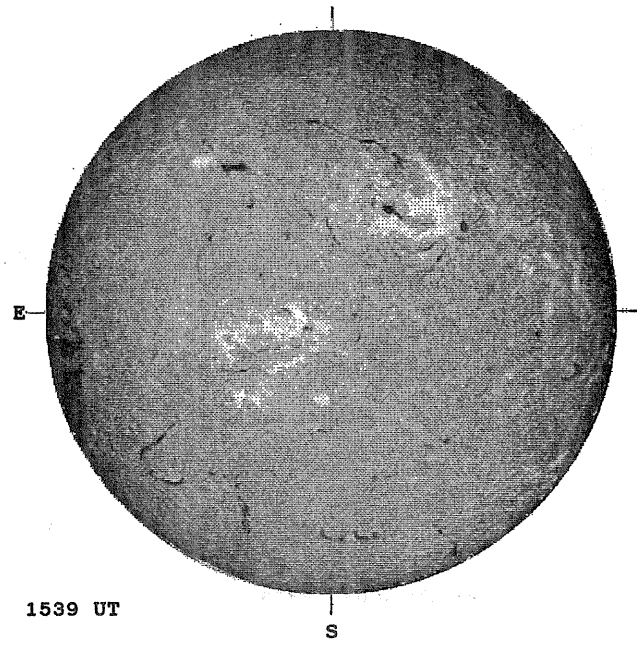
DeltaY = 13.1
DeltaX = 9.6



22.76 -
23.74 UT

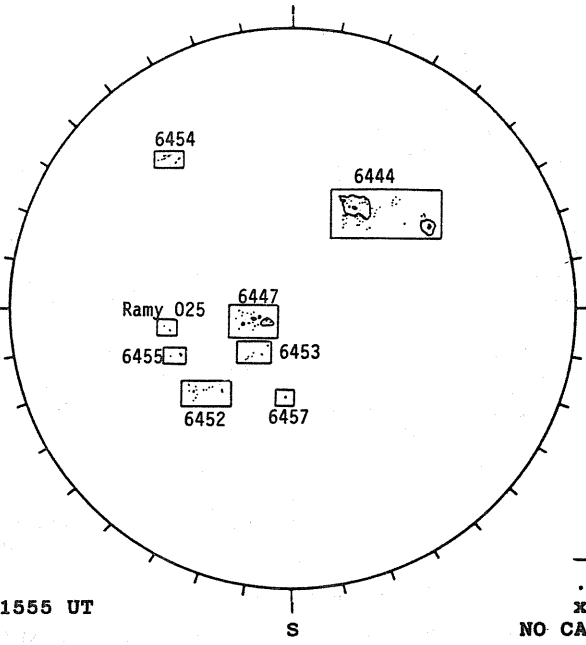
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



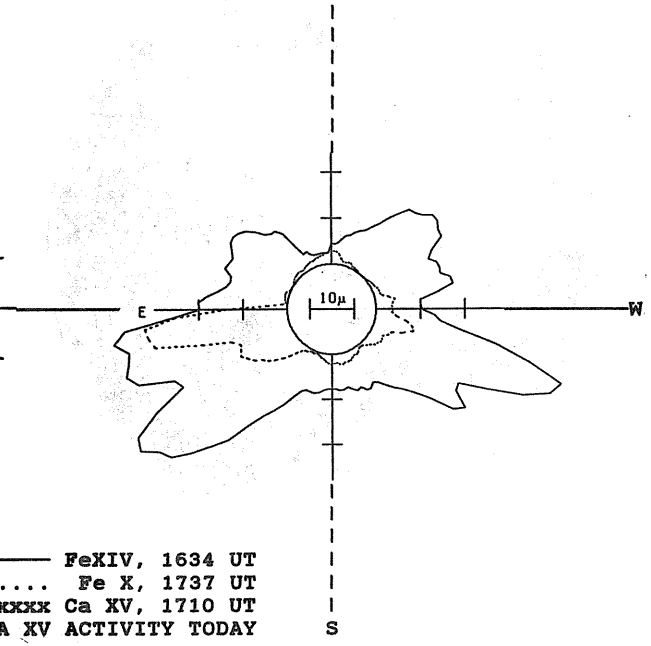
1539 UT

RAMEY SUNSPOT



1555 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

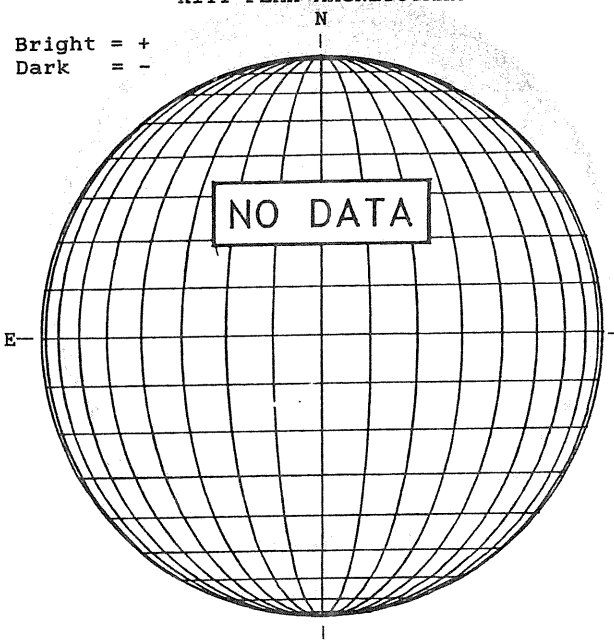


—— FeXIV, 1634 UT
.... Fe X, 1737 UT
xxxx Ca XV, 1710 UT
NO CA XV ACTIVITY TODAY

JANUARY 16, 1991 (P= -4.93, B_o =-4.61, L_o = 354.94)

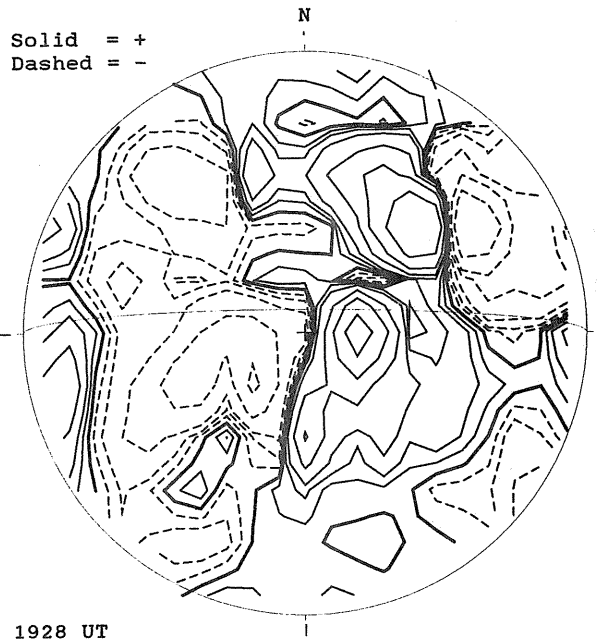
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

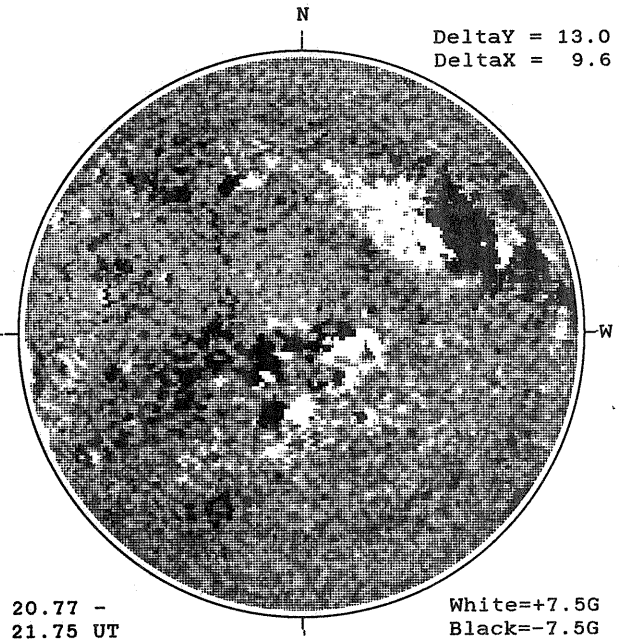
Solid = +
Dashed = -



1928 UT

MT. WILSON MAGNETOGRAM

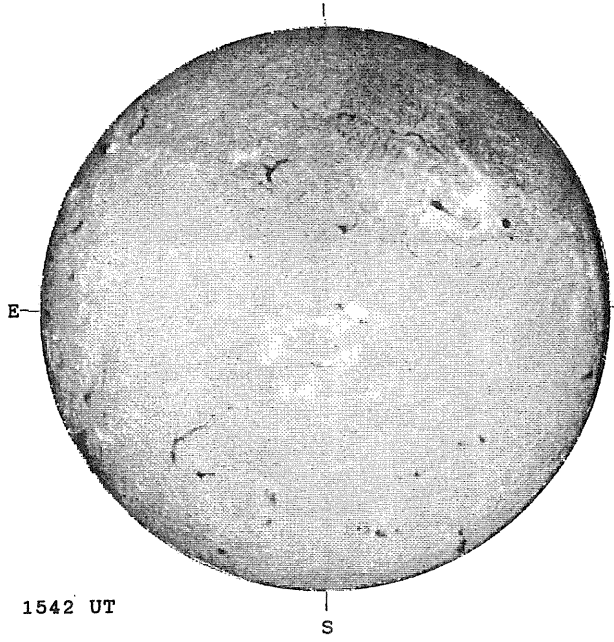
DeltaY = 13.0
DeltaX = 9.6



20.77 -
21.75 UT

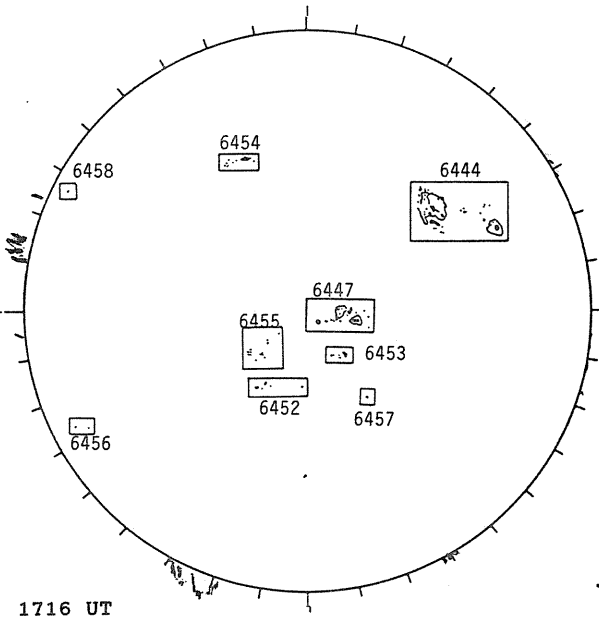
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



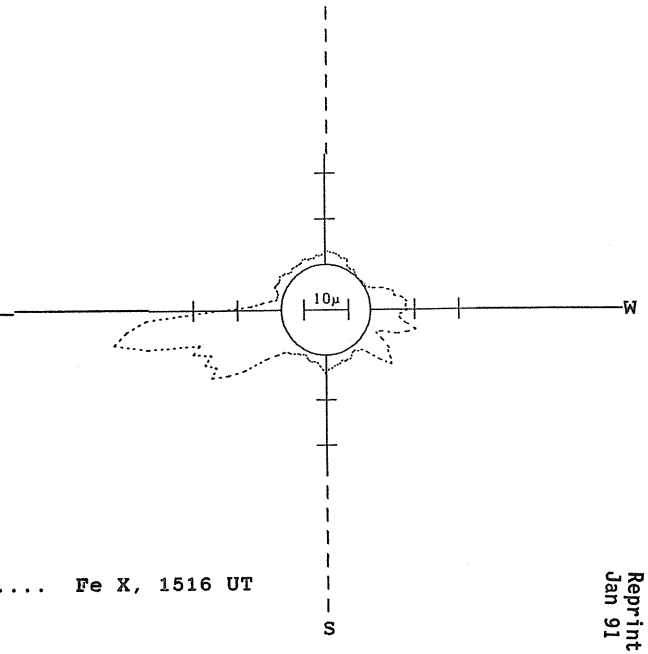
1542 UT

BOULDER SUNSPOT



1716 UT
1728 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



.... Fe X, 1516 UT

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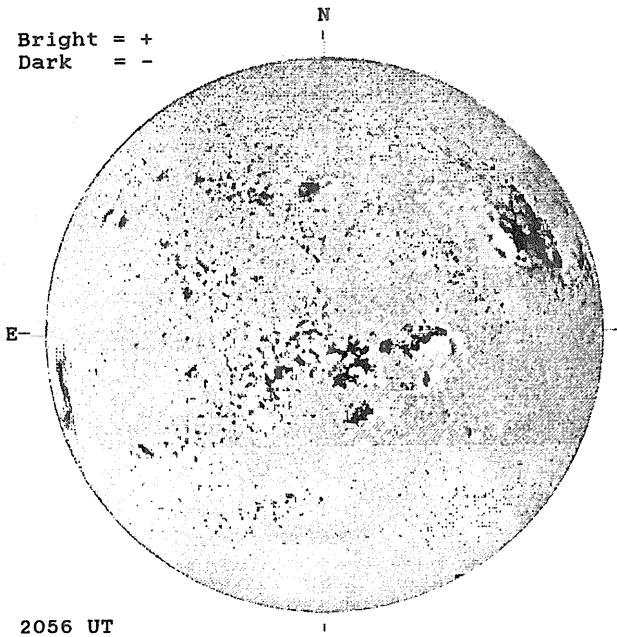
JANUARY 17, 1991 (P= -5.40, B_o =-4.71, L_o = 341.77)

KITT PEAK MAGNETOGRAM

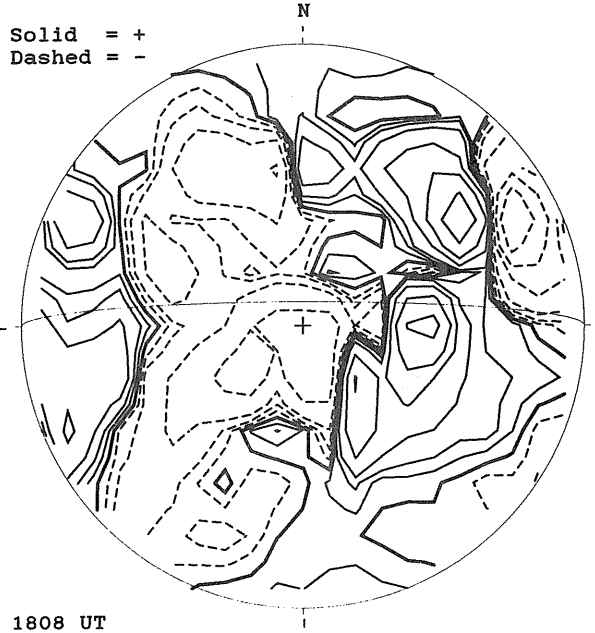
Bright = +
Dark = -



2056 UT

STANFORD MAGNETOGRAM

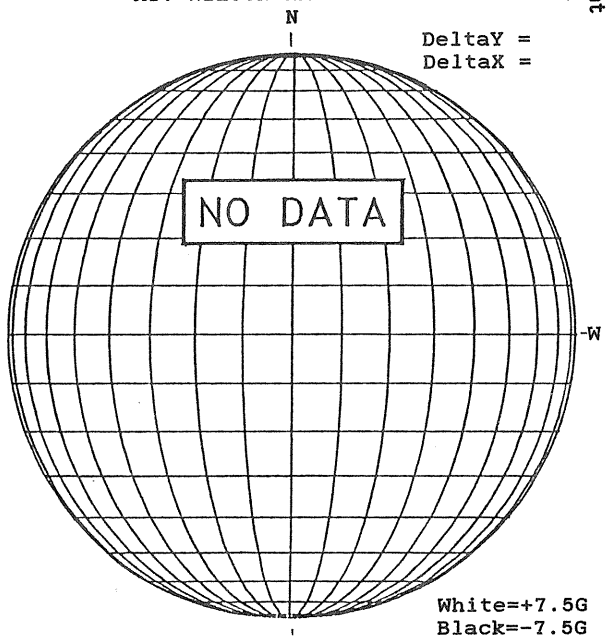
Solid = +
Dashed = -



1808 UT

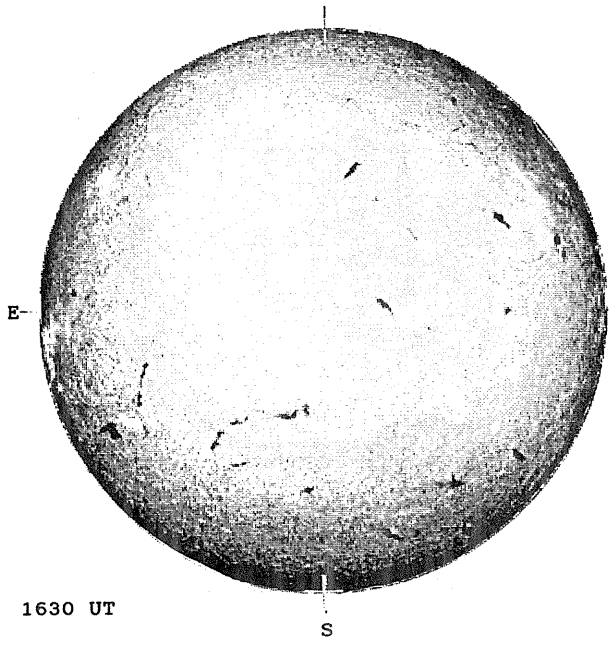
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



