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NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

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OCTOBER 1990 NUMBER 554 - Part I

Solar-Geophysical Data prompt reports

Data for September, August 1990, and Late Data

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NATIONAL GEOPHYSICAL DATA CENTER

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Boulder, Colorado

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

NUMBER 554

(Issued in Two Parts)

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C O N T E N T S

PART I (PROMPT REPORTS)

	Page
DETAILED INDEX FOR 1990.	2
DATA FOR SEPTEMBER 1990.	3- 46
DATA FOR AUGUST 1990	47-159
LATE DATA.	161-186
Solar Radio Spectral Potsdam and Weissenau Jul 90	
Cosmic Rays Climax and Huancayo Jul 90	
Geomagnetic Activity Indices May-Jul 90	
Geomagnetic Sudden Commencements May-Jul 90	
Provisional Equatorial Dst May-Dec 88	

PART II (COMPREHENSIVE REPORTS)

	Page
DETAILED INDEX FOR 1990.	2
DATA FOR APRIL 1990.	3-76

DETAILED INDEX OF OBSERVATIONS PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

CODE	KIND OF OBSERVATION	FEB 90	MAR	APR	MAY	JUN	JUL	AUG	SEP
A. SOLAR AND INTERPLANETARY EVENTS									
A.1	Sunspot Drawings	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.2aa	Internat. Provisional Sunspot Numbers	547A 27	548A 29	549A 27	550A 29	551A 27	552A 29	553A 29	554A 27
A.2c	American Sunspot Numbers	547A 27	548A 29	549A 27	550A 29	551A 27	552A 29	553A 29	554A 27
A.3a	Mt. Wilson Magnetograms	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.3f	SOON Sunspot Mag Class and Regions	548A 92	549A 91	550A 96	551A 91	552A 90	553A 95	554A 87	
A.3c	Kitt Peak Magnetograms	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.3d	Mean Solar Magnetic Field (Stanford)	547A 45	548A 51	549A 49	550A 55	551A 50	552A 49	553A 53	554A 45
A.3e	Stanford Magnetograms	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.4	H-alpha Filtergrams	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.6	H-alpha Synoptic Charts	548A 54	549A 52	550A 58	551A 52	552A 52	553A 56	554A 48	
A.6b	Active Region Carte Synoptique (Paris)	Aug 89 in 548B 94; Sep-Oct 89 in 550B 86							
A.6c	Stanford Solar Mag Field Synoptic Maps	548A 56	549A 54	550A 60	551A 54	552A 54	553A 58	554A 50	
A.6d	Kitt Peak " Mag Field Synoptic Maps	548A 55	549A 53	550A 59	551A 53	552A 53	553A 57	554A 49	
A.6e	Mass Ejections from the Sun	552B 66	553B 84	554B 63					
A.6f	Active Prominences and Filaments	552B 67	553B 85	554B 64					
A.6g	Sac Peak Coronal Line Synoptic Maps	548A 58	549A 56	550A 62	551A 56	552A 56	553A 60	554A 52	
A.7h	Coronal Line Emission (Sac Peak)	548A 64	549A 60	550A 66	551A 60	552A 60	553A 64	554A 56	
A.8aa	2800 MHz - Solar Flux (Ottawa)	547A 27	548A 29	549A 27	550A 29	551A 27	552A 29	553A 29	554A 27
A.8ac	2800 MHz - Adj. Solar Flux (Ottawa)	547A 27	548A 29	549A 27	550A 29	551A 27	552A 29	553A 29	554A 27
A.8g	Adjusted Daily Solar Fluxes (Palehua)	547A 27	548A 29	549A 27	550A 29	551A 27	552A 29	553A 29	554A 27
A.10a	Interferometric Chart (164 MHz) Nancay	548A150	549A144	549A 45	550A 49	551A 44	552A 46	553A 49	554A 42
A.10c	East-West Scans - 21 cm - Fleurs	547A 40	---	549A 43	550A 47	551A 42	552A 44	553A 48	---
A.10d	East-West Scans - 43 cm - Fleurs	547A 41	---	549A 44	550A 48	551A 43	552A 45	---	---
A.10e	East-West Scans - 10 cm - Ottawa	547A 39	548A 45	549A 42	550A 46	551A 41	552A 43	553A 47	554A 41
A.11g	Solar X-ray GOES (graphs/event table)	552B 58	553B 74	554B 55					
A.11k	Solar UV NOAA-9	May 86-Dec 87 in 541B178							
A.11l	Solar UV NIMBUS7	Nov 78-Oct 84 in 542B 82							
A.12e	Solar Particles (IMP H & J)	Jul 86-Aug 87 in 539B112; Sep 87-Mar 88 & May-Nov 88 in 546B124							
A.13e	Solar Plasma (IMP H & J)	552B 57 553B 73							
A.13f	Solar Wind (Pioneer 12)	Jan-Dec 88 in 536A153; Jan-Dec 89 in 549A148							
A.16a	SMM Solar Irradiance	Feb 80-Oct 87 in 530B 64							
A.16b	NIMBUS Solar Irradiance	Nov 78-Jul 89 in 534B114							
A.16c	ERBS, NOAA-9&10 Solar Irradiance	1984-88 in 538B101; 1989 in 551B 78							
A.17	Interplanetary Mag Field (Pioneer 12)	Jan-Jun 88 in 533A130; Jul 88 in 536A152							
A.17c	Inferred Interplanetary Mag Field	1984-1988 data in 542A168; 1989 in 548A154							
C. SOLAR FLARE-ASSOCIATED EVENTS									
C.1a	H-alpha Flares	547A 30	548A 32	549A 31	550A 32	551A 30	552A 32	553A 33	554A 31
C.1ba	H-alpha Flare Groups	552B 4	553B 4	554B 4					
C.1d	Flare Patrol Observations	547A 38	548A 44	549A 41	550A 45	551A 40	552A 42	553A 46	554A 40
C.1d	Flare Patrol Observations	552B 24	553B 38	554B 26					
C.3	Radio Bursts Fixed Freq.	552B 26	553B 40	554B 28					
C.3	Radio Bursts Fixed Freq. Selected	547A 43	548A 47	549A 46	550A 50	551A 45	552A 47	553A 50	554A 43
C.4d	Radio Bursts Spectral (Culgoora)	548A117			551A118	552A116			
C.4e	Radio Bursts Spectral (Weissenau)	548A117	552A140	550A123	551A118	552A116	554A162	554A128	
C.4f	Radio Bursts Spectral (Sagamore Hill)	548A117	549A123	550A123	551A118	552A116	553A129	554A128	
C.4i	Radio Bursts Spectral (Bleien)	---	549A123	550A123	551A118	553A154	553A129	554A128	
C.4k	Radio Bursts Spectral (Learmonth)	548A117	549A123	550A123	551A118	552A116	553A129	554A128	
C.4l	Radio Bursts Spectral (Palehua)	548A117	549A123	550A123	551A118	552A116	553A129	554A128	
C.4m	Radio Bursts Spectral (Ondrejov)	548A117	549A123	550A123	551A118	553A154	553A129	554A128	
C.4n	Radio Bursts Spectral (Potsdam)	---	---	---	551A118	552A116	554A162	554A128	
C.4o	Radio Bursts Spectral (San Vito)	548A117	549A123	550A123	551A118	552A116	553A129	554A128	
C.6	Sudden Ionospheric Disturbances	548A113	549A117	550A119	551A113	552A112	553A125	554A124	
D. GEOMAGNETIC & MAGNETOSPHERIC EVENTS									
D.1a	Geomagnetic Indices	549A145	549A137	550A140	554A173	554A174	554A175	554A155	
D.1ba	27-day Chart of Kp Indices	548A145	549A139	550A142	551A140	552A135	553A150	554A157	
D.1cb	Monthly Mean aa Indices	548A146	549A140	550A143	553A151	553A151	553A151		
D.1d	Principal Magnetic Storms	548A147	549A141	550A144	551A142	552A137	553A152	554A159	
D.1f	Sudden Commencements/Flare Effects	551A144	551A145	551A146	554A176	554A177	554A178		
D.1g	Equatorial Indices Dst	Mar-Apr 88 in 541A146; May-Dec 88 in 554A179							
F. COSMIC RAYS									
F.1a	Cosmic Ray Neutron Cts (Deep River)	548A142	549A131	550A135	551A133	552A132	553A143	554A154	
F.1b	Cosmic Ray Neutron Cts (Climax)		549A131	550A135		552A132	554A171	554A154	
F.1h	Cosmic Ray Neutron Cts (Thule)	548A142	549A131	550A135	551A133	552A132			
F.1i	Cosmic Ray Neutron Cts (Kiel)	548A142	549A131	550A135	551A133	552A132	553A143	554A154	
F.1j	Cosmic Ray Neutron Cts (Tokyo)	548A142	549A131	550A135	551A133	552A132	553A143	554A154	
F.1l	Cosmic Ray Neutron Cts (Huancayo)			552A142	552A143	553A156	554A171		
H. MISCELLANEOUS									
H.60	IUWDS Alert Periods	547A 18	548A 20	549A 19	550A 20	551A 19	552A 20	553A 20	554A19

The entry "548A 64" under Feb 1990, for example, means that the sunspot drawings for Feb 1990 appear in SOLAR-GEOPHYSICAL DATA No. 548, Part I, and that they begin on page 64. "A" denotes Part I and "B", Part II. Blanks indicate data not yet received and dashes mark unavailable data.

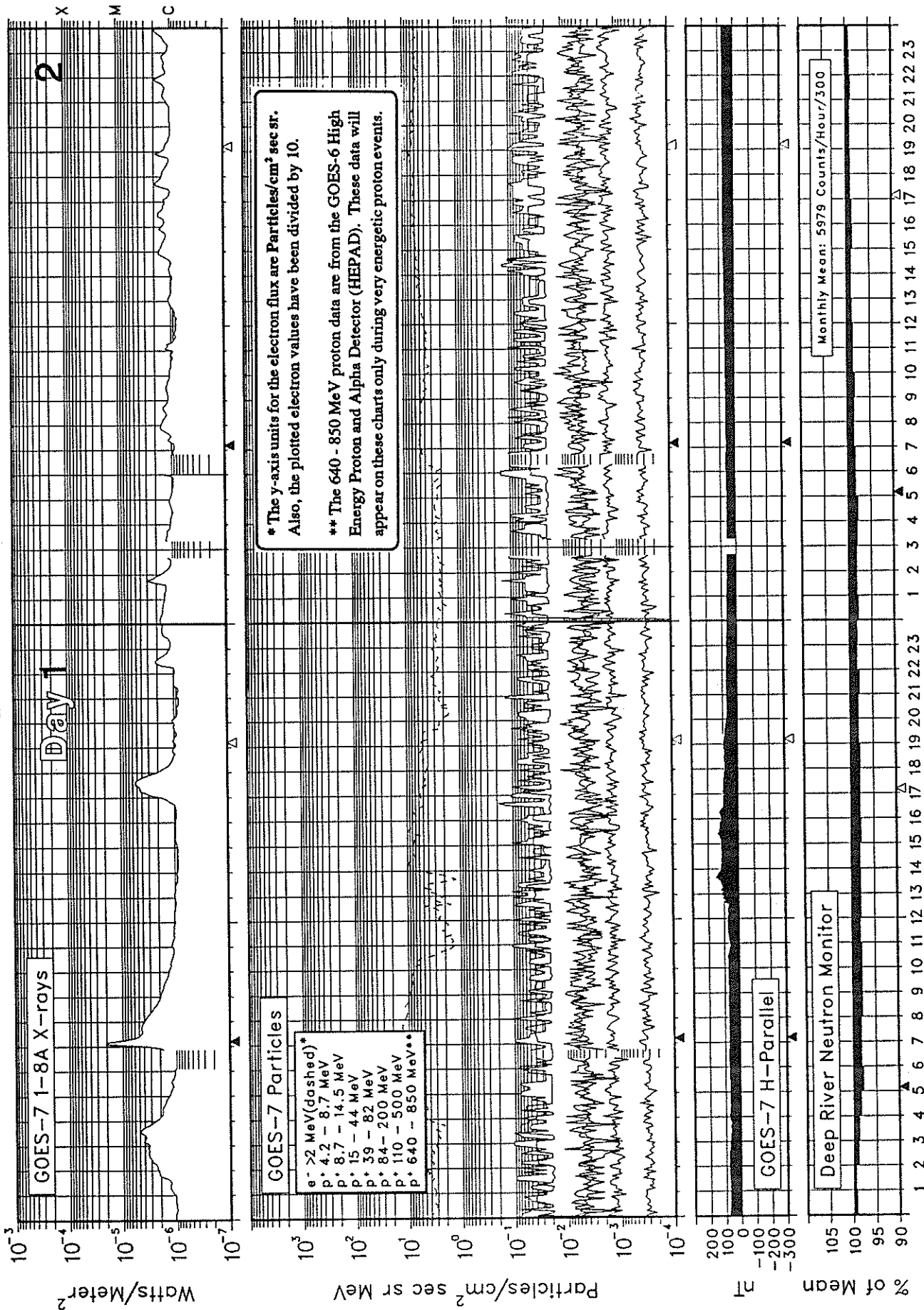
C O N T E N T S

Prompt Reports DATA FOR SEPTEMBER 1990 Number 554 Part I

	Page
SOLAR-TERRESTRIAL ENVIRONMENT.	4-18
Plots of GOES X-rays, Particles and Magnetometer with Boulder ground-based Magnetometer and Deep River Neutron Monitor	
IUWDS ALERT PERIODS (Advance and Worldwide).	19-25
SOLAR ACTIVITY INDICES	
Daily Sunspot Numbers and 2800 MHz Solar Flux (12 Months)	26
Daily Solar Indices (Sunspot Numbers and Solar Flux).	27
Smoothed Observed and Predicted Sunspot Numbers	28
Graph of Observed and Predicted Sunspot Numbers	29
Graph and Table of Monthly Mean Sunspot Numbers 1948-present.	30
SOLAR FLARES	
H-alpha Solar Flares.	31-39
Intervals of No Flare Patrol.	40
SOLAR RADIO EMISSION	
East-West Solar Scans at 10 cm - Ottawa	41
East-West Solar Scans at 21 cm - Fleurs (Station being discontinued!)	
East-West Solar Scans at 43 cm - Fleurs (Station being discontinued!)	
Solar Interferometric Chart - 164 MHz - Nancay.	42
Selected Fixed Frequency Events	43-44
Selected Graphs of Solar Noise Bursts (none available)	
STANFORD MEAN SOLAR MAGNETIC FIELD Table	
Graph	45
	46

SOLAR-TERRESTRIAL ENVIRONMENT

September 1990

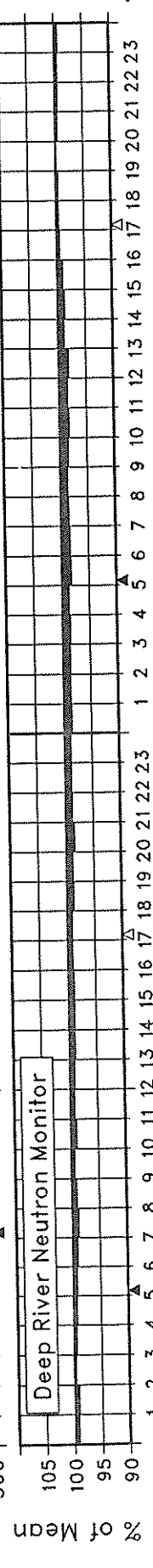
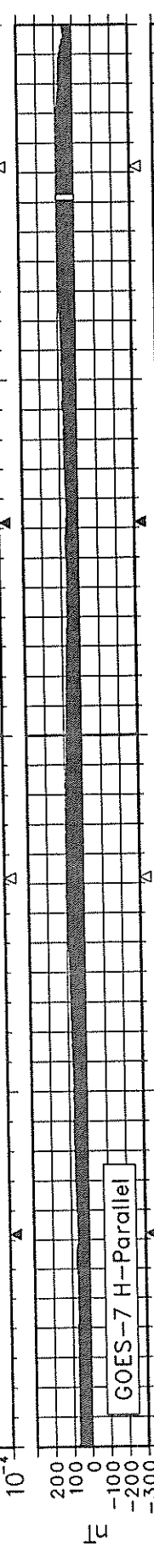
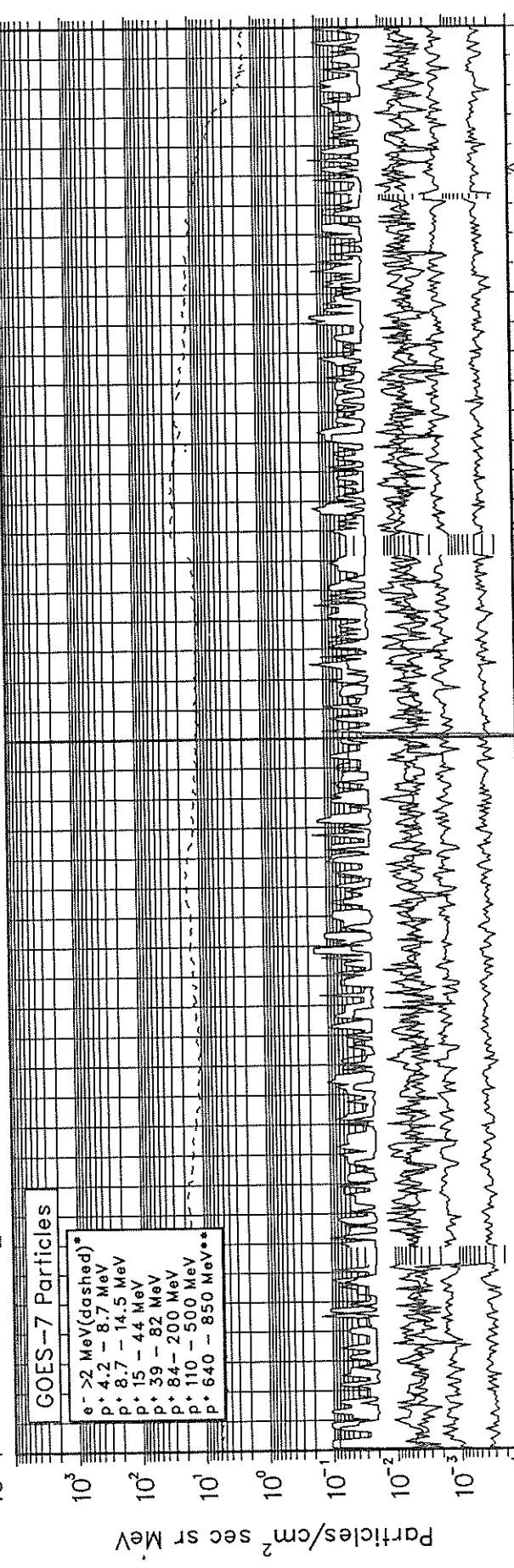
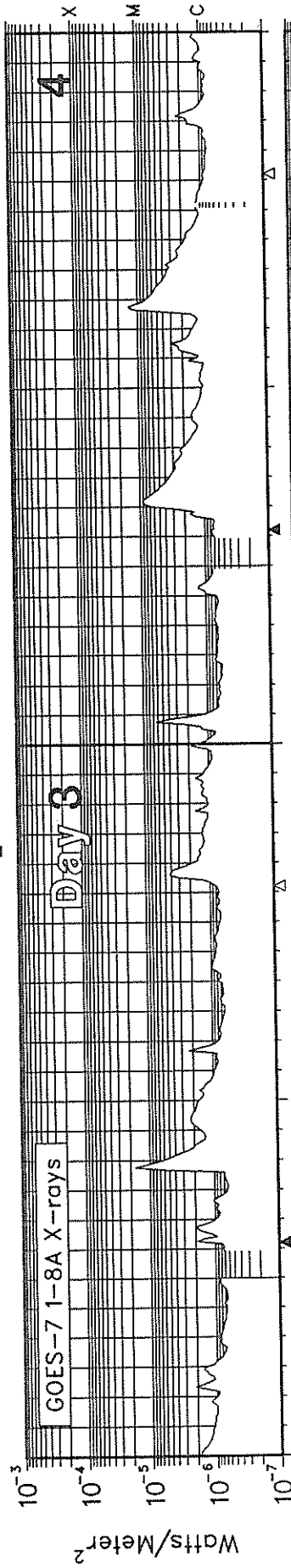


* The y-axis units for the electron flux are Particles/cm² sec sr. Also, the plotted electron values have been divided by 10.

** The 640 - 850 MeV proton data are from the GOES-6 High Energy Proton and Alpha Detector (HEPAD). These data will appear on these charts only during very energetic proton events.

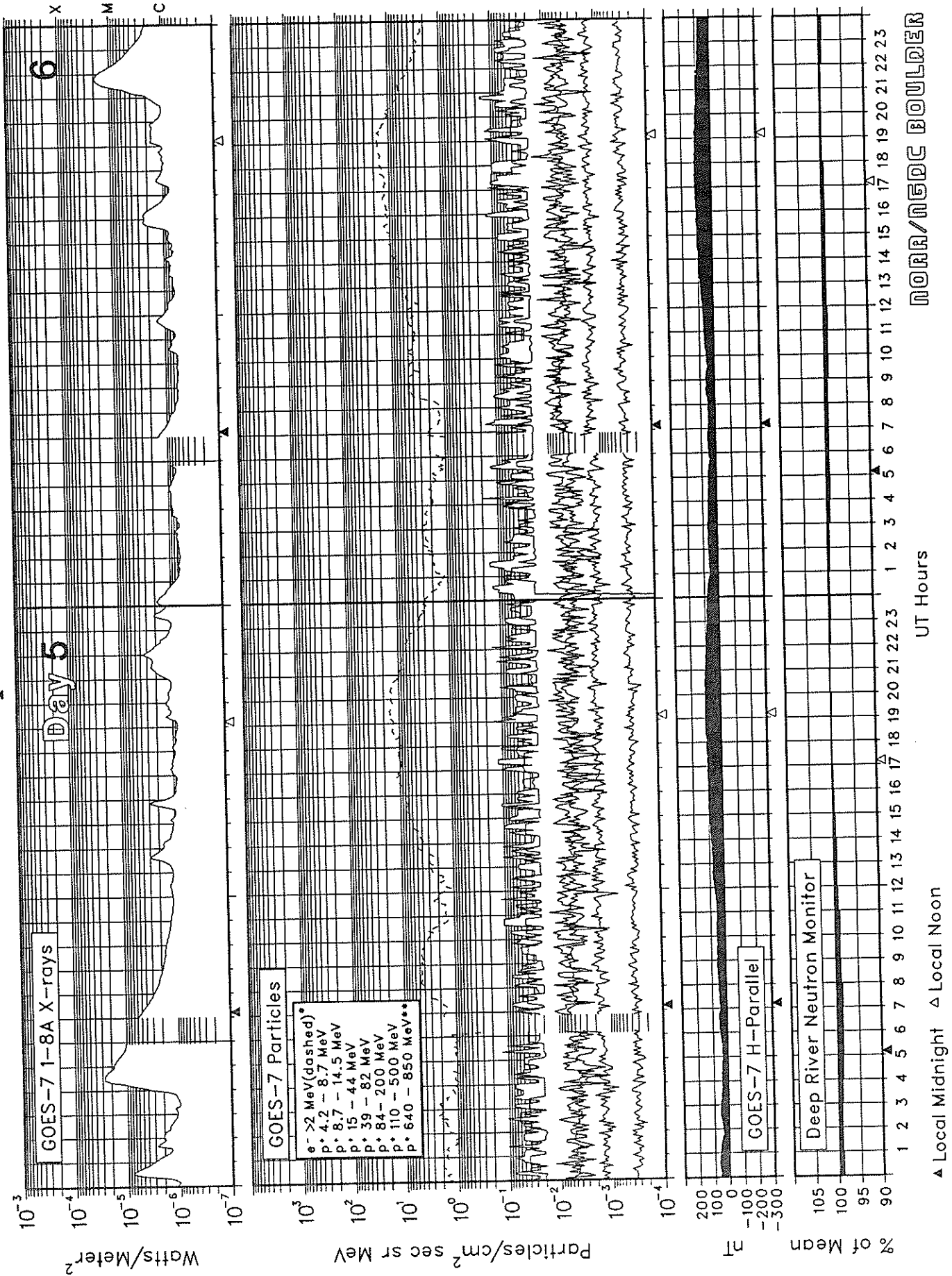
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



SOLAR-TERRESTRIAL ENVIRONMENT

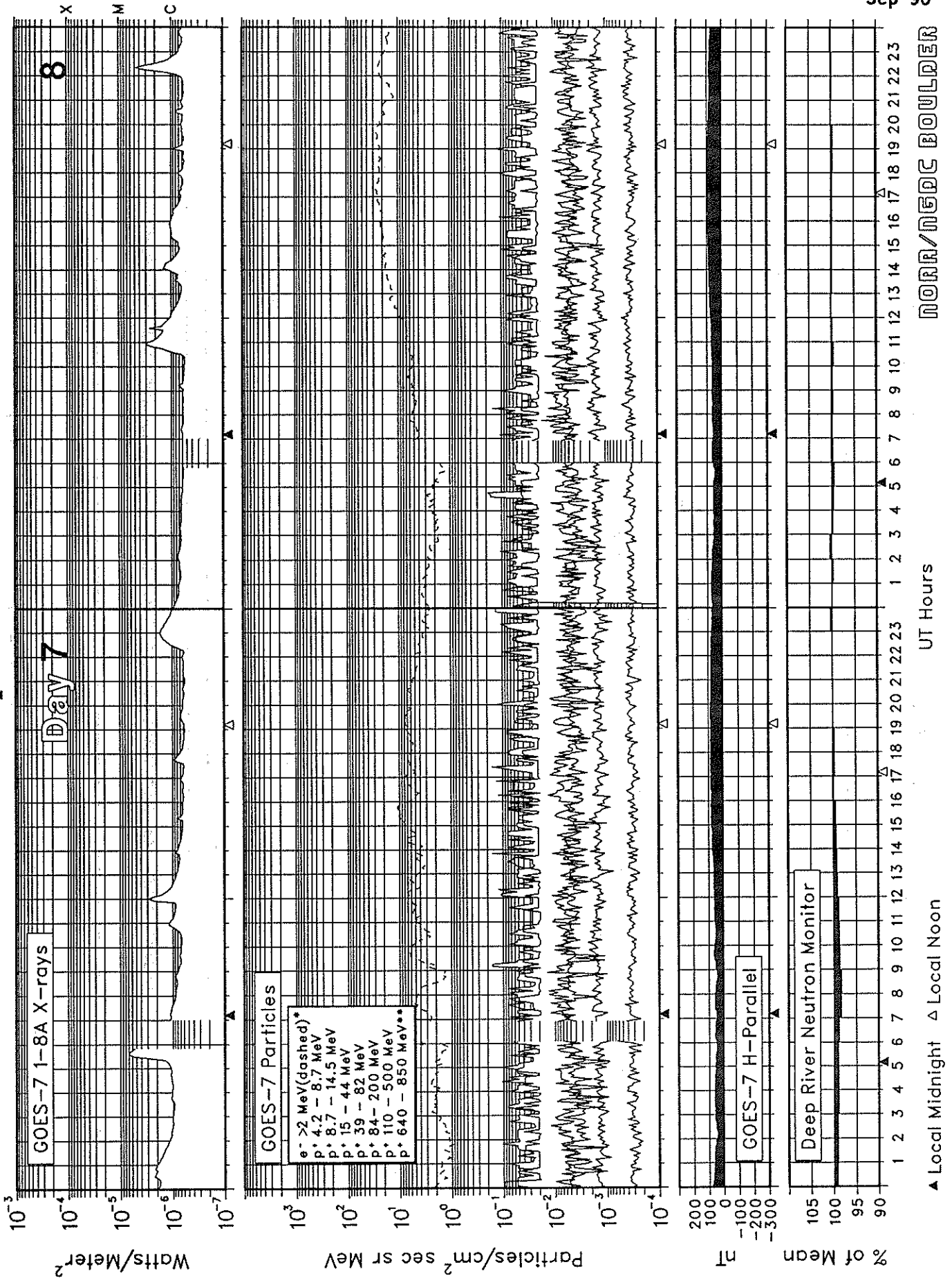
September 1990



NORR/NGDC BOULDER

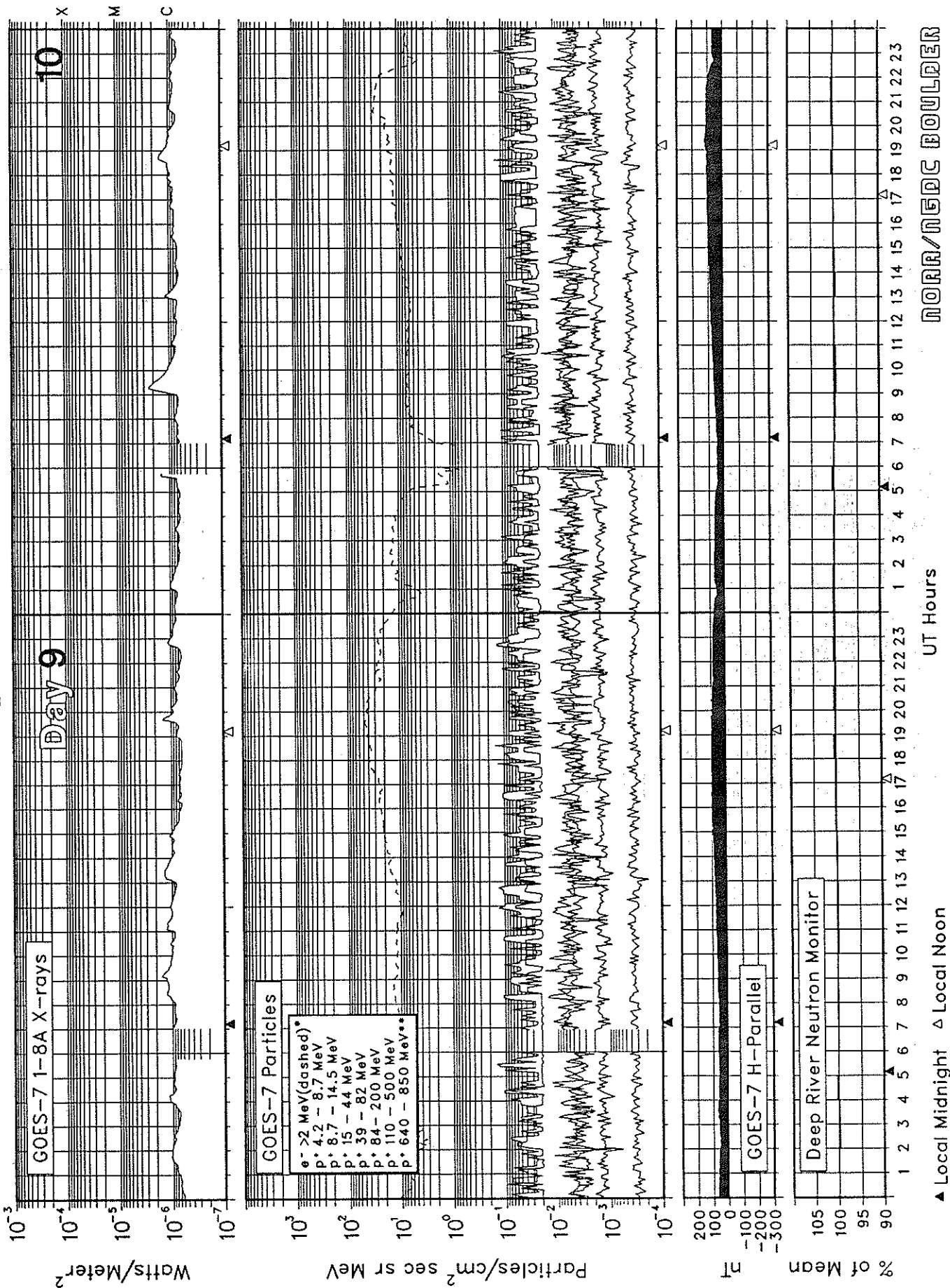
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



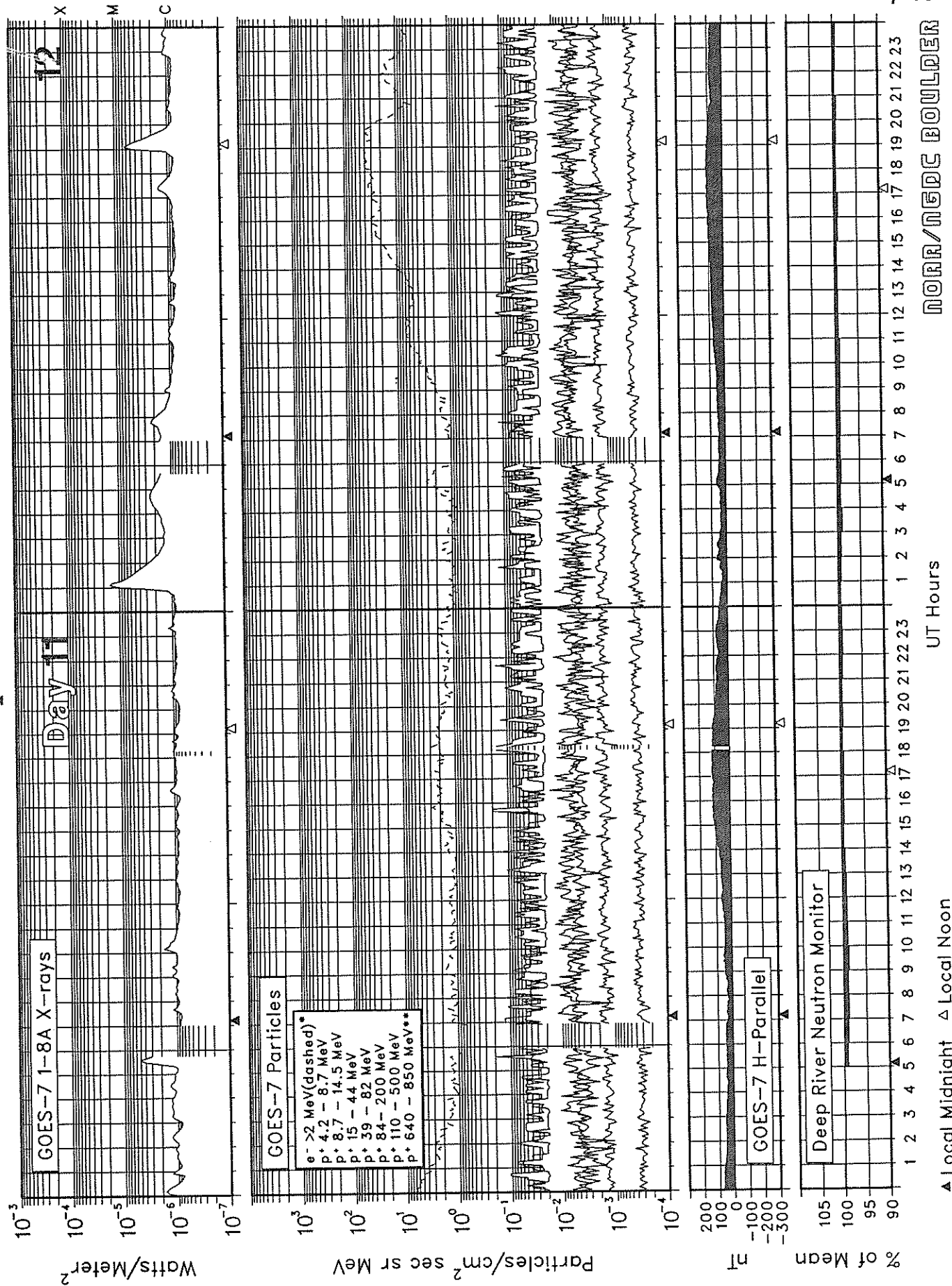
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



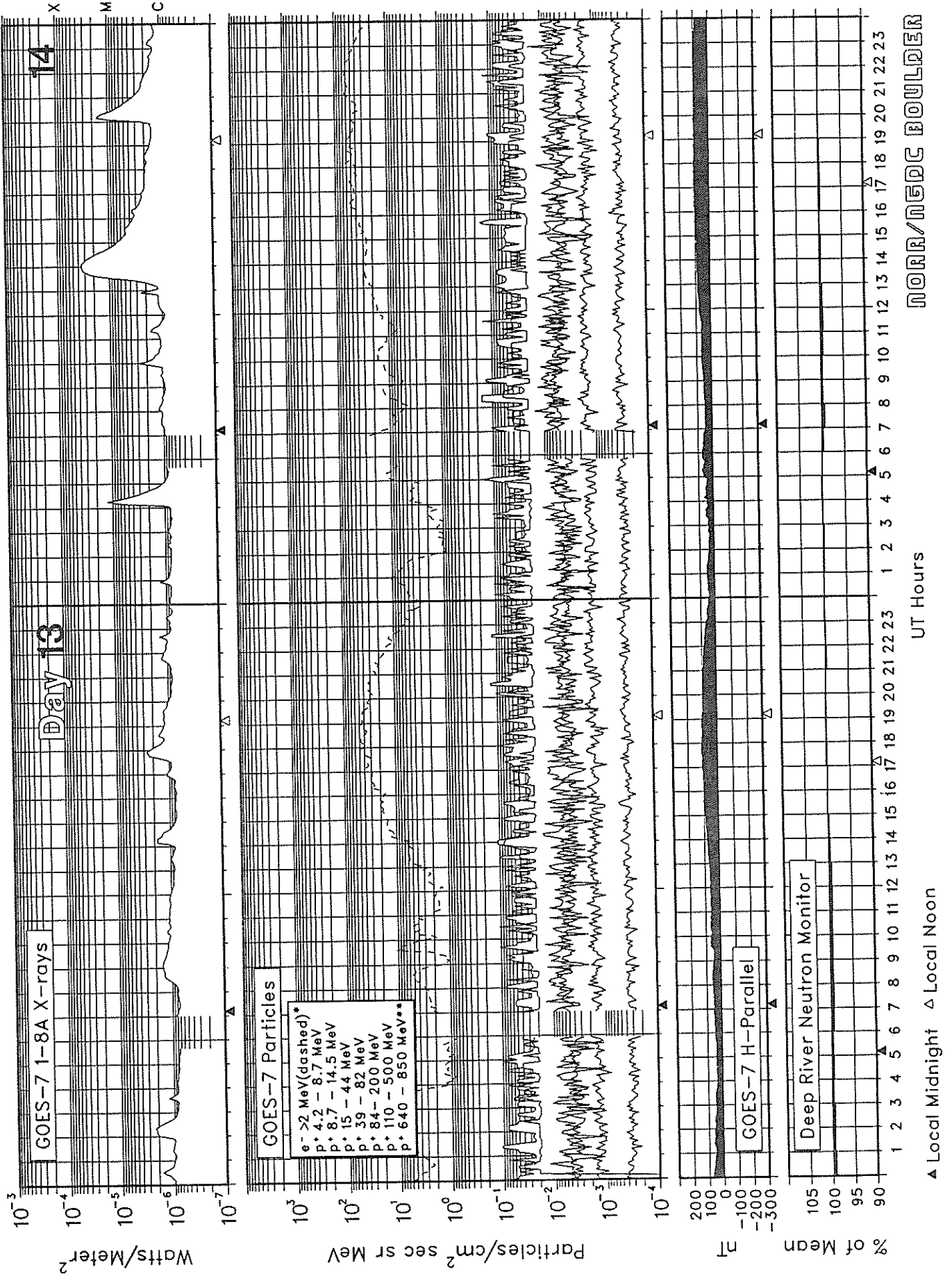
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



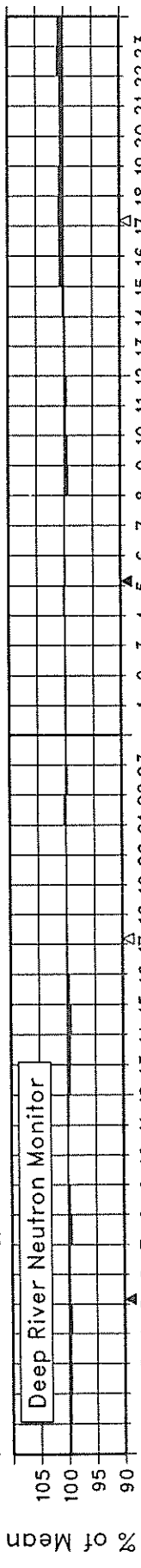
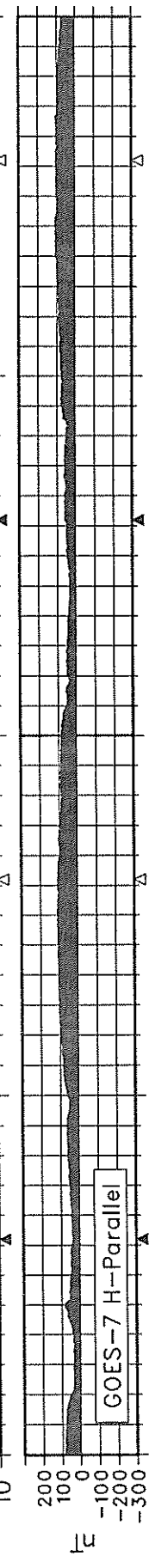
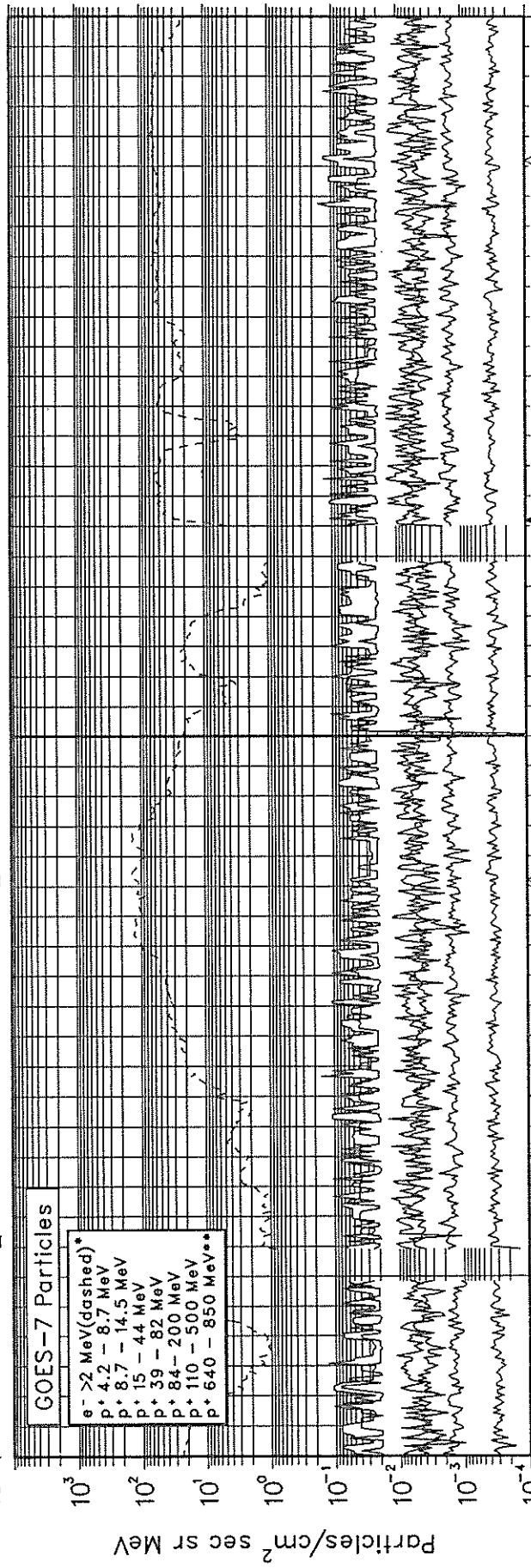
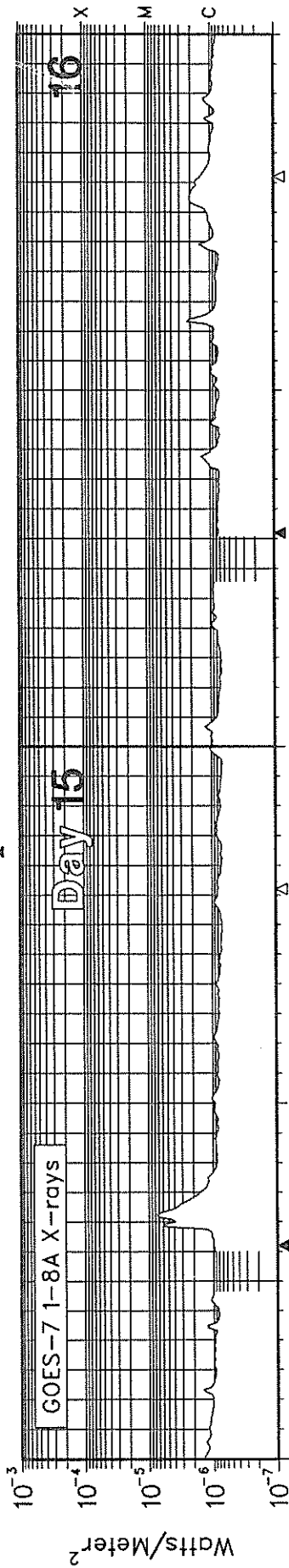
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



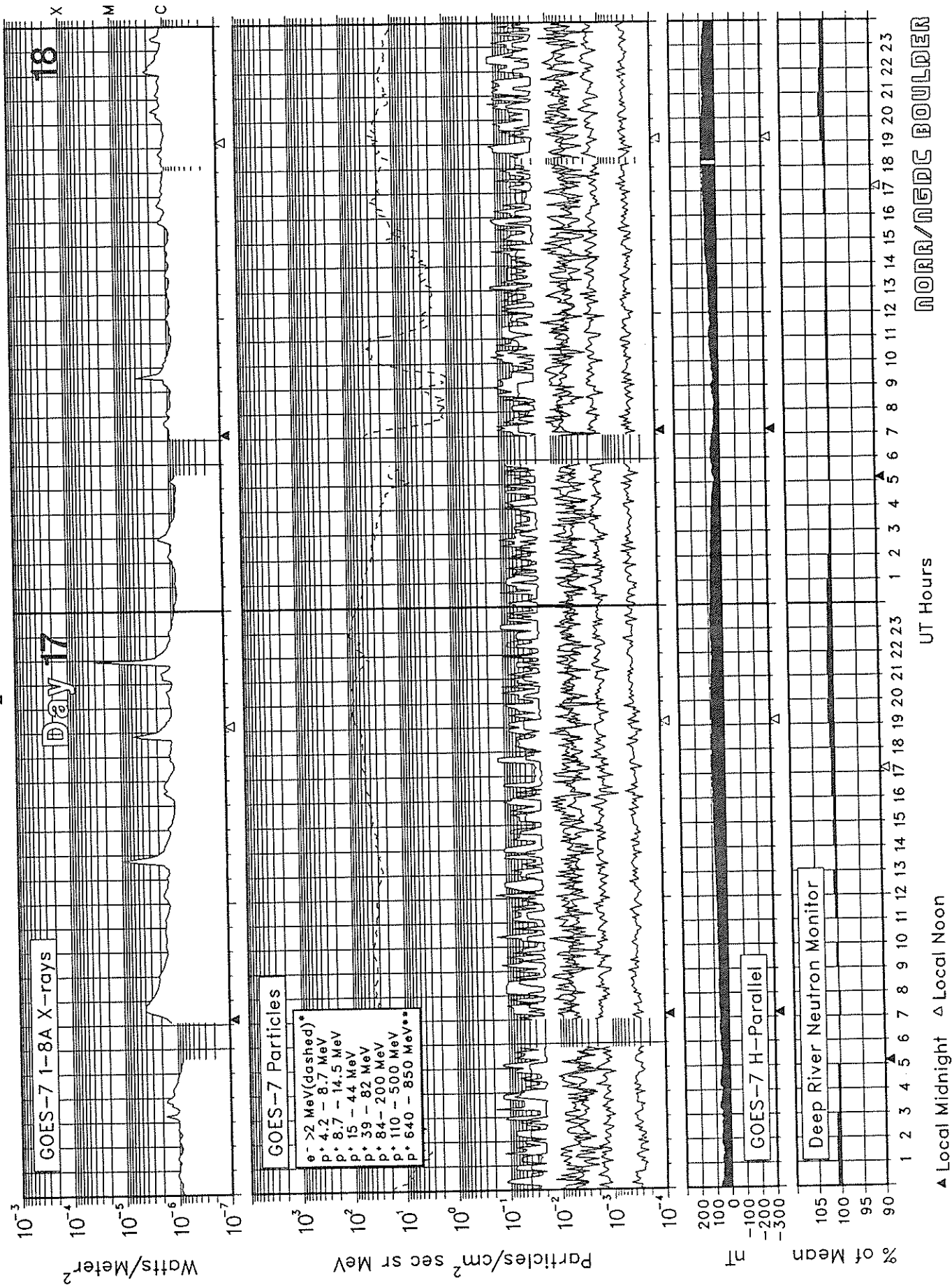
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



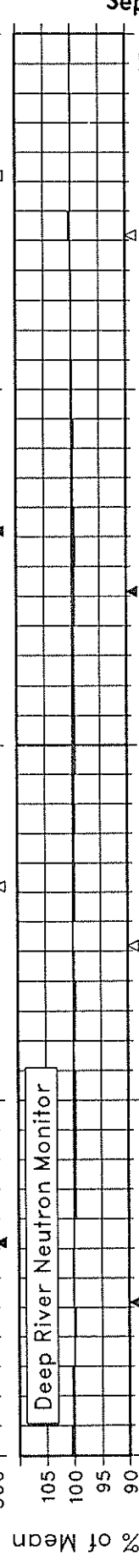
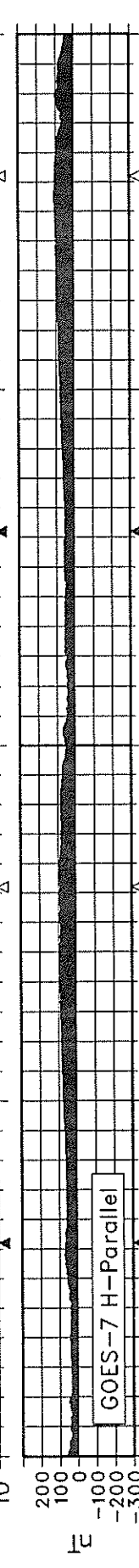
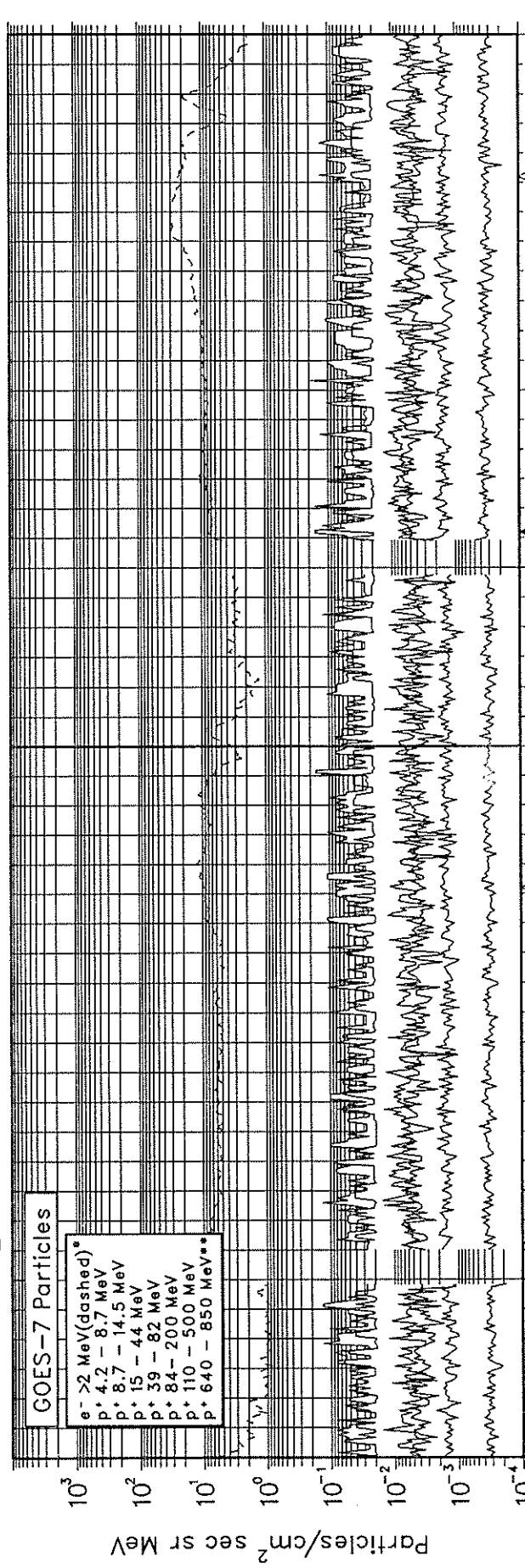
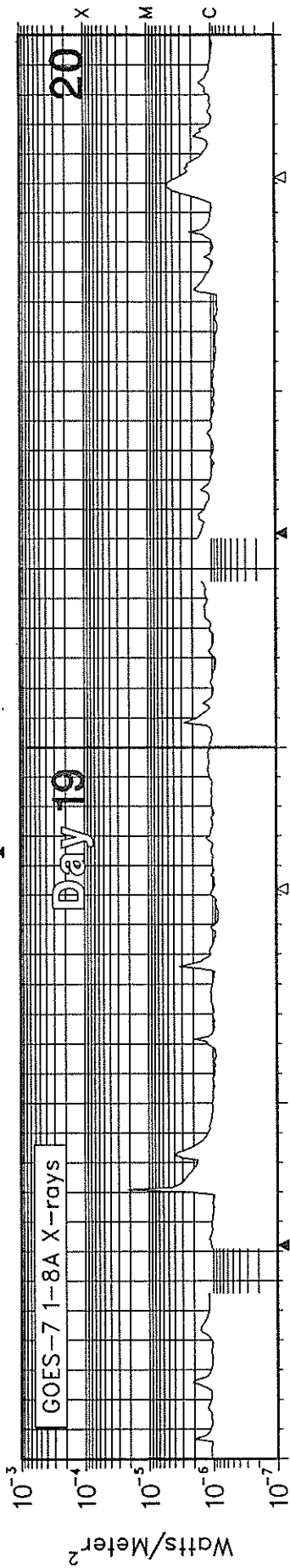
SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



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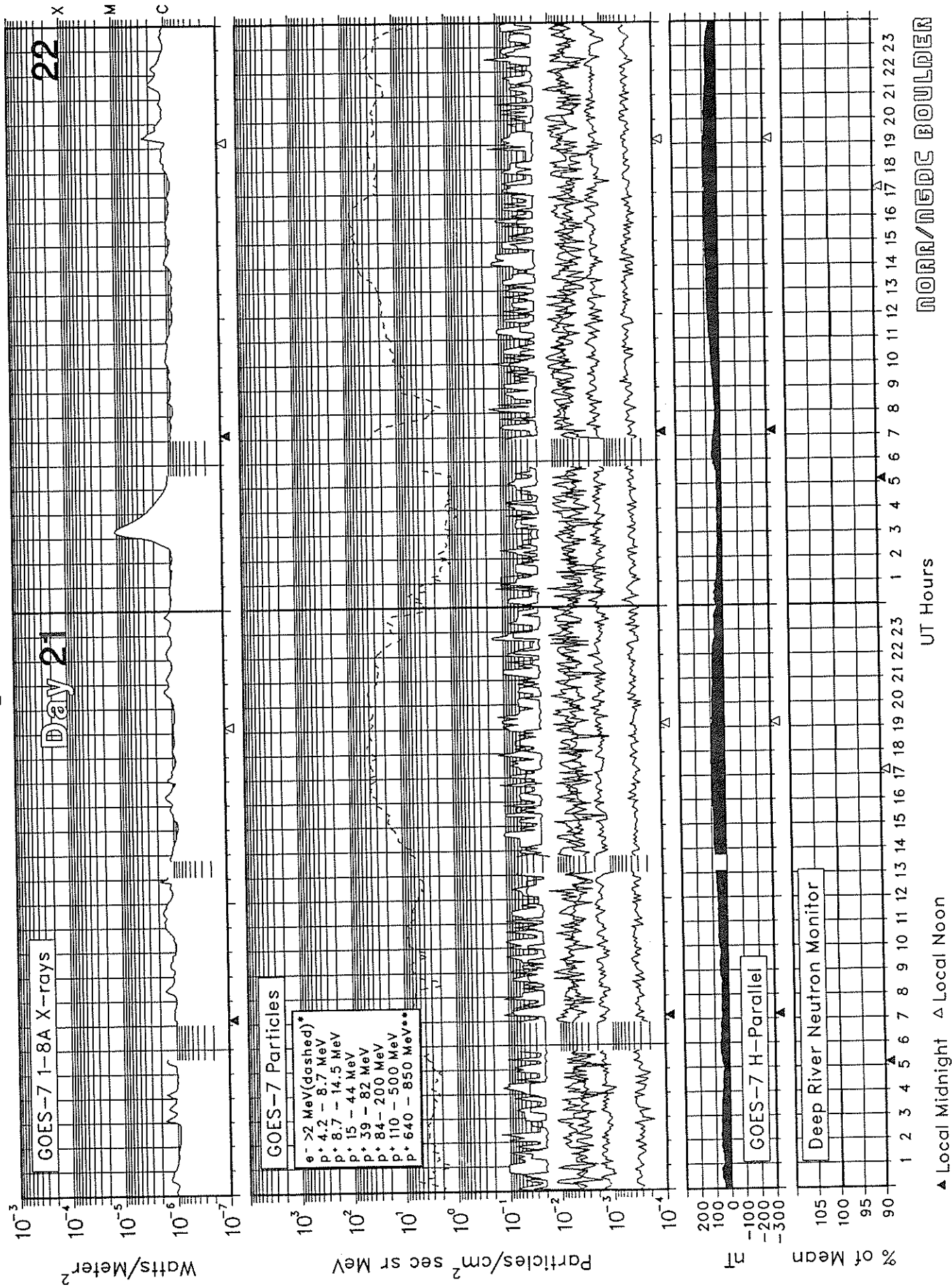
September 1990



▲ Local Midnight ▲ Local Noon UT Hours

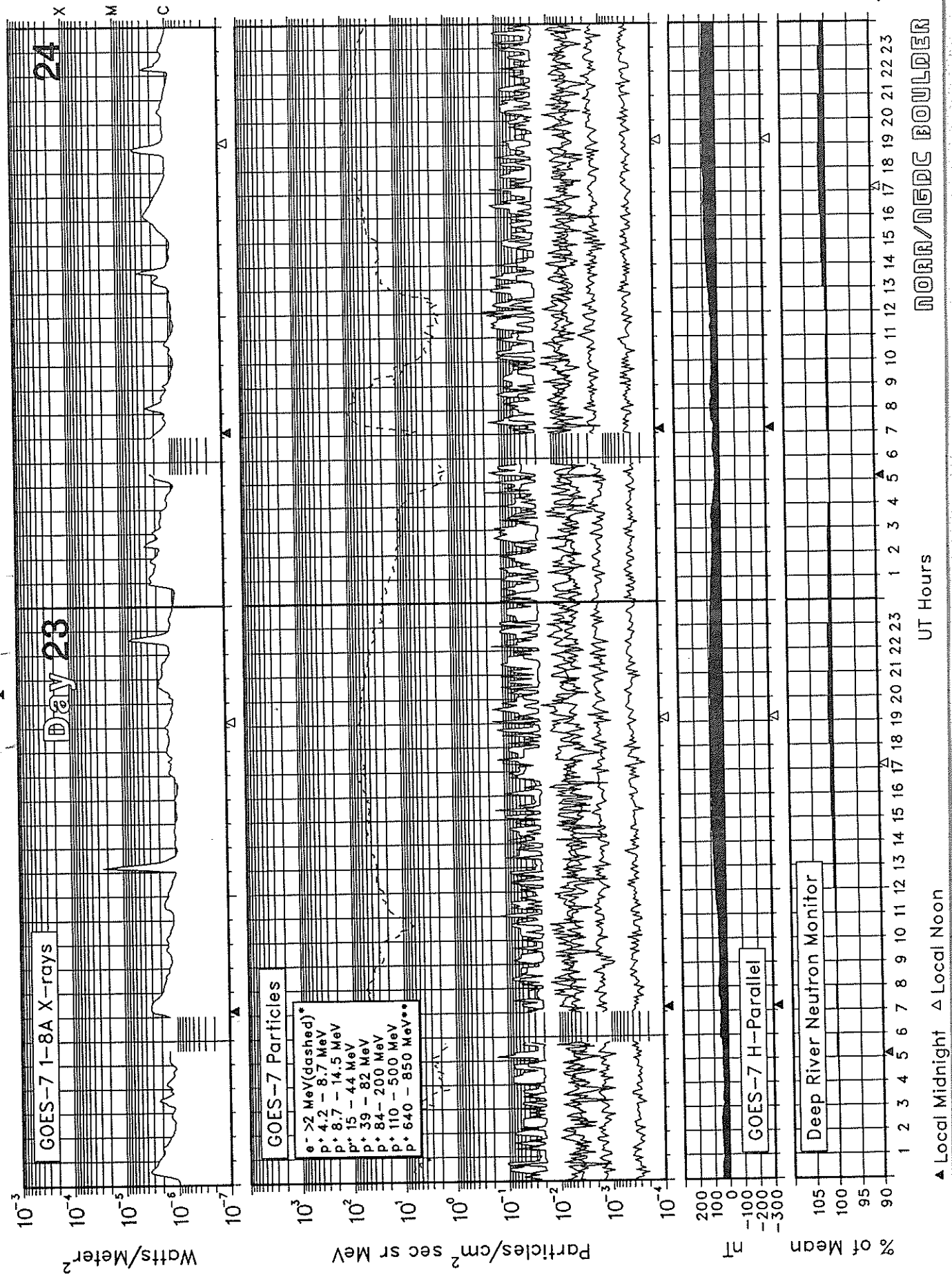
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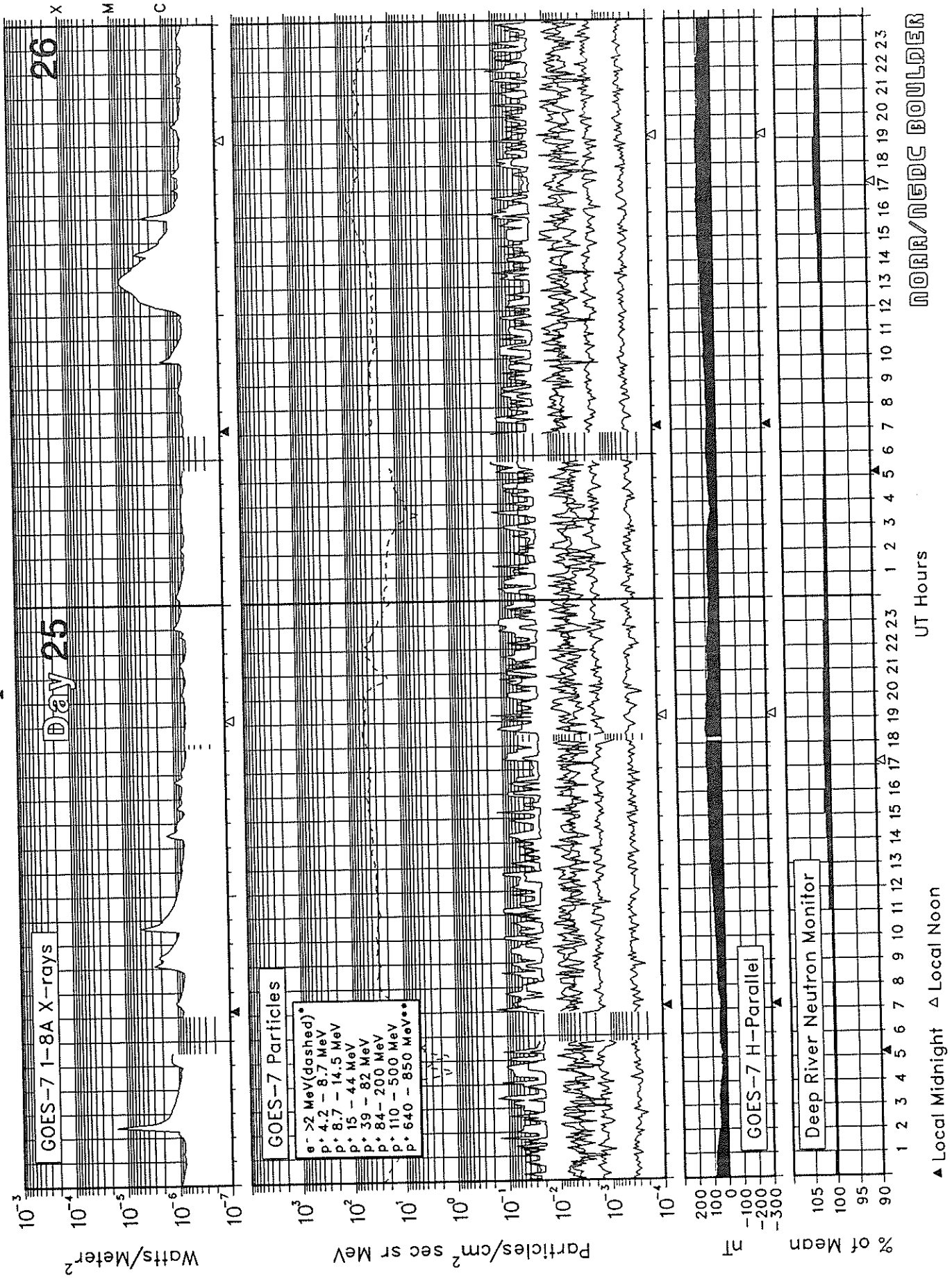
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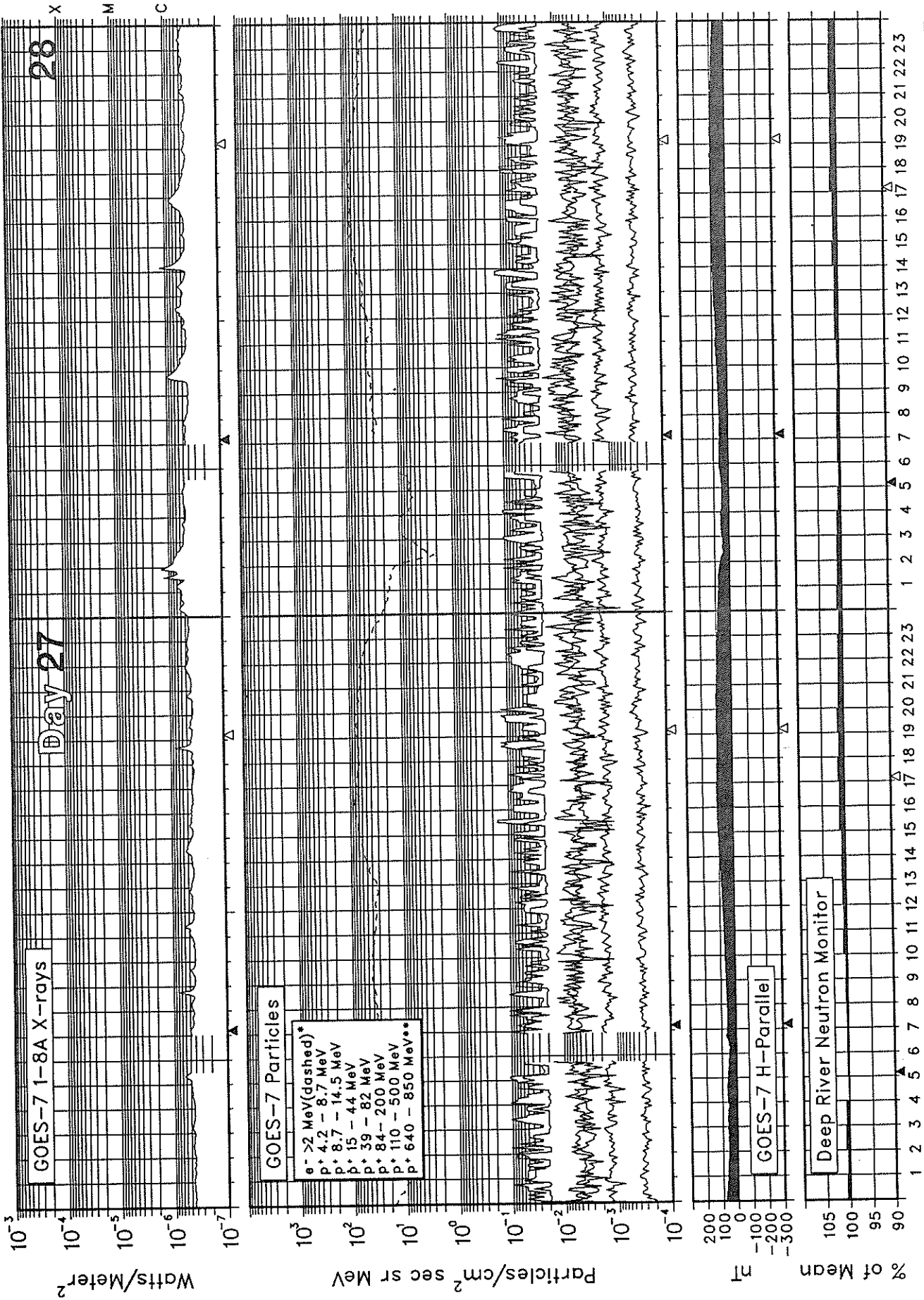
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September 1990



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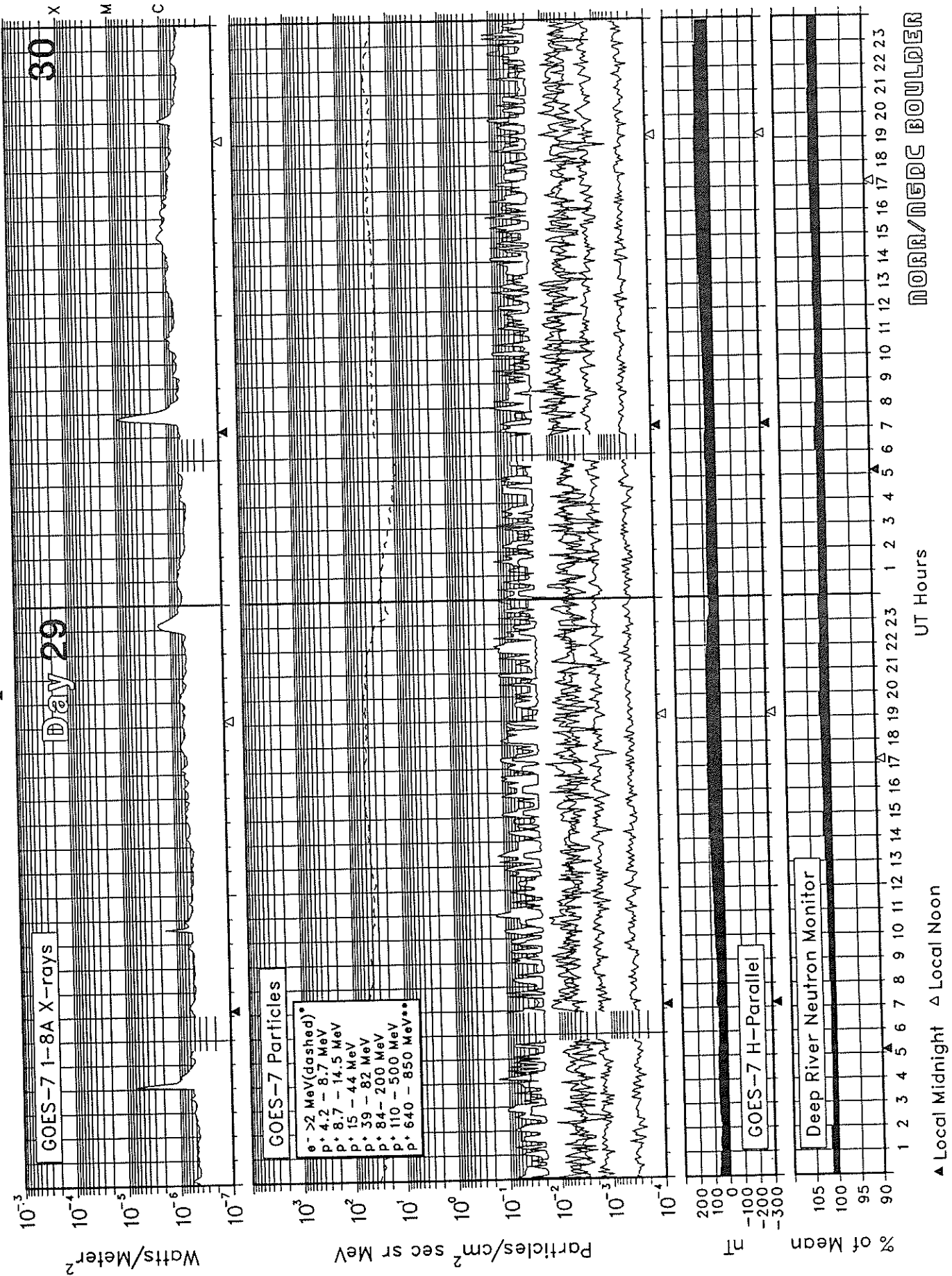
September 1990



NORR/NEDC BOULDER

SOLAR-TERRESTRIAL ENVIRONMENT

September 1990



ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geolert Messages SEPTEMBER 1990

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	Geolerts								
						°Lat	°Long	Total	M	X		°Lat	°Long										
244	01	31	241	182	024	S23	W93	5	1	0	01	S23	W93	E	Solalert 01/XX, Magnil.								
						S23	W79	0	0	0		S23	W79	Q									
						S08	W73	0	0	0		S08	W73	Q									
						S27	W63	0	0	0		S27	W63	Q									
						N13	W32	6	0	0		N13	W32	A									
						S15	E11	0	0	0		S15	E11	Q									
						S13	E24	2	0	0		S13	E24	Q									
						N17	E30	0	0	0		N17	E30	Q									
						N13	W20	2	0	0		N13	W20	Q									
						S13	E51	0	0	0		S13	E51	Q									
						S21	E18	1	0	0		S21	E18	Q									
						N13	E43	4	0	0		N13	E43	E									
						S14	E35	0	0	0		S14	E35	Q									
						245	02	01	193	167		026	S07	W87		0	0	0	02	S07	W87	Q	Solalert 02/XX, Magquiet.
S27	W74	0	0	0	S27						W74		Q										
N12	W46	5	1	0	N12						W46		A										
S16	W01	0	0	0	S16						W01		Q										
S13	E10	0	0	0	S13						E10		E										
N16	E17	0	0	0	N16						E17		Q										
N15	W37	2	0	0	N15						W37		Q										
S14	E37	0	0	0	S14						E37		Q										
S21	E04	0	0	0	S21						E04		Q										
N13	E28	0	0	0	N13						E28		E										
S14	E21	0	0	0	S14						E21		Q										
S16	E61	1	0	0	S16						E61		Q										
246	03	02	186	165	000						S26		W85	0	0	0	03	S26		W85	Q	Solnil, Magquiet.	
											N13		W59	8	0	0		N13		W59	E		
						S14	W17	0	0	0	S14	W17	Q										
						S13	W02	3	0	0	S13	W02	E										
						N16	E04	0	0	0	N16	E04	Q										
						S14	E22	0	0	0	S14	E22	Q										
						S20	W10	0	0	0	S20	W10	Q										
						N12	E17	1	0	0	N12	E17	E										
						S13	E07	0	0	0	S13	E07	Q										
						S15	E47	1	0	0	S15	E47	E										
						N03	E68	0	0	0	N03	E68	Q										
						N30	E07	0	0	0	N30	E07	Q										
						247	04	03	180	157	003	N13	W72	9	1	0		04	N13	W72	E		Solquiet, Magquiet.
												S16	W28	0	0	0			S16	W28	Q		
S12	W17	3	0	0	S12							W17	E										
N16	W10	0	0	0	N16							W10	Q										
S12	E07	1	0	0	S12							E07	Q										
S19	W25	0	0	0	S19							W25	Q										
N12	E02	0	0	0	N12							E02	Q										
S14	E33	1	0	0	S14							E33	Q										
N03	E55	0	0	0	N03							E55	Q										
N15	E68	0	0	0	N15							E68	Q										
S07	W25	0	0	0	S07							W25	Q										
248	05	04	204	160	008							N13	W84	5	1	0	05		N13	W84	E	Solquiet, Magquiet.	
												S19	W39	0	0	0			S19	W39	Q		
												S13	W29	1	0	0			S13	W29	Q		
						N15	W23	0	0	0	N15	W23	Q										
						S13	W06	1	0	0	S13	W06	Q										
						S19	W38	0	0	0	S19	W38	Q										
						N12	W11	2	0	0	N12	W11	Q										

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages SEPTEMBER 1990

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		
248	05	04				S15	W20	0	0	0	05	S15	W20	Q	
						S14	E21	1	0	0		S14	E21	Q	
						N03	E43	0	0	0		N03	E43	Q	
						N15	E55	0	0	0		N15	E55	Q	
						S06	W40	0	0	0		S06	W40	Q	
						N18	E37	0	0	0		N18	E37	Q	
						N13	E73	7	0	0		N13	E73	Q	
Presto: ² Boulder Tenflare 190 flux units 04/1434 duration 7 minutes.															
249	06	05	169	157	016	N14	W97	2	1	0	06	N14	W97	E	Solquiet, Magquiet.
						S17	W54	0	0	0		S17	W54	Q	
						S12	W44	2	0	0		S12	W44	E	
						N16	W35	0	0	0		N16	W35	E	
						S13	W19	0	0	0		S13	W19	Q	
						S17	W52	0	0	0		S17	W52	Q	
						N12	W24	0	0	0		N12	W24	Q	
						S14	E08	1	0	0		S14	E08	E	
						N03	E30	1	0	0		N03	E30	Q	
						N16	E44	1	0	0		N16	E44	Q	
						N17	E23	0	0	0		N17	E23	Q	
						N12	E60	0	0	0		N12	E60	E	
250	07	06	153	154	015	S13	W54	1	0	0	07	S13	W54	E	Solquiet, Magquiet.
						N16	W48	0	0	0		N16	W48	E	
						S13	W33	4	0	0		S13	W33	E	
						S19	W64	0	0	0		S19	W64	Q	
						N12	W37	0	0	0		N12	W37	Q	
						S14	W05	0	0	0		S14	W05	Q	
						N03	E18	0	0	0		N03	E18	Q	
						N17	E35	0	0	0		N17	E35	Q	
						N12	E47	1	0	0		N12	E47	E	
						N07	E68	0	0	0		N07	E68	E	
						N17	E82	0	0	0		N17	E82	Q	
						251	08	07	135	160		015	S12	W71	
N16	W61	0	0	0	N16						W61		Q		
S13	W46	3	0	0	S13						W46		E		
N13	W50	0	0	0	N13						W50		Q		
S13	W20	4	0	0	S13						W20		E		
N04	E03	0	0	0	N04						E03		Q		
N16	E19	1	0	0	N16						E19		Q		
N13	E33	1	0	0	N13						E33		E		
N08	E56	0	0	0	N08						E56		Q		
N18	E67	3	0	0	N18						E67		Q		
252	09	08	153	159	007	S11	W88	0	0	0	09	S11	W88	Q	Solquiet, Magquiet.
						N16	W73	0	0	0		N16	W73	Q	
						S14	W60	1	0	0		S14	W60	Q	
						N14	W63	0	0	0		N14	W63	Q	
						S13	W33	0	0	0		S13	W33	Q	
						N04	W09	0	0	0		N04	W09	Q	
						N16	E06	0	0	0		N16	E06	Q	
						N14	E20	0	0	0		N14	E20	Q	
						N07	E43	1	0	0		N07	E43	Q	
						N18	E54	7	0	0		N18	E54	Q	
						N20	W30	0	0	0		N20	W30	Q	
						S09	W05	0	0	0		S09	W05	Q	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages

SEPTEMBER 1990

Julian Day	Date of Issue	Date of Observation	Wolf No.	10-cm Solar Flux	A-index	Location		Flares			Date of Forecast	Location		Region Forecast	Geoalerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
257	14	13	195	194	020	N04	W77	0	0	0	14	N04	W77	E	Solquiet, Magnil.
						N13	W46	0	0	0		N13	W46	Q	
						N09	W26	2	0	0		N09	W26	Q	
						N17	W14	0	0	0		N17	W14	Q	
						S11	E16	4	0	0		S11	E16	E	
						S16	W12	0	0	0		S16	W12	Q	
						N10	E38	5	0	0		N10	E38	E	
						S18	E05	0	0	0		S18	E05	Q	
						S26	E44	4	0	0		S26	E44	E	
						S13	E47	0	0	0		S13	E47	E	
						N23	E52	1	0	0		N23	E52	E	
						N17	E69	0	0	0		N17	E69	Q	
						S19	E65	0	0	0		S19	E65	Q	
						S25	W32	0	0	0		S25	W32	Q	
						258	15	14	239	206		019	N05	W91	
N13	W59	1	0	0	N13						W59		Q		
N09	W39	0	0	0	N09						W39		Q		
N16	W27	0	0	0	N16						W27		Q		
S11	E04	4	0	0	S11						E04		E		
S16	W26	1	0	0	S16						W26		Q		
N10	E25	5	1	0	N10						E25		E		
S27	E31	1	1	0	S27						E31		E		
S13	E34	2	0	0	S13						E34		E		
N23	E39	1	0	0	N23						E39		E		
N19	E57	2	0	0	N19						E57		E		
S19	E51	0	0	0	S19						E51		Q		
S25	W44	0	0	0	S25						W44		Q		
S12	E72	1	0	0	S12						E72		E		
N05	W26	0	0	0	N05						W26		Q		
S09	W07	0	0	0	S09	W07	Q								
259	16	15	229	203	021	N12	W72	0	0	0	16	N12	W72	Q	Solnil, Magquiet.
						N09	W52	0	0	0		N09	W52	Q	
						N18	W39	0	0	0		N18	W39	Q	
						S11	W09	1	0	0		S11	W09	E	
						S17	W39	0	0	0		S17	W39	Q	
						N10	E12	2	0	0		N10	E12	E	
						S27	E19	1	0	0		S27	E19	E	
						S12	E22	1	0	0		S12	E22	E	
						N22	E27	1	0	0		N22	E27	E	
						N19	E47	1	0	0		N19	E47	E	
						S18	E36	0	0	0		S18	E36	Q	
						S12	E58	1	0	0		S12	E58	E	
						S09	W21	0	0	0		S09	W21	Q	
						S24	E67	2	0	0		S24	E67	E	
						260	17	16	221	200		021	N13	W86	
N11	W66	2	0	0	N11						W66		Q		
S10	W23	4	0	0	S10						W23		E		
S17	W53	0	0	0	S17						W53		Q		
N12	W00	1	0	0	N12						W00		E		
S26	E05	1	0	0	S26						E05		E		
S12	E09	3	0	0	S12						E09		E		
N22	E13	1	0	0	N22						E13		E		
N19	E31	0	0	0	N19						E31		Q		
S19	E25	0	0	0	S19						E25		Q		
S12	E45	1	0	0	S12						E45		E		
S09	W35	0	0	0	S09						W35		Q		
S23	E52	0	0	0	S23	E52	Q								

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geoalert Messages

SEPTEMBER 1990

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		
261	18	17	228	205	012	N10	W81	0	0	0	18	N10	W81	Q	Solquiet, Magquiet.
						S11	W35	0	0	0		S11	W35	E	
						S18	W66	4	0	0		S18	W66	Q	
						N11	W15	2	0	0		N11	W15	E	
						S26	W08	3	0	0		S26	W08	E	
						S13	W06	3	0	0		S13	W06	E	
						N22	W00	0	0	0		N22	W00	E	
						N19	E19	1	0	0		N19	E19	Q	
						S18	E13	0	0	0		S18	E13	Q	
						S12	E33	9	3	0		S12	E33	E	
						S24	E41	2	0	0		S24	E41	Q	
						S21	E22	0	0	0		S21	E22	Q	
						S32	W32	0	0	0		S32	W32	Q	
						Presto: ² Boulder Tenflare 540 flux units 17/2153 duration 10 minutes.									
262	19	18	224	203	023	N11	W90	0	0	0	19	N11	W90	Q	Solquiet, Magalert.
						S11	W51	8	0	0		S11	W51	E	
						S17	W81	0	0	0		S17	W81	Q	
						N12	W27	0	0	0		N12	W27	E	
						S26	W21	1	0	0		S26	W21	Q	
						S14	W18	4	0	0		S14	W18	Q	
						N22	W13	0	0	0		N22	W13	Q	
						N18	E03	0	0	0		N18	E03	Q	
						S18	W01	1	0	0		S18	W01	Q	
						S13	E21	4	0	0		S13	E21	E	
						S27	E30	0	0	0		S27	E30	Q	
						S23	E07	0	0	0		S23	E07	Q	
						S24	E68	3	0	0		S24	E68	Q	
						S08	E46	2	0	0		S08	E46	E	
						Presto: Boulder Tenflare 240 flux units 18/0936 duration 1 minute.									
263	20	19	231	208	014	S11	W62	0	0	0	20	S11	W62	E	Solquiet, Magalert 20/20.
						N13	W41	0	0	0		N13	W41	Q	
						S26	W35	1	0	0		S26	W35	Q	
						S13	W35	2	0	0		S13	W35	Q	
						N23	W23	1	0	0		N23	W23	Q	
						N20	W07	0	0	0		N20	W07	Q	
						S19	W15	0	0	0		S19	W15	Q	
						S13	E08	0	0	0		S13	E08	E	
						S25	E17	0	0	0		S25	E17	Q	
						S24	E54	0	0	0		S24	E54	Q	
						S08	E31	2	0	0		S08	E31	E	
						N13	E82	0	0	0		N13	E82	E	
						N05	E80	7	1	0		N05	E80	E	
						N25	E55	0	0	0		N25	E55	Q	
264	21	20	196	200	012	S12	W75	0	0	0	21	S12	W75	E	Solquiet, Magalert 21/21.
						N13	W55	8	0	0		N13	W55	Q	
						S25	W45	3	0	0		S25	W45	E	
						S13	W50	2	0	0		S13	W50	E	
						N22	W35	1	0	0		N22	W35	Q	
						N19	W20	0	0	0		N19	W20	Q	
						S13	W05	1	0	0		S13	W05	E	
						S24	W02	2	0	0		S24	W02	Q	
						S24	E43	0	0	0		S24	E43	Q	
						S09	E19	0	0	0		S09	E19	E	
						N13	E69	2	0	0		N13	E69	E	
						N05	E66	7	0	0		N05	E66	E	
						N25	E43	0	0	0		N25	E43	Q	

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geolert Messages SEPTEMBER 1990

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	Geolerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
265	22	21	194	200	016	S10	W88	0	0	0	22	S10	W88	Q	Solquiet, Magnil.
						N12	W68	1	0	0		N12	W68	Q	
						S25	W60	2	0	0		S25	W60	E	
						S12	W62	2	0	0		S12	W62	E	
						N21	W47	0	0	0		N21	W47	Q	
						N19	W36	0	0	0		N19	W36	Q	
						S12	W19	2	0	0		S12	W19	E	
						S24	W12	0	0	0		S24	W12	Q	
						S24	E30	0	0	0		S24	E30	Q	
						S09	E05	1	0	0		S09	E05	E	
						N13	E58	2	0	0		N13	E58	E	
N06	E52	2	0	0	N06	E52	Q								
266	23	22	182	192	022	N12	W83	3	0	0	23	N12	W83	Q	Solquiet, Magquiet.
						S25	W73	1	1	0		S25	W73	E	
						S12	W76	1	0	0		S12	W76	Q	
						N19	W52	0	0	0		N19	W52	Q	
						S13	W32	0	0	0		S13	W32	E	
						S24	E16	0	0	0		S24	E16	Q	
						S08	W07	0	0	0		S08	W07	E	
						N14	E45	5	0	0		N14	E45	E	
						N06	E38	0	0	0		N06	E38	Q	
						S06	E74	0	0	0		S06	E74	Q	
						N10	W65	1	0	0		N10	W65	Q	
267	24	23	172	183	011	N12	W94	3	0	0	24	N12	W94	Q	Solquiet, Magquiet.
						S24	W85	1	0	0		S24	W85	E	
						S13	W89	0	0	0		S13	W89	Q	
						N18	W63	0	0	0		N18	W63	Q	
						S13	W44	0	0	0		S13	W44	Q	
						S24	E05	0	0	0		S24	E05	Q	
						S09	W20	0	0	0		S09	W20	Q	
						N13	E32	2	0	0		N13	E32	Q	
						N05	E26	0	0	0		N05	E26	Q	
						S06	E64	0	0	0		S06	E64	Q	
						S12	E76	0	0	0		S12	E76	Q	
268	25	24	163	176	014	N18	W75	0	0	0	25	N18	W75	Q	Solquiet, Magquiet.
						S13	W58	2	0	0		S13	W58	E	
						S25	W49	0	0	0		S25	W49	Q	
						S24	W09	0	0	0		S24	W09	Q	
						S08	W34	1	0	0		S08	W34	Q	
						N13	E19	7	0	0		N13	E19	E	
						N05	E10	0	0	0		N05	E10	Q	
						S07	E51	3	0	0		S07	E51	E	
						S12	E61	0	0	0		S12	E61	Q	
						N14	W16	1	0	0		N14	W16	Q	
						269	26	25	173	165		009	N18	W89	
S13	W71	3	0	0	S13						W71		Q		
S26	W65	0	0	0	S26						W65		Q		
S24	W21	0	0	0	S24						W21		Q		
S08	W47	0	0	0	S08						W47		Q		
N13	E05	10	1	0	N13						E05		E		
N07	E01	0	0	0	N07						E01		Q		
S07	E38	3	0	0	S07						E38		E		
S12	E48	0	0	0	S12						E48		Q		
N14	W27	0	0	0	N14						W27		Q		
S15	E05	0	0	0	S15						E05		Q		

ALERT PERIODS
INTERNATIONAL URSIGRAM AND WORLD DAYS SERVICE

Summary of the Geolert Messages

SEPTEMBER 1990

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	Geolerts
						°Lat	°Long	Total	M	X		°Lat	°Long		
270	27	26	147	157	010	S13	W85	1	0	0	27	S13	W85	E	Solquiet, Magquiet.
						S25	W34	0	0	0		S25	W34	Q	
						S08	W61	4	0	0		S08	W61	E	
						N12	W10	1	0	0		N12	W10	E	
						N06	W12	0	0	0		N06	W12	Q	
						S07	E24	2	0	0		S07	E24	E	
						S12	E35	0	0	0		S12	E35	Q	
						S12	W33	0	0	0		S12	W33	Q	
271	28	27	160	150	009	S25	W47	3	0	0	28	S25	W47	Q	Solquiet, Magquiet.
						S08	W73	1	0	0		S08	W73	Q	
						N13	W21	1	0	0		N13	W21	E	
						N07	W28	0	0	0		N07	W28	Q	
						S08	E11	3	0	0		S08	E11	E	
						S12	E22	0	0	0		S12	E22	Q	
						S16	W25	0	0	0		S16	W25	Q	
						S12	W47	0	0	0		S12	W47	Q	
N11	E22	0	0	0	N11	E22	Q								
272	29	28	168	150	007	S25	W61	1	0	0	29	S25	W61	Q	Solquiet, Magquiet.
						S08	W86	0	0	0		S08	W86	Q	
						N13	W35	0	0	0		N13	W35	Q	
						S07	W03	3	0	0		S07	W03	E	
						S12	E08	0	0	0		S12	E08	Q	
						S14	W38	1	0	0		S14	W38	E	
						N11	E08	0	0	0		N11	E08	Q	
						N14	W69	0	0	0		N14	W69	Q	
S12	E26	0	0	0	S12	E26	Q								
273	30	29	185	149	005	S24	W75	0	0	0	30	S24	W75	Q	Solquiet, Magquiet.
						N15	W51	0	0	0		N15	W51	Q	
						S07	W17	7	0	0		S07	W17	E	
						S12	W04	0	0	0		S12	W04	Q	
						S15	W51	2	0	0		S15	W51	E	
						N11	W05	0	0	0		N11	W05	Q	
						N15	W84	3	0	0		N15	W84	Q	
						S12	E12	0	0	0		S12	E12	Q	
S16	E57	2	0	0	S16	E57	Q								
N06	W49	0	0	0	N06	W49	Q								
S04	E24	0	0	0	S04	E24	Q								
274	01	30	182	156	004	S24	W87	0	0	0	01	S24	W87	Q	Solquiet, Magquiet.
						N15	W65	1	0	0		N15	W65	Q	
						S07	W30	4	0	0		S07	W30	E	
						S12	W18	0	0	0		S12	W18	Q	
						S14	W63	2	0	0		S14	W63	Q	
						N11	W18	0	0	0		N11	W18	Q	
						S17	E43	0	0	0		S17	E43	Q	
						N07	W64	0	0	0		N07	W64	Q	
S04	E10	8	0	0	S04	E10	E								
S20	W28	0	0	0	S20	W28	Q								

Presto:² Boulder Tenflare 200 flux units 30/0736 duration 14 minutes.