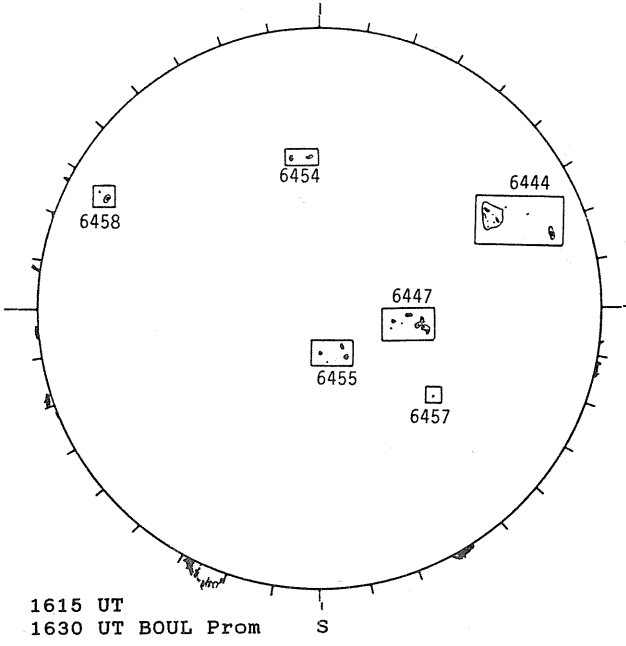
White=+7.5G
Black=-7.5G

BOULDER H-ALPHA



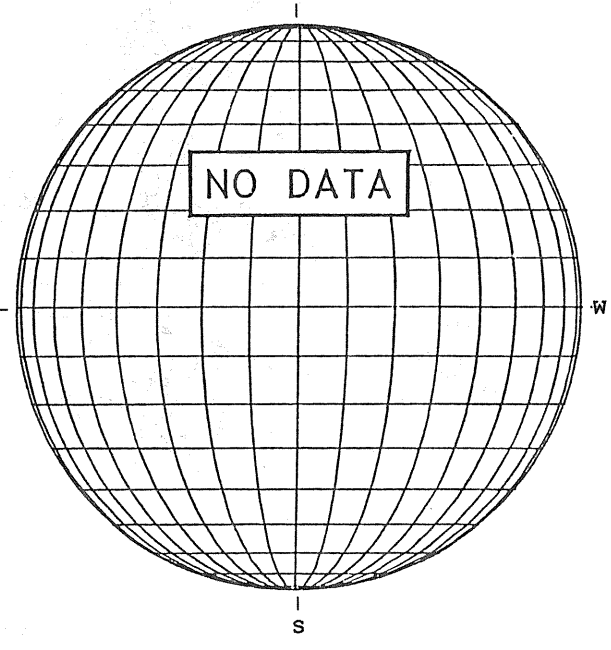
1630 UT

BOULDER SUNSPOT



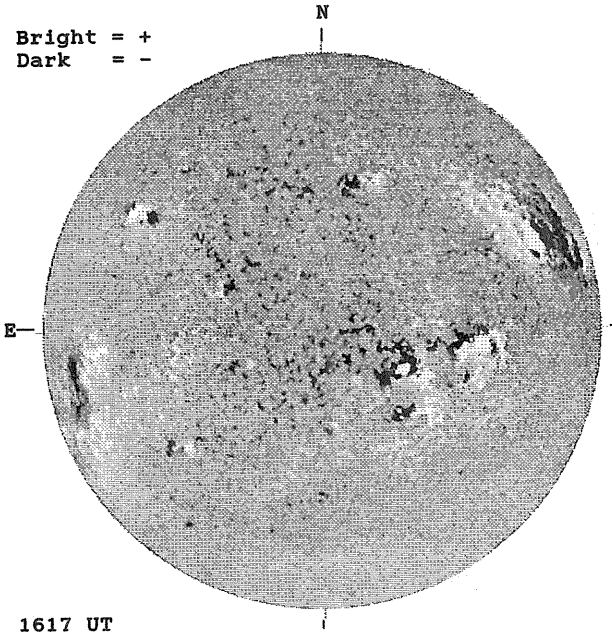
1615 UT
1630 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

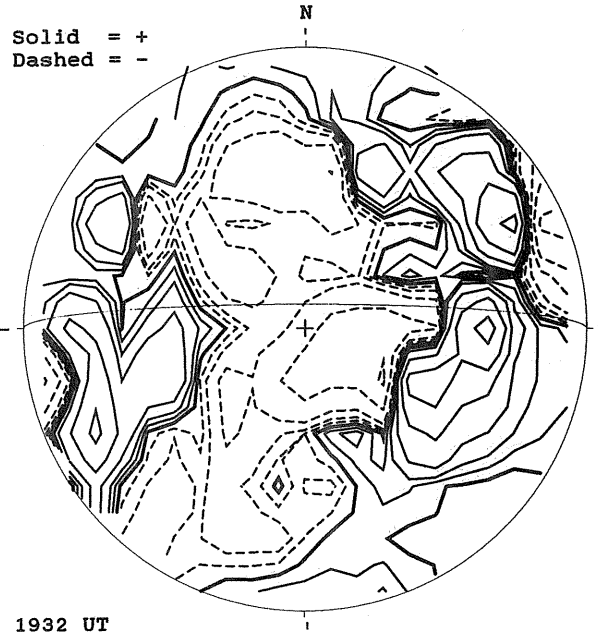


JANUARY 18, 1991 (P= -5.86, B_o =-4.81, L_o = 328.60)

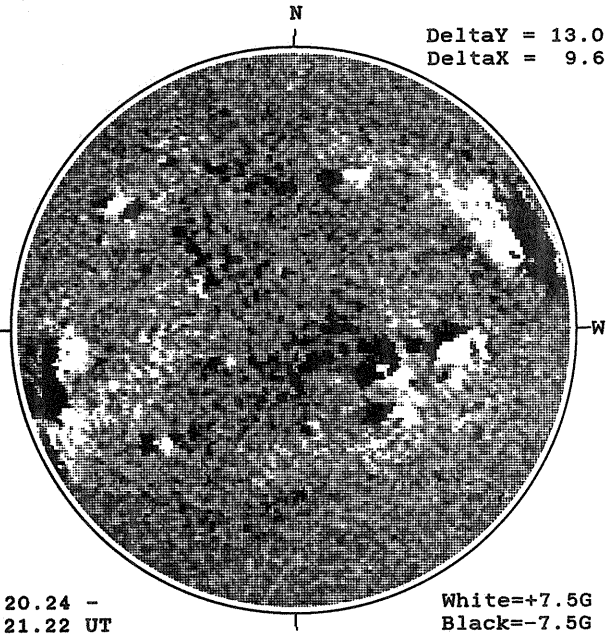
KITT PEAK MAGNETOGRAM



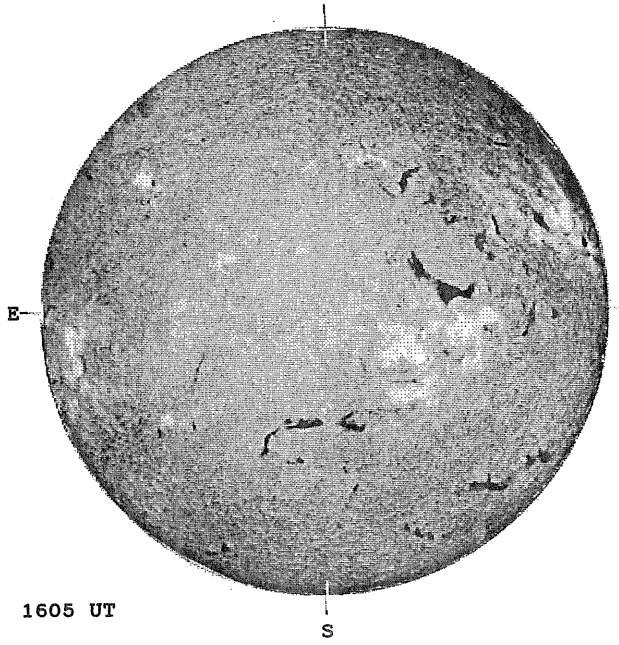
STANFORD MAGNETOGRAM



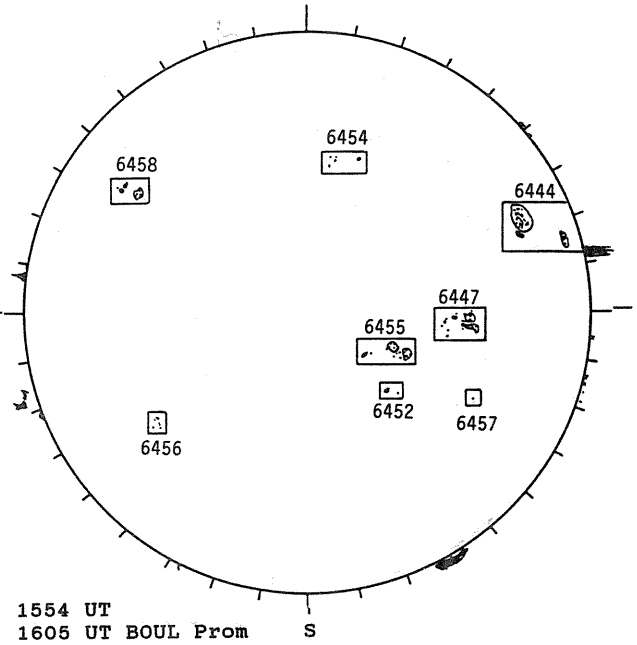
MT. WILSON MAGNETOGRAM



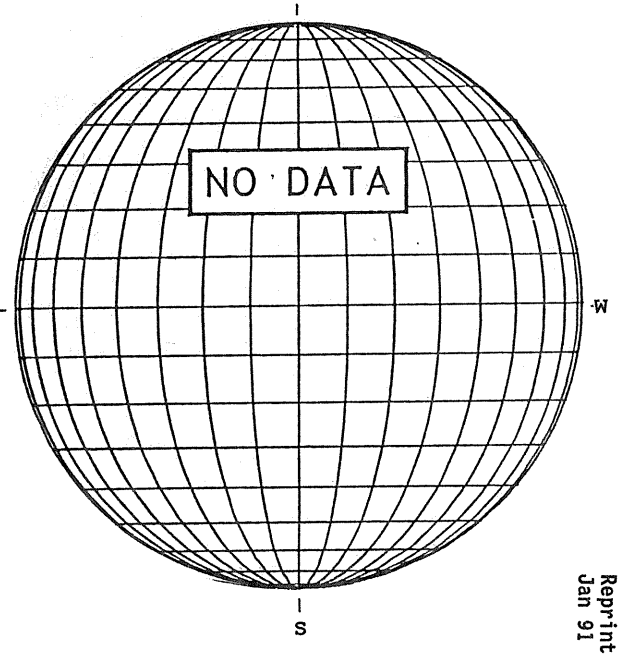
BOULDER H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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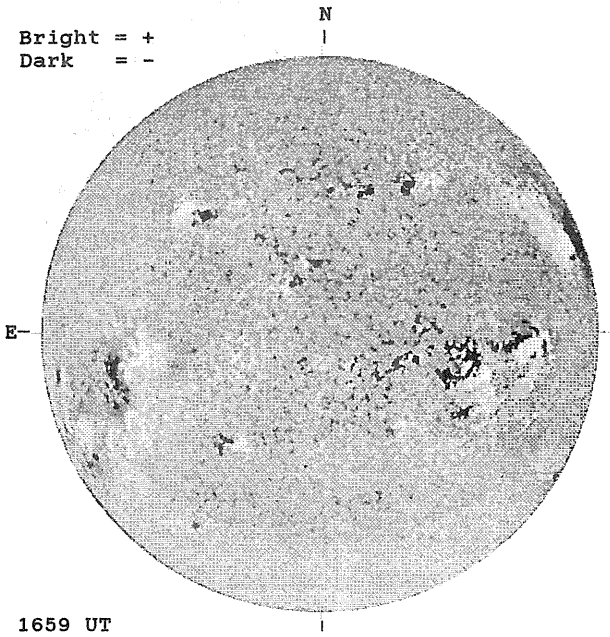
JANUARY 19, 1991 (P= -6.33, B_o =-4.90, L_o = 315.44)

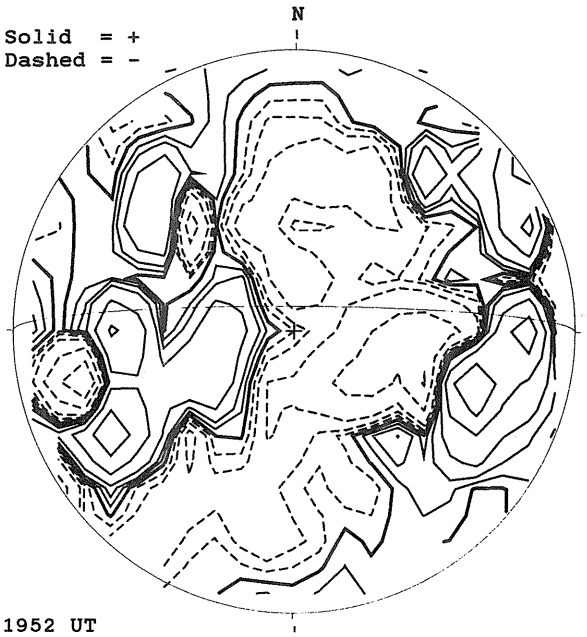
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



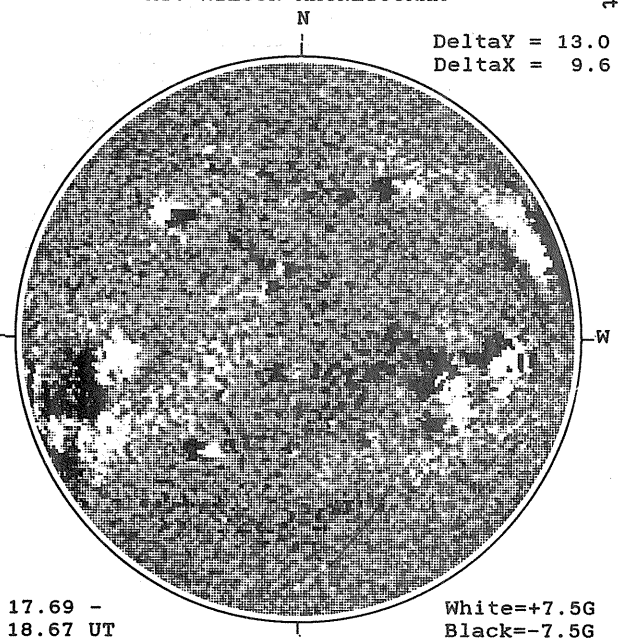
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

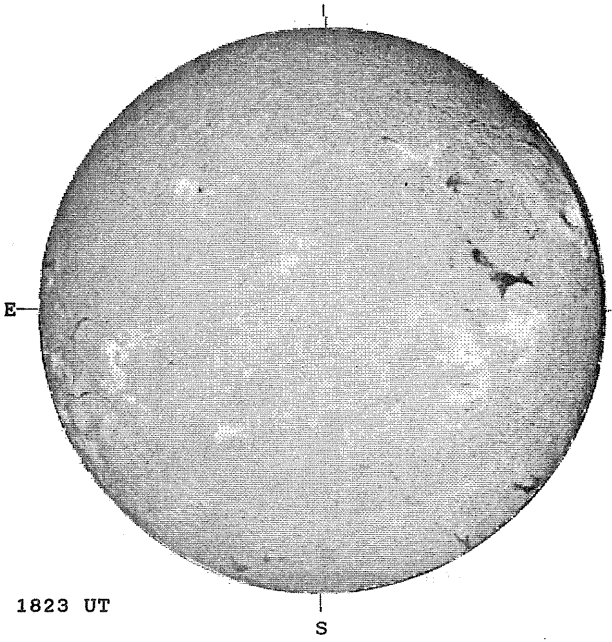


MT. WILSON MAGNETOGRAM

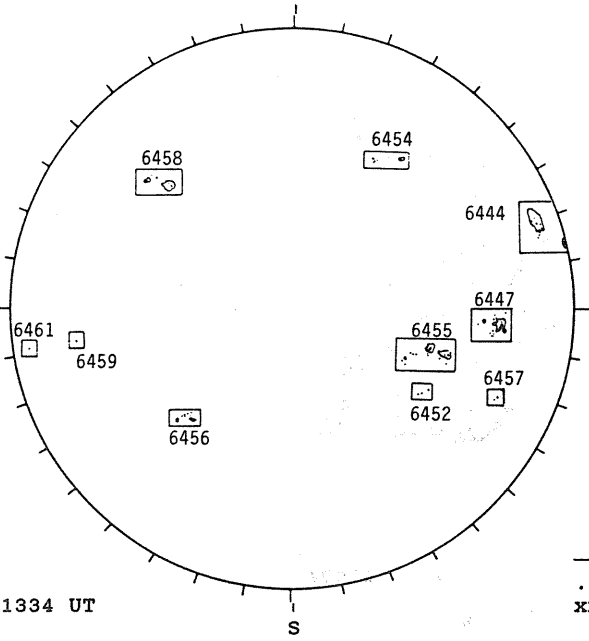
DeltaY = 13.0
DeltaX = 9.6



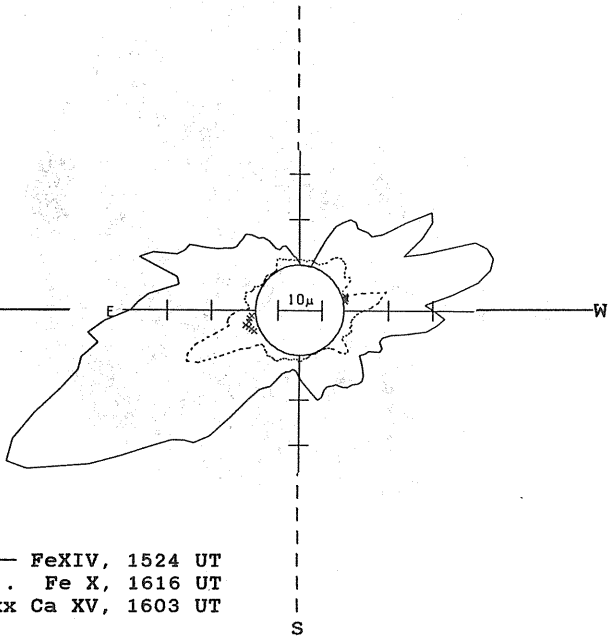
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)

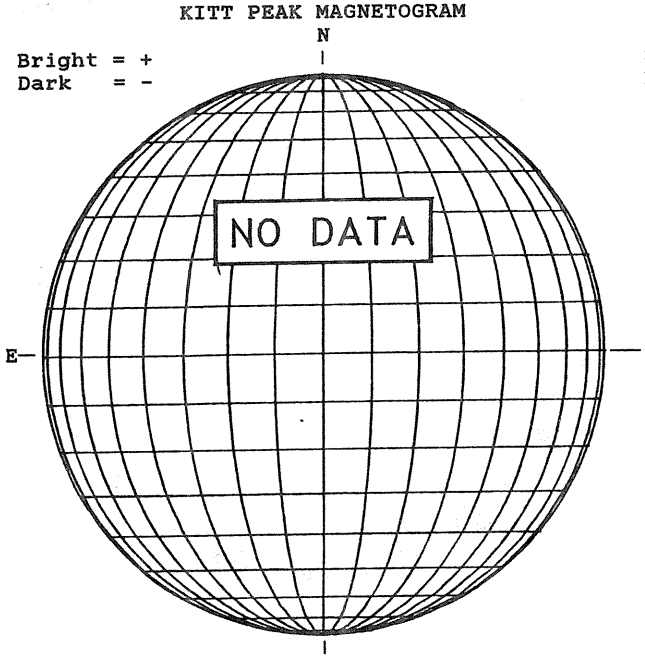


—— FeXIV, 1524 UT
.... Fe X, 1616 UT
xxxx Ca XV, 1603 UT

JANUARY 20, 1991 (P= -6.78, B_o =-5.00, L_o = 302.27)

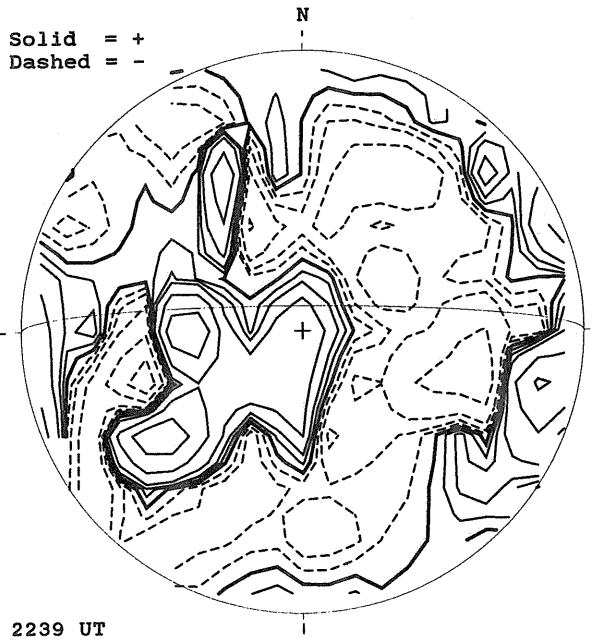
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

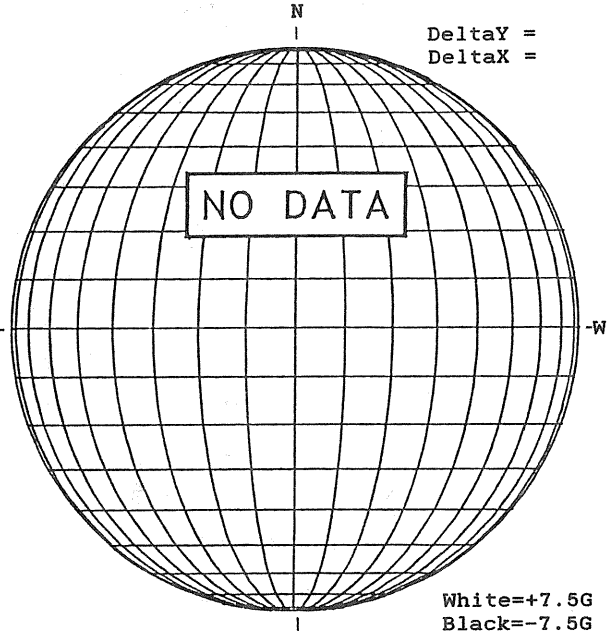
Solid = +
Dashed = -



2239 UT

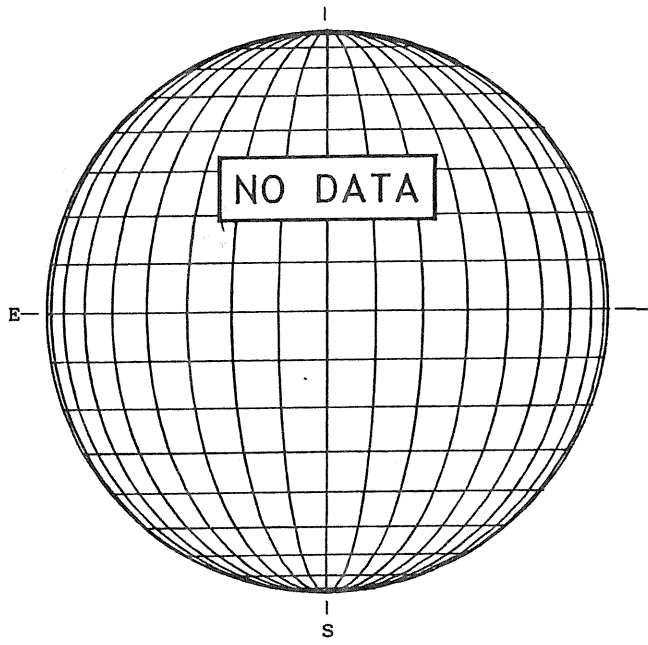
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =

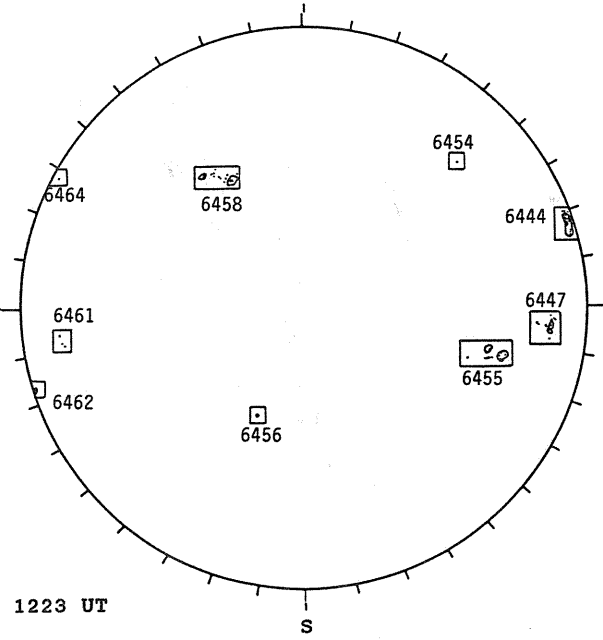


White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

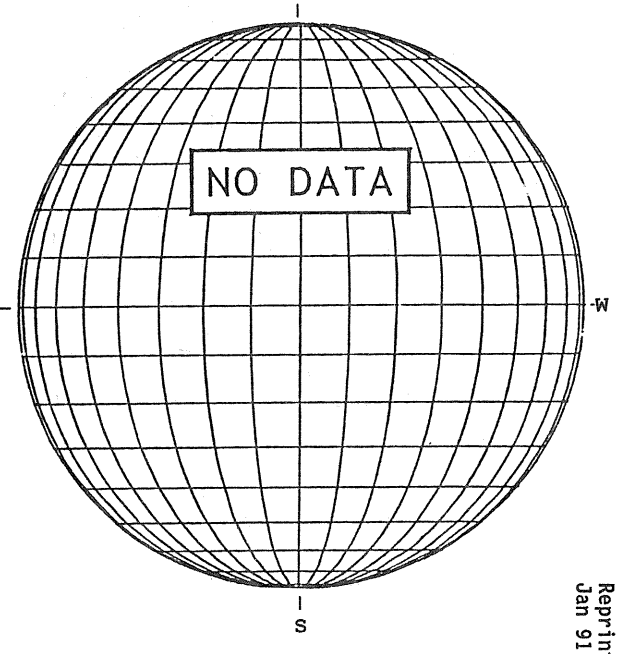


RAMEY SUNSPOT



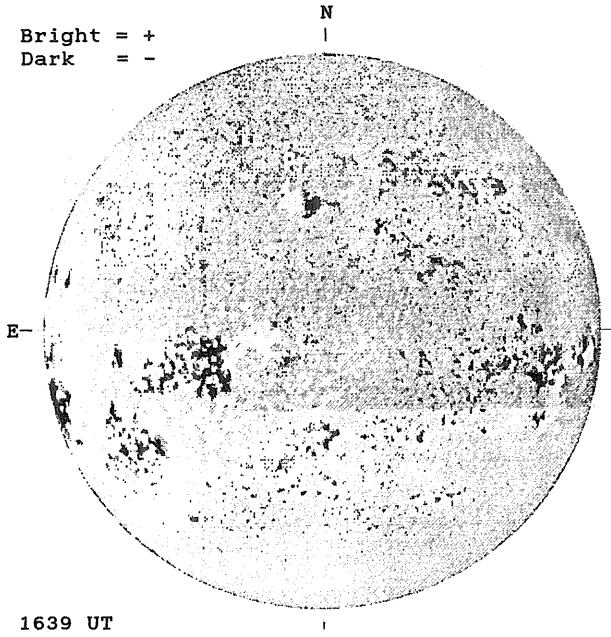
1223 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

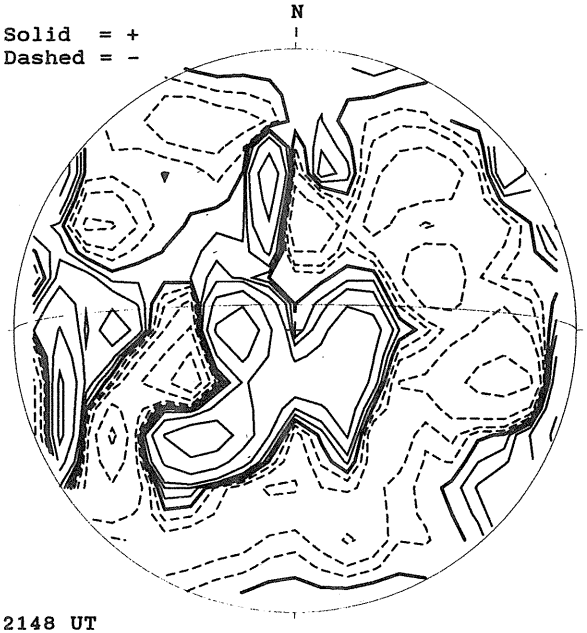


JANUARY 21, 1991 (P= -7.24, B_o =-5.09, L_o = 289.10)