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

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

INTERNATIONAL RELATIVE SUNSPOT NUMBERS

Day	Oct 89	Nov	Dec	Jan 90	Feb	Mar	Apr†	May†	Jun†	Jul†	Aug†	Sep†
01	129	153	198	186	171	173	100	70	96	272	146	126
02	150	160	182	176	161	171	114	59	80	253	175	116
03	167	191	203	166	124	163	113	61	73	245	151	131
04	186	216	182	174	113	126	127	86	77	229	137	134
05	209	228	192	164	97	98	132	80	79	202	128	118
06	189	245	184	144	80	104	138	106	96	186	124	118
07	168	233	217	129	82	105	128	132	107	173	120	103
08	166	215	167	138	95	88	116	138	107	135	136	112
09	187	214	161	125	103	71	88	133	87	102	145	113
10	178	203	148	134	79	80	77	116	111	88	160	121
11	191	179	104	164	75	73	83	126	131	106	161	116
12	154	173	99	172	80	85	77	146	115	110	160	124
13	148	153	107	179	85	83	123	144	115	114	192	142
14	159	140	100	147	75	90	142	141	111	118	215	178
15	189	132	84	157	78	110	171	144	102	98	229	162
16	209	124	101	152	64	129	170	157	110	95	232	156
17	206	124	120	164	54	123	190	167	100	87	269	142
18	184	134	123	177	77	167	203	170	83	57	270	136
19	159	124	131	199	107	202	213	187	79	61	278	151
20	140	141	127	236	134	217	206	187	73	81	295	135
21	152	159	111	217	159	211	212	193	57	123	278	139
22	158	162	150	208	191	195	214	187	71	143	262	130
23	145	157	201	200	239	206	174	160	64	165	281	110
24	131	160	191	191	249	209	157	158	85	194	276	101
25	121	175	209	206	245	204	160	146	94	194	263	101
26	109	184	221	203	234	188	118	134	103	186	214	93
27	97	183	240	211	217	168	124	139	140	177	188	77
28	116	183	249	193	187	129	103	116	184	159	170	113
29	131	164	213	185		132	94	118	203	144	186	119
30	156	182	214	198		133	126	90	224	117	196	124
31	157		201	201		115		101		142	161	
Mean	159.4	173.0	165.5	177.3	130.5	140.3	139.8	132.0	105.2	147.0	199.9	124.7

† = preliminary. The yearly mean sunspot number equaled 157.6 for 1989.

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

Day	Oct 89	Nov	Dec	Jan 90	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
01	198.4	211.4	223.7*	209.3	200.8	200.0	159.2	129.0	140.6	248.3	199.0	171.4
02	208.5	216.0	213.7	208.6	177.8	192.7	153.3	129.2	141.2	267.6	208.6	168.9
03	222.4	217.6	205.6	192.5	157.9	176.3*	151.6	125.2	146.1	253.8	192.4	162.6
04	234.1	223.9	212.9	189.2*	154.8	168.9	148.6*	123.6	148.1	238.3*	191.2	158.2*
05	223.2	235.4	209.7	187.1	150.9	161.7	156.5	130.6	153.7	231.6	180.8	157.5
06	220.5	255.3	209.7	180.9	147.5	163.8*	150.2	151.0	161.4	221.8	174.6	157.6
07	225.7	207.3*	221.5	177.1	144.3	168.1	155.0	155.5	183.6	215.7	172.1	165.1
08	210.1	270.9	203.6	170.9	142.2	157.1*	152.3	170.7	195.5	189.6	184.8	163.5
09	201.9	257.2	194.6	160.6	142.0	150.9*	146.8	174.6	203.9*	170.9	183.2	170.4
10	195.5	246.3*	177.1	167.2	148.5	149.0	149.3	195.4	207.5*	164.0	186.3	171.2
11	191.5	249.1	171.7	169.5	134.9	142.5	160.8	205.4*	217.2	160.2	187.1	180.6
12	203.2	253.5	164.9	170.0	140.0	146.1	169.9	215.2	221.8*	160.9	188.2	193.3
13	224.2	240.3	163.2	167.0	142.8	146.3	195.5*	225.8	208.8	161.5	192.5	198.0
14	225.9	243.0	161.8	165.9	149.5	149.8*	215.7	224.2*	206.8	155.4	188.2*	209.4*
15	225.4	216.5	165.5	184.9	148.8	164.2*	222.9	246.6	196.3	149.1	199.6	207.3
16	237.0	216.2	164.1	187.6	148.8	178.1	226.3*	251.5	189.9	146.5	211.0	205.2
17	225.3	215.0	176.0	186.8	151.6	182.0	236.7*	248.9	187.5	147.6	228.4	210.7
18	221.3*	221.6J	185.9	217.2	161.1	196.4	243.0	271.8	169.5	144.7	246.1	207.5
19	214.7J	229.2	188.2	233.1	180.3	216.3	244.2*	280.0	163.5	145.3	268.0*	213.8
20	205.4	223.7	189.3	238.2	189.5	223.9*	257.1	272.5	161.2	154.0	288.7	204.0
21	206.2	229.4	189.9	250.8*	211.9	227.6	239.6	259.2	155.8	159.2	298.3	203.2
22	217.8	222.0	199.9	233.7	215.7	243.1*	232.8	250.0	145.2	166.0*	322.8*	195.3
23	210.4	213.4	213.8	233.6	216.6	245.3	226.3	239.5	139.1	180.4	322.7	185.4
24	214.2	208.8	231.0	239.8	231.5	231.3	217.4	209.2	143.8	186.6	329.2	178.7
25	183.3*	216.0	248.0*	234.6	225.3	223.9*	198.3	189.1	149.3	213.6	303.9	167.1
26	171.7	234.3	252.6	238.8	213.3	226.9	188.9*	186.3	154.5	209.9	285.1*	159.6
27	176.9	239.4	274.8	232.2	224.1	215.1	169.8	164.6	173.4*	197.2	269.2	152.6
28	173.0	231.3	246.4	230.1	222.0	206.0	152.7	159.3	187.7	193.1	250.2	152.1
29	172.0	215.1	242.7*	227.8		184.1	140.9	144.8	210.8	180.3	225.2	150.1
30	186.3	240.9	258.2*	211.4		186.5E	136.9	142.5*	226.6	188.3	210.4	157.8
31	202.0*		236.7	209.3		172.8		142.5*		183.4	182.9*	
Mean	207.4	230.0	206.3	203.4	174.1	187.0	186.6	194.0	176.3	186.6	228.1	179.3

* = corrected for burst in progress; E = corrected for snow on antenna; J = no calibration due to burst.

DAILY SOLAR INDICES

27
Sep 90

September 1990

Day	Day of Year	Bartels Cycle Day	Sunspot Numbers		Obs Flux Ottawa (2800)	Solar Flux Adjusted to 1 Astronomical Unit								
			Int	Amer		PALE (15400)	PALE (8800)	PALE (4995)	Ottawa (2800)	PALE (2695)	PALE (1415)	PALE (610)	PALE (410)	PALE (245)
01	244	27	126	125	168.3	535	308	217	171.4	167	116	65	45	22
02	245	1	116	124	166.0	537	298	213	168.9	161	113	72	47	26
03	246	2	131	135	159.8	540	296	208	162.6	154	110	66	43	20
04	247	3	134	141	155.6*	529	288	195	158.2*	147	109	56	40	20
05	248	4	118	119	155.0	546	296	205	157.5	156	109	61	42	20
06	249	5	118	114	155.2	541	296	209	157.6	157	122	66	42	22
07	250	6	103	107	162.6	544	302	219	165.1	186	139	69	44	19
08	251	7	112	104	161.1	538	285	205	163.5	158	124	69	42	19
09	252	8	113	112	168.0	548	296	206	170.4	160	124	70	40	19
10	253	9	121	118	168.8	544	297	212	171.2	167	123	63	41	19
11	254	10	116	113	178.2	554	308	222	180.6	175	132	75	45	19
12	255	11	124	127	190.9	538	309	229	193.3	182	138	88	46	19
13	256	12	142	139	195.6	548	319	240	198.0	222	140	77	44	19
14	257	13	178	164	207.0*	543	330	251	209.4*	206	152	80	46	20
15	258	14	162	158	205.0	569	320	244	207.3	199	151	67	41	21
16	259	15	156	162	203.0	555	310	243	205.2	197	145	72	42	19
17	260	16	142	144	208.6	526	317	243	210.7	197	144	72	40	17
18	261	17	136	138	205.6	549	323	247	207.5	198	144	74	42	18
19	262	18	151	143	211.9	537	314	247	213.8	201	146	68	42	21
20	263	19	135	142	202.3	555	320	247	204.0	202	144	74	43	20
21	264	20	139	138	201.6	537	---	247	203.2	198	147	75	48	25
22	265	21	130	133	193.9	531	309	236	195.3	186	140	72	43	22
23	266	22	110	113	184.2	535	302	215	185.4	173	121	71	43	19
24	267	23	101	101	177.6	465	272	208	178.7	170	123	68	40	24
25	268	24	101	97	166.1	522	285	212	167.1	159	138	69	41	24
26	269	25	93	98	158.8	514	285	204	159.6	149	111	67	41	19
27	270	26	77	95	152.0	529	281	202	152.6	145	114	74	40	20
28	271	27	113	119	151.5	529	---	---	152.1	---	---	45	34	21
29	272	1	119	127	149.7	522	258	195	150.1	138	105	63	39	20
30	273	2	124	118	157.4	532	349	192	157.8	136	97	68	44	31
Mean			124.7	125.6	177.4	536	303	221	179.3	174	128	69	42	21

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 Palehua (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
1980	164	163	161	159	156	155	153	150	150	150	148	143
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	153
1990	151	153	152	150 (4)	148 (4)	146 (5)	144 (12)	143 (17)	139 (19)	135 (21)	131 (20)	129 (19)
1991	128 (20)	127 (21)	125 (23)	124 (27)	124 (28)	123 (25)	121 (21)	118 (19)	115 (16)	114 (15)	114 (15)	114 (17)

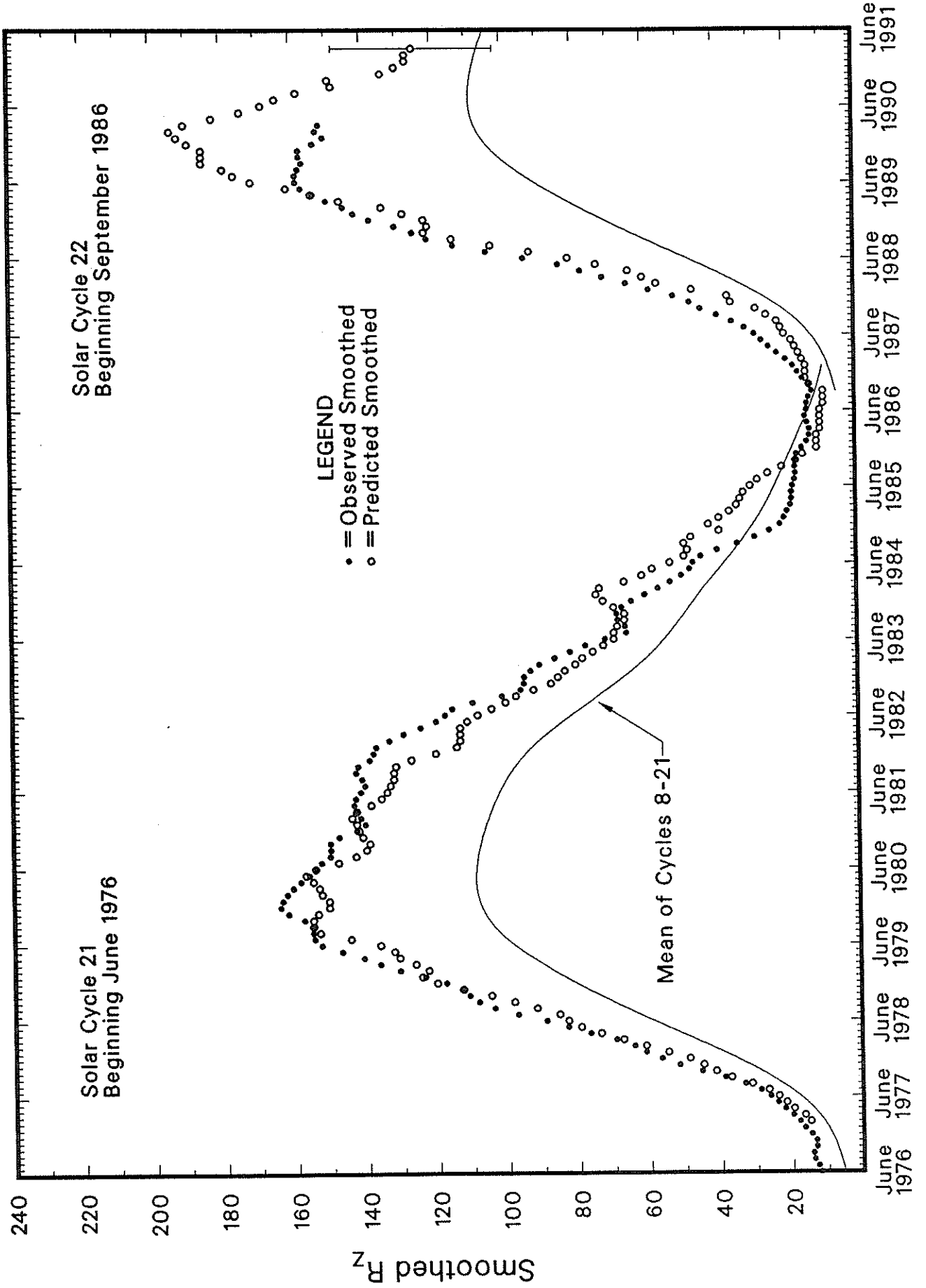
*September 1986 marks the onset of Sunspot Cycle 22.

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 March 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 March 1991 prediction. There exists a 90% chance that in March 1991 the actual smoothed sunspot number will fall somewhere between 102 and 148.

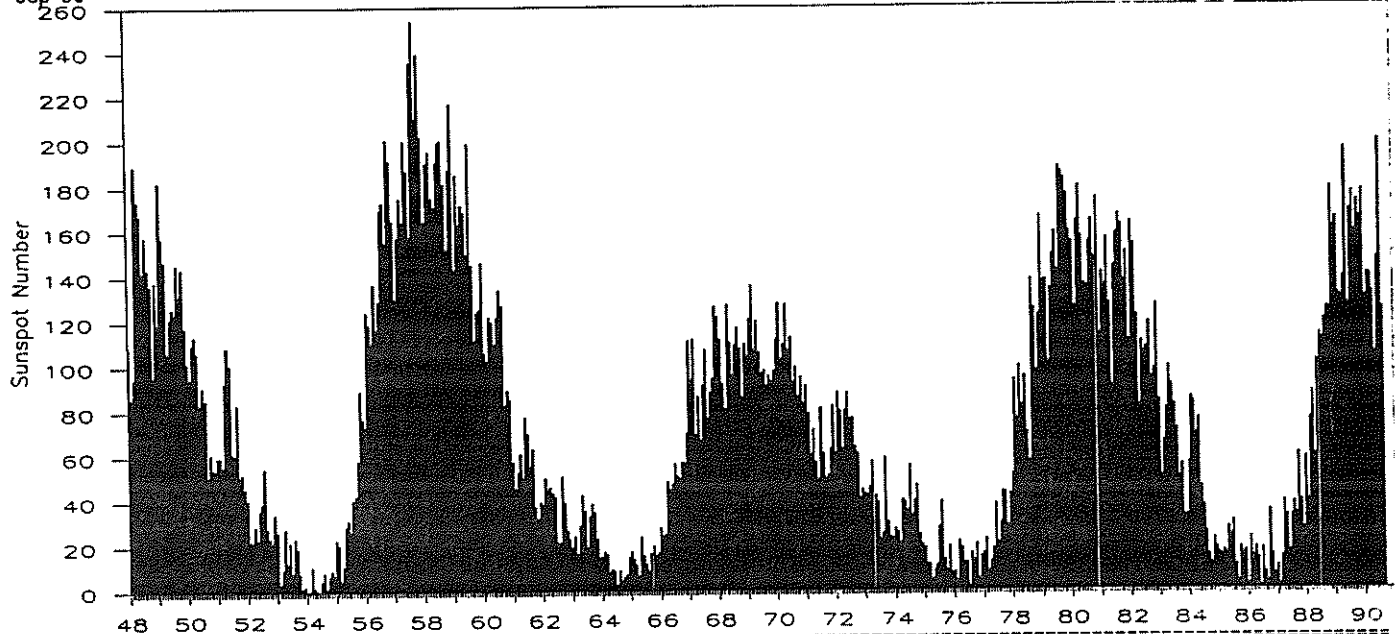
THE MCNISH-LINCOLN PREDICTION METHOD GENERATES USEFUL ESTIMATES OF SMOOTHED, MONTHLY MEAN SUNSPOT NUMBERS FOR NO MORE THAN 12 MONTHS AHEAD. Beyond a year the predictions regress rapidly toward the mean of all 13 cycles used in the computation. Moreover, the method is very sensitive to the data defined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



30
Sep 90
260

MONTHLY MEAN SUNSPOT NUMBERS Jan 1948 - Sep 1990



Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1948	108.5	86.1	94.8	189.7	174.0	167.8	142.2	157.9	143.3	136.3	95.8	138.0	136.3
1949	119.1	182.3	157.5	147.0	106.2	121.7	125.8	123.8	145.3	131.6	143.5	117.6	134.7
1950	101.6	94.8	109.7	113.4	106.2	83.6	91.0	85.2	51.3	61.4	54.8	54.1	83.9
1951	59.9	59.9	55.9	92.9	108.5	100.6	61.5	61.0	83.1	51.6	52.4	45.8	69.4
1952	40.7	22.7	22.0	29.1	23.4	36.4	39.3	54.9	28.2	23.8	22.1	34.3	31.5
1953	26.5	3.9	10.0	27.8	12.5	21.8	8.6	23.5	19.3	8.2	1.6	2.5	13.9
1954	0.2	0.5	10.9	1.8	0.8	0.2	4.8	8.4	1.5	7.0	9.2	7.6	4.4 m
1955	23.1	20.8	4.9	11.3	28.9	31.7	26.7	40.7	42.7	58.5	89.2	76.9	38.0
1956	73.6	124.0	118.4	110.7	136.6	116.6	129.1	169.6	173.2	155.3	201.3	192.1	141.7
1957	165.0	130.2	157.4	175.2	164.6	200.7	187.2	158.0	235.8	253.8	210.9	239.4	190.2 M
1958	202.5	164.9	190.7	196.0	175.3	171.5	191.4	200.2	201.2	181.5	152.3	187.6	184.8
1959	217.4	143.1	185.7	163.3	172.0	168.7	149.6	199.6	145.2	111.4	124.0	125.0	159.0
1960	146.3	106.0	102.2	122.0	119.6	110.2	121.7	134.1	127.2	82.8	89.6	85.6	112.3
1961	57.9	46.1	53.0	61.4	51.0	77.4	70.2	55.8	63.6	37.7	32.6	39.9	53.9
1962	38.7	50.3	45.6	46.4	43.7	42.0	21.8	21.8	51.3	39.5	26.9	23.2	37.6
1963	19.8	24.4	17.1	29.3	43.0	35.9	19.6	33.2	38.8	35.3	23.4	14.9	27.9
1964	15.3	17.7	16.5	8.6	9.5	9.1	3.1	9.3	4.7	6.1	7.4	15.1	10.2 m
1965	17.5	14.2	11.7	6.8	24.1	15.9	11.9	8.9	16.8	20.1	15.8	17.0	15.1
1966	28.2	24.4	25.3	48.7	45.3	47.7	56.7	51.2	50.2	57.2	57.2	70.4	47.0
1967	110.9	93.6	111.8	69.5	86.5	67.3	91.5	107.2	76.8	88.2	94.3	126.4	93.8
1968	121.8	111.9	92.2	81.2	127.2	110.3	96.1	109.3	117.2	107.7	86.0	109.8	105.9 M
1969	104.4	120.5	135.8	106.8	120.0	106.0	96.8	98.0	91.3	95.7	93.5	97.9	105.5
1970	111.5	127.8	102.9	109.5	127.5	106.8	112.5	93.0	99.5	86.6	95.2	83.5	104.5
1971	91.3	79.0	60.7	71.8	57.5	49.8	81.0	61.4	50.2	51.7	63.2	82.2	66.6
1972	61.5	88.4	80.1	63.2	80.5	88.0	76.5	76.8	64.0	61.3	41.6	45.3	68.9
1973	43.4	42.9	46.0	57.7	42.4	39.5	23.1	25.6	59.3	30.7	23.9	23.3	38.0
1974	27.6	26.0	21.3	40.3	39.5	36.0	55.8	33.6	40.2	47.1	25.0	20.5	34.5
1975	18.9	11.5	11.5	5.1	9.0	11.4	28.2	39.7	13.9	9.1	19.4	7.8	15.5
1976	8.1	4.3	21.9	18.8	12.4	12.2	1.9	16.4	13.5	20.6	5.2	15.3	12.6
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
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
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	139.8*	132.0*	105.2*	147.0*	199.9*	124.7*				144.1*

*Preliminary

For the yearly means, each "M" marks a sunspot cycle maximum and each "m" a minimum

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks
												Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
LEAR	01	0234	0234	0238	N13	W28	6233	08 30.1	4	SF	3	E	17		F
LEAR		0256	0314	0413	N14	W29	6233		77	SF		E	49		K
LEAR		0256	0327	0413	N14	W29	6233	08 30.0	77	SF C 4.9	3	E	45		F
LEAR		0320	0342	0414	N15	W24	6240	08 30.4	54	SF	3	E	26		
LEAR		0658	0706	0731	N14	W31	6233	08 30.0	33	SN M 2.7	3	E	60		F
SVTO		0702E	0707U	0740D	N14	W27	6233	08 30.3	380	SN	3	E	28		F
LEAR		0705	0707	0823	N15	W25	6240	08 30.5	78	SF	3	E	29		
HOLL		1522	1527	1538	N14	W35	6233	08 30.1	16	SF	3	E	12		
GOES		1703	1736	1754					51	C 5.9					
PALE		1916	1916	1922	S14	E67		09 6.9	6	SF	3	E	13		
HOLL		1926E	1945	2026	N14	W38	6233	08 30.0	600	SF	3	E	16		
RAMY		1950	2004	2022	N13	W37	6233	08 30.1	32	SF	3	E	13		
PALE		2000	2005	2007	N14	W39	6233	08 30.0	7	SF	3	E	16		
HOLL		2221	2225	2335	N13	W39	6233	08 30.1	74	SF C 2.2	2	E	16		F
LEAR	02	0143	0144	0149	N14	W45	6233	08 29.8	6	SF C 3.4	3	E	49		
LEAR		0600	0601	0614	N11	W46	6233	08 29.9	14	SF C 1.5	3	E	23		
SVTO		0713	0728	0754	N13	W47	6233	08 29.8	41	SF	3	E	47		F
LEAR		0720	0723	0734	N12	W44	6233	08 30.1	14	SF	3	E	45		
SVTO		0845	0848	0852	N14	E26	6244	09 4.3	7	SF	3	E	16		
SVTO		1147	1200	1204	S13	E55	6246	09 6.6	17	SF	4	E	13		
SVTO		1211	1212	1218	N12	W46	6233	08 30.1	7	SF	4	E	15		H
RAMY		1211	1212	1230	N13	W45	6233	08 30.2	19	SF	2	E	14		FH
GOES		1436	1458	1535					59	C 1.7					
HOLL		1449	1554U	1600D	S13	E03	6238	09 2.8	710	SF	1	E	16		F
HOLL		1626	1627	1637	S13	E03	6238	09 2.9	11	SF	4	E	26		F
RAMY		1626	1630	1635	S15	E08	6238	09 3.3	9	SF	3	E	15		
RAMY		1634	1634	1640	N13	W52	6233	08 29.9	6	SF	3	E	26		
PALE		1745	1748	1753	N12	W56	6233	08 29.6	8	SF C 1.9	3	E	24		
PALE		1852	1853	1905	N10	W53	6233	08 29.9	13	SF C 2.0	3	E	29		
HOLL		1852	1853	1912	N10	W52	6233	08 30.0	20	SN C 2.0	3	E	36		
HOLL		1908	1921	1930	S13	E03	6238	09 3.0	22	SF	3	E	17		F
GOES		2344	2358	2411					27	C 1.9					
LEAR	03	0219	0219	0232	N14	W53	6233	08 30.2	13	SF C 3.5	3	E	58		F
LEAR		0346	0347	0352	N10	W57	6233	08 30.0	6	SF	3	E	26		F
PALE		0347E	0347	0355D	N09	W60	6233	08 29.7	80	SF	3	E	10		
LEAR		0559	0602	0609	N15	W64	6233	08 29.5	10	SF C 1.5	3	E	33		
LEAR		0716	0719	0729	S14	W04	6238	09 3.0	13	SN C 3.0	4	E	52		FE
LEAR		0735	0739	0757	N14	W57	6233	08 30.1	22	SF C 2.0	3	E	26		
SVTO		0843E	0843U	0857D	S15	E44	6246	09 6.7	140	SF	3	E	23		
LEAR		0943	0944	1004D	N14	W57	6233	08 30.2	210	1F M 2.2	2	E	121		
SVTO		0943	0947	1033	N12	W57	6233	08 30.2	50	1B M 2.2	3	E	129		
SVTO		1109	1112	1143	N12	W52	6233	08 30.6	34	SF	3	E	16		
RAMY		1146E	1203	1204	N13	W54	6240	08 30.5	180	SF	3	E	19		
RAMY		1339	1340	1351	N15	W57	6233	08 30.3	12	SF C 2.4	3	E	46		F
HOLL		1340E	1340U	1405D	N13	W58	6233	08 30.3	250	SF	2	E	25		
HOLL		1518E	1527	1603	S13	W17	6238	09 2.3	450	SF	3	E	32		F
SVTO		1522	1526	1532	S15	W16	6238	09 2.4	10	SF	2	E	36		
RAMY		1525	1525	1534	S14	W17	6238	09 2.3	9	SF	3	E	30		
HOLL		1723	1726	1731	N13	W73	6233	08 29.3	8	SF	3	E	28		
HOLL		1855	1858	1902	S13	W19	6238	09 2.3	7	SF	3	E	11		
HOLL		1947E	1948U	1952	N13	W68	6233	08 29.8	50	SF C 4.3	3	E	27		F
GOES		2144	2148	2151					7	C 1.7					
GOES		2249	2253	2255					6	C 1.8					
GOES		2353	2358	2403					10	C 1.9					
LEAR	04	0042	0045	0105	N15	W66	6233	08 30.1	23	SF C 7.0	3	E	48		
GOES		0504	0520	0528					24	C 1.4					
SVTO		0604	0608	0624	N13	E83		09 10.5	20	SF	3	E	81		
SVTO		0656	0658	0713	N10	W74	6233	08 29.8	17	SF	3	E	34		
SVTO		0741	0806	0859	N12	W67	6233	08 30.4	78	2B	3	E	286		F
SVTO		0741	0821	0859	N12	W67	6233		78	2N	3	E	190		K
LEAR		0750	0804	0845	N14	W79	6233	08 29.4	55	2F C 9.2	3	E	262		F
SVTO		0831	0838	0859	N13	E82		09 10.5	28	SF	3	E	56		
SVTO		0916	0917	0923	N12	W01	6244	09 4.3	7	SF	3	E	12		
SVTO		0923	0924	0949	S13	E10	6241	09 5.1	26	SN	3	E	27		
SVTO		0941	0941	0956	N13	E80		09 10.4	15	SF	3	E	25		

32
Sep 90

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
SVTO	04	1004	1004	1011	N11	E82		09	10.6	7	SF		3	E		22		
SVTO		1145	1148	1151	N15	E79		09	10.5	6	SF		4	E		29		
SVTO		1216	1216	1220	N15	E78		09	10.4	4	SF		4	E		20		
GOES		1253	1257	1302						9		C 1.7						
SVTO		1310	1316	1326	N16	E78		09	10.5	16	SF		4	E		33		
RAMY		1313	1315	1322	N14	E78		09	10.4	9	SF		3	E		18		
RAMY		1313	1319	1325	N14	W71 6233		08	30.3	12	SF	C 3.3	3	E		21		
RAMY		1326	1327	1330	N14	W73 6233		08	30.1	4	SF		3	E		30		
HOLL		1424	1424	1431	N16	W81 6233		08	29.5	7	SF		3	E		38		
RAMY		1426	1442U	1538	N14	W73 6233		08	30.2	72	SF		3	E		62		
SVTO		1435	1448	1611	N13	W75 6233		08	30.0	96	1F		4	E		120		
HOLL		1437	1449	1528D	N14	W73 6233		08	30.2	51D	1N M 1.4		3	E		125		
SVTO		1602	1605	1611	S13	W25 6238		09	2.8	9	SF		3	E		18		
RAMY		1612	1612	1625	N12	E75 6252		09	10.3	13	SF		3	E		39		
HOLL		2102	2115	2158D	N13	W08 6244		09	4.3	56D	SF C 2.4		3	E		37		F
RAMY		2107	2107	2111	N13	E70 6252		09	10.2	4	SF		3	E		22		
LEAR		2347	2349	2415	S15	E21 6246		09	6.6	28	SF C 1.4		3	E		26		F
GOES	05	0016	0035	0052						36		C 8.3						
LEAR		0142	0149	0203	N13	E52 6249		09	9.0	21	SF C 3.0		3	E		15		
PALE		0359E	0401	0430D	N14	W85 6233		08	29.8	31D	SF		3	E		62		F
LEAR		0426E	0440	0531	N14	W87 6233		08	29.7	65D	SF M 2.7		3	E		84		
SVTO		0943	0951	0954	S11	W37 6238		09	2.6	11	SF		3	E		16		
RAMY		1330	1337	1415	S13	W37 6238		09	2.8	45	SF C 3.0		3	E		57		F
SVTO		1331	1337U	1411	S14	W36 6238		09	2.8	40	SF		3	E		93		F
RAMY		1540	1541	1552	S15	E12 6246		09	6.6	12	SF C 3.1		3	E		31		
GOES		1919	1926	1939						20		C 1.4						
HOLL		1957E	1958U	2007	N14	W90 6233		08	30.1	10D	SF C 1.4		2	E		28		
HOLL		1957E	1959U	2008	N01	E30 6247		09	8.1	11D	SF		2	E		15		
GOES		2100	2201	2216						76		C 3.5						
GOES		2331	2338	2347						16		C 2.1						
GOES	06	0002	0009	0021						19		C 2.0						
GOES		0306	0309	0311						5		B 9.5						
GOES		0544	0558	0606						22		C 1.3						
GOES		0610	0629	0642						32		C 1.5						
GOES		0643	0700	0710						27		C 1.7						
RAMY		1130	1132	1136	S17	W62 6237		09	1.8	6	SF C 1.5		3	E		21		
RAMY		1137	1139	1206	S17	W62 6237		09	1.8	29	SF		3	E		24		F
GOES		1530	1554	1631						61		C 2.5						
HOLL		1535	1537	1641	S20	E72		09	12.1	66	SF		3	E		27		F
RAMY		1603	1603	1607	N17	E18 6251		09	8.0	4	SF		3	E		12		
RAMY		1605	1605	1705	S19	E68		09	11.8	60	SF		3	E		22		F
HOLL		1729	1737	1743	S14	W33 6241		09	4.2	14	SF		4	E		10		F
HOLL		1755	1756	1803	S14	W33 6241		09	4.2	8	SF		3	E		23		F
HOLL		1843	1844	1852	N14	E52 6252		09	10.7	9	SF		3	E		14		F
HOLL		1909E	1911	2024	S14	W33 6241		09	4.3	75D	SF		3	E		25		F
HOLL		1909E	1947	2024	S14	W33 6241				75D	SB			E		50		K
HOLL		1911E	1912U	1916	S13	W53 6238		09	2.8	5D	SF		3	E		21		
RAMY		1947E	1947U	1949D	S14	W30 6241		09	4.5	2D	SF		2	E		18		F
HOLL		2052	2118	2125	S14	W33 6241		09	4.4	33	SF		3	E		16		
GOES		2108	2151	2250						102		M 1.9						
PALE	07	0030	0032	0051	S16	W05 6246		09	6.6	21	SF		3	E		27		F
HOLL		0040E	0045U	0055D	S19	W06 6246		09	6.6	15D	SF		1	E		39		UF
LEAR		0524	0529	0639	S15	W42 6245				75	1F			E		105		K
LEAR		0524	0549	0639	S15	W42 6245		09	4.0	75	1F		3	E		142		
GOES		0530E	0545	0615D						45D		C 7.2						
LEAR		0753	0756	0805	S13	W38 6245		09	4.5	12	SF		3	E		18		
RAMY		1153	1201	1239	S15	W13 6246		09	6.5	46	SN		3	E		89		UF
SVTO		1153	1201	1243	S15	W11 6246		09	6.7	50	1F C 3.0		3	E		127		U
SVTO		1356	1357	1412	S15	W39 6241		09	4.6	16	SF		3	E		25		
HOLL		1356	1359	1409	S14	W39 6241		09	4.6	13	SF		3	E		23		
RAMY		1521	1522	1526	N19	E73 6254		09	13.2	5	SF		3	E		30		H
SVTO		1521	1522	1528	N21	E76 6254		09	13.5	7	SF		3	E		51		
HOLL		1521	1522	1528	N19	E76 6254		09	13.4	7	SF B 9.6		4	E		55		
HOLL		1656	1658	1704D	N15	E21 6249		09	9.3	8D	SF		3	E		24		
HOLL		1715	1743	1753	S14	W44 6241		09	4.4	38	SF		3	E		25		

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
HOLL	07	1744	1745	1806	S17	W14	6246	09	6.7	22	SF		4	E		21		
HOLL		1745	1747	1800	N18	E68	6254	09	12.9	15	SF		3	E		13		
PALE		1748	1753	1807	S18	W15	6246	09	6.6	19	SF		4	E		11		F
LEAR		2308E	2308U	2331	N09	E40	6252	09	11.0	23D	SF		2	E		30		
PALE		2308E	2309U	2356D	N10	E40	6252	09	11.0	48D	SF		3	E		27		
LEAR		2331	2332	2344	N18	E67	6254	09	13.1	13	SF		3	E		13		
RAMY	08	1055E	1058U	1132	S15	W52	6241	09	4.5	37D	1F C	3.1	2	E		108		
RAMY		1136	1138	1150	N18	E57	6254	09	12.8	14	SF C	4.0	2	E		18		H
SVTO		1418	1419	1423	N20	E58	6254	09	13.0	5	SF		3	E		30		
RAMY		1418	1419	1425	N18	E56	6254	09	12.9	7	SF		3	E		22		H
HOLL		1707	1713	1739	N18	E55	6254	09	12.9	32	SF		3	E		18		F
PALE		1712	1717	1724	N19	E58	6254	09	13.1	12	SF		3	E		17		
PALE		1902	1903	1909	N18	E56	6254	09	13.0	7	SF C	1.0	3	E		28		
HOLL		2031	2033	2038	N16	E54	6254	09	12.9	7	SF		3	E		26		H
HOLL		2209	2216	2339	N06	E48	6253	09	12.5	90	1N		3	E		156		U
HOLL		2215	2223	2238	N17	E53	6254	09	12.9	23	SF C	4.8	3	E		36		
PALE		2230E		2301D	N08	E46	6253	09	12.4	31D	SF		3	E		53		F
HOLL		2342	2343	2347	N17	E52	6254	09	12.9	5	SF		3	E		24		
PALE	09	0352	0404	0411	S16	W63	6241	09	4.4	19	1F		3	E		114		
SVTO		0545E	0607	0617	S15	W59	6241	09	4.8	32D	SF		3	E		25		
LEAR		0600	0603	0610	S14	W62	6241	09	4.6	10	SF		3	E		41		
SVTO		0806	0806	0824	N11	W66	6244	09	4.4	18	SF		3	E		14		
SVTO		0829E	0830	0834	N19	W36	6255	09	6.6	5D	SF		2	E		16		
SVTO		1105	1108	1118	S16	W71	6241	09	4.1	13	SF		3	E		42		
RAMY		1106	1106	1112	S15	W68	6241	09	4.3	6	SF		3	E		23		
SVTO		1320	1330	1407	N05	W17	6247	09	8.3	47	SF		3	E		29		F
SVTO		1327	1327	1337	S16	W72	6241	09	4.1	10	SF		3	E		16		
SVTO		1342	1342	1347	S16	W68	6241	09	4.4	5	SF		3	E		13		
HOLL		1358	1359	1405	N20	W37	6255	09	6.7	7	SF		3	E		15		F
HOLL		1358	1407	1422	N04	W12	6247	09	8.7	24	SF		3	E		25		F
HOLL		1626	1655	1707	S14	W68	6241	09	4.5	41	SF		3	E		23		F
GOES		1939	1944	1950						11		C 1.6						
HOLL		2004	2009	2117	N05	W16	6247	09	8.6	73	SF		3	E		29		F
HOLL		2243	2245	2301	N07	E31	6253	09	12.3	18	SF		3	E		44		
GOES	10	0540	0544	0704						84		C 1.7						
GOES		0910	0919	0937						27		C 2.5						
SVTO		1307	1308	1312	N19	W48	6255	09	6.9	5	SF C	1.2	3	E		22		
HOLL		1750	1811	1822	S11	E56	6257	09	14.9	32	SF		3	E		17		
HOLL		1752	1754	1807	S18	E47		09	14.3	15	SF		3	E		18		
LEAR	11	0018	0019	0028	S23	E34	6262	09	13.6	10	SF C	1.7	3	E		18		
GOES		0055	0059	0102						7		C 1.8						
PALE		0303	0304	0317D	N23	E89		09	18.0	14D	SF		3	E		28		
LEAR		0423E	0426	0445	N20	E93		09	18.3	22D	1F		3	E		174		
LEAR		0446	0512	0557	N20	E92		09	18.2	71	SF C	5.2	3	E		74		
SVTO		0819	0824	0828	N22	E88		09	18.1	9	SF		2	E		33		
GOES		0901	0905	0909						8		C 1.3						
GOES		0923	0926	0929						6		C 1.3						
SVTO		0953	0955	1001	N23	E89		09	18.3	8	SF		3	E		19		
SVTO		1008	1009	1016	N23	E87		09	18.1	8	SF		3	E		13		
SVTO		1011	1011	1016	S10	E57	6257	09	15.7	5	SF		3	E		18		
PALE		1710	1717	1726	N23	E82	6268	09	18.0	16	SF		3	E		51		
HOLL		1729	1729	1738	S12	E80		09	17.7	9	SF		3	E		36		
HOLL		1732	1734	1742	N08	W12	6252	09	10.8	10	SF		3	E		11		
RAMY		1838	1839U	1859	N21	E80	6268	09	17.9	21	SF		3	E		48		
PALE		1841	1842	1844	S16	E21	6262	09	13.4	3	SF		3	E		11		
RAMY		1841	1842	1845	S19	E23	6262	09	13.5	4	SF		3	E		12		
HOLL		1844E	1844U	1849	S21	E24	6262	09	13.6	5D	SF		3	E		34		
HOLL		2031	2033	2240D	N13	E67	6263	09	16.9	129D	SF		3	E		39		
HOLL		2200	2201	2208	N16	E17	6254	09	13.2	8	SF		4	E		29		
GOES		2317	2321	2323						6		C 1.4						
HOLL		2341E	2341U	2345	S13	E74	6267	09	17.6	4D	SF		2	E		18		
HOLL	12	0037E	0038U	0041	S17	E16	6262	09	13.2	4D	SF		2	E		17		H
HOLL		0056E	0058U	0101D	N07	W45	6247	09	8.7	5D	SN		1	E		87		F

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Dur (Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks		
															Time (UT)	Apparent (10 ⁻⁶ Disk)	Corr (Sq Deg)			
PALE	12	0057	0113U	0233	N06	W45	6247	09	8.7	96	2N	M 1.5	3	E		474		UF		
		0102E	0102U	0229	N05	W46	6247	09	8.6	87D	2N		3	E		417		FE		
		0320	0325	0330	N21	E79	6268	09	18.2	10	SF		3	E		15				
		0415	0415	0432D	N19	E59	6263	09	16.7	17D	SF		3	E		35				
		0906	0909	0912						6			C 1.4							
		1241	1244	1247						6			C 1.1							
		1630	1718	1800	N06	W55	6247	09	8.6	90	1F			3	E		113		F	
		1710	1715	1755	N06	W56	6247			45	SF					E		21		K
		1710	1736	1755	N06	W56	6247	09	8.5	45	SF			3	E		40		F	
		1717	1735	1745	N06	W56	6247	09	8.5	28	SF			4	E		10			
		1848	1905	2005	S29	E58	6266	09	17.3	77	1N	C 6.6		4	E		144		FE	
		1848	1938	2005	S29	E58	6266			77	SB					E		22		K
		1910E	1917U	1949	S28	E58	6266	09	17.3	39D	SF			4	E		65		F	
		2104	2107	2125	S28	E58	6266	09	17.4	21	SF			3	E		24			
		2111E	2112U	2120	S28	E59	6266	09	17.5	9D	SF			2	E		18			
		2230	2232	2242	S09	E33	6257	09	15.4	12	SF			3	E		20			
		2257E	2257U	2324	N24	E15		09	14.1	27D	SF			2	E		79		F	
		2259E	2301	2319	N22	E13		09	13.9	20D	SF			2	E		34		F	
		2301E	2303	2323	N25	E15		09	14.1	22D	SF			3	E		38			
		2348	2351	2355	N09	E52	6263	09	16.9	7	SF			3	E		18			
2349	2351	2412	N13	E53	6263	09	17.0	23	SF			2	E		22					
HOLL	13	0011	0027	0046	N15	E51	6263	09	16.9	35	SF		2	E		81		F		
		0014	0028	0104	N14	E53	6263	09	17.0	50	SF	C 1.7	3	E		63		F		
		0027	0029	0044	N13	E54	6263	09	17.1	17	SF		3	E		24				
		0138	0138	0148	S09	E33	6257	09	15.5	10	SF			3	E		11			
		0220	0222	0228	N13	E51	6263	09	16.9	8	SF			3	E		20			
		0221	0221	0232	N09	E51	6263	09	16.9	11	SF	C 2.4		3	E		53		F	
		0333	0336	0350	N13	E52	6263	09	17.1	17	SF			3	E		94		F	
		0335	0341	0346	N14	E50	6263	09	16.9	11	SF	C 1.3		3	E		44		F	
		0644	0648	0701	N12	E50	6263	09	17.0	17	SF			3	E		23		F	
		0834	0836	0900	S10	E29	6257	09	15.5	26	SF			3	E		28			
		1405	1409	1457	N14	E45	6263	09	17.0	52	1F			3	E		174		F	
		1405	1410	1447	N14	E44	6263	09	16.9	42	SF			3	E		89		F	
		1412E	1412U	1446	N14	E43	6263	09	16.8	34D	1F	C 1.8		3	E		126		F	
		1443E	1445U	1505	S14	E77		09	19.4	22D	SF			2	E		20		H	
		1450	1458	1502	S27	E48	6266	09	17.3	12	SF			3	E		10			
		1547	1625	1637	S29	E49	6266	09	17.5	50	SF			3	E		18			
		1623	1625	1632	N24	E57	6268	09	18.1	9	SF			3	E		29			
		1735	1806	1850	S29	E48	6266	09	17.5	75	SF	C 2.6		3	E		70		F	
		1736	1745	1856	S28	E49	6266	09	17.6	80	SF			3	E		52			
		1929	1929	1939	N11	W22	6253	09	12.1	10	SF			3	E		12		F	
		2152	2155	2206	N11	W23	6253	09	12.2	14	SF			3	E		12		F	
		2239	2239	2258	S10	E20	6257	09	15.4	19	SF	C 1.4		3	E		43		F	
		2248	2250	2256	S09	E21	6257	09	15.5	8	SF			3	E		11			
		2303	2326	2350	S09	E21	6257	09	15.5	47	SF			3	E		56		F	
		2322	2326	2347	S10	E19	6257	09	15.4	25	SF			3	E		60		F	
		2324	2325	2337	S10	E20	6257	09	15.5	13	SF			3	E		24			
		2352	2407	2414	S30	E47	6266	09	17.7	22	SF			3	E		15			
		2355	2356	2404	S29	E45	6266	09	17.5	9	SF			3	E		18		F	
		LEAR	14	0053	0057	0125	S10	E18	6257	09	15.4	32	SF	C 1.6	3	E		89		F
				0056	0058	0110	S09	E19	6257	09	15.5	14	SF	C 1.6	3	E		60		F
0220	0227			0256	S10	E17	6257	09	15.4	36	SF			3	E		43			
0226	0226			0238	S10	E18	6257	09	15.4	12	SF			3	E		26		F	
0410	0412			0501	S29	E43	6266	09	17.5	51	1F	M 1.3		3	E		160		FE	
0532	0536			0542	S13	E49	6267	09	17.9	10	SF			3	E		23			
0535	0537			0544	N17	E71	6269	09	19.6	9	SF			3	E		22			
0806	0809			0827	N13	E35	6263	09	17.0	21	SF			3	E		27			
0807	0808			0824	S13	E18	6257	09	15.7	17	SF			3	E		22			
0942	0945			0952	N13	E34	6263	09	17.0	10	SF			3	E		25			
0954	1002			1008						14			C 3.0							
1006	1020			1026	N23	E48	6268	09	18.1	20	SF			4	E		53			
1113	1123			1146	N18	E64	6269	09	19.3	33	SF	C 1.8		4	E		69			
1255	1257			1316	S10	E13	6257	09	15.5	21	1F	C 3.1		4	E		180			
1256	1256			1307	S10	E13	6257	09	15.5	11	1F			2	E		100		FE	
1327	1331	1340	N08	E29	6263	09	16.7	13	1F			4	E		124					
1328	1331	1338	N10	E32	6263	09	17.0	10	1F			3	E		109		H			

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/		Dur (Min)	Imp	Obs	Area Measurement			Remarks
							USAF	Region				Mo	Day	Time (UT)		Apparent (10-6 Disk)	Corr (Sq Deg)
SVTO	14	1332	1333	1337	S20	E90		09	21.4	5	SF M 3.5	4	E	28	H
RAMY		1443E	1445U	1505	S14	E77		09	20.4	220	SF	2	E	20	H
HOLL		1449E	1449U	1500	S13	E73		09	20.1	110	SF	3	E	18	H
SVTO		1530	1535U	1542	S13	E33 6267		09	17.1	12	SF	2	E	60	F
SVTO		1614	1619	1623	S17	W19 6262		09	13.2	9	SF	2	E	37	
HOLL		1615E	1634U	1639	S16	W21 6262		09	13.1	240	SF	2	E	21	H
RAMY		1619	1620	1624	S16	W19 6262		09	13.2	5	SF	2	E	22	
HOLL		1700	1705	1712	N08	E27 6263		09	16.7	12	SF	3	E	76	H
PALE		1702	1704	1710	N09	E27 6263		09	16.7	8	SF	3	E	59	
RAMY		1704	1704	1708	N09	E28 6263		09	16.8	4	SF	2	E	14	
PALE		1721	1721	1723	N10	W51 6252		09	10.9	2	SF	3	E	19	
PALE		2005E	2010U	2138D	N19	E25 6263		09	16.7	930	2N M 1.6	3	E	347	UF
GOES		2305E	2314	2330D						250	C 1.8				
LEAR	15	0216	0221	0226	N18	E60 6269		09	19.7	10	SF	3	E	47	
LEAR		0428	0429	0436	N08	E21 6263		09	16.8	8	SF C 2.1	3	E	65	
SVTO		0512	0514	0524	N15	E35 6268		09	17.9	12	SF	2	E	23	F
SVTO		0521	0521	0533	S13	E38 6267		09	18.1	12	SF	2	E	17	F
SVTO		0550	0555	0603	S12	E68 6272		09	20.4	13	SF C 2.3	4	E	40	H
LEAR		0551	0558	0602	S13	E69 6272		09	20.4	11	SF	3	E	44	H
SVTO		0733	0735	0743	S18	E68		09	20.5	10	SF	4	E	52	
LEAR		0744	0751	0916	S11	E03 6257		09	15.5	92	1N C 6.9	3	E	149	FE
SVTO		0748	0817	0903	S12	E02 6257		09	15.5	75	1N	4	E	219	F
SVTO		0813	0815	0820	S23	E78		09	21.3	7	SF C 7.6	4	E	16	
SVTO		0900	0900	0907	N10	E21 6263		09	16.9	7	SF	4	E	16	
HOLL		1835	1841	1912	S30	E23 6266		09	17.6	37	SF	3	E	40	
PALE		1835E	1905U	1905D	N29	E22 6266		09	17.5	300	SF	3	E	18	
PALE	16	0038	0040	0051	S12	W09 6257		09	15.3	13	SF C 1.3	4	E	43	F
GOES		0920	0947	0952						32	C 1.2				
RAMY		1337	1338	1341	S12	W13 6257		09	15.6	4	SF	3	E	18	
RAMY		1341	1342	1349	S15	E51 6272		09	20.4	8	SF	3	E	22	
RAMY		1417	1424	1445	S11	W15 6257		09	15.5	28	1F C 2.4	3	E	100	F
HOLL		1643	1645	1703	N15	E04 6263		09	17.0	20	SF	3	E	67	F
PALE		1649	1655	1712	N10	W60 6253		09	12.2	23	SF C 1.5	3	E	50	F
HOLL		1649	1656	1712	N10	W61 6253		09	12.1	23	1F C 1.5	3	E	176	F
HOLL		1809	1814	1910	N10	W59 6253		09	12.3	61	SF C 2.1	3	E	45	F
PALE		1903	1907	1936D	S11	E04 6267		09	17.1	330	SF	3	E	26	F
HOLL		1904E	1904U	1924	S12	E03 6267		09	17.0	200	SF	3	E	40	
GOES		2107	2111	2115						8	C 1.3				
HOLL		2133	2136	2140D	S28	E04 6266		09	17.2	70	SF	2	E	23	
GOES		2147E	2151	2159D						120	C 1.3				
LEAR	17	0314	0317	0323	S15	E42 6272		09	20.3	9	SF C 2.1	3	E	39	F
GOES		0350	0353	0400						10	C 1.8				
LEAR		0550	0553	0601	S15	E41 6272		09	20.3	11	1N M 1.0	3	E	134	ZF
SVTO		0654	0754	0840	S22	E47 6275		09	20.9	106	SF C 4.1	4	E	82	F
LEAR		0728	0738	0803	S17	E48 6275		09	20.9	35	SF	3	E	68	F
HOLL		1319E	1345	1423	S15	E30 6272		09	19.8	640	SB M 1.3	3	E	52	FH
GOES		1332	1335	1338						6	C 1.8				
RAMY		1333	1344	1410	S14	E35 6272		09	20.2	37	1B	3	E	130	FH
RAMY		1333	1352	1410	S14	E35 6272		09	20.2	37	1B	3	E	81	
SVTO		1353E	1354U	1421D	S15	E34 6272		09	20.1	280	SB	2	E	31	H
HOLL		1500	1503	1539	S31	E00 6266		09	17.6	39	SF	3	E	19	
RAMY		1504	1505	1512	S19	W68 6271		09	12.4	8	SF	3	E	29	
HOLL		1505	1505	1512	S18	W61 6262		09	13.0	7	SF	3	E	26	
HOLL		1527	1528	1537	S20	E48 6275		09	21.3	10	SF	3	E	13	
HOLL		1616	1628	1719	S27	W03 6266		09	17.4	63	SF	3	E	73	F
RAMY		1616	1634	1728	S27	W03 6266		09	17.4	72	SF C 1.6	3	E	44	FH
RAMY		1642	1643	1653	S16	E35 6272		09	20.3	11	SF C 1.6	3	E	16	FH
HOLL		1642	1643	1702	S16	E35 6272		09	20.3	20	SF C 1.6	3	E	18	
PALE		1701E	1701U	1739D	S27	W04 6266		09	17.4	380	SF	4	E	33	F
HOLL		1710	1719	1725	S17	W61 6262		09	13.1	15	SF	3	E	11	
PALE		1711	1713	1739D	S17	W62 6262		09	13.0	280	SF	4	E	18	
RAMY		1750	1751	1818	S15	E35 6272		09	20.4	28	SF	3	E	23	
PALE		1751	1751	1825	S13	E36 6272		09	20.5	34	SF	4	E	35	F
HOLL		1751	1751	1831	S15	E31 6272		09	20.1	40	SF	4	E	33	F
PALE		1800E	1802	1839	S18	W63 6262		09	12.9	390	SF	4	E	25	H

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CHP Mo	Dur Day	(Min)	Imp Opt	Xray	Obs See	Type	Area Measurement			Remarks
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
L-HOLL	17	1802	1802	1816	S18	W62	6262	09	13.0	14	SF		3	E		18		H
HOLL		1825	1830	1854	S17	W61	6262	09	13.1	29	SF		3	E		34		
PALE		1827	1828	1834	N17	E21	6269	09	19.4	7	SF		4	E		18		
RAMY		1845	1849	1923	S14	E33	6272	09	20.3	38	1B C	6.5	4	E		126		F
PALE		1846	1906U	1906D	S14	E35	6272	09	20.4	200	SB		4	E		63		F
HOLL		1848E	1851	1944	S14	E31	6272	09	20.1	56D	1B		3	E		144		FH
HOLL		1857	1904	1937	S18	W62	6262	09	13.1	40	SF		3	E		25		
HOLL		2109	2111	2127	S30	W04	6266	09	17.6	18	SF C	1.3	3	E		28		F
HOLL		2137	2138	2144	N19	W14	6263	09	16.8	7	SF		3	E		15		
HOLL		2140	2156	2216	S15	E29	6272	09	20.1	36	1B H	5.3	4	E		218		FH
HOLL		2308	2310	2320	S15	E32	6272	09	20.4	12	SF		4	E		16		
GOES	18	0215E	0217	0221D						60			C	1.1				
LEAR		0252	0258	0319	S16	E36	6272	09	20.8	27	SF		3	E		27		F
LEAR		0404	0404	0409	S26	E79		09	24.3	5	SF		3	E		25		
LEAR		0735	0743	0804	S15	W05	6267	09	17.9	29	SF		3	E		39		F
LEAR		0805	0808	0821	S14	E26	6272	09	20.3	16	SF		3	E		16		
LEAR		0937	0937	0946	S14	E25	6272	09	20.3	9	1H C	6.6	3	E		103		
RAMY		1202	1206	1208	S12	W42	6257	09	15.3	6	SF		3	E		29		F
SVTO		1323E	1327U	1333	S40	W74		09	12.5	100	SF		2	E		43		
HOLL		1340E	1340U	1438	S12	W44	6657	09	15.2	58D	SF		1	E		54		
RAMY		1346	1348	1356	S13	W42	6257	09	15.4	10	SF		3	E		16		FH
SVTO		1405	1428	1450	S40	W75		09	12.5	45	SF		3	E		50		
SVTO		1415E	1450	1549D	S12	W44	6257	09	15.3	94D	SF		2	E		29		
HOLL		1441	1559	1623	S12	W45	6257	09	15.2	102	SF C	1.4	2	E		51		F
RAMY		1552	1606	1624	S11	W46	6257	09	15.2	32	SF		3	E		59		F
HOLL		1623	1656	1703	S13	E21	6272	09	20.3	40	SF		3	E		40		
RAMY		1634	1640	1655	S27	W16	6266	09	17.4	21	SF		2	E		21		
RAMY		1634	1657	1706	S13	W45	6257	09	15.3	32	SF		2	E		36		F
PALE		1636E	1636U	1655	S13	W46	6257	09	15.2	19D	SF		3	E		53		F
PALE		1636E	1639	1657	S26	W18	6266	09	17.3	21D	SF C	1.4	3	E		18		
HOLL		1650	1700	1710	S40	W76		09	12.5	20	SF		3	E		30		
HOLL		1701	1702	1707	S12	W46	6257	09	15.2	6	SF		3	E		47		
PALE		1827	1827	1839	S14	W44	6257	09	15.4	12	SF		3	E		20		
HOLL		1844	1846	1850	S12	W47	6257	09	15.2	6	SF		4	E		16		FH
HOLL		1859	1903	1908	S37	W74		09	12.8	9	SF		4	E		35		
GOES		2017	2020	2023						6			C	1.6				
HOLL		2108E	2111U	2125D	S37	W74		09	12.9	17D	SF		1	E		14		
HOLL		2209E	2220U	2243	S08	E46	6279	09	22.4	34D	SF C	2.6	2	E		45		F
GOES		2325	2330	2334						9			C	2.0				
GOES	19	0038	0042	0047						9			C	2.2				
PALE		0226	0229	0244	S06	E45	6279	09	22.5	18	SF C	2.5	3	E		30		
LEAR		0227E	0232U	0247	S08	E44	6279	09	22.4	20D	SF		3	E		51		F
GOES		0401	0424	0442						41			C	1.6				
SVTO		0620	0659	0844	S06	E42	6279	09	22.4	144	SF		3	E		30		
SVTO		0905	0906	0936	N06	E90		09	26.1	31	2H H	2.6	3	E		332		H
SVTO		0905	0918	0936	N06	E90	6281			31	2B			E		193		K
LEAR		0908E	0908U	0935	N03	E90		09	26.1	27D	SF		1	E		87		
GOES		1009	1019	1029						20			C	3.9				
RAMY		1356	1400	1410	S11	W33	6267	09	17.1	14	SF C	2.3	3	E		20		
HOLL		1404E	1404U	1418D	S12	W27	6267	09	17.5	14D	SF		2	E		40		
HOLL		1633	1635	1639	N05	E83	6281	09	25.9	6	SN C	3.9	3	E		53		
RAMY		1637	1637	1640	N04	E79	6281	09	25.6	3	SF		3	E		13		
HOLL		1707	1707	1719	N22	W21	6268	09	18.1	12	SF		3	E		18		F
PALE		1709	1709	1721D	N22	W19	6268	09	18.2	12D	SF		3	E		22		F
RAMY		1752	1753	1757	N05	E76	6281	09	25.4	5	SF		3	E		22		
HOLL		1835	1836	1841	S28	W28	6266	09	17.6	6	SF		3	E		11		
HOLL		2050	2052	2101	N05	E81	6281	09	25.9	11	SF		3	E		16		
HOLL		2054	2056	2107	S11	W35	6267	09	17.2	13	SF		3	E		23		
HOLL		2128	2136	2142D	N05	E78	6281	09	25.7	14D	SF		3	E		39		
LEAR		2341	2346	2403	N03	E78	6281	09	25.8	22	SF		3	E		99		
PALE		2348E	2348U	D	S05	E81	6281	09	26.0	12D	SF		3	E		49		
LEAR	20	0038	0043	0045	S17	E12	6272	09	20.9	7	SF		3	E		26		
LEAR		0047	0053	0104	N02	E79	6281	09	25.9	17	1F C	3.0	3	E		127		
LEAR		0128	0129	0134	S11	W37	6267	09	17.3	6	SF C	1.5	3	E		17		F
LEAR		0209	0213	0219	N04	E77	6281	09	25.8	10	SF		3	E		40		

H α SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	NOAA/USAF			CHP	Dur (Min)	Imp Opt	Xray	Obs See	Area Measurement	Remarks	
					Lat	Cmd	Region								Mo	Day	Time (UT)	Apparent (10^{-6} Disk)	Corr (Sq Deg)
LEAR	20	0420	0422	0553	N03	E75	6281	09 25.8	93	SF		3	E	52	
SVTO		0612	0625	0644	N06	E79	6281	09 26.2	32	1F	C 7.0	3	E	203	H
LEAR		0615	0623	0643	N02	E77	6281	09 26.0	28	1F		3	E	114	
LEAR		0641	0643	0659	N13	W45	6263	09 16.9	18	SF		3	E	29	F
LEAR		0742	0744	0750	N13	W48	6263	09 16.7	8	SF	C 1.8	3	E	28	
LEAR		0751	0751	0800	N14	E67	6280	09 25.4	9	SF		3	E	46	
SVTO		0838	0840	0859	S21	E15	6275	09 21.5	21	SN	C 1.5	4	E	43	
SVTO		1123	1129	1159	N13	E88	6280		36	SF			E	27	K
SVTO		1123	1151	1159	N13	E88	6280	09 27.1	36	SF		3	E	55	
RAMY		1149E	1151	1155	N14	E85	6280	09 26.9	60	SF		2	E	28	
HOLL		1453	1500	1507	S27	W41	6266	09 17.4	14	SF		3	E	21	F
SVTO		1521	1523	1536	N03	E80	6281	09 26.6	15	SN	C 2.1	3	E	97	
HOLL		1522E	1522U	1538	N04	E73	6281	09 26.1	160	SN		3	E	57	
RAMY		1711	1719	1738	N14	W54	6263	09 16.6	27	SF	C 2.5	3	E	20	
PALE		1711	1719	1746	N12	W53	6263	09 16.7	35	SF	C 2.5	3	E	45	
RAMY		1825	1842	1846D	S26	W40	6266	09 17.6	21D	SF		3	E	69	F
HOLL		1830	1834	1855	N13	W53	6263	09 16.8	25	SF		3	E	16	
HOLL		1832	1838	1955D	S27	W40	6266		83D	SN			E	13	K
HOLL		1832	1848	1955D	S27	W40	6266	09 17.6	83D	1N		3	E	134	F
PALE		1832	1901	2121D	S28	W39	6266	09 17.7	169D	SN	C 4.9	3	E	97	
GOES		2033	2038	2045					12		C 1.9				
HOLL		2103	2107	2110	S23	E07	6275	09 21.4	7	SF		3	E	19	F
HOLL		2153	2156	2220	S26	W45	6266	09 17.4	27	SF		3	E	21	F
HOLL		2214	2214	2236	N13	W55	6263	09 16.8	22	SF	C 1.6	3	E	32	F
HOLL		2237	2239	2252	N14	W52	6263	09 17.0	15	SF		3	E	11	F
PALE		2348E	2348U		D S05	E81	6281	09 27.0	12D	SF		3	E	49	
LEAR	21	0029	0038	0057	S26	W50	6266	09 17.1	28	SF	C 1.4	3	E	45	F
GOES		0302	0308	0314					12		C 1.8				
GOES		0329	0336	0341					12		C 1.5				
GOES		0406	0410	0417					11		C 1.7				
GOES		0524E		0531D					7D		C 1.6				
SVTO		0948	0948	0956	S17	W10	6272	09 20.6	8	SF		3	E	20	
RAMY		1255	1256	1307	N13	E59	6280	09 26.0	12	SF	C 2.1	3	E	47	
HOLL		1439	1439	1444	S15	W15	6272	09 20.5	5	SF		3	E	12	
HOLL		1500	1502	1507	N04	E60	6281	09 26.1	7	SF		3	E	12	
RAMY		1701	1702	1711	N13	E56	6280	09 25.9	10	SF	C 1.4	3	E	28	
HOLL		1858	1858	1907	S11	W59	6267	09 17.3	9	SF		3	E	12	
HOLL		2107E	2110U	2144	S12	W56	6267	09 17.7	37D	SF		2	E	27	F
HOLL		2159	2208	2223D	S09	E07	6279	09 22.4	24D	SF		3	E	34	
PALE	22	0306	0319U	0319D	S28	W57	6266	09 17.7	13D	SF	M 1.1	3	E	88	F
LEAR		0328E	0334	0357	S27	W60	6266	09 17.5	29D	1F		2	E	199	
SVTO		0835	0835	0839	N14	E48	6280	09 26.0	4	SF		3	E	39	
RAMY		1521	1521	1525	N14	E44	6280	09 26.0	4	SF		3	E	17	
PALE		1836	1842	1854	N13	W75	6263	09 17.1	18	SF		3	E	43	
GOES		1920	1927	1941					21		C 2.9				
PALE		1942	1944	1950	N14	W75	6263	09 17.1	8	SF		3	E	34	
PALE		2013	2015	2018	S14	W66	6267	09 17.8	5	SF		3	E	17	
LEAR		2216E	2243U	2310	N14	W75	6263	09 17.2	54D	SF		3	E	80	
PALE	23	0027	0029	0102D	S26	W66	6266	09 17.9	35D	SF	C 3.6	3	E	53	F
LEAR		0134	0135	0142	N15	E37	6280	09 25.9	8	SF		3	E	32	F
LEAR		0443	0445	0453	N13	W84	6263	09 16.8	10	SF		3	E	68	
LEAR		0549	0556	0622	N13	W84	6263	09 16.9	33	SF		3	E	97	
GOES		1305	1313	1322					17		M 2.7				
GOES		2230	2240	2247					17		C 7.1				
LEAR	24	0126	0127	0135	S07	E64	6283	09 28.8	9	SF	C 2.8	3	E	27	
PALE		0132E	0135U	0144D	N16	E25	6280	09 26.0	12D	SF		3	E	12	
GOES		0228	0233	0244					16		C 3.5				
GOES		0516	0535	0553					37		C 2.8				
LEAR		0628	0630	0635	N14	E20	6280	09 25.8	7	SF	C 4.4	3	E	27	F
LEAR		0813	0814	0844	S14	W48	6272	09 20.7	31	1F	C 2.9	3	E	102	F
SVTO		0817E	0821U	0850	S15	W45	6272	09 20.9	33D	1F		2	E	123	
LEAR		0908	0908	0928	N13	E26	6280	09 26.3	20	SF		3	E	33	F
SVTO		0908	0909	0922	N15	E25	6280	09 26.3	14	SF		3	E	25	
GOES		1257E	1344	1353D					56D		C 1.9				

Ha SOLAR FLARES

SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo	Dur Day	Imp (Min)	Obs Opt	Xray	See	Type	Area Measurement			Remarks		
															Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)			
SVTO	24	1316	1332	1347	S14	W52	6272	09	20.6	31	SF		3	E		31			F	
SVTO		1343	1400	1422	N15	E17	6280	09	25.8	39	1F		3	E		113			FH	
RAMY		1347	1352	1420	N16	E18	6280	09	25.9	33	1F C	4.2	3	E		105			FH	
GOES		1508	1615	1719						131		C	2.8							
RAMY		1846	1853	1928	N16	E16	6280	09	26.0	42	1F C	4.7	3	E		109			FH	
HOLL		1850	1853	1940	N17	E15	6280	09	25.9	50	1N C	4.7	3	E		172			FH	
PALE		1850	1855	1926	N17	E16	6280			36	SN			E		100			OK	
PALE		1850	1902	1926	N17	E16	6280	09	26.0	36	SF		4	E		58			FE	
PALE		1858	1858	1917	S05	W31	6279	09	22.5	19	SF		4	E		14			FE	
RAMY		1859	1903	1913	S07	W29	6279	09	22.6	14	SF		3	E		19			FE	
RAMY		1949	1950	2002	N14	W13	6286	09	23.8	13	SF		2	E		12			FE	
HOLL		1951	1954	1958	N14	W13	6286	09	23.8	7	SF		3	E		16			FE	
HOLL		2026	2030	2053	N16	E13	6280	09	25.8	27	SF		3	E		39			FE	
RAMY		2030E	2031U	2103	N14	E14	6280	09	25.9	33	SF		2	E		23			FE	
PALE		2045E	2045U	2050	N15	E14	6280	09	25.9	5	SF		3	E		19			FE	
HOLL		2215	2219	2248	N14	E13	6280	09	25.9	33	1N C	3.8	3	E		112			FE	
HOLL		2321	2323	2332	S07	E51	6283	09	28.8	11	SF		3	E		10			FE	
HOLL		2352	2354	2422	S07	E51	6283	09	28.8	30	SF		3	E		14			FE	
LEAR	25	0210	0211	0214	N13	E16	6280	09	26.3	4	SF		3	E		17			FE	
LEAR		0221	0224	0252	N15	E09	6280			31	2B			E		220			OK	
LEAR		0221	0228	0252	N15	E09	6280	09	25.8	31	1B M	1.7	3	E		181			FE	
LEAR		0234	0236	0244	S11	W62	6272	09	20.4	10	SF		3	E		18			FE	
LEAR		0502	0504	0518	N11	E11	6280	09	26.0	16	SF C	1.3	3	E		25			FE	
SVTO		0726	0730	0742	N15	E08	6280	09	25.9	16	SF		3	E		19			FE	
LEAR		0729	0730	0737	N14	E07	6280	09	25.8	8	SF		3	E		17			FE	
LEAR		0901	0905	0935	N13	E06	6280	09	25.8	34	SF C	2.9	3	E		63			FE	
LEAR		0901	0930	0935	N13	E06	6280			34	SB			E		55			K	
RAMY		1035E	1037	1110	N15	E08	6280	09	26.0	35	SF C	5.3	2	E		87			FH	
SVTO		1035	1037	1112	N16	E06	6280	09	25.9	37	1N C	5.3	3	E		196			FH	
SVTO		1035	1046	1112	N16	E06	6280			37	1N			E		129			OK	
HOLL		1425	1429	1437	N13	E04	6280	09	25.9	12	SF C	1.5	3	E		26			FE	
SVTO		1425	1429	1511	N12	E04	6280	09	25.9	46	SF C	1.5	3	E		29			FE	
RAMY		1427	1427	1437	S09	E43	6283	09	28.8	10	SF		3	E		52			FE	
HOLL		1427	1427	1438	S09	E44	6283	09	28.9	11	SF		3	E		30			FE	
SVTO		1427	1430	1516	S07	E44	6283	09	28.9	49	SF		3	E		30			FE	
RAMY		1428	1429	1433	N12	E04	6280	09	25.9	5	SF		3	E		14			FE	
HOLL		1534	1537	1552	S05	E42	6283	09	28.8	18	SF		3	E		20			FE	
HOLL		1539	1539	1546	N14	E03	6280	09	25.9	7	SF		3	E		19			FE	
HOLL		1625	1644	1646	S04	E40	6283	09	28.7	21	SF		3	E		65			FE	
HOLL		1702	1708	1714	S16	W66	6272	09	20.7	12	SF		3	E		23			FE	
HOLL		1803	1806	1815	N13	E03	6280	09	26.0	12	SF		3	E		12			FE	
HOLL		2242	2243	2246	S11	W71	6272	09	20.6	4	SF		3	E		45			FE	
HOLL		2259	2303	2314	N15	W01	6280	09	25.9	15	SF		3	E		23			FE	
GOES	26	1003	1008	1013						10		C	1.5							
RAMY		1215	1219	1234	S06	W56	6279	09	22.3	19	SF		3	E		23			FE	
HOLL		1320E	1320U	1417	S05	E29	6283	09	28.7	57	SF		2	E		16			FE	
RAMY		1325	1329	1420	S17	W83	6272	09	20.2	55	SF C	7.8	3	E		19			FE	
HOLL		1407E	1430	1505	S08	W55	6279	09	22.5	58	1F		3	E		136			FE	
RAMY		1418E	1430	1447	S07	W59	6279	09	22.2	29	SN C	4.2	3	E		57			FE	
HOLL		1507	1512	1523	N15	W06	6280	09	26.2	16	SF		3	E		20			FE	
RAMY		1558	1602	1614	S07	W59	6279	09	22.2	16	SF C	3.3	3	E		23			FE	
GOES		1708	1711	1713						5		B	7.6							
HOLL		1751E	1752U	1800	S07	W56	6279	09	22.5	9	SF		3	E		20			FE	
PALE		1947	1947	2000	S08	E28	6283	09	28.9	13	SF B	7.7	3	E		29			FE	
RAMY		1948	1948	2000	S10	E26	6283	09	28.8	12	SF		3	E		23			FE	
HOLL		1948	1949	2000	S08	E27	6283	09	28.8	12	SF		3	E		31			FE	
GOES		2128	2131	2134						6		B	6.3							
LEAR	27	0427	0435	0446	S17	W88	6272	09	20.5	19	SF		3	E		39			FE	
LEAR		0844	0846	0854	N12	W15	6280	09	26.2	10	SF C	1.1	3	E		20			FE	
PALE		1746	1747	1803	S09	W72	6279	09	22.3	17	SF		3	E		71			FE	
HOLL		1755	1805	1813	S04	E09	6283	09	28.4	18	SF		3	E		14			FE	
HOLL		1758	1800	1805	S24	W46	6278	09	24.2	7	SF		3	E		27			FE	
HOLL		1837	1839	1856	S21	W44	6278	09	24.4	19	SF B	9.2	3	E		77			FE	
PALE		1839	1839	1850	S25	W42	6278	09	24.5	11	SF		3	E		34			FE	
HOLL		1931	1932	1941	S24	W51	6278	09	23.9	10	SF		3	E		21			FE	

H α SOLAR FLARES

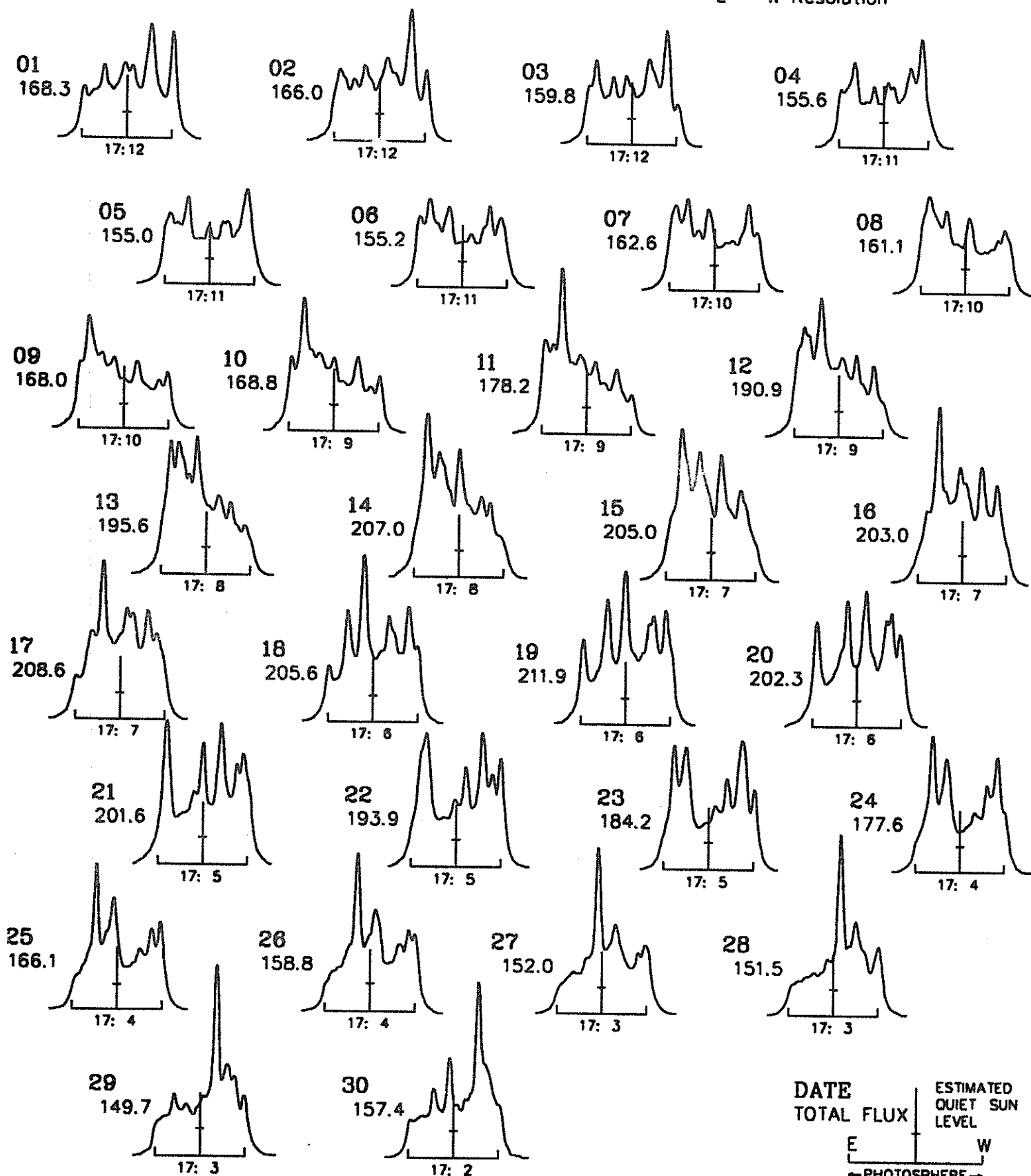
SEPTEMBER 1990

Sta	Day	Start (UT)	Max (UT)	End (UT)	Lat	CMD	NOAA/ USAF Region	CMP Mo Day	Dur (Min)	Imp Opt Xray	Obs See Type	Area Measurement			Remarks
												Time (UT)	Apparent (10-6 Disk)	Corr (Sq Deg)	
PALE	27	2018	2021	2038D	S08	E13	6283	09 28.8	200	SF		3	E	14	
HOLL		2047	2050	2057	S05	E08	6283	09 28.5	10	SF B 5.5		3	E	16	
RAMY		2047	2050	2057	S06	E08	6283	09 28.5	10	SF B 5.5		3	E	13	F
GOES	28	0133	0138	0141					8	C 1.7					
LEAR		0154	0155	0208	S04	E06	6283	09 28.5	14	SN C 1.5		3	E	95	F
PALE		0156E	0156U	0211D	S04	E08	6283	09 28.7	150	SF		3	E	38	F
GOES		0939	0948	1001					22	C 1.0					
SVTO		1224	1231	1242	S30	W56	6278	09 24.1	18	SF		3	E	22	
RAMY		1224	1236	1239	S27	W53	6278	09 24.4	15	SF		3	E	27	
SVTO		1409	1411	1420	S16	W31	6287	09 26.2	11	SF C 1.4		3	E	18	
RAMY		1410	1411	1417	S14	W31	6287	09 26.2	7	SF C 1.4		3	E	14	
HOLL		1412E	1413U	1422	S15	W31	6287	09 26.2	100	SF		3	E	24	
RAMY		1652	1653	1659	S09	E00	6283	09 28.7	7	SF		3	E	13	
HOLL		1658	1658	1709	N07	W38	6281	09 25.9	11	SF		3	E	12	
LEAR	29	0044	0044	0052	N14	W69	6290	09 23.8	8	SF		3	E	28	
LEAR		0210	0224	0306	S17	E66		10 4.1	56	SF		3	E	41	
PALE		0405	0406	0408D	S15	W42	6287	09 26.0	30	SF		1	E	57	F
LEAR		0406	0408	0420	S14	W38	6287	09 26.3	14	SF C 9.4		3	E	58	
LEAR		0542	0543	0545	S11	W10	6283	09 28.5	3	SF		3	E	23	
SVTO		0543	0543	0555	S11	W08	6283	09 28.6	12	SF		2	E	31	
LEAR		0749	0751	0803	S17	E66	6292	10 4.3	14	SF		3	E	29	
SVTO		1001	1002	1006	S11	W11	6283	09 28.6	5	SF		3	E	19	
SVTO		1036	1037	1043	S11	W12	6283	09 28.5	7	SN C 2.9		3	E	73	F
SVTO		1521	1525	1549	N12	W74	6290	09 24.1	28	SF		3	E	24	
HOLL		1539	1542	1547	S16	W45	6287	09 26.2	8	SF		2	E	40	FH
HOLL		1555	1555U	1604D	S08	W10	6283	09 28.9	90	SF		2	E	14	
RAMY		1612	1613	1728	S11	W16	6283	09 28.5	76	SF		3	E	14	F
PALE		1959	2003	2008	S08	W11	6283	09 29.0	9	SF		3	E	12	
RAMY		2021	2021	2028	S09	W14	6283	09 28.8	7	SF		3	E	18	F
LEAR		2257	2313	2338	S10	W20	6283	09 28.4	41	SF C 1.7		3	E	27	F
LEAR		2345	2348	2351	N15	W79	6290	09 24.0	6	SF		3	E	35	
LEAR	30	0023	0111	0222	S05	E23	6294	10 1.7	119	SF		3	E	80	
LEAR		0530	0533	0540	S05	E20	6294	10 1.7	10	SF		3	E	23	F
LEAR		0737	0744	0810	S11	W28	6283	09 28.2	33	SF		3	E	66	F
SVTO		0737	0746	0824	S13	W23	6283	09 28.6	47	SN C 9.2		4	E	80	FE
SVTO		0824	0825	0841	S07	W20	6283	09 28.8	17	SF		4	E	34	
SVTO		0913	0913	0923	S11	W21	6283	09 28.8	10	SF		4	E	19	
SVTO		0929	0931	0942	S07	W20	6283	09 28.9	13	SF		4	E	14	
SVTO		1014	1014	1022	S18	W54	6287	09 26.3	8	SF		3	E	12	
RAMY		1118	1118	1123	S15	W57	6287	09 26.1	5	SF		3	E	15	
RAMY		1413	1423	1427	S08	E18	6294	10 1.9	14	SF		3	E	21	
RAMY		1437	1439	1456	S08	E18	6294	10 1.9	19	SF		3	E	18	
SVTO		1439	1441	1456	S04	E16	6294	10 1.8	17	SF		3	E	19	H
RAMY		1457	1457	1510	S08	E17	6294	10 1.9	13	SF		3	E	21	
RAMY		1511	1527	1532	S08	E16	6294	10 1.8	21	SF		3	E	17	
RAMY		1522	1522	1528	S18	W58	6287	09 26.2	6	SF		3	E	12	
SVTO		1522	1523	1529	S17	W60	6287	09 26.1	7	SF		3	E	16	
RAMY		1545	1545	1551	S08	E17	6294	10 1.9	6	SF		3	E	12	
GOES		2000	2004	2010					10	C 1.4					
LEAR		2337	2337	2349	N15	W64	6280	09 26.1	12	SF		3	E	20	