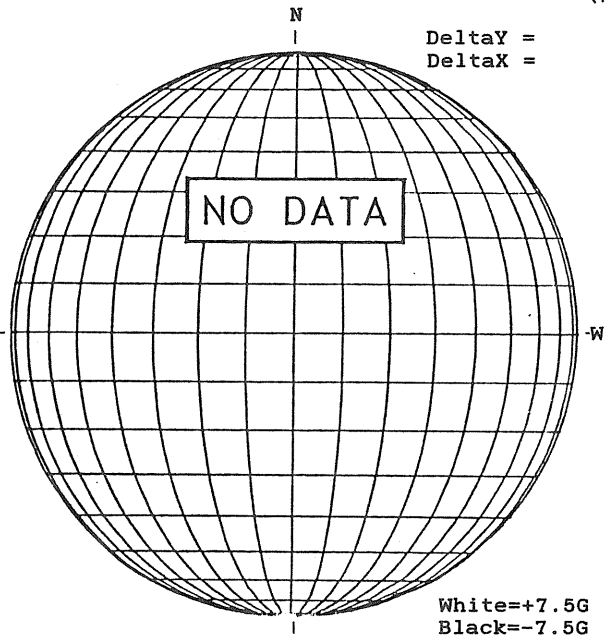
KITT PEAK MAGNETOGRAM



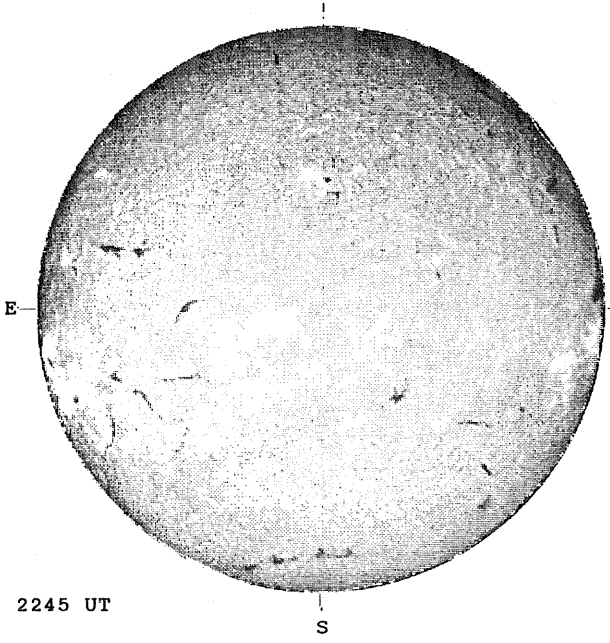
STANFORD MAGNETOGRAM



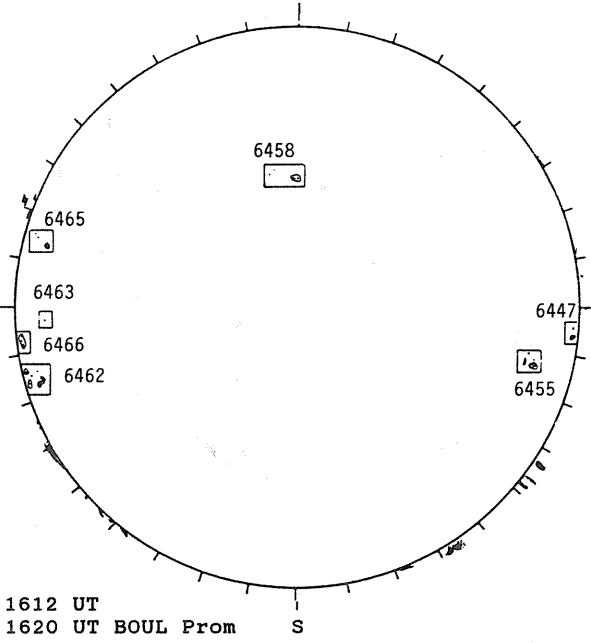
MT. WILSON MAGNETOGRAM



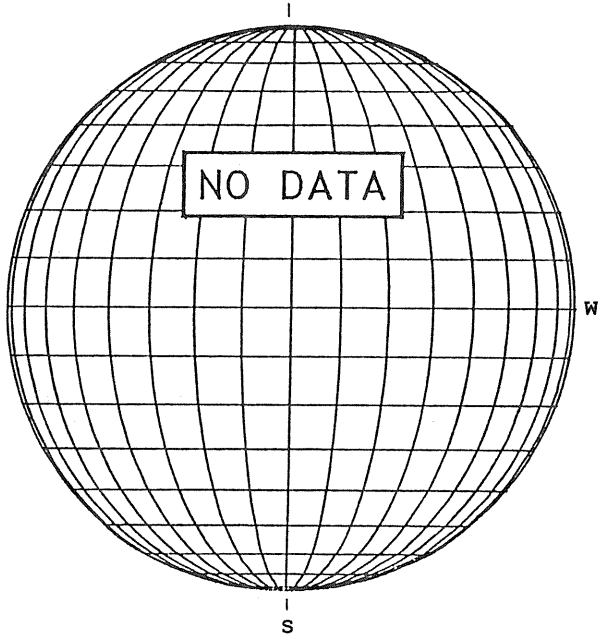
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



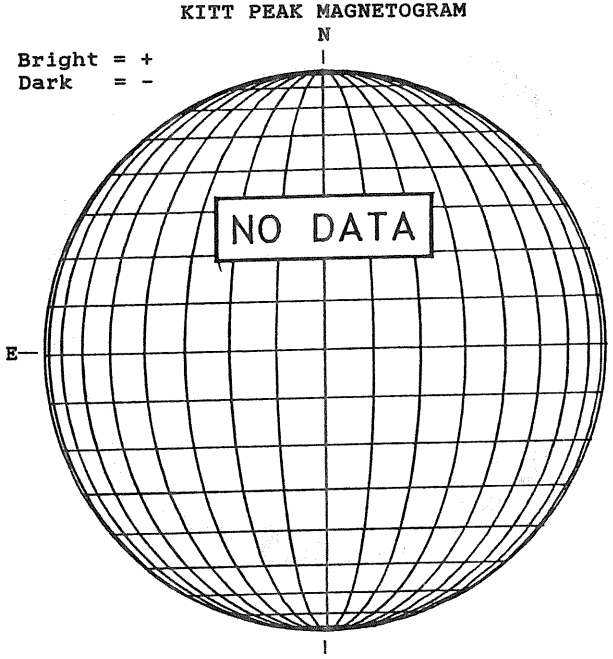
SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 22, 1991 (P= -7.69, B_o =-5.18, L_o = 275.94)

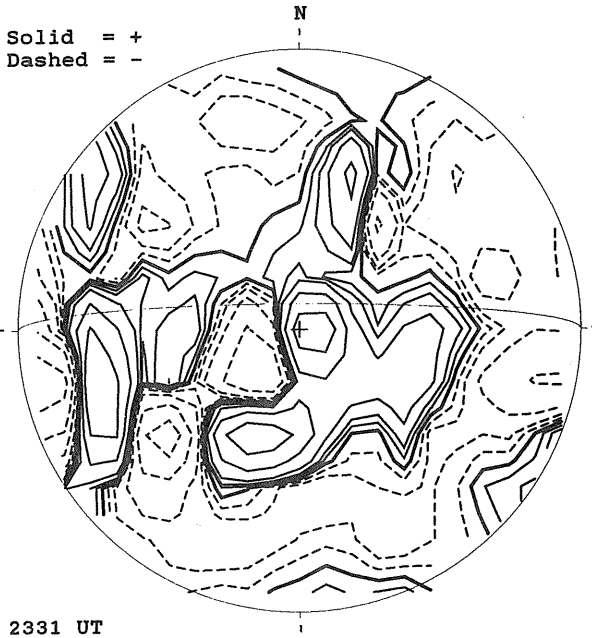
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

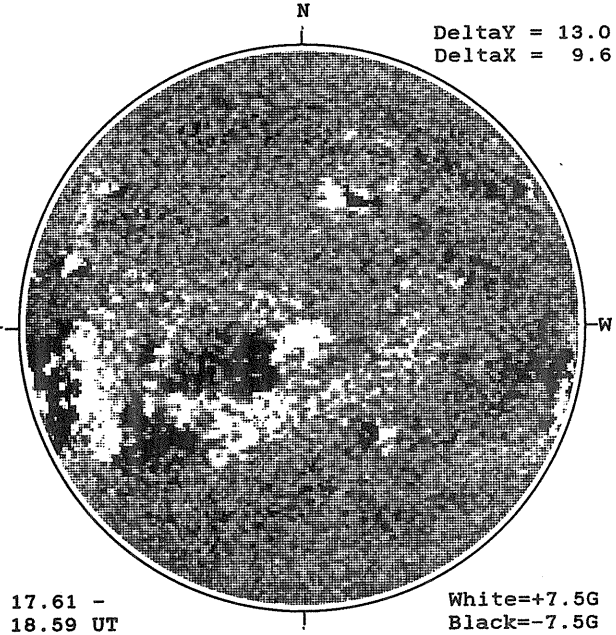
Solid = +
Dashed = -



2331 UT

MT. WILSON MAGNETOGRAM

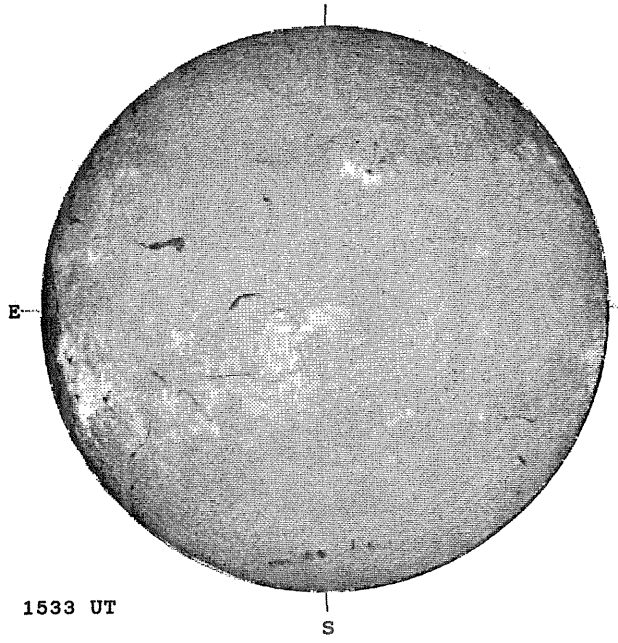
DeltaY = 13.0
DeltaX = 9.6



17.61 -
18.59 UT

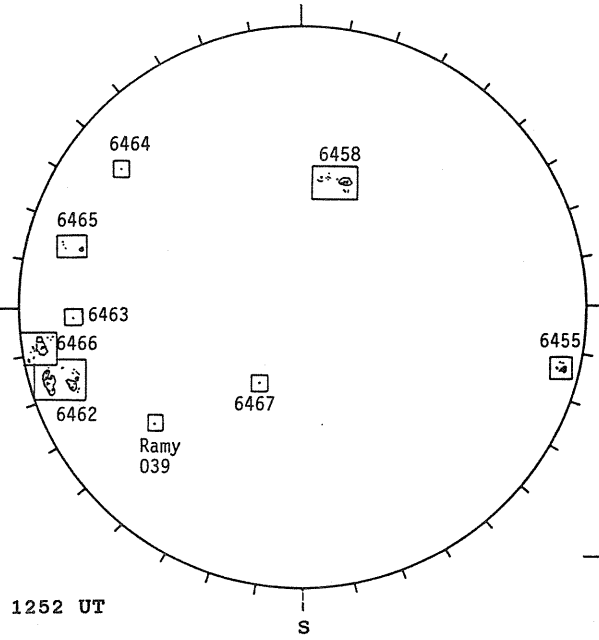
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



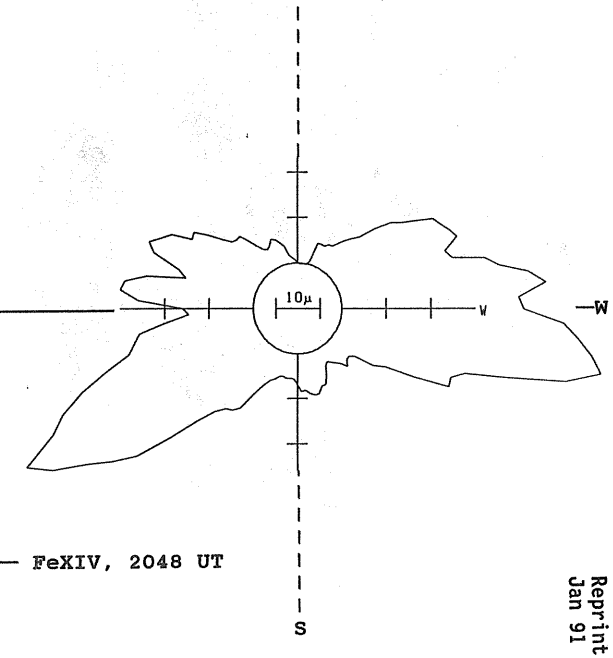
1533 UT

RAMEY SUNSPOT



1252 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



FeXIV, 2048 UT

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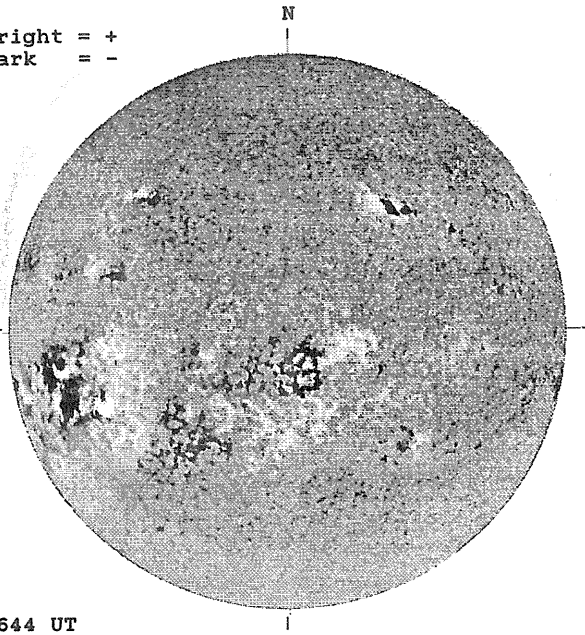
JANUARY 23, 1991 (P= -8.14, B_o =-5.27, L_o = 262.77)

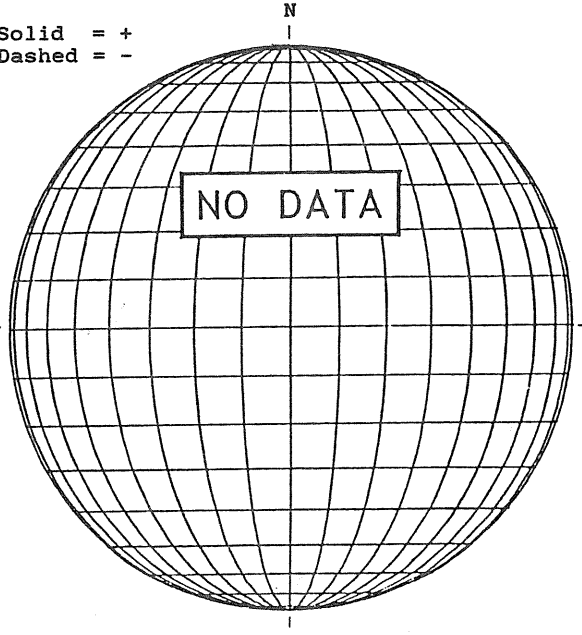
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



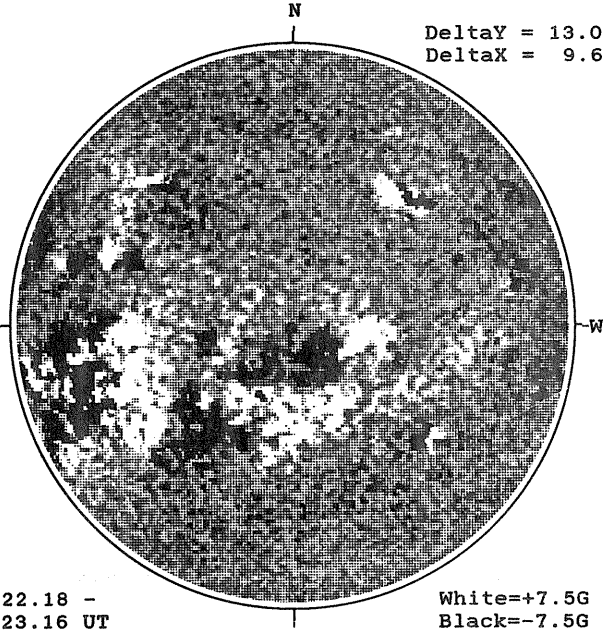
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

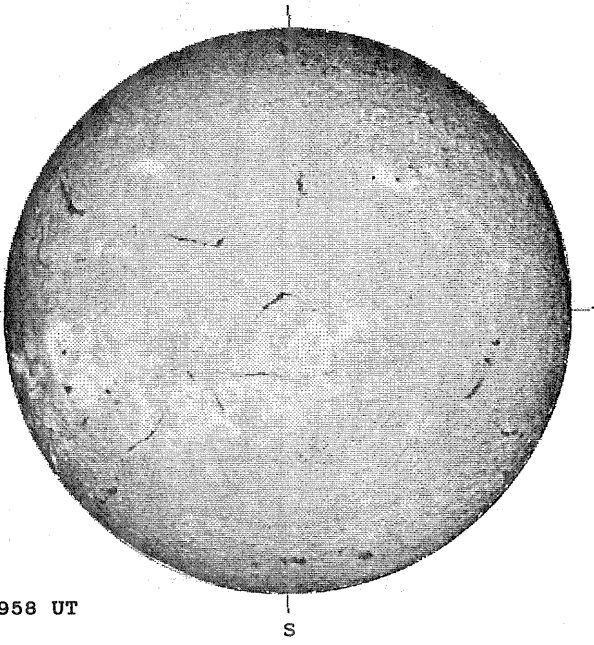


MT. WILSON MAGNETOGRAM

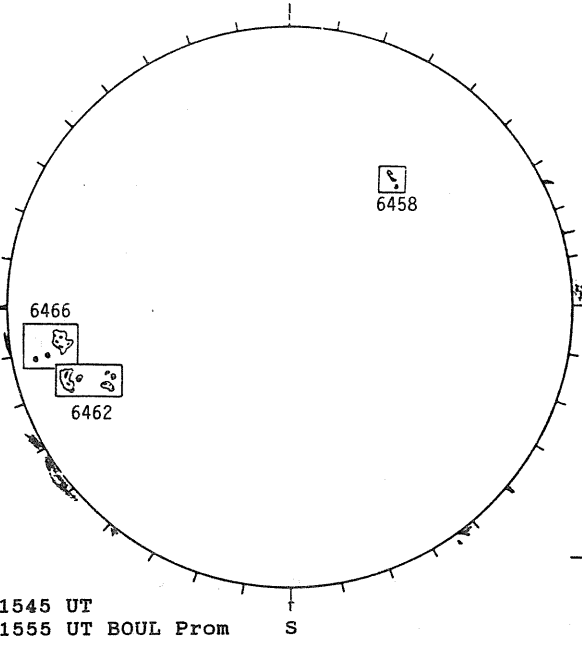
DeltaY = 13.0
DeltaX = 9.6



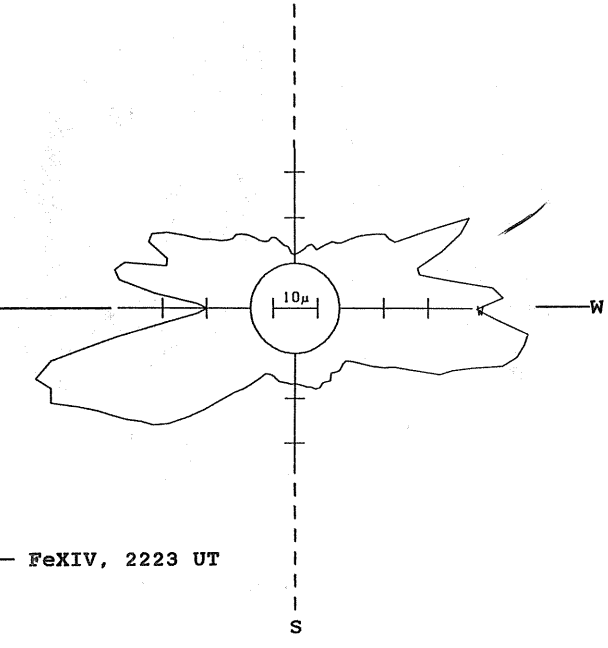
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



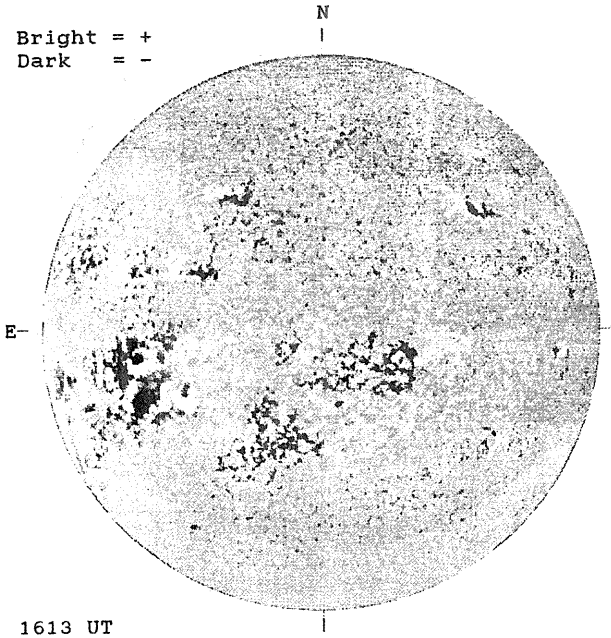
SACRAMENTO PEAK CORONA (1.15 Radii)



JANUARY 24, 1991 (P= -8.58 B_o =-5.35, L_o = 249.60)

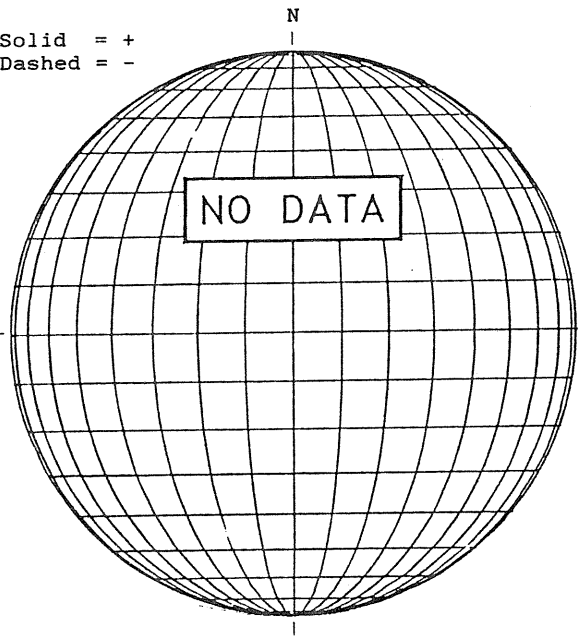
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



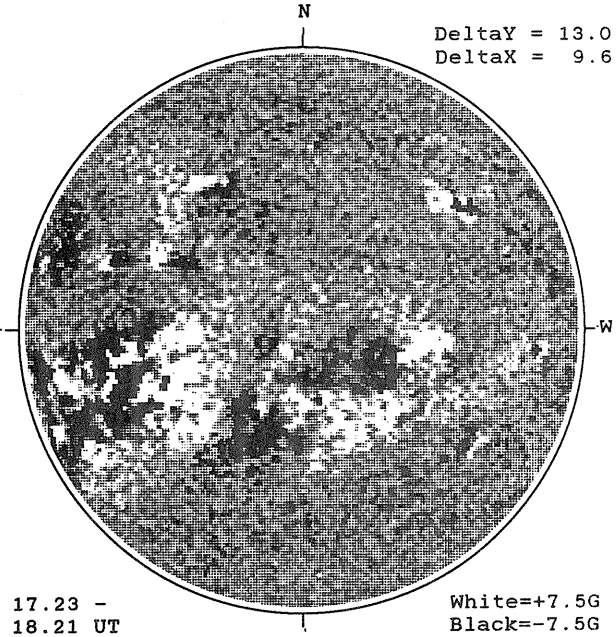
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

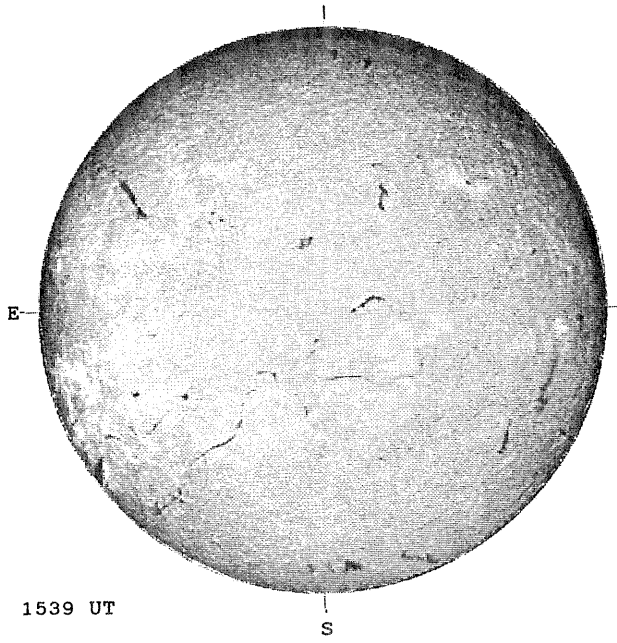


MT. WILSON MAGNETOGRAM

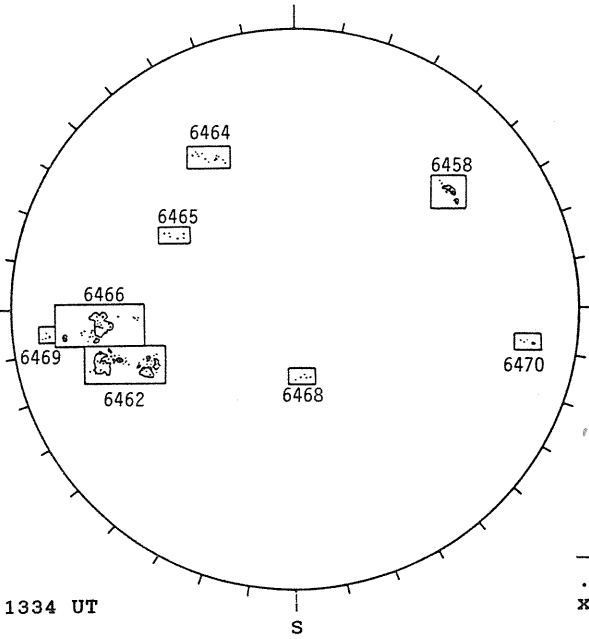
DeltaY = 13.0
DeltaX = 9.6



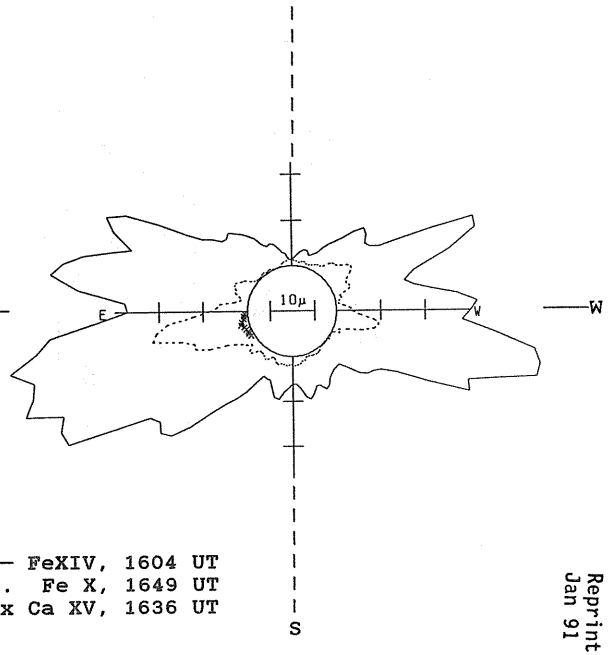
SACRAMENTO PEAK H-ALPHA



RAMEY SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1604 UT
.... Fe X, 1649 UT
xxxx Ca XV, 1636 UT

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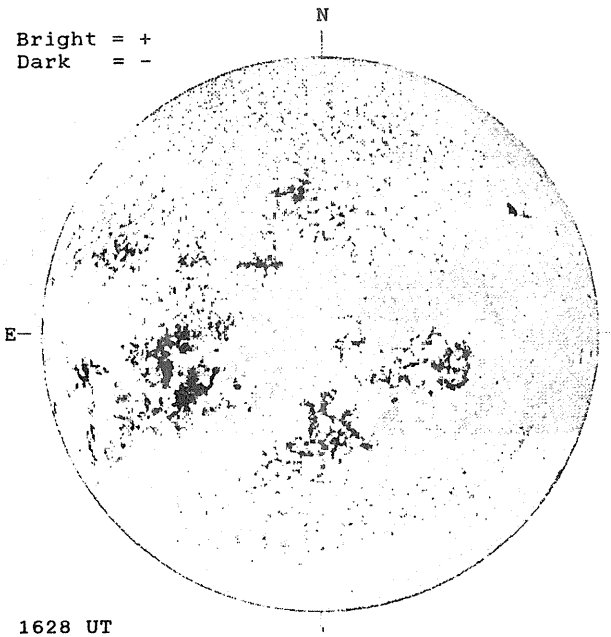
JANUARY 25, 1991 (P= -9.02, B_o =-5.44, L_o = 236.44)

KITT PEAK MAGNETOGRAM

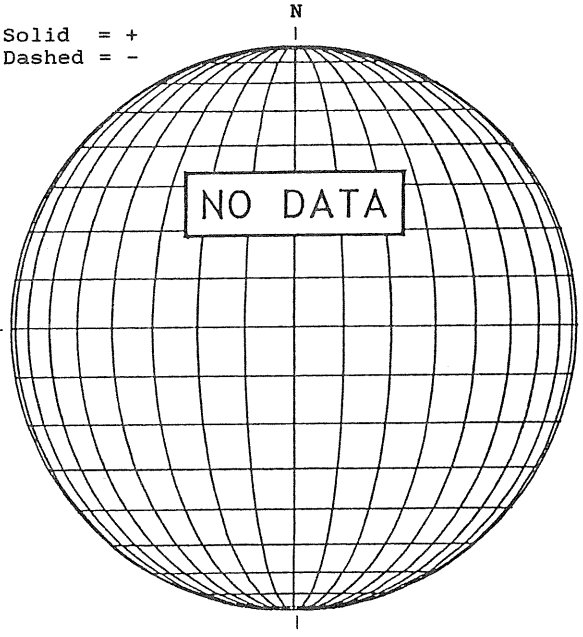
Bright = +
Dark = -



1628 UT

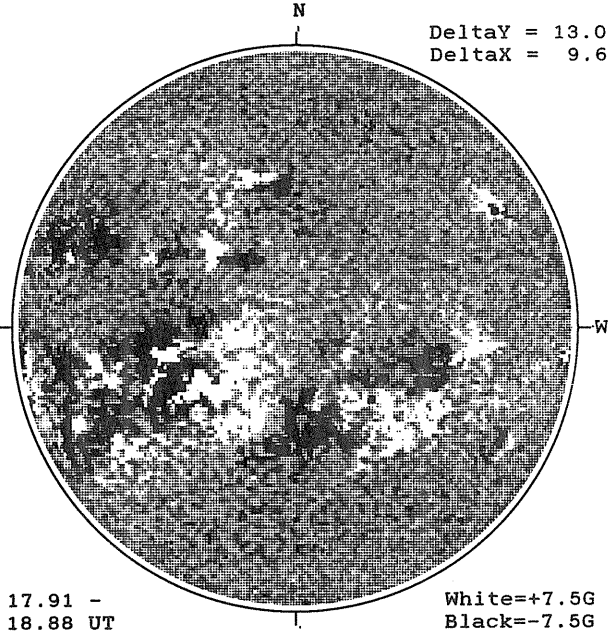
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

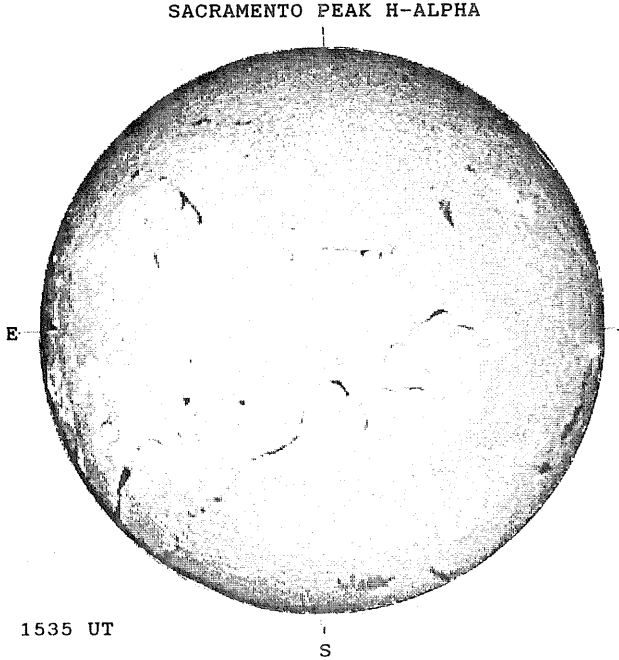
DeltaY = 13.0
DeltaX = 9.6



17.91 -
18.88 UT

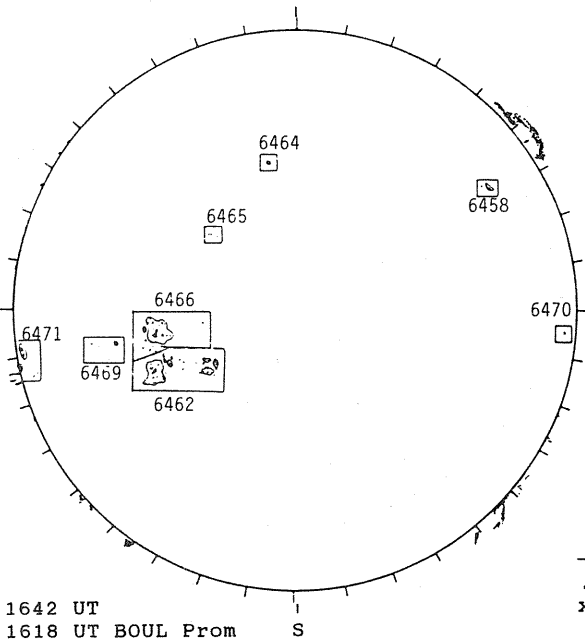
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