EAST - WEST SOLAR SCANS SEPTEMBER 1990

ALGONQUIN RADIO OBSERVATORY
CANADA

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



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

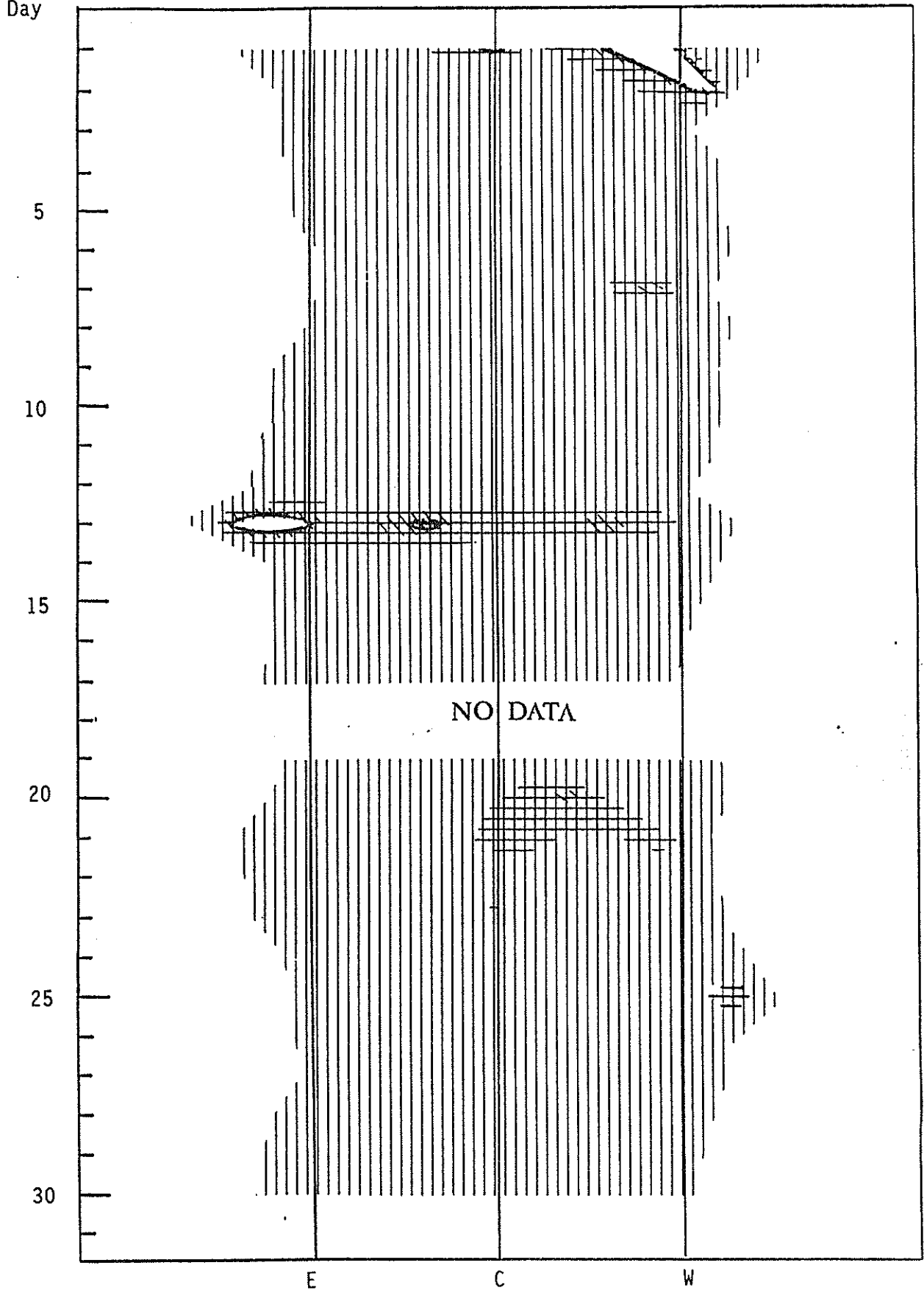
42
Sep 90

SOLAR INTERFEROMETRIC OBSERVATIONS
SEPTEMBER 1990

164 MHz

Nancay

Day



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

43
Sep 90

SEPTEMBER 1990

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density		Int	Remarks
						Peak (10 -22 W/m 2 Hz)	Mean		
01	8800 LEAR	4 S/F	0704.0E	0706.0	5.00	66.0			QL=2 ST=3 TYP=3
	2695 LEAR	8 S	0705.0E	0706.0	2.00	24.0			QL=2 ST=3 TYP=3
02	2800 OTTA	3 S	1452.3	1453.2	2.2	9.5	2.0		
	2800 OTTA	3 S	1455.0	1455.8	2.0	16.0	3.0		
	2800 OTTA	3 S	1851.0	1852.1	5.8	39.6	8.0		
03	2695 LEAR	8 S	0218.0E	0218.0	U	17.0			QL=2 ST=2 TYP=3
	8800 SVTO	4 S/F	0942.0E	0944.0	9.00	220.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0943.0E	0944.0	2.00	40.0			QL=2 ST=2 TYP=3
	8800 LEAR	8 S	0943.0E	0944.0	2.00	130.0			QL=2 ST=2 TYP=3
	2695 SVTO	8 S	0943.0E	0944.0	2.00	51.0			QL=4 ST=2 TYP=3
	2800 OTTA	20 GRF	1902.0	1918.5	85.0	8.4	4.0		
04	2800 OTTA	4 S/F	1433.0	1435.3	10.3	181.4	36.0		
	2695 SGMR	4 S/F	1434.0E	1435.0	7.00	190.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	1434.0E	1437.0	7.00	52.0			QL=4 ST=2 TYP=5
	8800 SVTO	4 S/F	1434.0E	1437.0	7.00	55.0			QL=4 ST=2 TYP=5
	2695 SVTO	4 S/F	1434.0E	1435.0	6.00	160.0			QL=4 ST=2 TYP=5
	2800 OTTA	29 PBI	1443.3	1610.2	285.0	8.6	4.0		
	2800 OTTA	4 S/F	1445.2	1445.4	2.0	25.2	5.0		
	2800 OTTA	4 S/F	1803.9	1805.4	3.7	8.9	2.0		
	2800 OTTA	20 GRF	2050.0	2116.0	94.0	3.6	1.0		
05	2800 OTTA	20 GRF	1322.5	1335.0	66.0	4.9	2.0		
06	2800 OTTA	20 GRF	1535.0	1614.0	85.0	5.1	2.0		
	2800 OTTA	20 GRF	1912.0	1953.5	92.0	3.2	1.0		
	2800 OTTA	42 SER	2106.0	2108.5	10.2	12.9	3.0		
	2800 OTTA	42 SER	2106.0	2142.5	42.7				
	2800 OTTA	42 SER	2120.5	2121.3	2.1	13.7	3.0		
	2800 OTTA	42 SER	2123.7	2123.9	1.5	15.9	3.0		
	2800 OTTA	42 SER	2127.5	2130.5	6.7	5.6	2.0		
	2800 OTTA	42 SER	2140.8	2142.6	7.9	12.4	3.0		
07	8800 LEAR	8 S	0526.0E	0528.0	2.00	15.0			QL=4 ST=2 TYP=3
	2695 LEAR	4 S/F	0526.0E	0526.0	3.00	75.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	0526.0E	0526.0	2.00	68.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0559.0E	0600.0	U	13.0			QL=4 ST=2 TYP=3
	2695 PENT	3 S	2250.8	2256.4	10.1	22.7	6.0		
	2695 PENT	3 S	2305.1	2305.9	3.1	19.8	5.0		
08	2800 OTTA	20 GRF	1457.0	1459.0	15.5	5.7	2.0		
	2800 OTTA	22 GRF	2201.0	2215.5	80.0	20.4	4.0		
12	2695 LEAR	4 S/F	0055.0E	0100.0	9.00	81.0			QL=4 ST=2 TYP=5
	2695 PALE	4 S/F	0056.0E	0100.0	5.00	73.0			QL=4 ST=2 TYP=5
	2800 OTTA	3 S	1858.2	1901.5	6.3	25.8	7.0		
	2800 OTTA	3 S	1904.5	1906.1	3.9	9.7	3.0		
	2800 OTTA	29 PBI	1908.4	1913.3	31.4	4.3	2.0		
14	2800 OTTA	4 S/F	1254.7	1255.3	2.5	13.2	2.0		
	8800 SVTO	8 S	1255.0E	1255.0	2.00	77.0			QL=4 ST=2 TYP=3
	2800 OTTA	22 GRF	1326.0	1419.0	270.0	42.1	16.0		
	2800 OTTA	20 GRF	2000.0	2008.5	290.0	39.8	11.0		
	2695 PALE	4 S/F	2006.0E	2008.0	4.00	40.0			QL=4 ST=2 TYP=3
	8800 PALE	4 S/F	2007.0E	2009.0	6.00	33.0			QL=4 ST=2 TYP=3
	8800 SGMR	4 S/F	2007.0E	2009.0	5.00	34.0			QL=4 ST=2 TYP=3
	2695 SGMR	4 S/F	2007.0E	2008.0	3.00	40.0			QL=4 ST=2 TYP=3
15	2695 LEAR	4 S/F	0749.0E	0751.0	3.00	42.0			QL=4 ST=2 TYP=3
16	2800 OTTA	20 GRF	1415.0	1420.5	37.0	7.4	3.0		
	2800 OTTA	22 GRF	1643.0	1644.5	35.0	8.1	3.0		
	2800 OTTA	20 GRF	1816.0	1850.0	94.0	4.3	2.0		
	2800 OTTA	4 S/F	1900.8	1901.4	3.1	12.0	2.0		
17	2695 LEAR	8 S	0550.0E	0550.0	1.00	19.0			QL=4 ST=2 TYP=3
	8800 LEAR	8 S	0551.0E	0553.0	2.00	15.0			QL=4 ST=2 TYP=3

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

SEPTEMBER 1990

Day	Freq Sta	Type	Start (UT)	Time of Maximum (UT)	Duration (Min)	Flux Density Peak (10 ⁻²² W/m ² Hz)	Mean	Int	Remarks
17	2695 SGMR	4 S/F	1339.0E	1343.0	6.00	130.0			QL=4 ST=3 TYP=3
	8800 SGMR	4 S/F	1340.0E	1343.0	5.00	190.0			QL=4 ST=3 TYP=3
	2800 OTTA	3 S	1340.7	1343.7	10.5	139.0	28.0		
	2695 SVTO	8 S	1343.0E	1343.0	1.00	140.0			QL=4 ST=2 TYP=3
	8800 SVTO	8 S	1343.0E	1343.0	1.00	240.0			QL=4 ST=2 TYP=3
	8800 PALE	8 S	1846.0E	1847.0	1.00	70.0			QL=4 ST=2 TYP=3
	2800 OTTA	3 S	1846.5	1847.9	6.8	27.3	6.0		
	2800 OTTA	3 S	2152.8	2154.1	6.5	503.0	100.0		
	8800 PALE	49 GB	2153.0E	2153.0	1.00	800.0			QL=4 ST=2 TYP=6
	2695 PALE	49 GB	2153.0E	2153.0	2.00	530.0			QL=4 ST=2 TYP=6
	8800 SGMR	49 GB	2153.0E	2153.0	1.00	800.0			QL=4 ST=2 TYP=6
	2695 SGMR	49 GB	2153.0E	2153.0	2.00	540.0			QL=4 ST=2 TYP=6
18	2695 LEAR	4 S/F	0936.0E	0937.0	864.00	240.0			QL=4 ST=1 TYP=3
	8800 SVTO	49 GB	0937.0E	0937.0	2.00	610.0			QL=4 ST=2 TYP=6
	2695 SVTO	8 S	0937.0E	0937.0	1.00	200.0			QL=4 ST=2 TYP=3
20	2800 OTTA	3 S	1521.1	1521.8	3.1	11.1	2.0		
	2800 OTTA	20 GRF	1824.0	1852.0	188.0	11.1	5.0		
22	2695 LEAR	4 S/F	0302.0E	0306.0	9.00	59.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0303.0E	0305.0	5.00	39.0			QL=4 ST=2 TYP=3
	2695 PALE	8 S	0305.0E	0306.0	2.00	44.0			QL=4 ST=2 TYP=3
	2800 OTTA	3 S	1920.9	1921.5	6.0	22.6	5.0		
23	2800 OTTA	3 S	1306.1	1308.8	11.1	21.3	4.0		
24	2800 OTTA	20 GRF	1812.5	1851.0	90.0	6.4	2.0		
25	2695 LEAR	4 S/F	0222.0E	0227.0	6.00	34.0			QL=4 ST=2 TYP=3
	8800 LEAR	4 S/F	0222.0E	0228.0	7.00	46.0			QL=4 ST=2 TYP=3
	2695 SVTO	8 S	1035.0E	1035.0	1.00	76.0			QL=4 ST=2 TYP=3
	2800 OTTA	20 GRF	1423.0	1427.5	50.0	8.5	4.0		
26	2800 OTTA	20 GRF	1225.0	1337.5	260.0	16.7	8.0		
28	8800 LEAR	8 S	0153.0E	0154.0	1.00	17.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0153.0E	0154.0	1.00	60.0			QL=4 ST=2 TYP=3
	2695 PALE	8 S	0153.0E	0154.0	1.00	59.0			QL=4 ST=2 TYP=3
29	8800 LEAR	8 S	0405.0E	0406.0	1.00	34.0			QL=4 ST=2 TYP=3
	2695 LEAR	8 S	0405.0E	0406.0	1.00	33.0			QL=4 ST=2 TYP=3
	2695 PENT	3 S	2252.2	2254.8	9.8	19.9	4.0		
30	2695 SVTO	4 S/F	0736.0E	0740.0	7.00	190.0			QL=4 ST=2 TYP=5
	2695 LEAR	4 S/F	0736.0E	0740.0	14.00	200.0			QL=4 ST=2 TYP=5
	8800 SVTO	4 S/F	0737.0E	0740.0	21.00	99.0			QL=4 ST=2 TYP=3

Reports are received routinely from the following observatories:

BERN = Berne

LEAR = Learmonth

PALE = Palehua

SGMR = Sagamore Hill

OTTA = Ottawa

PENT = Penticton

SVTO = San Vito

Explanation of Type Code:

1 Simple 1	7 Minor +	24 Rise	30 Post Burst Increase A	43 Onset of Noise Storm
2 Simple 1F	8 Spike	25 Rise A	31 Post Burst Decrease	44 Noise Storm in Progress
3 Simple 2	20 Simple 3	26 Fall	33 Absorption	45 Complex
4 Simple 2F	21 Simple 3A	27 Rise and Fall	40 Fluctuation	46 Complex F
5 Simple	22 Simple 3F	28 Precursor	41 Group of Bursts	47 Great Burst
6 Minor	23 Simple 3AF	29 Post Burst Increase	42 Series of Bursts	48 Major
1A Simple 1A	4A Simple 2AF	24PF Post Rise F	27F Rise and Fall F	
3A Simple 2A	40 Rise Only	16A Fall A	27AF Rise and Fall AF	
21A Simple 3A GRF	40F Rise Only F	260 Fall Only	31A Post Burst Decrease A	
2A Simple 1AF	4P Post Rise	26F Fall F	32A Absorption A	

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

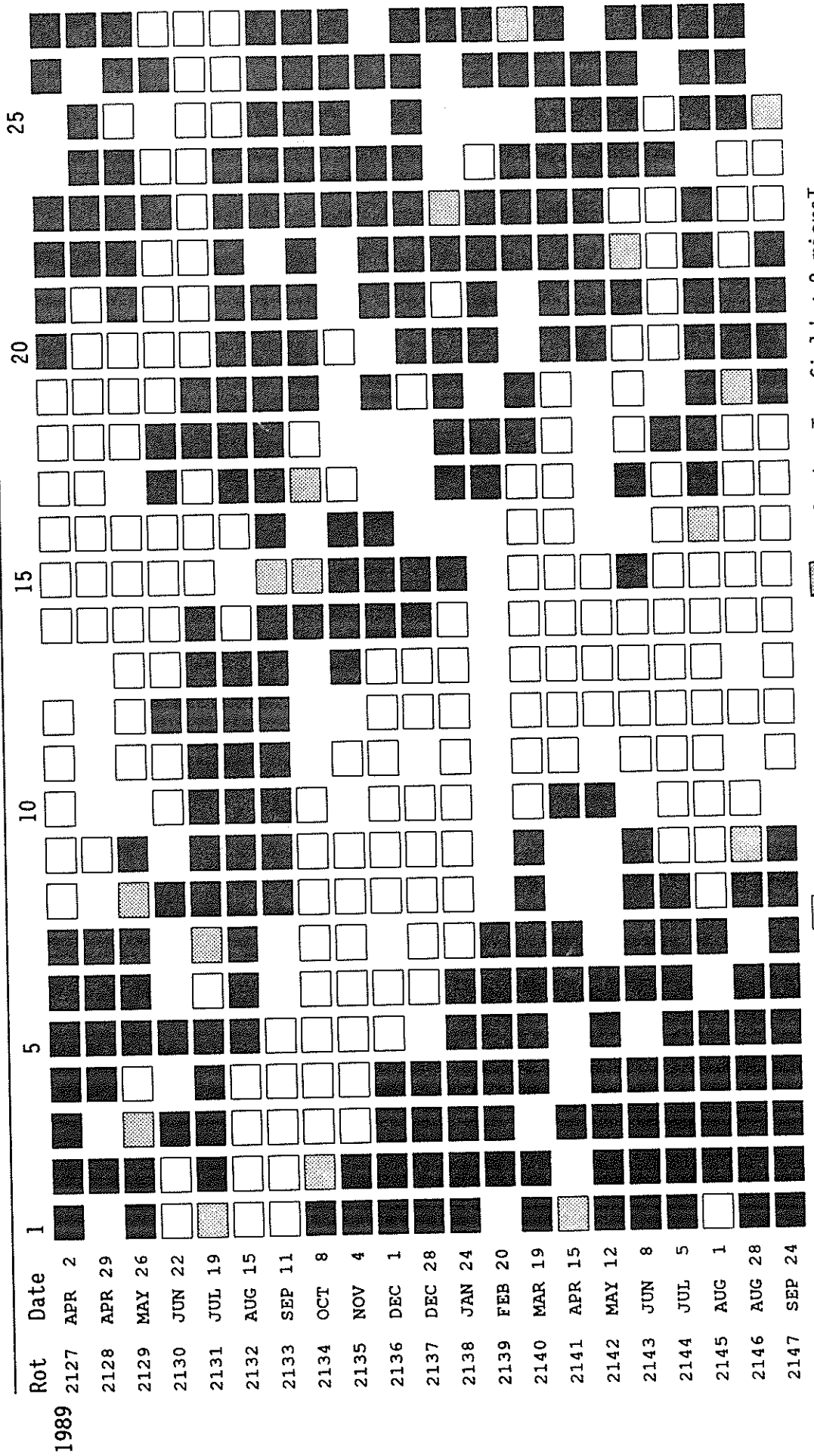
STANFORD MEAN SOLAR MAGNETIC FIELD (MICROTESLA)

Day	1989			1990								
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
1	-43	-111	-113	.	128	.	84	35	-9	-4	14	-75
2	.	-125	-79	22	150	.	47	19	-8	-13	-29	-77
3	-87	-111	-46	70	344	.	33	23	-5	-34	-27	.
4	-84	-75	-11	106	99	.	4	-18	-34	-42	-38	-44
5	-35	-11	43	132	69	.	-8	-24	-33	-36	-25	-2
6	-22	44	60	129	23	.	-29	-25	-33	-36	.	19
7	-13	54	.	.	-11	.	.	-27	.	-45	-13	.
8	-5	86	84	58	.	-28	.	-38	-26	-34	3	68
9	0	97	126	23	-15	-23	-29	-33	-52	-12	26	.
10	2	103	115	-7	-8	.	-36	-15	-86	-11	43	60
11	10	107	79	-41	-14	-25	-34	-4	-83	-10	94	43
12	38	95	47	.	-9	-23	.	-9	.	-15	137	41
13	33	.	7	.	4	-11	-8	-47	-88	17	76	14
14	26	13	-35	.	-12	-15	0	-80	-58	32	25	5
15	31	.	-59	5	-2	2	-2	-82	-31	78	3	-1
16	17	-70	-62	-11	.	.	.	-80	-10	95	1	-17
17	5	-79	.	-14	.	-10	-20	-88	.	57	-34	-9
18	.	-86	.	-58	.	-45	.	.	47	10	-33	30
19	.	-38	-4	-86	-78	-63	.	.	44	26	-27	35
20	.	4	.	-84	.	-108	-105	.	43	41	-22	23
21	-88	.	-32	-76	-142	.	-99	-29	11	20	-30	-20
22	0	.	-70	-88	-193	-150	.	.	-4	-12	-15	-78
23	.	17	-101	-124	-167	-124	.	25	.	.	-16	-96
24	1	.	-103	-152	-133	-113	-21	33	-12	7	.	-112
25	5	.	.	-184	-102	-74	23	16	7	25	-83	-121
26	-19	-52	-103	-203	-41	-62	57	3	13	50	-82	-107
27	-56	-78	.	-200	.	-34	75	.	42	10	-89	-90
28	-70	-76	-130	-140	.	9	65	.	-7	-13	-107	-82
29	-100	-92	-108	-62	.	45	50	.	-2	39	-131	-86
30	-110	-110	-106	3	.	103	50	.	8	.	-128	-103
31	-104	.	-94	46	.	94	.	-4	.	-67	-90	.

Dot symbol indicates no data available for the day.

Note: Data from 21 June to 15 August 1990 are of poorer quality due to instrument problems.

STANFORD MEAN SOLAR MAGNETIC FIELD



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

= field < -2 microT; No box = no data available

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

C O N T E N T S

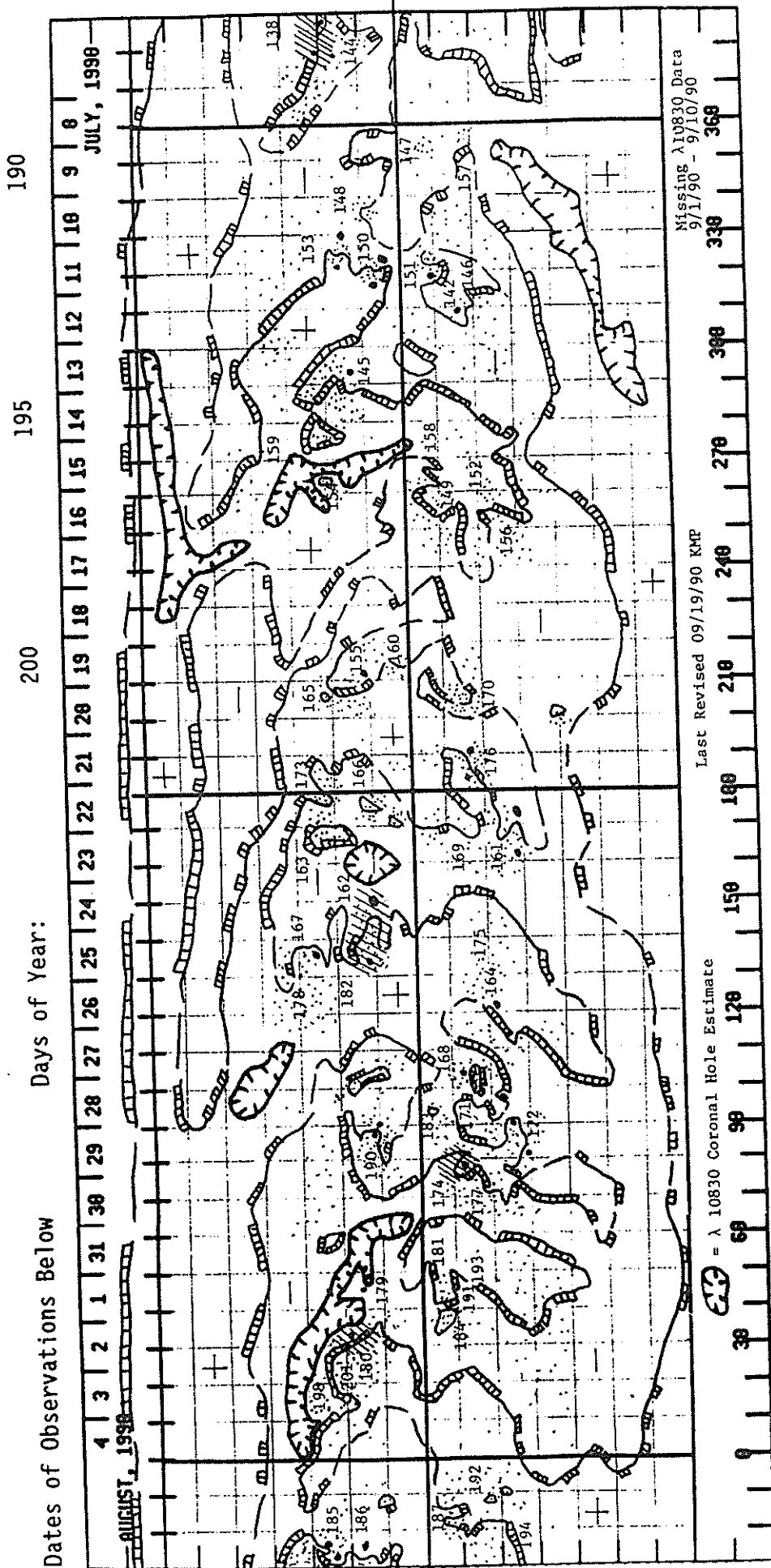
Prompt Reports

DATA FOR AUGUST 1990

Number 554 Part I

	Page
SOLAR ACTIVE REGIONS	
Solar Synoptic Charts	48- 55
Daily Activity Solar Maps	56- 86
Sunspot Groups.	87-123
SUDDEN IONOSPHERIC DISTURBANCES. . . . .	.124-127
PIONEER XII INTERPLANETARY MAGNETIC FIELD MAGNITUDES (Unavailable at time of publication.)	
SOLAR RADIO SPECTRAL OBSERVATIONS. . . . .	.128-149
COSMIC RAY MEASUREMENTS BY NEUTRON MONITOR	
Chart of Variations . . . . .	.150-153
Daily Counting Rates. . . . .	.154
GEOMAGNETIC INDICES	
Geomagnetic Activity Indices. . . . .	.155
Daily Average Ap. . . . .	.156
Chart of Kp by 27-day Rotation. . . . .	.157
Graph and Table of aa index (1945-present). . . . .	.158
Provisional Values of Hourly Equatorial Dst (Unavailable at time of publication.)	
Principal Magnetic Storms . . . . .	.159
Sudden Commencements/Solar Flare Effects (Unavailable at time of publication.)	

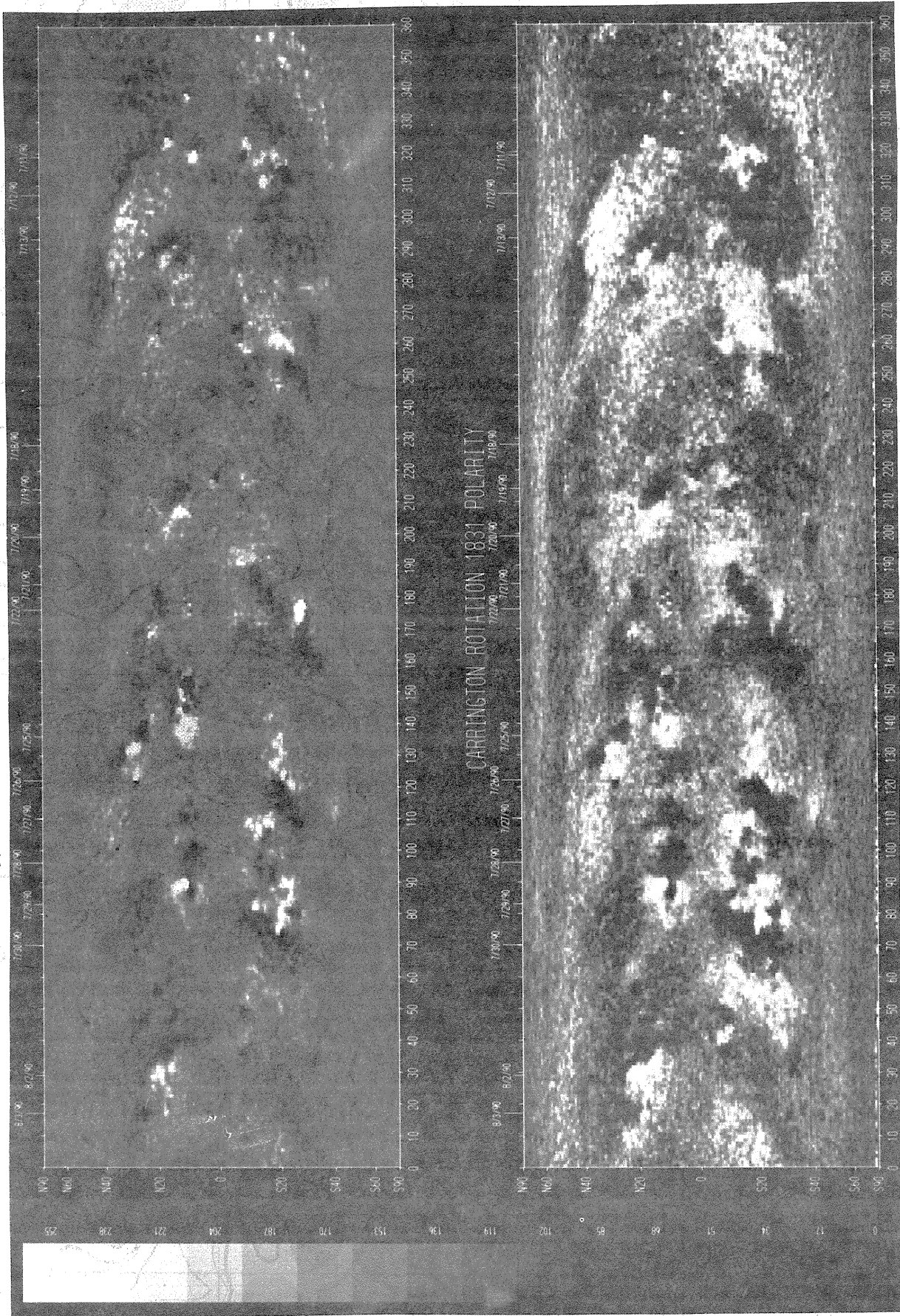
PRELIMINARY H - ALPHA SOLAR SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 1831
(8 July to 4 August 1990)



SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 1831
(8 July to 4 August 1990)

National Solar Observatory/Kitt Peak

Dates of Observation

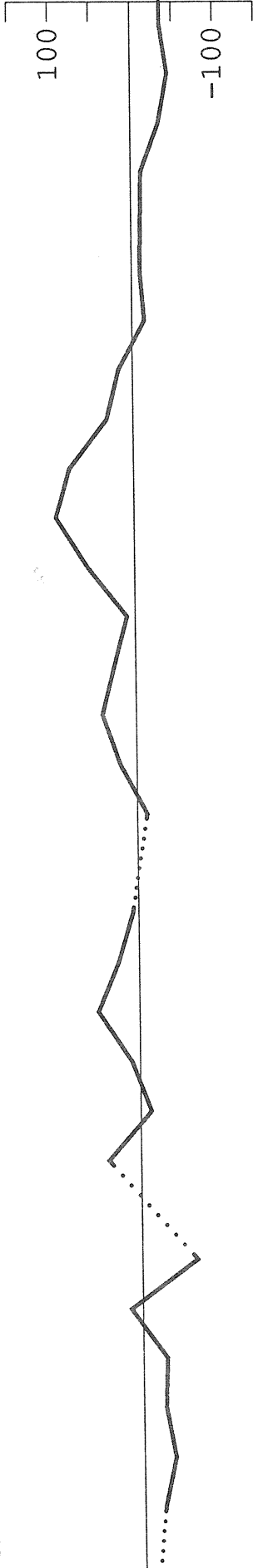


Heliographic Longitude

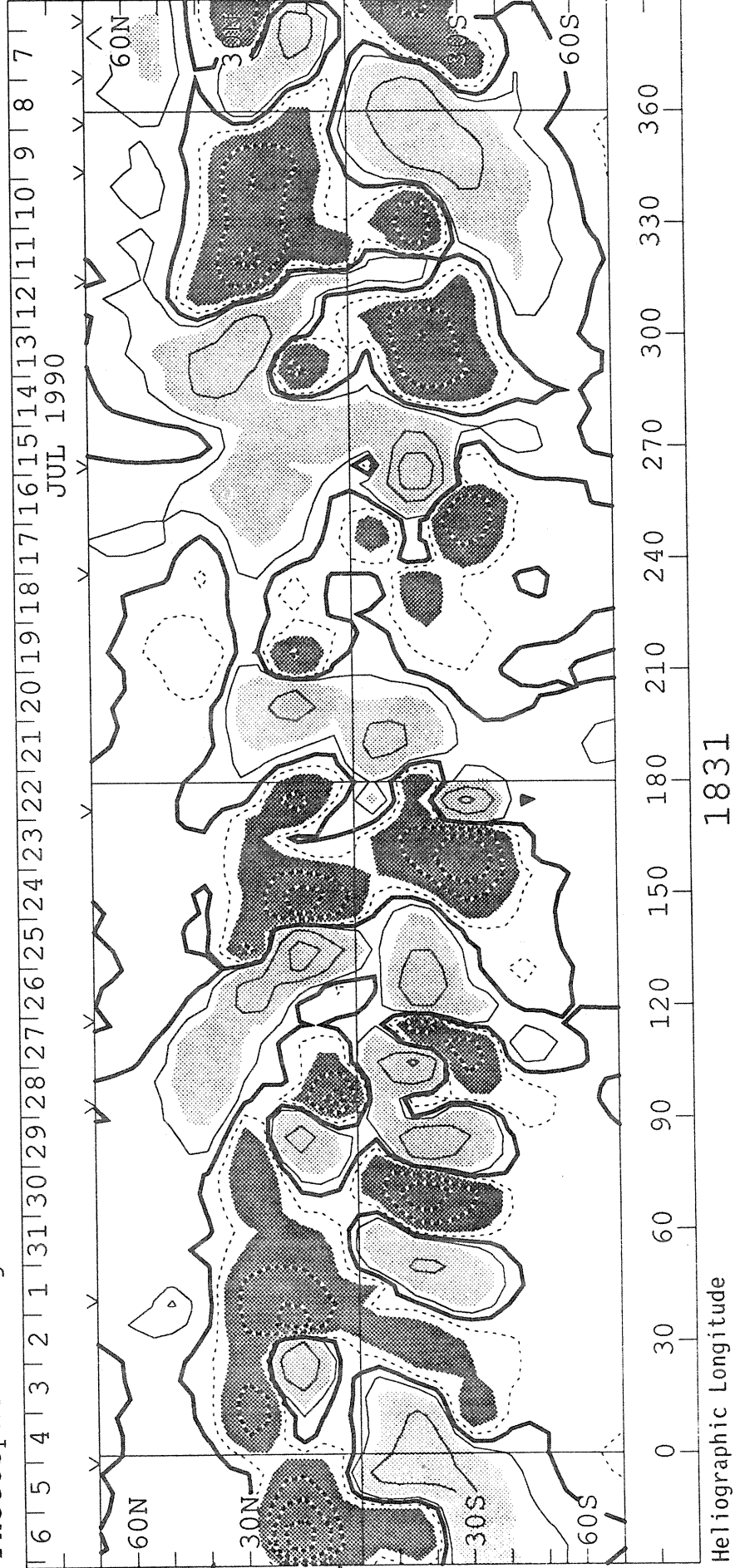
SOLAR MAGNETIC FIELD SYNOPTIC CHART
CARRINGTON ROTATION NUMBER 1831
(8 July to 4 August 1990)

WILCOX SOLAR OBSERVATORY

Mean Field

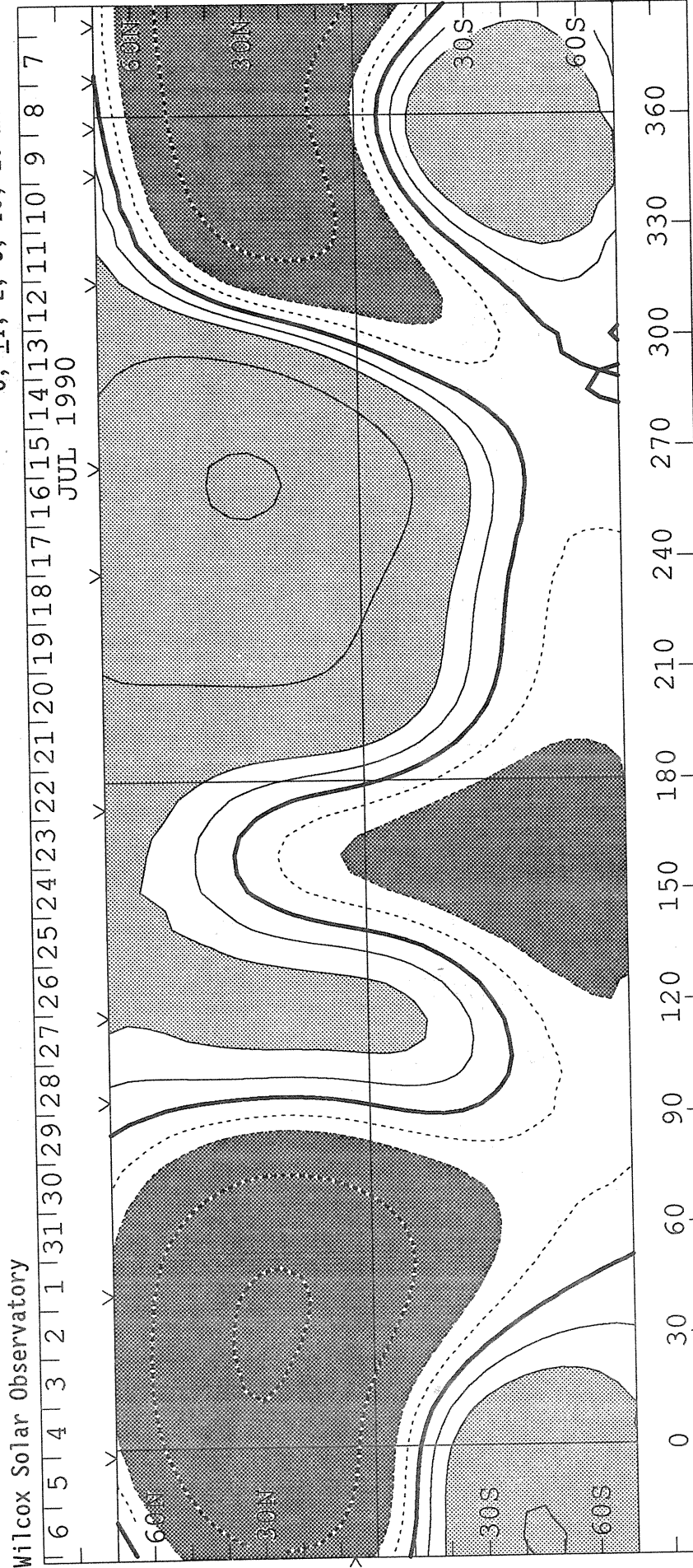


Photospheric Magnetic Field 0, +100, 500, 1000, 2000 MicroTesla



S O L A R M A G N E T I C F I E L D S Y N O P T I C C H A R T
S O U R C E S U R F A C E F I E L D
C A R R I N G T O N R O T A T I O N N U M B E R 1 8 3 1
(8 J u l y t o 4 A u g u s t 1 9 9 0)

0, ±1, 2, 5, 10, 20 microTesla



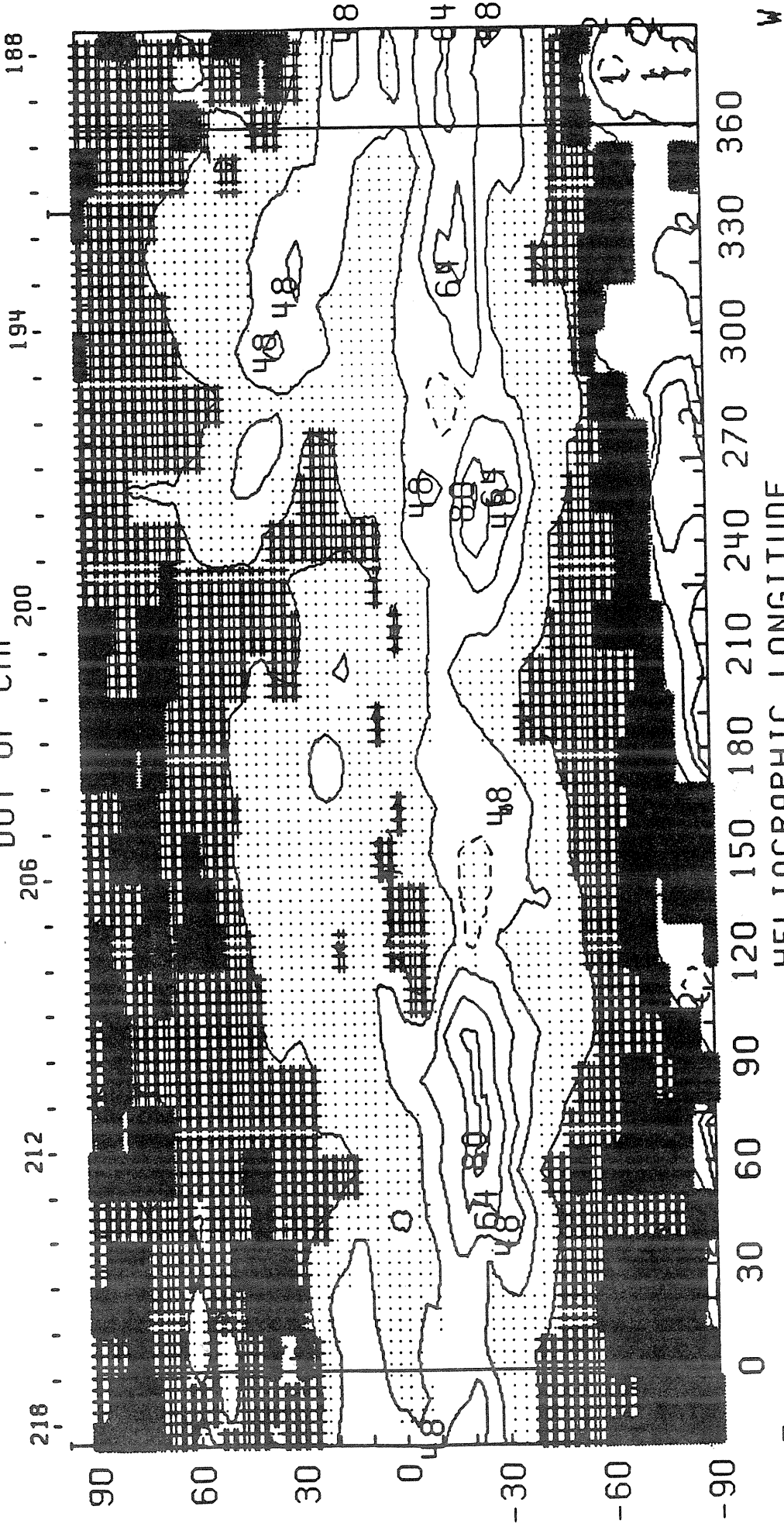
Wilcox Solar Observatory

1831

Heliographic Longitude

52
Aug 90

CARRINGTON ROTATION NUMBER 1831; SAC. PEAK FE XIV AT R = 1.15
DOY OF CMP 200

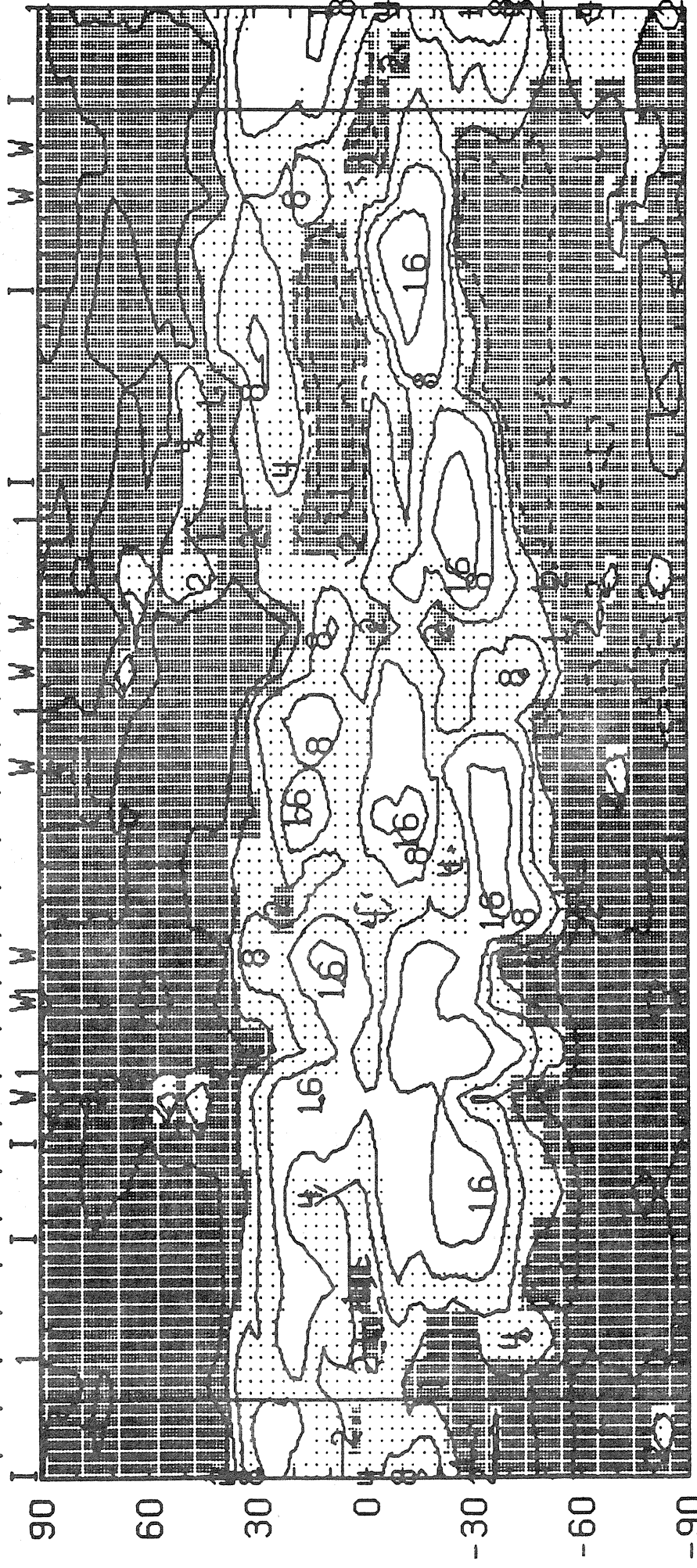


E
HELIOGRAPHIC LONGITUDE
1990 E LIMB CONTOURS: 1,2,4,8,16,32,40,56 MILLIONTHS OF I₀
(26-Sep-90) CORONAL HOLES ARE SHOWN AS WHITE SURROUNDED BY BLACK

CARRINGTON ROTATION NUMBER 1831; SAC. PEAK FE X AT R = 1.15

DOY OF CMP

218 212 206 200 194 188



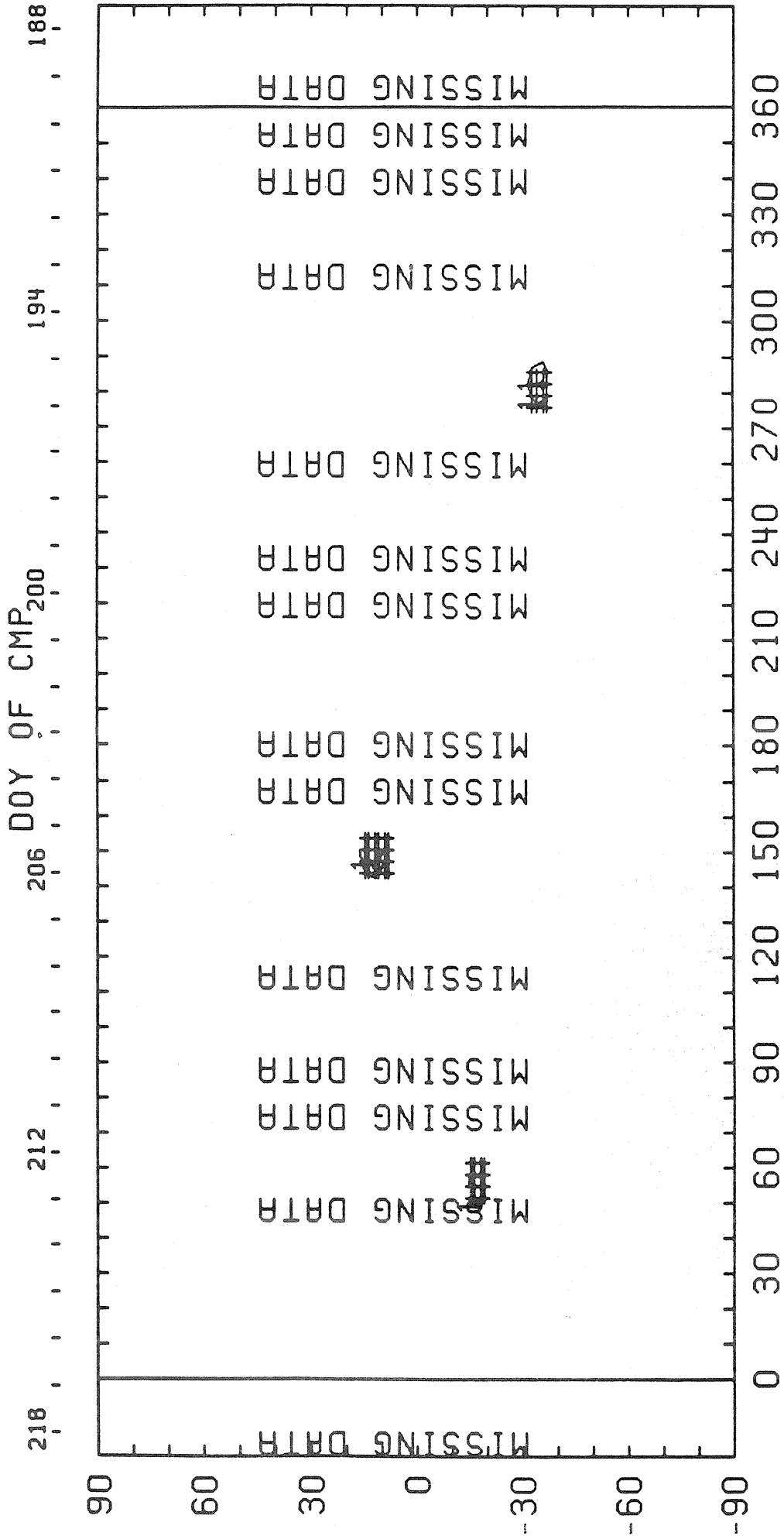
0 30 60 90 120 150 180 210 240 270 300 330 360

E HELIOGRAPHIC LONGITUDE W

1990 E+W LIMB CONTOURS: 1, 2, 4, 8, 16, 32, 40, 56 MILLIONTHS OF Io

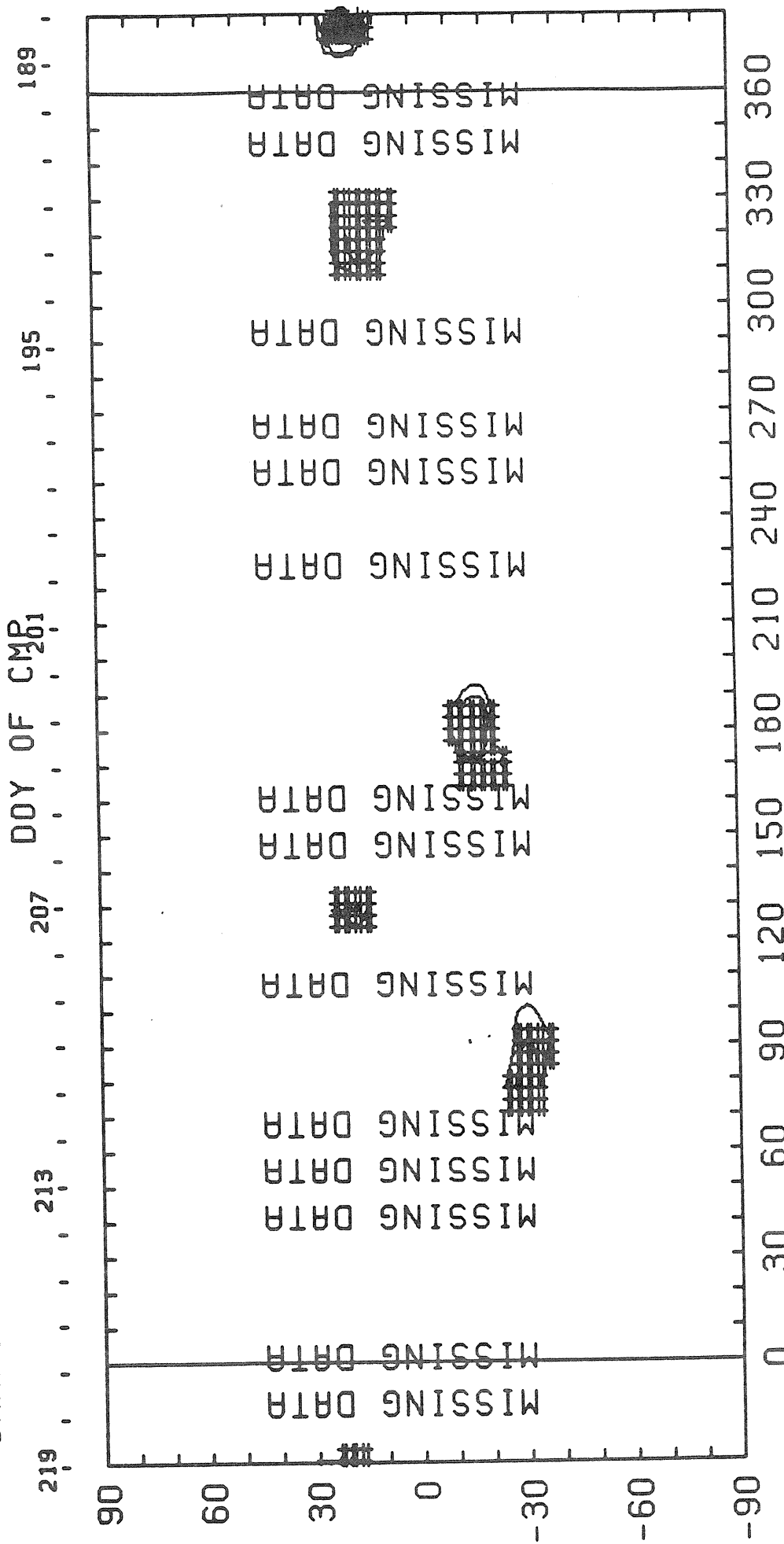
(26-Sep-90)

CARRINGTON ROTATION NUMBER 1831 ; SAC. PEAK CA XV at R = 1.13



E
1990 EAST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
(26-Sep-90)
W

CARRINGTON ROTATION NUMBER 1831 ; SAC. PEAK CA XV at R = 1.13

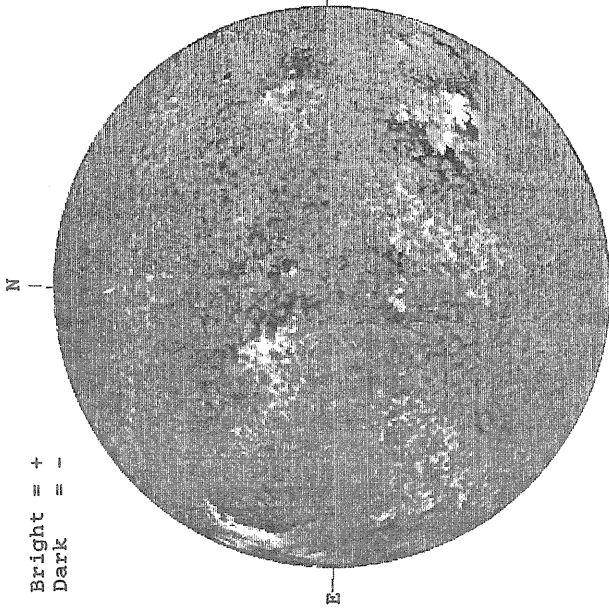


E
1990 WEST LIMB CONTOURS: YELLOW-MINIMUM, 1, 2, 4, 8 MILLIONTHS OF Io
W
HELIOGRAPHIC LONGITUDE
(26-Sep-90)

AUGUST 1, 1990 (P= 10.73, B₀ = 5.76, L₀ = 51.10)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1737 UT

STANFORD MAGNETOGRAM

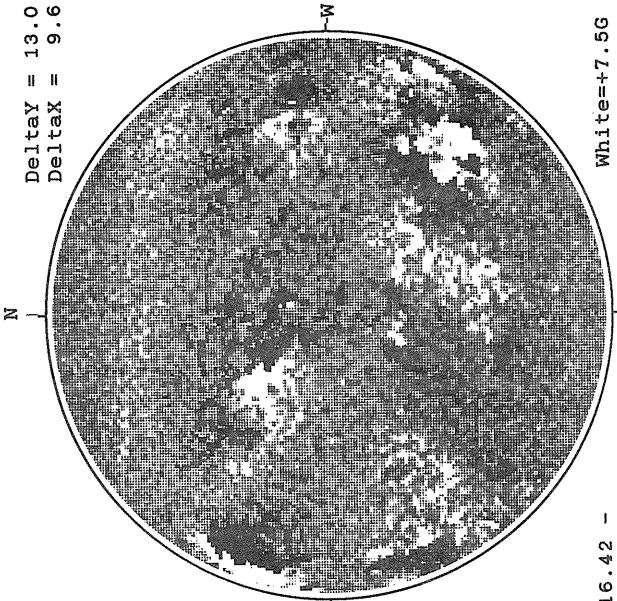
Solid = +
Dashed = -



1732 UT

MT. WILSON MAGNETOGRAM

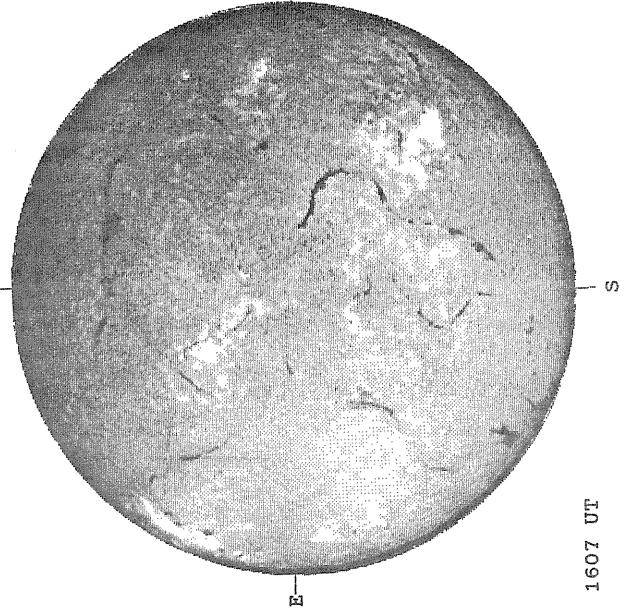
Deltaγ = 13.0
Deltaα = 9.6



16.42 -
17.35 UT

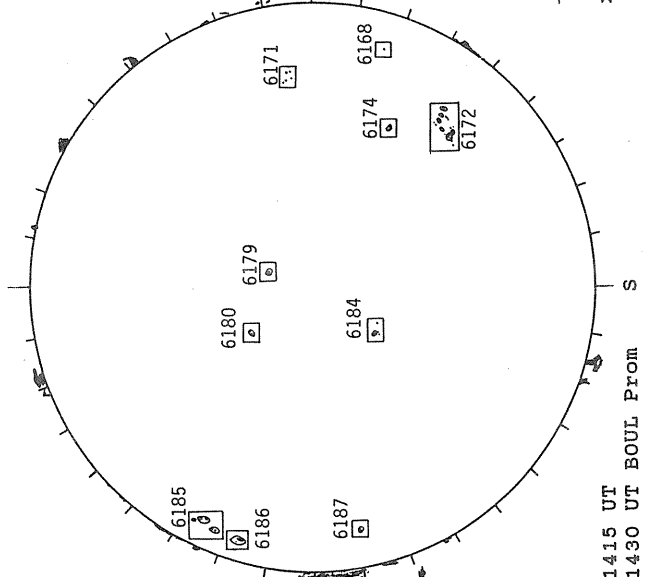
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



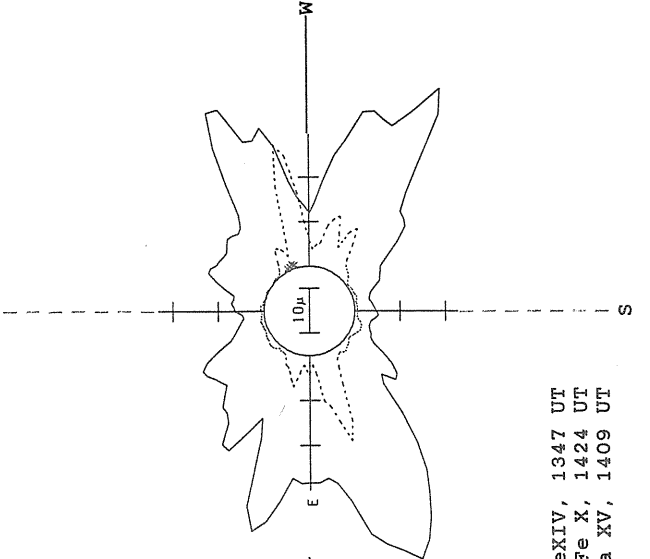
1607 UT

BOULDER SUNSPOT



1415 UT
1430 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

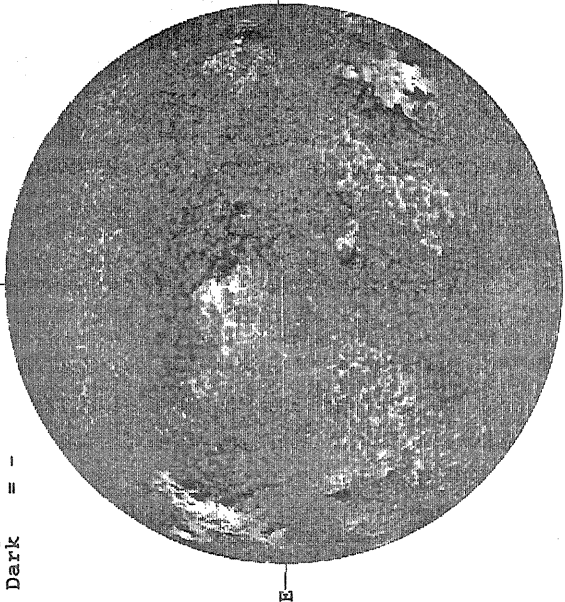


— FeXIV, 1347 UT
- - - Fe X, 1424 UT
xxxx Ca XV, 1409 UT

AUGUST 2, 1990 (P= 11.12, B₀ = 5.83, L₀ = 37.87)

KITT PEAK MAGNETOGRAM

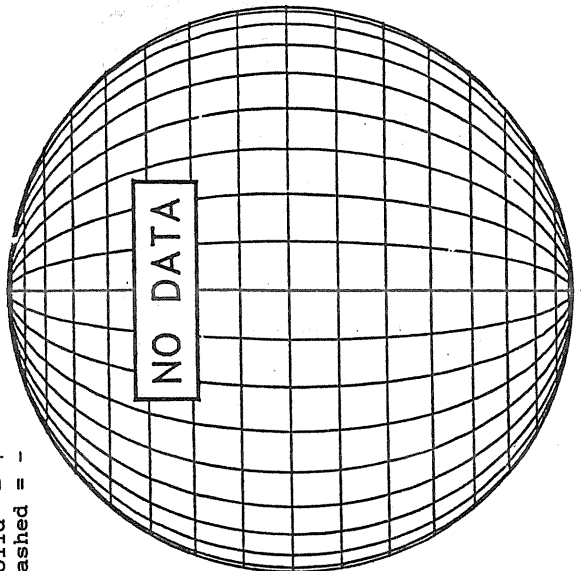
Bright = +
Dark = -



1517 UT

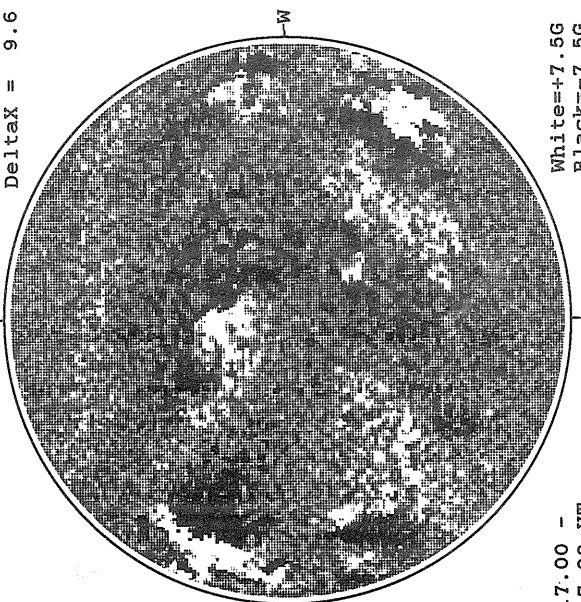
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

DeltaY = 13.0
DeltaX = 9.6



17.00 -
17.93 UT

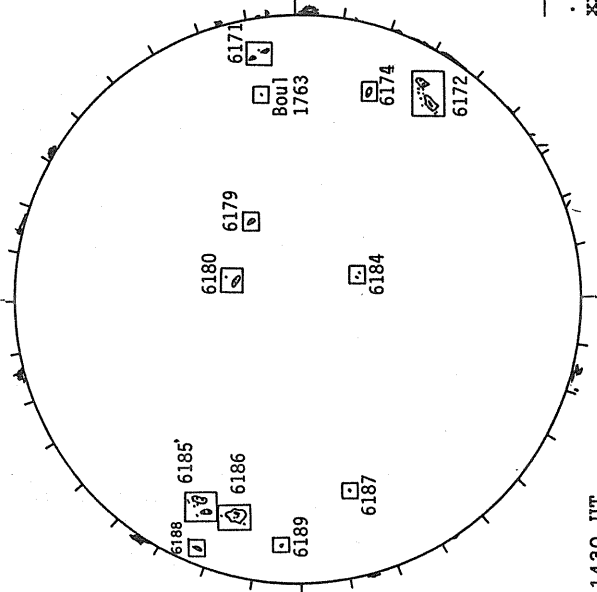
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



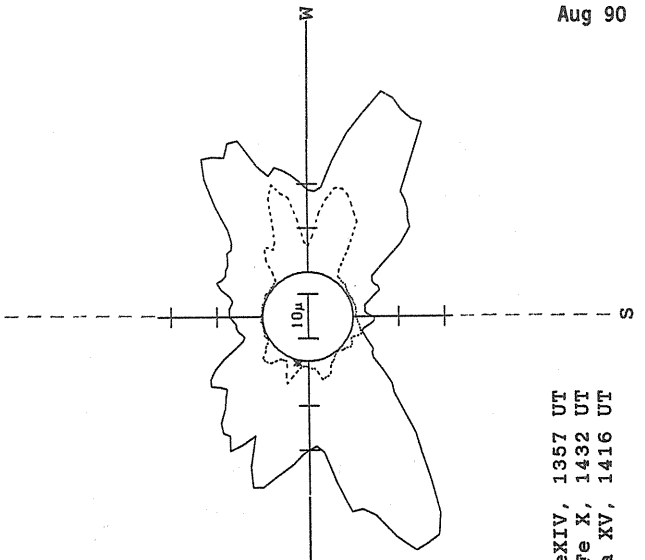
1452 UT

BOULDER SUNSPOT



1430 UT
1420 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

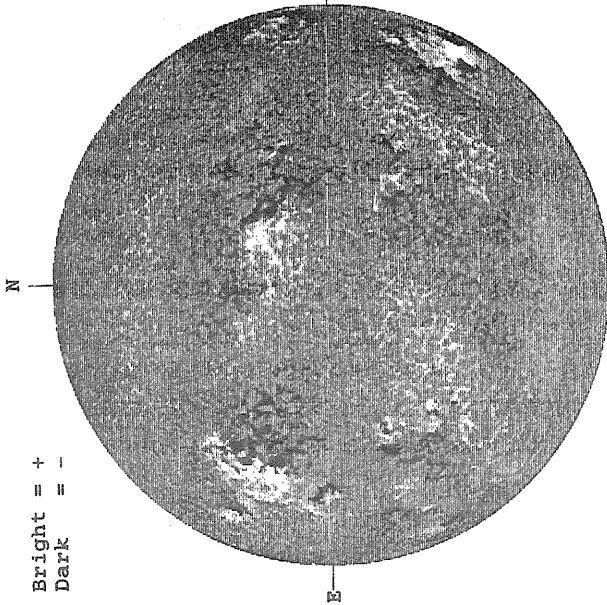


— FeXIV, 1357 UT
... Fe X, 1432 UT
xxxxx Ca XV, 1416 UT

AUGUST 3, 1990 (P= 11.52, B₀ = 5.90, L₀ = 24.65)

KITT PEAK MAGNETOGRAM

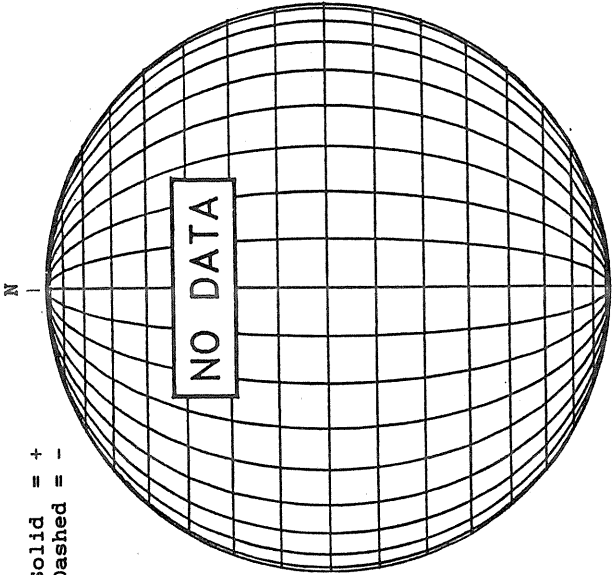
Bright = +
Dark = -



1423 UT

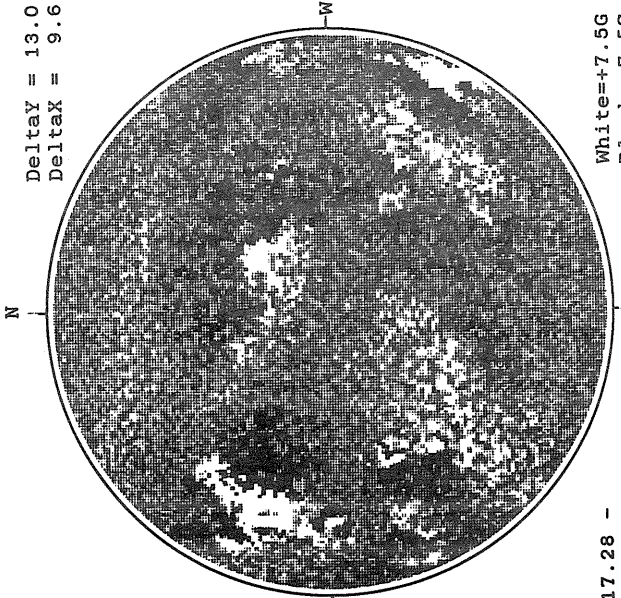
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

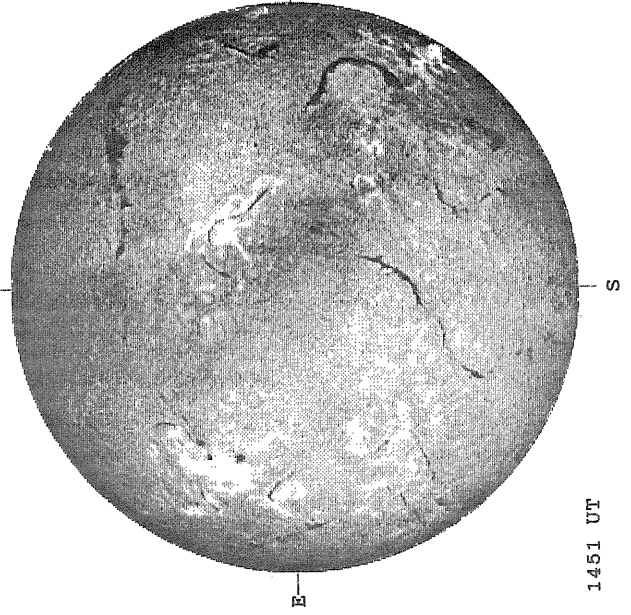
DeltaY = 13.0
DeltaX = 9.6



17.28 -
18.20 UT

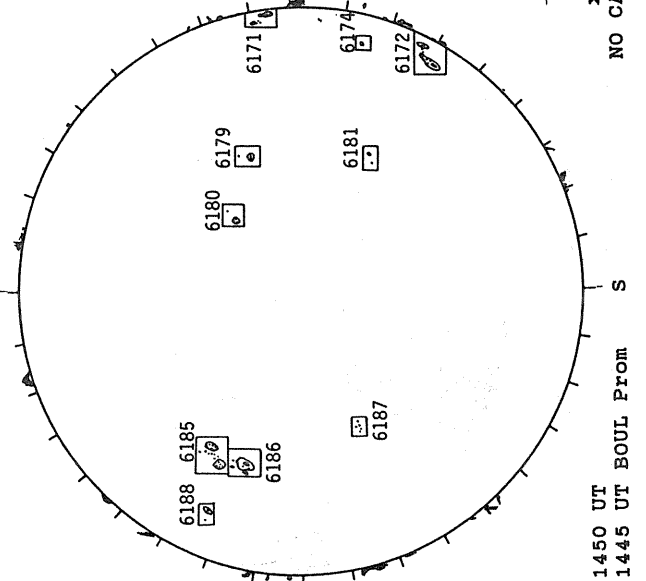
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



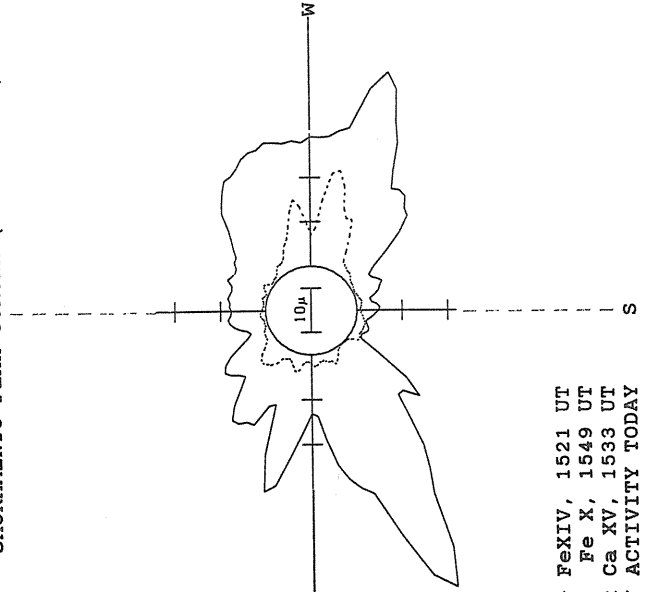
1451 UT

BOULDER SUNSPOT



1450 UT
1445 UT BOUL FROM S

SACRAMENTO PEAK CORONA (1.15 Radii)

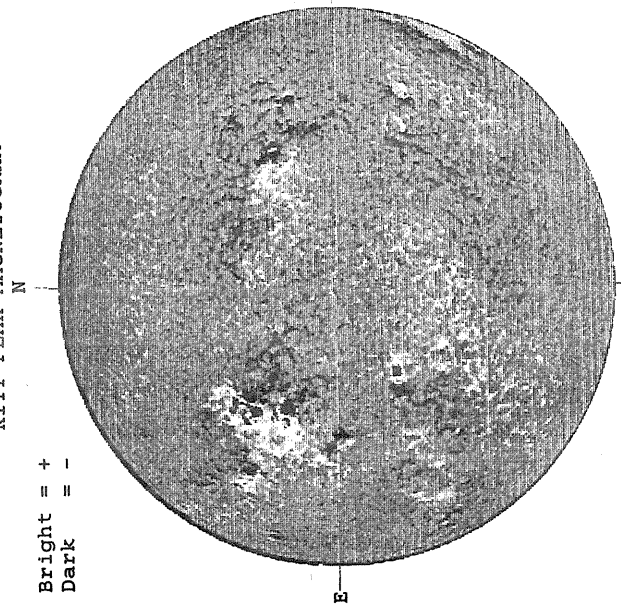


— Fe XIV, 1521 UT
.... Fe X, 1549 UT
xxxx Ca XV, 1533 UT
NO CA XV ACTIVITY TODAY

AUGUST 4, 1990 (P= 11.91, B₀ = 5.97, L₀ = 11.42)

KITT PEAK MAGNETOGRAM

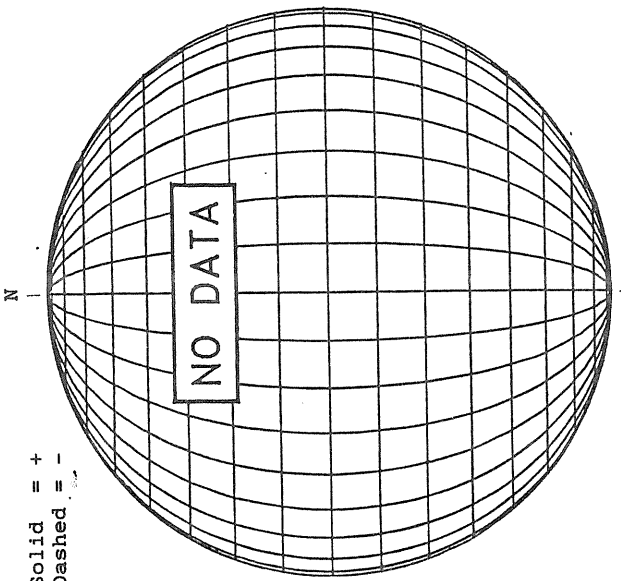
Bright = +
Dark = -



1454 UT

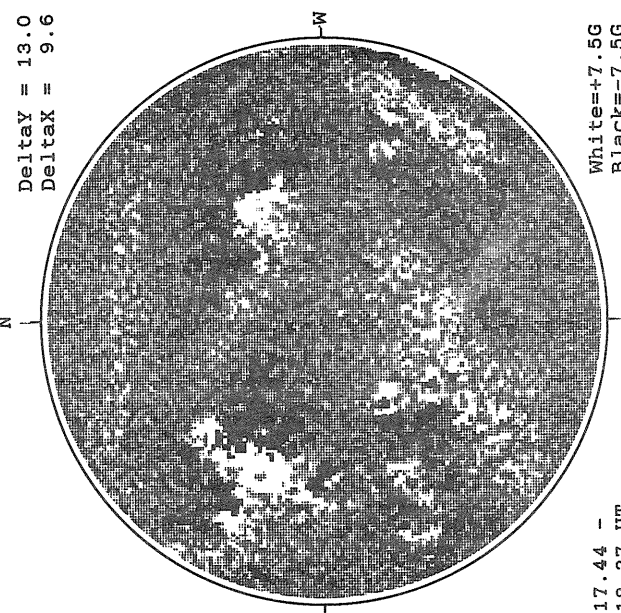
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

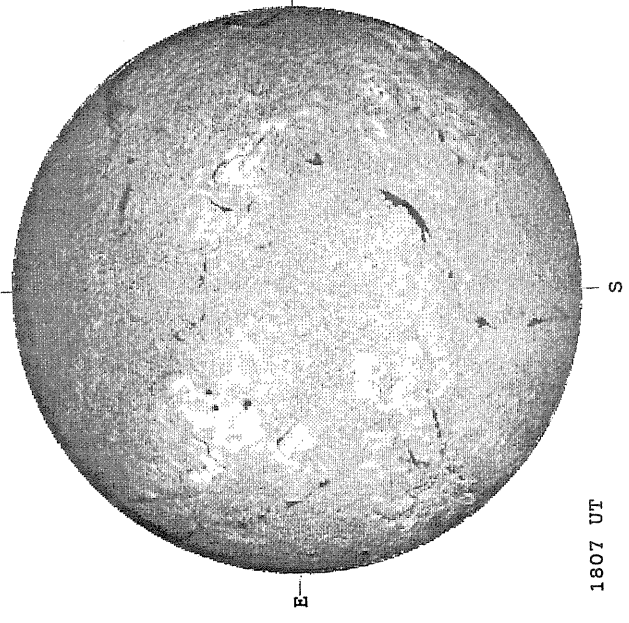
Delta_{ay} = 13.0
Delta_{ax} = 9.6



17.44 -
18.37 UT

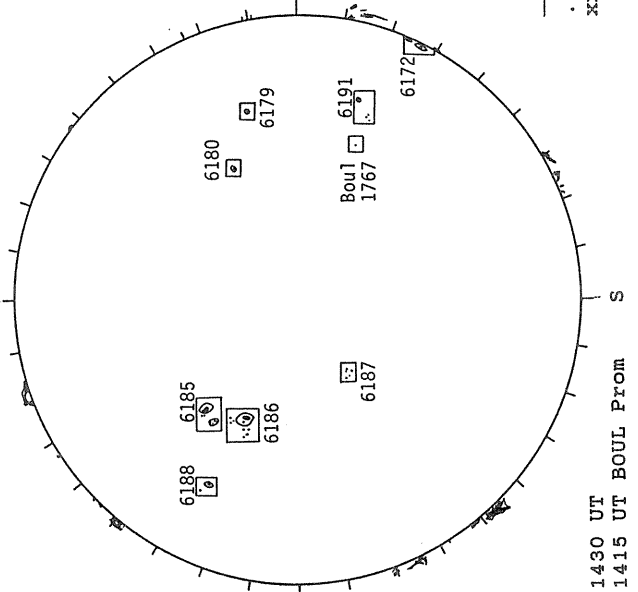
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



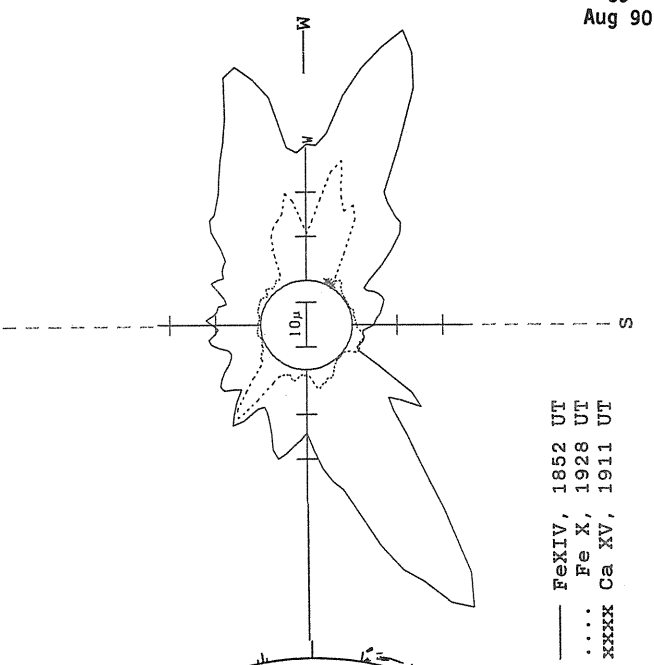
1807 UT

BOULDER SUNSPOT



1430 UT
1415 UT BOUL PROM

SACRAMENTO PEAK CORONA (1.15 Radii)



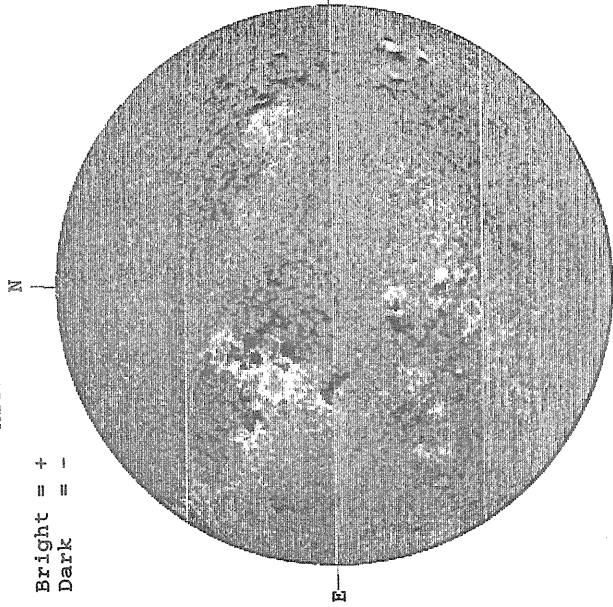
— Fe XIV, 1852 UT
... Fe X, 1928 UT
xxxxx Ca XV, 1911 UT

60
Aug 90

AUGUST 5, 1990 (P = 12.29, B₀ = 6.04, L₀ = 358.20)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1547 UT

STANFORD MAGNETOGRAM

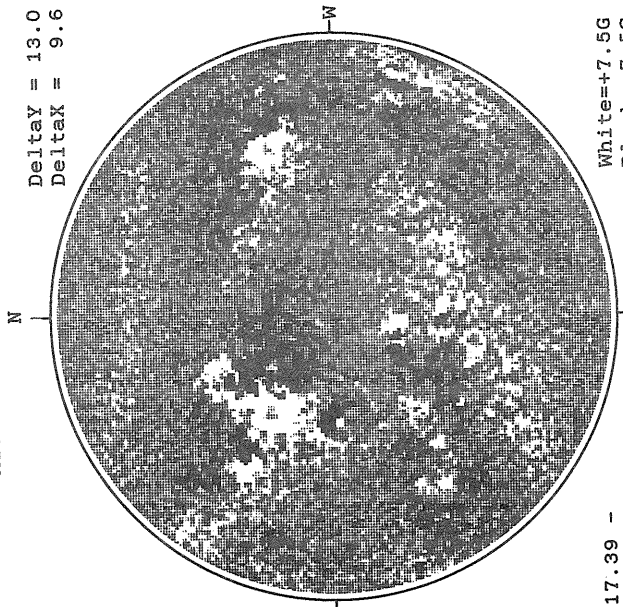
Solid = +
Dashed = -



0040 UT

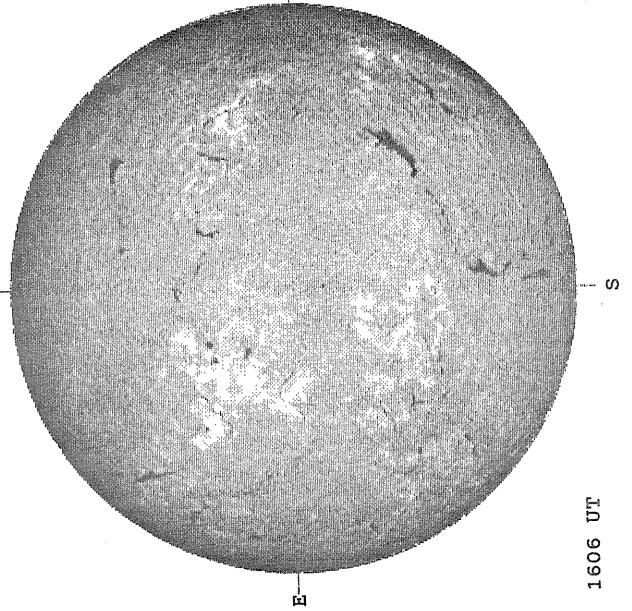
MT. WILSON MAGNETOGRAM

Delta_{ay} = 13.0
Delta_{ax} = 9.6



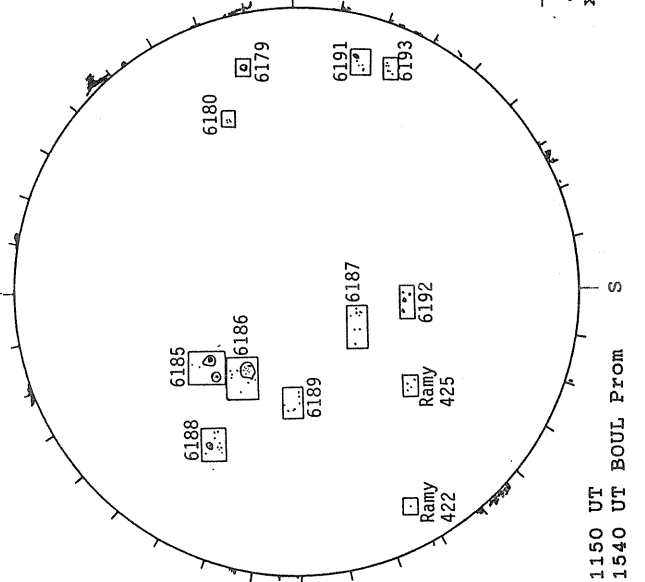
17.39 -
18.32 UT

SACRAMENTO PEAK H-ALPHA



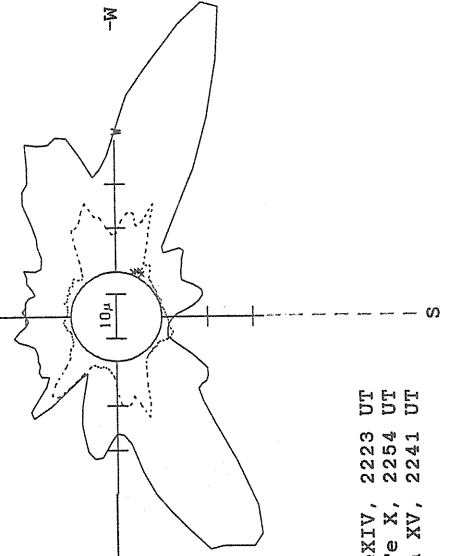
1606 UT

RAMEY SUNSPOT



1150 UT
1540 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

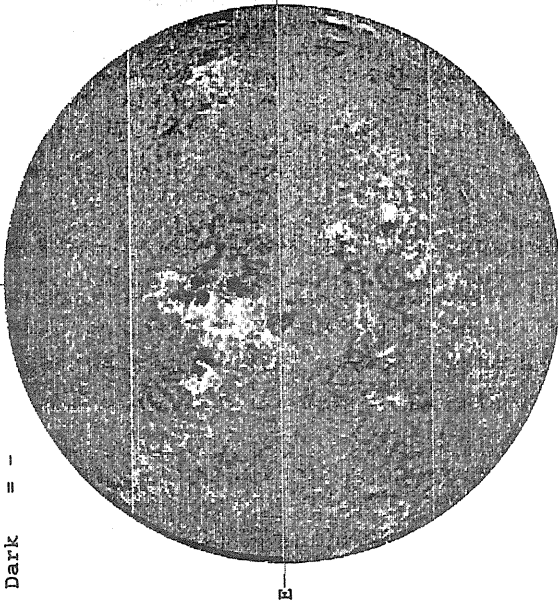


— Fe XIV, 2223 UT
... Fe X, 2254 UT
xxxxx Ca XV, 2241 UT

AUGUST 6, 1990 (P = 12.67, B₀ = 6.11, L₀ = 344.97)

KITT PEAK MAGNETOGRAM

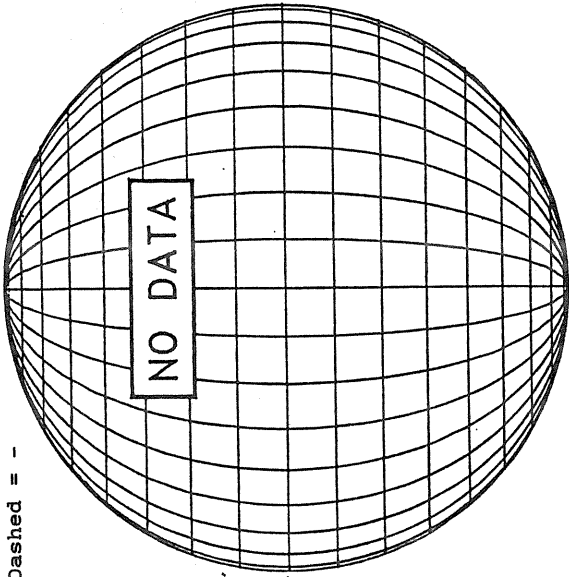
Bright = +
Dark = -



1439 UT

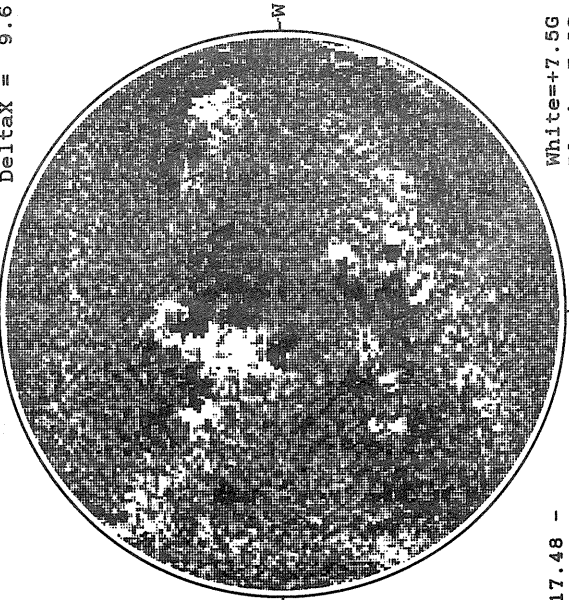
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

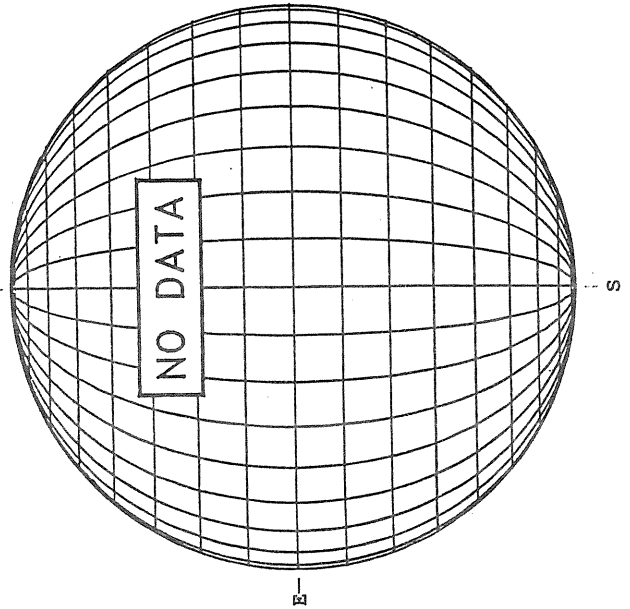
DeltaY = 13.0
DeltaX = 9.6



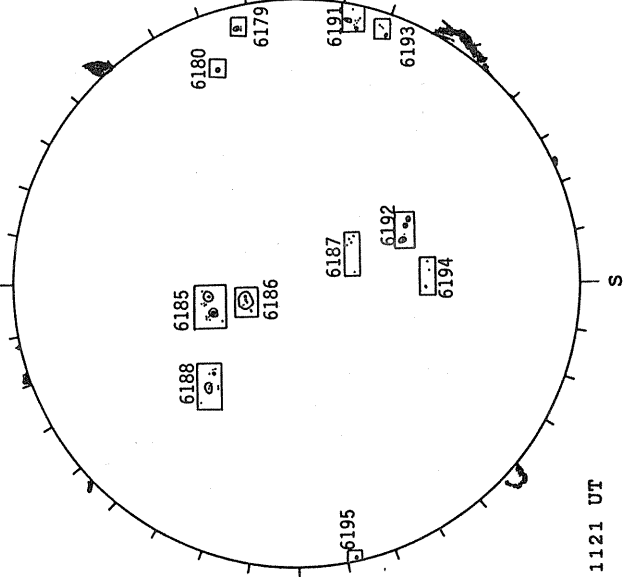
17.48 -
18.41 UT

White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

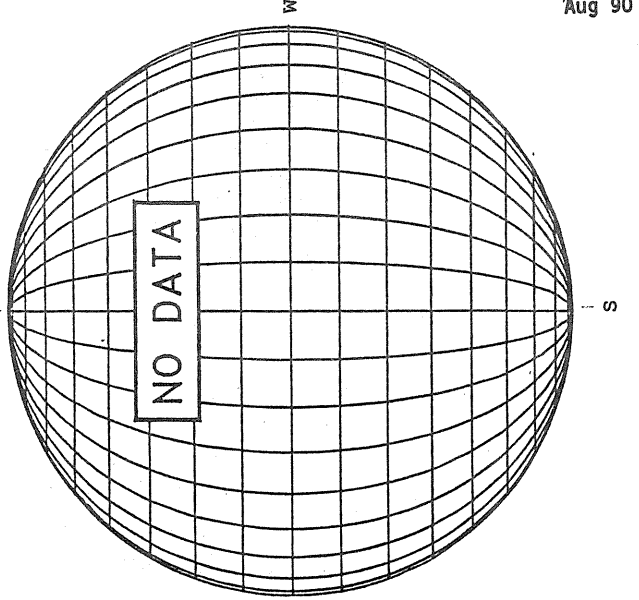


RAMEY SUNSPOT



1121 UT

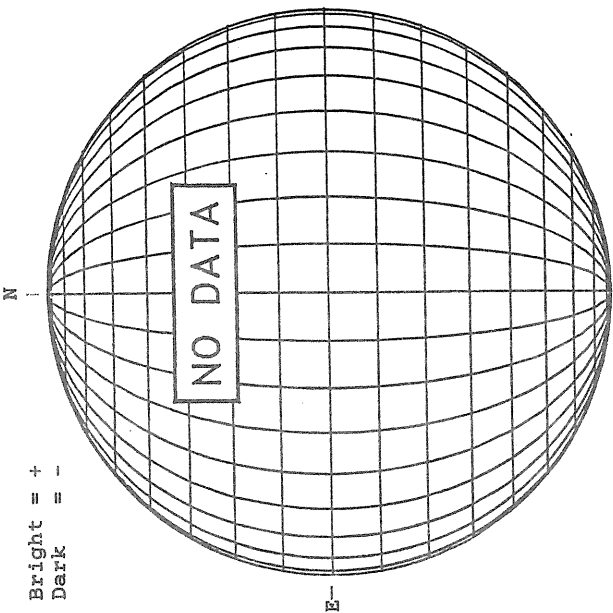
SACRAMENTO PEAK CORONA (1.15 Radii)



62
Aug 90

AUGUST 7, 1990 (P = 13.05, B₀ = 6.17, L₀ = 331.75)

KITT PEAK MAGNETOGRAM



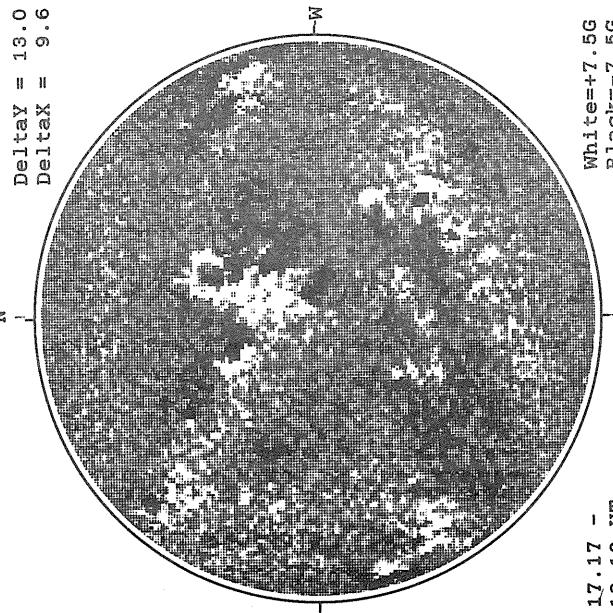
Bright = +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM

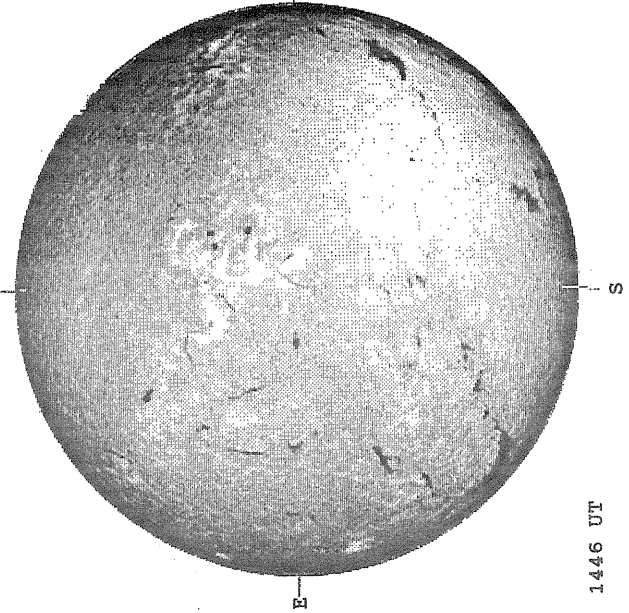


Delta_Y = 13.0
Delta_X = 9.6

White = +7.5G
Black = -7.5G

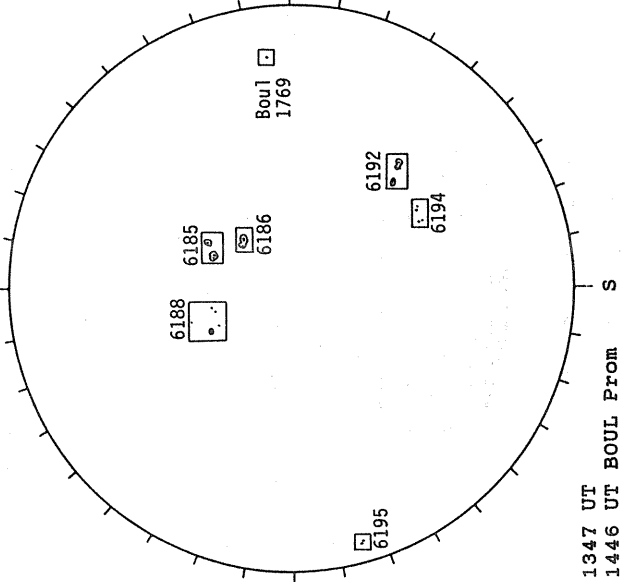
17.17 -
18.10 UT

BOULDER H-ALPHA



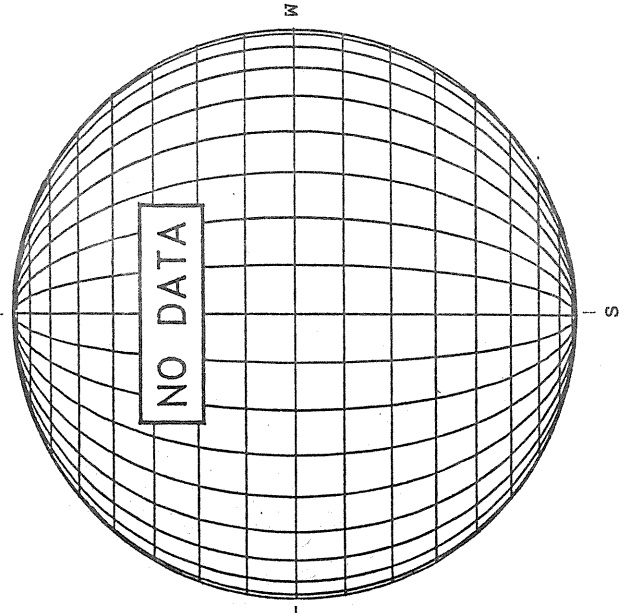
1446 UT

BOULDER SUNSPOT



1347 UT
1446 UT BOUL PROM

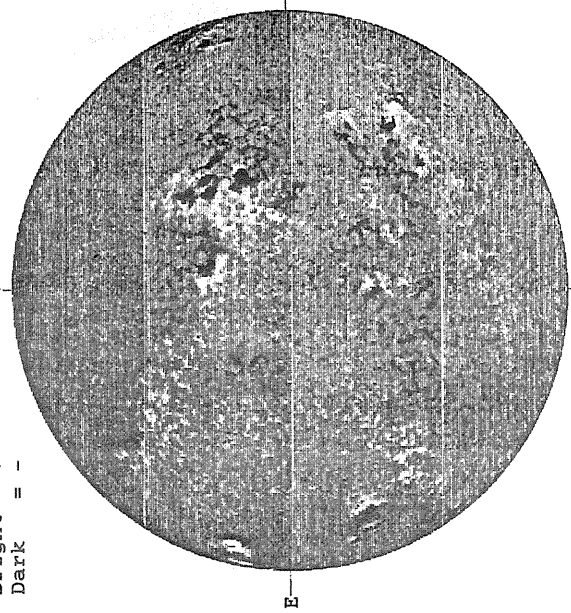
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 8, 1990 (P= 13.42, B₀ = 6.23, L₀ = 318.53)

KITT PEAK MAGNETOGRAM

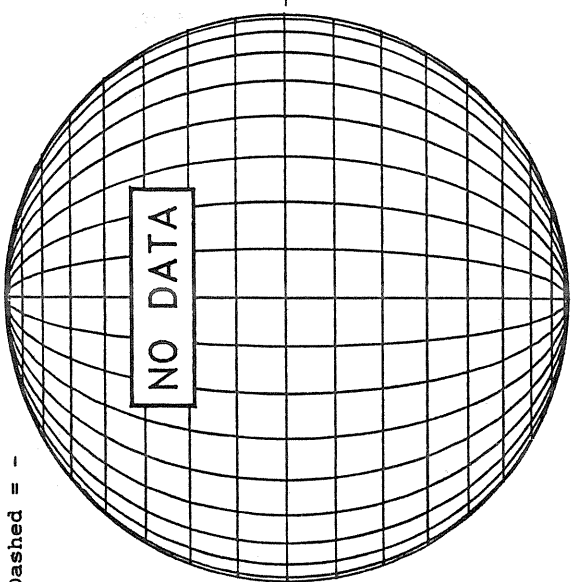
Bright = +
Dark = -



1604

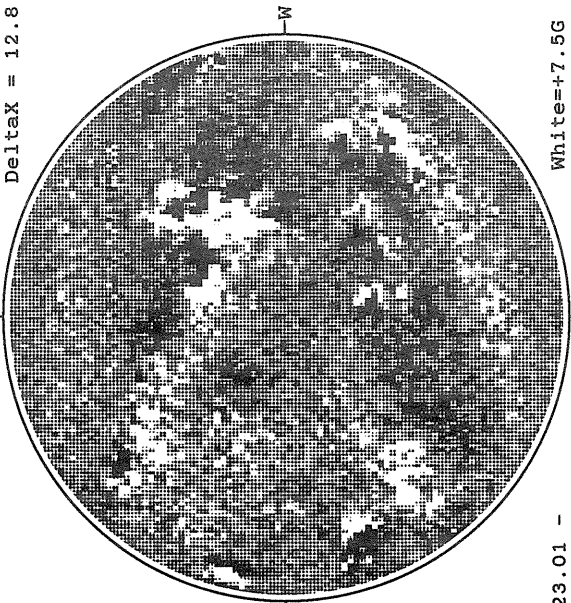
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

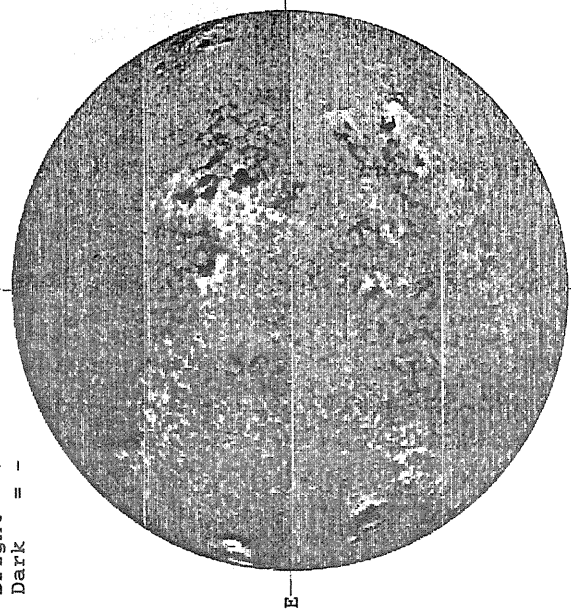
Delta Y = 20.2
Delta X = 12.8



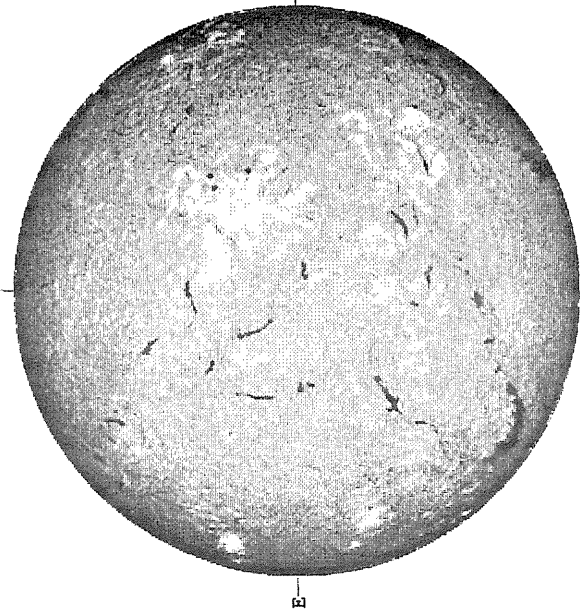
23.01 -
23.38 UT

White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

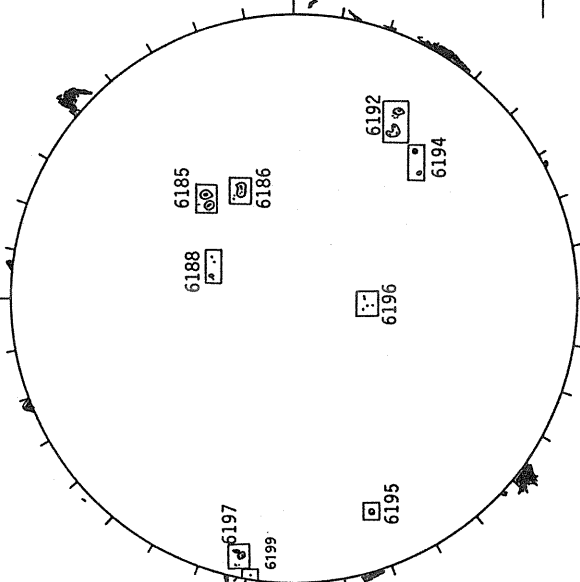


SACRAMENTO PEAK CORONA (1.15 Radii)



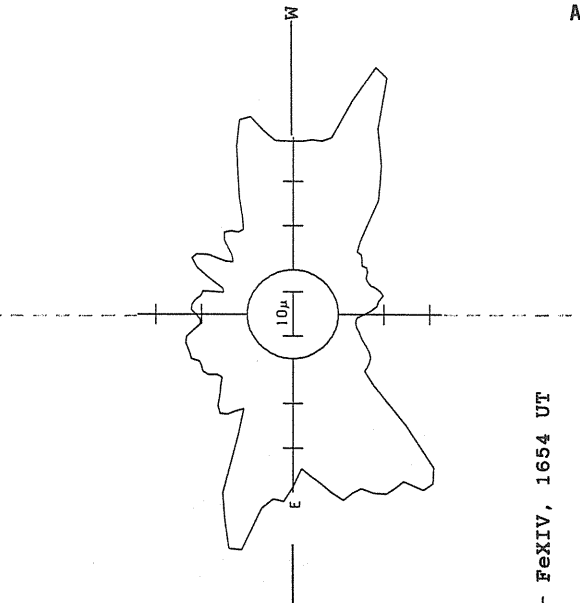
1520 UT

BOULDER SUNSPOT



1425 UT
1410 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)



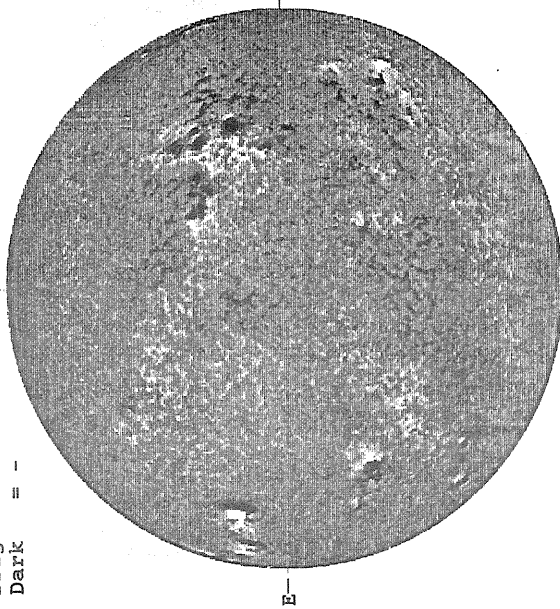
FeXIV, 1654 UT

64
Aug 90

AUGUST 9, 1990 (P = 13.79, B₀ = 6.29, I₀ = 305.30)

KITT PEAK MAGNETOGRAM

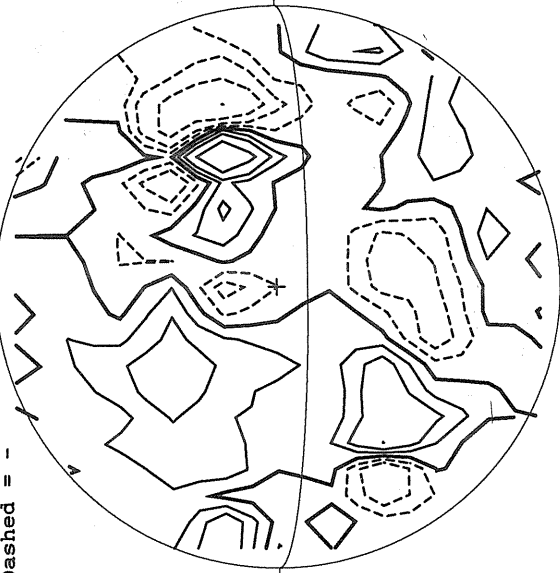
Bright = +
Dark = -



1510 UT

STANFORD MAGNETOGRAM

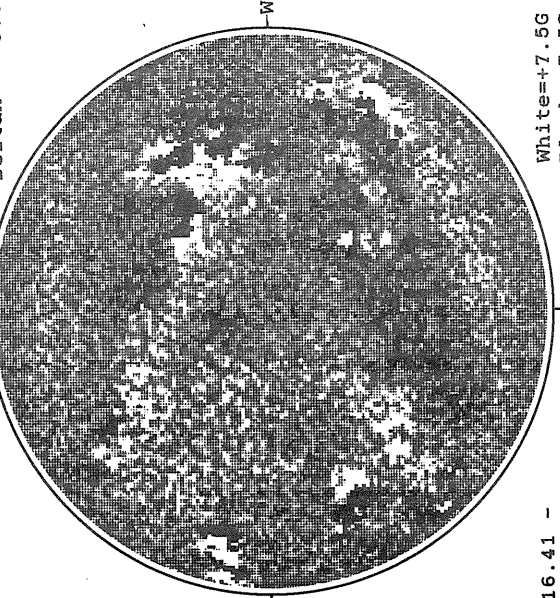
Solid = +
Dashed = -



2212 UT

MT. WILSON MAGNETOGRAM

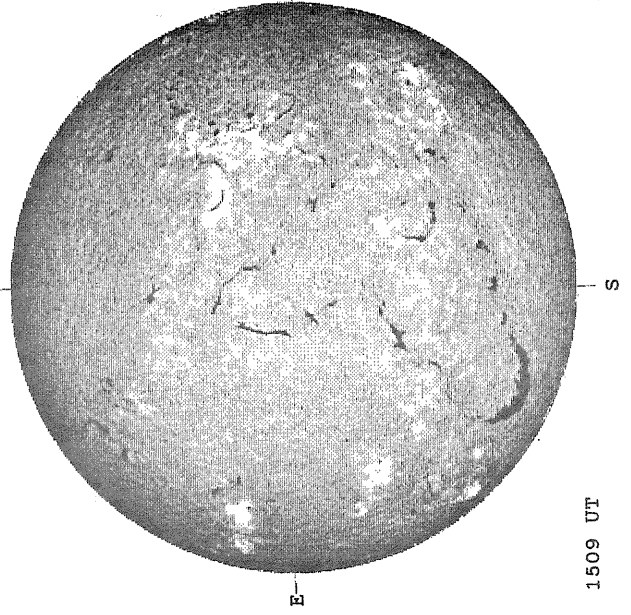
Delta_{ay} = 13.0
Delta_{ax} = 9.6



16.41 -
17.34 UT

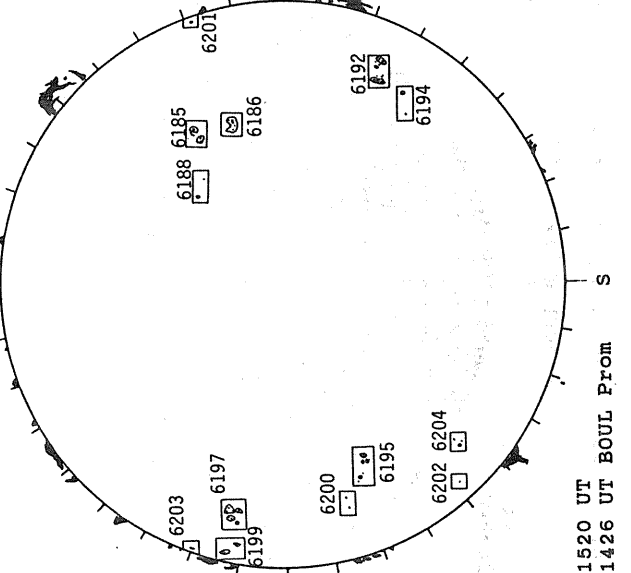
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



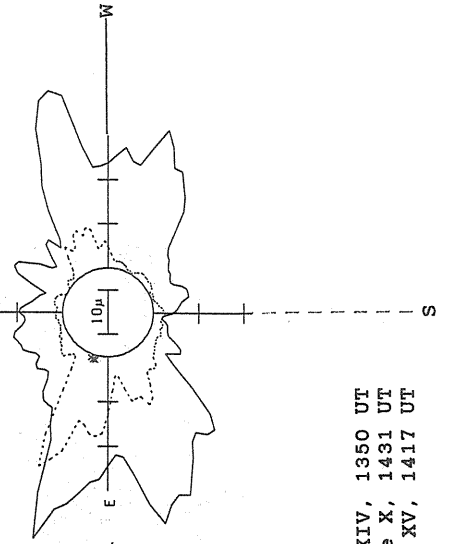
1509 UT

BOULDER SUNSPOT



1520 UT
1426 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



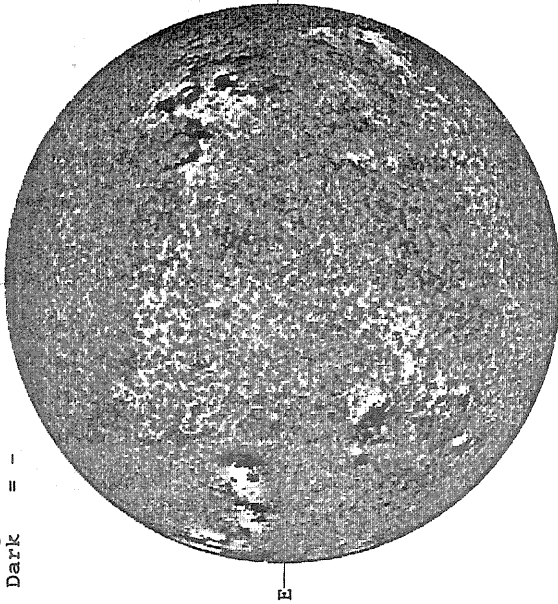
— Fe XIV, 1350 UT
.... Fe X, 1431 UT
xxxxx Ca XV, 1417 UT

AUGUST 10, 1990 (P= 14.16, B₀ = 6.35, L₀ = 292.08)

KITT PEAK MAGNETOGRAM

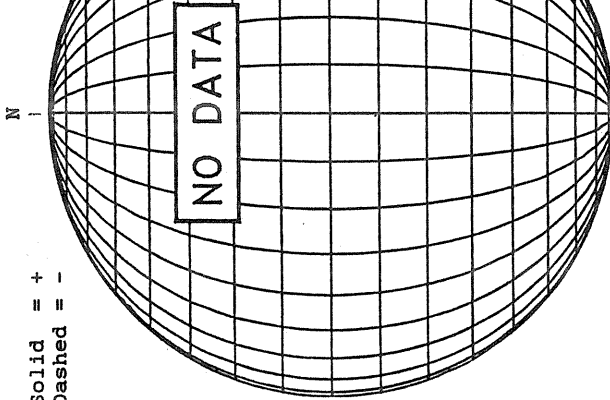
Bright = +
Dark = -

Solid = +
Dashed = -



1357 UT

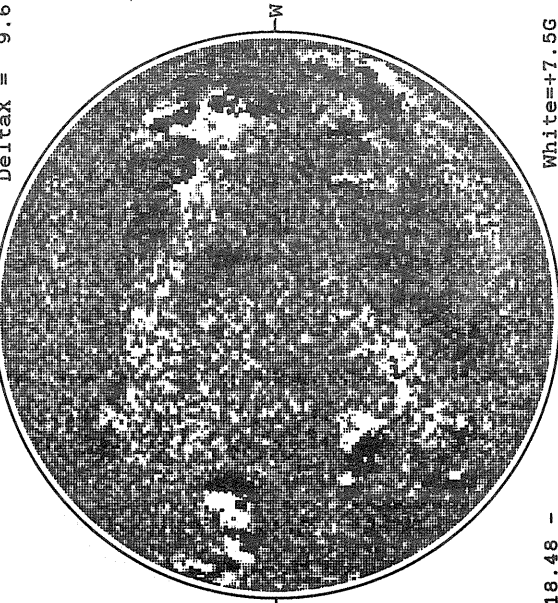
STANFORD MAGNETOGRAM



18.48 -
19.41 UT

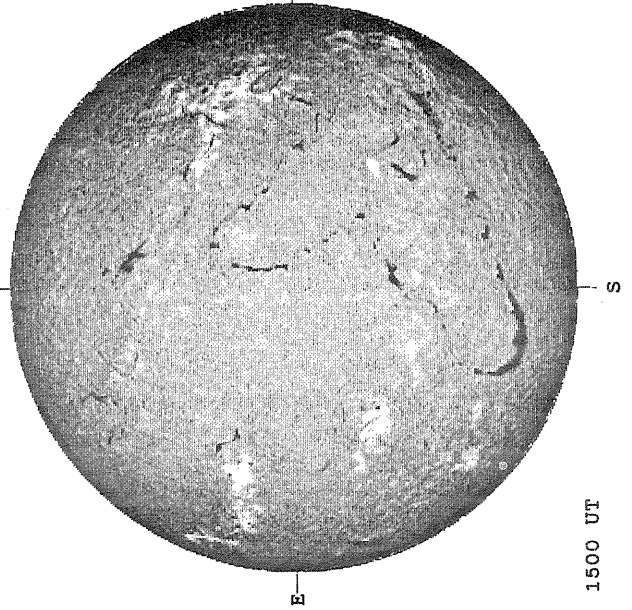
MT. WILSON MAGNETOGRAM

Delta_Y = 13.0
Delta_X = 9.6



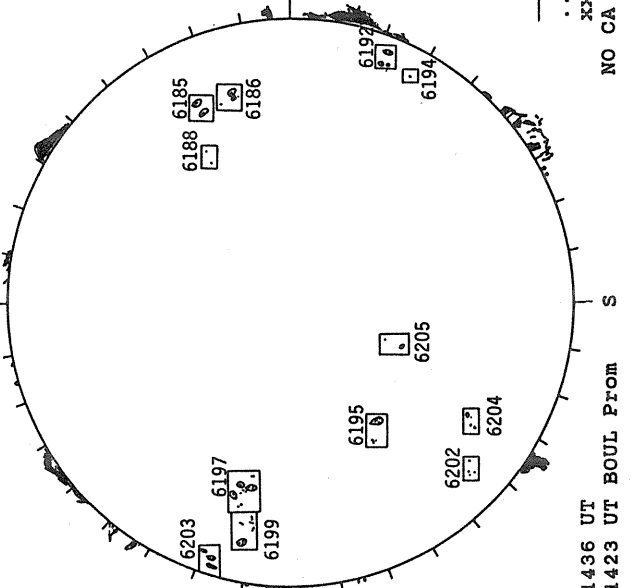
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



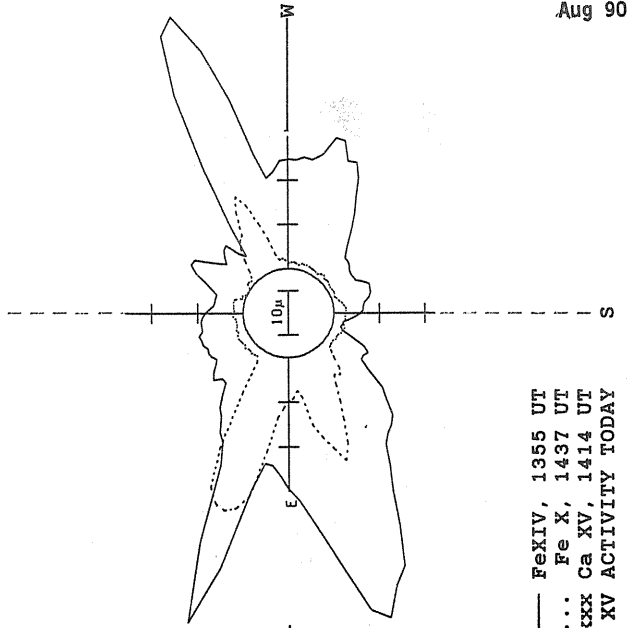
1500 UT

BOULDER SUNSPOT



1436 UT
1423 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)



66
Aug 90

AUGUST 11, 1990 (P = 14.52, B₀ = 6.41, L₀ = 278.86)

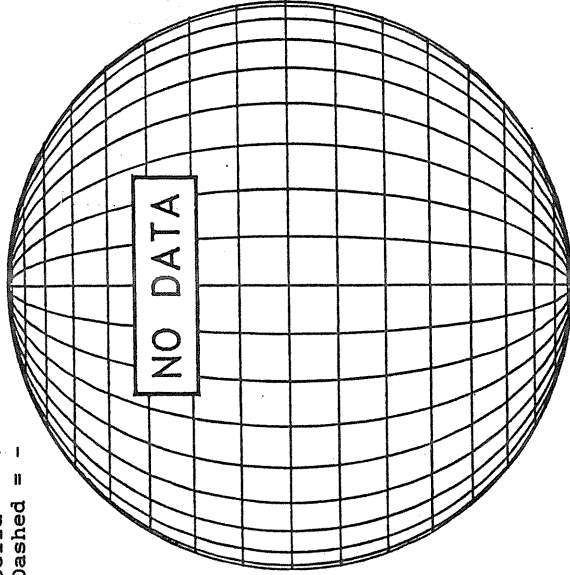
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

Solid = +
Dashed = -

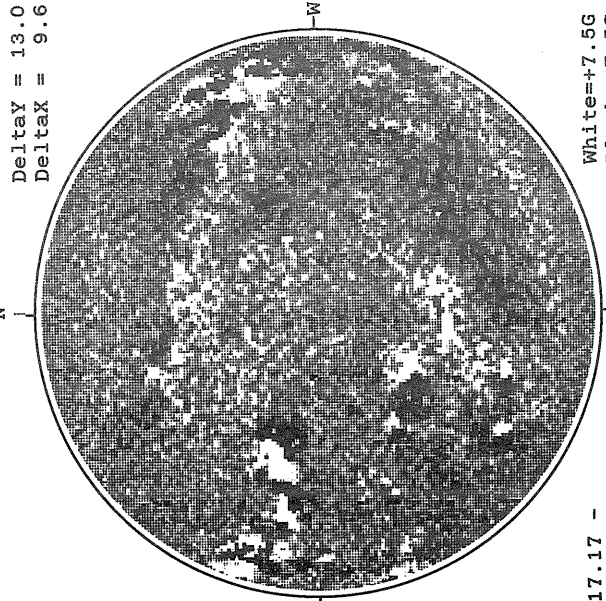
STANFORD MAGNETOGRAM

N



MT. WILSON MAGNETOGRAM

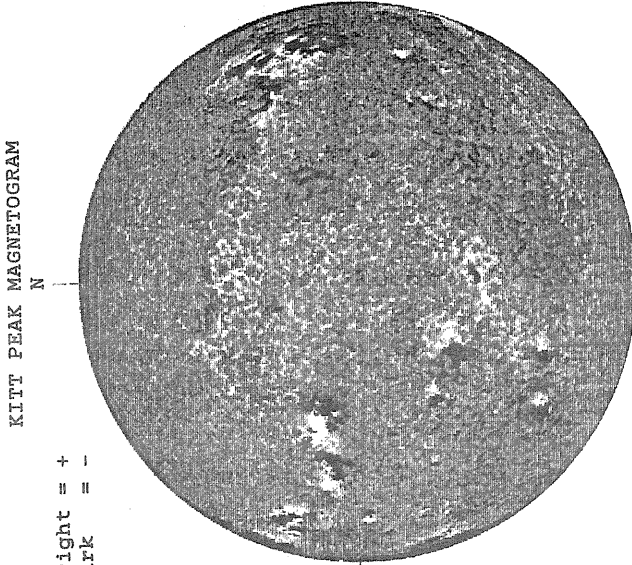
N



Delta_Y = 13.0
Delta_X = 9.6

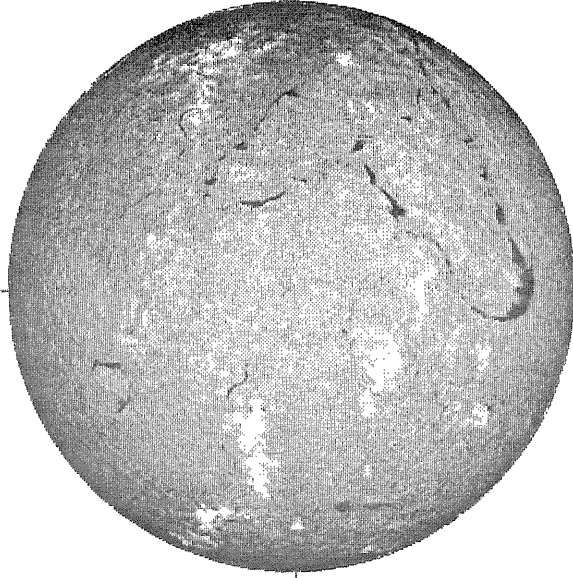
17.17 -
18.10 UT

White = +7.5G
Black = -7.5G



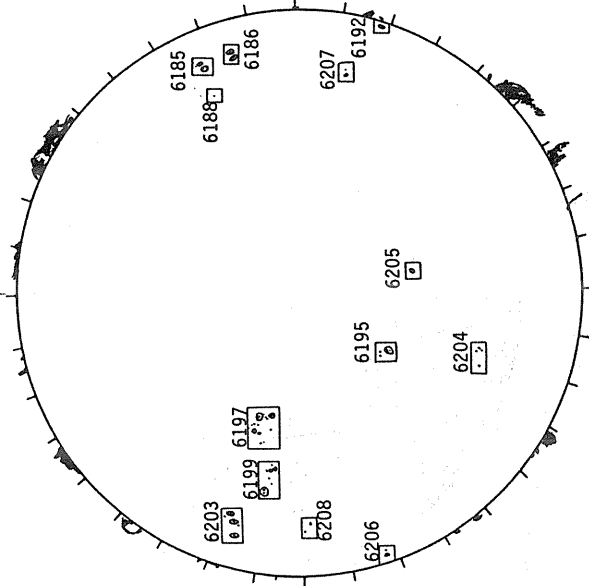
1507 UT

SACRAMENTO PEAK H-ALPHA



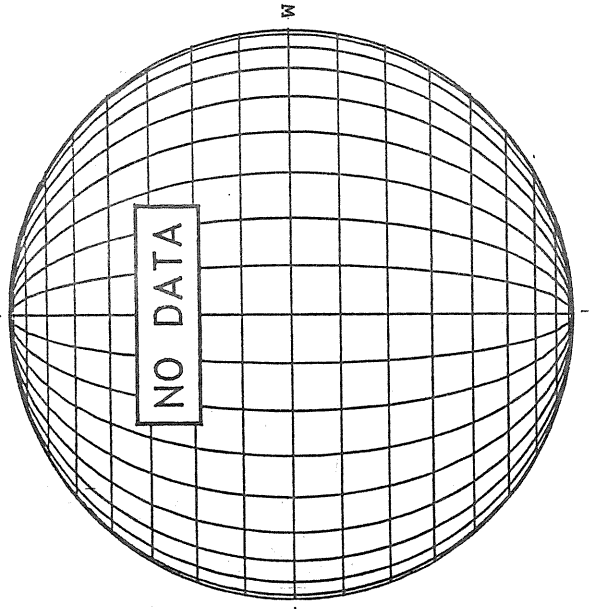
1540 UT

BOULDER SUNSPOT



1440 UT
1500 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

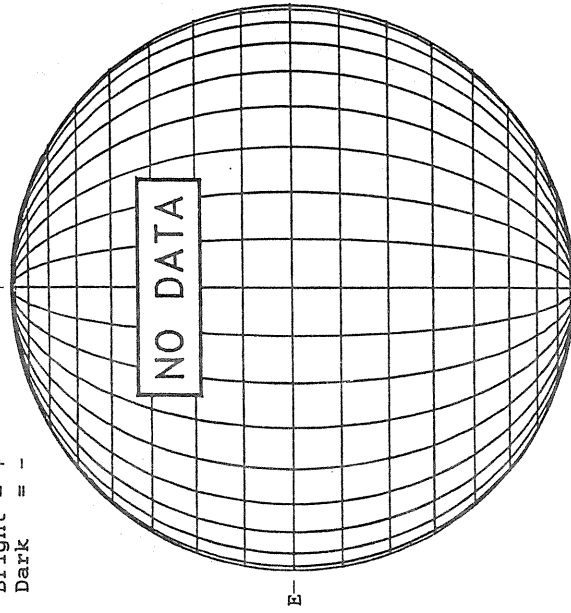


S

AUGUST 12, 1990 (P= 14.88, B₀ = 6.46, L₀ = 265.64)

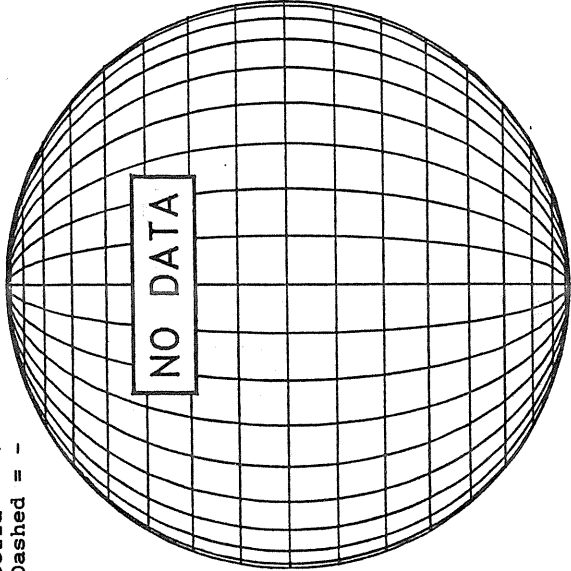
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



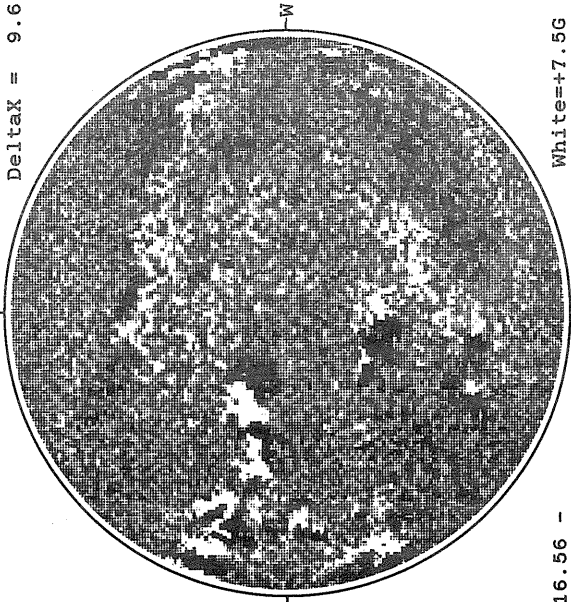
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

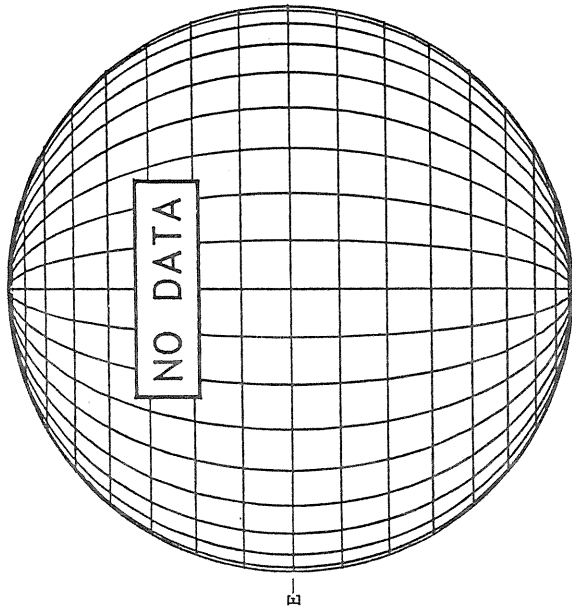
DeltaY = 13.0
DeltaX = 9.6



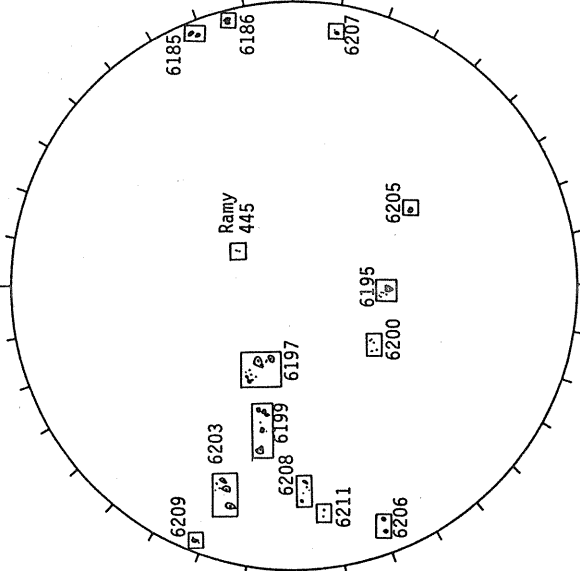
16.56 -
17.49 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

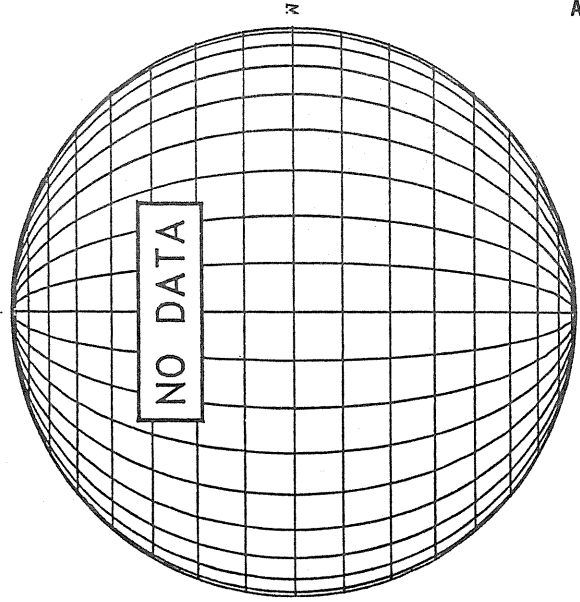


RAMEY SUNSPOT



1317 UT

SACRAMENTO PEAK CORONA (1.15 Radii)

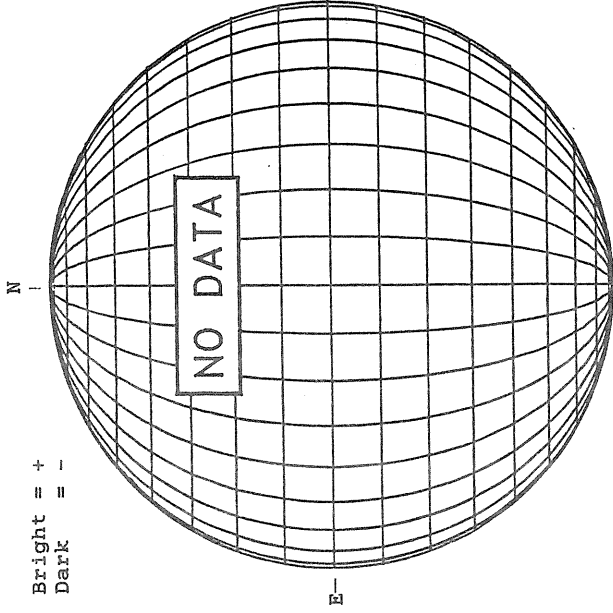


68
Aug 90

AUGUST 13, 1990 (P= 15.23, B₀ = 6.52, L₀ = 252.42)

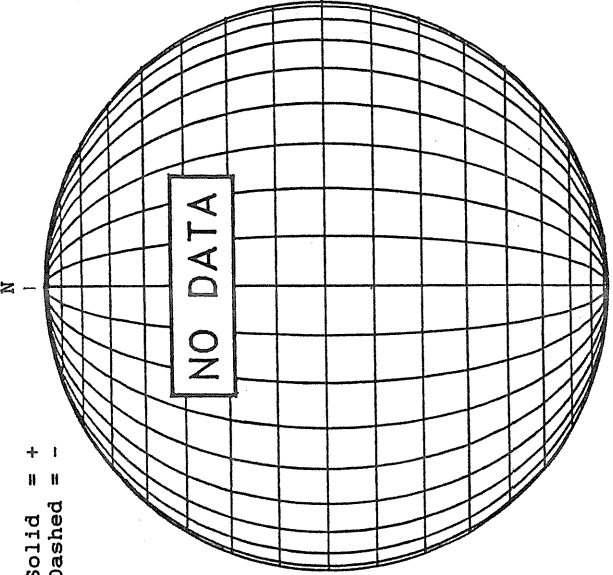
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



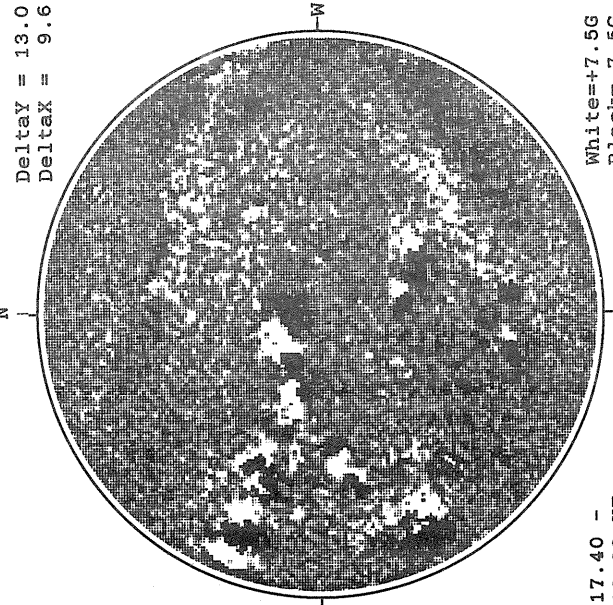
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

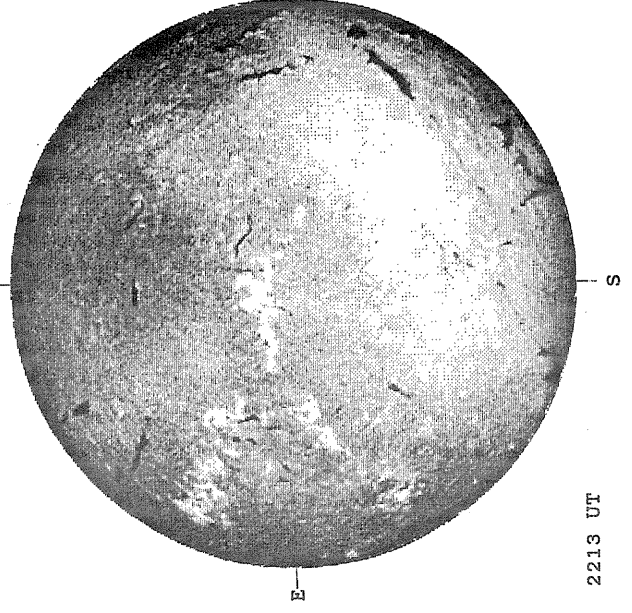
DeltaY = 13.0
DeltaX = 9.6



White=+7.5G
Black=-7.5G

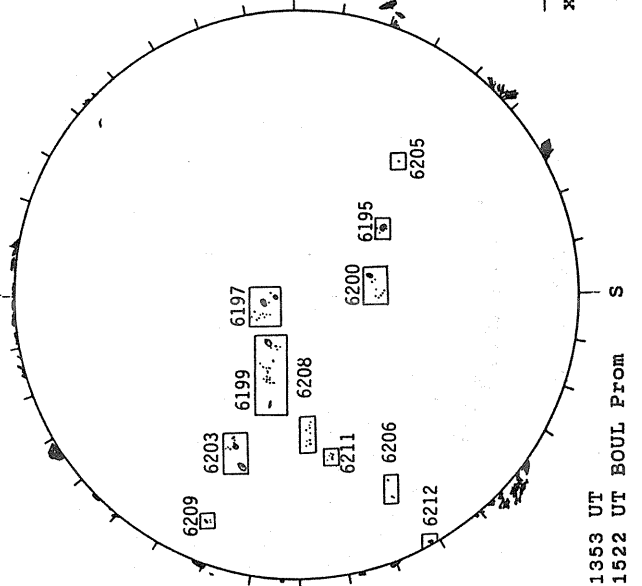
17.40 -
18.33 UT

SACRAMENTO PEAK H-ALPHA

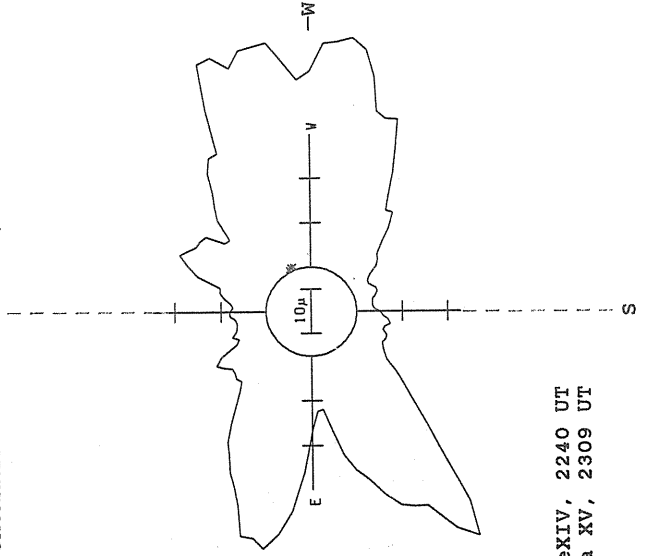


2213 UT

BOULDER SUNSPOT



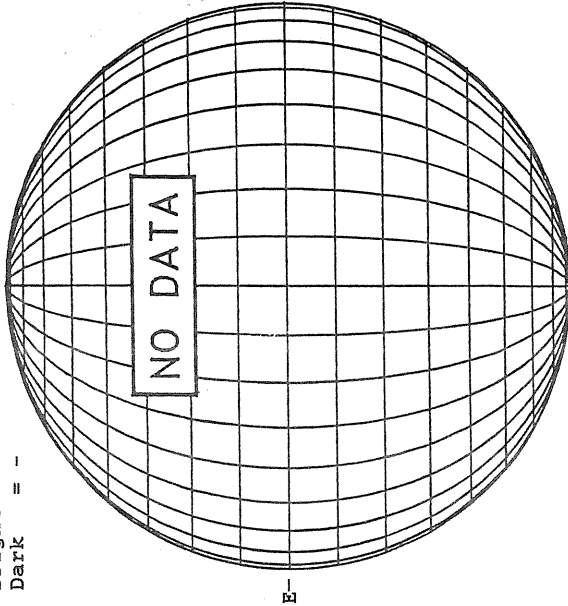
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 14, 1990 (P = 15.58, B₀ = 6.57, I₀ = 239.20)

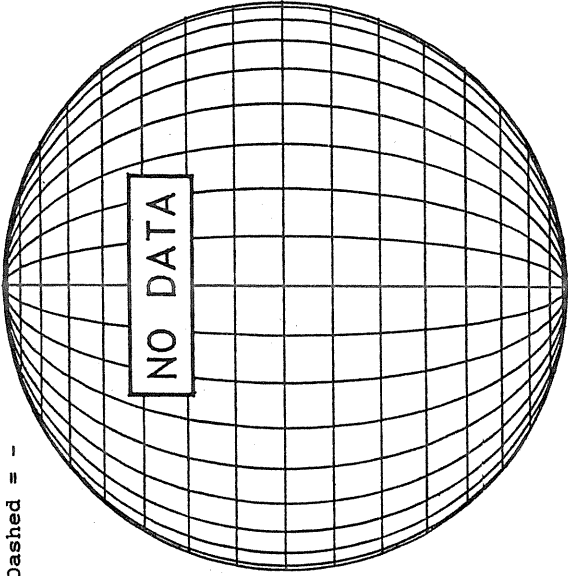
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



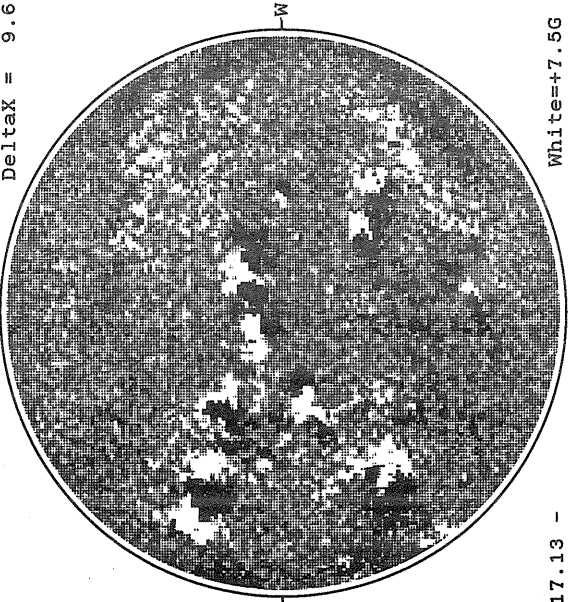
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

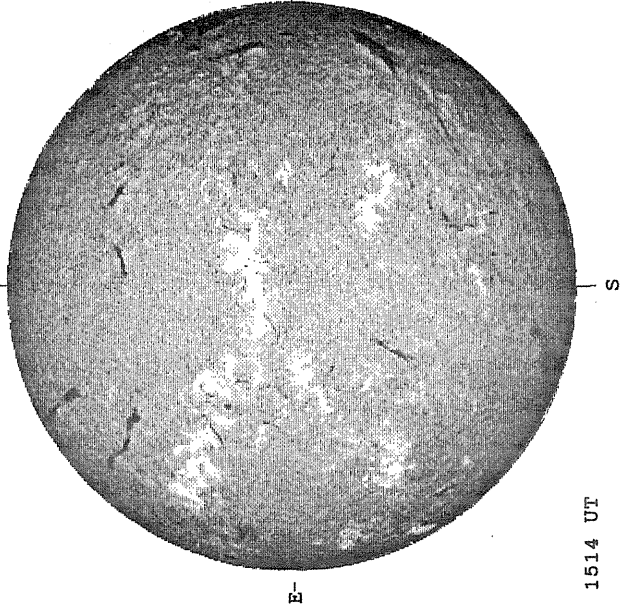
DeltaY = 13.0
DeltaX = 9.6



17.13 -
18.06 UT

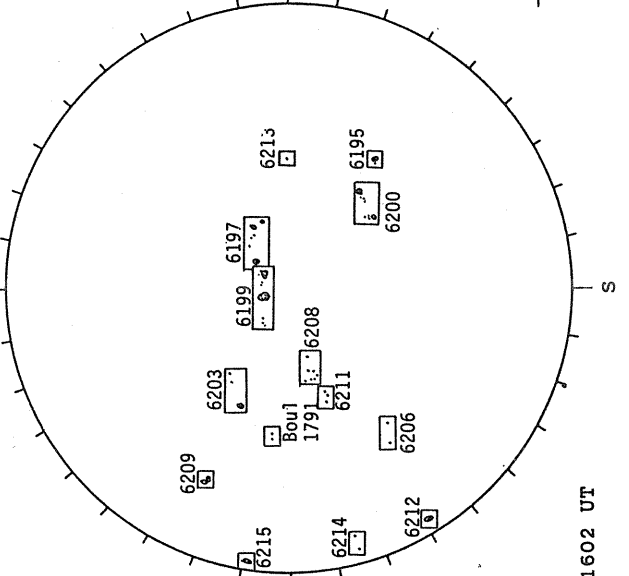
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



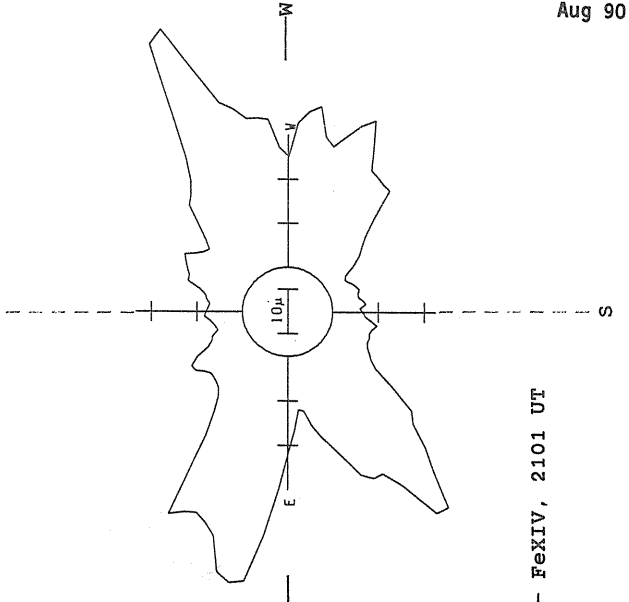
1514 UT

BOULDER SUNSPOT



1602 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



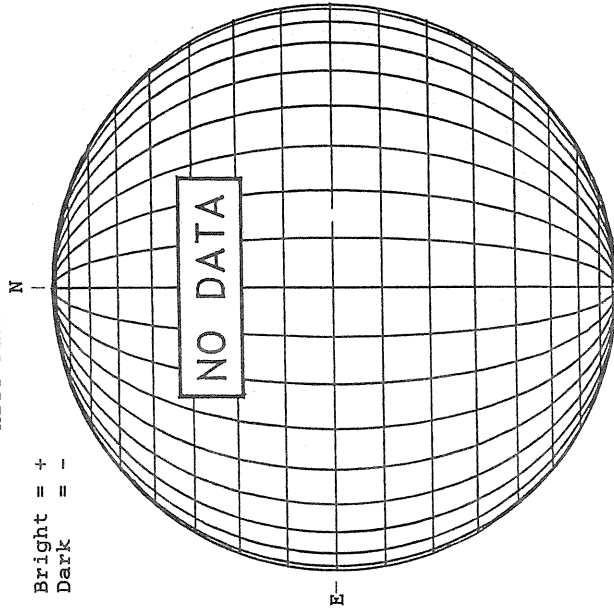
— FeXIV, 2101 UT

70
Aug 90

AUGUST 15, 1990 (P = 15.92, B₀ = 6.62, L₀ = 225.98)

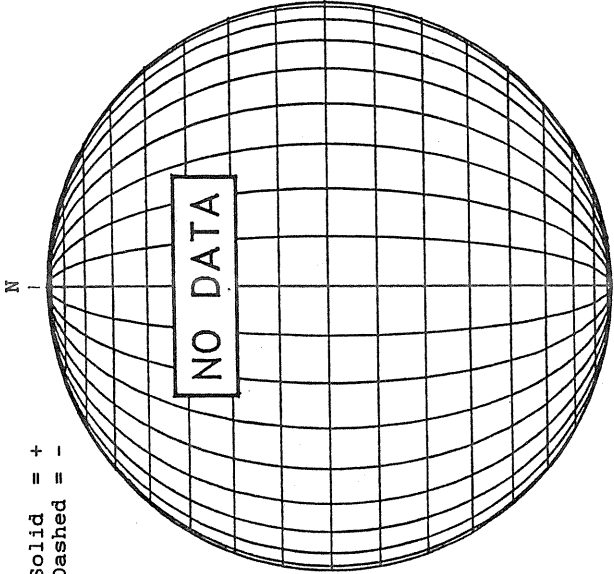
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



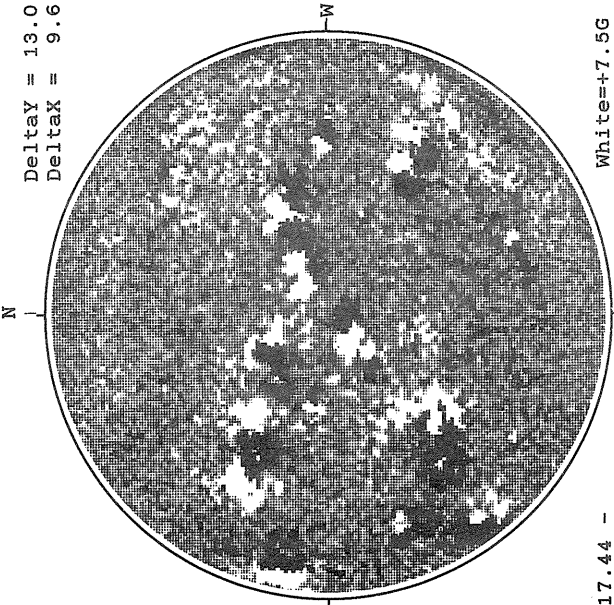
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

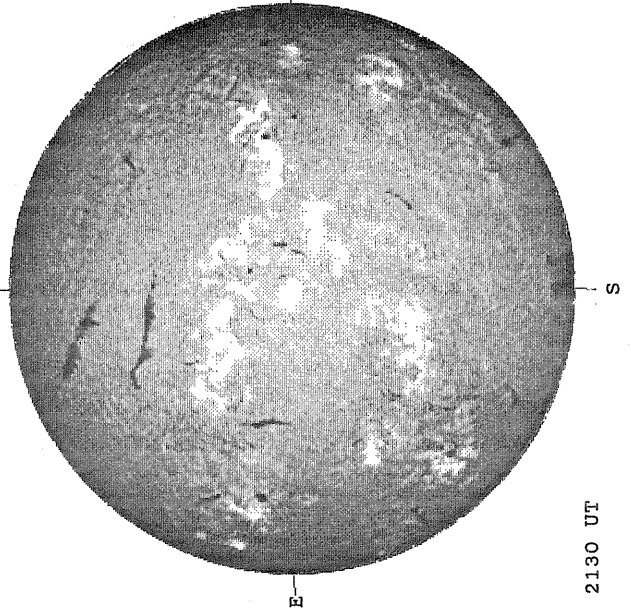
DeltaY = 13.0
DeltaX = 9.6



17.44 -
18.37 UT

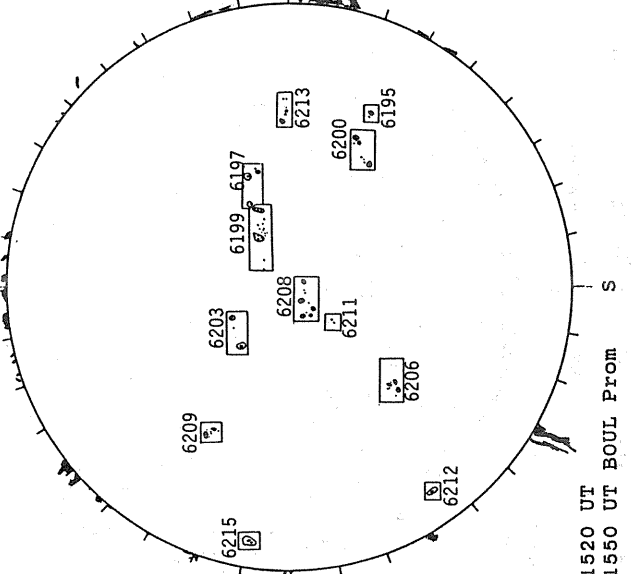
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



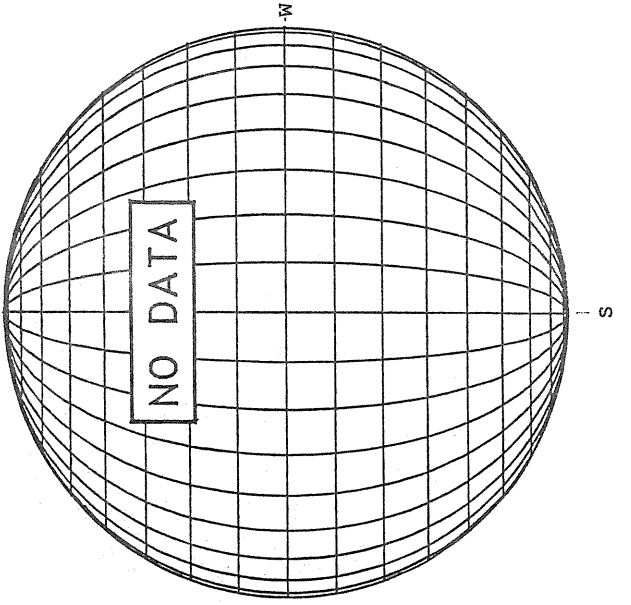
2130 UT

BOULDER SUNSPOT



1520 UT
1550 UT BOUL PROM

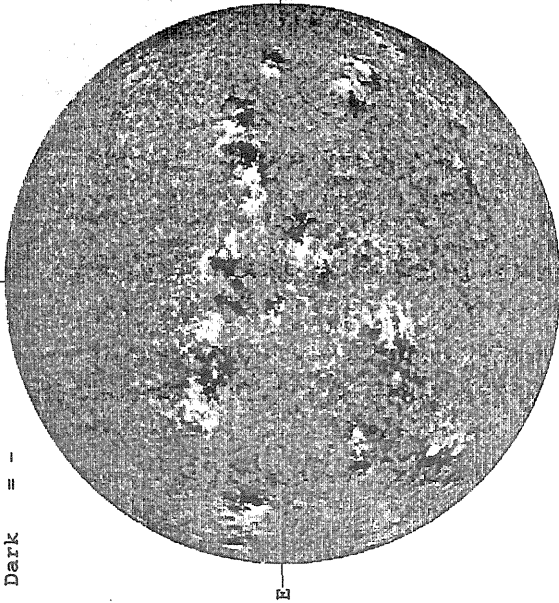
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 16, 1990 (P= 16.26, B₀ = 6.67, L₀ = 212.76)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1418 UT

STANFORD MAGNETOGRAM

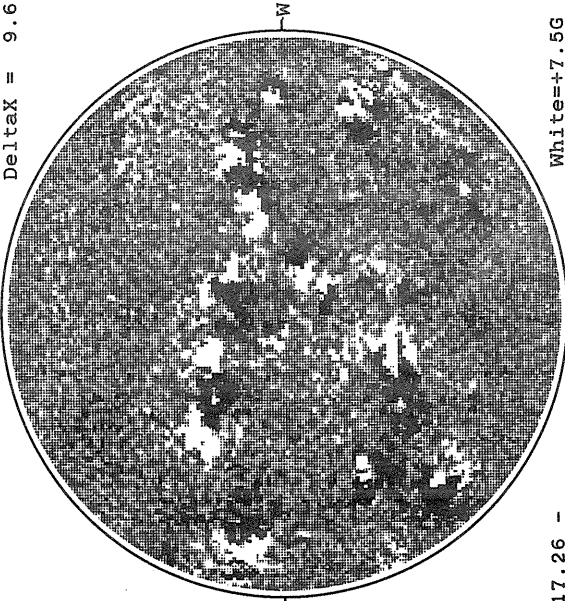
Solid = +
Dashed = -



1808 UT

MT. WILSON MAGNETOGRAM

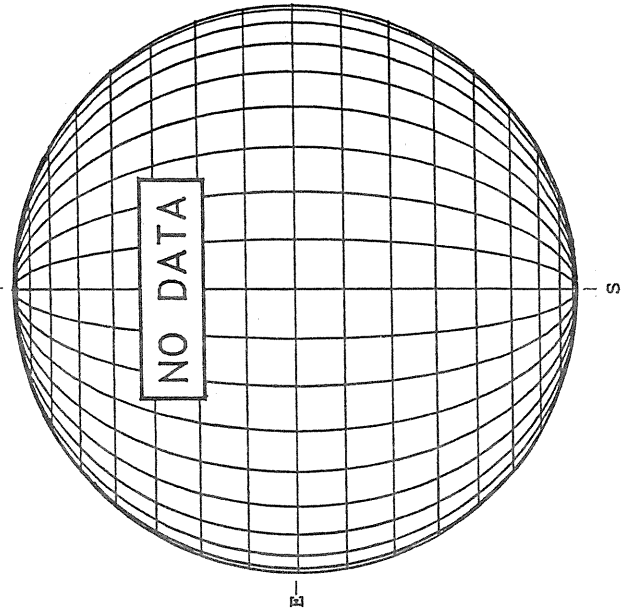
DeltaY = 13.0
DeltaX = 9.6



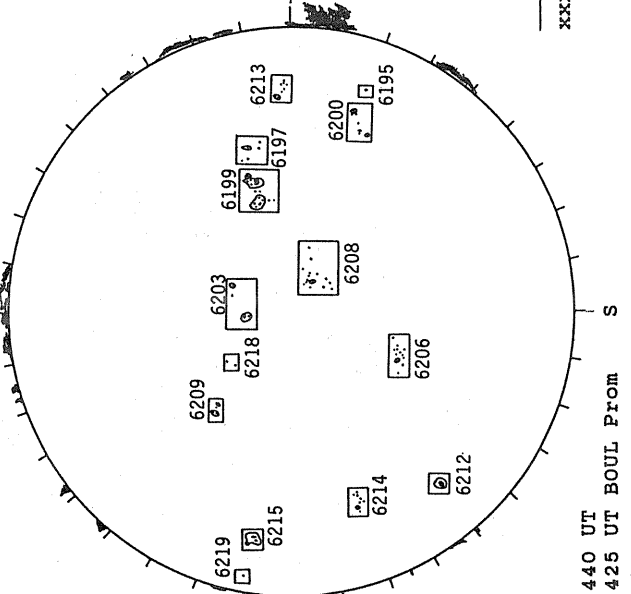
17.26 -
18.19 UT

White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA

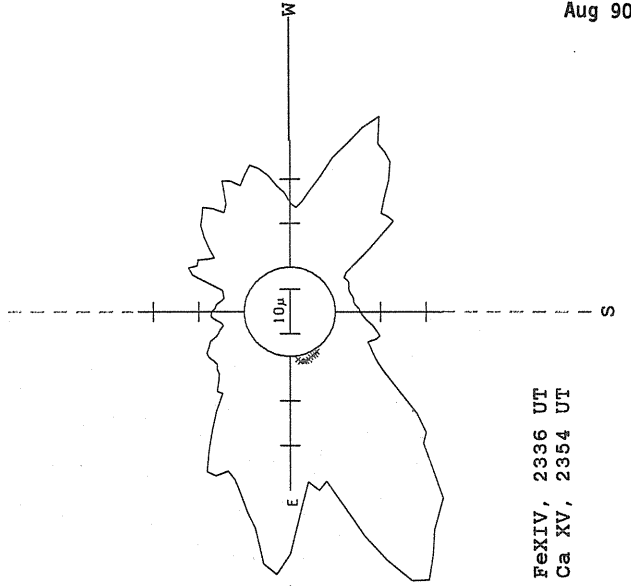


BOULDER SUNSPOT



1440 UT
1425 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)

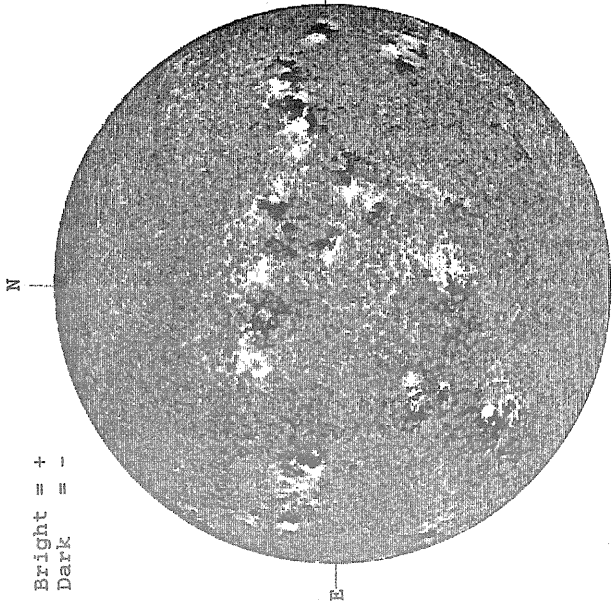


— FeXIV, 2336 UT
xxxx Ca XV, 2354 UT

72
Aug 90

AUGUST 17, 1990 (P= 16.60, B₀ = 6.71, L₀ = 199.55)

KITT PEAK MAGNETOGRAM



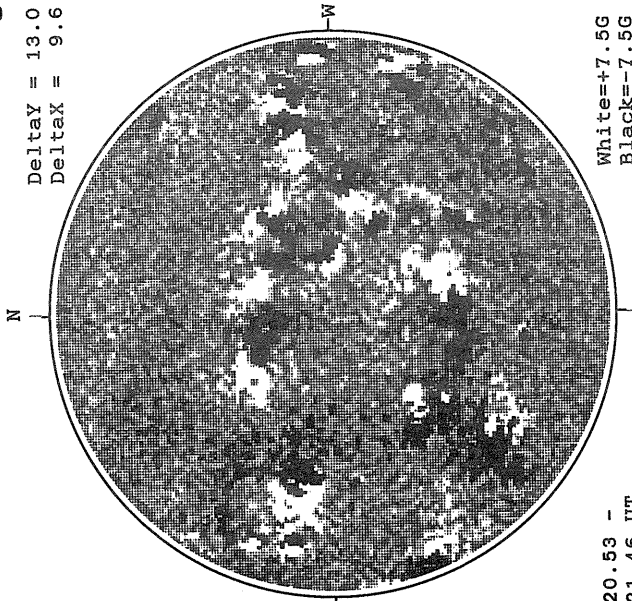
Bright = +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM



Delta_Y = 13.0
Delta_X = 9.6

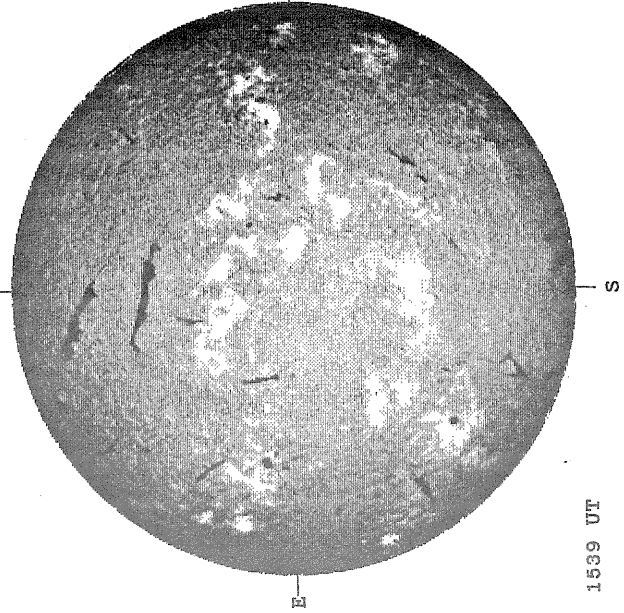
White = +7.5G
Black = -7.5G

20.53 -
21.46 UT

1352 UT

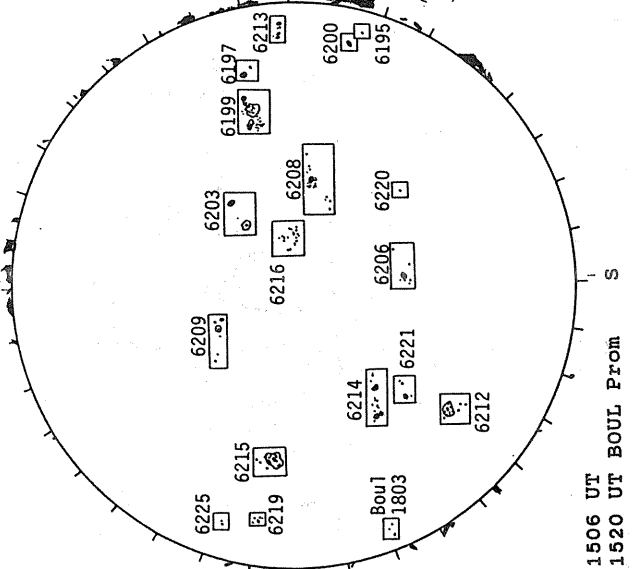
2346 UT

SACRAMENTO PEAK H-ALPHA



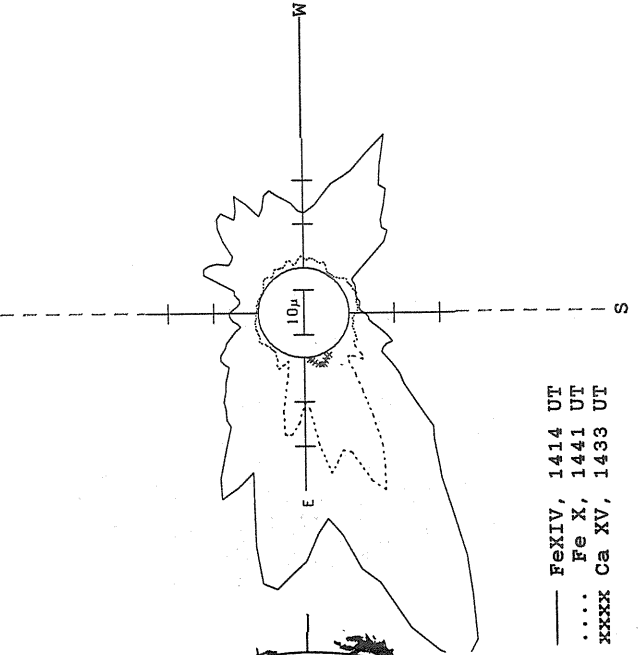
1539 UT

BOULDER SUNSPOT



1506 UT
1520 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

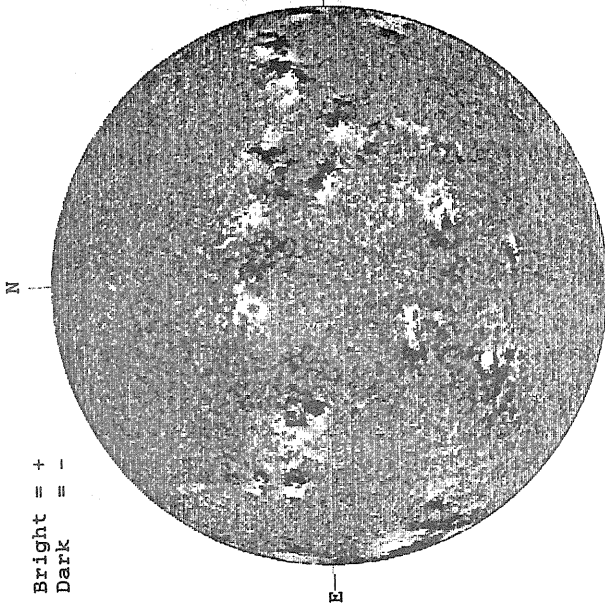


— Fe XIV, 1414 UT
.... Fe X, 1441 UT
xxxxx Ca XV, 1433 UT

AUGUST 18, 1990 (P= 16.93, B₀ = 6.76, I₀ = 186.33)

KITT PEAK MAGNETOGRAM

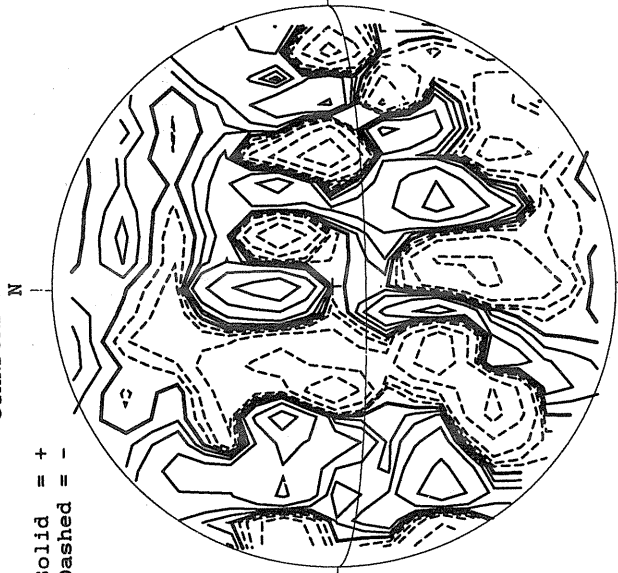
Bright = +
Dark = -



1401 UT

STANFORD MAGNETOGRAM

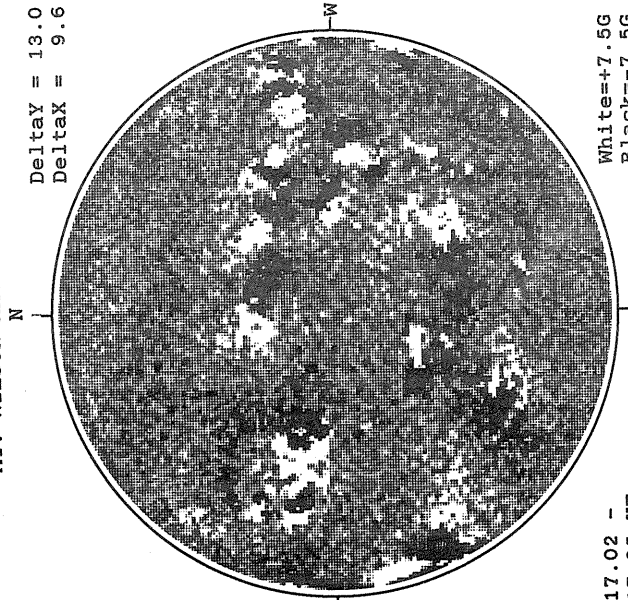
Solid = +
Dashed = -



2305 UT

MT. WILSON MAGNETOGRAM

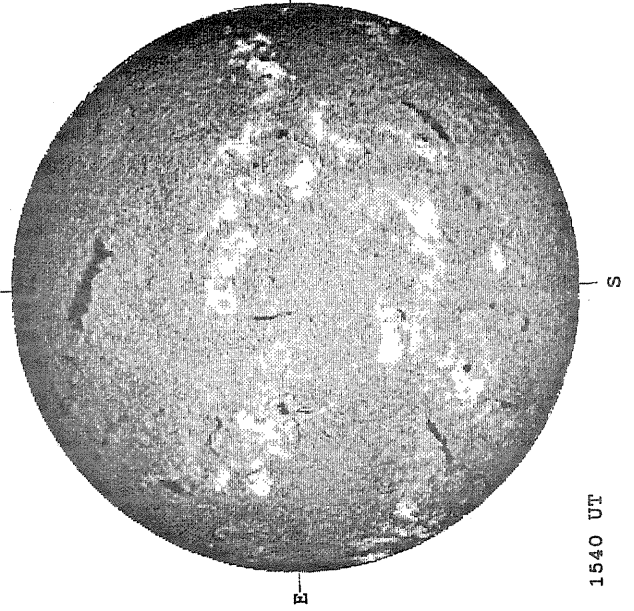
Delta_Y = 13.0
Delta_X = 9.6



17.02 -
17.95 UT

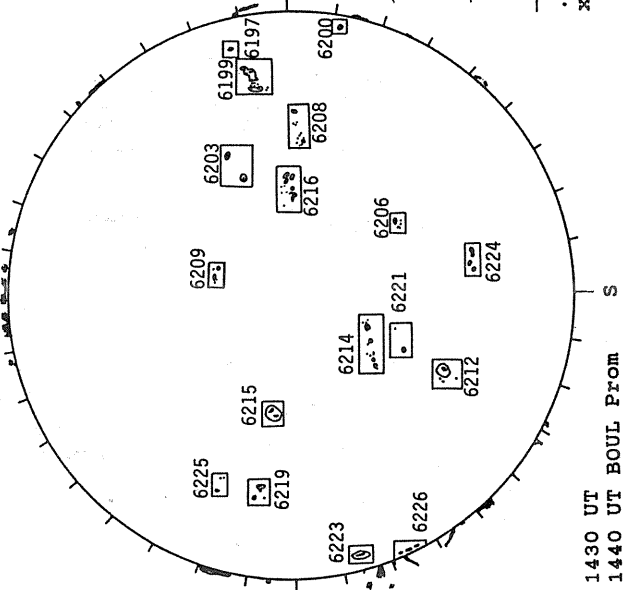
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



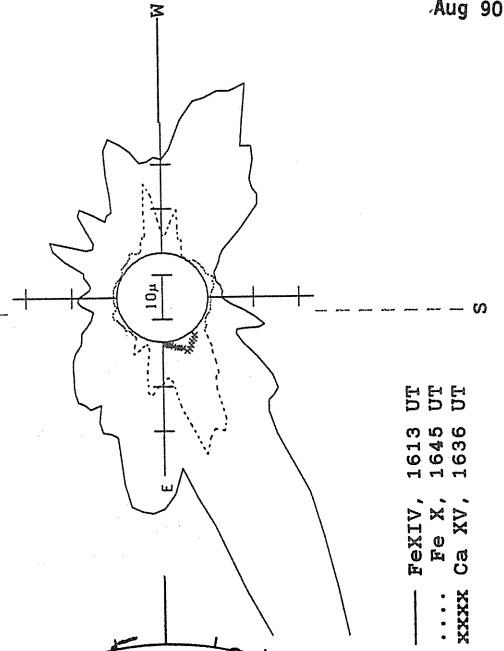
1540 UT

BOULDER SUNSPOT



1430 UT BOUL Prom
1440 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

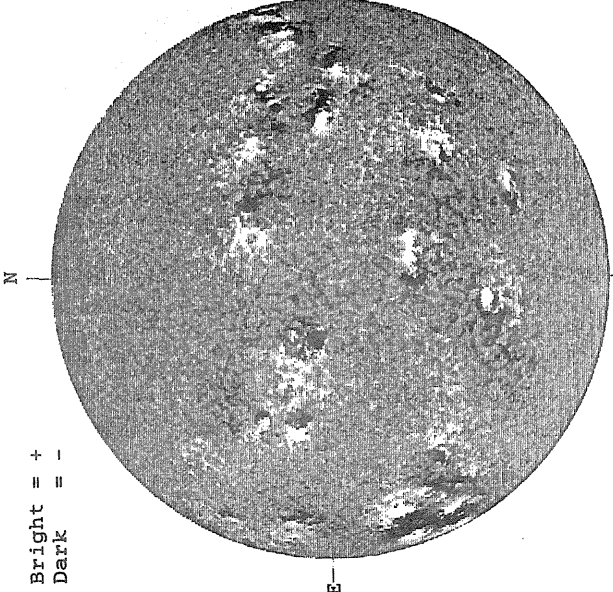


— Fe XIV, 1613 UT
.... Fe X, 1645 UT
xxxxx Ca XV, 1636 UT

74
Aug 90

AUGUST 19, 1990 (P= 17.25, B₀ = 6.80, L₀ = -173.11)