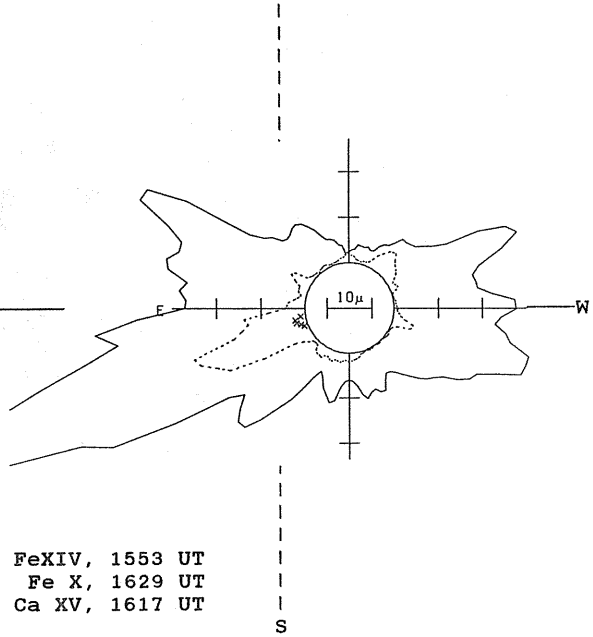
1535 UT

BOULDER SUNSPOT



1642 UT
1618 UT BOUL Prom

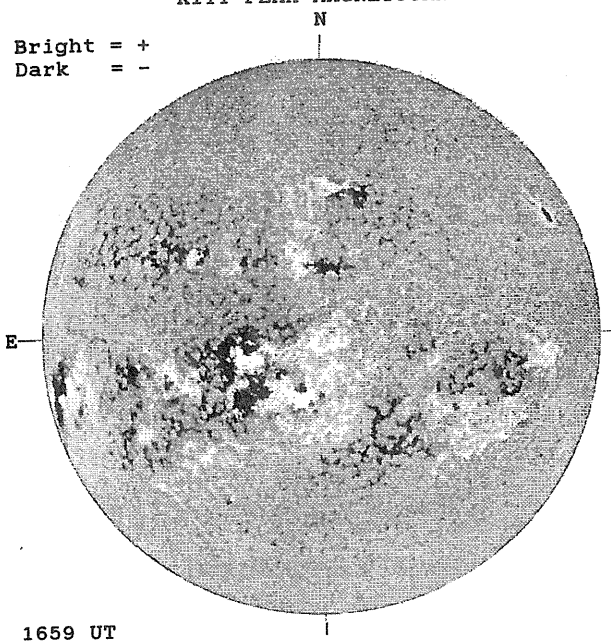
SACRAMENTO PEAK CORONA (1.15 Radii)



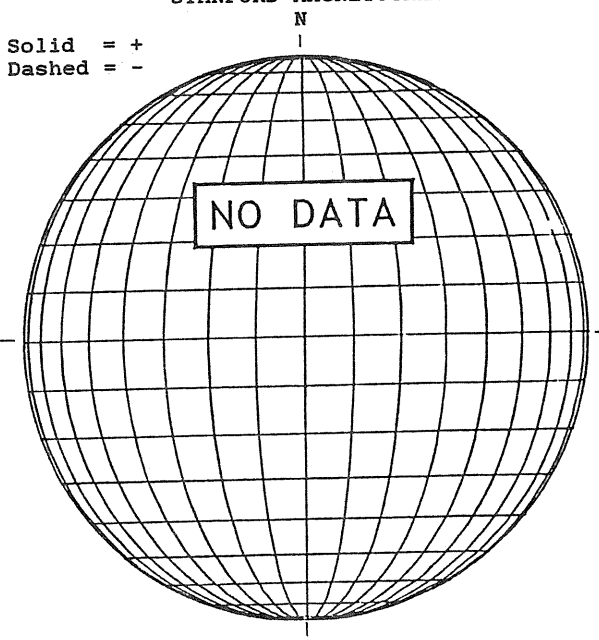
—— FeXIV, 1553 UT
.... Fe X, 1629 UT
xxxx Ca XV, 1617 UT

JANUARY 26, 1991 (P= -9.46, B_o =-5.52, L_o = 223.27)

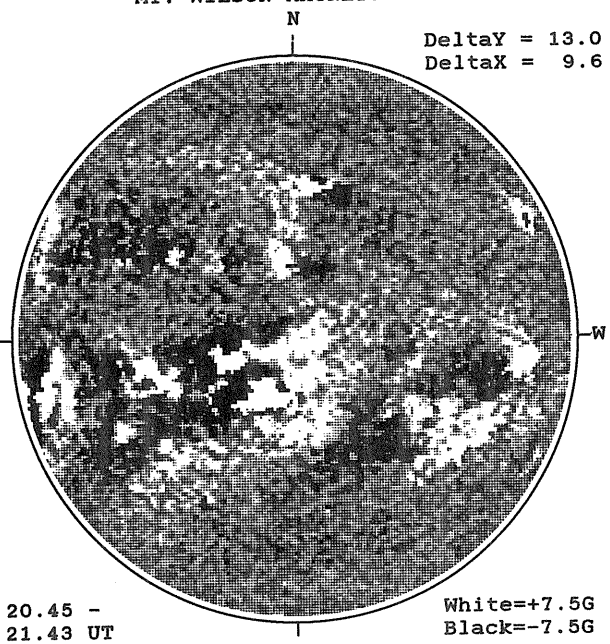
KITT PEAK MAGNETOGRAM



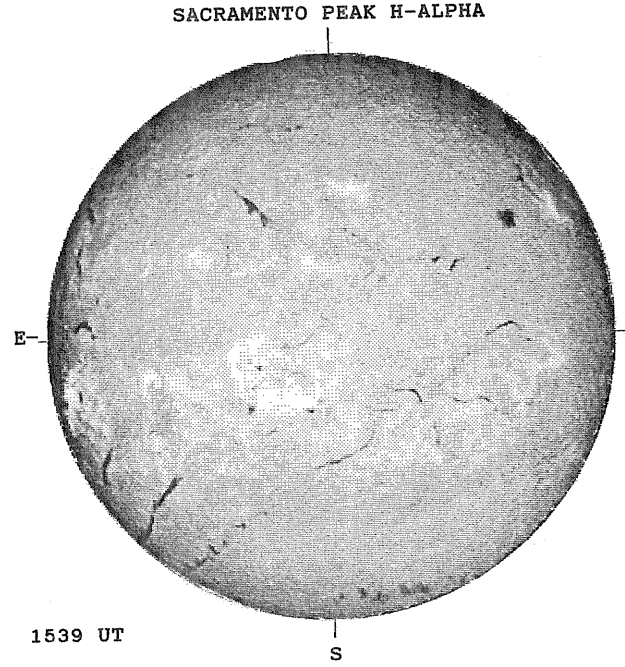
STANFORD MAGNETOGRAM



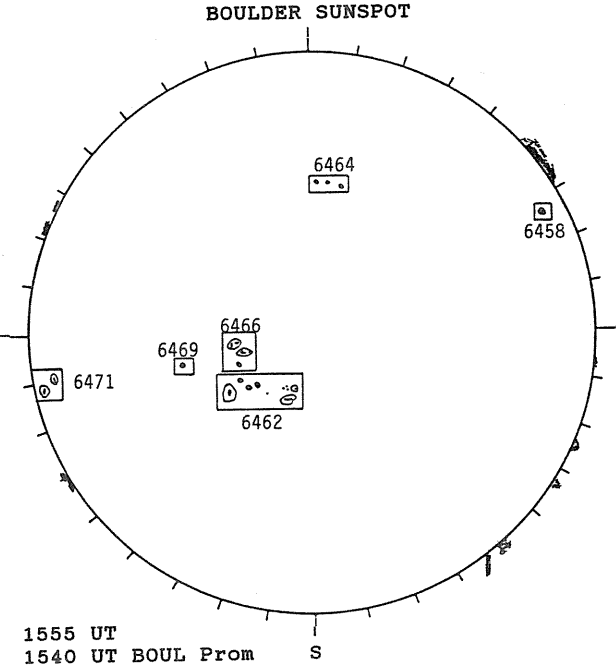
MT. WILSON MAGNETOGRAM



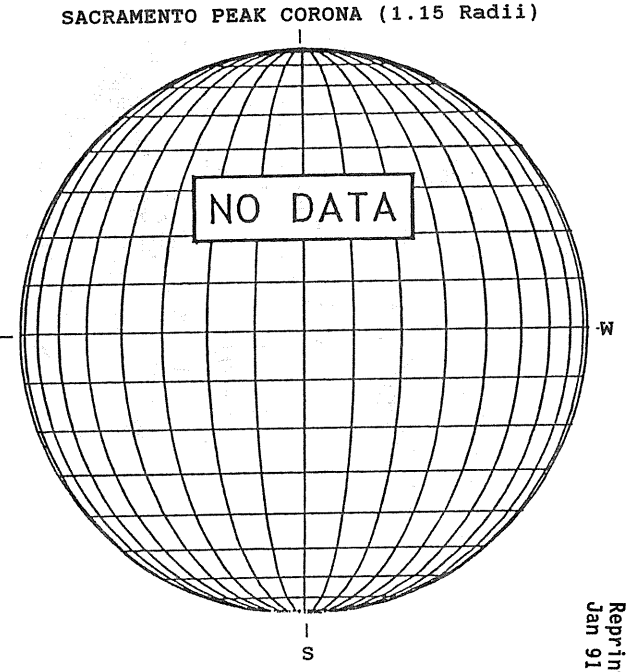
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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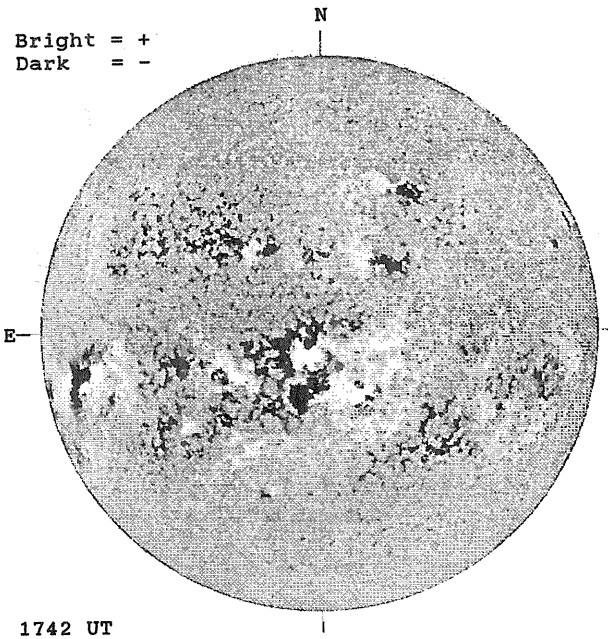
JANUARY 27, 1991 (P= -9.89, B_o =-5.61, L_o = 210.10)

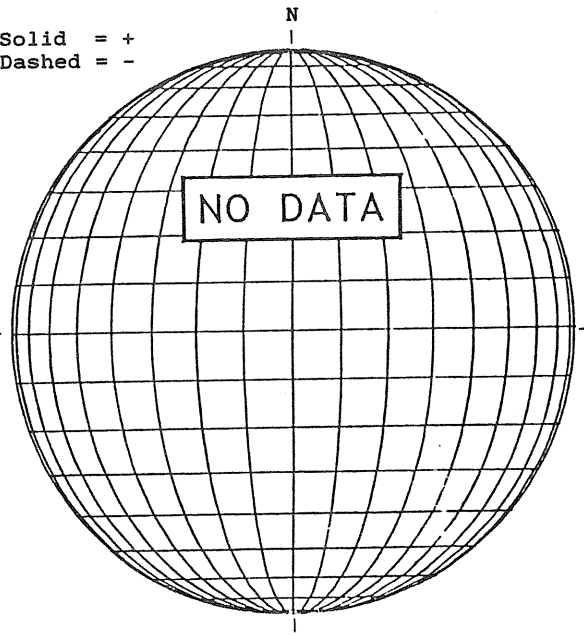
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



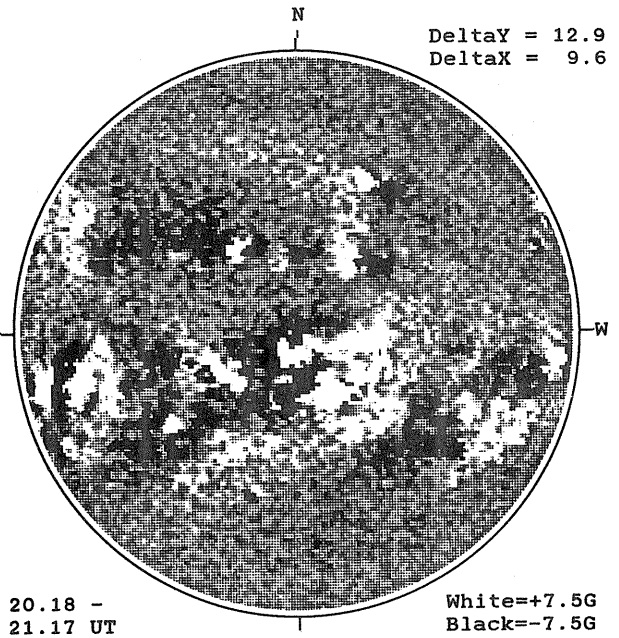
STANFORD MAGNETOGRAM

Solid = +
Dashed = -

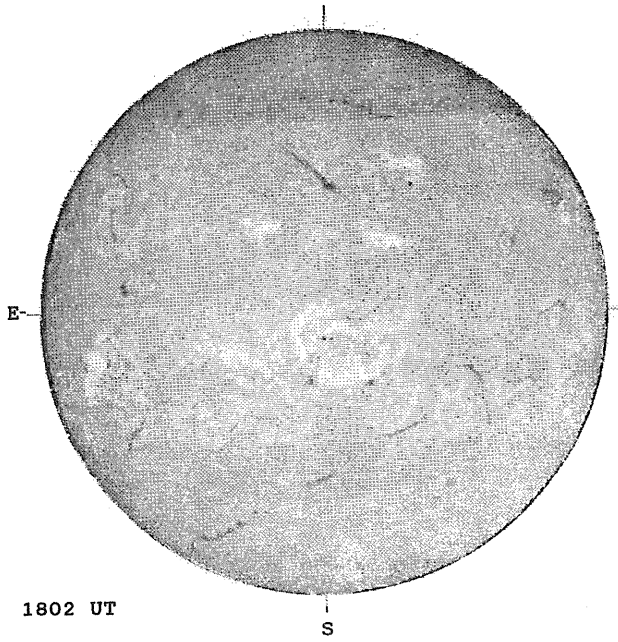


MT. WILSON MAGNETOGRAM

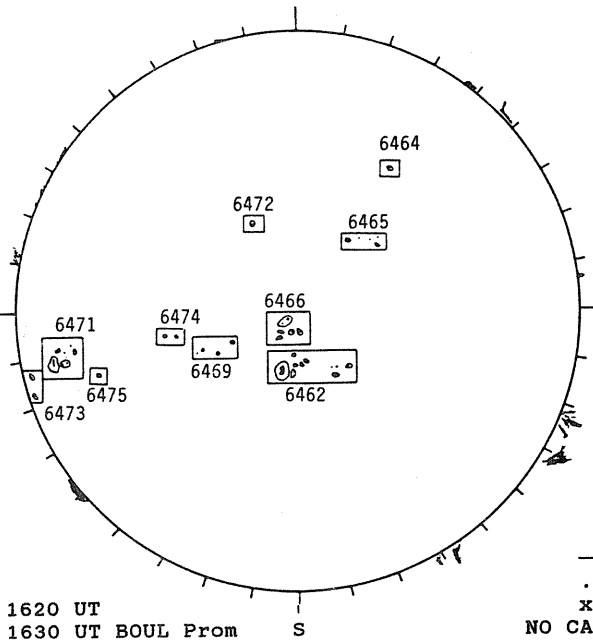
DeltaY = 12.9
DeltaX = 9.6



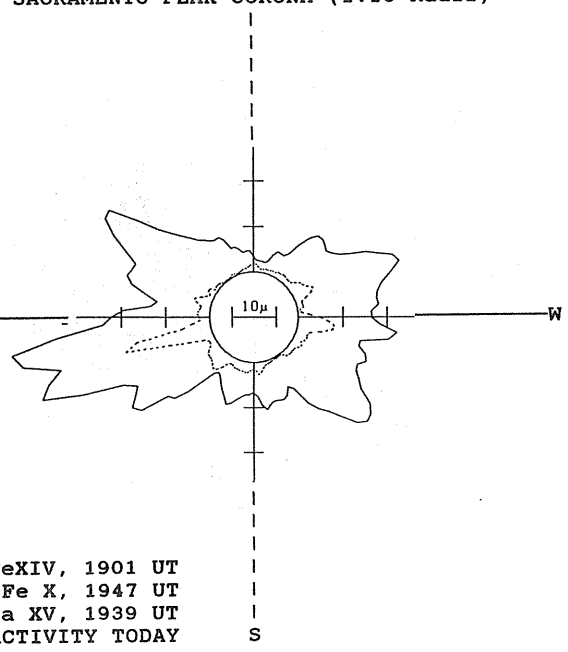
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