KITT PEAK MAGNETOGRAM



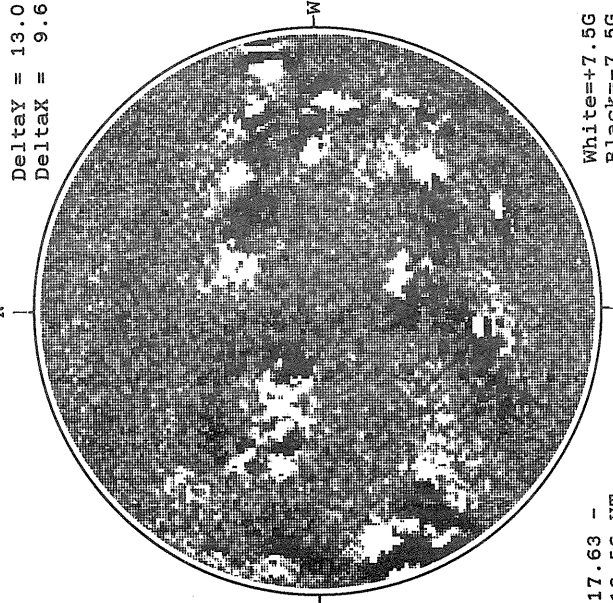
Bright = +
Dark = -

STANFORD MAGNETOGRAM



Solid = +
Dashed = -

MT. WILSON MAGNETOGRAM

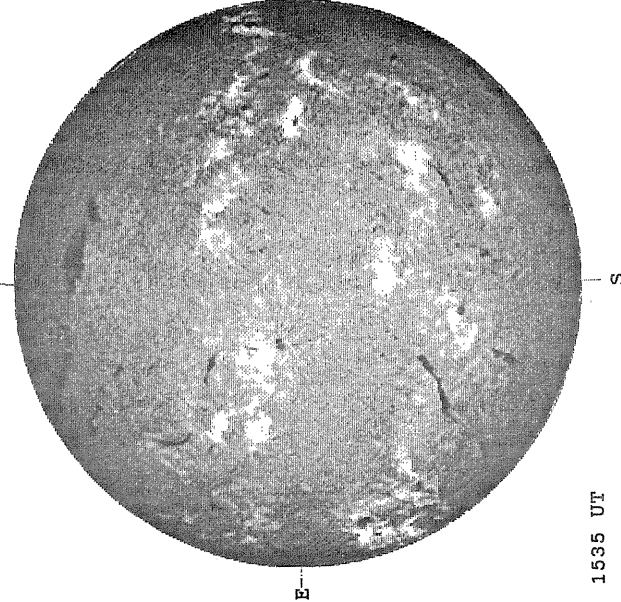


DeltaY = 13.0
DeltaX = 9.6

White=+7.5G
Black=-7.5G

17.63 -
18.56 UT

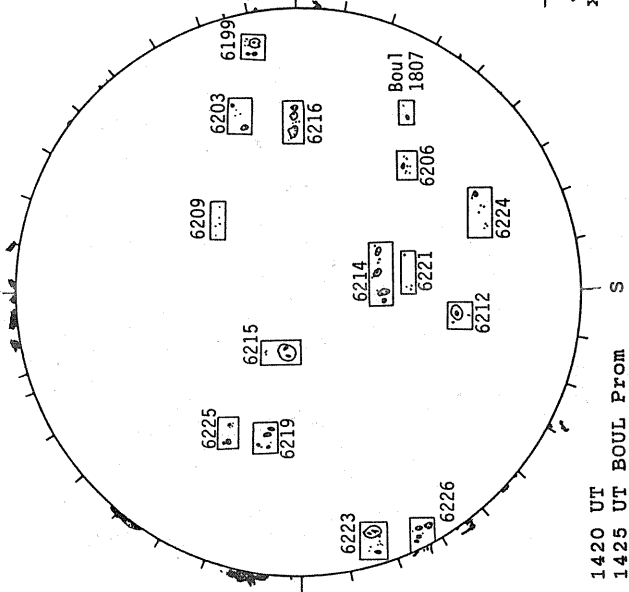
SACRAMENTO PEAK H-ALPHA



1436 UT

1535 UT

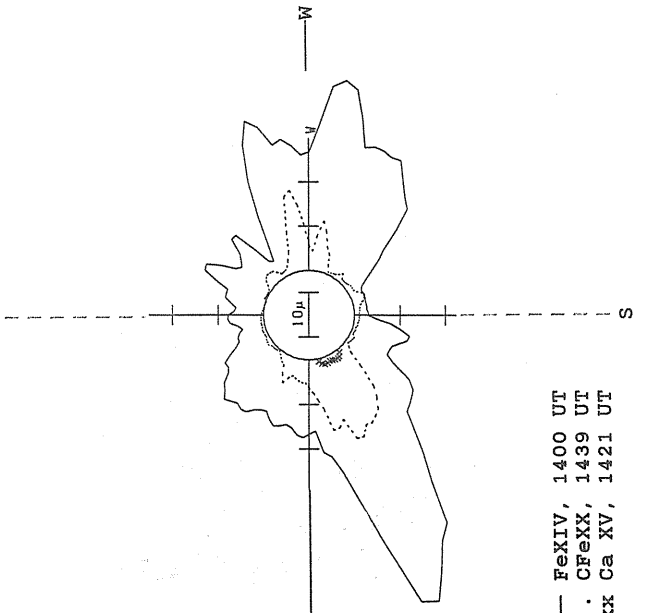
BOULDER SUNSPOT



1857 UT

1420 UT
1425 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

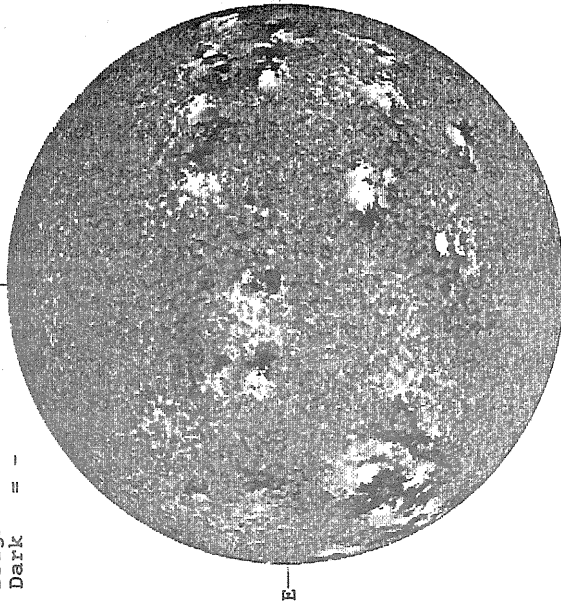


— FeXIV, 1400 UT
.... CFeXX, 1439 UT
xxxxx Ca XV, 1421 UT

AUGUST 20, 1990 (P= 17.57, B₀ = 6.84, L₀ = 159.90)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1612 UT

STANFORD MAGNETOGRAM

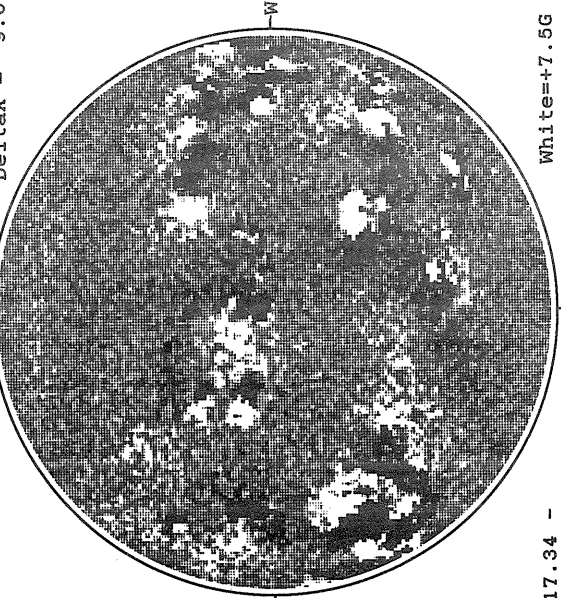
Solid = +
Dashed = -



2308 UT

MT. WILSON MAGNETOGRAM

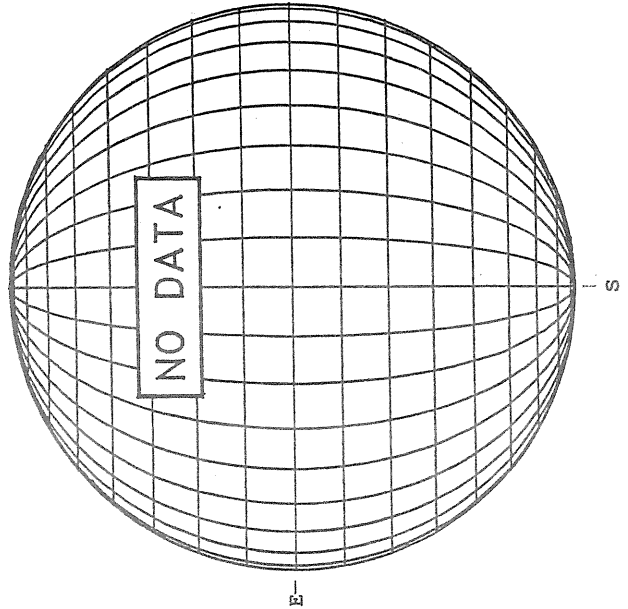
Delta_γ = 12.9
Delta_α = 9.6



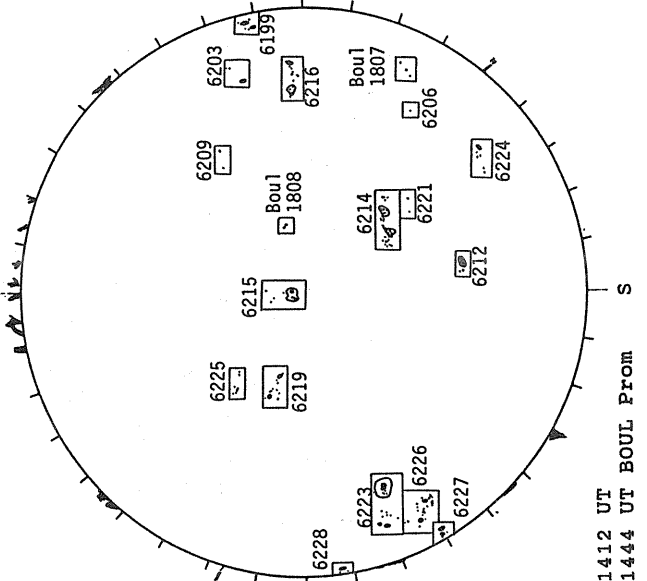
17.34 -
18.27 UT

White=+7.5G
Black=-7.5G

BOULDER H-ALPHA

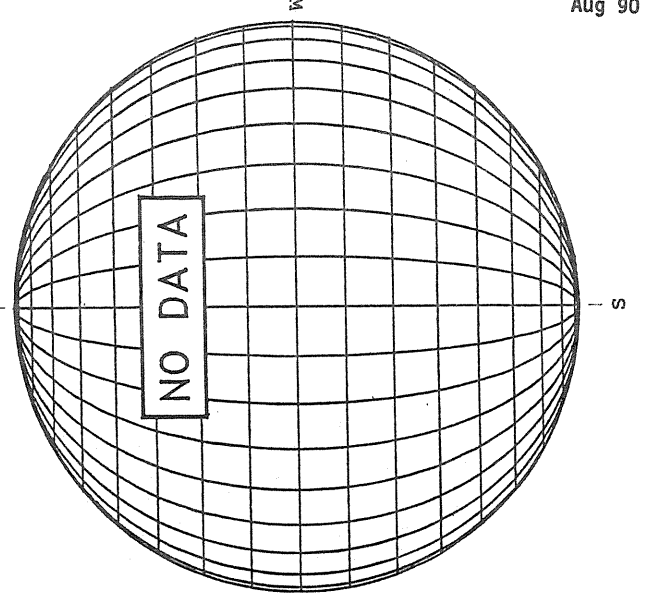


BOULDER SUNSPOT



1412 UT
1444 UT BOUL FROM

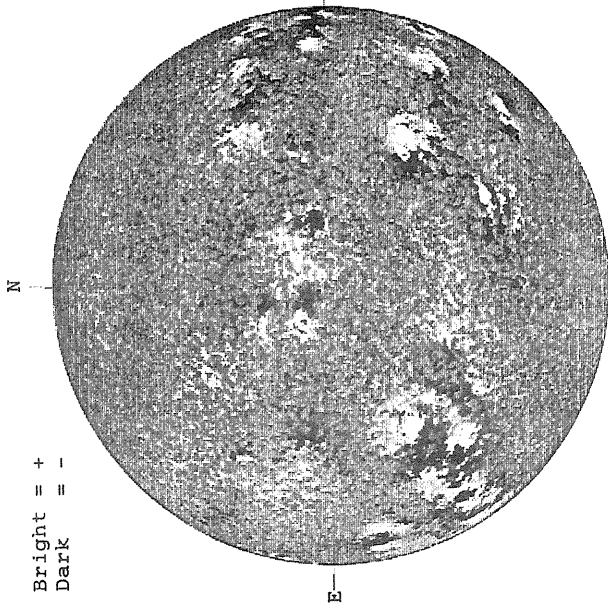
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 21, 1990 (P = 17.89, B₀ = 6.88, L₀ = 146.68)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1531 UT

STANFORD MAGNETOGRAM

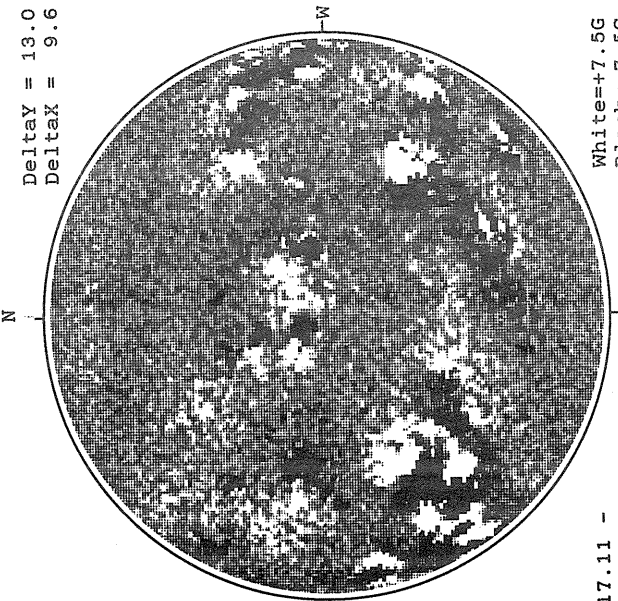
Solid = +
Dashed = -



2300 UT

MT. WILSON MAGNETOGRAM

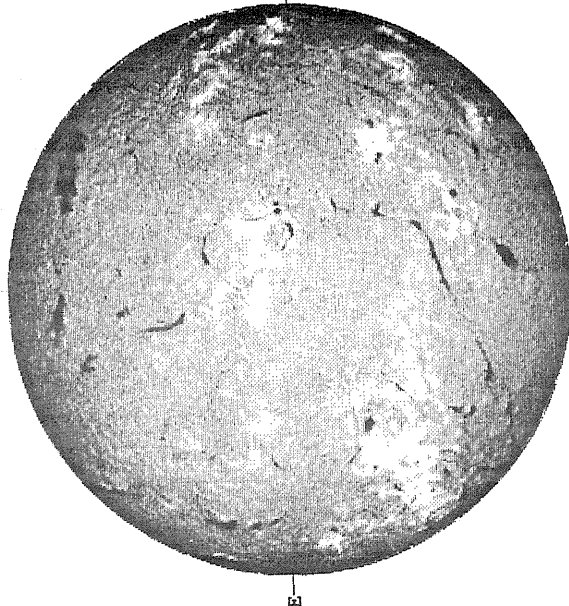
Delta_Y = 13.0
Delta_X = 9.6



17.11 -
18.05 UT

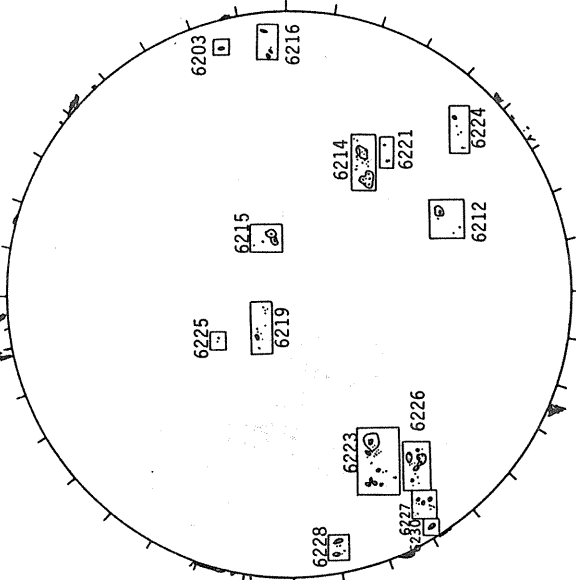
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



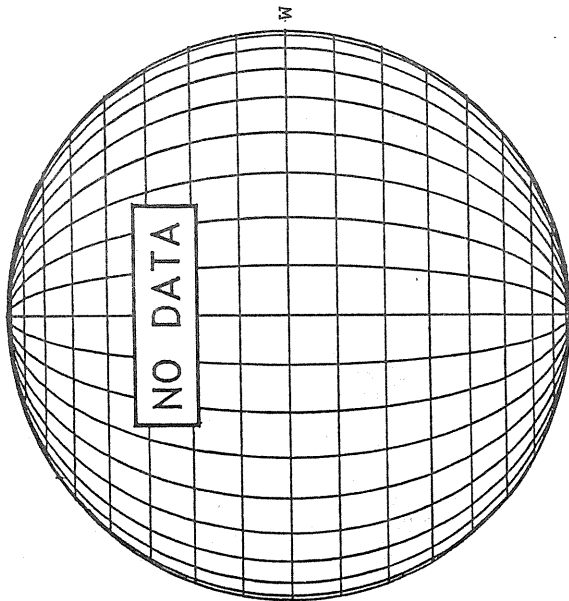
2103 UT

BOULDER SUNSPOT



1347 UT
1430 UT BOUL FROM

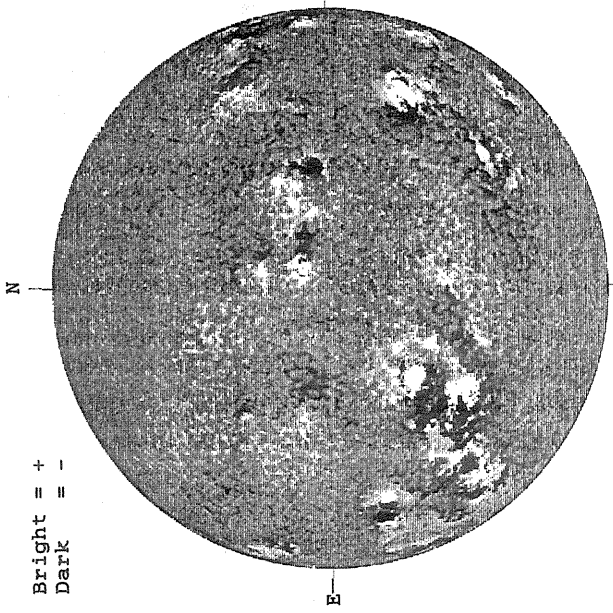
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 22, 1990 (P = 18.20, B₀ = 6.92, L₀ = 133.47)

KITT PEAK MAGNETOGRAM

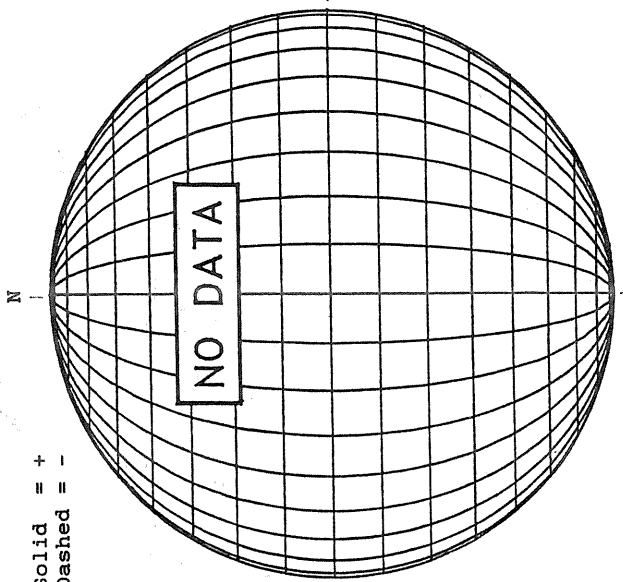
Bright = +
Dark = -



1437 UT

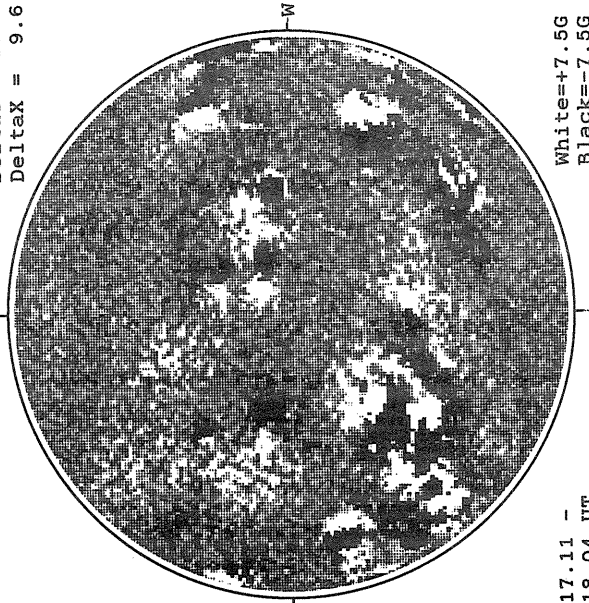
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

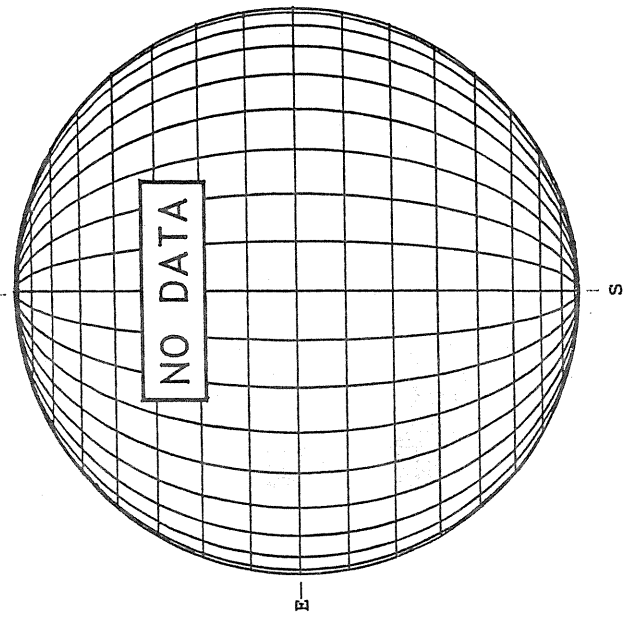
Delta Y = 13.0
Delta X = 9.6



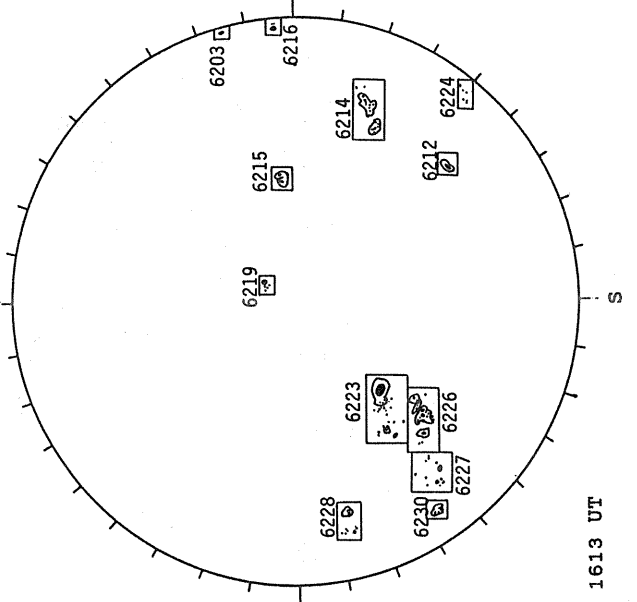
17.11 -
18.04 UT

White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA

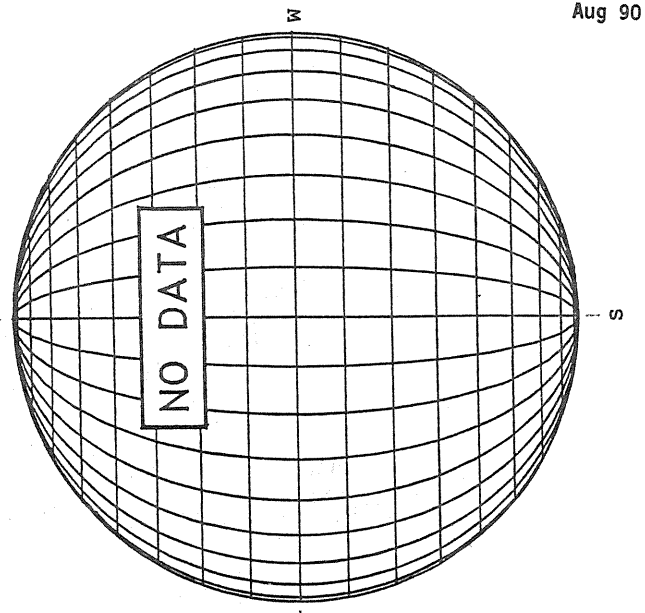


BOULDER SUNSPOT



1613 UT

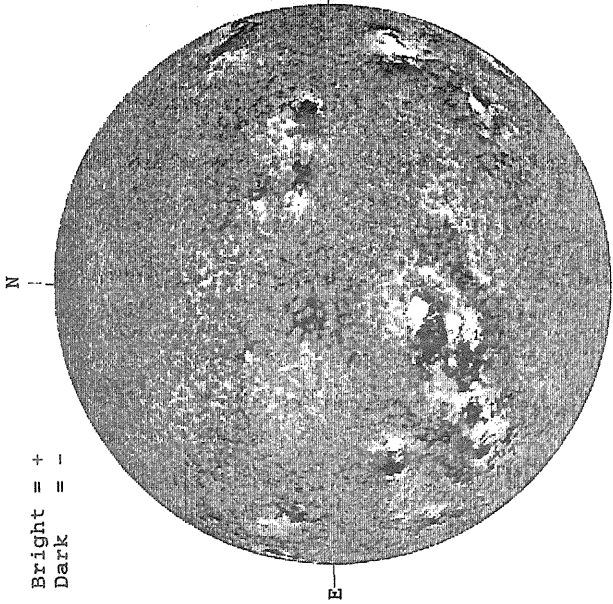
SACRAMENTO PEAK CORONA (1.15 Radii)



AUGUST 23, 1990 (P= 18.50, B₀ = 6.95, L₀ = 120.25)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



1508 UT

STANFORD MAGNETOGRAM

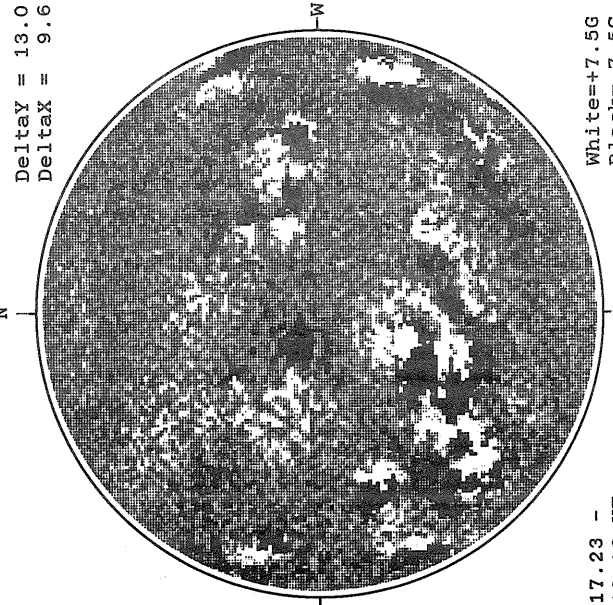
Solid = +
Dashed = -



2044 UT

MT. WILSON MAGNETOGRAM

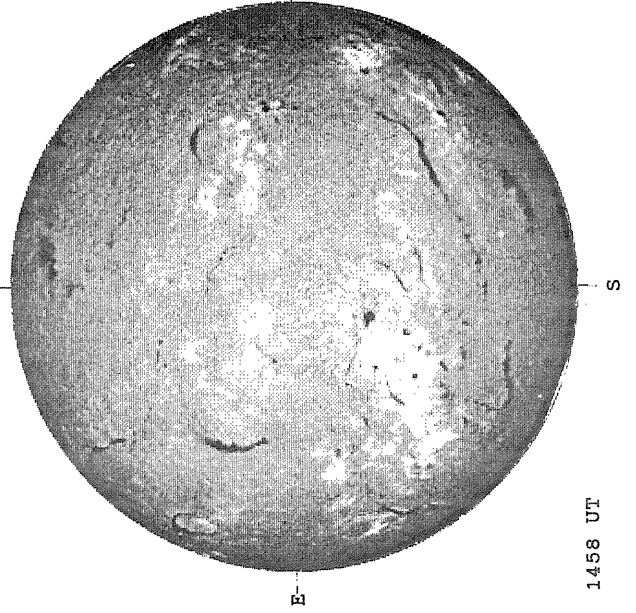
Delta Y = 13.0
Delta X = 9.6



17.23 -
18.16 UT

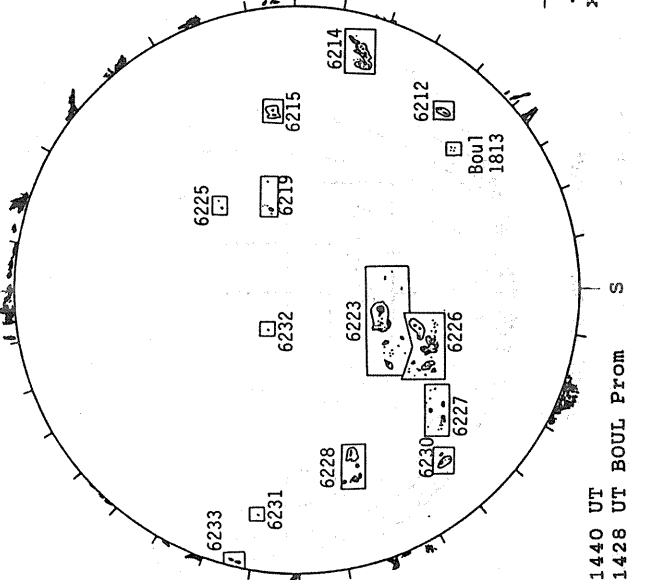
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



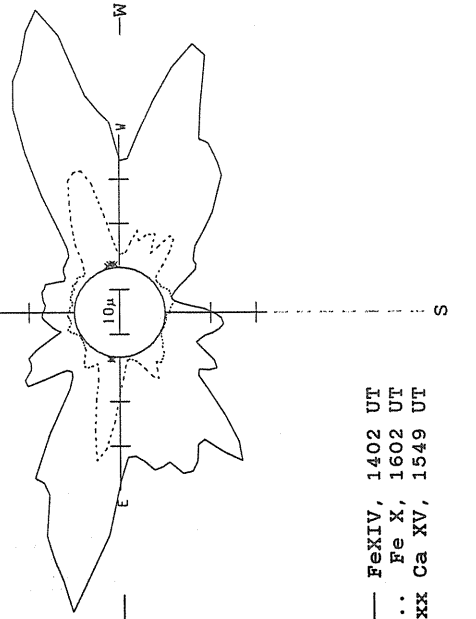
1458 UT

BOULDER SUNSPOT



1440 UT
1428 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



— Fe XIV, 1402 UT
.... Fe X, 1602 UT
xxxxx Ca XV, 1549 UT

AUGUST 24, 1990 (P = 18.80 B₀ = 6.99, L₀ = 107.04)

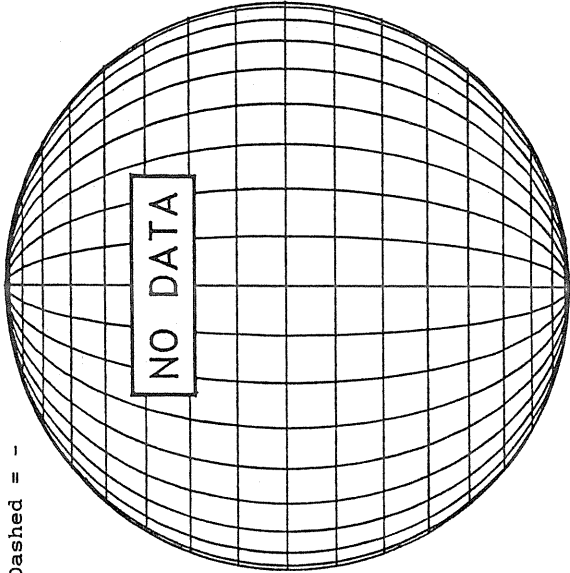
KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

Solid = +
Dashed = -

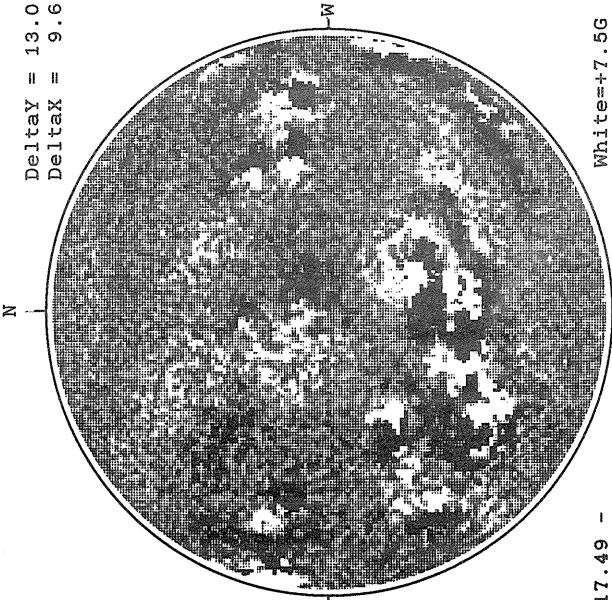
STANFORD MAGNETOGRAM

N



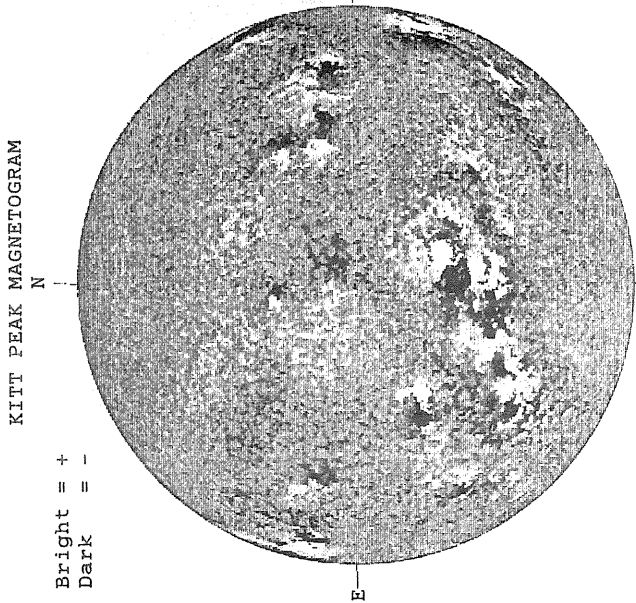
MT. WILSON MAGNETOGRAM

Delta_y = 13.0
Delta_x = 9.6



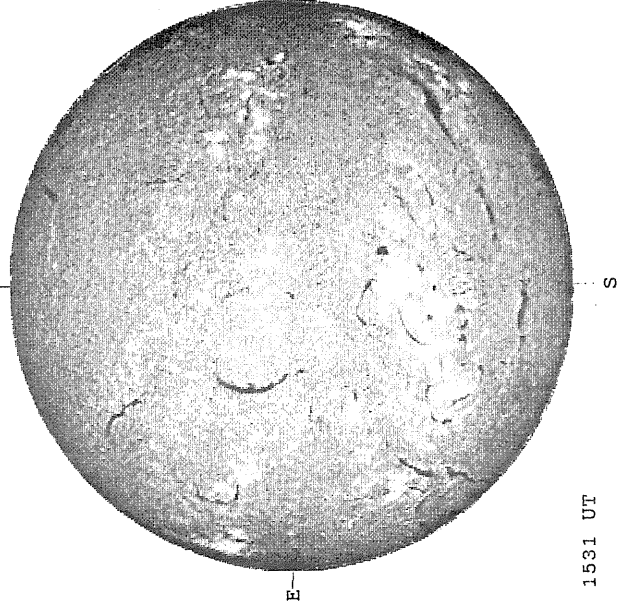
17.49 -
18.42 UT

White = +7.5G
Black = -7.5G



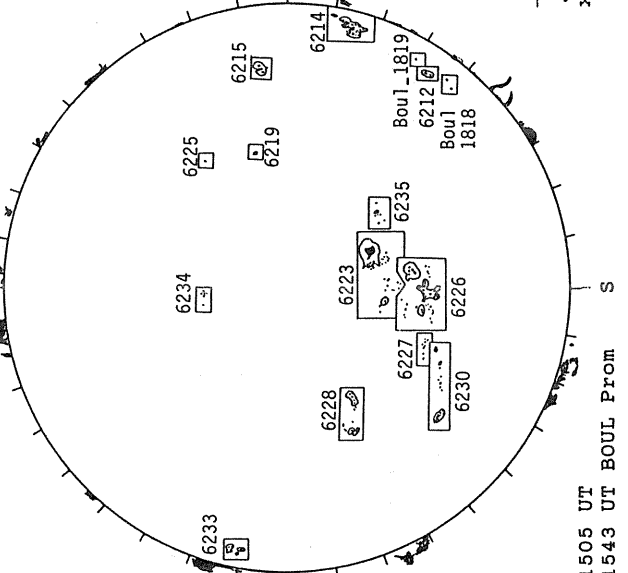
1422 UT

SACRAMENTO PEAK H-ALPHA



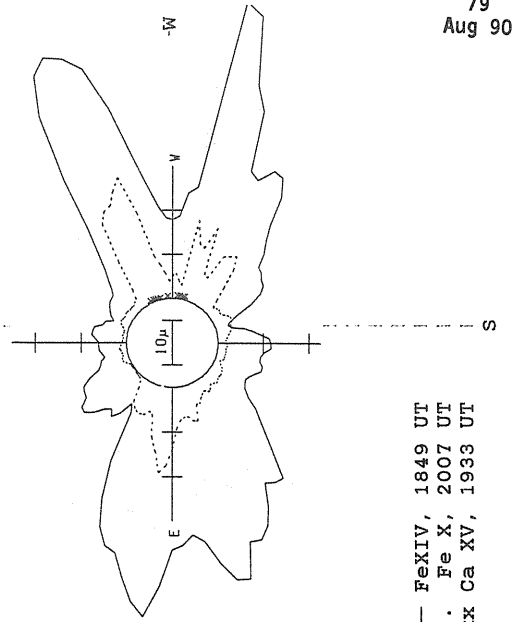
1531 UT

BOULDER SUNSPOT



1505 UT
1543 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)

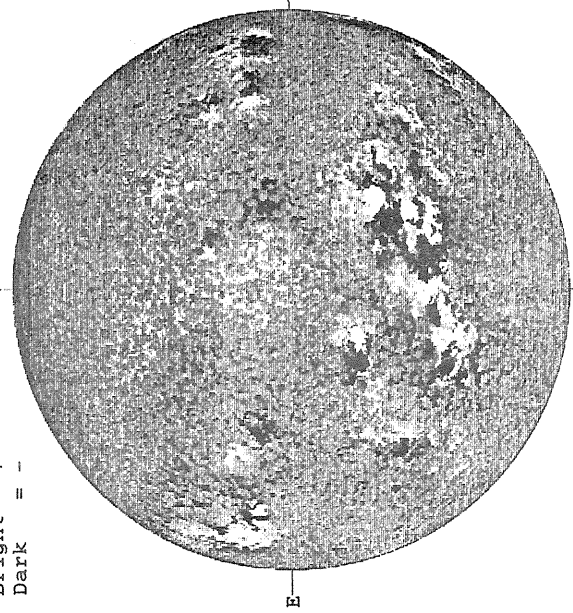


— Fe XIV, 1849 UT
.... Fe X, 2007 UT
- - - - Ca XV, 1933 UT

AUGUST 25, 1990 (P = 19.10, B₀ = 7.02, L₀ = 93.83)

KITT PEAK MAGNETOGRAM

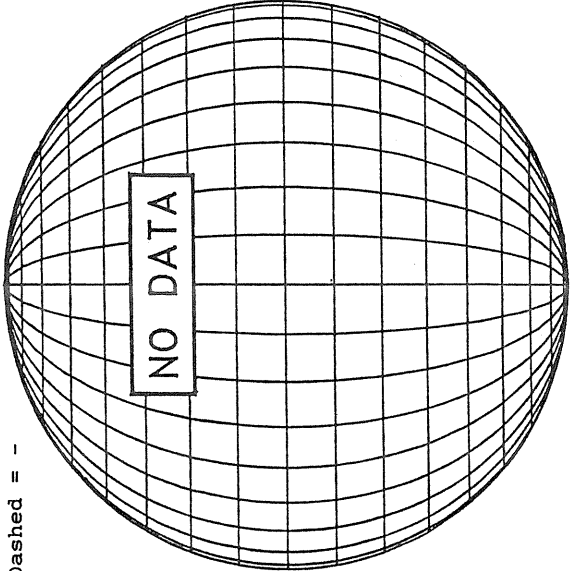
Bright = +
Dark = -



1422 UT

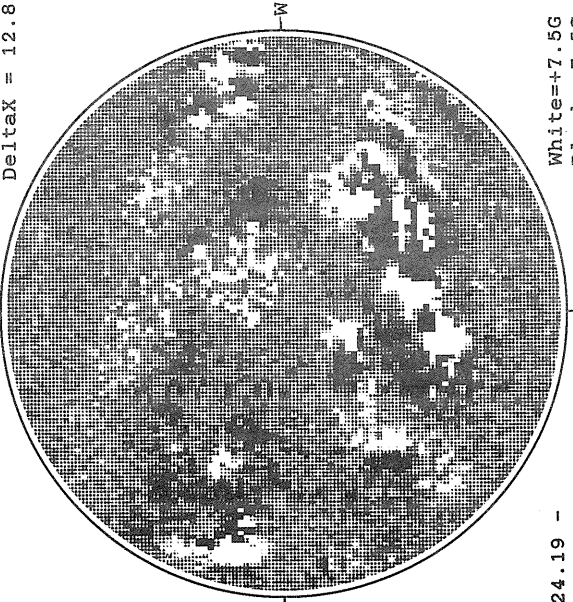
STANFORD MAGNETOGRAM

Solid = +
Dashed = -



MT. WILSON MAGNETOGRAM

DeltaY = 20.2
DeltaX = 12.8



24.19 -
24.53 UT

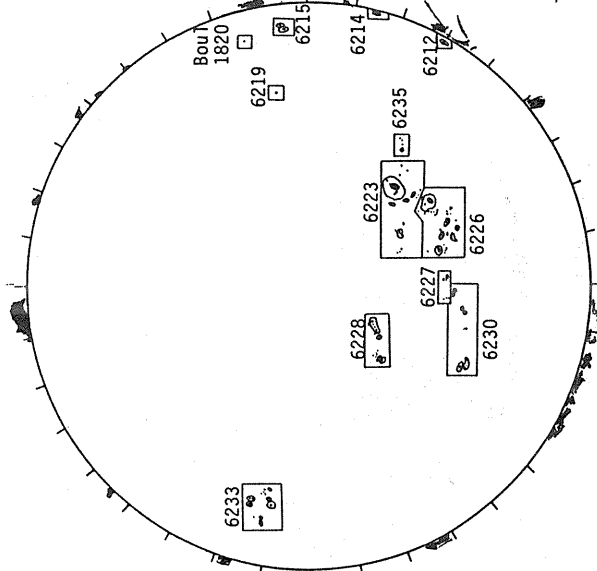
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



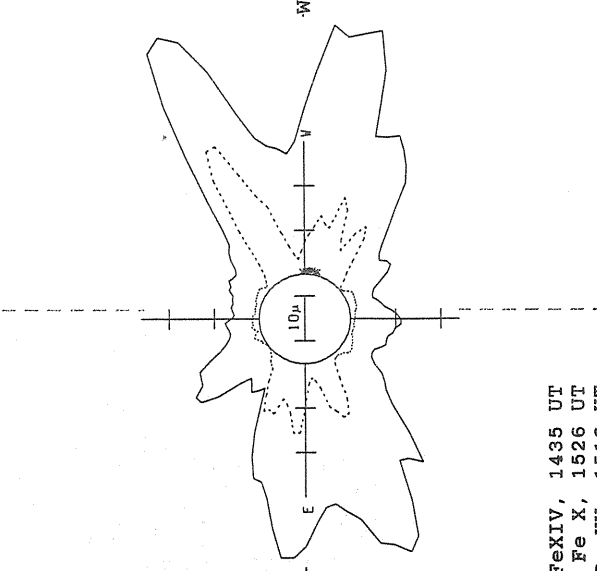
1623 UT

BOULDER SUNSPOT



1440 UT
1505 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)

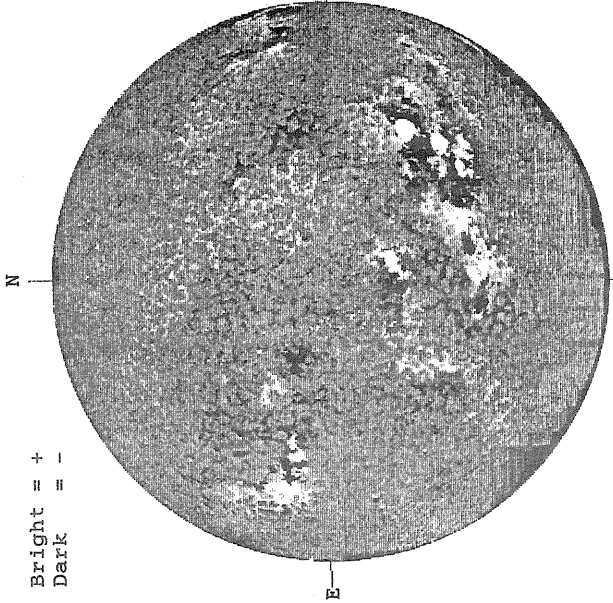


— FeXIV, 1435 UT
... Fe X, 1526 UT
xxxx Ca XV, 1516 UT

AUGUST 26, 1990 (P= 19.39, B₀ = 7.04, I₀ = 80.61)

KITT PEAK MAGNETOGRAM

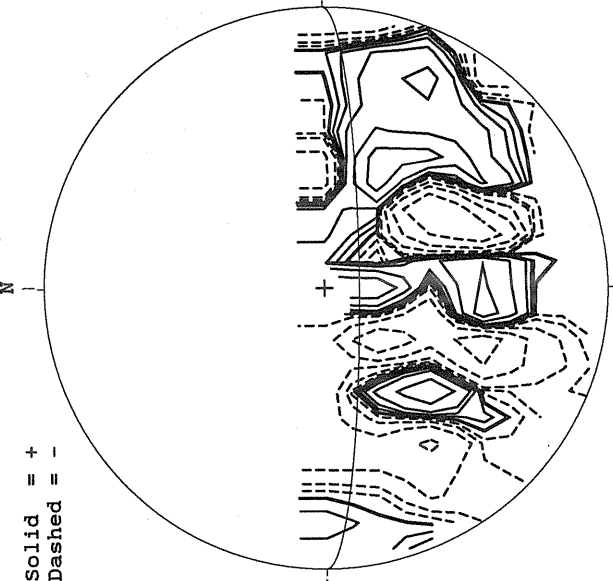
Bright = +
Dark = -



1618 UT

STANFORD MAGNETOGRAM

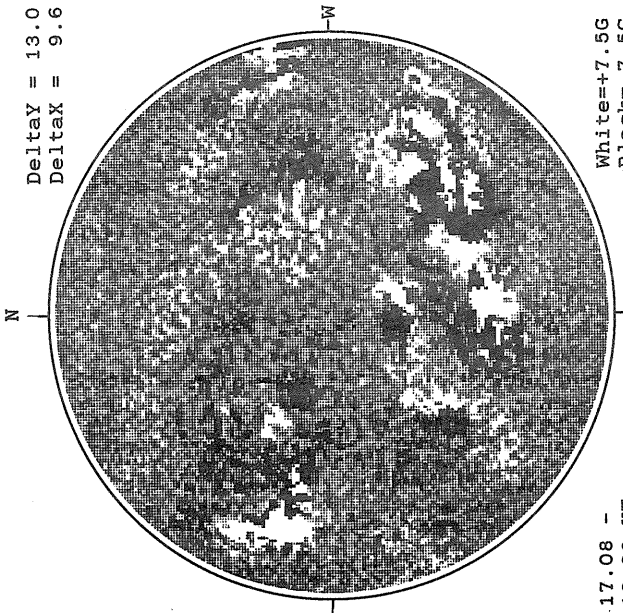
Solid = +
Dashed = -



0139 UT

MT. WILSON MAGNETOGRAM

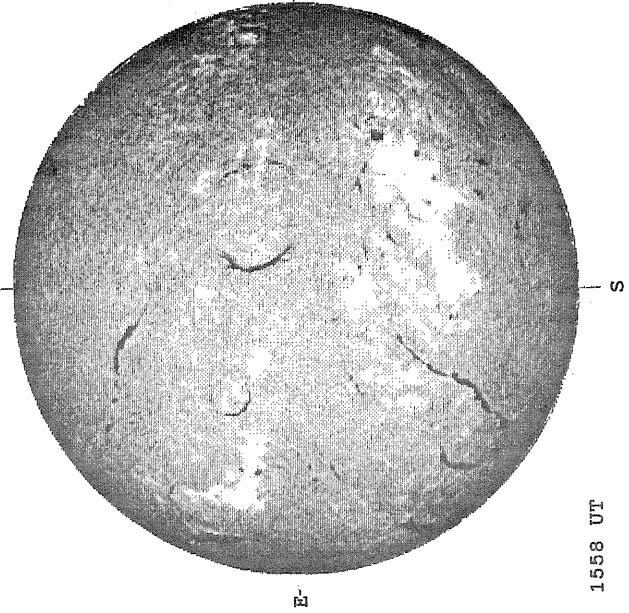
Delta γ = 13.0
Delta α = 9.6



17.08 -
18.02 UT

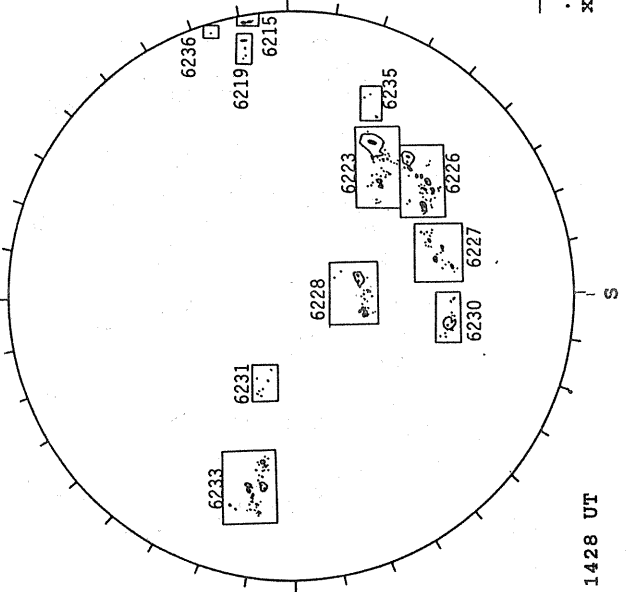
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



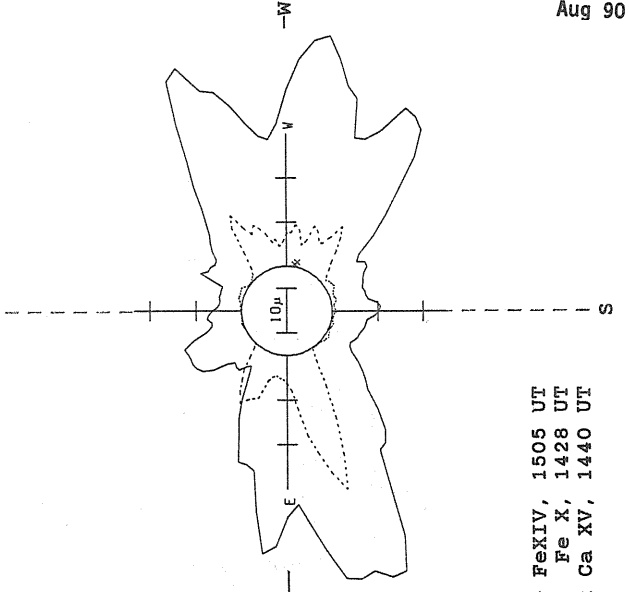
1558 UT

RAMEY SUNSPOT



1428 UT

SACRAMENTO PEAK CORONA (1.15 Radii)



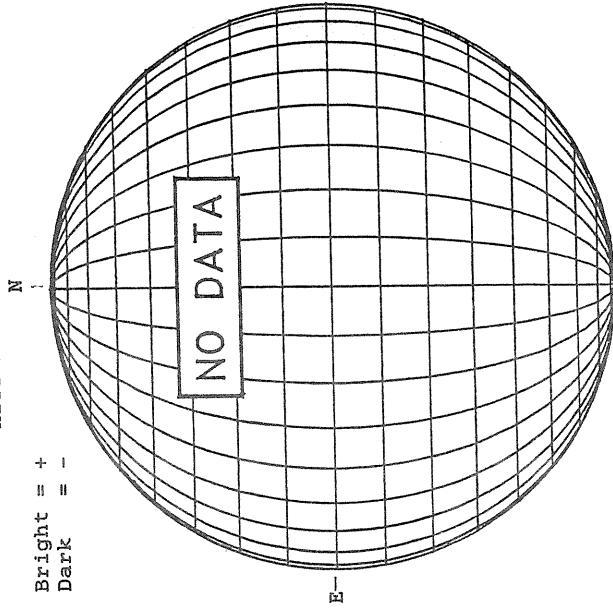
— Fe XIV, 1505 UT
... Fe X, 1428 UT
xxxxx Ca XV, 1440 UT

1558 UT

AUGUST 27, 1990 (P= 19.67, B₀ = 7.07, L₀ = 67.40)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -



STANFORD MAGNETOGRAM

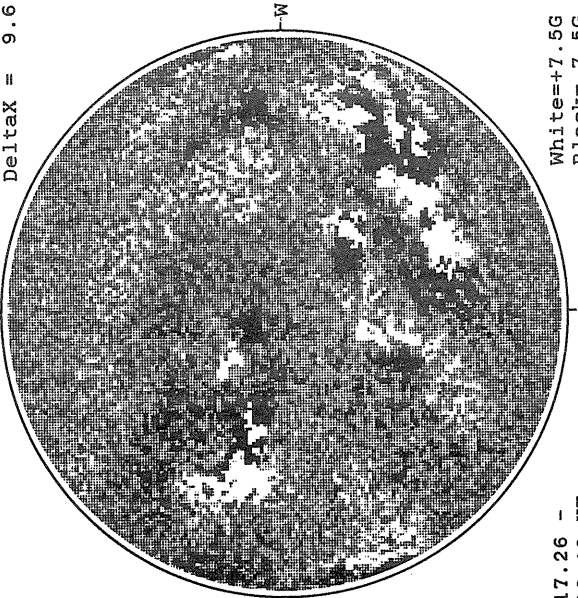
Solid = +
Dashed = -



1842 UT

MT. WILSON MAGNETOGRAM

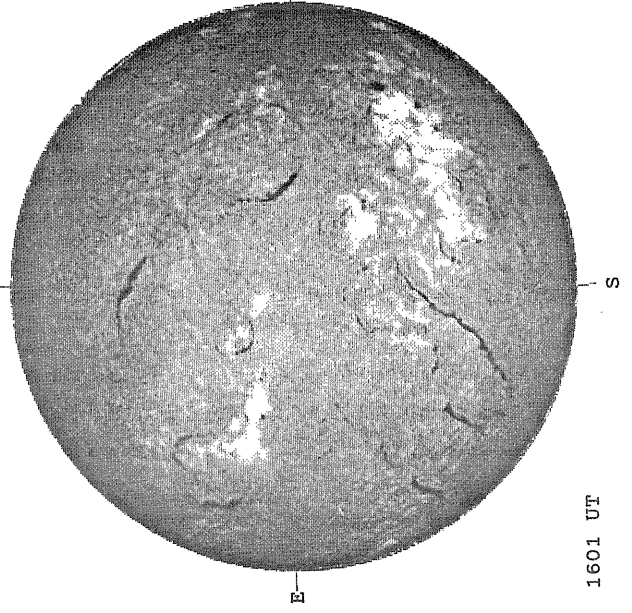
DeltaY = 13.0
DeltaX = 9.6



17.26 -
18.19 UT

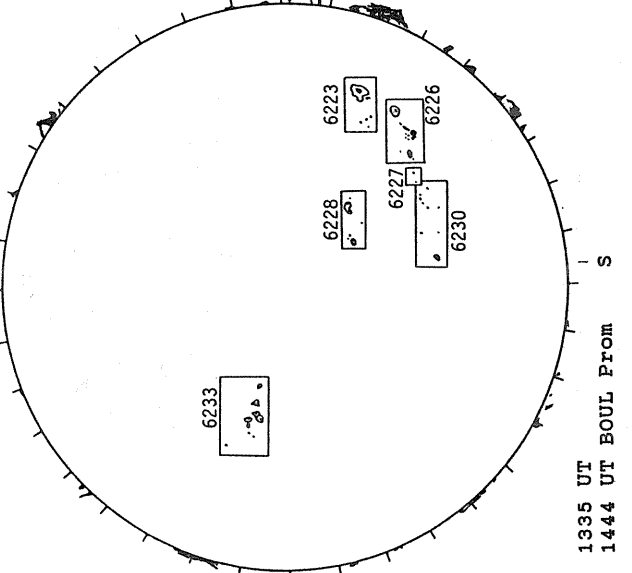
White=+7.5G
Black=-7.5G

SACRAMENTO PEAK H-ALPHA



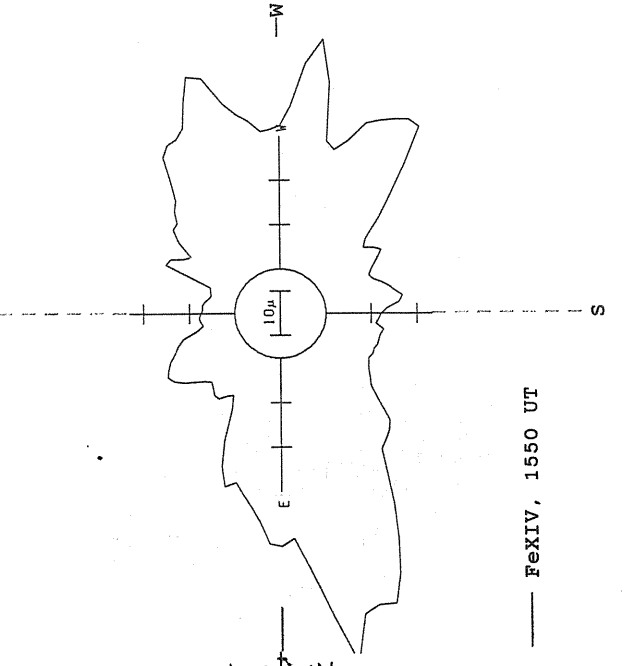
1601 UT

BOULDER SUNSPOT



1395 UT
1444 UT BOUL FROM

SACRAMENTO PEAK CORONA (1.15 Radii)

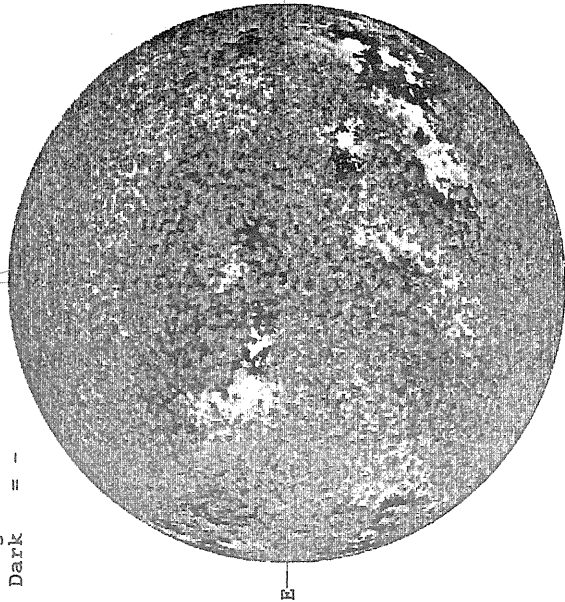


— FeXIV, 1550 UT

AUGUST 28, 1990 (P= 19.95 B₀ = 7.10, L₀ = 54.19)

KITT PEAK MAGNETOGRAM

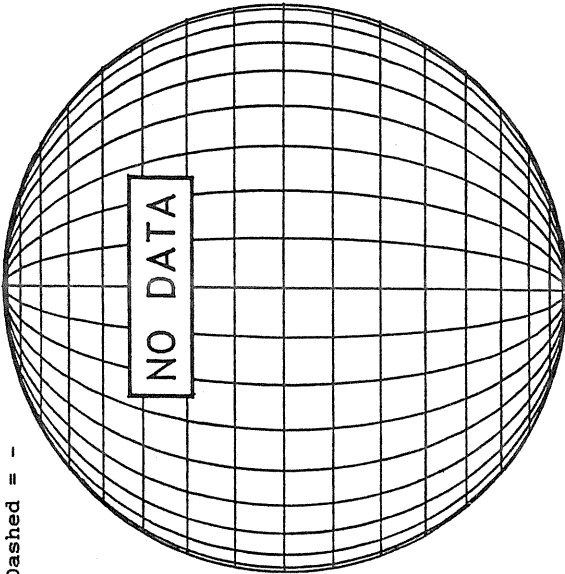
Bright = +
Dark = -



1558 UT

STANFORD MAGNETOGRAM

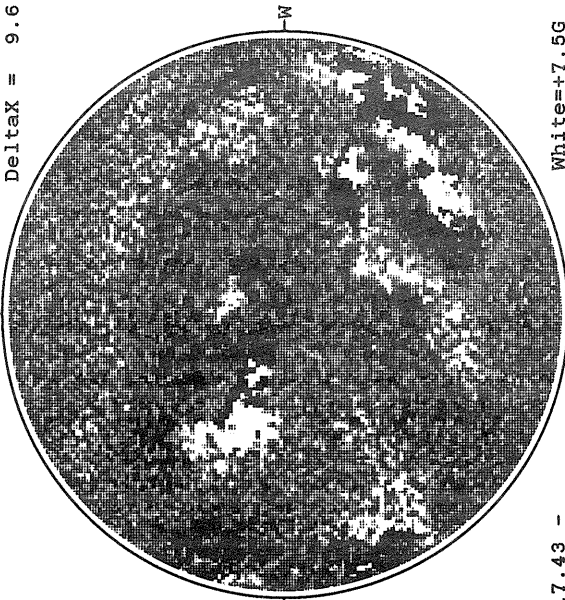
Solid = +
Dashed = -



17.43 -
18.37 UT

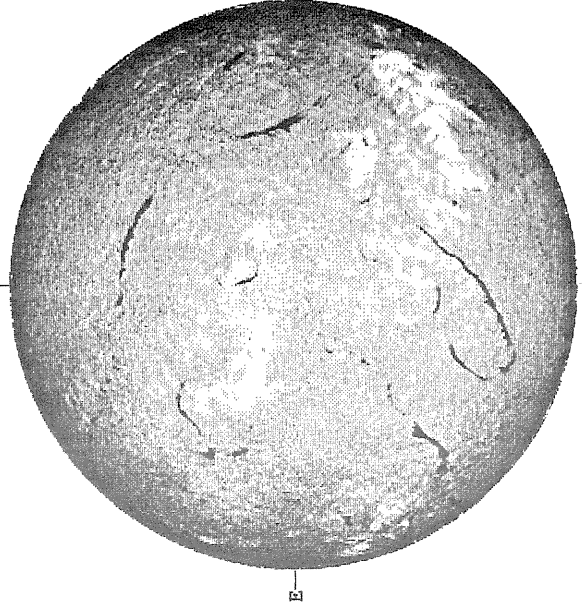
MT. WILSON MAGNETOGRAM

Delta Y = 13.0
Delta X = 9.6



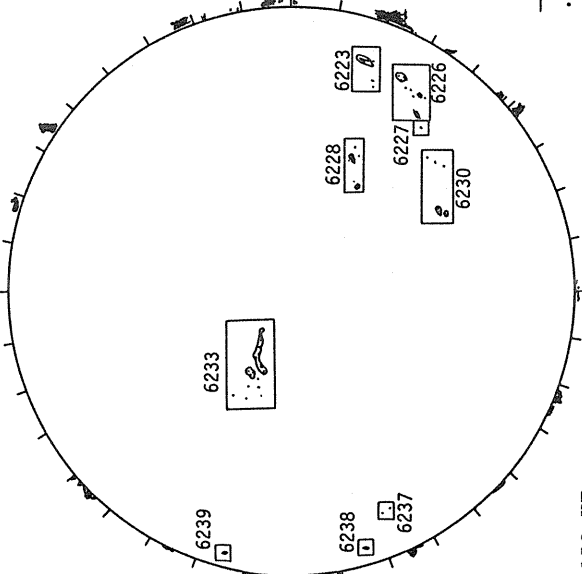
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



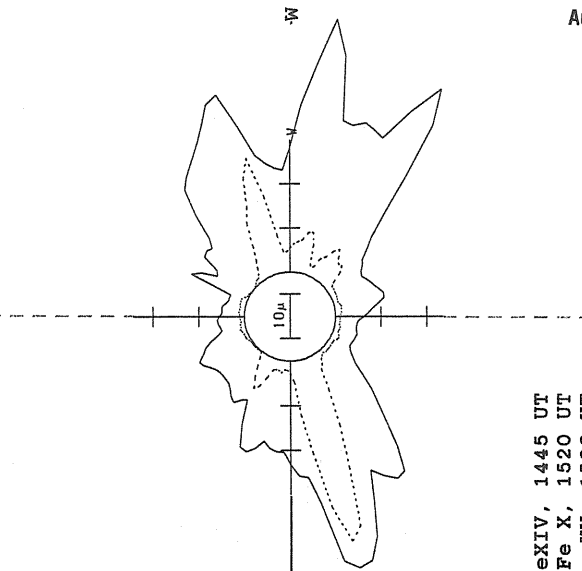
1551 UT

BOULDER SUNSPOT



1353 UT BOUL Prom
1508 UT BOUL Prom

SACRAMENTO PEAK CORONA (1.15 Radii)



— Fe XIV, 1445 UT
.... Fe X, 1520 UT
xxxx Ca XV, 1506 UT
NO CA XV ACTIVITY TODAY

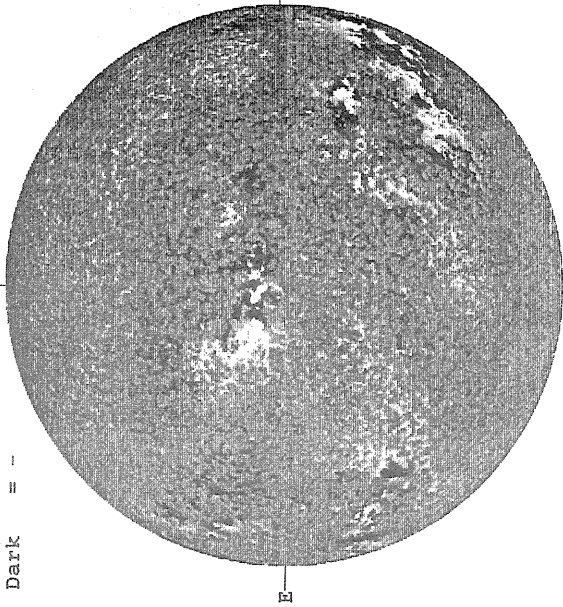
S

AUGUST 29, 1990 (P = 20.23, B₀ = 7.12, L₀ = 40.98)

KITT PEAK MAGNETOGRAM

Bright = +
Dark = -

N



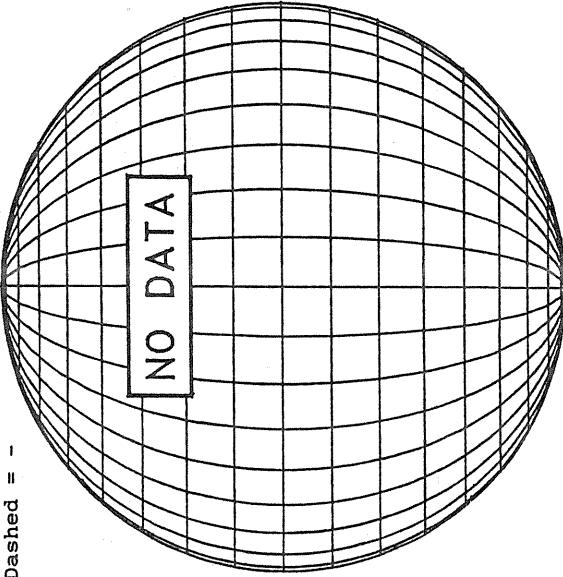
E

1554 UT

STANFORD MAGNETOGRAM

Solid = +
Dashed = -

N

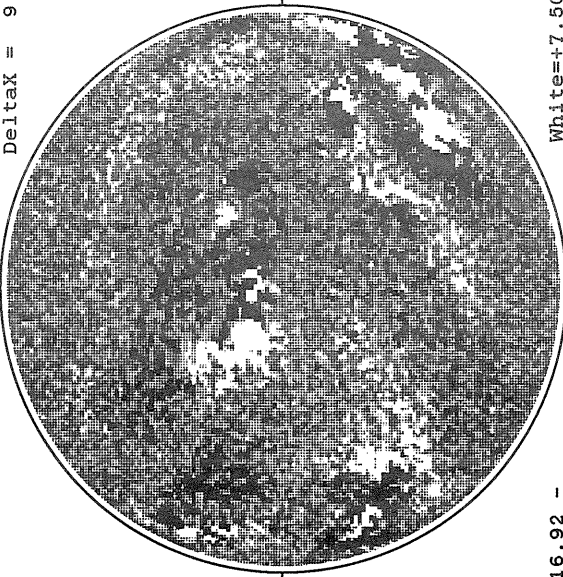


NO DATA

MT. WILSON MAGNETOGRAM

Delta_Y = 13.0
Delta_X = 9.6

N

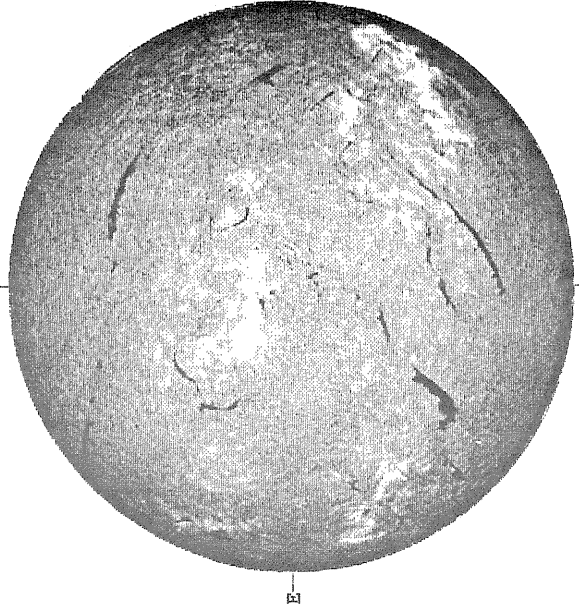


W

16.92 -
17.85 UT

White = +7.5G
Black = -7.5G

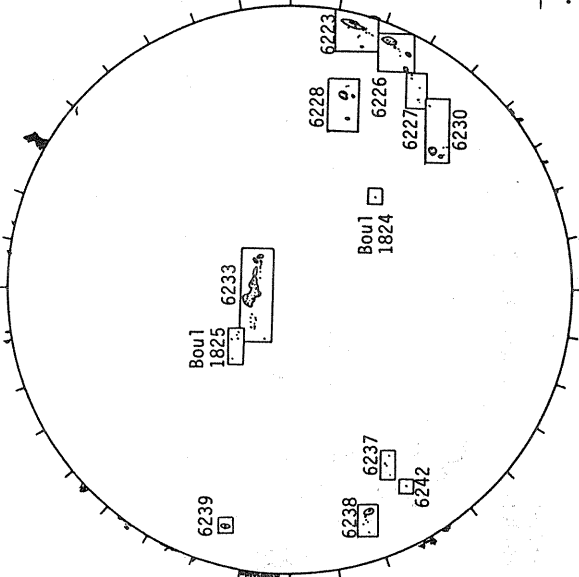
SACRAMENTO PEAK H-ALPHA



E

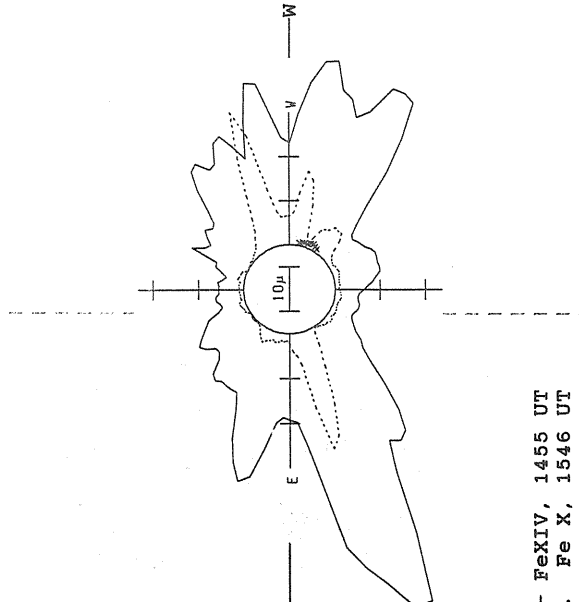
1541 UT

BOULDER SUNSPOT



1442 UT
1450 UT BOUL Prom S

SACRAMENTO PEAK CORONA (1.15 Radii)

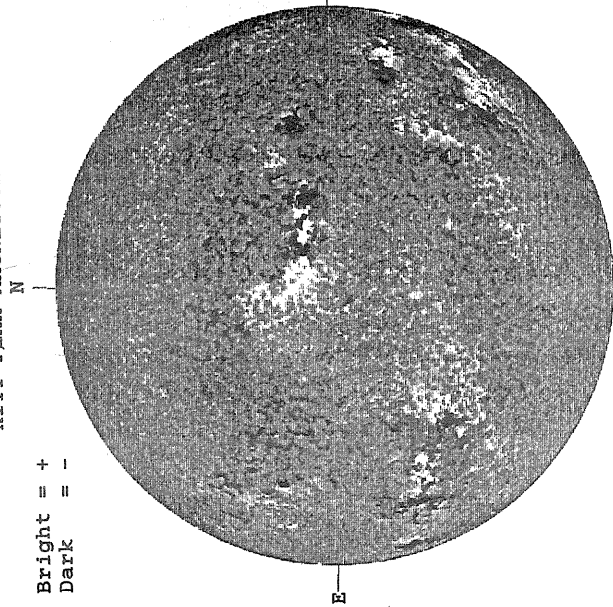


— Fe XIV, 1455 UT
.... Fe X, 1546 UT
xxxxx Ca XV, 1519 UT

AUGUST 30, 1990 (P = 20.50, B₀ = 7.14, L₀ = 27.77)

KITT PEAK MAGNETOGRAM

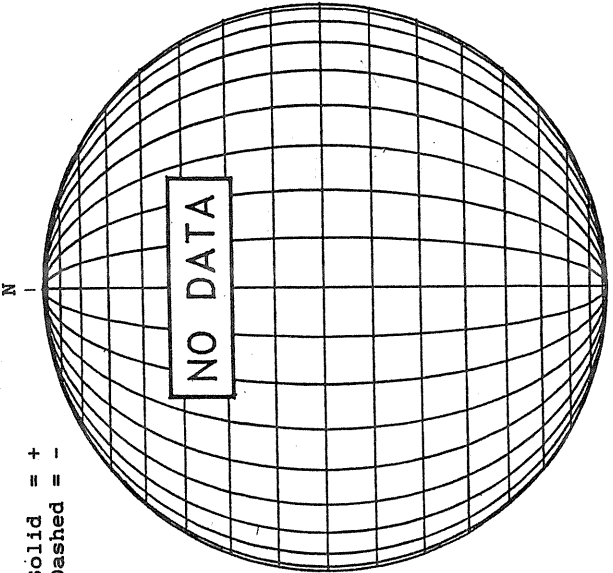
Bright = +
Dark = -



1412 UT

STANFORD MAGNETOGRAM

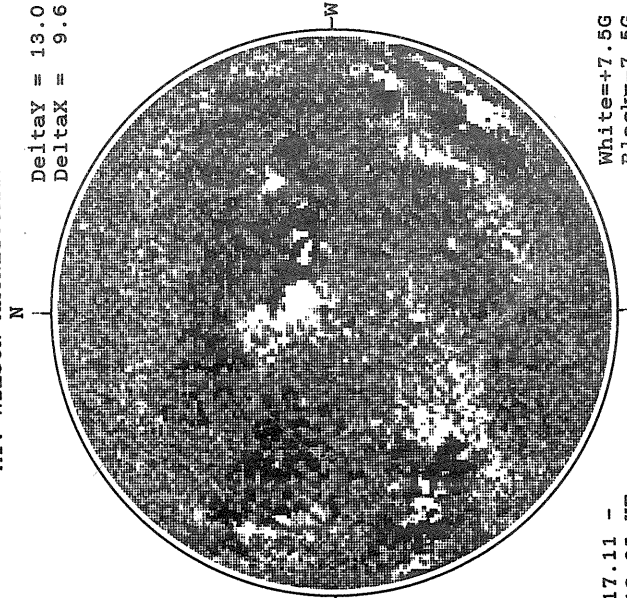
Solid = +
Dashed = -



17.11 -
18.05 UT

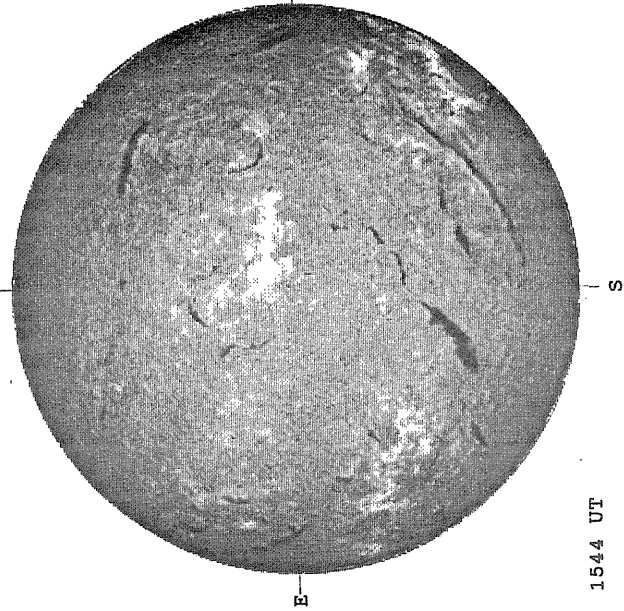
MT. WILSON MAGNETOGRAM

Delta_Y = 13.0
Delta_X = 9.6



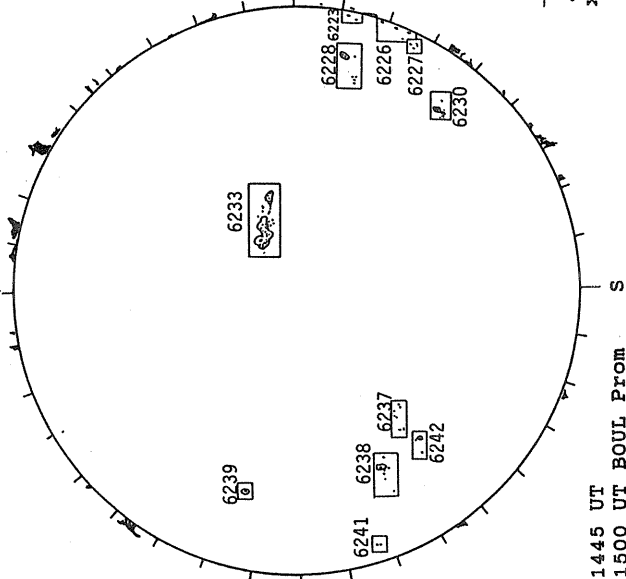
White = +7.5G
Black = -7.5G

SACRAMENTO PEAK H-ALPHA



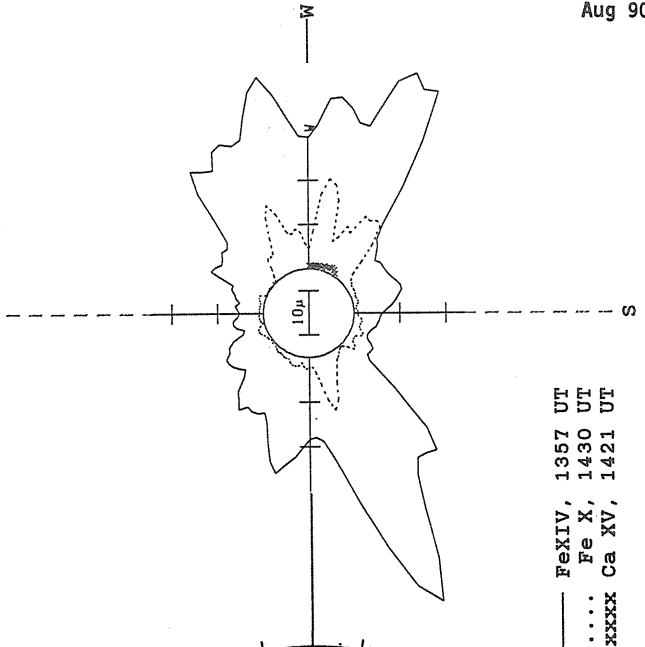
1544 UT

BOULDER SUNSPOT



1445 UT
1500 UT BOUL Prom

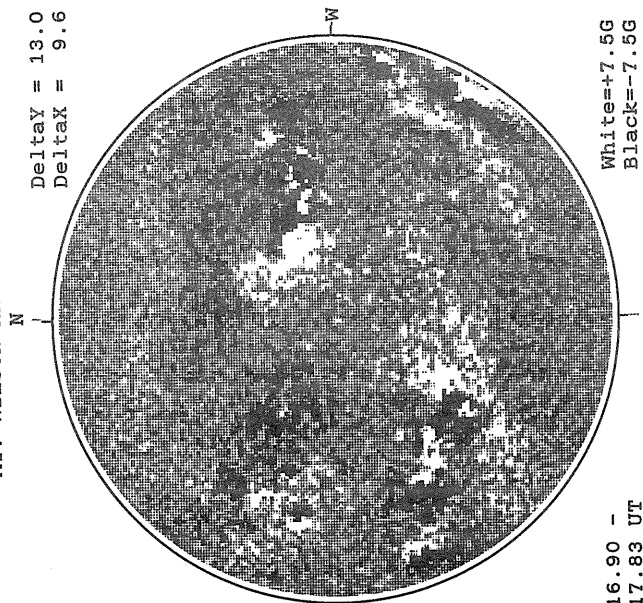
SACRAMENTO PEAK CORONA (1.15 Radii)



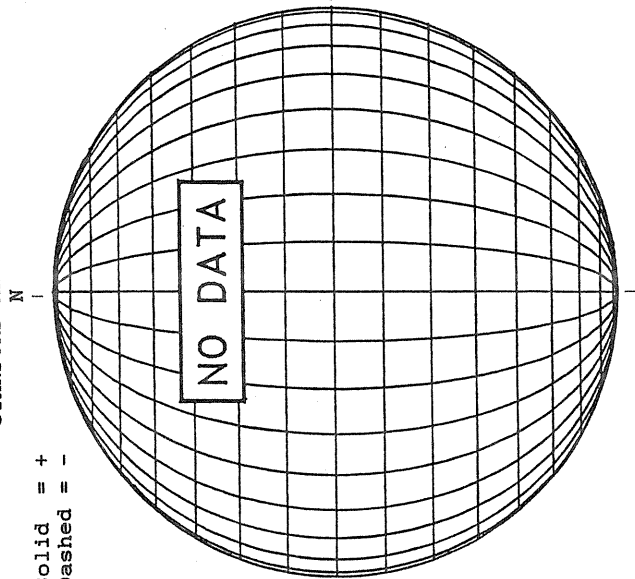
— Fe XIV, 1357 UT
- - - Fe X, 1430 UT
xxxx Ca XV, 1421 UT

AUGUST 31, 1990 (P = 20.76, B₀ = 7.16, L₀ = 14.56)

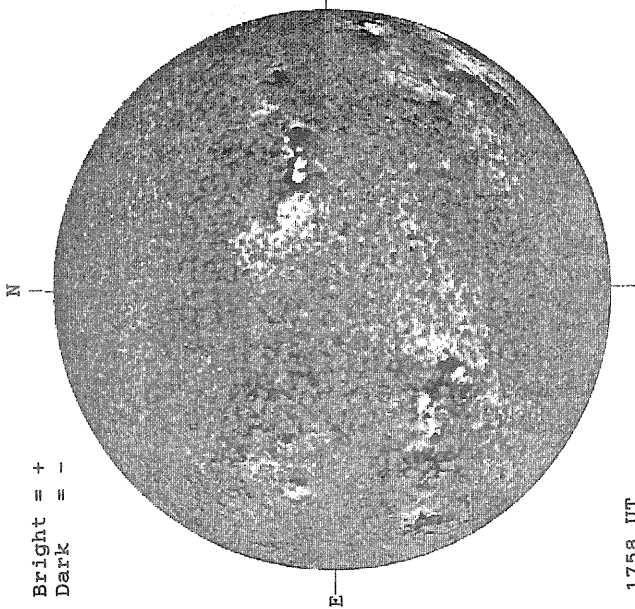
MT. WILSON MAGNETOGRAM



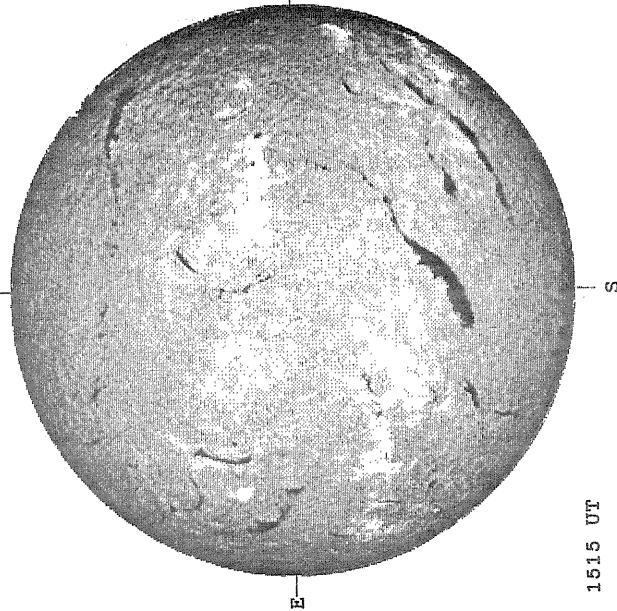
STANFORD MAGNETOGRAM



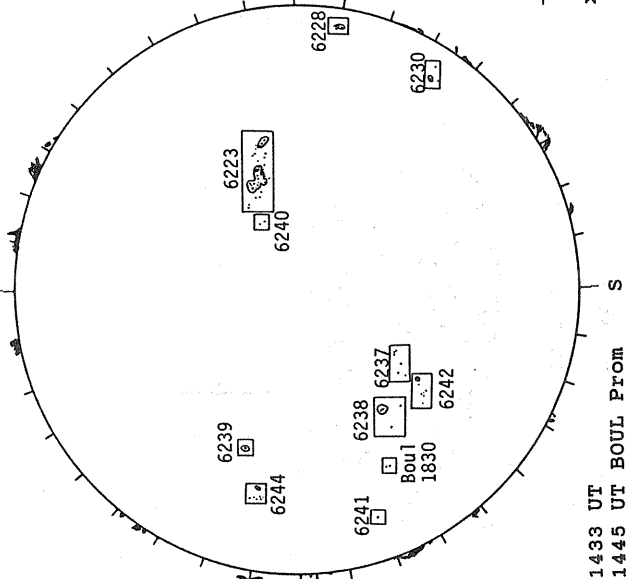
KITT PEAK MAGNETOGRAM



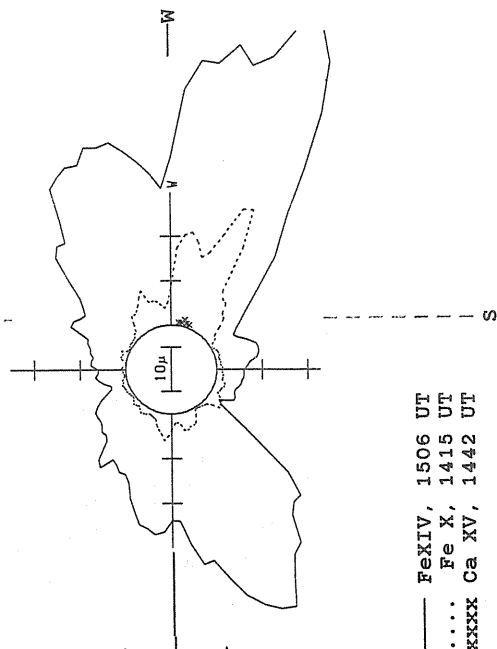
SACRAMENTO PEAK H-ALPHA



BOULDER SUNSPOT



SACRAMENTO PEAK CORONA (1.15 Radii)



SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

87
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo	Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											
6193		SVTO	08 05	0819	S17	W52	08	1.4		B	CRO	130	6	5	3
6193		RAMY	08 05	1150	S17	W54	08	1.4		B	CRO	30	6	4	4
6193		HOLL	08 05	2140	S16	W59	08	1.4		A	AX	10	1		1
6193		CULG	08 06	0110	S17	W61	08	1.4		B	CSO	20	3	5	2
6193		LEAR	08 06	0310	S16	W63	08	1.3		B	CAO	50	4	4	2
6193		SVTO	08 06	0525	S16	W66	08	1.2		B	BXO	20	4	4	4
6193		RAMY	08 06	1121	S17	W67	08	1.4		B	CAO	50	4	6	3
6193		PALE	08 06	1754	S16	W69	08	1.5		A	AX	2	2	2	4
6193		CULG	08 07	0020	S17	W74	08	1.4		B	CSO	10	2	6	3
6179		PALE	07 25	1937	N17	E85	08	1.3		A	HS	60	1	2	3
6179		LEAR	07 26	0030	N16	E77	07	31.9		A	HS	90	1	2	2
6179		SVTO	07 26	0740	N16	E76	08	1.1		A	HS	30	1	2	2
6179		RAMY	07 26	1205	N16	E75	08	1.2		A	HA	60	1	2	3
6179		BOUL	07 26	1440	N15	E75	08	1.3		A	HS	120	1	5	4
6179		LEAR	07 27	0030	N15	E67	08	1.1		A	HS	100	1	2	2
6179		SVTO	07 27	0720	N15	E67	08	1.4		A	HA	90	1	2	3
6179		HOLL	07 27	1420	N16	E61	08	1.2		A	HS	120	2	2	3
6179		BOUL	07 27	1455	N16	E61	08	1.2		A	HA	130	9	2	3
6179		RAMY	07 27	1515	N15	E61	08	1.2		A	HA	80	1	2	2
6179		LEAR	07 28	0030	N15	E56	08	1.3		A	HS	100	2	2	3
6179		SVTO	07 28	0705	N15	E52	08	1.2		A	HA	130	2	2	3
6179		RAMY	07 28	1128	N16	E51	08	1.3		A	HA	140	1	2	3
6179		BOUL	07 28	1410	N16	E47	08	1.1		A	HS	70	1	2	4
6179		HOLL	07 28	1600	N16	E48	08	1.3		A	HA	80	4	2	2
6179		PALE	07 28	1815	N17	E48	08	1.4		A	HS	110	2	2	4
6179		CULG	07 29	0105	N19	E44	08	1.4		A	HS	70	2	3	3
6179		LEAR	07 29	0110	N15	E42	08	1.2		A	HA	80	2	2	3
6179		SVTO	07 29	0625	N15	E41	08	1.4		A	HA	100	2	2	4
6179		RAMY	07 29	1231	N16	E37	08	1.3		A	HA	20	3	2	3
6179		BOUL	07 29	1420	N16	E34	08	1.2		A	HA	60	2	2	4
6179		HOLL	07 29	1440	N16	E36	08	1.3		A	HS	160	2	2	3
6179		PALE	07 29	1720	N16	E35	08	1.4		A	HA	100	2	2	3
6179		LEAR	07 30	0105	N15	E30	08	1.3		A	HS	90	1	2	3
6179		SVTO	07 30	0930	N15	E28	08	1.5		A	HA	90	2	2	3
6179		RAMY	07 30	1215	N15	E24	08	1.3		B	CAO	120	2	3	3
6179		BOUL	07 30	1450	N16	E22	08	1.3		A	HA	80	4	2	3
6179		HOLL	07 30	1550	N15	E22	08	1.3		A	HS	110	3	2	2
6179		PALE	07 30	1740	N15	E22	08	1.4		A	HS	100	1	2	3
6179		CULG	07 31	0210	N15	E17	08	1.4		A	HS	100	1	2	2
6179		LEAR	07 31	0458	N16	E16	08	1.4		A	HS	30	1	2	2
6179		SVTO	07 31	0840	N15	E13	08	1.3		A	HS	100	1	2	2
6179		RAMY	07 31	1318	N16	E12	08	1.5		B	CAO	100	2	3	3
6179		BOUL	07 31	1357	N16	E10	08	1.3		A	HA	70	1	2	1
6179		HOLL	07 31	1515	N16	E11	08	1.5		B	CSO	120	4	5	3
6179		PALE	07 31	1900	N16	E08	08	1.4		B	CSO	100	4	3	2
6179		CULG	08 01	0115	N16	E05	08	1.4		B	CSO	100	10	8	2
6179		LEAR	08 01	0222	N14	E05	08	1.5		A	HS	100	1	3	3
6179		SVTO	08 01	0740	N15	E02	08	1.5		B	CSO	80	6	4	3
6179		RAMY	08 01	1343	N15	W03	08	1.3		B	CAO	110	3	4	3
6179		BOUL	08 01	1415	N15	W03	08	1.4		A	HS	70	1	2	3
6179		HOLL	08 01	1515	N15	W04	08	1.3		B	CSO	110	3	3	3
6179		PALE	08 01	1900	N15	W06	08	1.3		A	HS	110	1	2	3
6179		LEAR	08 02	0120	N14	W09	08	1.4		A	HS	50	1	2	3
6179		SVTO	08 02	0825	N15	W13	08	1.4		A	HS	90	1	2	3
6179		RAMY	08 02	1221	N15	W16	08	1.3		A	HS	80	1	2	3
6179		BOUL	08 02	1420	N15	W16	08	1.4		A	HA	60	1	2	4
6179		HOLL	08 02	1550	N15	W18	08	1.3		A	HS	110	1	2	3
6179		PALE	08 02	1900	N15	W19	08	1.3		A	HS	70	2	2	3
6179		SVTO	08 03	0750	N15	W26	08	1.3		A	HS	70	1	2	2
6179		RAMY	08 03	1215	N16	W29	08	1.3		B	CAO	90	2	3	3
6179		BOUL	08 03	1450	N16	W29	08	1.4		B	CAO	90	3	2	3
6179		HOLL	08 03	1530	N15	W29	08	1.4		B	CSO	50	7	5	4
6179		PALE	08 03	1720	N14	W31	08	1.4		B	CSO	60	4	4	4
6179		SVTO	08 04	0545	N15	W39	08	1.3		A	HA	70	1	2	3
6179		RAMY	08 04	1210	N15	W41	08	1.4		A	HS	100	1	2	4
6179		BOUL	08 04	1430	N15	W43	08	1.3		A	HS	40	1	2	4
6179		HOLL	08 04	1610	N13	W44	08	1.3		A	HS	80	1	2	3
6179		PALE	08 04	1915	N13	W46	08	1.3		A	HS	60	3	2	3

88
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											Time (UT)
6179		SVTO	08 05	0819	N13	W54	08 1.3		A	HS	60	1	2	3
6179		RAMY	08 05	1150	N14	W55	08 1.3		A	HA	60	2	2	4
6179		HOLL	08 05	2140	N15	W62	08 1.2		A	HS	50	1	1	1
6179		CULG	08 06	0110	N14	W62	08 1.4		A	HA	40	1	2	2
6179		LEAR	08 06	0310	N14	W63	08 1.4		A	HS	40	1	1	2
6179		RAMY	08 06	1121	N13	W69	08 1.3		B	CAO	100	4	2	3
6179		PALE	08 06	1754	N15	W71	08 1.4		A	AX	30	1	1	4
6179		CULG	08 07	0020	N14	W75	08 1.3		A	HA	30	2	1	3
6179		SVTO	08 07	0725	N13	W80	08 1.3		A	AX	10	1		4
6179		RAMY	08 07	1119	N13	W81	08 1.3		A	HA	60	1	2	3
6191		HOLL	08 03	1530	S11	W29	08 1.5		B	CAO	30	6	3	4
6191		PALE	08 03	1720	S11	W31	08 1.4		B	CAO	20	5	4	4
6191		SVTO	08 04	0545	S10	W39	08 1.3		B	CRO	40	4	4	3
6191		RAMY	08 04	1210	S09	W41	08 1.4		B	CAO	60	9	6	4
6191		BOUL	08 04	1430	S09	W42	08 1.4		B	CSO	30	4	7	4
6191		HOLL	08 04	1610	S11	W44	08 1.4		B	DAO	50	5	6	3
6191		PALE	08 04	1915	S11	W45	08 1.4		B	CAO	40	6	7	3
6191		SVTO	08 05	0819	S10	W54	08 1.3		B	CAO	360	6	7	3
6191		RAMY	08 05	1150	S10	W54	08 1.4		B	CAO	50	7	6	4
6191		HOLL	08 05	2140	S09	W61	08 1.3		B	CSO	60	2	5	1
6191		CULG	08 06	0110	S10	W62	08 1.4		B	DAO	70	5	7	2
6191		LEAR	08 06	0310	S10	W65	08 1.2		B	CSO	120	7	6	2
6191		RAMY	08 06	1121	S10	W68	08 1.4		B	DAO	170	4	7	3
6191		PALE	08 06	1754	S09	W72	08 1.3		B	CAO	40	6	8	4
6191		CULG	08 07	0020	S10	W75	08 1.4		B	CAO	60	4	7	3
6191		SVTO	08 07	0725	S11	W77	08 1.5		A	AX		1		4
6191A		HOLL	08 01	1515	N22	E02	08 1.8		A	AX		1		3
6179A		RAMY	07 28	1128	S08	E61	08 2.0		A	AX		1	1	3
6191B		HOLL	08 01	1515	N08	E06	08 2.1		A	AX		2	1	3
6191B		LEAR	08 02	0120	N08	E01	08 2.1		A	AX	10	1	1	3
6184		BOUL	07 30	1450	S07	E34	08 2.2		A	AX	10	1		3
6184		HOLL	07 30	1550	S08	E35	08 2.3		A	AX	10	1		2
6184		PALE	07 30	1740	S08	E33	08 2.2		A	AX	10	3	1	3
6184		CULG	07 31	0210	S08	E29	08 2.3		A	HA	10	5	2	2
6184		LEAR	07 31	0458	S09	E28	08 2.3		B	CAO	20	5	3	2
6184		SVTO	07 31	0840	S09	E25	08 2.2		B	DAI	60	5	3	2
6184		RAMY	07 31	1318	S08	E22	08 2.2		B	EAO	50	4	3	3
6184		HOLL	07 31	1515	S09	E24	08 2.4		B	CSO	40	13	6	3
6184		PALE	07 31	1900	S08	E20	08 2.3		B	CSO	30	5	2	2
6184		CULG	08 01	0115	S09	E16	08 2.2		B	CAO	20	6	3	2
6184		LEAR	08 01	0222	S08	E16	08 2.3		B	CSO	20	2	3	3
6184		SVTO	08 01	0740	S07	E12	08 2.2		B	CSO	30	5	3	3
6184		RAMY	08 01	1343	S08	E09	08 2.2		B	CAO	40	7	3	3
6184		BOUL	08 01	1415	S07	E08	08 2.2		B	CAO	30	5	3	3
6184		HOLL	08 01	1515	S08	E08	08 2.2		B	CAO	40	12	6	3
6184		PALE	08 01	1900	S08	E06	08 2.2		B	CAO	30	7	4	3
6184		LEAR	08 02	0120	S09	E02	08 2.2		B	CSO	10	5	4	3
6184		SVTO	08 02	0825	S08	W02	08 2.2		B	CSO	20	3	2	3
6184		RAMY	08 02	1221	S08	W05	08 2.1		B	CAO	20	6	4	3
6184		BOUL	08 02	1420	S07	W05	08 2.2		A	AX	10	2	1	4
6184		HOLL	08 02	1550	S08	W06	08 2.2		B	BXO	10	6	5	3
6184		PALE	08 02	1900	S08	W07	08 2.3		B	BXO	10	5	5	3
6184		SVTO	08 03	0750	S08	W12	08 2.4		A	AX	10	2	1	2
6184		RAMY	08 03	1215	S07	W16	08 2.3		A	AX		2	1	3
6184		RAMY	08 04	1210	S09	W32	08 2.1		B	BXO	10	4	3	4
6184		BOUL	08 04	1430	S07	W33	08 2.1		A	AX		1		4
6184		HOLL	08 04	1610	S08	W33	08 2.2		A	AX		1		3
6180		LEAR	07 27	0030	N17	E77	08 1.9		A	HS	120	1	2	2
6180		SVTO	07 27	0720	N16	E70	08 1.6		A	HA	120	2	3	3
6180		HOLL	07 27	1420	N18	E74	08 2.2		B	DAI	180	8	4	3
6180		BOUL	07 27	1455	N18	E72	08 2.1		B	DAC	270	8	3	3
6180		RAMY	07 27	1515	N17	E73	08 2.2		B	DAO	90	2	4	2
6180		LEAR	07 28	0030	N18	E67	08 2.1		B	DSO	140	2	4	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

89
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											(UT)
6180		SVTO	07 28	0705	N18 E64	08 2.2			B	DAO	140	2	4	3
6180		RAMY	07 28	1128	N18 E61	08 2.1			B	DAO	140	5	6	3
6180		BOUL	07 28	1410	N17 E61	08 2.2			B	CSO	80	2	3	4
6180		HOLL	07 28	1600	N18 E59	08 2.1			A	HA	100	2	4	2
6180		PALE	07 28	1815	N19 E59	08 2.3			B	CSO	130	2	3	4
6180		CULG	07 29	0105	N22 E57	08 2.4			B	CSO	70	4	4	3
6180		LEAR	07 29	0110	N18 E53	08 2.1			B	DAO	90	3	4	3
6180		SVTO	07 29	0625	N18 E52	08 2.2			B	CAO	110	5	4	4
6180		RAMY	07 29	1231	N19 E50	08 2.3			B	DAO	130	7	9	3
6180		BOUL	07 29	1420	N18 E47	08 2.2			B	CAO	80	2	4	4
6180		HOLL	07 29	1440	N18 E50	08 2.4			B	CAO	120	7	7	3
6180		PALE	07 29	1720	N19 E46	08 2.2			B	CSO	100	3	3	3
6180		LEAR	07 30	0105	N18 E42	08 2.2			A	CSO	70	4	4	3
6180		SVTO	07 30	0930	N18 E40	08 2.4			B	CAO	80	4	3	3
6180		RAMY	07 30	1215	N18 E35	08 2.2			B	DAO	40	7	5	3
6180		BOUL	07 30	1450	N19 E33	08 2.1			B	CAO	90	6	4	3
6180		HOLL	07 30	1550	N18 E33	08 2.2			B	CSO	90	7	7	2
6180		PALE	07 30	1740	N18 E32	08 2.2			B	CSO	90	8	5	3
6180		CULG	07 31	0210	N18 E28	08 2.2			B	CAO	70	7	3	2
6180		LEAR	07 31	0458	N19 E27	08 2.3			B	CAO	30	6	4	2
6180		SVTO	07 31	0840	N18 E24	08 2.2			B	DAO	80	6	4	2
6180		RAMY	07 31	1318	N19 E22	08 2.2			B	CAO	80	8	4	3
6180		BOUL	07 31	1357	N18 E21	08 2.2			B	CSO	40	4	2	1
6180		HOLL	07 31	1515	N18 E20	08 2.1			B	CSO	80	14	6	3
6180		PALE	07 31	1900	N19 E20	08 2.3			B	CSO	70	11	4	2
6180		CULG	08 01	0115	N18 E15	08 2.2			B	CAO	60	11	5	2
6180		LEAR	08 01	0222	N18 E17	08 2.4			B	CAO	70	7	5	3
6180		SVTO	08 01	0740	N18 E14	08 2.4			B	CAO	80	9	5	3
6180		RAMY	08 01	1343	N19 E09	08 2.2			B	CAO	100	8	4	3
6180		BOUL	08 01	1415	N18 E09	08 2.3			A	HA	50	2	2	3
6180		HOLL	08 01	1515	N19 E11	08 2.5			B	CSO	100	16	7	3
6180		PALE	08 01	1900	N19 E06	08 2.2			B	CSO	110	8	4	3
6180		LEAR	08 02	0120	N18 E04	08 2.4			B	CAO	30	4	3	3
6180		SVTO	08 02	0825	N18 W01	08 2.3			B	CAO	60	4	3	3
6180		RAMY	08 02	1221	N19 W03	08 2.3			A	CS	70	2	3	3
6180		BOUL	08 02	1420	N18 W03	08 2.4			B	CAO	80	3	3	4
6180		HOLL	08 02	1550	N19 W04	08 2.3			B	CSO	110	11	6	3
6180		PALE	08 02	1900	N19 W04	08 2.5			B	CSO	60	5	5	3
6180		SVTO	08 03	0750	N18 W12	08 2.4			B	CAO	50	3	4	2
6180		RAMY	08 03	1215	N20 W13	08 2.5			B	CAO	60	5	6	3
6180		BOUL	08 03	1450	N19 W17	08 2.3			B	CAO	50	3	3	3
6180		HOLL	08 03	1530	N19 W17	08 2.3			B	CAO	50	7	6	4
6180		PALE	08 03	1720	N19 W19	08 2.3			B	CSO	50	5	4	4
6180		SVTO	08 04	0545	N19 W25	08 2.3			A	HS	70	3	2	3
6180		RAMY	08 04	1210	N19 W28	08 2.4			B	CAO	50	5	3	4
6180		BOUL	08 04	1430	N18 W28	08 2.5			A	HS	50	1	1	4
6180		HOLL	08 04	1610	N19 W28	08 2.5			B	CAO	50	6	4	3
6180		PALE	08 04	1915	N18 W31	08 2.4			A	HS	40	5	2	3
6180		SVTO	08 05	0819	N18 W39	08 2.4			A	HA	30	2	1	3
6180		RAMY	08 05	1150	N18 W40	08 2.4			A	HR	20	4	1	4
6180		HOLL	08 05	2140	N19 W46	08 2.4			A	HS	30	1	1	1
6180		CULG	08 06	0110	N18 W47	08 2.5			B	CSO	30	3	3	2
6180		LEAR	08 06	0310	N19 W48	08 2.5			B	CAO	20	2	3	2
6180		RAMY	08 06	1121	N19 W52	08 2.5			A	HA	30	1	1	3
6180		PALE	08 06	1754	N19 W57	08 2.4			A	AX		2	1	4
6180		CULG	08 07	0020	N18 W60	08 2.4			A	AX		1		3
6180		RAMY	08 07	1119	N19 W67	08 2.3			A	AX	10	4	2	3
6180A		CULG	08 01	0115	S19 E22	08 2.7			A	AX		1		2
6180B		BOUL	08 07	1347	N08 W56	08 3.4			A	AX		1		1
6180C		CULG	08 09	0252	N13 W76	08 3.4			B	BXO	10	2	3	3
6180C		SVTO	08 09	0815	N14 W79	08 3.4			A	AX	20	1	1	2
6198		LEAR	08 08	0012	N29 W58	08 3.5			A	AX	20	1	1	3
6198		HOLL	08 08	1400	N29 W64	08 3.6			B	BXO	10	3	5	4
6198		RAMY	08 08	1400	N29 W65	08 3.5			B	BXO	10	3	4	3
6198		PALE	08 08	1747	N31 W65	08 3.6			A	AX	10	1	1	3

90
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CND	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6201		SVTO	08 02 0825	N17 E16	08 3.6		A	AX	10	2	3	3
6201		RAMY	08 02 1221	N17 E14	08 3.6		B	BXO	10	2	4	3
6201		RAMY	08 09 1340	N14 W80	08 3.5		A	AX	10	1	1	3
6201		BOUL	08 09 1520	N19 W80	08 3.5		A	AX	20	1	1	3
6192		PALE	08 03 1720	S20 E25	08 5.6		A	AX		1		4
6192		PALE	08 04 1915	S17 E11	08 5.6		B	BXO	10	10	4	3
6192		SVTO	08 05 0819	S17 E04	08 5.6		B	DAO	50	10	5	3
6192		RAMY	08 05 1150	S17 E01	08 5.6		B	DAO	40	15	4	4
6192		HOLL	08 05 2140	S17 W05	08 5.5		B	BXO	100	15	5	1
6192		CULG	08 06 0110	S17 W06	08 5.6		B	DAO	80	13	5	2
6192		LEAR	08 06 0310	S17 W07	08 5.6		B	DAO	60	9	6	2
6192		SVTO	08 06 0525	S17 W08	08 5.6		B	DAO	90	15	6	4
6192		RAMY	08 06 1121	S17 W11	08 5.6		B	DAO	130	7	7	3
6192		PALE	08 06 1754	S17 W14	08 5.7		B	DAO	80	10	7	4
6192		CULG	08 07 0020	S17 W19	08 5.6		B	DAO	110	23	7	3
6192		SVTO	08 07 0725	S17 W23	08 5.6		B	DAO	170	12	6	4
6192		RAMY	08 07 1119	S18 W26	08 5.5		B	DAO	250	16	7	3
6192		BOUL	08 07 1347	S16 W26	08 5.6		B	DAO	170	9	6	1
6192		PALE	08 07 1730	S18 W28	08 5.6		B	DAO	220	15	7	2
6192		HOLL	08 07 2320	S17 W32	08 5.5		B	DAO	330	20	8	1
6192		LEAR	08 08 0012	S18 W33	08 5.5		B	DAO	340	18	7	3
6192		CULG	08 08 0229	S20 W34	08 5.5		B	DAO	200	11	8	1
6192		SVTO	08 08 0600	S18 W37	08 5.4		B	DAO	300	11	8	3
6192		HOLL	08 08 1400	S18 W39	08 5.6		B	DAI	270	14	7	4
6192		RAMY	08 08 1400	S19 W39	08 5.6		B	DAO	310	18	10	3
6192		BOUL	08 08 1425	S17 W40	08 5.6		B	DKO	460	12	9	3
6192		PALE	08 08 1747	S18 W42	08 5.5		B	DAO	290	22	10	3
6192		LEAR	08 09 0015	S18 W44	08 5.6		B	DAO	300	13	8	4
6192		CULG	08 09 0252	S19 W47	08 5.5		B	DAO	120	17	9	3
6192		SVTO	08 09 0815	S18 W50	08 5.5		B	DAO	300	7	8	2
6192		RAMY	08 09 1340	S18 W51	08 5.7		B	DAO	260	12	9	3
6192		BOUL	08 09 1520	S17 W53	08 5.6		B	DKO	320	15	9	3
6192		HOLL	08 09 1600	S17 W54	08 5.6		B	DAO	290	13	10	4
6192		PALE	08 09 1800	S18 W54	08 5.6		B	DAO	290	26	9	3
6192		LEAR	08 10 0050	S18 W58	08 5.6		B	DAO	90	9	8	3
6192		CULG	08 10 0148	S20 W61	08 5.4		B	EAO	110	6	11	4
6192		SVTO	08 10 0810	S18 W63	08 5.5		B	DAO	260	5	9	4
6192		RAMY	08 10 1240	S17 W63	08 5.7		B	DAO	220	4	10	3
6192		BOUL	08 10 1436	S17 W65	08 5.7		B	DAO	300	11	9	3
6192		HOLL	08 10 1540	S18 W66	08 5.6		B	DSO	300	7	9	3
6192		PALE	08 10 1715	S18 W67	08 5.6		B	DSO	230	8	9	3
6192		CULG	08 11 0010	S18 W71	08 5.6		B	EAO	210	3	11	3
6192		LEAR	08 11 0035	S17 W68	08 5.8		B	DAO	120	4	7	3
6192		SVTO	08 11 0638	S17 W75	08 5.6		B	DAO	180	3	10	2
6192		RAMY	08 11 1155	S18 W79	08 5.5		B	DAO	90	5	9	4
6192		BOUL	08 11 1440	S16 W75	08 5.9		A	HS	60	1	4	2
6192		HOLL	08 11 1610	S17 W77	08 5.8		B	BXO	30	3	3	2
6192		PALE	08 11 1914	S16 W79	08 5.8		A	HA	60	1	2	3
6192		LEAR	08 12 0030	S16 W75	08 6.3		A	HS	30	1	1	3
6192		CULG	08 12 0205	S19 W80	08 6.0		A	HS	40	1	1	3
6187		CULG	07 31 0210	S06 E85	08 6.4		A	HS	20	1	1	2
6187		LEAR	07 31 0458	S08 E78	08 6.0		A	AX	20	1	1	2
6187		SVTO	07 31 0840	S08 E79	08 6.3		A	HS	30	1	2	2
6187		RAMY	07 31 1318	S06 E73	08 6.0		A	HA	300	1	2	3
6187		BOUL	07 31 1357	S06 E70	08 5.8		A	AX	10	1		1
6187		HOLL	07 31 1515	S06 E71	08 5.9		A	HR	30	1	1	3
6187		PALE	07 31 1900	S07 E71	08 6.1		A	AX	30	1	2	2
6187		CULG	08 01 0115	S07 E68	08 6.1		A	HS	20	2	1	2
6187		RAMY	08 01 1343	S06 E61	08 6.1		B	CAO	40	2	4	3
6187		BOUL	08 01 1415	S07 E58	08 5.9		A	HS	30	1	1	3
6187		HOLL	08 01 1515	S07 E58	08 6.0		A	HS	40	1	1	3
6187		PALE	08 01 1900	S07 E56	08 6.0		A	HS	30	1	1	3
6187		SVTO	08 02 0825	S07 E48	08 5.9		A	HA	30	1	2	3
6187		RAMY	08 02 1221	S06 E48	08 6.1		A	HR	10	1	1	3
6187		BOUL	08 02 1420	S06 E42	08 5.7		A	AX	10	1	1	4
6187		HOLL	08 02 1550	S06 E45	08 6.0		A	HR	30	2	1	3

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

91
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6187		PALE	08 02 1900	S07 E42	08 5.9		A	HA	30	2	1	3
6187		SVTO	08 03 0750	S07 E35	08 5.9		A	AX	10	2	2	2
6187		RAMY	08 03 1215	S06 E31	08 5.8		B	DRO	20	4	2	3
6187		BOUL	08 03 1450	S06 E28	08 5.7		B	BXO	20	5	3	3
6187		HOLL	08 03 1530	S06 E29	08 5.8		B	CRO	20	7	3	4
6187		PALE	08 03 1720	S07 E32	08 6.1		B	CRO	20	7	9	4
6187		SVTO	08 04 0545	S06 E22	08 5.9		B	BXO	10	5	4	3
6187		RAMY	08 04 1210	S06 E19	08 5.9		B	DRO	30	19	6	4
6187		BOUL	08 04 1430	S04 E15	08 5.7		B	BXO	10	5	3	4
6187		HOLL	08 04 1610	S07 E17	08 5.9		B	CAO	30	6	4	3
6187		PALE	08 04 1915	S07 E16	08 6.0		B	BXO	20	7	5	3
6187		SVTO	08 05 0819	S06 E08	08 5.9		B	BXO	20	7	5	3
6187		RAMY	08 05 1150	S06 E07	08 6.0		B	BXO	20	10	8	4
6187		HOLL	08 05 2140	S07 W02	08 5.7		A	AX	10	3	2	1
6187		CULG	08 06 0110	S06 W03	08 5.8		A	HR	10	4	1	2
6187		LEAR	08 06 0310	S06 W04	08 5.8		B	BXO	20	5	3	2
6187		RAMY	08 06 1121	S06 W06	08 6.0		B	BXO	10	5	8	3
6187		PALE	08 06 1754	S07 W12	08 5.8		A	AX		3	2	4
6187		CULG	08 07 0020	S06 W16	08 5.8		A	AX		4	1	3
6187		SVTO	08 07 0725	S06 W20	08 5.8		A	AX	10	4	3	4
6187		RAMY	08 07 1119	S07 W22	08 5.8		B	BXO	10	5	4	3
6187		PALE	08 07 1730	S07 W27	08 5.7		A	AX	10	4	2	2
6187		HOLL	08 07 2320	S07 W29	08 5.8		B	BXO	10	2	3	1
6187		LEAR	08 08 0012	S07 W30	08 5.8		A	AX	10	1	1	3
6192A		HOLL	08 04 1610	S16 E14	08 5.7		A	AX		1		3
6182A		LEAR	08 01 0222	S08 E65	08 6.0		A	HS	20	1	1	3
6182A		LEAR	08 02 0120	S07 E52	08 5.9		A	HS	30	1	1	3
6194		HOLL	08 05 2140	S22 E10	08 6.7		B	BXO	10	2	3	1
6194		CULG	08 06 0110	S21 E11	08 6.9		B	CRO	10	2	3	2
6194		LEAR	08 06 0310	S22 E05	08 6.5		A	AX	10	1	1	2
6194		RAMY	08 06 1121	S21 W02	08 6.3		B	CAO	20	3	6	3
6194		PALE	08 06 1754	S22 W03	08 6.5		A	AX	10	2	1	4
6194		CULG	08 07 0020	S21 W07	08 6.5		B	BXO		3	6	3
6194		SVTO	08 07 0725	S22 W12	08 6.4		B	BXO	20	4	5	4
6194		RAMY	08 07 1119	S23 W16	08 6.2		B	CAO	40	4	5	3
6194		BOUL	08 07 1347	S21 W17	08 6.3		B	BXO	20	4	4	1
6194		PALE	08 07 1730	S22 W19	08 6.3		B	BXO	10	5	5	2
6194		HOLL	08 07 2320	S23 W22	08 6.3		B	DSO	50	8	6	1
6194		LEAR	08 08 0012	S22 W22	08 6.3		B	DSO	70	7	5	3
6194		CULG	08 08 0229	S24 W24	08 6.2		B	DAO	20	4	6	1
6194		SVTO	08 08 0600	S23 W27	08 6.2		B	DAO	40	5	6	3
6194		HOLL	08 08 1400	S22 W30	08 6.3		B	CAO	50	3	6	4
6194		RAMY	08 08 1400	S22 W30	08 6.3		B	DAO	40	3	7	3
6194		BOUL	08 08 1425	S21 W30	08 6.3		B	DAO	50	3	7	3
6194		PALE	08 08 1747	S23 W33	08 6.2		B	CRO	10	4	7	3
6194		LEAR	08 09 0015	S22 W36	08 6.2		B	CSO	40	2	7	4
6194		CULG	08 09 0252	S24 W38	08 6.2		B	DRO	10	3	9	3
6194		SVTO	08 09 0815	S23 W41	08 6.2		B	BXO	20	4	6	2
6194		RAMY	08 09 1340	S18 W43	08 6.3		B	CAO	20	2	7	3
6194		BOUL	08 09 1520	S21 W43	08 6.3		B	CSO	30	2	7	3
6194		HOLL	08 09 1600	S23 W45	08 6.2		B	CAO	30	3	7	4
6194		PALE	08 09 1800	S23 W45	08 6.3		B	CRO	20	2	8	3
6194		LEAR	08 10 0050	S21 W50	08 6.2		A	HS	20	1	1	3
6194		CULG	08 10 0148	S23 W50	08 6.2		B	BXO	10	2	7	4
6194		SVTO	08 10 0810	S22 W58	08 5.9		A	AX	10	1		4
6194		RAMY	08 10 1240	S21 W59	08 6.0		A	AX	10	1	1	3
6194		BOUL	08 10 1436	S23 W60	08 6.0		A	AX	10	1		3
6194		HOLL	08 10 1540	S23 W62	08 5.9		A	AX	20	2	1	3
6194		PALE	08 10 1715	S24 W63	08 5.8		A	AX		1		3
6194		CULG	08 11 0010	S23 W68	08 5.8		A	AX		1		3
6194		LEAR	08 11 0035	S22 W63	08 6.2		B	BXO	20	2	1	3
6194		SVTO	08 11 0638	S22 W69	08 6.0		A	AX	10	1	1	2
6186		CULG	07 31 0210	N17 E87	08 6.7		A	HS	60	1	2	2
6186		LEAR	07 31 0458	N15 E85	08 6.6		A	HS	120	1	4	2
6186		RAMY	07 31 1318	N16 E80	08 6.6		A	HK	50	1	3	3

92
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Mo	Day	Observation Time (UT)	Lat	CMD	Mo	Day	CMP	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6186		BOUL	07	31	1357	N14	E75	08	6.2			A	HS	240	1	2	1
6186		HOLL	07	31	1515	N17	E80	08	6.7			A	HH	300	1	3	3
6186		PALE	07	31	1900	N18	E79	08	6.8			A	HS	240	2	3	2
6186		CULG	08	01	0115	N16	E73	08	6.6			A	HK	450	2	3	2
6186		LEAR	08	01	0222	N14	E73	08	6.6			A	HH	300	3	3	3
6186		SVTO	08	01	0740	N16	E70	08	6.6			A	HK	420	4	6	3
6186		RAMY	08	01	1343	N16	E69	08	6.8			B	CKO	480	6	5	3
6186		BOUL	08	01	1415	N16	E68	08	6.7			A	HK	470	2	6	3
6186		HOLL	08	01	1515	N16	E67	08	6.7			B	CKO	460	4	5	3
6186		PALE	08	01	1900	N17	E65	08	6.7			B	CKO	330	3	6	3
6186		LEAR	08	02	0120	N16	E63	08	6.8			B	CAO	350	4	7	3
6186		SVTO	08	02	0825	N17	E59	08	6.8			B	CKO	400	8	6	3
6186		RAMY	08	02	1221	N16	E56	08	6.8			B	CKO	370	5	5	3
6186		BOUL	08	02	1420	N16	E52	08	6.5			B	CKO	480	7	5	4
6186		HOLL	08	02	1550	N16	E55	08	6.8			B	CKO	530	17	5	3
6186		PALE	08	02	1900	N17	E53	08	6.8			B	DAO	540	19	6	3
6186		SVTO	08	03	0750	N18	E48	08	7.0			B	CKO	450	17	7	2
6186		RAMY	08	03	1215	N17	E41	08	6.6			B	DKO	450	18	6	3
6186		BOUL	08	03	1450	N17	E40	08	6.6			B	DKO	420	13	5	3
6186		HOLL	08	03	1530	N17	E41	08	6.8			B	DKO	450	13	5	4
6186		PALE	08	03	1720	N17	E40	08	6.8			B	DKO	400	15	5	4
6186		SVTO	08	04	0545	N17	E34	08	6.8			B	CKO	360	11	6	3
6186		RAMY	08	04	1210	N17	E30	08	6.8			B	DKO	370	33	7	4
6186		BOUL	08	04	1430	N17	E27	08	6.6			B	CKO	290	9	6	4
6186		HOLL	08	04	1610	N16	E28	08	6.8			B	CHO	390	15	6	3
6186		PALE	08	04	1915	N17	E27	08	6.8			B	CKI	380	16	6	3
6186		SVTO	08	05	0819	N17	E18	08	6.7			B	CKO	40	9	4	3
6186		RAMY	08	05	1150	N17	E17	08	6.8			B	CKO	410	14	7	4
6186		HOLL	08	05	2140	N17	E13	08	6.9			B	CHO	430	5	6	1
6186		CULG	08	06	0110	N17	E10	08	6.8			B	CKO	320	2	3	2
6186		LEAR	08	06	0310	N15	E08	08	6.7			A	HK	270	5	3	2
6186		RAMY	08	06	1121	N16	E03	08	6.7			B	CKO	440	6	3	3
6186		PALE	08	06	1754	N19	E00	08	6.7			B	CKO	370	11	7	4
6186		CULG	08	07	0020	N17	W03	08	6.8			B	CKO	350	6	6	3
6186		SVTO	08	07	0725	N16	W08	08	6.7			A	HA	310	5	5	4
6186		RAMY	08	07	1119	N16	W07	08	6.9			B	CKO	450	8	10	3
6186		BOUL	08	07	1347	N16	W11	08	6.7			A	HA	190	3	3	1
6186		PALE	08	07	1730	N16	W11	08	6.9			B	CKO	300	9	7	2
6186		HOLL	08	07	2320	N15	W14	08	6.9			B	CAO	310	11	7	1
6186		LEAR	08	08	0012	N16	W14	08	6.9			B	DKO	340	10	6	3
6186		CULG	08	08	0229	N16	W17	08	6.8			B	CAO	230	6	7	1
6186		SVTO	08	08	0600	N16	W17	08	7.0			B	CAO	220	8	7	3
6186		HOLL	08	08	1400	N17	W21	08	7.0			B	CKO	270	8	6	4
6186		RAMY	08	08	1400	N17	W21	08	7.0			B	CKO	350	10	7	3
6186		BOUL	08	08	1425	N17	W22	08	6.9			A	HA	200	5	5	3
6186		PALE	08	08	1747	N15	W24	08	6.9			B	CKO	350	10	6	3
6186		LEAR	08	09	0015	N16	W27	08	7.0			B	CKO	240	8	7	4
6186		CULG	08	09	0252	N16	W31	08	6.8			B	CAO	200	5	6	3
6186		SVTO	08	09	0815	N16	W33	08	6.8			A	HK	360	4	3	2
6186		RAMY	08	09	1340	N16	W35	08	6.9			B	CKO	240	5	6	3
6186		BOUL	08	09	1520	N16	W36	08	6.9			A	HK	250	7	4	3
6186		HOLL	08	09	1600	N15	W37	08	6.9			A	HA	300	4	3	4
6186		PALE	08	09	1800	N16	W36	08	7.0			B	CKO	210	7	6	3
6186		LEAR	08	10	0050	N16	W41	08	6.9			B	DKC	170	5	5	3
6186		CULG	08	10	0148	N16	W43	08	6.8			B	CKO	200	5	5	4
6186		SVTO	08	10	0810	N16	W47	08	6.8			B	DSO	230	6	4	4
6186		RAMY	08	10	1240	N17	W48	08	6.9			B	CKO	220	3	5	3
6186		BOUL	08	10	1436	N17	W49	08	6.9			B	DAO	210	8	4	3
6186		HOLL	08	10	1540	N16	W50	08	6.9			B	DAO	260	11	8	3
6186		PALE	08	10	1715	N16	W50	08	6.9			B	CAO	210	13	7	3
6186		CULG	08	11	0010	N16	W55	08	6.8			B	CKO	140	9	7	3
6186		LEAR	08	11	0035	N17	W53	08	7.0			B	DHO	130	3	5	3
6186		SVTO	08	11	0638	N16	W58	08	6.9			B	DAO	160	4	5	2
6186		RAMY	08	11	1155	N16	W61	08	6.9			B	CAO	160	4	5	4
6186		BOUL	08	11	1440	N17	W61	08	7.0			B	DAO	170	4	4	2
6186		HOLL	08	11	1610	N15	W64	08	6.8			B	DSO	220	3	4	2
6186		PALE	08	11	1914	N15	W64	08	6.9			B	DAO	130	2	3	3
6186		LEAR	08	12	0030	N16	W67	08	6.9			B	DAO	70	2	4	3
6186		CULG	08	12	0205	N14	W72	08	6.6			B	DSO	170	3	4	3

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

93
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected		Long. Extent (Deg)	Qual
			Mo	Day							(UT)	Area (10-6 Hemi)			Spot Count
6186		SVTO	08	12	0603	N16 W73	08	6.7	B	DSO	160	2	4	2
6186		RAMY	08	12	1317	N16 W75	08	6.9	B	CAO	120	2	5	3
6186		HOLL	08	12	1600	N14 W78	08	6.8	B	CSO	210	2	5	1
6186		PALE	08	12	1916	N15 W77	08	7.0	B	CAO	140	2	3	3
6186		CULG	08	13	0049	N15 W81	08	6.9	B	CSO	30	2	6	2
6186		LEAR	08	13	0110	N16 W79	08	7.0	B	DAO	70	2	3	2
6185		CULG	07	31	0210	N24 E86	08	6.7	B	DKO	350	2	4	2
6185		LEAR	07	31	0458	N23 E80	08	6.4	B	DHO	210	2	9	2
6185		SVTO	07	31	0840	N23 E84	08	6.8	B	DHO	150	2	9	2
6185		RAMY	07	31	1318	N27 E82	08	6.9	B	DHO	390	3	10	3
6185		BOUL	07	31	1357	N26 E77	08	6.6	B	DSO	240	1	5	1
6185		HOLL	07	31	1515	N24 E78	08	6.7	B	DHO	450	6	5	3
6185		PALE	07	31	1900	N25 E78	08	6.8	B	DKO	390	5	8	2
6185		CULG	08	01	0115	N24 E72	08	6.6	B	DKO	370	7	7	2
6185		LEAR	08	01	0222	N23 E72	08	6.6	B	DHO	260	8	6	3
6185		SVTO	08	01	0740	N25 E70	08	6.7	B	CKO	340	3	5	3
6185		RAMY	08	01	1343	N26 E68	08	6.8	B	DKO	490	7	7	3
6185		BOUL	08	01	1415	N24 E65	08	6.6	B	DAO	370	5	7	3
6185		HOLL	08	01	1515	N25 E65	08	6.7	B	DHI	610	13	7	3
6185		PALE	08	01	1900	N25 E64	08	6.7	B	DKI	560	7	7	3
6185		LEAR	08	02	0120	N23 E61	08	6.7	B	DAO	400	9	8	3
6185		SVTO	08	02	0825	N25 E56	08	6.7	B	DKO	380	10	8	3
6185		RAMY	08	02	1221	N24 E55	08	6.8	B	DKO	600	7	7	3
6185		BOUL	08	02	1420	N25 E53	08	6.7	B	DKO	270	9	8	4
6185		HOLL	08	02	1550	N25 E55	08	6.9	BD	DHO	480	17	8	3
6185		PALE	08	02	1900	N25 E53	08	6.9	B	DHO	380	12	9	3
6185		SVTO	08	03	0750	N24 E47	08	6.9	B	DKO	350	13	8	2
6185		RAMY	08	03	1215	N24 E43	08	6.8	B	DKO	460	18	9	3
6185		BOUL	08	03	1450	N24 E38	08	6.5	B	DKI	390	18	6	3
6185		HOLL	08	03	1530	N24 E41	08	6.8	B	CKI	470	23	9	4
6185		PALE	08	03	1720	N25 E38	08	6.7	B	DKO	420	19	9	4
6185		SVTO	08	04	0545	N23 E32	08	6.7	B	DSO	400	9	5	3
6185		RAMY	08	04	1210	N23 E30	08	6.8	B	CKO	470	16	8	4
6185		BOUL	08	04	1430	N24 E26	08	6.6	B	DHO	310	6	6	4
6185		HOLL	08	04	1610	N23 E27	08	6.7	A	HH	430	11	7	3
6185		PALE	08	04	1915	N24 E26	08	6.8	B	DKO	380	5	7	3
6185		SVTO	08	05	0819	N23 E18	08	6.7	B	DAO	70	9	7	3
6185		RAMY	08	05	1150	N24 E17	08	6.8	B	CKO	400	10	7	4
6185		HOLL	08	05	2140	N23 E13	08	6.9	A	HK	430	4	6	1
6185		CULG	08	06	0110	N24 E10	08	6.8	B	DHO	370	9	8	2
6185		LEAR	08	06	0310	N23 E09	08	6.8	B	DAO	300	5	8	2
6185		RAMY	08	06	1121	N23 E05	08	6.8	B	CKO	280	12	7	3
6185		PALE	08	06	1754	N24 E02	08	6.9	B	DKO	330	9	7	4
6185		CULG	08	07	0020	N24 W03	08	6.8	B	DHO	380	13	6	3
6185		SVTO	08	07	0725	N24 W07	08	6.8	A	HA	360	8	7	4
6185		RAMY	08	07	1119	N22 W10	08	6.7	B	CKO	370	10	9	3
6185		BOUL	08	07	1347	N23 W09	08	6.9	B	DSO	220	5	5	1
6185		PALE	08	07	1730	N23 W11	08	6.9	B	DSO	350	4	5	2
6185		HOLL	08	07	2320	N23 W16	08	6.7	A	HA	300	5	6	1
6185		LEAR	08	08	0012	N22 W15	08	6.8	B	DHO	320	7	6	3
6185		CULG	08	08	0229	N23 W18	08	6.7	B	DSO	290	4	6	1
6185		SVTO	08	08	0600	N23 W18	08	6.9	B	DAO	340	3	6	3
6185		HOLL	08	08	1400	N23 W22	08	6.9	A	HH	340	6	6	4
6185		RAMY	08	08	1400	N23 W24	08	6.7	B	CAO	360	5	6	3
6185		BOUL	08	08	1425	N23 W22	08	6.9	B	DHO	280	3	6	3
6185		PALE	08	08	1747	N23 W24	08	6.9	B	DSO	280	2	5	3
6185		LEAR	08	09	0015	N23 W27	08	6.9	B	DHO	240	4	5	4
6185		CULG	08	09	0252	N22 W31	08	6.7	B	DSO	250	4	6	3
6185		SVTO	08	09	0815	N22 W32	08	6.9	B	DAO	220	3	5	2
6185		RAMY	08	09	1340	N23 W36	08	6.8	A	HS	200	5	6	3
6185		BOUL	08	09	1520	N23 W35	08	6.9	B	DAO	200	7	5	3
6185		HOLL	08	09	1600	N23 W36	08	6.9	A	HS	280	5	6	4
6185		PALE	08	09	1800	N23 W37	08	6.9	B	DSO	270	5	6	3
6185		LEAR	08	10	0050	N23 W40	08	6.9	B	DHO	200	4	7	3
6185		CULG	08	10	0148	N22 W43	08	6.8	B	DSO	250	3	6	4
6185		SVTO	08	10	0810	N23 W46	08	6.8	B	DSO	280	2	6	4
6185		RAMY	08	10	1240	N23 W47	08	6.9	A	HA	270	6	6	3
6185		BOUL	08	10	1436	N23 W48	08	6.9	B	DAO	250	6	6	3

94
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat Mo Day	Mag Mo Day	Spot Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6185	HOLL	08 10	1540	N22 W50	08 6.8	B	DSO	360	3	7	3		
6185	PALE	08 10	1715	N23 W50	08 6.9	B	DAO	300	5	6	3		
6185	CULG	08 11	0010	N23 W54	08 6.8	B	DAO	210	5	6	3		
6185	LEAR	08 11	0035	N22 W52	08 7.0	B	DHO	190	3	6	3		
6185	SVTO	08 11	0638	N22 W57	08 6.9	B	DSO	250	3	5	2		
6185	RAMY	08 11	1155	N22 W60	08 6.9	A	HA	270	5	6	4		
6185	BOUL	08 11	1440	N23 W60	08 7.0	B	DAO	150	4	5	2		
6185	HOLL	08 11	1610	N22 W63	08 6.8	A	HA	240	2	6	2		
6185	PALE	08 11	1914	N22 W63	08 6.9	B	DAO	80	2	5	3		
6185	LEAR	08 12	0030	N23 W66	08 6.9	B	DAO	130	3	5	3		
6185	CULG	08 12	0205	N21 W71	08 6.6	B	DAO	120	3	4	3		
6185	SVTO	08 12	0603	N22 W70	08 6.9	B	DSO	180	6	7	2		
6185	RAMY	08 12	1317	N22 W74	08 6.9	A	HA	180	3	8	3		
6185	HOLL	08 12	1600	N21 W78	08 6.7	A	HA	150	2	5	1		
6185	PALE	08 12	1916	N22 W74	08 7.1	B	DAO	90	2	4	3		
6185	CULG	08 13	0049	N22 W80	08 6.9	B	DAO	40	2	8	2		
6185	LEAR	08 13	0110	N23 W78	08 7.0	B	DSO	100	3	5	2		
6185A	RAMY	08 05	1150	S18 E20	08 7.0	B	BXO	10	4	3	4		
6189	SVTO	07 31	0840	N06 E85	08 6.7	A	HS	90	1	3	2		
6189	RAMY	08 01	1343	N07 E73	08 7.0	A	AX	20	2	2	3		
6189	HOLL	08 01	1515	N06 E75	08 7.2	A	AX	10	1		3		
6189	LEAR	08 02	0120	N07 E69	08 7.2	B	BXO	20	2	2	3		
6189	SVTO	08 02	0825	N07 E66	08 7.3	A	AX	10	2	2	3		
6189	RAMY	08 02	1221	N06 E63	08 7.2	A	AX	10	2	2	3		
6189	BOUL	08 02	1420	N06 E60	08 7.1	A	AX	20	1	1	4		
6189	HOLL	08 02	1550	N06 E62	08 7.3	A	AX	20	2	1	3		
6189	PALE	08 02	1900	N07 E60	08 7.3	A	AX	10	2	1	3		
6189	SVTO	08 03	0750	N07 E55	08 7.4	A	AX	10	2	2	2		
6189	RAMY	08 03	1215	N05 E49	08 7.2	B	BXO	10	5	6	3		
6189	HOLL	08 03	1530	N05 E48	08 7.2	B	BXO	20	7	6	4		
6189	PALE	08 03	1720	N07 E47	08 7.2	B	BXO	10	6	7	4		
6189	RAMY	08 04	1210	N06 E37	08 7.3	A	AX		1	1	4		
6189	HOLL	08 04	1610	N06 E36	08 7.4	A	AX	10	2	2	3		
6189	PALE	08 04	1915	N07 E36	08 7.5	B	BXO	10	5	3	3		
6189	RAMY	08 05	1150	N07 E22	08 7.1	B	BXO	10	7	4	4		
6189	PALE	08 06	1754	N09 E11	08 7.6	A	AX	10	1		4		
6207	HOLL	08 08	1400	S07 W11	08 7.7	A	AX		1		4		
6207	RAMY	08 08	1400	S07 W11	08 7.7	A	AX	10	1	1	3		
6207	RAMY	08 11	1155	S06 W51	08 7.7	B	BXO	20	8	4	4		
6207	BOUL	08 11	1440	S06 W50	08 7.9	B	CSO	20	2	3	2		
6207	HOLL	08 11	1610	S06 W53	08 7.7	B	BXO	20	2	3	2		
6207	PALE	08 11	1914	S07 W56	08 7.6	B	BXO	20	2	4	3		
6207	CULG	08 12	0205	S08 W60	08 7.6	A	HR	10	1	1	3		
6207	SVTO	08 12	0603	S07 W60	08 7.7	A	HR	20	1	1	2		
6207	RAMY	08 12	1317	S05 W62	08 7.9	B	CAO	40	2	2	3		
6207	HOLL	08 12	1600	S07 W65	08 7.8	A	AX	20	1	1	1		
6207	PALE	08 12	1916	S06 W66	08 7.9	A	AX		2		3		
6188	RAMY	08 01	1343	N25 E80	08 7.8	A	HA	40	1	2	3		
6188	HOLL	08 01	1515	N24 E83	08 8.0	A	HH	110	1	3	3		
6188	LEAR	08 02	0120	N23 E78	08 8.1	A	HS	60	1	3	3		
6188	SVTO	08 02	0825	N24 E75	08 8.1	B	CAO	120	4	6	3		
6188	RAMY	08 02	1221	N24 E73	08 8.1	B	CAO	80	3	4	3		
6188	BOUL	08 02	1420	N23 E71	08 8.1	A	HA	100	2	2	4		
6188	HOLL	08 02	1550	N24 E75	08 8.4	B	CSO	140	5	6	3		
6188	PALE	08 02	1900	N24 E73	08 8.4	B	DAO	140	5	8	3		
6188	SVTO	08 03	0750	N23 E69	08 8.6	B	CAO	100	5	6	2		
6188	RAMY	08 03	1215	N23 E61	08 8.2	B	CAO	130	3	7	3		
6188	BOUL	08 03	1450	N23 E59	08 8.2	B	CAO	110	2	5	3		
6188	HOLL	08 03	1530	N23 E61	08 8.3	B	CSO	110	6	6	4		
6188	PALE	08 03	1720	N24 E60	08 8.3	B	CSO	100	7	5	4		
6188	SVTO	08 04	0545	N23 E53	08 8.3	B	CAO	110	6	7	3		
6188	RAMY	08 04	1210	N23 E49	08 8.3	B	DAO	140	7	5	4		
6188	BOUL	08 04	1430	N24 E45	08 8.1	B	CSO	90	2	4	4		
6188	HOLL	08 04	1610	N23 E47	08 8.3	B	CAO	150	13	9	3		
6188	PALE	08 04	1915	N23 E46	08 8.3	B	CSO	100	6	4	3		

S U N S P O T G R O U P S
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95
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											(UT)
6188		SVTO	08 05	0819	N23	E32	08 7.8		B	DAO	410	7	6	3
6188		RAMY	08 05	1150	N23	E35	08 8.2		B	CAO	140	14	7	4
6188		HOLL	08 05	2140	N22	E30	08 8.2		B	CSO	110	19	7	1
6188		CULG	08 06	0110	N23	E26	08 8.0		B	DAO	110	18	7	2
6188		LEAR	08 06	0310	N22	E26	08 8.1		B	CSO	110	9	7	2
6188		RAMY	08 06	1121	N22	E21	08 8.1		B	DAO	110	15	9	3
6188		PALE	08 06	1754	N22	E21	08 8.3		B	CSI	100	22	10	4
6188		CULG	08 07	0020	N23	E14	08 8.1		B	CAO	90	23	10	3
6188		SVTO	08 07	0725	N21	E12	08 8.2		B	DAO	100	15	8	4
6188		RAMY	08 07	1119	N22	E09	08 8.2		B	DAO	150	12	8	3
6188		BOUL	08 07	1347	N24	E09	08 8.3		B	CAO	60	6	6	1
6188		PALE	08 07	1730	N23	E08	08 8.3		B	CAO	80	12	10	2
6188		HOLL	08 07	2320	N22	E04	08 8.3		B	CAO	70	15	8	1
6188		LEAR	08 08	0012	N22	E02	08 8.2		B	DSO	140	20	9	3
6188		CULG	08 08	0229	N23	W01	08 8.0		B	CAO	40	13	7	1
6188		SVTO	08 08	0600	N22	W02	08 8.1		B	DAO	80	15	7	3
6188		HOLL	08 08	1400	N23	W04	08 8.3		B	CRO	30	16	10	4
6188		RAMY	08 08	1400	N23	W05	08 8.2		B	CAO	40	15	10	3
6188		BOUL	08 08	1425	N23	W07	08 8.1		B	CSO	30	5	5	3
6188		PALE	08 08	1747	N23	W07	08 8.2		B	CRO	30	4	7	3
6188		LEAR	08 09	0015	N22	W12	08 8.1		B	CSO	50	5	7	4
6188		CULG	08 09	0252	N23	W16	08 7.9		B	CRO	10	2	6	3
6188		SVTO	08 09	0815	N22	W17	08 8.0		B	CRO	20	2	6	2
6188		RAMY	08 09	1340	N23	W19	08 8.1		B	CAO	20	4	6	3
6188		BOUL	08 09	1520	N23	W22	08 7.9		B	CSO	10	2	4	3
6188		HOLL	08 09	1600	N23	W21	08 8.0		B	CRO	20	4	5	4
6188		PALE	08 09	1800	N22	W21	08 8.1		B	BXO	10	4	5	3
6188		LEAR	08 10	0050	N23	W24	08 8.2		B	BXO	10	4	6	3
6188		CULG	08 10	0148	N24	W25	08 8.1		B	BXO	10	7	9	4
6188		SVTO	08 10	0810	N22	W32	08 7.9		B	BXO	10	3	4	4
6188		RAMY	08 10	1240	N22	W32	08 8.1		B	BXO	10	2	4	3
6188		BOUL	08 10	1436	N22	W33	08 8.1		B	BXO	10	2	4	3
6188		HOLL	08 10	1540	N21	W35	08 8.0		B	BXO	10	3	4	3
6188		PALE	08 10	1715	N22	W36	08 7.9		B	BXO	10	2	5	3
6188		CULG	08 11	0010	N22	W41	08 7.8		B	BXO		2	3	3
6188		SVTO	08 11	0638	N22	W46	08 7.7		A	AX	10	1	1	2
6188		RAMY	08 11	1155	N21	W48	08 7.8		A	AX		1	1	4
6188		BOUL	08 11	1440	N22	W48	08 7.9		A	AX		1		2
6188A		RAMY	08 04	1210	S12	E50	08 8.3		A	AX	10	3	1	4
6188A		HOLL	08 04	1610	S12	E49	08 8.4		A	AX	10	2	2	3
6188A		SVTO	08 05	0819	S11	E40	08 8.3		A	AX		1		3
6196		RAMY	08 07	1119	S10	E17	08 8.7		B	BXO	10	3	3	3
6196		PALE	08 07	1730	S10	E12	08 8.6		A	AX		2	2	2
6196		SVTO	08 08	0600	S12	E05	08 8.6		B	BXO	10	4	3	3
6196		HOLL	08 08	1400	S10	E01	08 8.6		B	BXO	10	6	5	4
6196		RAMY	08 08	1400	S11	E03	08 8.8		B	BXO	10	5	4	3
6196		BOUL	08 08	1425	S09	E02	08 8.7		B	BXO	10	5	3	3
6196		PALE	08 08	1747	S11	E00	08 8.7		B	BXO	10	4	4	3
6196		LEAR	08 09	0015	S11	W03	08 8.8		B	BXO	20	2	3	4
6196A		RAMY	08 04	1210	S19	E61	08 9.2		B	BXO	10	3	2	4
6196A		HOLL	08 04	1610	S18	E61	08 9.3		B	BXO	10	2	3	3
6196A		SVTO	08 05	0819	S19	E56	08 9.6		A	AX	10	2	1	3
6196A		RAMY	08 05	1150	S19	E52	08 9.5		A	AX		1	1	4
6205		CULG	08 10	0148	S18	E20	08 11.6		A	AX	10	1	1	4
6205		SVTO	08 10	0810	S19	E16	08 11.6		B	CRO	20	4	5	4
6205		RAMY	08 10	1240	S19	E13	08 11.5		B	CRO	20	9	4	3
6205		BOUL	08 10	1436	S16	E08	08 11.2		B	CSO	20	2	2	3
6205		HOLL	08 10	1540	S18	E12	08 11.6		B	BXO	20	3	5	3
6205		PALE	08 10	1715	S19	E11	08 11.5		B	CSO	20	2	5	3
6205		CULG	08 11	0010	S18	E06	08 11.5		A	HS	20	3	2	3
6205		LEAR	08 11	0035	S18	E05	08 11.4		A	HS	20	2	1	3
6205		SVTO	08 11	0638	S18	E01	08 11.3		A	HR	20	1	1	2
6205		RAMY	08 11	1155	S18	W02	08 11.3		A	HA	20	1	1	4
6205		BOUL	08 11	1440	S17	W04	08 11.3		A	HS	10	1	1	2
6205		HOLL	08 11	1610	S18	W03	08 11.4		A	AX	10	1	1	2

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day (UT)									Lat	Cmd
6205		PALE	08 11	1914	S19 W06	08 11.3	A	HS	20	1	1	3
6205		LEAR	08 12	0030	S18 W08	08 11.4	A	HS	10	1	1	3
6205		CULG	08 12	0205	S18 W10	08 11.3	A	HR	10	1	1	3
6205		SVTO	08 12	0603	S19 W12	08 11.3	A	HR	20	2	2	2
6205		RAMY	08 12	1317	S18 W16	08 11.3	B	CAO	20	2	3	3
6205		HOLL	08 12	1600	S18 W19	08 11.2	A	AX	10	2	1	1
6205		PALE	08 12	1916	S17 W16	08 11.6	B	CSO	20	5	4	3
6205		CULG	08 13	0049	S18 W23	08 11.3	A	HR	10	1	1	2
6205		LEAR	08 13	0110	S18 W22	08 11.4	A	AX	10	1	1	2
6205		BOUL	08 13	1353	S16 W28	08 11.4	A	AX	10	1	1	1
6205		RAMY	08 13	1428	S18 W29	08 11.4	A	HR	10	1	1	3
6205		HOLL	08 13	2155	S17 W32	08 11.5	A	AX	10	1	1	2
6205		CULG	08 14	0107	S17 W37	08 11.2	A	AX	10	1	1	3
6205		LEAR	08 14	0420	S17 W37	08 11.4	A	AX	10	1	1	2
6205		RAMY	08 14	1540	S16 W43	08 11.4	A	AX	10	1	1	2
6205		HOLL	08 14	1602	S18 W41	08 11.5	B	BXO	10	2	5	3
6205		PALE	08 14	1704	S17 W43	08 11.4	A	AX	10	1	1	3
6205		CULG	08 15	0043	S18 W44	08 11.7	A	AX	10	2	1	3
6205		LEAR	08 15	0132	S18 W43	08 11.8	A	AX	10	1	1	3
6205		HOLL	08 15	1540	S18 W52	08 11.7	B	BXO	10	3	3	3
6205A		RAMY	08 12	1317	N18 W09	08 11.9	B	BXO	10	2	2	3
6205A		PALE	08 12	1916	N18 W13	08 11.8	B	BXO	10	6	3	3
6205B		CULG	08 10	0148	N25 E24	08 11.9	A	AX	10	2	1	4
6205B		SVTO	08 10	0810	N23 E22	08 12.0	A	AX	10	1	1	4
6195		RAMY	08 06	1121	S11 E81	08 12.6	A	HR	10	1	1	3
6195		CULG	08 07	0020	S09 E76	08 12.7	A	AX	10	1	1	3
6195		SVTO	08 07	0725	S11 E74	08 12.9	B	BXO	20	5	9	4
6195		RAMY	08 07	1119	S11 E69	08 12.7	B	CAO	50	3	3	3
6195		BOUL	08 07	1347	S11 E64	08 12.4	B	BXO	20	2	2	1
6195		PALE	08 07	1730	S12 E65	08 12.6	B	BXO	20	2	3	2
6195		HOLL	08 07	2320	S12 E58	08 12.3	A	HA	60	2	2	1
6195		LEAR	08 08	0012	S13 E61	08 12.6	B	CSO	90	7	8	3
6195		CULG	08 08	0229	S10 E61	08 12.7	B	BXO	10	3	3	1
6195		SVTO	08 08	0600	S12 E60	08 12.8	B	CAO	70	4	7	3
6195		RAMY	08 08	1400	S11 E55	08 12.7	B	CAO	80	3	6	3
6195		HOLL	08 08	1400	S12 E55	08 12.7	B	CSO	80	7	7	4
6195		BOUL	08 08	1425	S12 E50	08 12.4	A	HA	60	2	2	3
6195		PALE	08 08	1747	S13 E51	08 12.6	A	HS	100	2	2	3
6195		LEAR	08 09	0015	S12 E49	08 12.7	B	CSO	110	5	4	4
6195		CULG	08 09	0252	S11 E49	08 12.8	B	DAO	40	4	6	3
6195		SVTO	08 09	0815	S12 E45	08 12.7	B	DSO	80	5	6	2
6195		RAMY	08 09	1340	S13 E44	08 12.9	B	DAO	100	10	7	3
6195		BOUL	08 09	1520	S11 E41	08 12.7	B	DAO	110	10	8	3
6195		HOLL	08 09	1600	S13 E41	08 12.8	B	DAO	100	12	7	4
6195		PALE	08 09	1800	S13 E40	08 12.8	B	DAO	100	11	5	3
6195		LEAR	08 10	0050	S12 E35	08 12.7	B	DAO	70	9	6	3
6195		CULG	08 10	0148	S12 E37	08 12.9	B	DAO	100	9	6	4
6195		SVTO	08 10	0810	S13 E33	08 12.8	B	CAO	120	5	7	4
6195		RAMY	08 10	1240	S12 E29	08 12.7	B	CAO	110	8	6	3
6195		BOUL	08 10	1436	S12 E28	08 12.7	B	CAO	120	10	6	3
6195		HOLL	08 10	1540	S13 E28	08 12.8	B	CSO	140	5	6	3
6195		PALE	08 10	1715	S13 E28	08 12.8	B	CSO	100	4	7	3
6195		CULG	08 11	0010	S14 E24	08 12.8	B	CSO	90	9	5	3
6195		LEAR	08 11	0035	S13 E23	08 12.7	B	CSO	60	9	5	3
6195		SVTO	08 11	0638	S13 E17	08 12.5	B	CAO	90	3	3	2
6195		RAMY	08 11	1155	S12 E14	08 12.5	A	HA	100	5	2	4
6195		BOUL	08 11	1440	S11 E13	08 12.6	B	CAO	70	5	3	2
6195		HOLL	08 11	1610	S12 E13	08 12.6	A	HS	80	4	2	2
6195		PALE	08 11	1914	S13 E11	08 12.6	A	HS	60	1	2	3
6195		LEAR	08 12	0030	S13 E08	08 12.6	B	CSO	50	2	2	3
6195		CULG	08 12	0205	S12 E07	08 12.6	A	HS	70	1	1	3
6195		SVTO	08 12	0603	S13 E05	08 12.6	B	CAO	90	5	4	2
6195		RAMY	08 12	1317	S11 E01	08 12.6	B	CAO	80	9	3	3
6195		HOLL	08 12	1600	S12 W01	08 12.6	A	HS	70	1	2	1
6195		PALE	08 12	1916	S12 W03	08 12.6	B	CSI	80	14	4	3
6195		CULG	08 13	0049	S12 W04	08 12.7	B	CAO	40	8	3	2

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

97
Aug 90

AUGUST 1990

NOAA/ USAF Group	Ht Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CND	CHP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long- Extent (Deg)	Qual
6195		LEAR	08 13 0110	S12 W06	08 12.6		B	DSO	50	7	2	2
6195		BOUL	08 13 1353	S11 W14	08 12.5		A	HA	70	6	2	1
6195		RAMY	08 13 1428	S11 W11	08 12.8		B	CAO	100	16	6	3
6195		HOLL	08 13 2155	S12 W15	08 12.8		B	CAO	70	9	3	2
6195		CULG	08 14 0107	S12 W20	08 12.5		B	DSO	70	11	4	3
6195		LEAR	08 14 0420	S12 W20	08 12.7		B	CAO	60	12	4	2
6195		SVTO	08 14 0552	S13 W21	08 12.6		B	CAI	110	11	4	4
6195		RAMY	08 14 1540	S12 W26	08 12.7		B	CAO	100	6	3	2
6195		BOUL	08 14 1602	S12 W27	08 12.6		A	HA	50	3	2	1
6195		HOLL	08 14 1602	S13 W26	08 12.7		B	CAO	80	7	4	3
6195		PALE	08 14 1704	S14 W27	08 12.7		B	CAO	70	4	3	3
6195		CULG	08 15 0043	S13 W33	08 12.5		A	HA	20	3	2	3
6195		LEAR	08 15 0132	S13 W32	08 12.6		B	CAO	80	4	4	3
6195		SVTO	08 15 0848	S12 W37	08 12.6		A	HR	50	2	2	3
6195		RAMY	08 15 1202	S12 W38	08 12.6		A	HA	50	3	2	2
6195		BOUL	08 15 1520	S12 W39	08 12.7		A	HA	30	3	2	1
6195		HOLL	08 15 1540	S13 W40	08 12.6		B	CSO	60	5	3	3
6195		PALE	08 15 1800	S14 W40	08 12.7		B	CSO	60	6	3	3
6195		LEAR	08 16 0050	S12 W46	08 12.6		A	HA	20	2	2	3
6195		CULG	08 16 0100	S13 W45	08 12.6		A	HA	30	4	2	2
6195		SVTO	08 16 1037	S12 W50	08 12.7		A	HS	20	5	2	2
6195		RAMY	08 16 1215	S12 W51	08 12.7		A	HA	20	2	1	3
6195		BOUL	08 16 1440	S12 W52	08 12.7		A	HA	20	1	1	4
6195		HOLL	08 16 1610	S12 W54	08 12.6		A	AX	20	3		2
6195		PALE	08 16 1730	S14 W55	08 12.6		A	HA	20	1	1	3
6195		LEAR	08 17 0030	S13 W57	08 12.7		A	AX	10	1	1	3
6195		CULG	08 17 0225	S15 W63	08 12.3		A	AX	10	1	1	2
6195		SVTO	08 17 0706	S13 W62	08 12.6		A	AX		1	1	3
6195		RAMY	08 17 1155	S12 W64	08 12.7		A	AX	10	2	2	4
6195		BOUL	08 17 1506	S12 W66	08 12.6		A	AX	10	1	1	4
6195		PALE	08 17 1720	S14 W68	08 12.6		A	AX		1		4
6213		HOLL	08 13 2155	N07 W14	08 12.9		B	BXO	10	3	3	2
6213		CULG	08 14 0107	N07 W17	08 12.8		B	BXO	10	2	3	3
6213		LEAR	08 14 0420	N07 W19	08 12.7		A	AX	10	2	1	2
6213		SVTO	08 14 0552	N05 W19	08 12.8		A	AX	10	2	2	4
6213		RAMY	08 14 1540	N06 W26	08 12.7		A	AX	10	1	1	2
6213		HOLL	08 14 1602	N06 W25	08 12.8		B	CRO	10	5	4	3
6213		PALE	08 14 1704	N06 W25	08 12.8		B	CAO	40	4	3	3
6213		CULG	08 15 0043	N07 W32	08 12.6		B	BXO	10	4	5	3
6213		LEAR	08 15 0132	N06 W31	08 12.7		B	CAO	30	4	4	3
6213		SVTO	08 15 0848	N06 W35	08 12.7		B	DRI	50	6	7	3
6213		RAMY	08 15 1202	N06 W37	08 12.7		B	DAO	80	12	6	2
6213		BOUL	08 15 1520	N06 W38	08 12.8		B	DSO	60	7	6	1
6213		HOLL	08 15 1540	N05 W39	08 12.7		B	CSO	110	12	7	3
6213		PALE	08 15 1800	N07 W40	08 12.7		B	DSO	100	12	7	3
6213		LEAR	08 16 0050	N06 W46	08 12.6		B	DAO	60	10	8	3
6213		CULG	08 16 0100	N06 W44	08 12.7		B	DSO	80	15	8	2
6213		SVTO	08 16 1037	N06 W51	08 12.6		B	CAO	60	14	10	2
6213		RAMY	08 16 1215	N05 W51	08 12.7		B	CAO	60	14	8	3
6213		BOUL	08 16 1440	N07 W52	08 12.7		B	DSO	70	7	6	4
6213		PALE	08 16 1730	N05 W54	08 12.7		B	CAO	50	10	8	3
6213		LEAR	08 17 0030	N06 W56	08 12.8		B	CAO	50	10	7	3
6213		SVTO	08 17 0706	N05 W63	08 12.6		B	CRO	60	5	7	3
6213		RAMY	08 17 1155	N06 W65	08 12.6		B	DAO	70	6	9	4
6213		BOUL	08 17 1506	N05 W65	08 12.8		B	DAO	80	7	7	4
6213		PALE	08 17 1720	N05 W67	08 12.7		B	CAO	70	7	7	4
6213		HOLL	08 17 2015	N05 W69	08 12.7		B	BXO	60	10	8	3
6213		LEAR	08 18 0020	N06 W69	08 12.8		B	CAO	50	9	7	4
6213		CULG	08 18 0104	N05 W76	08 12.3		B	BXO	10	2	9	2
6213		SVTO	08 18 0930	N04 W79	08 12.5		B	BXO	20	3	9	4
6213		RAMY	08 18 1521	N06 W80	08 12.6		A	AX	10	1	1	3
6213		HOLL	08 18 1640	N05 W79	08 12.8		A	AX	10	1		3
6213		PALE	08 18 2014	N05 W82	08 12.7		A	AX		1		3
6204		LEAR	08 09 0015	S36 E57	08 13.6		B	BXO	90	4	5	4
6204		RAMY	08 09 1340	S34 E45	08 13.1		B	BXO	20	4	2	3
6204		BOUL	08 09 1520	S34 E42	08 13.0		B	DSO	50	4	3	3
6204		HOLL	08 09 1600	S34 E43	08 13.1		B	BXO	30	6	3	4

98
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

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
6204		PALE	08 09 1800	S35 E44	08 13.3		B	BXO	20	7	4	3
6204		LEAR	08 10 0050	S34 E38	08 13.1		B	CAO	50	5	5	3
6204		CULG	08 10 0148	S34 E40	08 13.3		B	CRO	10	4	5	4
6204		SVTO	08 10 0810	S36 E35	08 13.1		B	DRO	30	4	5	4
6204		RAMY	08 10 1240	S32 E34	08 13.2		B	CAO	5030	7		3
6204		BOUL	08 10 1436	S34 E31	08 13.1		B	CAO	30	7	4	3
6204		HOLL	08 10 1540	S36 E32	08 13.2		B	BXO	30	10	5	3
6204		PALE	08 10 1715	S35 E30	08 13.1		B	DRO	30	7	5	3
6204		CULG	08 11 0010	S34 E28	08 13.2		B	DRO	20	7	4	3
6204		LEAR	08 11 0035	S35 E27	08 13.2		B	BXO	30	7	6	3
6204		SVTO	08 11 0638	S35 E23	08 13.1		B	CRO	30	5	5	2
6204		RAMY	08 11 1155	S34 E20	08 13.1		B	BXO	20	8	6	4
6204		BOUL	08 11 1440	S33 E17	08 13.0		B	BXO	10	3	5	2
6204		HOLL	08 11 1610	S35 E16	08 12.9		A	AX	10	3	2	2
6204		PALE	08 11 1914	S35 E17	08 13.2		B	BXO		2	4	3
6204		LEAR	08 12 0030	S35 E15	08 13.2		A	AX	20	1	1	3
6200		RAMY	08 08 1400	S10 E69	08 13.8		A	AX	10	2	2	3
6200		HOLL	08 08 1400	S11 E69	08 13.8		A	AX	10	3	2	4
6200		PALE	08 08 1747	S13 E65	08 13.6		A	AX	10	2	1	3
6200		LEAR	08 09 0015	S11 E60	08 13.5		A	AX	40	2	2	4
6200		CULG	08 09 0252	S10 E60	08 13.6		A	AX	10	2	1	3
6200		SVTO	08 09 0815	S11 E57	08 13.6		B	BXO	20	4	4	2
6200		RAMY	08 09 1340	S10 E53	08 13.5		B	BXO	20	3	3	3
6200		BOUL	08 09 1520	S09 E51	08 13.5		B	BXO	10	2	4	3
6200		HOLL	08 09 1600	S11 E52	08 13.6		B	BXO	10	2	3	4
6200		PALE	08 09 1800	S11 E51	08 13.6		B	BXO	10	2	5	3
6200		LEAR	08 10 0050	S10 E47	08 13.6		B	BXO	20	3	5	3
6200		CULG	08 10 0148	S09 E48	08 13.7		B	BXO	10	2	5	4
6200		SVTO	08 10 0810	S12 E44	08 13.6		B	BXO	10	2	1	4
6200		RAMY	08 10 1240	S09 E38	08 13.4		A	AX		1	1	3
6200		HOLL	08 10 1540	S10 E37	08 13.4		A	AX	10	2	2	3
6200		PALE	08 10 1715	S10 E37	08 13.5		B	BXO		3	3	3
6200		CULG	08 11 0010	S10 E35	08 13.6		A	AX		3	1	3
6200		SVTO	08 11 0638	S10 E29	08 13.4		A	AX	10	2	1	2
6200		PALE	08 11 1914	S11 E23	08 13.5		A	AX		2	2	3
6200		RAMY	08 12 1317	S09 E12	08 13.4		B	BXO	10	5	3	3
6200		HOLL	08 12 1600	S10 E11	08 13.5		B	BXO	10	5	3	1
6200		PALE	08 12 1916	S08 E11	08 13.6		B	CAO	40	10	5	3
6200		CULG	08 13 0049	S09 E07	08 13.5		B	CAO	20	9	4	2
6200		LEAR	08 13 0110	S11 E06	08 13.5		B	CAO	20	8	5	2
6200		BOUL	08 13 1353	S09 W01	08 13.5		B	CAI	40	13	5	1
6200		RAMY	08 13 1428	S09 W02	08 13.4		B	CAO	80	14	6	3
6200		HOLL	08 13 2155	S10 W05	08 13.5		B	DAI	70	17	6	2
6200		CULG	08 14 0107	S09 W09	08 13.4		B	DAO	50	15	7	3
6200		LEAR	08 14 0420	S09 W09	08 13.5		B	DAI	70	16	6	2
6200		SVTO	08 14 0552	S11 W12	08 13.3		B	DAI	130	20	6	4
6200		BOUL	08 14 1602	S09 W16	08 13.5		B	DSI	120	13	6	1
6200		HOLL	08 14 1602	S10 W16	08 13.5		B	DAI	130	24	6	3
6200		PALE	08 14 1704	S10 W17	08 13.4		B	CAI	220	15	7	3
6200		CULG	08 15 0043	S10 W23	08 13.3		B	DAO	90	19	7	3
6200		LEAR	08 15 0132	S10 W22	08 13.4		B	DSO	150	11	6	3
6200		SVTO	08 15 0848	S10 W26	08 13.4		B	DSO	110	11	7	3
6200		RAMY	08 15 1202	S09 W28	08 13.4		B	DSO	140	16	7	2
6200		BOUL	08 15 1520	S09 W28	08 13.5		B	DSI	90	8	7	1
6200		HOLL	08 15 1540	S10 W30	08 13.4		B	DSO	110	13	8	3
6200		PALE	08 15 1800	S10 W30	08 13.5		B	DSO	120	11	7	3
6200		LEAR	08 16 0050	S10 W35	08 13.4		B	DSO	60	9	8	3
6200		CULG	08 16 0100	S10 W35	08 13.4		B	DAO	80	14	8	2
6200		SVTO	08 16 1037	S09 W41	08 13.4		B	DSO	70	10	8	2
6200		RAMY	08 16 1215	S09 W41	08 13.4		B	DAO	100	11	8	3
6200		BOUL	08 16 1440	S09 W42	08 13.4		B	DAO	70	7	9	4
6200		HOLL	08 16 1610	S09 W44	08 13.4		B	CSO	120	7	9	2
6200		PALE	08 16 1730	S11 W45	08 13.3		B	DSO	80	6	8	3
6200		LEAR	08 17 0030	S10 W47	08 13.5		B	CSO	40	7	7	3
6200		CULG	08 17 0225	S11 W52	08 13.2		B	CSO	30	3	7	2
6200		SVTO	08 17 0706	S10 W52	08 13.4		B	CSO	70	4	8	3
6200		RAMY	08 17 1155	S09 W55	08 13.4		B	CAO	50	7	9	4
6200		BOUL	08 17 1506	S09 W59	08 13.2		B	DSO	40	4	2	4

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

99
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CND	CMP No Day	Max H	Meg Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6200		PALE	08 17 1720	S10 W60	08 13.2		A	HA	50	4	2	4
6200		HOLL	08 17 2015	S10 W63	08 13.1		A	HS	40	2	2	3
6200		CULG	08 18 0104	S09 W69	08 12.9		A	HS	10	1	1	2
6200		SVTO	08 18 0930	S10 W73	08 12.9		A	HS	30	1	1	4
6200		BOUL	08 18 1430	S09 W71	08 13.3		A	HS	30	1	2	3
6200		RAMY	08 18 1521	S10 W70	08 13.4		A	HA	20	1	1	3
6200		HOLL	08 18 1640	S10 W76	08 13.0		A	HA	30	1	1	3
6200		PALE	08 18 2014	S09 W76	08 13.1		A	HA	30	1	1	3
6200		LEAR	08 19 0025	S10 W80	08 13.0		A	HS	30	1	1	3
6197		RAMY	08 07 1119	N17 E87	08 14.1		B	BXO	10	4	3	3
6197		HOLL	08 07 2320	N14 E78	08 13.9		B	CSO	60	6	7	1
6197		LEAR	08 08 0012	N14 E76	08 13.7		B	BXO	90	6	6	3
6197		CULG	08 08 0229	N16 E80	08 14.2		B	BXO	10	4	9	1
6197		SVTO	08 08 0600	N13 E78	08 14.1		B	DAO	180	11	8	3
6197		HOLL	08 08 1400	N13 E71	08 13.9		B	DAI	160	12	9	4
6197		RAMY	08 08 1400	N15 E71	08 13.9		B	DAO	240	9	10	3
6197		BOUL	08 08 1425	N14 E70	08 13.9		B	DAO	220	7	9	3
6197		PALE	08 08 1747	N13 E69	08 13.9		B	CAO	230	12	8	3
6197		LEAR	08 09 0015	N13 E64	08 13.8		B	DKO	370	14	8	4
6197		CULG	08 09 0252	N15 E66	08 14.1		B	DKO	140	12	9	3
6197		SVTO	08 09 0815	N13 E62	08 14.0		B	DKO	480	10	8	2
6197		RAMY	08 09 1340	N15 E59	08 14.0		B	DAI	360	17	8	3
6197		BOUL	08 09 1520	N14 E57	08 13.9		B	DKI	360	20	7	3
6197		HOLL	08 09 1600	N13 E57	08 14.0		BD	DAI	320	23	9	4
6197		PALE	08 09 1800	N13 E56	08 14.0		B	DAI	320	30	9	3
6197		LEAR	08 10 0050	N15 E51	08 13.9		B	DKO	210	15	8	3
6197		CULG	08 10 0148	N16 E53	08 14.1		B	DKI	250	27	9	4
6197		SVTO	08 10 0810	N12 E48	08 13.9		B	DKI	360	15	7	4
6197		RAMY	08 10 1240	N13 E44	08 13.8		B	DAO	300	20	8	3
6197		BOUL	08 10 1436	N15 E44	08 13.9		B	DKI	320	21	9	3
6197		HOLL	08 10 1540	N14 E44	08 14.0		B	DAO	390	22	8	3
6197		PALE	08 10 1715	N14 E43	08 14.0		B	DKI	300	23	9	3
6197		CULG	08 11 0010	N14 E39	08 13.9		B	DKI	280	19	8	3
6197		LEAR	08 11 0035	N14 E37	08 13.8		B	DKI	200	13	8	3
6197		SVTO	08 11 0638	N14 E34	08 13.8		B	DAO	250	16	8	2
6197		RAMY	08 11 1155	N13 E32	08 13.9		B	DAO	240	27	9	4
6197		BOUL	08 11 1440	N14 E30	08 13.9		B	DAI	210	15	8	2
6197		HOLL	08 11 1610	N13 E30	08 13.9		B	DSO	290	19	8	2
6197		PALE	08 11 1914	N13 E28	08 13.9		B	DKO	210	7	6	3
6197		LEAR	08 12 0030	N14 E25	08 13.9		B	DAI	150	11	7	3
6197		CULG	08 12 0205	N14 E22	08 13.7		B	DAO	200	9	6	3
6197		SVTO	08 12 0603	N13 E22	08 13.9		B	DAO	280	19	10	2
6197		RAMY	08 12 1317	N15 E17	08 13.8		B	DAO	240	14	8	3
6197		HOLL	08 12 1600	N14 E15	08 13.8		B	DSO	210	11	8	1
6197		PALE	08 12 1916	N14 E14	08 13.9		B	DAO	210	18	7	3
6197		CULG	08 13 0049	N14 E13	08 14.0		B	DAO	140	15	9	2
6197		LEAR	08 13 0110	N12 E11	08 13.9		B	DSO	140	10	7	2
6197		BOUL	08 13 1353	N14 E03	08 13.8		B	DAI	130	15	6	1
6197		RAMY	08 13 1428	N14 E03	08 13.8		B	EAO	240	15	8	3
6197		HOLL	08 13 2155	N14 E00	08 13.9		B	CAI	110	19	9	2
6197		CULG	08 14 0107	N14 W02	08 13.9		B	DAO	110	16	7	3
6197		LEAR	08 14 0420	N14 W03	08 13.9		B	DAI	120	22	9	2
6197		SVTO	08 14 0552	N13 W04	08 13.9		B	DAI	180	15	6	4
6197		RAMY	08 14 1540	N15 W08	08 14.0		B	DAI	260	17	10	2
6197		HOLL	08 14 1602	N14 W09	08 14.0		B	CAI	150	20	6	3
6197		BOUL	08 14 1602	N14 W11	08 13.8		B	DAI	120	6	9	1
6197		PALE	08 14 1704	N15 W09	08 14.0		B	DAO	260	18	10	3
6197		CULG	08 15 0043	N14 W16	08 13.8		B	DAO	90	13	6	3
6197		LEAR	08 15 0132	N14 W14	08 14.0		B	DSO	230	15	9	3
6197		SVTO	08 15 0848	N13 W19	08 13.9		B	CSO	90	9	6	3
6197		RAMY	08 15 1202	N14 W22	08 13.8		B	CSO	90	6	7	2
6197		BOUL	08 15 1520	N14 W21	08 14.0		B	DSO	90	3	3	1
6197		HOLL	08 15 1540	N14 W23	08 13.9		B	CSO	90	16	11	3
6197		PALE	08 15 1800	N13 W22	08 14.1		B	DSO	140	21	10	3
6197		LEAR	08 16 0050	N13 W27	08 14.0		B	DSO	80	5	8	3
6197		CULG	08 16 0100	N14 W30	08 13.8		B	CAO	70	12	6	2
6197		SVTO	08 16 1037	N14 W34	08 13.9		B	CSO	110	9	6	2
6197		RAMY	08 16 1215	N13 W36	08 13.8		B	CSO	80	8	5	3