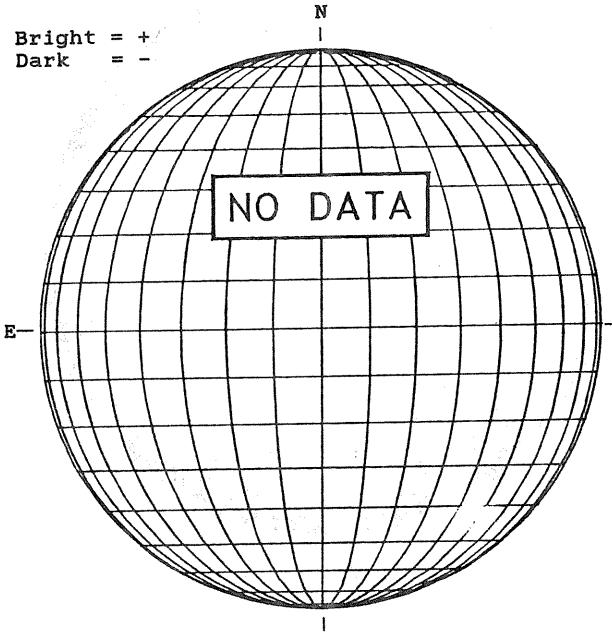
SACRAMENTO PEAK CORONA (1.15 Radii)



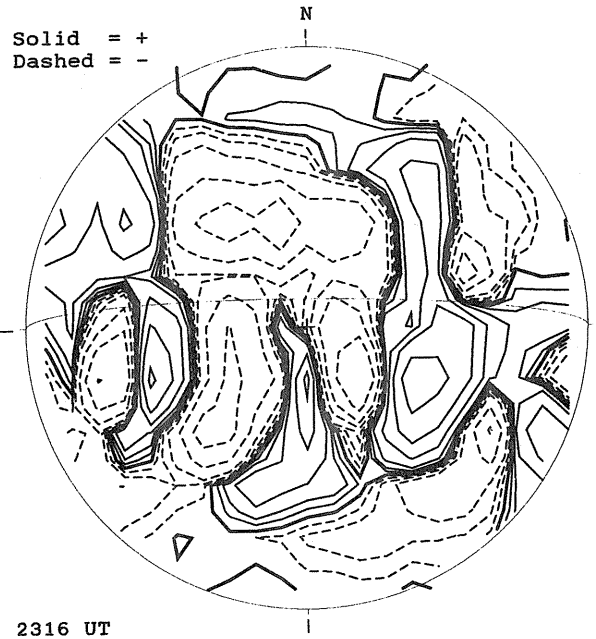
—— FeXIV, 1901 UT
.... Fe X, 1947 UT
xxxx Ca XV, 1939 UT
NO CA XV ACTIVITY TODAY

JANUARY 28, 1991 (P=-10.32 B_o =-5.69, L_o = 196.94)

KITT PEAK MAGNETOGRAM

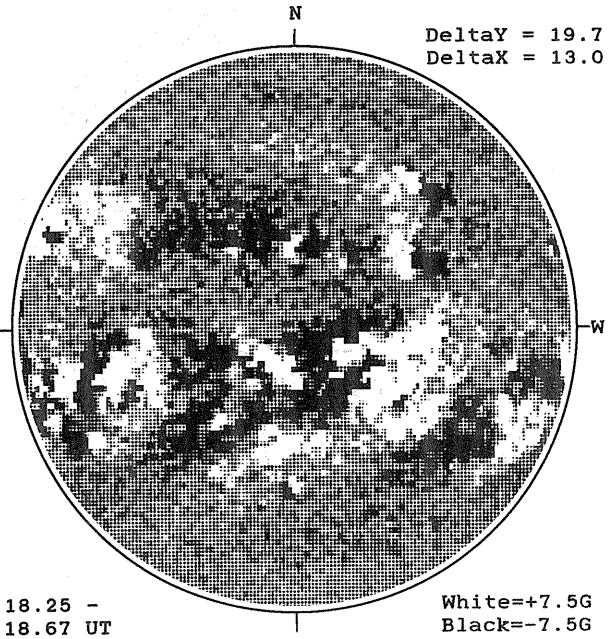


STANFORD MAGNETOGRAM



2316 UT

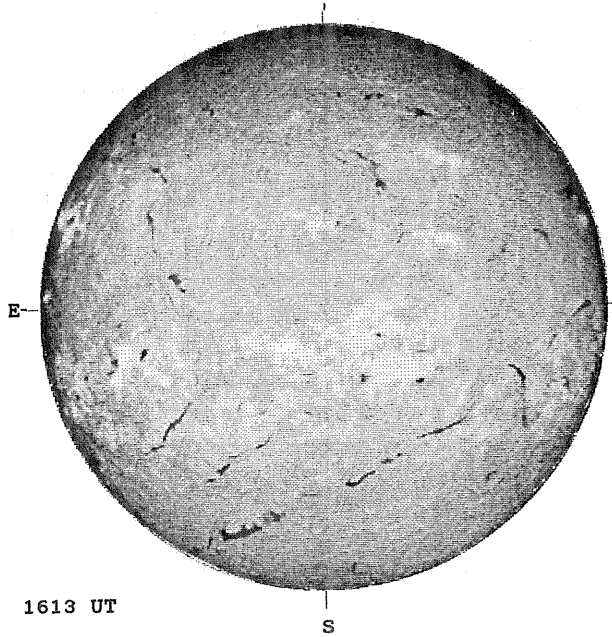
MT. WILSON MAGNETOGRAM



18.25 -
18.67 UT

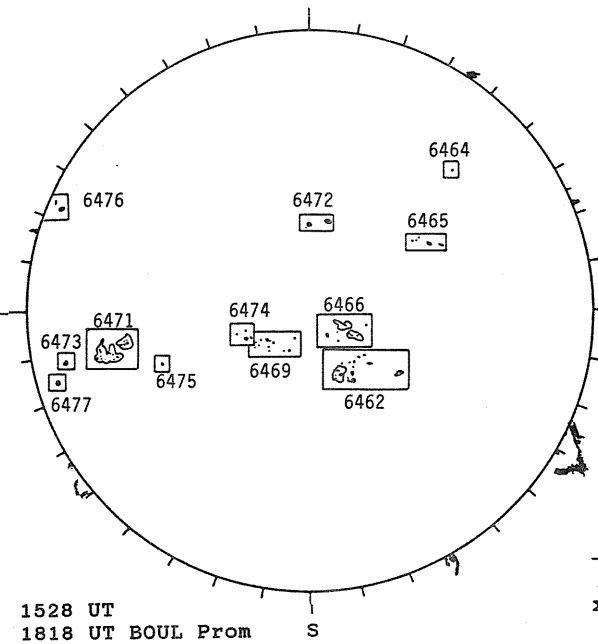
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



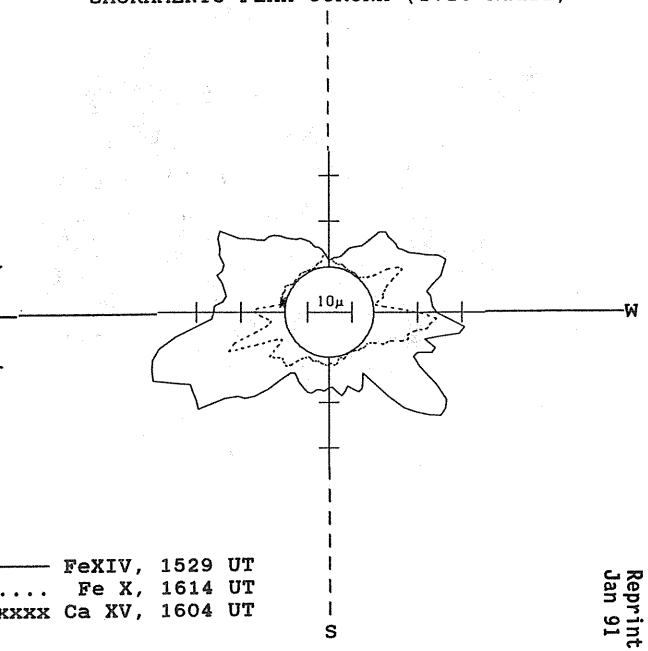
1613 UT

BOULDER SUNSPOT



1528 UT
1818 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1529 UT
.... Fe X, 1614 UT
xxxx Ca XV, 1604 UT

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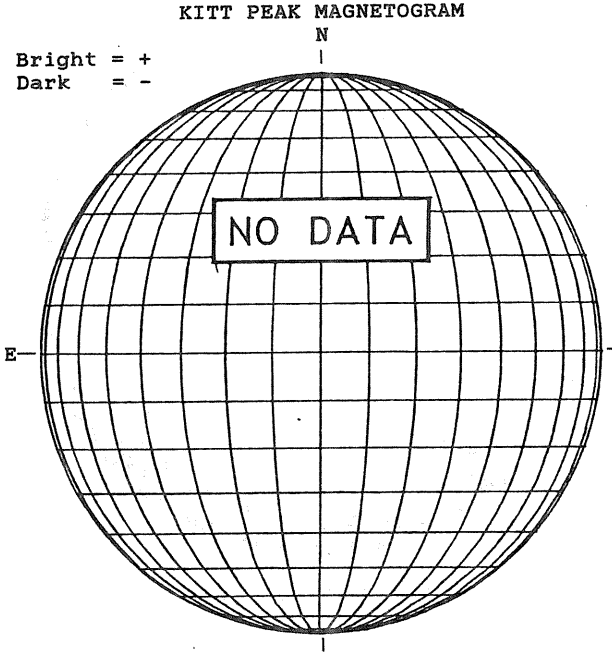
JANUARY 29, 1991 (P=-10.75, B_o =-5.76, L_o = 183.77)

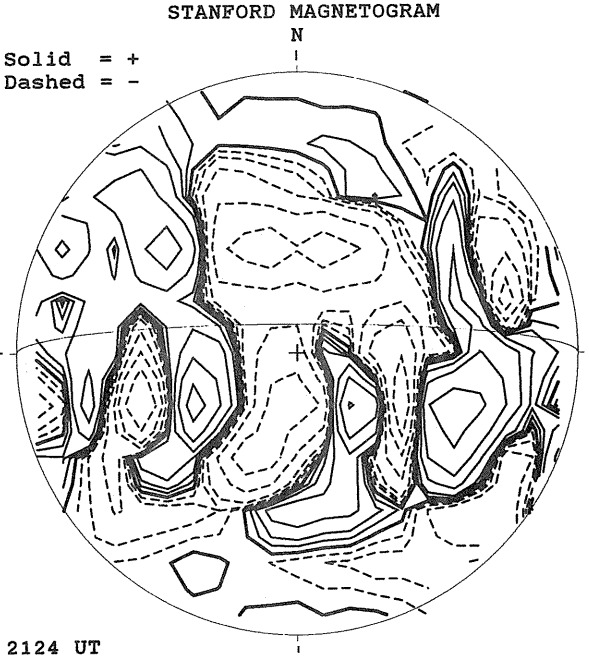
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

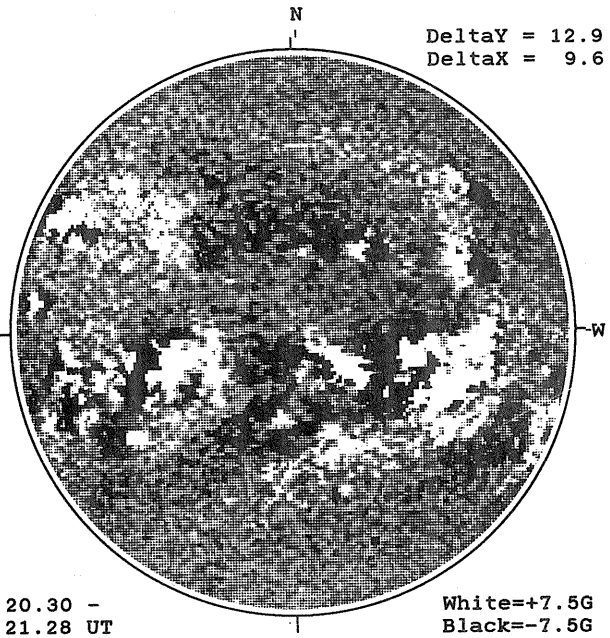
Solid = +
Dashed = -



2124 UT

MT. WILSON MAGNETOGRAM

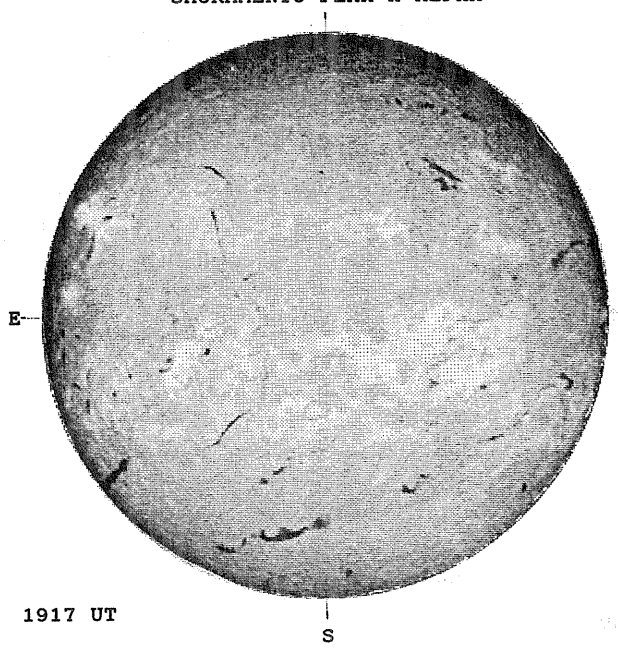
DeltaY = 12.9
DeltaX = 9.6



20.30 -
21.28 UT

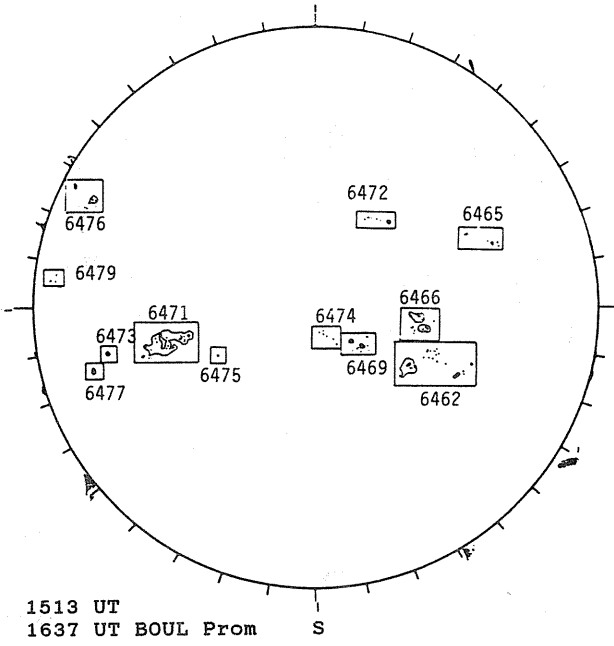
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