100
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6197		BOUL	08 16 1440	N15 W35	08 14.0		B	DAO	50	5	6	4
6197		HOLL	08 16 1610	N14 W38	08 13.8		B	CSO	100	4	7	2
6197		PALE	08 16 1730	N12 W39	08 13.8		B	CSO	60	6	3	3
6197		LEAR	08 17 0030	N14 W43	08 13.8		B	CSO	50	4	3	3
6197		CULG	08 17 0225	N11 W48	08 13.5		B	CSO	30	3	5	2
6197		SVTO	08 17 0706	N13 W48	08 13.7		B	CSO	90	2	4	3
6197		RAMY	08 17 1155	N13 W50	08 13.7		B	CAO	80	7	4	4
6197		BOUL	08 17 1506	N13 W51	08 13.8		B	CSO	60	2	3	4
6197		PALE	08 17 1720	N12 W53	08 13.7		B	CAO	70	5	4	4
6197		HOLL	08 17 2015	N14 W55	08 13.7		A	HS	40	2	2	3
6197		LEAR	08 18 0020	N15 W55	08 13.8		B	CAO	50	2	4	4
6197		CULG	08 18 0104	N16 W58	08 13.6		B	CSO	40	2	3	2
6197		SVTO	08 18 0930	N15 W62	08 13.7		A	HS	40	1	1	4
6197		BOUL	08 18 1430	N15 W64	08 13.7		A	HS	40	1	2	3
6197		RAMY	08 18 1521	N14 W62	08 13.9		B	CAO	1020	2		3
6197		HOLL	08 18 1640	N14 W66	08 13.7		A	HA	90	3	2	3
6197		PALE	08 18 2014	N14 W66	08 13.8		A	HA	40	2	1	3
6197		LEAR	08 19 0025	N14 W66	08 14.0		B	CAO	50	5	5	3
6197		SVTO	08 19 0705	N14 W75	08 13.6		A	HS	30	1	1	3
6197		RAMY	08 19 1310	N13 W73	08 14.0		A	AX	20	4	1	3
6197		HOLL	08 19 1740	N13 W79	08 13.8		A	AX	20	2	1	3
6197		PALE	08 19 1921	N14 W79	08 13.8		A	HA	30	1	1	3
6202		RAMY	08 09 1340	S33 E61	08 14.4		B	BXO	30	3	2	3
6202		BOUL	08 09 1520	S36 E60	08 14.4		A	AX	10	1	1	3
6202		HOLL	08 09 1600	S35 E58	08 14.3		B	BXO	20	4	4	4
6202		PALE	08 09 1800	S36 E58	08 14.4		B	BXO		3	5	3
6202		CULG	08 10 0148	S34 E58	08 14.7		A	AX	10	2	1	4
6202		SVTO	08 10 0810	S38 E50	08 14.4		B	BXO	20	3	5	4
6202		RAMY	08 10 1240	S36 E51	08 14.6		A	AX	20	3	2	3
6202		BOUL	08 10 1436	S36 E47	08 14.4		B	BXO	20	4	6	3
6202		HOLL	08 10 1540	S34 E48	08 14.5		B	BXO	20	4	3	3
6202		PALE	08 10 1715	S36 E46	08 14.4		B	BXO	10	4	6	3
6199		HOLL	08 08 1400	N10 E85	08 15.0		A	HS	30	2	2	4
6199		RAMY	08 08 1400	N11 E85	08 15.0		A	HS	30	1	2	3
6199		BOUL	08 08 1425	N10 E82	08 14.8		A	AX	10	1	1	3
6199		PALE	08 08 1747	N09 E85	08 15.1		B	CAO	50	3	5	3
6199		LEAR	08 09 0015	N11 E77	08 14.8		B	DSO	180	3	5	4
6199		CULG	08 09 0252	N12 E80	08 15.1		B	BXO	30	6	12	3
6199		SVTO	08 09 0815	N10 E76	08 15.0		B	DAO	180	4	9	2
6199		RAMY	08 09 1340	N12 E74	08 15.1		B	DAO	30	4	3	3
6199		BOUL	08 09 1520	N13 E72	08 15.1		B	DAO	220	11	9	3
6199		HOLL	08 09 1600	N11 E70	08 14.9		B	DSO	140	6	8	4
6199		PALE	08 09 1800	N11 E70	08 15.0		B	DAO	160	5	8	3
6199		LEAR	08 10 0050	N11 E67	08 15.1		B	CHO	130	7	9	3
6199		CULG	08 10 0148	N13 E68	08 15.2		B	DAO	60	7	9	4
6199		SVTO	08 10 0810	N11 E61	08 14.9		B	DSO	200	8	9	4
6199		RAMY	08 10 1240	N11 E60	08 15.0		B	EAO	210	10	11	3
6199		BOUL	08 10 1436	N13 E56	08 14.8		B	EAO	220	14	11	3
6199		HOLL	08 10 1540	N13 E58	08 15.0		B	CSO	180	12	9	3
6199		PALE	08 10 1715	N11 E57	08 15.0		B	DSO	190	12	9	3
6199		CULG	08 11 0010	N12 E53	08 15.0		B	DAO	130	12	10	3
6199		LEAR	08 11 0035	N11 E51	08 14.9		B	DKO	110	10	10	3
6199		SVTO	08 11 0638	N11 E49	08 15.0		B	DAO	180	13	10	2
6199		RAMY	08 11 1155	N12 E46	08 15.0		B	DAO	150	20	10	4
6199		BOUL	08 11 1440	N13 E44	08 14.9		B	DAI	150	9	9	2
6199		HOLL	08 11 1610	N12 E44	08 15.0		B	CAO	140	14	11	2
6199		PALE	08 11 1914	N11 E43	08 15.0		B	EAO	240	15	11	3
6199		LEAR	08 12 0030	N11 E39	08 14.9		B	DSI	170	11	10	3
6199		CULG	08 12 0205	N15 E37	08 14.9		B	DAO	160	8	9	3
6199		SVTO	08 12 0603	N12 E35	08 14.9		B	EAO	250	29	12	2
6199		RAMY	08 12 1317	N12 E30	08 14.8		B	EAO	190	28	12	3
6199		HOLL	08 12 1600	N13 E28	08 14.8		B	DAO	210	14	10	1
6199		PALE	08 12 1916	N11 E29	08 15.0		BG	EKI	360	32	12	3
6199		CULG	08 13 0049	N14 E25	08 14.9		B	EAI	150	37	12	2
6199		LEAR	08 13 0110	N11 E24	08 14.8		B	EAI	190	22	12	2
6199		BOUL	08 13 1353	N13 E17	08 14.9		B	EAI	250	29	15	1
6199		RAMY	08 13 1428	N12 E15	08 14.7		BG	EAI	330	37	13	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	.CMP Mo Day	Max H	Hag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6199		HOLL	08 13 2155	N13 E12	08 14.8		BG	EAI	210	45	15	2
6199		CULG	08 14 0107	N13 E10	08 14.8		BG	EAI	210	34	14	3
6199		LEAR	08 14 0420	N13 E08	08 14.8		B	EAI	180	42	13	2
6199		SVTO	08 14 0552	N12 E08	08 14.8		BG	EAI	410	34	14	4
6199		RAMY	08 14 1540	N12 E03	08 14.9		BG	EAI	330	22	13	2
6199		HOLL	08 14 1602	N12 E02	08 14.8		B	EAI	290	53	14	3
6199		BOUL	08 14 1602	N13 E02	08 14.8		B	DAI	230	15	10	1
6199		PALE	08 14 1704	N12 E01	08 14.8		BG	EKI	410	30	15	3
6199		CULG	08 15 0043	N13 W03	08 14.8		BG	FAI	290	38	16	3
6199		LEAR	08 15 0132	N12 W03	08 14.8		BG	EKI	410	38	14	3
6199		SVTO	08 15 0848	N12 W08	08 14.8		BG	EAI	240	26	14	3
6199		RAMY	08 15 1202	N13 W09	08 14.8		BG	FKI	350	27	16	2
6199		BOUL	08 15 1520	N13 W09	08 14.9		B	EAI	210	23	13	1
6199		HOLL	08 15 1540	N13 W11	08 14.8		B	EKI	490	35	13	3
6199		PALE	08 15 1800	N12 W14	08 14.7		B	EKI	490	31	11	3
6199		LEAR	08 16 0050	N12 W15	08 14.9		BG	EKI	360	21	15	3
6199		CULG	08 16 0100	N13 W17	08 14.7		BG	FAI	400	47	16	2
6199		SVTO	08 16 1037	N13 W20	08 14.9		BG	FKI	580	35	16	2
6199		RAMY	08 16 1215	N12 W21	08 14.9		BG	FKI	550	38	16	3
6199		BOUL	08 16 1440	N13 W26	08 14.6		B	EKC	660	18	9	4
6199		HOLL	08 16 1610	N13 W26	08 14.7		B	EKI	630	26	15	2
6199		PALE	08 16 1730	N12 W26	08 14.8		B	EKI	630	33	13	3
6199		LEAR	08 17 0030	N14 W29	08 14.8		B	EKI	480	18	14	3
6199		CULG	08 17 0225	N11 W36	08 14.4		B	DAO	280	15	8	2
6199		SVTO	08 17 0706	N12 W36	08 14.6		BGD	DAI	620	16	9	3
6199		RAMY	08 17 1155	N12 W33	08 15.0		B	FKO	640	36	16	4
6199		BOUL	08 17 1506	N14 W38	08 14.7		B	DKC	690	68	10	4
6199		PALE	08 17 1720	N13 W39	08 14.8		B	FKI	550	38	16	4
6199		HOLL	08 17 2015	N13 W43	08 14.6		B	ENI	490	34	10	3
6199		LEAR	08 18 0020	N12 W44	08 14.7		B	DKI	430	27	10	4
6199		CULG	08 18 0104	N14 W47	08 14.5		B	EKI	420	21	10	2
6199		SVTO	08 18 0930	N12 W48	08 14.8		BG	FKI	520	31	16	4
6199		BOUL	08 18 1430	N12 W51	08 14.8		B	DKI	420	16	9	3
6199		RAMY	08 18 1521	N13 W52	08 14.7		BG	EKI	400	20	11	3
6199		HOLL	08 18 1640	N13 W55	08 14.5		BG	DKI	590	30	10	3
6199		PALE	08 18 2014	N13 W55	08 14.7		B	DKO	420	17	10	3
6199		LEAR	08 19 0025	N13 W57	08 14.7		B	DKI	400	21	10	3
6199		SVTO	08 19 0705	N13 W63	08 14.5		BG	DAI	440	11	9	3
6199		RAMY	08 19 1310	N13 W64	08 14.7		B	EKI	530	13	11	3
6199		BOUL	08 19 1420	N13 W63	08 14.8		B	DKO	370	10	9	4
6199		HOLL	08 19 1740	N12 W67	08 14.7		BG	DKI	430	20	9	3
6199		PALE	08 19 1921	N13 W67	08 14.7		B	DKO	490	9	8	3
6199		LEAR	08 20 0015	N13 W71	08 14.6		B	DKI	290	12	10	3
6199		KIS	08 20 0536	N12 W74	08 14.6			FK	84	18		4
6199		SVTO	08 20 1305	N11 W80	08 14.5		B	EAI	360	8	14	2
6199		BOUL	08 20 1412	N12 W74	08 15.0		B	DSO	260	6	9	2
6199		RAMY	08 20 1448	N12 W80	08 14.6		B	EKO	240	6	11	3
6199		HOLL	08 20 1625	N11 W80	08 14.7		B	ESO	160	5	12	2
6199		PALE	08 20 2156	N12 W85	08 14.5		B	DAO	200	4	4	3
6199		LEAR	08 21 0100	N12 W85	08 14.6		B	DAO	90	4	10	3
6199		SVTO	08 21 0740	N12 W85	08 14.9		A	HA	60	1	3	3
6208		RAMY	08 11 1155	N02 E61	08 16.0		B	BXO	10	3	3	4
6208		BOUL	08 11 1440	N04 E57	08 15.9		B	BXO	10	3	5	2
6208		HOLL	08 11 1610	N03 E59	08 16.1		B	BXO	20	6	3	2
6208		PALE	08 11 1914	N02 E57	08 16.0		B	BXO	10	6	4	3
6208		LEAR	08 12 0030	N01 E53	08 16.0		B	DSO	40	4	3	3
6208		CULG	08 12 0205	N06 E52	08 16.0		B	BXO	10	3	4	3
6208		SVTO	08 12 0603	N03 E50	08 16.0		B	DRO	40	4	5	2
6208		RAMY	08 12 1317	N03 E47	08 16.1		B	DRO	40	5	7	3
6208		HOLL	08 12 1600	N03 E45	08 16.0		B	BXO	30	3	6	1
6208		PALE	08 12 1916	N03 E43	08 16.0		B	BXO	20	8	7	3
6208		CULG	08 13 0049	N04 E41	08 16.1		B	CRO	20	7	7	2
6208		LEAR	08 13 0110	N02 E38	08 15.9		B	BXO	20	10	6	2
6208		BOUL	08 13 1353	N04 E30	08 15.8		B	BXI	30	9	6	1
6208		RAMY	08 13 1428	N04 E32	08 16.0		B	DAO	60	16	8	3
6208		HOLL	08 13 2155	N03 E27	08 15.9		B	BXO	20	18	6	2
6208		CULG	08 14 0107	N03 E24	08 15.8		B	CRO	10	14	7	3
6208		LEAR	08 14 0420	N01 E25	08 16.0		B	ESO	50	22	12	2

102
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6208		SVTO	08 14 0552	N02	E23	08 16.0		B	CRI	50	15	6	4
6208		RAMY	08 14 1540	N04	E17	08 15.9		B	DAO	70	14	6	2
6208		BOUL	08 14 1602	N03	E17	08 15.9		B	BXO	30	7	5	1
6208		HOLL	08 14 1602	N04	E17	08 15.9		B	DRI	20	21	7	3
6208		PALE	08 14 1704	N03	E17	08 16.0		B	DAO	100	16	6	3
6208		CULG	08 15 0043	N03	E11	08 15.8		B	CRO	20	14	7	3
6208		LEAR	08 15 0132	N02	E12	08 16.0		B	DSO	110	18	5	3
6208		SVTO	08 15 0848	N02	E08	08 16.0		B	DRI	90	14	7	3
6208		RAMY	08 15 1202	N03	E07	08 16.0		B	DSO	70	16	7	2
6208		BOUL	08 15 1520	N04	E03	08 15.9		B	DSI	80	11	8	1
6208		HOLL	08 15 1540	N03	E03	08 15.9		B	BXO	30	21	7	3
6208		PALE	08 15 1800	N03	E04	08 16.0		B	ESO	130	15	11	3
6208		LEAR	08 16 0050	N02	W01	08 16.0		B	CSO	40	14	9	3
6208		CULG	08 16 0100	N03	W03	08 15.8		B	DSO	30	23	8	2
6208		SVTO	08 16 1037	N03	W07	08 15.9		B	CAI	70	27	9	2
6208		RAMY	08 16 1215	N02	W09	08 15.8		B	DAO	90	29	9	3
6208		BOUL	08 16 1440	N03	W08	08 16.0		B	DAO	60	14	9	4
6208		HOLL	08 16 1610	N03	W11	08 15.8		B	CRO	50	19	8	2
6208		PALE	08 16 1730	N03	W11	08 15.9		B	DAI	80	14	9	3
6208		LEAR	08 17 0030	N02	W15	08 15.9		B	DAO	70	11	8	3
6208		CULG	08 17 0225	N02	W16	08 15.9		B	DSO	60	7	9	2
6208		SVTO	08 17 0706	N03	W19	08 15.9		B	DRI	90	15	9	3
6208		RAMY	08 17 1155	N03	W21	08 15.9		B	DAO	80	25	10	4
6208		BOUL	08 17 1506	N01	W22	08 16.0		B	EAI	100	26	13	4
6208		PALE	08 17 1720	N02	W25	08 15.8		B	DAI	100	21	9	4
6208		HOLL	08 17 2015	N03	W27	08 15.8		B	BXO	70	30	9	3
6208		LEAR	08 18 0020	N03	W28	08 15.9		B	DAI	30	22	8	4
6208		CULG	08 18 0104	N04	W31	08 15.7		B	DAI	20	15	9	2
6208		SVTO	08 18 0930	N04	W35	08 15.8		B	CRO	40	22	10	4
6208		BOUL	08 18 1430	N04	W36	08 15.9		B	DSO	90	12	9	3
6208		RAMY	08 18 1521	N03	W36	08 15.9		B	DAO	50	13	9	3
6208		HOLL	08 18 1640	N03	W39	08 15.8		B	CRO	40	10	9	3
6208		PALE	08 18 2014	N03	W40	08 15.8		B	DAO	40	8	9	3
6208		LEAR	08 19 0025	N03	W43	08 15.8		B	CAO	30	9	9	3
6208		SVTO	08 19 0705	N03	W46	08 15.8		B	BXO	10	5	8	3
6208		RAMY	08 19 1310	N03	W49	08 15.9		B	BXO	20	5	10	3
6208		HOLL	08 19 1740	N03	W53	08 15.8		B	BXO	20	4	9	3
6208		PALE	08 19 1921	N03	W53	08 15.8		B	BXO		3	8	3
6208		LEAR	08 20 0015	N04	W57	08 15.7		B	BXO	20	5	9	3
6208		RAMY	08 20 1448	N05	W68	08 15.5		B	BXO	20	2	6	3
6208		PALE	08 20 2156	N05	W67	08 15.9		A	AX		1		3
6208		PALE	08 21 1705	N05	W85	08 15.3		A	AX	30	1	1	3
6208A		RAMY	08 14 1540	S12	E20	08 16.1		A	AX		1	1	2
6208A		HOLL	08 14 1602	S13	E19	08 16.1		A	AX		1		3
6220		LEAR	08 17 0030	S19	W11	08 16.2		A	AX	10	2	3	3
6220		CULG	08 17 0225	S17	W13	08 16.1		A	AX		0		2
6220		SVTO	08 17 0706	S19	W13	08 16.3		B	BXO	10	3	6	3
6220		RAMY	08 17 1155	S15	W19	08 16.0		A	HR	10	1	1	4
6220		BOUL	08 17 1506	S16	W20	08 16.1		A	AX	10	1	1	4
6220		PALE	08 17 1720	S16	W21	08 16.1		A	AX		1		4
6220		HOLL	08 17 2015	S15	W24	08 16.0		A	AX		1		3
6220		CULG	08 18 0104	S16	W28	08 15.9		A	AX	10	1	1	2
6220		SVTO	08 18 0930	S16	W31	08 16.0		B	BXO	10	2	5	4
6220		RAMY	08 18 1521	S16	W34	08 16.1		B	BXO	10	7	6	3
6220		HOLL	08 18 1640	S18	W32	08 16.2		B	BXO	20	4	3	3
6220		PALE	08 18 2014	S19	W34	08 16.2		B	BXO	10	2	3	3
6220		LEAR	08 19 0025	S19	W35	08 16.3		B	BXO	10	3	4	3
6220		SVTO	08 19 0705	S19	W40	08 16.2		B	CRO	20	4	3	3
6220		RAMY	08 19 1310	S19	W43	08 16.3		B	DAO	40	3	4	3
6220		HOLL	08 19 1740	S19	W45	08 16.3		B	CAO	40	3	4	3
6220		PALE	08 19 1921	S19	W45	08 16.4		B	BXO	20	3	3	3
6220		LEAR	08 20 0015	S18	W49	08 16.3		B	CAO	50	7	5	3
6220		SVTO	08 20 0730	S19	W57	08 16.0		B	DRO	50	11	7	2
6220		RAMY	08 20 1448	S18	W58	08 16.2		B	BXO	30	14	9	3
6220		HOLL	08 20 1625	S19	W58	08 16.2		B	BXO	20	8	7	2
6220		PALE	08 20 2156	S18	W60	08 16.3		B	BXO	10	6	7	3
6220		LEAR	08 21 0100	S18	W62	08 16.3		B	BXO	10	6	7	3

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

103
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											(UT)
6220		SVTO	08 21	0740	S18	W65	08 16.4		B	BXO	50	7	7	3
6220		RAMY	08 21	1335	S18	W69	08 16.3		B	BXO	40	6	7	2
6220		HOLL	08 21	2235	S17	W78	08 16.0		B	BXO	20	3	9	2
6211		RAMY	08 12	1317	S02	E52	08 16.4		B	BXO	10	2	3	3
6211		PALE	08 12	1916	S01	E50	08 16.5		B	BXO		3	4	3
6211		CULG	08 13	0049	S01	E46	08 16.5		A	AX	10	2	1	2
6211		BOUL	08 13	1353	S01	E36	08 16.3		A	AX	10	7	2	1
6211		RAMY	08 13	1428	S02	E37	08 16.4		B	CRO	20	7	3	3
6211		HOLL	08 13	2155	S02	E34	08 16.4		B	CRO	40	13	5	2
6211		CULG	08 14	0107	S02	E31	08 16.4		B	DAO	20	11	5	3
6211		SVTO	08 14	0552	S03	E30	08 16.5		B	CRI	30	10	5	4
6211		RAMY	08 14	1540	S02	E23	08 16.4		B	BXO	30	6	3	2
6211		BOUL	08 14	1602	S01	E23	08 16.4		B	BXO	10	3	3	1
6211		HOLL	08 14	1602	S02	E23	08 16.4		B	BXO	10	7	4	3
6211		PALE	08 14	1704	S02	E22	08 16.3		B	BXO	20	4	3	3
6211		CULG	08 15	0043	S01	E17	08 16.3		A	AX	10	3	1	3
6211		LEAR	08 15	0132	S03	E16	08 16.2		B	BXO	30	3	3	3
6211		SVTO	08 15	0848	S03	E12	08 16.3		A	AX	10	2	2	3
6211		RAMY	08 15	1202	S02	E11	08 16.3		A	AX	10	3	2	2
6211		BOUL	08 15	1520	S02	E07	08 16.2		A	AX		2	2	1
6211		HOLL	08 15	1540	S02	E09	08 16.3		B	BXO	10	4	4	3
6211		PALE	08 15	1800	S04	E09	08 16.4		B	BXO	20	3	6	3
6211		LEAR	08 16	0050	S03	E03	08 16.2		A	AX	10	2	1	3
6211		CULG	08 16	0100	S02	E03	08 16.3		A	AX		2	1	2
6211		SVTO	08 16	1037	S01	W02	08 16.3		B	BXO	10	3	3	2
6211		RAMY	08 16	1215	S01	W02	08 16.4		B	BXO	10	3	3	3
6211		HOLL	08 16	1610	S02	W04	08 16.4		B	BXO	10	7	5	2
6211		PALE	08 16	1730	S02	W05	08 16.3		B	BXO	10	9	3	3
6211		LEAR	08 17	0030	S03	W09	08 16.3		B	BXO	10	8	4	3
6211		CULG	08 17	0225	S02	W16	08 15.9		A	BX	10	4	1	2
6211		SVTO	08 17	0706	S02	W12	08 16.4		B	BXO	10	6	4	3
6211		RAMY	08 17	1155	S02	W15	08 16.4		B	BXO	10	6	3	4
6211		PALE	08 17	1720	S02	W18	08 16.4		B	BXO	10	5	4	4
6211		CULG	08 18	0104	S02	W22	08 16.4		A	AX	10	2	2	2
6203		RAMY	08 09	1340	N19	E86	08 16.1		B	DAO	60	2	5	3
6203		BOUL	08 09	1520	N21	E80	08 15.8		A	HA	60	1	1	3
6203		HOLL	08 09	1600	N18	E82	08 15.9		B	DSO	90	2	7	4
6203		PALE	08 09	1800	N18	E80	08 15.8		B	DAO	120	2	9	3
6203		LEAR	08 10	0050	N18	E78	08 16.0		B	DAO	120	4	5	3
6203		CULG	08 10	0148	N20	E79	08 16.1		B	EAO	100	7	11	4
6203		SVTO	08 10	0810	N16	E78	08 16.2		B	DSO	210	4	8	4
6203		RAMY	08 10	1240	N19	E75	08 16.2		B	DAO	200	8	9	3
6203		BOUL	08 10	1436	N19	E74	08 16.2		B	EAO	330	8	11	3
6203		HOLL	08 10	1540	N18	E74	08 16.3		B	ESO	360	5	11	3
6203		PALE	08 10	1715	N18	E74	08 16.3		B	EAO	300	6	11	3
6203		CULG	08 11	0010	N18	E68	08 16.2		B	EAO	250	3	11	3
6203		LEAR	08 11	0035	N18	E69	08 16.3		B	ESO	260	3	11	3
6203		SVTO	08 11	0638	N18	E67	08 16.4		B	DAO	240	5	10	2
6203		RAMY	08 11	1155	N18	E64	08 16.4		B	EAO	260	9	11	4
6203		BOUL	08 11	1440	N18	E60	08 16.2		B	DAO	260	4	10	2
6203		HOLL	08 11	1610	N18	E61	08 16.3		B	DAO	340	5	8	2
6203		PALE	08 11	1914	N18	E62	08 16.5		B	EAO	230	8	12	3
6203		LEAR	08 12	0030	N17	E58	08 16.4		B	DSI	200	6	9	3
6203		CULG	08 12	0205	N21	E55	08 16.3		B	EAI	230	12	11	3
6203		SVTO	08 12	0603	N18	E53	08 16.3		B	DSO	270	9	10	2
6203		RAMY	08 12	1317	N18	E49	08 16.3		BG	EAO	320	9	11	3
6203		HOLL	08 12	1600	N18	E48	08 16.3		B	DSO	240	5	10	1
6203		PALE	08 12	1916	N19	E49	08 16.5		B	EAO	180	11	11	3
6203		CULG	08 13	0049	N20	E45	08 16.5		B	EAO	150	10	11	2
6203		LEAR	08 13	0110	N17	E43	08 16.3		B	DSO	220	5	9	2
6203		BOUL	08 13	1353	N18	E34	08 16.2		B	DAO	180	9	5	1
6203		RAMY	08 13	1428	N18	E36	08 16.3		BG	EAO	230	11	13	3
6203		HOLL	08 13	2155	N19	E33	08 16.4		B	EAO	180	18	14	2
6203		CULG	08 14	0107	N19	E32	08 16.5		B	EAO	170	16	14	3
6203		LEAR	08 14	0420	N19	E29	08 16.4		B	DSO	170	12	8	2
6203		SVTO	08 14	0552	N18	E28	08 16.4		B	DSO	220	11	10	4
6203		RAMY	08 14	1540	N19	E23	08 16.4		B	EAO	200	10	11	2

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

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)									Lat	CMD
6203		BOUL	08	14	1602	N18 E22	08 16.3	B	CSO	100	4	8	1
6203		HOLL	08	14	1602	N18 E22	08 16.3	B	DSO	190	17	9	3
6203		PALE	08	14	1704	N18 E23	08 16.5	B	DHO	260	12	7	3
6203		CULG	08	15	0043	N20 E17	08 16.3	B	DSO	100	7	9	3
6203		LEAR	08	15	0132	N17 E18	08 16.4	B	DSO	190	7	9	3
6203		SVTO	08	15	0848	N17 E14	08 16.4	B	DSO	150	5	8	3
6203		RAMY	08	15	1202	N17 E13	08 16.5	B	DSO	140	14	8	2
6203		BOUL	08	15	1520	N17 E10	08 16.4	B	DSO	110	3	7	1
6203		HOLL	08	15	1540	N20 E10	08 16.4	B	DSO	220	11	10	3
6203		PALE	08	15	1800	N18 E10	08 16.5	B	DSO	220	15	10	3
6203		LEAR	08	16	0050	N18 E05	08 16.4	B	DSO	100	6	8	3
6203		CULG	08	16	0100	N18 E04	08 16.3	B	DSO	150	11	10	2
6203		SVTO	08	16	1037	N16 W03	08 16.2	B	EAO	160	15	11	2
6203		RAMY	08	16	1215	N19 W01	08 16.4	B	DAO	230	14	9	3
6203		BOUL	08	16	1440	N18 W03	08 16.4	A	HS	30	4	8	4
6203		PALE	08	16	1730	N18 W05	08 16.3	B	DSO	150	6	8	3
6203		LEAR	08	17	0030	N17 W07	08 16.5	B	DSO	100	6	8	3
6203		CULG	08	17	0225	N17 W12	08 16.2	B	DAO	130	8	8	2
6203		SVTO	08	17	0706	N17 W12	08 16.4	B	DSO	190	7	8	3
6203		RAMY	08	17	1155	N18 W13	08 16.5	B	DAO	180	9	8	4
6203		BOUL	08	17	1506	N18 W16	08 16.4	B	DAO	140	6	6	4
6203		PALE	08	17	1720	N18 W17	08 16.4	B	DSO	140	9	9	4
6203		HOLL	08	17	2015	N18 W19	08 16.4	B	DAO	170	8	8	3
6203		LEAR	08	18	0020	N18 W21	08 16.4	B	DSO	110	7	8	4
6203		CULG	08	18	0104	N19 W23	08 16.3	B	DSO	110	5	9	2
6203		SVTO	08	18	0930	N17 W27	08 16.3	B	DSO	110	5	7	4
6203		BOUL	08	18	1430	N17 W27	08 16.5	B	DSO	120	3	8	3
6203		RAMY	08	18	1521	N18 W30	08 16.3	B	DAO	120	7	4	3
6203		HOLL	08	18	1640	N18 W30	08 16.4	B	CAO	120	4	9	3
6203		PALE	08	18	2014	N18 W32	08 16.4	B	CSO	80	6	8	3
6203		LEAR	08	19	0025	N17 W34	08 16.4	B	CAO	100	4	9	3
6203		SVTO	08	19	0705	N16 W39	08 16.3	B	CSO	110	7	8	3
6203		RAMY	08	19	1310	N16 W38	08 16.7	B	EAO	100	9	12	3
6203		BOUL	08	19	1420	N17 W40	08 16.5	B	DSO	110	5	8	4
6203		HOLL	08	19	1740	N17 W44	08 16.4	B	CSO	120	5	8	3
6203		PALE	08	19	1921	N17 W44	08 16.5	B	CSO	90	5	7	3
6203		LEAR	08	20	0015	N17 W47	08 16.4	B	DSO	80	5	8	3
6203		SVTO	08	20	1305	N17 W55	08 16.4	B	CSO	110	3	7	2
6203		BOUL	08	20	1412	N17 W53	08 16.6	B	CSO	80	3	7	2
6203		HOLL	08	20	1625	N16 W56	08 16.4	B	CSO	110	3	7	2
6203		PALE	08	20	2156	N17 W58	08 16.5	B	CSO	70	4	7	3
6203		LEAR	08	21	0100	N17 W63	08 16.2	B	CSO	100	3	8	3
6203		SVTO	08	21	0740	N16 W65	08 16.4	B	DAO	60	2	7	3
6203		RAMY	08	21	1200	N16 W69	08 16.3	A	HA	60	1	2	3
6203		BOUL	08	21	1347	N16 W64	08 16.7	A	HS	80	1	1	1
6203		PALE	08	21	1705	N16 W65	08 16.8	B	CSO	100	3	3	3
6203		HOLL	08	21	2235	N18 W72	08 16.4	B	CSO	80	2	4	2
6203		LEAR	08	22	0127	N16 W71	08 16.7	A	HS	60	1	1	2
6203		CULG	08	22	0145	N16 W77	08 16.2	A	HS	150	1	1	2
6203		SVTO	08	22	0900	N15 W76	08 16.6	A	HS	60	1	2	3
6203		RAMY	08	22	1200	N16 W79	08 16.5	A	HA	60	1	2	3
6203		BOUL	08	22	1613	N16 W79	08 16.7	A	HS	60	1	1	1
6203		PALE	08	22	1830	N15 W84	08 16.4	A	HH	120	1	3	3
6203		HOLL	08	22	2230	N15 W87	08 16.3	A	HS	40	1	1	2
6203		LEAR	08	23	0035	N17 W89	08 16.3	A	HH	30	1	5	3
6211A		BOUL	08	19	1420	S17 W42	08 16.4	B	CSO	30	2	4	4
6211A		BOUL	08	20	1412	S16 W55	08 16.4	B	BXO	20	4	7	2
6216		HOLL	08	13	2155	N10 E42	08 17.1	A	AX		2	2	2
6216		RAMY	08	14	1540	N10 E32	08 17.0	B	BXO	20	4	3	2
6216		HOLL	08	14	1602	N10 E32	08 17.1	B	BXO	10	5	3	3
6216		PALE	08	14	1704	N10 E32	08 17.1	B	BXO	30	4	4	3
6216		CULG	08	15	0043	N10 E28	08 17.1	A	AX	10	2	3	3
6216		LEAR	08	15	0132	N09 E27	08 17.1	B	BXO	30	3	3	3
6216		SVTO	08	15	0848	N09 E23	08 17.1	B	BXO	10	7	4	3
6216		RAMY	08	15	1202	N09 E23	08 17.2	A	AX	10	4	3	2
6216		HOLL	08	15	1540	N10 E19	08 17.1	A	AX	10	2	2	3
6216		PALE	08	15	1800	N10 E18	08 17.1	B	BXO	20	6	5	3

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

105
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	(UT)									Lat	CMD
6216		CULG	08	16	0100	N10 E14	08 17.1	B	BXO		2	4	2
6216		RAMY	08	16	1215	N09 E08	08 17.1	B	BXO	10	5	3	3
6216		HOLL	08	16	1610	N08 E04	08 17.0	B	BXO	10	7	4	2
6216		PALE	08	16	1730	N09 E04	08 17.0	B	BXO	10	5	3	3
6216		LEAR	08	17	0030	N07 E00	08 17.0	B	BXO	10	5	4	3
6216		SVTO	08	17	0706	N08 W05	08 16.9	B	DRI	80	16	6	3
6216		RAMY	08	17	1155	N08 W08	08 16.9	B	DAO	60	31	6	4
6216		BOUL	08	17	1506	N07 W09	08 16.9	B	DAI	90	27	5	4
6216		PALE	08	17	1720	N08 W10	08 17.0	B	DAI	90	25	7	4
6216		HOLL	08	17	2015	N07 W13	08 16.9	B	DAI	120	23	6	3
6216		LEAR	08	18	0020	N07 W14	08 17.0	B	DAI	70	26	7	4
6216		CULG	08	18	0104	N07 W15	08 16.9	B	DAI	60	15	8	2
6216		SVTO	08	18	0930	N07 W20	08 16.9	B	DAO	120	26	8	4
6216		BOUL	08	18	1430	N06 W22	08 16.9	B	DAI	180	19	8	3
6216		RAMY	08	18	1521	N07 W24	08 16.8	B	DAI	140	26	8	3
6216		HOLL	08	18	1640	N07 W25	08 16.8	B	DAI	250	32	8	3
6216		PALE	08	18	2014	N06 W25	08 17.0	BG	DKI	280	22	7	3
6216		LEAR	08	19	0025	N06 W28	08 16.9	B	DAI	170	23	9	3
6216		SVTO	08	19	0705	N06 W33	08 16.8	B	DAO	260	24	9	3
6216		RAMY	08	19	1310	N06 W35	08 16.9	B	DKO	390	18	8	3
6216		BOUL	08	19	1420	N06 W36	08 16.9	B	DAI	300	16	10	4
6216		HOLL	08	19	1740	N06 W40	08 16.7	B	DKI	380	25	10	3
6216		PALE	08	19	1921	N06 W40	08 16.8	B	CKO	280	18	10	3
6216		LEAR	08	20	0015	N07 W43	08 16.8	B	EAI	240	21	14	3
6216		SVTO	08	20	1305	N06 W50	08 16.8	B	EAI	350	12	11	2
6216		BOUL	08	20	1412	N06 W49	08 16.9	B	DAI	220	14	10	2
6216		RAMY	08	20	1448	N06 W51	08 16.8	B	EKO	300	12	12	3
6216		HOLL	08	20	1625	N06 W52	08 16.8	B	EAO	220	17	12	2
6216		PALE	08	20	2156	N07 W55	08 16.8	B	EKO	250	14	12	3
6216		LEAR	08	21	0100	N07 W58	08 16.7	B	EAO	240	14	12	3
6216		SVTO	08	21	0740	N06 W63	08 16.6	B	EAO	220	10	13	3
6216		RAMY	08	21	1335	N07 W65	08 16.7	B	EKO	330	12	12	2
6216		BOUL	08	21	1347	N07 W63	08 16.8	B	EAO	200	7	12	1
6216		PALE	08	21	1705	N08 W65	08 16.8	B	EAO	250	11	11	3
6216		HOLL	08	21	2235	N08 W71	08 16.6	B	ESO	190	6	15	2
6216		LEAR	08	22	0127	N06 W70	08 16.8	B	EAO	160	6	12	2
6216		CULG	08	22	0145	N07 W76	08 16.4	B	EAO	70	4	13	2
6216		SVTO	08	22	0900	N06 W76	08 16.7	B	ESO	200	5	14	3
6216		RAMY	08	22	1200	N06 W79	08 16.6	B	FAO	150	8	16	3
6216		BOUL	08	22	1613	N06 W76	08 17.0	B	CAI	90	9	5	1
6216		PALE	08	22	1830	N05 W78	08 16.9	B	DAO	150	5	6	3
6216		HOLL	08	22	2230	N05 W80	08 16.9	B	BXO	40	6	6	2
6216		LEAR	08	23	0035	N07 W77	08 17.2	B	BXO	30	6	9	3
6216A		SVTO	08	14	0552	N09 E38	08 17.1	A	AX		1	1	4
6216A		BOUL	08	14	1602	N10 E32	08 17.1	A	AX	10	2	2	1
6206		CULG	08	11	0010	S11 E79	08 16.9	A	HS	10	1	1	3
6206		SVTO	08	11	0638	S15 E76	08 17.0	B	DSO	90	2	8	2
6206		RAMY	08	11	1155	S15 E74	08 17.1	B	DAO	50	3	8	4
6206		BOUL	08	11	1440	S15 E77	08 17.4	B	CAO	60	2	7	2
6206		HOLL	08	11	1610	S15 E72	08 17.1	B	BXO	20	2	5	2
6206		PALE	08	11	1914	S16 E74	08 17.4	B	BXO	10	5	10	3
6206		LEAR	08	12	0030	S17 E68	08 17.2	B	DSO	70	2	4	3
6206		CULG	08	12	0205	S13 E67	08 17.1	B	BXO	10	4	4	3
6206		SVTO	08	12	0603	S15 E63	08 17.0	B	DAO	70	5	8	2
6206		RAMY	08	12	1317	S14 E60	08 17.1	B	DAO	90	3	7	3
6206		HOLL	08	12	1600	S14 E57	08 17.0	B	BXO	30	3	6	1
6206		PALE	08	12	1916	S15 E58	08 17.2	B	CAO	30	2	6	3
6206		CULG	08	13	0049	S14 E57	08 17.3	B	CAO	20	3	7	2
6206		LEAR	08	13	0110	S16 E54	08 17.1	B	CSO	30	2	7	2
6206		BOUL	08	13	1353	S14 E45	08 17.0	B	BXO	40	5	7	1
6206		RAMY	08	13	1428	S15 E47	08 17.2	B	DAO	50	5	6	3
6206		HOLL	08	13	2155	S15 E43	08 17.2	B	CRO	20	4	6	2
6206		CULG	08	14	0107	S16 E42	08 17.2	B	DRO	20	2	7	3
6206		LEAR	08	14	0420	S16 E38	08 17.1	B	DSO	30	2	5	2
6206		SVTO	08	14	0552	S16 E39	08 17.2	B	CRO	30	3	5	4
6206		RAMY	08	14	1540	S15 E34	08 17.2	B	CRO	20	3	6	2
6206		BOUL	08	14	1602	S14 E32	08 17.1	B	BXO	20	2	5	1

106
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CND	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6206		HOLL	08 14 1602	S17 E35	08 17.3		B	DRO	20	9	9	3
6206		PALE	08 14 1704	S15 E34	08 17.3		B	CSO	40	6	7	3
6206		CULG	08 15 0043	S13 E29	08 17.2		B	BXO	10	6	7	3
6206		LEAR	08 15 0132	S15 E28	08 17.2		B	CRO	100	12	7	3
6206		SVTO	08 15 0848	S17 E23	08 17.1		B	CRO	30	9	6	3
6206		RAMY	08 15 1202	S16 E24	08 17.3		B	CRO	50	19	7	2
6206		BOUL	08 15 1520	S15 E20	08 17.1		B	DSO	50	9	8	1
6206		HOLL	08 15 1540	S16 E22	08 17.3		B	BXO	30	24	8	3
6206		PALE	08 15 1800	S17 E23	08 17.5		B	DSO	120	13	9	3
6206		LEAR	08 16 0050	S17 E17	08 17.3		B	CAO	30	11	8	3
6206		CULG	08 16 0100	S16 E17	08 17.3		B	CSO	50	15	8	2
6206		SVTO	08 16 1037	S16 E10	08 17.2		B	DAO	40	1	6	2
6206		RAMY	08 16 1215	S16 E11	08 17.3		B	DAO	60	26	9	3
6206		BOUL	08 16 1440	S13 E09	08 17.3		B	DAO	40	13	8	4
6206		HOLL	08 16 1610	S16 E08	08 17.3		B	CRO	20	14	7	2
6206		PALE	08 16 1730	S17 E08	08 17.3		B	CAO	40	15	8	3
6206		LEAR	08 17 0030	S14 E04	08 17.3		B	CAO	20	10	8	3
6206		CULG	08 17 0225	S16 E01	08 17.2		B	CRO	20	6	5	2
6206		SVTO	08 17 0706	S16 E01	08 17.4		B	BXO	10	7	8	3
6206		RAMY	08 17 1155	S15 W01	08 17.4		B	CAO	20	12	8	4
6206		BOUL	08 17 1506	S14 W04	08 17.3		B	CAO	40	7	7	4
6206		PALE	08 17 1720	S17 W06	08 17.3		B	CAO	20	10	7	4
6206		HOLL	08 17 2015	S17 W08	08 17.2		B	BXO	20	9	7	3
6206		CULG	08 18 0104	S17 W10	08 17.3		B	CSO	10	4	3	2
6206		SVTO	08 18 0930	S16 W14	08 17.3		B	BXO	20	8	5	4
6206		BOUL	08 18 1430	S15 W15	08 17.5		B	CAO	30	6	3	3
6206		RAMY	08 18 1521	S17 W15	08 17.5		B	CAO	30	7	4	3
6206		HOLL	08 18 1640	S18 W17	08 17.4		B	BXO	30	5	4	3
6206		PALE	08 18 2014	S18 W19	08 17.4		B	CAO	20	7	4	3
6206		LEAR	08 19 0025	S18 W21	08 17.4		B	CRO	20	4	3	3
6206		SVTO	08 19 0705	S17 W25	08 17.4		B	BXO	20	9	4	3
6206		RAMY	08 19 1310	S18 W27	08 17.5		B	CAO	5040	9	4	3
6206		BOUL	08 19 1420	S15 W27	08 17.5		B	CAO	30	8	4	4
6206		HOLL	08 19 1740	S19 W29	08 17.5		B	BXO	20	9	6	3
6206		PALE	08 19 1921	S18 W31	08 17.4		B	BXO	10	7	4	3
6206		LEAR	08 20 0015	S17 W34	08 17.4		B	BXO	10	8	6	3
6206		SVTO	08 20 0730	S17 W42	08 17.1		B	BXO	10	4	6	2
6206		BOUL	08 20 1412	S17 W42	08 17.4		A	AX		1		2
6206		RAMY	08 20 1448	S18 W45	08 17.2		A	AX	40	6	2	3
6206		HOLL	08 20 1625	S18 W45	08 17.2		B	BXO	10	2	3	2
6206		PALE	08 20 2156	S17 W56	08 16.6		A	AX		2	1	3
6206		PALE	08 21 1705	S18 W74	08 16.1		B	BXO	80	4	4	3
6218		CULG	08 16 0100	N22 E19	08 17.5		A	AX		2	2	2
6218		SVTO	08 16 1037	N21 E12	08 17.4		B	BXO	10	4	3	2
6218		RAMY	08 16 1215	N21 E12	08 17.4		A	AX	10	3	2	3
6218		BOUL	08 16 1440	N19 E10	08 17.4		A	AX	10	2	1	4
6218		HOLL	08 16 1610	N22 E10	08 17.4		B	BXO	10	3	2	2
6218		PALE	08 16 1730	N22 E10	08 17.5		A	AX	10	5	2	3
6218		LEAR	08 17 0030	N22 E06	08 17.5		A	AX	10	2	3	3
6218		RAMY	08 18 1521	N21 W20	08 17.1		B	BXO	10	4	4	3
6218A		SVTO	08 16 1037	S15 E17	08 17.7		A	HR	20	4	2	2
6224		SVTO	08 18 0930	S34 W06	08 17.9		B	BXO	20	8	4	4
6224		BOUL	08 18 1430	S33 W08	08 18.0		B	DAO	70	6	5	3
6224		RAMY	08 18 1521	S34 W06	08 18.2		B	DAO	520	7	5	3
6224		HOLL	08 18 1640	S35 W10	08 17.9		B	BXO	50	8	7	3
6224		PALE	08 18 2014	S34 W12	08 17.9		B	CSO	20	6	6	3
6224		LEAR	08 19 0025	S34 W13	08 18.0		B	CRO	40	11	8	3
6224		SVTO	08 19 0705	S34 W18	08 17.9		B	CAO	70	12	8	3
6224		RAMY	08 19 1310	S35 W20	08 17.9		B	CAO	110	9	10	3
6224		BOUL	08 19 1420	S33 W19	08 18.1		B	DAO	70	14	10	4
6224		HOLL	08 19 1740	S35 W22	08 18.0		B	CSO	90	14	10	3
6224		PALE	08 19 1921	S34 W24	08 17.9		B	CAO	100	7	10	3
6224		LEAR	08 20 0015	S36 W34	08 17.3		B	CAO	60	9	10	3
6224		SVTO	08 20 1305	S34 W34	08 17.8		B	CSO	80	7	10	2
6224		BOUL	08 20 1412	S33 W33	08 18.0		B	CSO	40	5	8	2
6224		RAMY	08 20 1448	S35 W34	08 17.9		B	CAO	110	13	11	3

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

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											(UT)
6224		HOLL	08	20	1625	S35 W35	08 17.9		B	CAO	50	8	11	2
6224		PALE	08	20	2156	S33 W36	08 18.0		B	CAO	70	15	11	3
6224		LEAR	08	21	0100	S34 W40	08 17.8		B	CAO	60	9	10	3
6224		SVTO	08	21	0740	S35 W44	08 17.8		B	EAO	110	8	11	3
6224		RAMY	08	21	1335	S35 W46	08 17.9		B	DAO	80	7	11	2
6224		BOUL	08	21	1347	S33 W43	08 18.1		B	CSO	40	7	9	1
6224		PALE	08	21	1705	S28 W45	08 18.2		B	DAO	180	8	10	3
6224		HOLL	08	21	2235	S33 W50	08 18.0		B	CRO	70	6	12	2
6224		LEAR	08	22	0127	S35 W54	08 17.7		B	DAO	60	8	8	2
6224		CULG	08	22	0145	S35 W54	08 17.7		B	CRO	20	4	11	2
6224		SVTO	08	22	0900	S35 W58	08 17.7		B	BXO	40	5	7	3
6224		RAMY	08	22	1200	S33 W54	08 18.2		B	EAO	60	6	11	3
6224		BOUL	08	22	1613	S34 W60	08 17.9		B	CSO	40	7	7	1
6224		PALE	08	22	1830	S33 W59	08 18.1		B	DSO	110	5	8	3
6224		HOLL	08	22	2230	S35 W65	08 17.7		B	BXO	30	4	6	2
6224		LEAR	08	23	0035	S34 W64	08 17.9		B	CAO	60	4	8	3
6209		HOLL	08	11	1610	N23 E87	08 18.4		A	AX	30	1	1	2
6209		LEAR	08	12	0030	N21 E80	08 18.1		A	HS	30	1	2	3
6209		CULG	08	12	0205	N25 E81	08 18.4		A	HS	80	1	1	3
6209		SVTO	08	12	0603	N22 E78	08 18.2		A	HS	90	2	2	2
6209		RAMY	08	12	1317	N23 E76	08 18.4		B	DAO	120	4	5	3
6209		HOLL	08	12	1600	N23 E72	08 18.2		A	HS	60	2	2	1
6209		PALE	08	12	1916	N23 E73	08 18.4		B	CAO	70	2	4	3
6209		CULG	08	13	0049	N23 E67	08 18.2		B	CAO	40	5	9	2
6209		LEAR	08	13	0110	N22 E66	08 18.1		B	CSO	50	3	4	2
6209		BOUL	08	13	1353	N23 E60	08 18.2		A	HA	50	4	1	1
6209		RAMY	08	13	1428	N22 E64	08 18.5		B	EAO	110	7	10	3
6209		HOLL	08	13	2155	N21 E63	08 18.7		B	CAO	90	10	10	2
6209		CULG	08	14	0107	N23 E58	08 18.5		A	HA	70	6	3	3
6209		LEAR	08	14	0420	N21 E57	08 18.5		B	CAO	90	8	10	2
6209		RAMY	08	14	1540	N23 E48	08 18.3		B	CAO	120	5	4	2
6209		HOLL	08	14	1602	N22 E49	08 18.4		B	DAI	80	13	8	3
6209		BOUL	08	14	1602	N23 E46	08 18.2		B	DAO	100	4	3	1
6209		PALE	08	14	1704	N23 E47	08 18.3		B	CAO	100	8	4	3
6209		CULG	08	15	0043	N25 E45	08 18.5		B	CAO	60	8	9	3
6209		LEAR	08	15	0132	N22 E42	08 18.3		B	DAO	120	9	4	3
6209		SVTO	08	15	0848	N20 E38	08 18.3		B	DAI	110	12	5	3
6209		RAMY	08	15	1202	N22 E37	08 18.3		B	CAO	70	16	6	2
6209		BOUL	08	15	1520	N23 E35	08 18.3		B	DAI	90	9	3	1
6209		HOLL	08	15	1540	N22 E34	08 18.3		B	CAO	90	10	7	3
6209		PALE	08	15	1800	N23 E34	08 18.4		B	CAO	120	7	4	3
6209		LEAR	08	16	0050	N23 E28	08 18.2		B	DAO	60	8	4	3
6209		CULG	08	16	0100	N26 E29	08 18.3		B	CAO	70	9	4	2
6209		SVTO	08	16	1037	N22 E27	08 18.5		B	DAO	90	12	9	2
6209		RAMY	08	16	1215	N21 E22	08 18.2		B	DAO	70	13	10	3
6209		BOUL	08	16	1440	N22 E20	08 18.1		B	CSO	80	5	4	4
6209		HOLL	08	16	1610	N23 E21	08 18.3		B	DAO	100	7	5	2
6209		PALE	08	16	1730	N23 E20	08 18.3		B	DAO	80	10	4	3
6209		LEAR	08	17	0030	N23 E19	08 18.5		B	DSO	40	7	9	3
6209		CULG	08	17	0225	N22 E12	08 18.0		B	DSO	40	5	4	2
6209		SVTO	08	17	0706	N22 E14	08 18.4		B	DRI	80	6	9	3
6209		RAMY	08	17	1155	N22 E13	08 18.5		B	EAO	90	18	13	4
6209		BOUL	08	17	1506	N23 E13	08 18.6		B	DAO	70	9	9	4
6209		PALE	08	17	1720	N23 E07	08 18.3		B	DAO	60	11	4	4
6209		HOLL	08	17	2015	N24 E09	08 18.5		B	CSO	70	6	9	3
6209		LEAR	08	18	0020	N22 E06	08 18.5		B	DSO	30	7	8	4
6209		CULG	08	18	0104	N24 E03	08 18.3		B	DSO	40	3	4	2
6209		SVTO	08	18	0930	N23 W03	08 18.2		B	DRO	20	9	4	4
6209		BOUL	08	18	1430	N23 W05	08 18.2		B	DAO	30	8	4	3
6209		RAMY	08	18	1521	N23 W04	08 18.3		B	EAO	40	14	11	3
6209		HOLL	08	18	1640	N23 W07	08 18.1		B	CAO	40	13	6	3
6209		LEAR	08	19	0025	N23 W08	08 18.4		B	BXO	30	10	8	3
6209		SVTO	08	19	0705	N23 W14	08 18.2		B	BXO	20	9	6	3
6209		RAMY	08	19	1310	N23 W15	08 18.4		B	BXO	30	3	8	3
6209		BOUL	08	19	1420	N24 W16	08 18.4		B	BXO	10	5	6	4
6209		HOLL	08	19	1740	N23 W19	08 18.3		B	BXO	20	7	7	3
6209		PALE	08	19	1921	N22 W20	08 18.3		B	BXO	20	5	6	3
6209		LEAR	08	20	0015	N23 W23	08 18.2		B	BXO	10	4	5	3

108
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6209		SVTO	08 20 1305	N22	W31	08 18.2		B	BXO	10	2	5	2
6209		BOUL	08 20 1412	N23	W31	08 18.2		B	BXO	10	2	4	2
6209		RAMY	08 20 1448	N23	W31	08 18.2		B	BXO	10	5	4	3
6209		HOLL	08 20 1625	N22	W31	08 18.3		B	BXO	10	4	5	2
6209		LEAR	08 21 0100	N23	W38	08 18.1		B	BXO	10	2	3	3
6209B		SVTO	08 15 0848	S20	E39	08 18.3		B	BXO		2	4	3
6209B		RAMY	08 15 1202	S18	E39	08 18.5		B	BXO	10	4	4	2
6209B		HOLL	08 15 1540	S18	E36	08 18.4		B	BXO	10	2	3	3
6209A		RAMY	08 14 1540	S34	E48	08 18.5		A	AX	10	1	1	2
6209A		HOLL	08 14 1602	S35	E48	08 18.5		A	AX		1		3
6221		CULG	08 17 0225	S16	E32	08 19.5		A	AX		0		2
6221		SVTO	08 17 0706	S16	E28	08 19.4		B	CRO	20	4	3	3
6221		RAMY	08 17 1155	S17	E24	08 19.3		B	CRO	20	7	4	4
6221		PALE	08 17 1720	S17	E22	08 19.4		B	CAO	30	4	4	4
6221		HOLL	08 17 2015	S16	E21	08 19.4		B	BXO	10	7	5	3
6221		CULG	08 18 0104	S16	E17	08 19.3		B	BXO	10	4	5	2
6221		SVTO	08 18 0930	S16	E13	08 19.4		B	BXO	20	5	6	4
6221		BOUL	08 18 1430	S16	E10	08 19.4		B	CAO	20	3	6	3
6221		RAMY	08 18 1521	S16	E08	08 19.2		B	BXO	10	4	6	3
6221		HOLL	08 18 1640	S16	E09	08 19.4		B	BXO	20	3	5	3
6221		PALE	08 18 2014	S17	E07	08 19.4		B	BXO	10	5	6	3
6221		LEAR	08 19 0025	S17	E04	08 19.3		B	BXO	10	4	7	3
6221		SVTO	08 19 0705	S16	W01	08 19.2		B	BXO	10	3	6	3
6221		RAMY	08 19 1310	S16	W04	08 19.2		B	BXO	10	4	8	3
6221		BOUL	08 19 1420	S15	W04	08 19.3		B	BXO	10	3	7	4
6221		HOLL	08 19 1740	S16	W06	08 19.3		B	BXO	10	5	7	3
6221		PALE	08 19 1921	S16	W09	08 19.1		B	BXO		4	7	3
6221		LEAR	08 20 0015	S16	W11	08 19.2		B	BXO	10	3	5	3
6221		SVTO	08 20 1305	S16	W19	08 19.1		B	BXO	10	2	4	2
6221		BOUL	08 20 1412	S15	W18	08 19.2		B	BXO	10	7	3	2
6221		RAMY	08 20 1448	S16	W20	08 19.1		B	BXO	10	3	4	3
6221		HOLL	08 20 1625	S17	W21	08 19.1		B	BXO		2	4	2
6221		LEAR	08 21 0100	S16	W25	08 19.1		B	BXO		4	4	3
6221		SVTO	08 21 0740	S16	W30	08 19.0		B	BXO	10	5	4	3
6221		RAMY	08 21 1335	S16	W33	08 19.1		B	DAO	50	2	4	2
6221		BOUL	08 21 1347	S15	W31	08 19.2		B	CSO	40	2	4	1
6221		PALE	08 21 1705	S12	W35	08 19.1		B	CAO	70	5	5	3
6221		HOLL	08 21 2235	S14	W38	08 19.1		B	BXO	10	4	3	2
6221		LEAR	08 22 0127	S18	W39	08 19.1		B	BXO	20	2	3	2
6221		RAMY	08 22 1200	S16	W46	08 19.0		A	AX	10	2	1	3
6221A		SVTO	08 20 0730	N15	W13	08 19.3		B	BXO	10	3	3	2
6214		HOLL	08 13 2155	S09	E77	08 19.7		B	BXO	20	4	8	2
6214		CULG	08 14 0107	S10	E73	08 19.5		B	BXO	10	3	8	3
6214		LEAR	08 14 0420	S12	E70	08 19.4		B	BXO	30	4	7	2
6214		RAMY	08 14 1540	S08	E63	08 19.4		B	BXO	30	5	7	2
6214		HOLL	08 14 1602	S10	E65	08 19.5		B	BXO	10	5	7	3
6214		BOUL	08 14 1602	S11	E66	08 19.6		B	BXO	20	2	8	1
6214		PALE	08 14 1704	S10	E60	08 19.2		B	AX	20	7	2	3
6214		CULG	08 15 0043	S09	E62	08 19.7		B	BXO	10	4	9	3
6214		LEAR	08 15 0132	S11	E58	08 19.4		B	BXO	50	4	6	3
6214		SVTO	08 15 0848	S11	E55	08 19.5		B	BXO	10	3	7	3
6214		RAMY	08 15 1202	S10	E50	08 19.2		A	AX	10	2	1	2
6214		HOLL	08 15 1540	S10	E50	08 19.4		B	BXO	20	6	10	3
6214		PALE	08 15 1800	S10	E50	08 19.5		B	BXO	30	5	10	3
6214		LEAR	08 16 0050	S10	E45	08 19.4		B	BXO	10	4	9	3
6214		CULG	08 16 0100	S10	E47	08 19.6		B	CRO	20	5	8	2
6214		SVTO	08 16 1037	S10	E40	08 19.4		B	CRO	30	7	10	2
6214		RAMY	08 16 1215	S10	E40	08 19.5		B	CRO	30	18	10	3
6214		BOUL	08 16 1440	S08	E41	08 19.7		B	CSO	40	8	5	4
6214		HOLL	08 16 1610	S10	E37	08 19.4		B	BXO	40	18	10	2
6214		PALE	08 16 1730	S10	E37	08 19.5		B	CAO	40	19	10	3
6214		LEAR	08 17 0030	S10	E32	08 19.4		B	CAO	40	12	10	3
6214		CULG	08 17 0225	S10	E31	08 19.4		B	CSO	30	7	10	2
6214		SVTO	08 17 0706	S10	E29	08 19.5		B	DRI	100	12	9	3

SUNSPOT GROUPS
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AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long- Extent (Deg)	Qual
			Mo	Day (UT)									Lat	Cmd
6214		RAMY	08 17	1155	S11 E26	08 19.4	B	EAO	110	36	11	4
6214		BOUL	08 17	1506	S10 E24	08 19.4	B	EAI	110	24	11	4
6214		PALE	08 17	1720	S11 E24	08 19.5	B	DAO	120	22	9	4
6214		HOLL	08 17	2015	S10 E22	08 19.5	B	EAO	110	23	11	3
6214		CULG	08 18	0104	S10 E17	08 19.3	B	EAI	40	18	12	2
6214		SVTO	08 18	0930	S10 E14	08 19.4	BG	EAI	100	36	11	4
6214		BOUL	08 18	1430	S10 E11	08 19.4	B	EAI	110	16	11	3
6214		RAMY	08 18	1521	S11 E11	08 19.5	B	EAO	90	28	11	3
6214		HOLL	08 18	1640	S10 E10	08 19.4	B	EAI	120	37	11	3
6214		PALE	08 18	2014	S11 E08	08 19.4	B	EAO	70	22	12	3
6214		LEAR	08 19	0025	S11 E06	08 19.5	B	DAI	130	26	10	3
6214		SVTO	08 19	0705	S10 E01	08 19.4	B	EAO	170	26	11	3
6214		RAMY	08 19	1310	S11 W02	08 19.4	B	EAI	300	34	13	3
6214		BOUL	08 19	1420	S10 W04	08 19.3	B	EAI	260	16	11	4
6214		HOLL	08 19	1740	S10 W03	08 19.5	B	EAI	370	41	13	3
6214		PALE	08 19	1921	S11 W06	08 19.3	B	EAI	310	31	12	3
6214		LEAR	08 20	0015	S10 W08	08 19.4	B	EAI	180	32	11	3
6214		SVTO	08 20	1305	S11 W16	08 19.3	B	EAI	530	43	13	2
6214		BOUL	08 20	1412	S10 W15	08 19.5	B	EKI	380	40	11	2
6214		RAMY	08 20	1448	S11 W17	08 19.3	BG	EAI	600	50	12	3
6214		HOLL	08 20	1625	S11 W17	08 19.4	B	EAI	540	39	12	2
6214		PALE	08 20	2156	S11 W18	08 19.5	BG	EKI	560	30	14	3
6214		LEAR	08 21	0100	S11 W22	08 19.4	B	EKI	490	33	13	3
6214		SVTO	08 21	0740	S11 W26	08 19.4	B	EKI	890	27	13	3
6214		RAMY	08 21	1335	S12 W29	08 19.4	B	EKI	840	32	12	2
6214		BOUL	08 21	1347	S10 W27	08 19.5	B	EKI	580	36	11	1
6214		PALE	08 21	1705	S12 W35	08 19.1	B	EKO	990	25	11	3
6214		HOLL	08 21	2235	S11 W35	08 19.3	B	EKI	1320	26	13	2
6214		LEAR	08 22	0127	S12 W35	08 19.4	B	EKO	970	23	13	2
6214		CULG	08 22	0145	S10 W38	08 19.2	B	EKO	950	16	11	2
6214		SVTO	08 22	0900	S12 W40	08 19.4	B	EKI	1040	27	12	3
6214		RAMY	08 22	1200	S11 W40	08 19.5	B	EKO	1130	32	14	3
6214		BOUL	08 22	1613	S11 W43	08 19.4	B	EKI	860	30	13	1
6214		PALE	08 22	1830	S13 W45	08 19.4	B	EKI	900	35	12	3
6214		HOLL	08 22	2230	S10 W47	08 19.4	B	EKC	1050	47	15	2
6214		LEAR	08 23	0035	S11 W48	08 19.4	B	EKI	560	36	14	3
6214		RAMY	08 23	1325	S10 W55	08 19.4	B	EKC	940	14	14	1
6214		BOUL	08 23	1440	S09 W57	08 19.3	B	EKI	1120	44	12	3
6214		HOLL	08 23	1608	S12 W58	08 19.3	BD	FKI	1300	33	16	3
6214		PALE	08 23	1800	S11 W54	08 19.7	B	EKO	780	35	13	3
6214		LEAR	08 24	0030	S11 W62	08 19.3	B	EKI	790	22	13	2
6214		CULG	08 24	0050	S11 W61	08 19.4	B	EKC	780	18	13	3
6214		SVTO	08 24	0739	S13 W66	08 19.3	B	EKC	1150	27	14	3
6214		RAMY	08 24	1239	S10 W69	08 19.3	B	FKO	1680	20	15	2
6214		HOLL	08 24	1445	S13 W68	08 19.5	BD	EKI	730	14	15	4
6214		BOUL	08 24	1505	S12 W69	08 19.4	B	EKC	1080	27	12	3
6214		PALE	08 24	1940	S13 W70	08 19.5	B	EKO	900	11	12	2
6214		LEAR	08 25	0105	S13 W75	08 19.4	B	EKI	810	7	13	3
6214		SVTO	08 25	0745	S12 W78	08 19.4	B	DKI	360	10	8	4
6214		RAMY	08 25	1322	S11 W80	08 19.5	B	CKO	360	11	13	3
6214		BOUL	08 25	1440	S12 W76	08 19.9	B	DAO	120	3	8	2
6214		HOLL	08 25	1630	S13 W73	08 20.2	A	HA	120	5	3	3
6214		PALE	08 25	1750	S13 W84	08 19.4	A	HK	170	4	6	3
6214		LEAR	08 26	0025	S12 W78	08 20.1	A	AX	30	1	1	4
6214		CULG	08 26	0150	S15 W90	08 19.3	A	HS	100	1	2	3
6214A		SVTO	08 20	1305	N10 W14	08 19.5	A	HR	10	1	1	2
6214A		BOUL	08 20	1412	N11 W14	08 19.5	A	AX		2		2
6214A		RAMY	08 20	1448	N12 W14	08 19.6	B	BXO	10	3	2	3
6214A		HOLL	08 20	1625	N10 W17	08 19.4	A	AX		2	1	2
6214A		PALE	08 20	2156	N10 W18	08 19.6	A	AX		1		3
6214B		SVTO	08 14	0552	S11 E71	08 19.6	B	BXO	20	5	8	4
6214C		BOUL	08 24	1505	S24 W61	08 19.9	A	AX	10	1		3
6212		BOUL	08 13	1353	S27 E79	08 19.7	A	HS	60	1	3	1
6212		RAMY	08 13	1428	S26 E83	08 20.0	A	HA	120	1	8	3
6212		HOLL	08 13	2155	S27 E79	08 20.1	A	HH	110	1	2	2

110
Aug 90

SUNSPOT GROUPS
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AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CMD	CNP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6212		CULG	08 14 0107	S27 E77	08 20.0		A	HH	90	1	4	3
6212		LEAR	08 14 0420	S28 E70	08 19.6		A	HK	180	1	2	2
6212		SVTO	08 14 0552	S28 E73	08 19.9		A	HA	120	1	2	4
6212		RAMY	08 14 1540	S26 E68	08 19.9		A	HS	160	1	2	2
6212		BOUL	08 14 1602	S27 E65	08 19.7		A	HA	170	1	3	1
6212		HOLL	08 14 1602	S28 E68	08 20.0		A	HH	240	1	3	3
6212		PALE	08 14 1704	S28 E69	08 20.1		A	HH	280	1	3	3
6212		CULG	08 15 0043	S25 E65	08 20.1		A	HH	210	1	3	3
6212		LEAR	08 15 0132	S27 E62	08 19.9		A	HH	270	1	4	3
6212		SVTO	08 15 0848	S28 E58	08 19.9		A	HK	260	1	3	3
6212		RAMY	08 15 1202	S27 E59	08 20.1		A	HK	240	1	3	2
6212		BOUL	08 15 1520	S26 E54	08 19.8		A	HS	160	1	4	1
6212		HOLL	08 15 1540	S26 E56	08 20.0		B	CSO	260	3	4	3
6212		PALE	08 15 1800	S28 E55	08 20.0		A	HH	320	1	4	3
6212		LEAR	08 16 0050	S27 E50	08 19.9		A	HH	260	1	3	3
6212		CULG	08 16 0100	S27 E52	08 20.1		A	HH	320	1	3	2
6212		SVTO	08 16 1037	S27 E46	08 20.0		A	HH	320	1	3	2
6212		RAMY	08 16 1215	S28 E45	08 20.0		B	CKO	320	3	5	3
6212		BOUL	08 16 1440	S26 E42	08 19.9		A	HH	240	1	3	4
6212		HOLL	08 16 1610	S27 E42	08 19.9		B	CHO	300	5	5	2
6212		PALE	08 16 1730	S28 E43	08 20.1		B	CSO	270	6	4	3
6212		LEAR	08 17 0030	S29 E38	08 20.0		A	HH	220	4	3	3
6212		CULG	08 17 0225	S28 E40	08 20.2		B	CSO	300	3	3	2
6212		SVTO	08 17 0706	S30 E35	08 20.0		B	CKO	320	5	4	3
6212		RAMY	08 17 1155	S29 E32	08 20.0		B	CKO	290	12	6	4
6212		BOUL	08 17 1506	S28 E30	08 20.0		B	CKI	310	17	5	4
6212		PALE	08 17 1720	S29 E30	08 20.1		B	CHO	320	9	5	4
6212		HOLL	08 17 2015	S28 E29	08 20.1		B	CKO	340	7	7	3
6212		CULG	08 18 0104	S29 E26	08 20.1		B	CHO	260	7	4	2
6212		SVTO	08 18 0930	S28 E22	08 20.1		B	CSO	290	8	5	4
6212		BOUL	08 18 1430	S27 E18	08 20.0		A	HH	300	4	5	3
6212		RAMY	08 18 1521	S29 E19	08 20.1		B	CKO	290	5	5	3
6212		HOLL	08 18 1640	S28 E19	08 20.2		B	CHO	320	5	6	3
6212		PALE	08 18 2014	S29 E17	08 20.2		B	CHO	240	5	5	3
6212		LEAR	08 19 0025	S28 E13	08 20.0		B	CHO	240	3	5	3
6212		SVTO	08 19 0705	S29 E10	08 20.1		B	DSO	290	4	4	3
6212		RAMY	08 19 1310	S29 E09	08 20.2		B	CKO	250	4	5	3
6212		BOUL	08 19 1420	S27 E06	08 20.1		B	CHO	280	4	4	4
6212		HOLL	08 19 1740	S28 E06	08 20.2		B	CHO	300	6	6	3
6212		PALE	08 19 1921	S28 E02	08 20.0		B	CHO	250	4	4	3
6212		LEAR	08 20 0015	S28 E02	08 20.2		B	CHO	240	5	5	3
6212		SVTO	08 20 1305	S28 W06	08 20.1		A	HS	260	1	3	2
6212		BOUL	08 20 1412	S27 W06	08 20.1		B	CSO	170	3	3	2
6212		RAMY	08 20 1448	S28 W05	08 20.2		B	CKO	360	3	5	3
6212		HOLL	08 20 1625	S30 W05	08 20.3		B	CSO	240	4	9	2
6212		PALE	08 20 2156	S27 W10	08 20.1		B	CHO	230	3	3	3
6212		LEAR	08 21 0100	S28 W12	08 20.1		B	CHO	210	3	4	3
6212		SVTO	08 21 0740	S27 W17	08 20.0		A	HA	250	1	3	3
6212		RAMY	08 21 1335	S30 W18	08 20.1		B	CKO	260	4	6	2
6212		BOUL	08 21 1347	S28 W17	08 20.2		B	CAO	180	4	6	1
6212		PALE	08 21 1705	S28 W21	08 20.1		B	DHO	370	8	7	3
6212		HOLL	08 21 2235	S27 W25	08 20.0		A	HH	330	2	3	2
6212		LEAR	08 22 0127	S29 W27	08 19.9		A	HH	240	1	3	2
6212		CULG	08 22 0145	S27 W28	08 19.9		B	CSO	200	2	4	2
6212		SVTO	08 22 0900	S29 W29	08 20.1		A	HS	260	1	3	3
6212		RAMY	08 22 1200	S28 W31	08 20.1		A	HH	280	1	3	3
6212		BOUL	08 22 1613	S27 W33	08 20.1		A	HK	270	1	3	1
6212		PALE	08 22 1830	S27 W33	08 20.2		B	CHO	280	5	5	3
6212		HOLL	08 22 2230	S28 W38	08 20.0		A	HH	300	1	3	2
6212		LEAR	08 23 0035	S28 W38	08 20.0		A	HH	230	1	4	3
6212		RAMY	08 23 1325	S26 W47	08 19.9		A	HH	270	1	3	1
6212		BOUL	08 23 1440	S26 W43	08 20.3		A	HK	260	3	2	3
6212		HOLL	08 23 1608	S28 W41	08 20.5		B	CHO	360	3	12	3
6212		PALE	08 23 1800	S29 W58	08 19.2		A	HH	340	1	3	3
6212		LEAR	08 24 0030	S28 W50	08 20.1		A	HS	180	1	3	2
6212		CULG	08 24 0050	S28 W51	08 20.0		A	HS	300	1	2	3
6212		SVTO	08 24 0739	S28 W54	08 20.1		A	HH	200	1	3	3
6212		RAMY	08 24 1239	S29 W55	08 20.2		B	CKO	180	4	4	2
6212		HOLL	08 24 1445	S30 W55	08 20.3		B	CHO	250	4	10	4

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

111
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat CND	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long- Extent (Deg)	Qual
6212		BOUL	08 24 1505	S26 W57	08 20.2		A	HK	220	3	3	3
6212		LEAR	08 25 0105	S28 W61	08 20.3		A	HS	180	1	3	3
6212		SVTO	08 25 0745	S28 W67	08 20.1		A	HK	270	1	5	4
6212		RAMY	08 25 1322	S27 W70	08 20.1		A	HK	3000	1	6	3
6212		BOUL	08 25 1440	S26 W69	08 20.2		A	HS	120	1	2	2
6212		HOLL	08 25 1630	S28 W70	08 20.2		A	HH	240	1	2	3
6212		PALE	08 25 1750	S29 W70	08 20.2		B	CKO	180	4	3	3
6212		LEAR	08 26 0025	S27 W73	08 20.3		A	HH	180	1	3	4
6212		CULG	08 26 0150	S30 W81	08 19.7		A	HS	150	1	2	3
6212		SVTO	08 26 1020	S28 W78	08 20.3		A	HA	120	1	3	3
6212A		BOUL	08 24 1505	S31 W57	08 20.1		B	BXO	10	2	4	3
6224A		PALE	08 24 1940	S29 W60	08 20.1		A	HH	330	1	4	2
6215		LEAR	08 14 0420	N10 E80	08 20.2		A	HH	120	1	3	2
6215		RAMY	08 14 1540	N13 E76	08 20.4		A	HK	240	1	3	2
6215		BOUL	08 14 1602	N11 E76	08 20.4		A	HA	210	2	3	1
6215		HOLL	08 14 1602	N11 E77	08 20.5		A	HK	300	2	3	3
6215		PALE	08 14 1704	N11 E77	08 20.5		B	CHO	300	5	3	3
6215		CULG	08 15 0043	N12 E77	08 20.8		A	HK	330	2	5	3
6215		LEAR	08 15 0132	N10 E72	08 20.5		A	HH	340	3	5	3
6215		SVTO	08 15 0848	N10 E70	08 20.6		A	HK	430	2	4	3
6215		RAMY	08 15 1202	N11 E70	08 20.8		A	HK	700	1	4	2
6215		BOUL	08 15 1520	N11 E67	08 20.7		A	HK	260	3	4	1
6215		HOLL	08 15 1540	N12 E66	08 20.6		B	DKO	440	4	4	3
6215		PALE	08 15 1800	N12 E66	08 20.7		B	DKO	440	5	6	3
6215		LEAR	08 16 0050	N11 E60	08 20.5		A	HK	220	4	5	3
6215		CULG	08 16 0100	N11 E61	08 20.6		A	HK	380	2	4	2
6215		SVTO	08 16 1037	N11 E55	08 20.6		B	DKI	390	5	4	2
6215		RAMY	08 16 1215	N11 E54	08 20.6		A	HK	440	5	4	3
6215		BOUL	08 16 1440	N12 E53	08 20.6		A	HK	350	3	4	4
6215		HOLL	08 16 1610	N12 E52	08 20.6		B	DKO	480	6	5	2
6215		PALE	08 16 1730	N12 E53	08 20.7		B	DKO	370	7	5	3
6215		LEAR	08 17 0030	N10 E47	08 20.5		B	DKI	310	3	4	3
6215		CULG	08 17 0225	N12 E48	08 20.7		A	HK	340	3	4	2
6215		SVTO	08 17 0706	N11 E44	08 20.6		B	CKO	490	5	5	3
6215		RAMY	08 17 1155	N11 E41	08 20.6		B	CKO	430	11	6	4
6215		BOUL	08 17 1506	N11 E38	08 20.5		B	CKI	370	21	4	4
6215		PALE	08 17 1720	N12 E38	08 20.6		B	CHO	430	13	5	4
6215		HOLL	08 17 2015	N11 E37	08 20.6		B	CKO	440	7	5	3
6215		LEAR	08 18 0020	N11 E33	08 20.5		A	HK	400	6	4	4
6215		CULG	08 18 0104	N12 E34	08 20.6		B	CKO	350	4	4	2
6215		SVTO	08 18 0930	N10 E30	08 20.6		A	HH	400	1	5	4
6215		BOUL	08 18 1430	N10 E26	08 20.5		A	HK	370	2	4	3
6215		RAMY	08 18 1521	N12 E25	08 20.5		B	CKO	460	4	4	3
6215		HOLL	08 18 1640	N11 E25	08 20.6		A	HH	460	7	5	3
6215		PALE	08 18 2014	N10 E25	08 20.7		B	CHO	400	2	4	3
6215		LEAR	08 19 0025	N09 E21	08 20.6		A	HK	340	2	3	3
6215		SVTO	08 19 0705	N11 E18	08 20.6		B	DKO	410	8	4	3
6215		RAMY	08 19 1310	N11 E13	08 20.5		B	CKO	440	6	4	3
6215		BOUL	08 19 1420	N11 E13	08 20.6		B	CKO	380	5	4	4
6215		HOLL	08 19 1740	N12 E13	08 20.7		B	CHO	500	14	7	3
6215		PALE	08 19 1921	N11 E11	08 20.6		B	CKO	370	11	5	3
6215		LEAR	08 20 0015	N12 E08	08 20.6		B	CKO	300	8	6	3
6215		SVTO	08 20 1305	N12 E01	08 20.6		B	CKO	330	6	4	2
6215		BOUL	08 20 1412	N12 E01	08 20.7		B	CKO	310	6	4	2
6215		RAMY	08 20 1448	N12 W01	08 20.5		B	CKO	430	13	4	3
6215		HOLL	08 20 1625	N12 E00	08 20.7		B	CKO	360	11	8	2
6215		PALE	08 20 2156	N11 W03	08 20.7		B	CKO	330	10	4	3
6215		LEAR	08 21 0100	N12 W06	08 20.6		B	CKO	300	9	8	3
6215		SVTO	08 21 0740	N09 W10	08 20.6		B	CKO	460	5	4	3
6215		RAMY	08 21 1335	N12 W11	08 20.7		B	EKO	440	7	7	2
6215		BOUL	08 21 1347	N12 W12	08 20.7		B	CKO	250	4	3	1
6215		PALE	08 21 1705	N09 W14	08 20.7		B	CHO	530	7	5	3
6215		HOLL	08 21 2235	N10 W17	08 20.7		A	HK	360	3	4	2
6215		LEAR	08 22 0127	N08 W19	08 20.6		B	CKO	300	4	4	2
6215		CULG	08 22 0145	N10 W22	08 20.4		A	HK	320	2	4	2
6215		SVTO	08 22 0900	N09 W23	08 20.6		A	HA	310	4	4	3

112
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											(UT)
6215		RAMY	08	22	1200	N10 W24	08 20.7		B	CKO	320	7	4	3
6215		BOUL	08	22	1613	N08 W26	08 20.7		A	HK	290	2	4	1
6215		PALE	08	22	1830	N09 W28	08 20.7		B	CKO	430	5	4	3
6215		HOLL	08	22	2230	N09 W32	08 20.5		B	CKO	400	6	5	2
6215		LEAR	08	23	0035	N09 W31	08 20.7		B	CKO	190	3	5	3
6215		RAMY	08	23	1325	N10 W39	08 20.6		A	HK	360	2	4	1
6215		BOUL	08	23	1440	N11 W38	08 20.7		A	HK	300	2	4	3
6215		HOLL	08	23	1608	N08 W41	08 20.6		A	HK	360	4	4	3
6215		PALE	08	23	1800	N09 W41	08 20.7		B	CKO	280	5	4	3
6215		LEAR	08	24	0030	N09 W39	08 21.1		B	CAO	200	3	11	2
6215		CULG	08	24	0050	N10 W44	08 20.7		A	HK	350	2	4	3
6215		SVTO	08	24	0739	N08 W48	08 20.7		A	HK	250	3	3	3
6215		RAMY	08	24	1239	N10 W51	08 20.7		B	CKO	340	3	7	2
6215		HOLL	08	24	1445	N09 W51	08 20.8		A	HK	320	5	5	4
6215		BOUL	08	24	1505	N09 W52	08 20.7		A	HK	330	3	5	3
6215		PALE	08	24	1940	N09 W55	08 20.7		B	CAO	430	7	5	2
6215		LEAR	08	25	0105	N09 W58	08 20.7		A	HK	190	2	4	3
6215		SVTO	08	25	0745	N08 W63	08 20.6		A	HK	300	3	6	4
6215		RAMY	08	25	1322	N10 W66	08 20.6		A	HK	350	2	4	3
6215		BOUL	08	25	1440	N08 W65	08 20.7		B	DSO	310	2	5	2
6215		HOLL	08	25	1630	N08 W67	08 20.7		A	HS	200	2	3	3
6215		PALE	08	25	1750	N09 W68	08 20.6		A	HA	240	3	4	3
6215		LEAR	08	26	0025	N09 W69	08 20.8		A	HK	240	2	4	4
6215		CULG	08	26	0150	N08 W73	08 20.6		A	HK	210	2	3	3
6215		SVTO	08	26	1020	N08 W76	08 20.7		A	HK	100	2	5	3
6215		RAMY	08	26	1428	N10 W78	08 20.7		A	HK	180	2	3	2
6215		HOLL	08	26	1740	N09 W83	08 20.5		A	HA	240	2	2	4
6215		PALE	08	26	1830	N09 W82	08 20.6		A	HK	130	2	6	2
6215		CULG	08	27	0220	N08 W89	08 20.4		A	HK	150	2	3	3
6215		LEAR	08	27	0255	N11 W80	08 21.1		A	HS	90	1	2	2
6236		RAMY	08	25	1322	N17 W64	08 20.7		B	BXO	30	3	3	3
6236		BOUL	08	25	1440	N17 W62	08 20.9		A	AX		1	1	2
6236		HOLL	08	25	1630	N17 W64	08 20.8		A	AX		1		3
6236		PALE	08	25	1750	N16 W65	08 20.8		A	AX		1		3
6236		LEAR	08	26	0025	N17 W67	08 20.9		A	AX	50	2	2	4
6236		CULG	08	26	0150	N16 W71	08 20.7		A	AX	10	1	1	3
6236		RAMY	08	26	1428	N18 W73	08 21.0		A	AX	10	1	1	2
6236A		BOUL	08	23	1440	S28 W33	08 21.0		B	BXO	10	4	2	3
6236B		LEAR	08	21	0100	N15 E03	08 21.3		B	BXO	10	3	3	3
6236B		SVTO	08	21	0740	N12 W02	08 21.2		B	BXO	10	2	1	3
6236B		CULG	08	27	0220	N11 W74	08 21.5		A	AX		1		3
6219		SVTO	08	16	1037	N13 E76	08 22.2		A	AX	10	1	1	2
6219		RAMY	08	16	1215	N13 E73	08 22.0		B	CAO	30	3	3	3
6219		BOUL	08	16	1440	N13 E69	08 21.8		A	AX		1	1	4
6219		HOLL	08	16	1610	N13 E71	08 22.0		B	BXO	30	4	5	2
6219		PALE	08	16	1730	N14 E71	08 22.1		B	BXO	10	5	6	3
6219		LEAR	08	17	0030	N13 E66	08 22.0		B	BXO	20	3	4	3
6219		SVTO	08	17	0706	N13 E65	08 22.2		B	BXO	40	7	6	3
6219		RAMY	08	17	1155	N12 E61	08 22.1		B	BXO	40	15	6	4
6219		BOUL	08	17	1506	N12 E58	08 22.0		B	CAO	30	10	3	4
6219		PALE	08	17	1720	N13 E59	08 22.2		B	CAO	30	7	4	4
6219		HOLL	08	17	2015	N14 E58	08 22.2		B	BXO	30	14	5	3
6219		CULG	08	18	0104	N13 E56	08 22.3		B	CAO	30	7	6	2
6219		SVTO	08	18	0930	N13 E50	08 22.2		B	CAO	40	10	5	4
6219		BOUL	08	18	1430	N13 E45	08 22.0		B	DAI	110	10	6	3
6219		RAMY	08	18	1521	N13 E47	08 22.2		B	DAO	70	12	6	3
6219		HOLL	08	18	1640	N13 E45	08 22.1		B	DRI	70	23	6	3
6219		PALE	08	18	2014	N13 E45	08 22.2		B	CAO	30	12	6	3
6219		LEAR	08	19	0025	N13 E41	08 22.1		B	DAO	70	13	5	3
6219		SVTO	08	19	0705	N12 E39	08 22.2		B	BXO	40	26	5	3
6219		RAMY	08	19	1310	N13 E35	08 22.2		B	DAO	230	27	6	3
6219		BOUL	08	19	1420	N14 E33	08 22.1		B	DAI	170	12	6	4
6219		HOLL	08	19	1740	N13 E33	08 22.2		B	CAI	110	39	6	3
6219		PALE	08	19	1921	N11 E31	08 22.1		B	CAI	70	16	6	3
6219		LEAR	08	20	0015	N13 E29	08 22.2		B	CAO	50	17	7	3

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

113
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6219		SVTO	08 20 1305	N12	E21	08 22.1		B	DAI	130	12	7	2
6219		BOUL	08 20 1412	N13	E20	08 22.1		B	DAO	80	14	6	2
6219		RAMY	08 20 1448	N12	E22	08 22.3		B	DAO	110	29	6	3
6219		HOLL	08 20 1625	N12	E19	08 22.1		B	DAO	60	16	8	2
6219		PALE	08 20 2156	N13	E17	08 22.2		B	DSO	100	17	7	3
6219		LEAR	08 21 0100	N13	E16	08 22.2		B	DAO	60	15	8	3
6219		SVTO	08 21 0740	N12	E11	08 22.1		B	DAO	70	17	8	3
6219		RAMY	08 21 1335	N12	E09	08 22.2		B	DAO	80	22	11	2
6219		BOUL	08 21 1347	N13	E07	08 22.1		B	DAO	50	11	9	1
6219		PALE	08 21 1705	N12	E05	08 22.1		B	DAO	110	28	10	3
6219		HOLL	08 21 2235	N13	E03	08 22.2		B	CRO	60	12	9	2
6219		LEAR	08 22 0127	N12	E01	08 22.1		B	CSO	30	21	10	2
6219		CULG	08 22 0145	N13	W02	08 21.9		B	DSO	40	6	9	2
6219		SVTO	08 22 0900	N12	W03	08 22.1		B	DRI	70	11	9	3
6219		RAMY	08 22 1200	N13	W04	08 22.2		B	DAO	60	25	10	3
6219		BOUL	08 22 1613	N13	W03	08 22.4		B	CSO	30	5	3	1
6219		PALE	08 22 1830	N13	W09	08 22.1		B	DAO	70	20	7	3
6219		LEAR	08 23 0035	N13	W10	08 22.3		B	DAO	60	15	9	3
6219		RAMY	08 23 1325	N12	W19	08 22.1		B	DAO	30	6	6	1
6219		BOUL	08 23 1440	N13	W19	08 22.2		B	CAO	30	7	7	3
6219		HOLL	08 23 1608	N12	W20	08 22.2		B	BXO	20	15	8	3
6219		PALE	08 23 1800	N12	W21	08 22.2		B	CAO	60	9	3	3
6219		LEAR	08 24 0030	N13	W24	08 22.2		B	BXO	20	7	7	2
6219		CULG	08 24 0050	N12	W25	08 22.1		B	CRO	20	9	8	3
6219		SVTO	08 24 0739	N12	W26	08 22.3		B	CRO	20	9	4	3
6219		RAMY	08 24 1239	N13	W29	08 22.3		B	CAO	20	3	3	2
6219		HOLL	08 24 1445	N13	W30	08 22.3		B	BXO		3	3	4
6219		BOUL	08 24 1505	N13	W29	08 22.4		A	HS	20	1	1	3
6219		PALE	08 24 1940	N12	W32	08 22.4		B	BXO	10	2	3	2
6219		LEAR	08 25 0105	N12	W37	08 22.2		B	BXO	10	2	2	3
6219		SVTO	08 25 0745	N11	W41	08 22.2		B	BXO	10	4	2	4
6219		RAMY	08 25 1322	N12	W43	08 22.3		A	HR	10	4	1	3
6219		BOUL	08 25 1440	N13	W43	08 22.4		A	AX		1		2
6219		HOLL	08 25 1630	N12	W46	08 22.2		A	AX		1		3
6219		PALE	08 25 1750	N11	W46	08 22.3		A	AX		1		3
6219		LEAR	08 26 0025	N13	W49	08 22.3		B	BXO	30	2	3	4
6219		SVTO	08 26 1020	N10	W57	08 22.1		B	BXO	20	3	8	3
6219		RAMY	08 26 1428	N12	W62	08 21.9		B	CAO	50	5	9	2
6219		HOLL	08 26 1740	N11	W65	08 21.8		B	BXO	20	4	9	4
6219		PALE	08 26 1830	N10	W67	08 21.7		B	CAO	30	2	4	2
6219		LEAR	08 27 0255	N12	W70	08 21.8		A	HS	30	1	1	2
6219		SVTO	08 27 0850	N11	W70	08 22.1		B	CRO	50	4	7	3
6219		RAMY	08 27 1330	N12	W77	08 21.8		B	CAO	50	3	4	3
6219		HOLL	08 27 1608	N12	W78	08 21.8		A	AX	20	2	2	3
6219		PALE	08 27 1735	N10	W80	08 21.7		B	CRO	30	2	3	4
6236C		RAMY	08 25 1322	S13	W46	08 22.1		B	BXO	10	3	3	3
6225		PALE	08 17 1720	N20	E60	08 22.3		B	BXO	10	4	3	4
6225		HOLL	08 17 2015	N20	E57	08 22.2		B	BXO	20	7	4	3
6225		LEAR	08 18 0020	N20	E56	08 22.3		B	BXO	20	8	6	4
6225		CULG	08 18 0104	N20	E57	08 22.4		B	BXO	10	5	4	2
6225		SVTO	08 18 0930	N21	E53	08 22.4		B	BXO	20	4	3	4
6225		BOUL	08 18 1430	N21	E45	08 22.0		B	CSO	40	4	6	3
6225		RAMY	08 18 1521	N21	E46	08 22.2		B	CRO	20	5	4	3
6225		HOLL	08 18 1640	N21	E46	08 22.2		B	BXO	30	4	5	3
6225		PALE	08 18 2014	N21	E45	08 22.3		B	CRO	20	4	6	3
6225		LEAR	08 19 0025	N20	E41	08 22.1		B	BXO	20	10	6	3
6225		SVTO	08 19 0705	N20	E38	08 22.2		B	BXO	10	9	6	3
6225		RAMY	08 19 1310	N20	E35	08 22.2		B	DAO	70	12	6	3
6225		BOUL	08 19 1420	N21	E32	08 22.0		B	DAO	70	7	6	4
6225		HOLL	08 19 1740	N21	E33	08 22.3		B	BXO	40	21	8	3
6225		PALE	08 19 1921	N21	E32	08 22.2		B	CRO	20	8	7	3
6225		LEAR	08 20 0015	N21	E30	08 22.3		B	BXO	30	9	6	3
6225		SVTO	08 20 1305	N21	E21	08 22.1		B	CRO	30	8	5	2
6225		BOUL	08 20 1412	N21	E19	08 22.0		B	BXO	20	7	5	2
6225		RAMY	08 20 1448	N20	E20	08 22.1		B	BXO	40	16	7	3
6225		HOLL	08 20 1625	N21	E19	08 22.1		B	BXO	10	8	6	2
6225		PALE	08 20 2156	N21	E19	08 22.4		A	AX	20	5	2	3