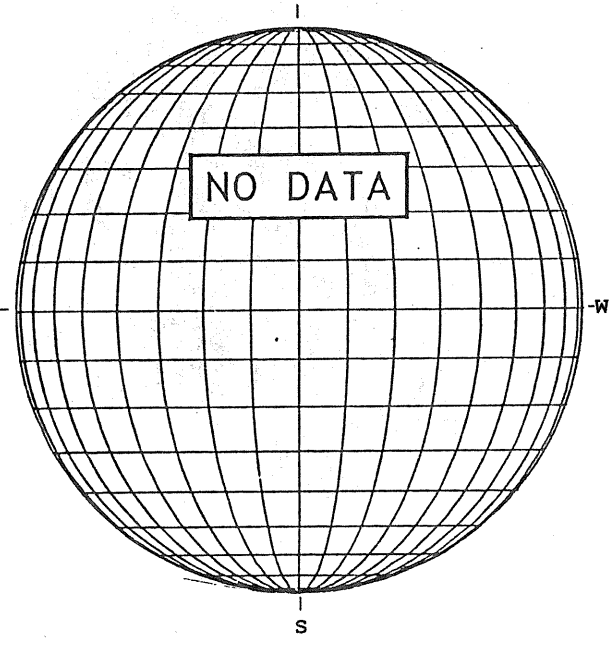
1917 UT

BOULDER SUNSPOT



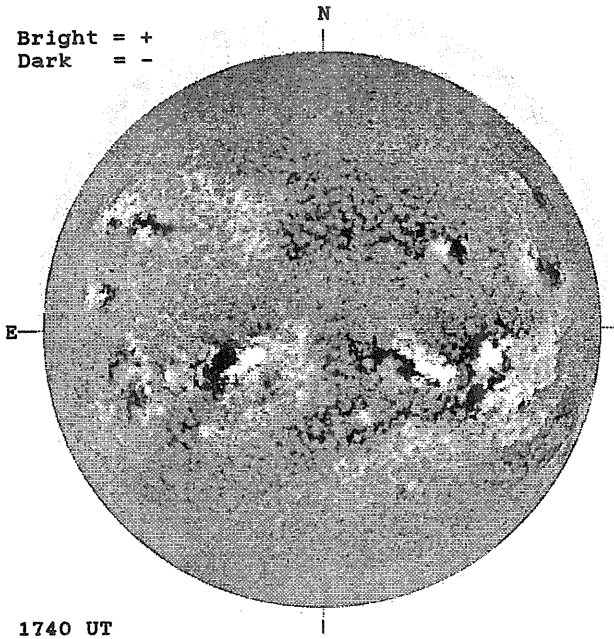
1513 UT
1637 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



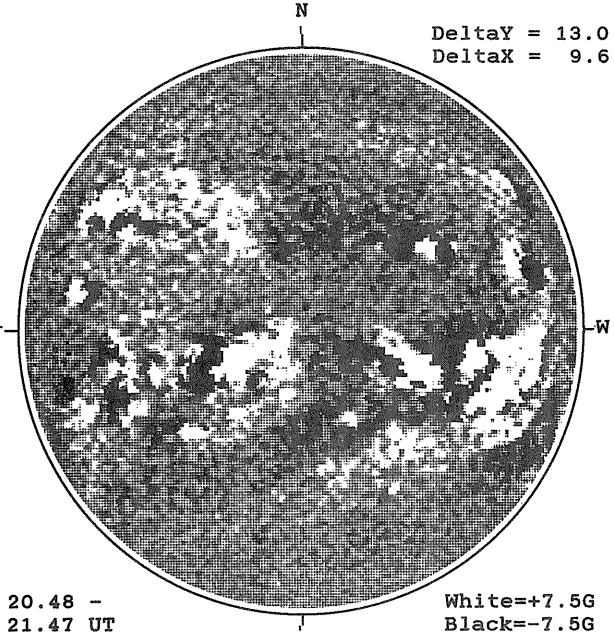
JANUARY 30, 1991 (P=-11.17, B_o =-5.84, L_o = 170.60)

KITT PEAK MAGNETOGRAM

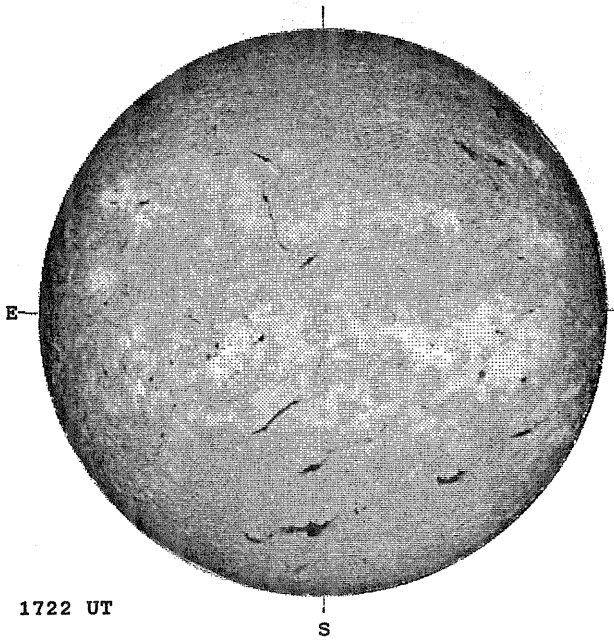


STANFORD MAGNETOGRAM

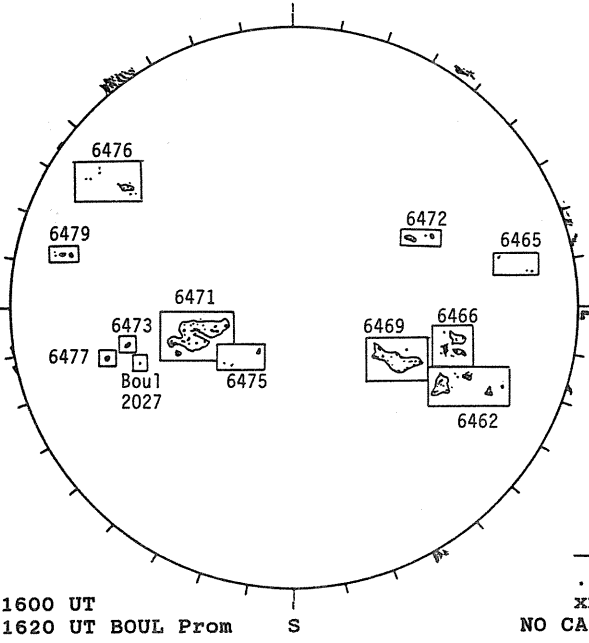
MT. WILSON MAGNETOGRAM



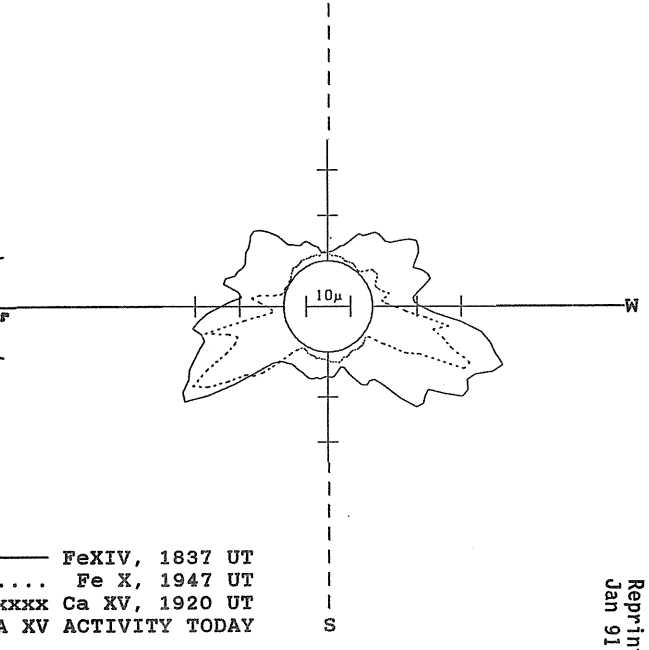
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



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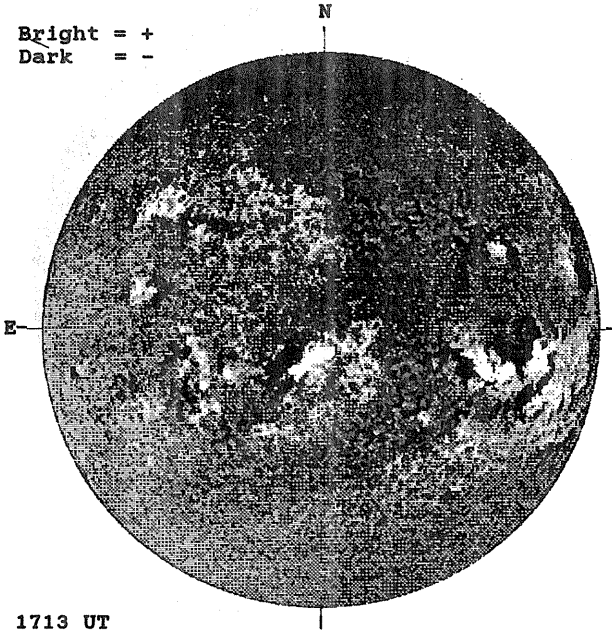
JANUARY 31, 1991 (P=-11.59, B_o =-5.92, L_o = 157.44)

KITT PEAK MAGNETOGRAM

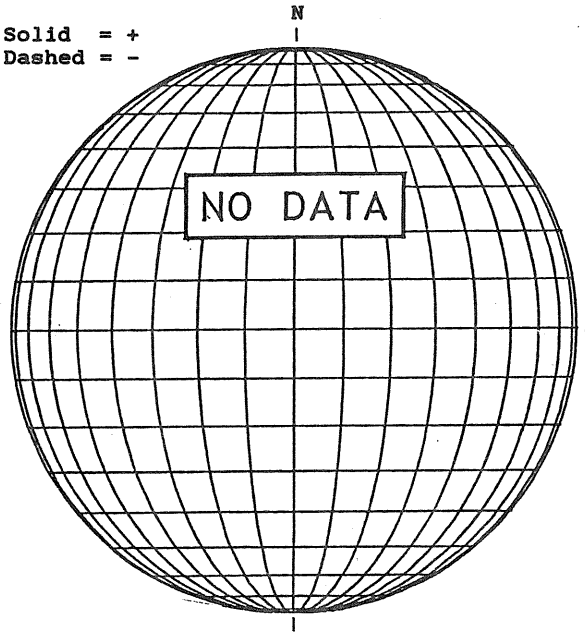
Bright = +
Dark = -



1713 UT

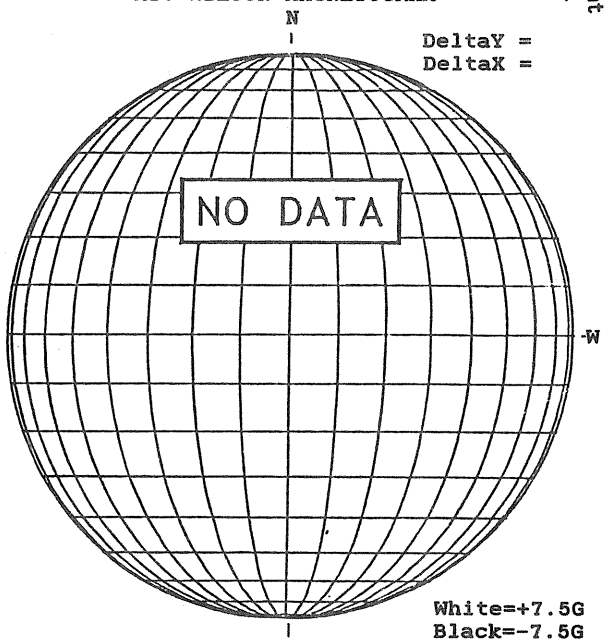
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



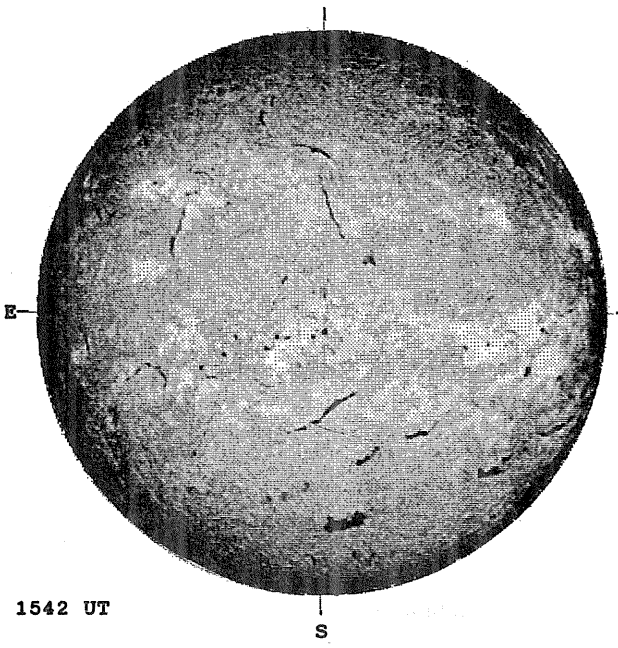
MT. WILSON MAGNETOGRAM

DeltaY =
DeltaX =



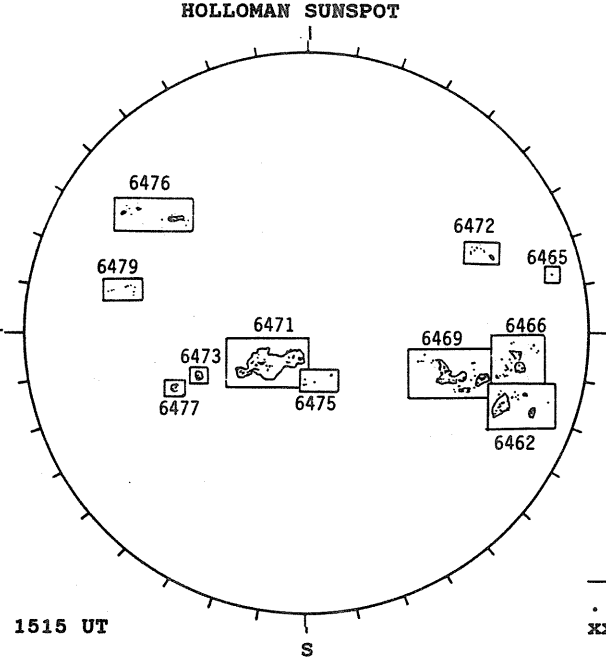
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



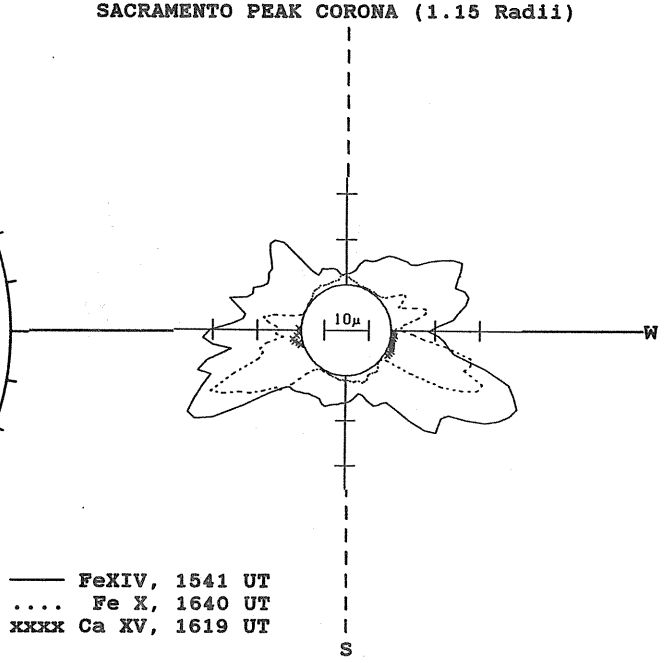
1542 UT

HOLLOMAN SUNSPOT



1515 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



—— FeXIV, 1541 UT
.... Fe X, 1640 UT
xxxx Ca XV, 1619 UT

WORLD DATA CENTER A
FOR
SOLAR-TERRESTRIAL PHYSICS

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

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