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

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation			CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day	Time (UT)									Lat	Cmd
6225		LEAR	08	21	0100	N21 E17	08 22.3	B	BXO	20	5	2	3
6225		SVTO	08	21	0740	N21 E13	08 22.3	B	BXO	10	3	2	3
6225		RAMY	08	21	1335	N21 E10	08 22.3	A	AX	10	1	1	2
6225		BOUL	08	21	1347	N21 E10	08 22.3	A	AX		2	1	1
6225		PALE	08	21	1705	N21 E08	08 22.3	A	AX	20	2	2	3
6225		HOLL	08	21	2235	N22 E06	08 22.4	A	AX	10	1		2
6225		LEAR	08	22	0127	N21 E03	08 22.3	A	AX	10	1	1	2
6225		SVTO	08	22	0900	N22 E00	08 22.4	A	AX		1		3
6225		RAMY	08	22	1200	N21 W01	08 22.4	A	AX		1	1	3
6225		PALE	08	22	1830	N22 W06	08 22.3	A	AX	10	1	1	3
6225		HOLL	08	22	2230	N21 W13	08 21.9	A	AX		2		2
6225		RAMY	08	23	1325	N23 W17	08 22.2	A	AX	10	3	2	1
6225		BOUL	08	23	1440	N23 W19	08 22.1	B	CSO	10	2	2	3
6225		HOLL	08	23	1608	N21 W20	08 22.1	B	BXO	20	13	4	3
6225		PALE	08	23	1800	N21 W22	08 22.1	B	CRO	40	14	5	3
6225		LEAR	08	24	0030	N22 W22	08 22.3	A	AX	10	1	1	2
6225		CULG	08	24	0050	N21 W22	08 22.3	B	CRO	10	4	3	3
6225		SVTO	08	24	0739	N22 W26	08 22.3	B	BXO	10	2	4	3
6225		RAMY	08	24	1239	N22 W29	08 22.3	A	AX	10	1	1	2
6225		HOLL	08	24	1445	N20 W31	08 22.2	B	BXO		3	5	4
6225		BOUL	08	24	1505	N23 W29	08 22.4	A	AX	10	1	1	3
6225		PALE	08	24	1940	N21 W31	08 22.4	B	BXO	20	3	3	2
6225		LEAR	08	25	0105	N22 W36	08 22.3	A	AX	10	1	1	3
6225		SVTO	08	25	0745	N21 W40	08 22.2	A	AX		1		4
6225		RAMY	08	25	1322	N22 W42	08 22.3	B	BXO	10	5	8	3
6222		PALE	08	16	1730	S15 E78	08 22.6	B	BXO	10	2	5	3
6222		LEAR	08	17	0030	S16 E70	08 22.3	A	AX	10	2	3	3
6222		SVTO	08	17	0706	S17 E70	08 22.6	B	BXO	30	3	5	3
6222		RAMY	08	17	1155	S17 E68	08 22.7	B	BXO	30	6	5	4
6222		PALE	08	17	1720	S16 E65	08 22.6	B	BXO	10	5	7	4
6222		HOLL	08	17	2015	S16 E62	08 22.5	B	BXO	10	3	5	3
6222		CULG	08	18	0104	S16 E57	08 22.4	A	AX	10	1	1	2
6222		SVTO	08	18	0930	S16 E58	08 22.8	B	BXO	10	4	6	4
6222		RAMY	08	18	1521	S16 E53	08 22.6	B	BXO	10	3	4	3
6222		PALE	08	18	2014	S16 E49	08 22.5	A	AX		2	1	3
6222		LEAR	08	19	0025	S18 E50	08 22.8	A	AX	10	1	1	3
6235		PALE	08	23	1800	S08 W02	08 23.6	B	BXO	20	3	3	3
6235		CULG	08	24	0050	S13 W07	08 23.5	B	BXO		8	5	3
6235		SVTO	08	24	0739	S13 W10	08 23.6	B	BXO	20	10	6	3
6235		RAMY	08	24	1239	S12 W12	08 23.6	B	BXO	10	10	6	2
6235		HOLL	08	24	1445	S13 W15	08 23.5	B	BXO	10	7	5	4
6235		BOUL	08	24	1505	S12 W16	08 23.4	B	DAO	60	8	5	3
6235		PALE	08	24	1940	S13 W18	08 23.5	B	BXO	30	8	5	2
6235		LEAR	08	25	0105	S12 W21	08 23.5	B	CRO	20	8	6	3
6235		SVTO	08	25	0745	S14 W25	08 23.4	B	DRO	50	9	7	4
6235		RAMY	08	25	1322	S12 W28	08 23.4	BG	DAO	50	14	8	3
6235		BOUL	08	25	1440	S13 W29	08 23.4	B	CAO	30	5	4	2
6235		HOLL	08	25	1630	S13 W28	08 23.6	B	BXO	20	8	8	3
6235		PALE	08	25	1750	S13 W30	08 23.5	B	CAO	40	8	8	3
6235		LEAR	08	26	0025	S13 W34	08 23.4	B	BXO	80	13	7	4
6235		CULG	08	26	0150	S13 W37	08 23.3	B	BXO	10	2	7	3
6235		SVTO	08	26	1020	S13 W38	08 23.6	B	CSO	30	5	8	3
6235		RAMY	08	26	1428	S11 W41	08 23.5	B	BXO	20	3	5	2
6235		HOLL	08	26	1740	S12 W48	08 23.1	B	BXO	10	2		4
6235		PALE	08	26	1830	S13 W48	08 23.1	A	HR	20	1	1	2
6235		CULG	08	27	0220	S13 W54	08 23.0	A	AX		1		3
6235		HOLL	08	27	1608	S15 W67	08 22.6	A	AX	10	1		3
6223		PALE	08	17	1720	S11 E89	08 24.4	A	HK	180	2	3	4
6223		HOLL	08	17	2015	S10 E80	08 23.8	A	HH	200	1	4	3
6223		CULG	08	18	0104	S11 E83	08 24.3	A	HH	180	1	6	2
6223		SVTO	08	18	0930	S11 E77	08 24.2	A	HHC	510	1	6	4
6223		BOUL	08	18	1430	S11 E69	08 23.8	B	HH	560	1	5	3
6223		RAMY	08	18	1521	S12 E72	08 24.1	B	EKO	690	7	12	3
6223		HOLL	08	18	1640	S12 E75	08 24.3	B	CKO	660	12	12	3
6223		PALE	08	18	2014	S12 E72	08 24.3	B	EKO	600	2	14	3
6223		LEAR	08	19	0025	S12 E72	08 24.4	B	EKO	720	9	15	3

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

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation		Lat	CND	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day											Time (UT)
6223		SVTO	08	19	0705	S11	E67	08 24.3	B	FKO	930	11	17	3
6223		RAMY	08	19	1310	S13	E68	08 24.7	B	FKO	1250	17	20	3
6223		BOUL	08	19	1420	S12	E63	08 24.3	B	EKO	910	10	14	4
6223		HOLL	08	19	1740	S13	E65	08 24.6	B	FKI	1130	60	21	3
6223		PALE	08	19	1921	S13	E62	08 24.5	BG	EKI	820	24	15	3
6223		LEAR	08	20	0015	S13	E60	08 24.5	B	EKO	970	19	14	3
6223		SVTO	08	20	1305	S13	E53	08 24.5	B	EKI	1360	19	15	2
6223		BOUL	08	20	1412	S12	E50	08 24.3	B	EKO	920	22	16	2
6223		RAMY	08	20	1448	S15	E53	08 24.6	B	EKO	1090	19	14	3
6223		HOLL	08	20	1625	S13	E52	08 24.6	B	FKI	1140	31	20	2
6223		PALE	08	20	2156	S14	E48	08 24.5	BG	EKI	980	19	15	3
6223		LEAR	08	21	0100	S13	E46	08 24.5	B	EKO	1060	22	15	3
6223		SVTO	08	21	0740	S12	E44	08 24.6	B	FKO	1200	27	16	3
6223		RAMY	08	21	1335	S14	E40	08 24.6	B	EKO	1120	30	15	2
6223		BOUL	08	21	1347	S12	E37	08 24.4	B	EKI	830	30	14	1
6223		PALE	08	21	1705	S12	E37	08 24.5	B	EHO	1090	35	14	3
6223		HOLL	08	21	2235	S13	E33	08 24.4	B	EKI	1150	46	15	2
6223		LEAR	08	22	0127	S12	E31	08 24.4	B	EKO	950	19	14	2
6223		CULG	08	22	0145	S12	E32	08 24.5	B	EHO	850	15	13	2
6223		SVTO	08	22	0900	S12	E28	08 24.5	B	EKI	1100	31	14	3
6223		RAMY	08	22	1200	S11	E28	08 24.6	B	FKO	1080	46	16	3
6223		BOUL	08	22	1613	S13	E23	08 24.4	B	EKI	840	28	14	1
6223		PALE	08	22	1830	S13	E24	08 24.6	B	EHO	1210	39	13	3
6223		HOLL	08	22	2230	S11	E21	08 24.5	B	EKI	1030	58	15	2
6223		LEAR	08	23	0035	S12	E20	08 24.5	B	EKO	990	40	16	3
6223		RAMY	08	23	1325	S11	E12	08 24.5	B	EKO	950	13	14	1
6223		BOUL	08	23	1440	S13	E07	08 24.1	B	FKI	750	54	20	3
6223		HOLL	08	23	1608	S13	E11	08 24.5	B	EKI	1120	59	14	3
6223		PALE	08	23	1800	S12	E11	08 24.6	B	EKO	1180	39	14	3
6223		LEAR	08	24	0030	S12	E01	08 24.1	B	CKI	310	35	17	2
6223		CULG	08	24	0050	S12	E06	08 24.5	B	EKO	910	31	13	3
6223		SVTO	08	24	0739	S12	E02	08 24.5	B	EKO	1130	60	14	3
6223		RAMY	08	24	1239	S12	W01	08 24.4	B	EKI	1150	36	12	2
6223		HOLL	08	24	1445	S13	E01	08 24.7	B	FKI	970	53	16	4
6223		BOUL	08	24	1505	S13	W03	08 24.4	B	FKI	950	56	16	3
6223		PALE	08	24	1940	S11	W03	08 24.6	B	EKO	1000	30	15	2
6223		LEAR	08	25	0105	S12	W07	08 24.5	BD	FKC	930	15	16	3
6223		SVTO	08	25	0745	S12	W09	08 24.6	BD	FKI	1200	48	17	4
6223		RAMY	08	25	1322	S11	W12	08 24.6	BD	FKI	1130	43	16	3
6223		BOUL	08	25	1440	S12	W15	08 24.5	B	FKI	940	24	19	2
6223		HOLL	08	25	1630	S12	W15	08 24.5	BG	FKO	870	33	17	3
6223		PALE	08	25	1750	S12	W15	08 24.6	BD	FKI	960	47	17	3
6223		LEAR	08	26	0025	S12	W19	08 24.6	BG	FKI	1050	45	16	4
6223		CULG	08	26	0150	S13	W21	08 24.5	B	FKO	840	20	16	3
6223		SVTO	08	26	1020	S12	W22	08 24.8	BG	FKI	950	32	17	3
6223		RAMY	08	26	1428	S13	W28	08 24.5	BG	FKI	1200	43	18	2
6223		HOLL	08	26	1740	S13	W30	08 24.5	BG	EKO	960	46	12	4
6223		PALE	08	26	1830	S13	W28	08 24.6	BG	EKI	840	31	13	2
6223		CULG	08	27	0220	S12	W35	08 24.5	B	FKO	800	12	16	3
6223		LEAR	08	27	0255	S12	W33	08 24.6	B	FKO	900	14	17	2
6223		SVTO	08	27	0850	S13	W34	08 24.8	BG	FKI	890	25	16	3
6223		RAMY	08	27	1330	S13	W39	08 24.6	BG	FKI	840	31	17	3
6223		BOUL	08	27	1335	S11	W39	08 24.6	B	CKI	480	8	11	1
6223		HOLL	08	27	1608	S12	W40	08 24.6	BG	EKO	910	31	15	3
6223		PALE	08	27	1735	S14	W40	08 24.7	BD	FKO	840	25	16	4
6223		LEAR	08	28	0035	S11	W48	08 24.4	BG	EKO	500	13	13	3
6223		CULG	08	28	0145	S12	W50	08 24.3	B	DKO	680	2	9	3
6223		SVTO	08	28	0745	S13	W49	08 24.6	BG	EKO	700	11	14	3
6223		RAMY	08	28	1210	S11	W53	08 24.5	B	EKO	710	5	12	3
6223		BOUL	08	28	1353	S11	W51	08 24.7	B	CKO	410	5	10	1
6223		HOLL	08	28	1630	S12	W56	08 24.5	B	CKO	720	15	15	3
6223		PALE	08	28	1746	S16	W56	08 24.5	BD	EKO	560	13	12	3
6223		LEAR	08	29	0020	S12	W56	08 24.8	BG	EHO	360	8	14	3
6223		SVTO	08	29	1042	S13	W65	08 24.5	BG	EHO	550	7	14	2
6223		RAMY	08	29	1155	S11	W63	08 24.7	B	EKO	620	13	13	4
6223		HOLL	08	29	1440	S13	W68	08 24.5	B	EHO	510	7	11	4
6223		BOUL	08	29	1442	S12	W66	08 24.6	B	EKI	760	16	14	3
6223		PALE	08	29	1743	S13	W67	08 24.7	B	CKO	510	9	10	3
6223		LEAR	08	30	0015	S13	W71	08 24.6	B	EHI	390	6	12	3

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

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
6223		CULG	08 30 0200	S12	W72	08 24.6		B	EKO	550	5	13	1
6223		SVTO	08 30 0840	S12	W77	08 24.6		B	EKO	480	6	13	3
6223		RAMY	08 30 1245	S11	W76	08 24.8		B	EKO	300	7	11	2
6223		BOUL	08 30 1445	S11	W78	08 24.7		B	CAO	50	2	4	3
6223		HOLL	08 30 1537	S12	W75	08 25.0		B	CAO	50	2	3	3
6223		PALE	08 30 1735	S13	W80	08 24.7		B	CAO	90	3	5	4
6223		LEAR	08 31 0045	S12	W78	08 25.1		A	HS	30	1	2	2
6235A		SVTO	08 20 0730	N03	E51	08 24.1		B	BXO	10	4	1	2
6232		RAMY	08 19 1310	N10	E61	08 24.1		A	AX	10	3	1	3
6232		HOLL	08 19 1740	N11	E60	08 24.2		A	AX	10	1		3
6232		RAMY	08 22 1200	N12	E22	08 24.1		A	AX	10	4	2	3
6232		PALE	08 22 1830	N12	E20	08 24.3		A	AX	10	2	2	3
6232		HOLL	08 22 2230	N13	E18	08 24.3		B	BXO	10	6	3	2
6232		LEAR	08 23 0035	N12	E17	08 24.3		B	CRO	10	3	2	3
6232		RAMY	08 23 1325	N13	E09	08 24.2		A	HR	10	2	1	1
6232		BOUL	08 23 1440	N13	E08	08 24.2		A	AX	10	1		3
6232		HOLL	08 23 1608	N13	E08	08 24.3		B	BXO	10	3	3	3
6232		PALE	08 23 1800	N12	E07	08 24.3		B	BXO	30	5	3	3
6232		LEAR	08 24 0030	N11	E03	08 24.2		B	BXO	10	8	6	2
6232		CULG	08 24 0050	N11	E02	08 24.2		B	CRO	10	2	4	3
6232		SVTO	08 24 0739	N12	W02	08 24.2		B	BXO	20	10	4	3
6232		HOLL	08 24 1445	N12	W04	08 24.3		B	BXO		4	5	4
6232		PALE	08 24 1940	N11	W07	08 24.3		B	BXO	20	5	3	2
6232		LEAR	08 25 0105	N11	W11	08 24.2		B	BXO	20	3	2	3
6232		SVTO	08 25 0745	N10	W15	08 24.2		B	BXO	10	3	2	4
6232		PALE	08 25 1750	N10	W20	08 24.2		A	AX		2	2	3
6229		SVTO	08 22 0900	N13	E26	08 24.3		B	BXO	10	5	4	3
6229		RAMY	08 24 1239	N11	W02	08 24.4		B	BXO	10	8	3	2
6229		RAMY	08 25 1322	N12	W09	08 24.9		B	BXO	10	5	3	3
6226		SVTO	08 18 0930	S22	E84	08 24.8		B	DSO	80	2	10	4
6226		BOUL	08 18 1430	S22	E78	08 24.6		B	DSO	150	3	5	3
6226		HOLL	08 18 1640	S22	E75	08 24.4		B	DAI	150	8	5	3
6226		PALE	08 18 2014	S22	E73	08 24.4		B	CAO	130	5	5	3
6226		LEAR	08 19 0025	S22	E75	08 24.8		B	DAO	210	10	10	3
6226		SVTO	08 19 0705	S21	E70	08 24.7		B	ESO	210	10	13	3
6226		RAMY	08 19 1310	S23	E70	08 24.9		B	EKI	540	16	14	3
6226		BOUL	08 19 1420	S24	E68	08 24.8		B	DSI	330	8	10	4
6226		HOLL	08 19 1740	S22	E68	08 25.0		B	DAI	360	21	8	3
6226		PALE	08 19 1921	S22	E65	08 24.8		B	EKO	300	13	15	3
6226		LEAR	08 20 0015	S23	E63	08 24.9		B	EKI	410	18	15	3
6226		SVTO	08 20 1305	S21	E57	08 24.9		B	FAI	400	24	19	2
6226		BOUL	08 20 1412	S20	E55	08 24.8		B	EST	300	32	11	2
6226		RAMY	08 20 1448	S22	E59	08 25.1		B	FAI	460	26	20	3
6226		HOLL	08 20 1625	S21	E57	08 25.0		BG	FAI	330	37	20	2
6226		PALE	08 20 2156	S23	E48	08 24.6		B	CKI	440	17	7	3
6226		LEAR	08 21 0100	S22	E51	08 25.0		B	EAO	250	33	12	3
6226		SVTO	08 21 0740	S22	E46	08 24.8		B	EAI	320	28	15	3
6226		RAMY	08 21 1335	S22	E43	08 24.9		A	DKI	680	40	15	2
6226		BOUL	08 21 1347	S21	E42	08 24.8		B	DKI	620	21	10	1
6226		PALE	08 21 1705	S24	E39	08 24.7		BG	EKI	770	42	12	3
6226		HOLL	08 21 2235	S22	E39	08 24.9		BD	FKC	1120	43	18	2
6226		LEAR	08 22 0127	S22	E35	08 24.7		B	EKC	900	21	13	2
6226		CULG	08 22 0145	S23	E34	08 24.7		BG	EKC	750	14	14	2
6226		SVTO	08 22 0900	S21	E32	08 24.8		B	EKI	1370	51	14	3
6226		RAMY	08 22 1200	S22	E30	08 24.8		B	EKI	1200	44	13	3
6226		BOUL	08 22 1613	S21	E26	08 24.7		B	EKI	900	34	12	1
6226		PALE	08 22 1830	S22	E25	08 24.7		BG	EKI	1100	35	12	3
6226		HOLL	08 22 2230	S20	E23	08 24.7		BG	FKC	1010	85	14	2
6226		LEAR	08 23 0035	S21	E22	08 24.7		BG	EKI	780	61	14	3
6226		RAMY	08 23 1325	S21	E16	08 24.8		BG	EKO	790	37	13	1
6226		BOUL	08 23 1440	S19	E14	08 24.7		B	EKI	880	60	14	3
6226		HOLL	08 23 1608	S21	E15	08 24.8		BGD	EKI	1040	79	13	3
6226		PALE	08 23 1800	S21	E11	08 24.6		BG	DKI	880	62	14	3
6226		LEAR	08 24 0030	S20	E10	08 24.8		B	EKC	680	59	14	2
6226		CULG	08 24 0050	S21	E09	08 24.7		B	EKI	410	63	13	3

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

117
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Observation Sta	Time		CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
			Mo	Day (UT)									Lat	Cmd
6226		SVTO	08 24	0739	08 24.8		BG	EKI	1010	60	13	3
6226		RAMY	08 24	1239	08 24.7		BG	EKI	900	68	13	2
6226		HOLL	08 24	1445	08 24.7		B	EKI	720	50	14	4
6226		BOUL	08 24	1505	08 24.8		B	EKI	1100	64	13	3
6226		PALE	08 24	1940	08 24.7		BG	EKI	990	44	11	2
6226		LEAR	08 25	0105	08 24.7		G	EKC	740	37	14	3
6226		SVTO	08 25	0745	08 24.8		BGD	FKI	860	62	17	4
6226		RAMY	08 25	1322	08 24.8		BGD	FKI	900	54	16	3
6226		BOUL	08 25	1440	08 24.7		B	EKI	830	53	12	2
6226		HOLL	08 25	1630	08 24.8		BGD	FKI	800	55	16	3
6226		PALE	08 25	1750	08 24.7		BGD	EKI	830	35	15	3
6226		LEAR	08 26	0025	08 24.9		BG	EKI	990	51	15	4
6226		CULG	08 26	0150	08 24.8		BG	EKI	660	28	14	3
6226		SVTO	08 26	1020	08 24.9		BG	FKI	800	51	16	3
6226		RAMY	08 26	1428	08 24.7		BG	FKI	720	41	16	2
6226		HOLL	08 26	1740	08 24.7		BG	EKI	780	55	15	4
6226		PALE	08 26	1830	08 24.7		BG	EKI	740	23	15	2
6226		CULG	08 27	0220	08 24.6		BG	EKI	600	20	13	3
6226		LEAR	08 27	0255	08 24.7		BG	EKI	740	27	13	2
6226		SVTO	08 27	0850	08 24.9		BG	EKI	680	33	15	3
6226		RAMY	08 27	1330	08 24.6		BG	EKI	680	25	14	3
6226		BOUL	08 27	1335	08 24.9		B	EAI	230	20	13	1
6226		HOLL	08 27	1608	08 24.7		B	FKO	730	39	17	3
6226		PALE	08 27	1735	08 24.8		BG	EKI	740	30	14	4
6226		LEAR	08 28	0035	08 24.9		BG	EKI	460	30	14	3
6226		CULG	08 28	0145	08 24.7		BG	EKI	600	17	13	3
6226		SVTO	08 28	0745	08 24.7		BG	EKI	560	20	15	3
6226		RAMY	08 28	1210	08 24.7		BG	EKO	510	22	14	3
6226		BOUL	08 28	1353	08 24.7		B	EAI	380	11	14	1
6226		HOLL	08 28	1630	08 24.8		BG	FKO	610	20	18	3
6226		PALE	08 28	1746	08 25.0		BG	EKI	350	12	15	3
6226		LEAR	08 29	0020	08 25.1		BG	EKO	290	17	14	3
6226		SVTO	08 29	1042	08 24.8		BG	FKO	530	17	16	2
6226		RAMY	08 29	1155	08 24.8		BG	EKO	470	9	14	4
6226		HOLL	08 29	1440	08 25.0		BG	FKO	330	16	20	4
6226		BOUL	08 29	1442	08 24.8		B	EKI	630	18	12	3
6226		PALE	08 29	1743	08 25.0		B	EKO	390	8	15	3
6226		LEAR	08 30	0015	08 24.8		B	DAO	180	10	10	3
6226		CULG	08 30	0200	08 24.9		BG	EKO	450	10	14	1
6226		SVTO	08 30	0840	08 25.0		BG	EKO	420	5	14	3
6226		RAMY	08 30	1245	08 25.1		BG	EKO	570	14	14	2
6226		BOUL	08 30	1445	08 25.3		B	DSO	180	4	3	3
6226		HOLL	08 30	1537	08 24.9		B	CAO	240	5	5	3
6226		PALE	08 30	1735	08 24.8		B	FKO	530	8	17	4
6226		RAMY	08 31	1228	08 24.9		B	CAO	60	4	9	3
6226		PALE	08 31	1735	08 24.8		A	AX	10	1	1	4
6234		HOLL	08 23	1608	08 24.7		A	AX	10	2	2	3
6234		PALE	08 23	1800	08 24.7		A	AX	10	2	2	3
6234		LEAR	08 24	0030	08 24.8		B	CAO	20	3	3	2
6234		CULG	08 24	0050	08 24.7		B	CRO	10	2	3	3
6234		SVTO	08 24	0739	08 24.7		B	BXO	10	4	4	3
6234		HOLL	08 24	1445	08 24.8		B	BXO	10	3	3	4
6234		BOUL	08 24	1505	08 24.9		B	CSO	10	7	4	3
6234		PALE	08 24	1940	08 24.7		B	BXO	30	5	4	2
6234		LEAR	08 25	0105	08 24.8		B	BXO	10	2	4	3
6227		RAMY	08 19	1310	08 26.0		A	HR	40	1	2	3
6227		PALE	08 19	1921	08 25.6		A	AX	30	1	1	3
6227		LEAR	08 20	0015	08 25.9		A	HS	60	2	2	3
6227		SVTO	08 20	1305	08 26.0		B	DSO	90	2	4	2
6227		BOUL	08 20	1412	08 25.9		B	DSO	160	4	7	2
6227		RAMY	08 20	1448	08 26.1		B	DAO	90	5	5	3
6227		HOLL	08 20	1625	08 26.5		B	FAO	200	6	20	2
6227		PALE	08 20	2156	08 26.5		B	CAO	150	4	10	3
6227		LEAR	08 21	0100	08 26.3		B	DAO	120	4	8	3
6227		SVTO	08 21	0740	08 26.1		B	CAO	140	3	5	3
6227		RAMY	08 21	1335	08 26.0		B	DAO	160	11	8	2
6227		BOUL	08 21	1347	08 25.9		B	DAO	160	12	19	1

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time		CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual		
			Mo	Day									Lat	Cmd
6227		PALE	08	21	1705	S25	E53	08 25.8	B	DAO	220	8	8	3
6227		HOLL	08	21	2235	S26	E51	08 25.9	B	DSO	260	11	8	2
6227		LEAR	08	22	0127	S26	E49	08 25.9	B	DSO	170	8	7	2
6227		CULG	08	22	0145	S27	E47	08 25.7	B	DSO	90	6	7	2
6227		SVTO	08	22	0900	S24	E46	08 25.9	B	DSI	160	14	8	3
6227		RAMY	08	22	1200	S24	E45	08 26.0	B	DAO	170	16	7	3
6227		BOUL	08	22	1613	S23	E41	08 25.8	B	DAO	140	15	10	1
6227		PALE	08	22	1830	S25	E42	08 26.0	B	EHO	120	19	11	3
6227		HOLL	08	22	2230	S23	E40	08 26.0	B	ESO	140	19	11	2
6227		LEAR	08	23	0035	S24	E39	08 26.0	B	DSO	100	17	9	3
6227		RAMY	08	23	1325	S25	E30	08 25.9	B	DAO	100	15	10	1
6227		BOUL	08	23	1440	S23	E28	08 25.8	B	EAI	130	19	11	3
6227		HOLL	08	23	1608	S23	E31	08 26.1	B	ESO	180	39	13	3
6227		PALE	08	23	1800	S27	E29	08 26.0	B	EAO	110	23	10	3
6227		LEAR	08	24	0030	S24	E22	08 25.7	B	EAO	90	19	12	2
6227		CULG	08	24	0050	S23	E25	08 26.0	B	ESO	80	24	12	3
6227		SVTO	08	24	0739	S23	E22	08 26.0	B	EAO	120	30	15	3
6227		RAMY	08	24	1239	S23	E18	08 25.9	B	FSO	120	25	16	2
6227		HOLL	08	24	1445	S22	E17	08 25.9	B	BXO	20	15	8	4
6227		BOUL	08	24	1505	S22	E13	08 25.6	B	CSO	30	7	5	3
6227		PALE	08	24	1940	S25	E13	08 25.8	B	EAO	170	20	13	2
6227		LEAR	08	25	0105	S23	E11	08 25.9	B	BXO	30	10	7	3
6227		SVTO	08	25	0745	S24	E09	08 26.0	B	DSO	90	13	8	4
6227		RAMY	08	25	1322	S23	E03	08 25.8	B	BXO	20	17	8	3
6227		BOUL	08	25	1440	S22	E02	08 25.8	B	CSO	40	10	6	2
6227		HOLL	08	25	1630	S23	E03	08 25.9	B	BXO	30	15	9	3
6227		PALE	08	25	1750	S22	E01	08 25.8	B	CAO	30	15	8	3
6227		LEAR	08	26	0025	S23	W01	08 25.9	B	CSO	110	22	9	4
6227		CULG	08	26	0150	S23	W02	08 25.9	B	DAO	50	7	4	3
6227		SVTO	08	26	1020	S23	W06	08 26.0	B	DAO	100	12	7	3
6227		RAMY	08	26	1428	S24	W09	08 25.9	B	DAO	130	23	9	2
6227		HOLL	08	26	1740	S23	W12	08 25.8	B	DAO	90	17	7	4
6227		PALE	08	26	1830	S23	W12	08 25.8	B	DAO	90	9	7	2
6227		CULG	08	27	0220	S23	W18	08 25.7	B	DAO	40	8	6	3
6227		LEAR	08	27	0255	S22	W18	08 25.7	B	CSO	60	8	4	2
6227		SVTO	08	27	0850	S24	W18	08 26.0	B	DAO	70	17	8	3
6227		RAMY	08	27	1330	S24	W23	08 25.8	B	DAO	80	13	8	3
6227		BOUL	08	27	1335	S21	W23	08 25.8	B	BXO	10	2	3	1
6227		HOLL	08	27	1608	S24	W23	08 25.9	B	BXO	50	19	9	3
6227		PALE	08	27	1735	S24	W22	08 26.0	B	DSO	70	13	9	4
6227		LEAR	08	28	0035	S22	W30	08 25.7	B	CSO	30	6	5	3
6227		CULG	08	28	0145	S22	W31	08 25.7	B	DRO	20	6	7	3
6227		SVTO	08	28	0745	S23	W32	08 25.8	B	DAO	40	9	8	3
6227		RAMY	08	28	1210	S24	W32	08 26.0	B	DAO	40	11	9	3
6227		BOUL	08	28	1353	S22	W38	08 25.6	A	AX	10	1		1
6227		HOLL	08	28	1630	S23	W41	08 25.5	B	BXO	30	8	4	3
6227		PALE	08	28	1746	S25	W37	08 25.9	B	BXO	20	6	9	3
6227		LEAR	08	29	0020	S23	W42	08 25.8	B	BXO	30	4	5	3
6227		SVTO	08	29	1042	S23	W47	08 25.8	B	DRO	50	5	10	2
6227		RAMY	08	29	1155	S23	W47	08 25.9	B	DRO	50	13	10	4
6227		HOLL	08	29	1440	S25	W45	08 26.1	B	BXO	10	5	7	4
6227		BOUL	08	29	1442	S22	W48	08 25.9	B	BXO	50	6	8	3
6227		PALE	08	29	1743	S23	W50	08 25.9	B	CAO	30	5	10	3
6227		LEAR	08	30	0015	S22	W59	08 25.5	B	DAO	60	6	6	3
6227		CULG	08	30	0200	S23	W54	08 25.9	A	HR	10	3	2	1
6227		SVTO	08	30	0840	S23	W61	08 25.7	B	CAO	70	4	6	3
6227		RAMY	08	30	1245	S24	W62	08 25.7	B	BXO	10	5	10	2
6227		BOUL	08	30	1445	S22	W67	08 25.5	B	CAO	50	4	3	3
6227		HOLL	08	30	1537	S27	W68	08 25.3	A	AX	10	1	1	3
6227		PALE	08	30	1735	S27	W60	08 26.0	A	AX	10	1		4
6227		RAMY	08	31	1228	S25	W70	08 26.1	B	BXO	10	8	9	3
6227A		SVTO	08	20	0730	S16	E80	08 26.4	A	EK	60	1	1	2
6228		SVTO	08	20	1305	S06	E78	08 26.4	A	HS	180	1	2	2
6228		RAMY	08	20	1448	S06	E80	08 26.6	B	CAO	180	3	6	3
6228		HOLL	08	20	1625	S05	E80	08 26.7	B	DAO	190	7	10	2
6228		PALE	08	20	2156	S08	E75	08 26.5	B	DAO	270	5	9	3
6228		LEAR	08	21	0100	S07	E74	08 26.6	B	CAO	180	7	9	3

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

119
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat Mo Day	CMD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6228		RAMY	08 21	1335	S07 E68	08 26.6		B	DAO	430	9	9	2
6228		BOUL	08 21	1347	S06 E64	08 26.4		B	DAI	300	8	8	1
6228		PALE	08 21	1705	S07 E64	08 26.5		B	DKO	480	11	10	3
6228		HOLL	08 21	2235	S12 E61	08 26.5		B	EAO	460	12	11	2
6228		LEAR	08 22	0127	S08 E58	08 26.4		B	DSO	300	4	8	2
6228		CULG	08 22	0145	S07 E60	08 26.6		B	DSO	270	6	7	2
6228		SVTO	08 22	0900	S06 E57	08 26.6		B	DAO	450	6	8	3
6228		RAMY	08 22	1200	S08 E55	08 26.6		B	DKO	480	12	10	3
6228		BOUL	08 22	1613	S06 E51	08 26.5		B	DKO	380	13	8	1
6228		PALE	08 22	1830	S08 E53	08 26.7		B	DHO	400	8	8	3
6228		HOLL	08 22	2230	S06 E49	08 26.6		B	DAO	340	23	9	2
6228		LEAR	08 23	0035	S07 E48	08 26.6		B	DHO	200	12	9	3
6228		RAMY	08 23	1325	S08 E41	08 26.6		B	DKO	380	14	10	1
6228		BOUL	08 23	1440	S06 E39	08 26.5		B	DKO	370	14	9	3
6228		HOLL	08 23	1608	S07 E40	08 26.7		B	CAO	290	23	8	3
6228		PALE	08 23	1800	S08 E39	08 26.7		B	DAO	310	24	9	3
6228		LEAR	08 24	0030	S07 E34	08 26.6		B	DAO	300	19	9	2
6228		CULG	08 24	0050	S06 E34	08 26.6		B	DKO	230	17	10	3
6228		SVTO	08 24	0739	S07 E30	08 26.6		B	DSO	350	30	10	3
6228		RAMY	08 24	1239	S08 E27	08 26.5		B	DKO	310	29	10	2
6228		HOLL	08 24	1445	S07 E26	08 26.6		B	DKO	280	27	10	4
6228		BOUL	08 24	1505	S07 E26	08 26.6		B	EAI	280	24	11	3
6228		PALE	08 24	1940	S07 E26	08 26.8		B	DKO	340	18	10	2
6228		LEAR	08 25	0105	S07 E20	08 26.5		B	DKO	240	12	7	3
6228		SVTO	08 25	0745	S07 E18	08 26.7		B	DKO	350	30	9	4
6228		RAMY	08 25	1322	S08 E12	08 26.4		B	DKO	490	37	10	3
6228		BOUL	08 25	1440	S06 E13	08 26.6		B	DKI	290	21	10	2
6228		HOLL	08 25	1630	S07 E13	08 26.7		B	DAI	310	32	9	3
6228		PALE	08 25	1750	S07 E13	08 26.7		B	DAO	310	22	10	3
6228		LEAR	08 26	0025	S08 E07	08 26.5		B	DKO	400	35	9	4
6228		CULG	08 26	0150	S08 E07	08 26.6		B	DKO	220	17	8	3
6228		SVTO	08 26	1020	S08 E04	08 26.7		B	DAO	250	19	9	3
6228		RAMY	08 26	1428	S07 W01	08 26.5		B	DKI	330	28	9	2
6228		HOLL	08 26	1740	S08 W01	08 26.7		B	DAO	350	32	9	4
6228		PALE	08 26	1830	S07 W03	08 26.5		B	DAO	280	23	9	2
6228		CULG	08 27	0220	S09 W07	08 26.6		B	DKO	210	20	9	3
6228		LEAR	08 27	0255	S08 W08	08 26.5		B	DKO	270	21	8	2
6228		SVTO	08 27	0850	S08 W09	08 26.7		B	DAO	260	23	10	3
6228		RAMY	08 27	1330	S07 W13	08 26.6		B	DKO	300	24	10	3
6228		BOUL	08 27	1335	S06 W12	08 26.7		B	DAO	190	11	10	1
6228		HOLL	08 27	1608	S08 W15	08 26.5		B	EAO	30	25	11	3
6228		PALE	08 27	1735	S08 W16	08 26.5		B	EAO	230	12	11	4
6228		LEAR	08 28	0035	S08 W19	08 26.6		B	EAO	130	16	12	3
6228		CULG	08 28	0145	S07 W22	08 26.4		B	CAO	190	14	9	3
6228		SVTO	08 28	0745	S08 W23	08 26.6		B	EAO	190	9	12	3
6228		RAMY	08 28	1210	S08 W25	08 26.6		B	EAO	280	13	11	3
6228		BOUL	08 28	1353	S06 W26	08 26.6		B	DAO	140	8	9	1
6228		HOLL	08 28	1630	S08 W28	08 26.6		B	DAO	160	18	10	3
6228		PALE	08 28	1746	S09 W26	08 26.8		B	EAO	140	8	10	3
6228		LEAR	08 29	0020	S08 W32	08 26.6		B	EKO	100	15	12	3
6228		SVTO	08 29	1042	S07 W39	08 26.5		B	DAO	200	14	10	2
6228		RAMY	08 29	1155	S08 W39	08 26.6		B	DAO	170	15	10	4
6228		HOLL	08 29	1440	S08 W40	08 26.6		B	EAO	120	15	11	4
6228		BOUL	08 29	1442	S06 W41	08 26.5		B	DAO	200	15	10	3
6228		PALE	08 29	1743	S08 W41	08 26.7		B	EAO	160	12	12	3
6228		LEAR	08 30	0015	S08 W45	08 26.6		B	DAO	150	10	8	3
6228		CULG	08 30	0200	S08 W46	08 26.6		B	DAO	140	9	9	1
6228		SVTO	08 30	0840	S08 W49	08 26.7		B	DAO	150	8	9	3
6228		RAMY	08 30	1245	S07 W51	08 26.7		B	DAO	1090	11	10	2
6228		BOUL	08 30	1445	S07 W52	08 26.7		B	DAO	140	7	10	3
6228		HOLL	08 30	1537	S08 W52	08 26.7		B	CAO	140	6	9	3
6228		PALE	08 30	1735	S08 W55	08 26.6		B	CSO	150	13	10	4
6228		LEAR	08 31	0045	S07 W57	08 26.8		B	CSO	130	7	9	2
6228		SVTO	08 31	0755	S07 W63	08 26.6		B	CAO	130	9	10	2
6228		RAMY	08 31	1228	S07 W66	08 26.6		B	CAO	180	10	9	3
6228		BOUL	08 31	1433	S07 W68	08 26.5		B	CAO	180	3	2	3
6228		HOLL	08 31	1540	S08 W70	08 26.4		A	HA	110	3	2	4
6228		PALE	08 31	1735	S09 W72	08 26.3		A	HA	110	3	3	4
6228		LEAR	09 01	0108	S07 W73	08 26.7		B	CAO	210	4	5	2

120
Aug 90

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

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Observation Time (UT)	Lat Mo Day	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6228		CULG 09 01 0310	S08 W73	08 26.7		A	HA	120	2	2	3
6228		SVTO 09 01 0635	S08 W80	08 26.4		A	HS	90	3	2	2
6228		RAMY 09 01 1352	S07 W79	08 26.8		A	HR	60	2	2	4
6228		HOLL 09 01 1510	S07 W85	08 26.4		A	AX	10	2	2	3
6230		PALE 08 20 2156	S28 E80	08 27.2		A	HA	80	2	2	3
6230		SVTO 08 21 0740	S27 E73	08 27.0		A	HK	210	2	3	3
6230		RAMY 08 21 1200	S28 E70	08 27.0		A	HK	290	4	3	3
6230		BOUL 08 21 1347	S27 E67	08 26.8		A	HS	120	2	3	1
6230		PALE 08 21 1705	S28 E70	08 27.2		B	CHO	330	3	4	3
6230		HOLL 08 21 2235	S28 E64	08 26.9		A	HK	300	2	3	2
6230		LEAR 08 22 0127	S28 E62	08 26.9		A	HA	210	2	2	2
6230		CULG 08 22 0145	S27 E63	08 27.0		A	HS	180	1	2	2
6230		SVTO 08 22 0900	S26 E60	08 27.0		A	HA	220	3	3	3
6230		RAMY 08 22 1200	S28 E60	08 27.2		A	HK	290	4	3	3
6230		BOUL 08 22 1613	S26 E54	08 26.9		A	HK	280	4	3	1
6230		PALE 08 22 1830	S27 E55	08 27.0		B	CHO	300	5	4	3
6230		HOLL 08 22 2230	S26 E53	08 27.0		B	CKO	290	7	6	2
6230		LEAR 08 23 0035	S27 E51	08 27.0		B	CHO	200	6	6	3
6230		RAMY 08 23 1325	S27 E43	08 26.9		B	CKO	320	5	4	1
6230		BOUL 08 23 1440	S26 E42	08 26.9		B	DKO	340	10	4	3
6230		HOLL 08 23 1608	S26 E43	08 27.0		B	CKO	340	8	7	3
6230		PALE 08 23 1800	S28 E42	08 27.0		B	CAO	260	5	5	3
6230		LEAR 08 24 0030	S27 E36	08 26.8		B	CKO	210	11	8	2
6230		CULG 08 24 0050	S28 E39	08 27.1		B	CKO	230	8	5	3
6230		SVTO 08 24 0739	S27 E36	08 27.1		B	DAI	200	4	3	3
6230		RAMY 08 24 1239	S28 E32	08 27.0		B	CKO	350	10	6	2
6230		HOLL 08 24 1445	S27 E22	08 26.3		BG	FKO	260	23	20	4
6230		BOUL 08 24 1505	S26 E22	08 26.3		B	FKO	320	24	19	3
6230		PALE 08 24 1940	S26 E21	08 26.4		B	DAO	260	8	5	2
6230		LEAR 08 25 0105	S27 E17	08 26.4		B	FKO	330	16	18	3
6230		SVTO 08 25 0745	S26 E18	08 26.7		BG	EAO	240	27	15	4
6230		RAMY 08 25 1322	S28 E11	08 26.4		B	FAO	340	30	20	3
6230		BOUL 08 25 1440	S25 E11	08 26.5		B	FAO	300	12	19	2
6230		HOLL 08 25 1630	S27 E10	08 26.5		B	FKO	300	13	19	3
6230		PALE 08 25 1750	S27 E10	08 26.5		B	FAO	290	16	19	3
6230		LEAR 08 26 0025	S27 E06	08 26.5		B	FKO	320	17	18	4
6230		CULG 08 26 0150	S28 E08	08 26.7		B	EKO	170	6	14	3
6230		SVTO 08 26 1020	S27 E05	08 26.8		B	EAO	260	14	16	3
6230		RAMY 08 26 1428	S27 E05	08 27.0		B	DKO	360	16	10	2
6230		HOLL 08 26 1740	S27 E00	08 26.7		B	FHO	340	25	16	4
6230		PALE 08 26 1830	S27 W02	08 26.6		B	FKO	250	13	16	2
6230		CULG 08 27 0220	S28 W08	08 26.5		B	EKO	240	4	13	3
6230		LEAR 08 27 0255	S26 W08	08 26.5		B	FKO	260	12	19	2
6230		SVTO 08 27 0850	S27 W08	08 26.7		B	EKO	240	7	15	3
6230		RAMY 08 27 1330	S26 W06	08 27.1		B	CKO	240	6	4	3
6230		BOUL 08 27 1335	S24 W14	08 26.5		B	FAI	120	8	16	1
6230		HOLL 08 27 1608	S27 W13	08 26.6		B	EAO	210	17	15	3
6230		PALE 08 27 1735	S28 W14	08 26.6		B	EAO	230	11	15	4
6230		LEAR 08 28 0035	S27 W18	08 26.6		B	EAO	140	14	18	3
6230		CULG 08 28 0145	S27 W20	08 26.5		B	EAO	160	5	14	3
6230		SVTO 08 28 0745	S27 W21	08 26.7		B	EAO	210	8	14	3
6230		RAMY 08 28 1210	S28 W17	08 27.2		B	CAO	190	8	5	3
6230		BOUL 08 28 1353	S24 W24	08 26.7		B	EAI	130	6	14	1
6230		HOLL 08 28 1630	S27 W26	08 26.7		B	CAO	250	12	15	3
6230		PALE 08 28 1746	S26 W28	08 26.6		B	EAO	130	3	14	3
6230		LEAR 08 29 0020	S26 W30	08 26.7		B	FKO	160	7	17	3
6230		SVTO 08 29 1042	S27 W35	08 26.7		B	EAO	210	8	15	2
6230		RAMY 08 29 1155	S25 W29	08 27.2		B	CAO	130	13	7	4
6230		HOLL 08 29 1440	S25 W29	08 27.4		B	CAO	120	7	9	4
6230		BOUL 08 29 1442	S25 W38	08 26.7		B	EAO	180	8	14	3
6230		PALE 08 29 1743	S27 W38	08 26.8		B	EAO	170	12	14	3
6230		LEAR 08 30 0015	S27 W37	08 27.1		B	DAO	110	7	4	3
6230		CULG 08 30 0200	S26 W42	08 26.8		A	EA	110	5	3	1
6230		SVTO 08 30 0840	S27 W42	08 27.1		B	DAO	150	6	7	3
6230		RAMY 08 30 1245	S27 W43	08 27.2		B	CAO	100	5	5	2
6230		BOUL 08 30 1445	S26 W45	08 27.1		B	DAO	160	7	6	3
6230		HOLL 08 30 1537	S27 W45	08 27.1		B	CAO	120	7	6	3
6230		PALE 08 30 1735	S27 W45	08 27.2		B	CAO	120	10	7	4

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

121
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time (UT)	Lat Mo Day	Cmd	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6230		LEAR	08 31 0045	S25	W48	08 27.3		B	CAO	110	5	6	2
6230		SVTO	08 31 0755	S27	W54	08 27.1		B	CAO	100	8	9	2
6230		RAMY	08 31 1228	S26	W57	08 27.1		B	CAO	120	7	8	3
6230		BOUL	08 31 1433	S26	W57	08 27.2		B	CAO	90	3	7	3
6230		HOLL	08 31 1540	S28	W58	08 27.1		B	CAO	90	3	7	4
6230		PALE	08 31 1735	S28	W61	08 27.0		B	CAO	80	6	7	4
6230		LEAR	09 01 0108	S26	W62	08 27.3		B	CSO	160	2	4	2
6230		CULG	09 01 0310	S27	W67	08 27.0		A	HS	60	1	2	3
6230		SVTO	09 01 0635	S27	W66	08 27.2		A	HA	60	2	2	2
6230		RAMY	09 01 1352	S26	W68	08 27.4		A	HR	40	1	2	4
6230		HOLL	09 01 1510	S27	W68	08 27.4		A	HS	30	1	2	3
6230		PALE	09 01 1747	S27	W68	08 27.5		A	AX	20	2	1	3
6230		LEAR	09 02 0014	S26	W72	08 27.5		A	AX	30	1	1	3
6230B		RAMY	08 30 1245	S18	W33	08 28.0		A	AX	10	3	2	2
6231		RAMY	08 21 1200	N12	E71	08 26.8		A	HA	30	2	2	3
6231		HOLL	08 21 2235	N11	E78	08 27.8		B	BXO	30	3	3	2
6231		LEAR	08 22 0127	N11	E71	08 27.4		A	AX	30	1	1	2
6231		SVTO	08 22 0900	N13	E72	08 27.8		A	AX	10	1		3
6231		RAMY	08 22 1200	N12	E71	08 27.8		A	HA	30	2	2	3
6231		PALE	08 22 1830	N12	E68	08 27.9		A	AX	10	1	1	3
6231		HOLL	08 22 2230	N13	E64	08 27.8		A	AX		2		2
6231		LEAR	08 23 0035	N13	E62	08 27.7		A	AX	20	1	1	3
6231		RAMY	08 23 1325	N12	E54	08 27.6		A	HR	10	1	1	1
6231		BOUL	08 23 1440	N13	E54	08 27.7		A	AX	10	1	1	3
6231		HOLL	08 23 1608	N13	E54	08 27.7		A	AX	10	1		3
6231		PALE	08 23 1800	N12	E53	08 27.7		A	AX	20	1	1	3
6231		CULG	08 24 0050	N13	E49	08 28.5		A	AX		2	1	3
6231		RAMY	08 24 1239	N13	E46	08 28.0		A	AX	10	1	1	2
6231		PALE	08 24 1940	N13	E42	08 28.0		B	BXO	20	6	4	2
6231		RAMY	08 25 1322	N15	E35	08 28.2		B	BXO	10	2	3	3
6231		PALE	08 25 1750	N14	E30	08 28.0		B	BXO		4	3	3
6231		LEAR	08 26 0025	N13	E26	08 28.0		B	BXO	30	5	4	4
6231		CULG	08 26 0150	N14	E27	08 28.1		A	AX	10	1	1	3
6231		RAMY	08 26 1428	N13	E19	08 28.0		B	BXO	20	7	6	2
6231		PALE	08 26 1830	N15	E16	08 28.0		B	BXO		3	4	2
6231		PALE	08 29 1743	N14	W21	08 28.1		B	BXO	20	6	8	3
6231		CULG	08 30 0200	N15	W29	08 27.9		B	BXO		3	4	1
6231		RAMY	08 30 1245	N13	W36	08 27.8		B	BXO	10	3	4	2
6231		PALE	08 30 1735	N13	W38	08 27.9		A	AX		2	1	4
6231		RAMY	08 31 1228	N13	W51	08 27.7		B	BXO	10	3	6	3
6231		LEAR	09 01 0108	N12	W64	08 27.3		A	AX	20	1	1	2
6230A		HOLL	08 29 1440	S11	W21	08 28.0		A	AX		3	2	4
6230A		BOUL	08 29 1442	S11	W19	08 28.2		A	AX		1		3
6231B		SVTO	08 31 0755	S11	W21	08 29.7		A	AX		1		2
6233		RAMY	08 23 1325	N13	E85	08 30.0		B	DAO	120	2	6	1
6233		BOUL	08 23 1440	N14	E82	08 29.8		B	DAO	120	3	3	3
6233		HOLL	08 23 1608	N14	E80	08 29.7		B	DAO	120	2	5	3
6233		PALE	08 23 1800	N13	E80	08 29.8		B	CSO	360	3	5	3
6233		LEAR	08 24 0030	N13	E75	08 29.7		B	DAO	150	6	7	2
6233		CULG	08 24 0050	N14	E77	08 29.8		B	DSO	180	2	5	3
6233		SVTO	08 24 0739	N14	E75	08 30.0		B	DSO	200	7	8	3
6233		RAMY	08 24 1239	N13	E71	08 29.9		B	DAO	310	9	8	2
6233		HOLL	08 24 1445	N14	E70	08 29.9		B	DSO	190	10	10	4
6233		BOUL	08 24 1505	N13	E70	08 29.9		B	DAO	360	7	4	3
6233		PALE	08 24 1940	N13	E68	08 29.9		B	DSO	350	10	9	2
6233		LEAR	08 25 0105	N13	E64	08 29.9		B	ESO	200	10	11	3
6233		SVTO	08 25 0745	N15	E61	08 29.9		B	EAO	400	22	12	4
6233		RAMY	08 25 1322	N13	E56	08 29.8		B	EAO	430	21	13	3
6233		BOUL	08 25 1440	N15	E54	08 29.7		B	ESI	360	20	14	2
6233		HOLL	08 25 1630	N14	E56	08 29.9		BG	ESI	410	28	14	3
6233		PALE	08 25 1750	N14	E55	08 29.9		B	EAO	310	20	13	3
6233		LEAR	08 26 0025	N14	E50	08 29.8		BGD	EHI	620	35	14	4
6233		CULG	08 26 0150	N13	E51	08 29.9		B	EAI	210	13	14	3
6233		SVTO	08 26 1020	N14	E46	08 29.9		BG	EAO	340	30	15	3

122
Aug 90

SUNSPOT GROUPS
(Ordered by Central Meridian Passage Date)

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	CHD	CMP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6233		RAMY	08 26 1428	N16	E44	08 29.9		BGD	FKI	560	47	16	2
6233		HOLL	08 26 1740	N15	E41	08 29.8		BGD	FKO	590	58	17	4
6233		PALE	08 26 1830	N14	E38	08 29.6		BGD	EKI	470	37	16	2
6233		CULG	08 27 0220	N13	E34	08 29.7		B	EKI	330	23	14	3
6233		LEAR	08 27 0255	N14	E34	08 29.7		BGD	EKI	640	37	15	2
6233		SVTO	08 27 0850	N15	E33	08 29.9		BGD	FKI	570	33	16	3
6233		RAMY	08 27 1330	N14	E32	08 30.0		BGD	FKI	720	60	20	3
6233		BOUL	08 27 1335	N16	E27	08 29.6		B	EKI	350	14	14	1
6233		HOLL	08 27 1608	N15	E28	08 29.8		BGD	FKI	700	61	18	3
6233		PALE	08 27 1735	N14	E26	08 29.7		BG	FKI	630	52	17	4
6233		LEAR	08 28 0035	N14	E23	08 29.8		BGD	FKI	380	50	18	3
6233		CULG	08 28 0145	N15	E20	08 29.6		BG	FKC	380	30	18	3
6233		SVTO	08 28 0745	N15	E18	08 29.7		BGD	FKI	570	44	18	3
6233		RAMY	08 28 1210	N12	E16	08 29.7		BGD	FKC	810	65	19	3
6233		BOUL	08 28 1353	N16	E16	08 29.8		B	EKI	480	32	16	1
6233		HOLL	08 28 1630	N14	E14	08 29.7		BGD	FKC	850	51	18	3
6233		PALE	08 28 1746	N15	E14	08 29.8		BGD	FKC	590	51	18	3
6233		LEAR	08 29 0020	N12	E10	08 29.8		BGD	FKC	510	50	18	3
6233		SVTO	08 29 1042	N14	E04	08 29.7		BGD	FKI	540	62	17	2
6233		RAMY	08 29 1155	N12	E03	08 29.7		BGD	FKC	600	94	20	4
6233		HOLL	08 29 1440	N12	E02	08 29.8		BGD	FKC	600	55	19	4
6233		BOUL	08 29 1442	N14	E03	08 29.8		B	FKC	530	50	17	3
6233		PALE	08 29 1743	N13	E00	08 29.7		BGD	FKC	670	51	16	3
6233		LEAR	08 30 0015	N13	W06	08 29.5		BGD	FKC	550	44	16	3
6233		CULG	08 30 0200	N13	W04	08 29.8		BGD	FKC	520	51	16	1
6233		SVTO	08 30 0840	N12	W09	08 29.7		BGD	FKC	590	53	16	3
6233		RAMY	08 30 1245	N13	W11	08 29.7		BGD	FKC	780	61	20	2
6233		BOUL	08 30 1445	N13	W11	08 29.8		B	FKC	640	60	20	3
6233		HOLL	08 30 1537	N13	W10	08 29.9		BGD	FKC	680	55	20	3
6233		PALE	08 30 1735	N12	W12	08 29.8		BGD	FKC	790	68	20	4
6233		LEAR	08 31 0045	N13	W19	08 29.6		BGD	EKC	570	28	12	2
6233		SVTO	08 31 0755	N13	W23	08 29.6		BGD	EKI	790	49	15	2
6233		RAMY	08 31 1228	N12	W23	08 29.8		BGD	FKI	790	40	18	3
6233		BOUL	08 31 1433	N14	W26	08 29.6		B	FKC	750	66	17	3
6233		HOLL	08 31 1540	N13	W28	08 29.5		BGD	EKC	810	40	15	4
6233		PALE	08 31 1735	N13	W29	08 29.5		BGD	EKC	690	53	15	4
6233		LEAR	09 01 0108	N13	W33	08 29.6		BGD	EKI	590	25	14	2
6233		CULG	09 01 0310	N13	W37	08 29.4		BG	EKO	500	20	13	3
6233		SVTO	09 01 0635	N13	W37	08 29.6		BGD	EKI	610	46	15	2
6233		RAMY	09 01 1352	N12	W39	08 29.7		BD	EKO	650	19	13	4
6233		HOLL	09 01 1510	N12	W41	08 29.6		BGD	EKC	730	29	14	3
6233		PALE	09 01 1747	N12	W40	08 29.8		BG	EKI	470	20	15	3
6233		LEAR	09 02 0014	N13	W46	08 29.6		BGD	EKI	520	19	14	3
6233		CULG	09 02 0225	N13	W49	08 29.5		BG	EKO	370	19	13	3
6233		SVTO	09 02 0736	N13	W50	08 29.6		BGD	EKI	630	24	14	2
6233		RAMY	09 02 1345	N12	W54	08 29.6		BGD	EKO	660	22	13	3
6233		BOUL	09 02 1430	N15	W52	08 29.8		BD	EKI	430	21	12	2
6233		HOLL	09 02 1553	N12	W55	08 29.6		BG	EKO	570	12	12	3
6233		PALE	09 02 1756	N12	W55	08 29.7		BGD	EKO	460	18	14	3
6233		LEAR	09 03 0006	N13	W59	08 29.6		BGD	EKI	520	27	13	3
6233		CULG	09 03 0110	N13	W62	08 29.5		BG	EAI	270	15	11	3
6233		SVTO	09 03 0640	N13	W62	08 29.7		BGD	EAI	450	27	13	2
6233		RAMY	09 03 1310	N14	W63	08 29.9		BGD	EKO	460	23	13	3
6233		BOUL	09 03 1343	N14	W64	08 29.8		B	EKI	410	22	12	1
6233		HOLL	09 03 1525	N13	W68	08 29.6		BGD	EAO	570	26	15	3
6233		PALE	09 03 1905	N13	W70	08 29.6		BG	EKO	290	19	10	3
6233		CULG	09 04 0015	N12	W72	08 29.7		BG	EKO	420	11	13	2
6233		SVTO	09 04 0915	N14	W77	08 29.7		BGD	EAO	360	20	15	3
6233		RAMY	09 04 1115	N13	W79	08 29.6		B	EAO	270	7	14	4
6233		BOUL	09 04 1348	N14	W75	08 30.0		B	EAO	200	4	11	1
6233		HOLL	09 04 1510	N14	W78	08 29.8		B	EAO	230	4	12	4
6233		PALE	09 04 1745	N14	W80	08 29.8		B	CAO	130	5	12	4
6233		LEAR	09 05 0115	N14	W84	08 29.8		B	CSO	80	3	6	3
6233		CULG	09 05 0125	N12	W85	08 29.7		A	HS	200	2	3	2
6233		SVTO	09 05 0745	N14	W88	08 29.8		A	HA	40	1	3	3
6233A		PALE	08 29 1743	S19	E01	08 29.8		A	AX	10	3	2	3
6233A		LEAR	08 30 0015	S18	W03	08 29.8		A	AX	10	1	1	3
6233A		CULG	08 30 0200	S19	W03	08 29.8		A	AX		1		1

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

123
Aug 90

AUGUST 1990

NOAA/ USAF Group	Mt Wilson Group	Sta	Observation Time Mo Day (UT)	Lat	ChD	ChP Mo Day	Max H	Mag Class	Spot Class	Corrected Area (10-6 Hemi)	Spot Count	Long. Extent (Deg)	Qual
6233B		RAMY	08 31 1228	S11	W22	08 29.9		A	AX	10	1	1	3
6233C		CULG	08 30 0200	N28	E00	08 30.1		A	AX		1		1
6240		CULG	08 27 0220	N18	E42	08 30.3		A	AX		2	1	3
6240		CULG	08 28 0145	N19	E28	08 30.2		A	AX		1		3
6240		SVTO	08 29 1042	N17	E13	08 30.4		A	AX	10	2	1	2
6240		HOLL	08 29 1440	N16	E12	08 30.5		B	BXO	10	5	5	4
6240		BOUL	08 29 1442	N18	E13	08 30.6		B	BXO	10	5	6	3
6240		PALE	08 29 1743	N16	E12	08 30.6		B	BXO	10	7	7	3
6240		LEAR	08 30 0015	N16	E05	08 30.4		A	AX	10	3	2	3
6240		CULG	08 30 0200	N16	E06	08 30.5		B	BXO		5	4	1
6240		SVTO	08 30 0840	N16	E02	08 30.5		B	BXO	10	3	3	3
6240		SVTO	08 31 0755	N13	W10	08 30.6		A	AX	10	2	1	2
6240		RAMY	08 31 1228	N13	W12	08 30.6		B	BXO	10	6	4	3
6240		BOUL	08 31 1433	N14	W14	08 30.5		B	BXO	10	2	1	3
6240		HOLL	08 31 1540	N13	W15	08 30.5		B	BXO	10	5	4	4
6240		PALE	08 31 1735	N14	W18	08 30.4		B	BXO	10	4	4	4
6240		SVTO	09 01 0635	N14	W27	08 30.3		A	AX	10	2	1	2
6240		PALE	09 01 1747	N16	W34	08 30.3		A	AX	10	4	2	3
6240B		RAMY	08 30 1245	N05	E04	08 30.8		B	BXO	10	3	3	2
6240B		PALE	08 30 1735	N05	E04	08 31.0		A	AX		1		4

Stations reporting:

BOUL = Boulder
CULG = Culgoora

HOLL = Holloman
LEAR = Learmonth

MWIL = Mt. Wilson
PALE = Palehua

RAMY = Ramey
SVTO = San Vito

SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 1990

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
01	0103	0110	0125	1-	1			1			0052	C1.8	
01	0206	0212	0222	1-	1			1			0203	C1.5	
01	0639	0644	0659	1-	1			1			No flare		
01	0908	0918	0922	1-	1		1				No flare		
01	0925	0936	1026	2+	5	4	4	1	1	3	0923	C7.0	
01	1956	2006	2045	1	5	1		1		6	1936	M1.6	6172
01	2124	2137	2252	1-	5	1		1		2	2120	C8.3	6172
02	0050	0054	0102	1-	1			1			No flare		
02	0104	0108	0134	1-	1			1			0104	C2.8	
02	0235	0303	0325D	1-	1			1			No flare		
02	0325E	0332	0356	1-	1			1			No flare		
02	0528	0622	0713D	2-	5		1	1	1	1	0616	C7.4	
02	0713E	0730	0844	2-	5			1	1	1	No flare		
02	1007	1012	1050	1-	3			1	1	1	1006	C4.2	6172
02	1028	1056	1100	1+	1		1				No flare		
02	1248	1350U	1458	1+	1		2				1244		6172
02	1509	1515	1527	1-	3					3	1510	C2.3	6186
02	1530	1535	1552	1	3					2	1533		6171
02	1628	1631	1645	1-	3					4	1629	C2.9	6172
03	0232	0238	0308	1-	1			1			0231	C1.7	
03	0358	0401	0412	1-	1			1			0354	C1.1	
03	0503	0507	0516	1-	1			1			*		
03	0631E	0711	0725	2-	1		1				0628	C1.3	
03	0733	0740	0746	1-	1			1			*		
03	0859	0939	0951	1	1		2				*		
03	1027	1031	1045	1-	3		1		1	1	1026	C2.7	
03	1103	1122	1221	1+	3		1			1	No flare		
03	1133	1142	1220	1	3	1			1		1132	C2.0	6172
03	1317	1323	1323D	1-	5	1	2		1	4	1318E	C2.6	
03	1338	1345	1410	1-	1		1		1		1330		
03	1446	1455	1520	1-	5	1	1		1	6	1443	C4.5	6172
03	1647	1650	1656	1-	3					2	1647		6172
04	0339	0347	0411	1-	1			1			0340	C2.5	6172
04	0542	0546	0602	1-	1			1			No flare		
04	0648	0654	0732	1	5	2	1	1	1	5	0648	C4.9	6172
04	0957	1002	1030	1-	3		1		1	1	0954	C2.3	
04	1116	1134	1200	1	3		2				No flare		
04	1203	1224	1248	1	3		2				1154	C1.5	6186
04	1408	1416	1611	1	1		1				1421		6186
05	1436	1451U	1505	1	1		1				No flare		
05	1928	1935	2019	2-	3					2	1928	C5.1	6172
05	1947	1954	2033	2+	1					1	No flare		
06	0900	0915	0951	1-	5	1	3	1	1	1	0850	C5.1	6188
07	0001	0006	0022	1-	1			1			0001E	C2.4	
07	1030	1033	1100	1	3		2				No flare		
07	1141	1145	1207	1	1		1				1133	C1.2	
07	1208	1224	1236	1	3		2				No flare		
08	0434	0445	0509	1-	1			1			0433	C1.7	6192
08	0628	0633	0641	1-	1		1				0621	C1.3	
08	0905	0948	1033	1+	3		2				No flare		
08	1155	1234	1310	1	3		2				*		
08	1336	1404	1500	3	5	4	4		1	9	1334	M1.9	6197
08	1807	1809	1840	2	3					3	1801	C2.4	6197
08	2228	2235	2304	1-	5			1		1	2229	C3.6	
08	2340	2350	2503	2	5	2		1		4	2342	C9.6	6197
09	0538	0608	0642	1-	1			1			0545	C1.6	
09	0720	0730	0804	1-	1		1				*		
09	0741	0751	0812	1-	5			1	1	2	0746E	C3.5	6197
09	1525	1530	1537	1-	1					1	1525	C1.8	6197
09	2034	2046	2118	1-	5			1		8	2031	C3.8	6197

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

125
Aug 90

AUGUST 1990

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
10	0712	0719	0830	1-	5			1		1	No flare		
10	1813	1825	1900	1+	5	3	3		1	7	1809	M7.9	6203
10	2311	2340	2415	1-	1			1			2318	C3.7	6188
11	1426	1439	1528	1	3		2				No flare		
11	1556	1602	1637	1	3		2				No flare		
12	2103	2108	2200	2+	1					1	2101		6199
13	0031	0044	0050D	1-	5			1		1	0034	C3.5	6199
13	0050E	0106	0143	1-	1			1			0048	C3.5	6199
13	0410	0439	0548	1-	1			1			0424	C3.4	6203
13	0921	0930	1028	2+	5	3	3	1	1	4	0921	M1.0	6199
13	1258	1312	1325	1	1		1				1313	M1.4	6197
13	1316	1336	1450	2	5	4	1		1	5	1313	M1.4	6197
13	1537	1557	1654	1	1		1				No flare		
13	2226	2233	2319	1	5	2		1		3	2226	C8.5	6203
14	0907	0921	0951	1-	5	1	1	1	1	1	0907	C3.3	6199
14	1949	1957	2024	2	1					1	1945	C1.8	6203
15	0132	0145	0200	1-	1			1			0137	C1.5	6195
15	1549	1603	1630	1-	5		1		1	6	1545	C4.9	6213
15	1943	1945	2015	1+	3					5	1941	C5.5	6206
15	2256	2311	2338	1-	5			1		1	2257E		6206
16	0143	0148	0230	1-	1			1			0146	C2.4	6206
16	0400	0408	0427	1-	1			1			0404	C2.2	6206
16	0725	0731	0748	1-	5		1	1			0722	C2.0	
17	0848	0902	0932	1-	1		1				No flare		
17	1043	1059U	1234	1	1		1				No flare		
17	1254	1415	1430	1	1		1				No flare		
17	1500	1522	1633	1	3		2				No flare		
17	1655	1705	1740	1-	5	1	1		1	5	1705E	C7.8	
17	1852	1859	1901	1-	1					1	1852	C2.2	6214
17	1915	1928	1940	1	1					1	1914		6206
17	2138	2151	2232	1-	5			1		3	2140	C4.0	6214
17	2250	2304	2337D	2	5	1		1		4	2243	C9.1	6216
17	2337E	2346	2512	2-	5	2		1		2	2331	M1.1	6216
18	0511	0527	0723	2	5	1		1		1	0517	C5.6	
18	0847	0856	0911D	1	5		2	1	1	4	0847	C6.2	
18	0911E	0919	1007	1	5		1	1	1	4	No flare		
18	2306	2310	2326	1-	1			1			2306E	C3.2	
19	0005	0007	0023	1-	1					1	0005		6221
19	0148	0204	0326	1	1			1			0150	C5.5	6226
19	0524	0530	0541	1-	1			1			No flare		
19	1011	1016	1055	1-	1				1		No flare		
19	1104	1127	1200	1-	1				1	1	1056E	C2.9	6226
19	1717	1719	1736	1	1					1	1717		6216
19	2336	2401	2454	1-	1			1			*		
20	0139	0150	0205	1-	1			1			0136		6225
20	0950	0958	1016	1	3		2				No flare		
20	1032	1035	1101	1	3		2			1	No flare		
20	1119	1125	1154	1-	5	2	2	1	1	3	1115E	C7.5	6226
21	0109	0119	0135	1-	1			1			No flare		
21	0323	0331	0351	1-	1			1			0324	C2.9	
21	0405	0431	0509D	2	3	1		1			0430	C9.5	6226
21	0509E	0526	0730	2+	3	1		1			0515		6223
21	0929	0934	1048	1+	5	2	2	1	1	2	0929		6223
21	1603	1607	1630	1-	5	1	1		1	5	1558	C9.1	6226
22	0140	0146	0241	1-	1			1			0138E	C5.6	
22	0408E	0415	0454D	1	1			1			0401	C5.7	6223

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 1990

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
22	0454E	0501	0528D	1	1			1			0456	C5.3	6223
22	0528E	0532	0639	1-	1			1			No flare		
22	0750	0801	0844	1	5		1	1	1	2	0755	C6.1	6226
22	0902	0910	0915	1-	5		1	1	1	1	0905	C3.4	6226
22	0940	0944	1000	1-	3	1			1		0940E	C3.7	
22	1002	1012	1023	1	1		1				*		
22	1619	1626	1640	1-	5				1	3	1620	C6.0	6223
22	1655	1702	1710	1-	5				1	4	1652	C6.4	
22	2159	2212	2227	1-	5	1		1		1	2154	C5.3	6226
23	0125	0135	0239	1	3	1		1			0126	C8.8	6216
23	0505	0509	0544	1-	1			1			0501		6230
23	0732	0748	0855D	1-	5		1	1	1	1	0741E	C3.9	6223
23	0855E	0913	0955	2-	5	1		1	1	3	0856	C6.2	
23	1126	1133	1156	1-	5	1		1	1	3	1125	C6.5	
23	2037	2040	2112	2-	3					4	2037	C7.4	6223
23	2148	2206	2240	1-	1			1			2203	C7.9	6226
23	2246	2306	2320	1-	5	1		1			2245		6223
24	0207E	0219	0244	1-	1			1			No flare		
24	0311	0324	0352D	1-	1			1			0309	C5.2	6230
24	0352E	0420	0434D	1-	1			1			No flare		
24	0437E	0446	0532	1-	5			1		1	0437	C6.6	6214
24	0851	0924	1108	2+	5	2	2	1	1	3	0830	M1.6	6223
24	1145	1200	1220	1+	3	1	1		1	2	1137	C8.8	
24	1342	1431	1530	1	3		2				1415	C4.4	6223
24	2355	2406	2510	2	5	2		1			2351E	M1.5	6230
25	0240	0257	0357	1-	1			1			0242	C4.6	6233
25	0713	0719	0731	1-	1					1	0709		6235
25	0830	0836	0842	1-	1		1				No flare		
25	1551	1555	1604	1-	1					1	1553	C3.1	6226
25	1830	1836	1845	1-	1					1	1831	C3.2	6226
25	2006	2017	2100	1-	5			1		4	1958	C6.0	6227
25	2150	2230	2330	1-	1			1			2148	C4.0	6228
26	0210	0226	0314	1	3	1		1			0212	C5.5	6235
26	0324	0338	0356D	1-	1			1			0326	C3.8	
26	0356E	0406	0455	1-	1			1			0353	C5.9	6226
26	0732	0743	0839D	2-	5	1	3	1	1	5	0728	C6.7	6223
26	0752	0820	0846	1	3		2			1	No flare		
26	0839E	0912	1012	2	5	3	1	1	1	3	0844	C5.9	6226
26	1140	1157	1236	3	3	1	2				1120	C2.8	6223
26	1351	1358	1500	1+	5	2	1		1	7	1347	M1.0	6223
26	1539	1554	1554D	2	5	2	3		1	9	1541	C8.3	6233
26	1615	1630	1800	2	3	2	1		1	1	1605	M5.2	6227
26	1815	1816	1829	1-	1					1	1816E		6223
26	2216	2248	2355	1-	5	1		1			2217	C5.6	6233
27	0002	0022	0043	1-	1			1			0008		6233
27	0348	0401	0530	3	3	1		1			0350	M1.8	6226
27	0710	0719	0800	1-	1			1			0700		6235
27	1030	1033	1108	1-	5		1	1	1	2	1028	C3.5	6233
27	1401	1404	1427	1	3		2				1401		6233
27	1458	1507	1539	1	3		2				1503E		6233
27	1550	1618	1700	1-	5		3		1	3	1549		6233
27	1713	1727	1757	1-	1			1			No flare		
27	1821	1831	1900	2	3					3	1822		6233
27	1906	1928	2039	2	5	1		1		5	1905	M2.1	6233
27	2056	2112	2236	3	5	3		1		5	2037	X3.0	6233
27	2335	2343	2357	1-	1			1			2332		6233
28	0237	0250	0320	1-	3	1		1			No flare		
28	0337	0350	0421D	2	3	1		1			0338	C9.5	6233
28	0421E	0425	0500D	1-	1			1			0421	C6.5	6233
28	0500E	0515	0542D	1-	1			1			No flare		
28	0541E	0549	0614	1-	1			1			0549		6233
28	0632	0648U	0700	2	1		1				No flare		

* = no flare patrol.

SUDDEN IONOSPHERIC DISTURBANCES

AUGUST 1990

Day	Start (UT)	Max (UT)	End (UT)	Imp	Wide Spread Index	Number of Station Reports by Type					Flare (UT)	X-ray Class	NOAA Region
						SWF	SEA	SPA	LF-SPA	SES			
28	0753	0758	0810	1-	1				1		No flare		
28	0816	0828	0856D	1-	1			1			0817		6233
28	0856E	0913	1010D	3	5	4	3	1	1	5	0849	M4.5	6233
28	1010E	1020	1136	2	5	4	4	1	1	6	1013	M1.3	6233
28	1138	1143	1150	1-	1				1		1137		6233
28	1249	1255	1354	1-	5	4	4	1	1	9	1241	M4.9	6233
28	1457	1500	1512	1-	1					1	1451		6233
28	1630	1633	1647	1-	3					5	1624	C5.2	6226
28	1709	1713	1730	1	1					1	1709	C4.3	6226
28	1818	1834	1930D	1-	5			1		5	1820E	M1.8	6233
28	2057	2116	2208	1+	1	1					2052	M1.8	6233
28	2147	2203	2231D	1-	1			1			2144		6233
28	2229E	2242	2401	2	5	2		1		1	No flare		
29	0053	0100	0207	1	1			1			0053	C7.4	
29	0413	0418	0425D	1-	1			1			0413	C4.5	
29	0425E	0433	0541	3-	5	2		1		3	0429	M1.5	6226
29	0702	0723	0808D	3-	5	3	2	1	1	5	0705	C9.4	6233
29	0808E	0820	0947	3-	5	3	3	1	1	4	0807	M1.3	6233
29	0842	0852	0900	1	1		1				No flare		
29	1152	1158	1300	1	1		1		1	1	1155	C3.7	6226
29	1232	1236U	1328	1	1		1				No flare		
29	1318	1322	1340	1-	5				1	4	1320	C2.7	6223
29	1343	1346	1403	1	1					1	1343		6228
29	1457	1503	1530	1-	5				1	7	1456	C4.0	6223
29	2036	2043	2239	1	5	1		1		6	2036	M1.6	6233
30	0003	0112	0155D	2	5	2		1			0109		6233
30	0155E	0201	0212D	2-	1			1			0157	M1.2	6233
30	0212E	0217	0301D	2-	1			1			No flare		
30	0301E	0305	0345D	1-	1			1			0303		6223
30	0345E	0353	0421D	1-	1			1			No flare		
30	0419E	0441	0612D	2	1			1			0422	M1.0	6233
30	0612E	0622	0709	1-	3		1	1			0612	C1.0	6233
30	0715	0717	0725	1-	1					1	0714	C3.1	
30	0836	0844U	0900	1	1		1				No flare		
30	1020	1025	1120	1	1					1	1023E	C2.6	6233
30	1257	1320	1400	3	5	4	2		1	10	1308E	M2.5	6233
30	2209	2227	2252	1-	1			1			2208		6233
31	0232	0248	0310	1-	1			1			0233	C2.2	
31	0406	0415	0509D	2+	5	1		1		3	0408	M1.0	6226
31	0509E	0515	0536D	1-	1			1			0509	C3.6	6233
31	0536E	0540	0637	1-	1			1			0525	C2.3	
31	1017	1038U	1113	2	1		1				1044E	C2.0	6242
31	1115	1142	1234	2	1		1				No flare		
31	1425	1430	1500	1-	1		1		1		1438	C1.7	6226
31	1622	1630	1710	2+	3					5	1613	C5.7	6233

* = no flare patrol.

OBSERVATORIES REPORTING FOR AUGUST 1990

Athens, Georgia, USA	SES	LaCrescenta, California, USA	SES
Boksborg, Rep of S. Africa	SES	Latrobe, Pennsylvania, USA	SES
Cleveland, Ohio, USA	SES	Locust Grove, Georgia, USA	SES
Darmstadt, German Fed Rep	SWF	Madison, Wisconsin, USA	SES
Edenvale, Rep of S. Africa	SES	Manahawkin, New Jersey, USA	SES
Farsta, Sweden	SES	Maui, Hawaii, USA	SWF
Hiraiso, Japan	SWF	Nerja, Spain	SES
Houston, Texas, USA	SES	Panska Ves, Czechoslovakia	SES, SEA, SWF
Hudson, Ohio, USA	SES	San Francisco, California, USA	SES
Inubo, Japan	SPA	Shaker Heights, Ohio, USA	SES
Johannesburg, Rep of S. Africa	SES	Sofia, Bulgaria	SES
Juliusruh, German Dem Rep	SWF	Sunnyvale, California, USA	SES
Kandilli, Turkey	SEA	Upice, Czechoslovakia	SEA
Kuhlungsborn, German Dem Rep	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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
01				0034.0	0035.0	1				III
				0034.0	0035.0	1				III
0512 1309										
				0517.0	0517.0	2				III
0536 1623										
				0629.0	0629.0	1				III
0631 1451				0714.6	0716.0	1				III G,U
				0719.6	0719.7	1				III B
				0726.9	0727.0	2				III G,U
				0728.8	0731.0	1				III G,U
				0800.0	0905.0	2				I,S,DC
				0817.0	0817.0	1				III
				0817.1	0817.5	2				III G
0441 1833				0817.3	0817.6	1				III G
				0920.7	0924.4	1				III GG
				0920.8	0920.9	1				III B
				0927.2	1107.7	2				I,S,C,DC
				0942.4	0942.5	2				III B
				0950.2	0950.3	1				III B
				1148.4	1149.1	3				III G
				1148.5	1148.7	2				III G
				1338.2	1338.4	1				U
				1942.0	1943.0	1				III
				2356.0	2356.0	1				III
02				0525.0	0526.0	2				III
				0525.0	0526.0	2				III
0441 0944				0525.3	0526.1	3				III GG,RS
0611 1621										
0750 1755										
0639 0814				0806.5	0912.4	1				I,W
0837 1136				0907.4	0907.9	2				III G
				0914.4	0918.0	1				III GG,U
0951 1830										
				1011.6	1014.5	1				III GG
1146 1505				1017.0	1505.0	2				I,S,DC
				1217.0	1217.0	1				III
				1328.4	1328.5	1				III B
				1818.0	1818.0	1				III
03				0556.0	0557.0	1				III
				0557.0	0557.0	1				III
0619 1507				1111.7	1112.2	2				III B,U
0444 1830				1111.8	1112.2	1				III G
				1157.0	1157.0	1				III
				1157.2	1157.2	1				UNCLF
				1240.0	1241.0	2				III
				1240.3	1241.6	3				III G,U
				1240.5	1241.6	2				III G,U
				1251.4	1309.7	3				III G,U
0515 1755				1251.4	1251.7	2				CONT U
0608 1621				1251.4	1251.8	3				III G
				1251.4	1251.6	3				III G,RS
				1254.9	1255.8	2				III G,U
				1254.9	1255.3	2				III G,U
				1255.0	1302.0	1				III
				1301.6	1302.1	1				III G
				1301.8	1301.9	1				III B
				1309.4	1309.8	2				III G
				1434.9	1436.1	3				III G
				1435.0	1436.3	2				III G,U
				1435.0	1436.0	2				III
				1435.0	1436.0	2				III
				1445.0	1446.0	2				III
				2140.0	2140.0	1				III
				2140.0	2140.0	1				III
				2226.0	2226.0	1				III
				2320.0	2320.0	1				III

130
Aug 90

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

AUGUST 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
06	0651	1621	ONDR											
	0627	1511	POTS				0835.1	0836.6	2				IIIG	
			POTS				1414.5	1414.6	1				UNCLF	
07	0448	1313	WEIS											
	0518	1750	BLEN											
	0604	1621	ONDR											
	0627	1439	POTS				0818.0	0818.3	1				UNCLF	
			POTS				0858.8	0900.0	1				I,W	
			POTS				1200.5	1300.0	1				I,S,DC	
	1319	1825	WEIS											
			POTS				1326.3	1329.0	1				I,W	
			SGMR				1500.0	1500.0	1				III	
			SGMR				1708.0	1708.0	1				III	
08			LEAR				0221.0	0224.0	2				III	
			PALE				0221.0	0224.0	2				III	
			LEAR				0247.0	0257.0	1				S	
			LEAR				0312.0	0323.0	1				S	
			LEAR				0346.0	0515.0	1				CONT	
	0448	1227	WEIS											
	0520	0705	BLEN											
	1025	1745	BLEN											
	0536	1623	ONDR				1101.0	1214.0	1				I,N,DC	
	1256	1822	WEIS											
	0635	1509	POTS				1343.0	1346.0	1				I,W	
			SGMR				1715.0	1716.0	1				V	
	09			LEAR				0334.0	0334.0	1				III
		0451	0916	WEIS										
		0520	1745	BLEN										
0536		1623	ONDR											
			LEAR				0625.0	0626.0	1				III	
0629		1511	POTS				0638.7	0641.0	1				I,W	
			POTS				0732.6	0736.0	1				I,W	
			POTS				0750.0	0751.0	1				I,W	
			POTS				0756.7	0756.9	1				IIIB,U	
			POTS				0853.5	0854.5	1				IIIG	
			POTS				0858.7	1021.0	1				I,N,C,DC	
			POTS				0934.5	0936.3	2				IIIG	
			POTS				0949.3	0953.7	1				IIIG	
			POTS				1024.5	1024.6	1				IIIB	
			POTS				1054.3	1055.9	2				IIIG	
			POTS				1120.7	1120.9	2				IIIB,U	
			POTS				1239.9	1243.5	3				IIIGG	
0625		1822	WEIS				1241.9	1242.3	3				IIIG	
		POTS				1300.7	1300.9	1				UNCLF		
		POTS				1312.5	1313.5	3				IIIG		
		POTS				1319.3	1327.5	1				IIIGG,U,RS		
		POTS				1329.3	1441.0	2				IIIGG,U,N,C,DC		
		SGMR				1920.0	1920.0	1				III		
		SGMR				1938.0	1940.0	1				III		
10			PALE				0031.0	0032.0	1				III	
			LEAR				0032.0	0032.0	1				III	
			LEAR				0156.0	0156.0	1				III	
			LEAR				0310.0	0310.0	1				III	
	0522	1745	BLEN											
	0605	1621	ONDR											
	0617	1505	POTS				0626.6	0627.0	1				I	
			POTS				0654.4	0655.1	1				I	
			POTS				0716.4	0720.2	2				IIIGG	
			LEAR				0718.0	0719.0	2				III	
			SVTO				0718.0	0719.0	2				III	
	0450	1820	WEIS				0718.2	0719.3	2				IIIG	
			LEAR				0814.0	0818.0	2				III	
			SVTO				0814.0	0818.0	2				III	
		POTS				0814.4	0818.3	1				IIIG		
		WEIS				0814.4	0814.6	2				IIIB		

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

131
Aug 90

AUGUST 1990

Observation Start End Day (UT) (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
10	WEIS				0815.8	0818.3	3				IIIGG
	POTS				0847.8	0848.3	2				IIIG,U
	SVTO				0848.0	0849.0	2				III
	WEIS				0848.3	0848.9	1				IIIB
	POTS				0854.8	0858.3	1				I
	POTS				0930.5	0933.0	1				I,W
	POTS				0937.9	0939.9	1				IIIG
	WEIS				0937.9	0938.2	3				IIIB
	SVTO				0938.0	0938.0	2				III
	WEIS				1023.2	1024.9	2				IIIG
	POTS				1024.5	1025.9	2				IIIG
	POTS				1032.3	1034.0	2				I
	POTS				1202.2	1203.0	1				IIIG
	POTS				1303.0	1303.1	1				IIIB
	SGMR				1303.0	1303.0	1				III
	POTS				1334.0	1334.5	1				IIIG
	POTS				1353.5	1407.0	1				I,DC
	SGMR				1416.0	1416.0	1				III
	WEIS				1416.7	1416.9	1				IIIB
	SGMR				1448.0	1449.0	1				III
	POTS				1448.8	1449.3	1				IIIG
	WEIS				1448.9	1449.4	1				IIIG
	SVTO				1449.0	1449.0	2				III
	SGMR				1525.0	1526.0	1				III
	SVTO				1525.0	1526.0	2				III
	PALE				1806.0	1815.0	2				V
	SGMR				1806.0	1912.0	3				IV
	WEIS				1806.7	1814.7	2				IIIG
	PALE				1815.0	1849.0	3				IV
	WEIS				1815.9	1820.3U	3				II H
PALE				1915.0	1916.0	1				III	
SGMR				1915.0	1916.0	1				III	
PALE				2012.0	2012.0	1				III	
SGMR				2012.0	2012.0	1				III	
PALE				2208.0	2209.0	2				III	
SGMR				2208.0	2209.0	2				III	
11	LEAR				0259.0	0300.0	1				III
	PALE				0259.0	0259.0	1				III
	0525 1740	BLEN									
	0629 1451	POTS			0629.0E	1423.4	2				I,S,C,DP,DC
		LEAR			0749.0	0750.0	1				III
		SVTO			0749.0	0749.0	1				III
	0456 1533	WEIS			0749.7	0749.9	1				IIIB
		SVTO			0811.0	0813.0	1				III
		POTS			0811.8	0812.4	1				IIIG,U
		WEIS			0811.9	0812.1	2				U
		POTS			1010.0	1012.7	1				IIIG
		SVTO			1012.0	1012.0	2				III
		WEIS			1012.4	1012.7	3				IIIG
		WEIS			1141.7	1141.8	1				IIIB
		POTS			1142.1	1144.7	1				IIIG
		POTS			1207.3	1207.4	1				IIIB
		POTS			1252.3	1254.0	1				IIIG
		SGMR			1452.0	1453.0	1				III
		SVTO			1452.0	1452.0	1				III
		WEIS			1452.2	1452.3	1				IIIB
	0535 1621	ONDR			1509.3	1509.4	1				DP
	1539 1818	WEIS									
	PALE			2004.0	2005.0	1				III	
	SGMR			2004.0	2005.0	1				III	
	SGMR			2108.0	2109.0	1				III	
12	LEAR				0117.0	0118.0	2				III
	PALE				0117.0	0117.0	1				III
	LEAR				0457.0	0458.0	1				III
	0525 1740	BLEN									
	0709 1403	POTS			0843.5	0843.6	1				IIIB
		POTS			0907.6	0943.0	1				I,W

132
Aug 90

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

AUGUST 1990

Observation Day (UT)	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
12			POTS				0952.4	0952.5	1				IIIB
			POTS				1040.3	1040.4	1				IIIG
			POTS				1119.0	1119.1	2				IIIG
	1215	1623	ONDR										
			POTS				1223.7	1223.9	1				U
			SGMR				1225.0	1226.0	1				III
			POTS				1226.2	1226.3	1				IIIB
			POTS				1300.5	1339.0	2				I,N,DC
			SGMR				1322.0	1323.0	1				V
			SVTO				1322.0	1323.0	2				III
			POTS				1322.4	1324.8	2				IIIGG
	0453	1815	WEIS				1322.7	1323.3	2				U
	1421	1457	POTS				1428.5	1432.0	2				IIIGG,C,U
			SGMR				1549.0	1559.0	1				V
			SVTO				1549.0	1559.0	2				V
			WEIS				1550.6	1551.5	3				IIIG
			WEIS				1558.8	1601.8	1				I
			SGMR				1626.0	1626.0	1				III
			SGMR				1655.0	1655.0	1				III
			WEIS				1655.4	1655.5	1				IIIG
		SGMR				1724.0	1724.0	1				III	
		PALE				1755.0	1755.0	1				III	
		SGMR				1755.0	1755.0	1				III	
		WEIS				1755.2	1755.4	2				IIIG	
		PALE				1824.0	1824.0	1				III	
		SGMR				1824.0	1824.0	1				III	
		SGMR				1901.0	1901.0	1				III	
		SGMR				1901.0	1902.0	1				III	
		LEAR				2329.0	2333.0	1				III	
		PALE				2329.0	2333.0	1				III	
13			LEAR				0003.0	0003.0	1				III
			PALE				0003.0	0003.0	1				III
			LEAR				0254.0	0255.0	2				III
			PALE				0254.0	0300.0	2				III
			LEAR				0257.0	0304.0	3				V
			LEAR				0329.0	0331.0	1				III
			LEAR				0402.0	0403.0	2				III
			PALE				0402.0	0402.0	1				III
			LEAR				0520.0	0528.0	1				III
	0527	1735	BLEN										
			LEAR				0633.0	0638.0	3				V
	0456	1815	WEIS				0633.5	0638.5	3				IIIG,U/V
	0625	1447	POTS				0633.8	0638.7	2				IIIGG,V,C
			SVTO				0634.0	0640.0	3				V
			POTS				0639.2	0912.0	1				I,N,DC
			WEIS				0645.2	0645.3	1				IIIB
	0535	1623	ONDR	0728.5	0729.1	1							I
			POTS				0831.2	0831.7	1				IIIG
			WEIS				0831.4	0831.7	2				IIIG
			WEIS				0837.1	0837.5	2				IIIG
		POTS				0837.3	0837.5	2				IIIG	
		POTS				0900.7	0900.8	1				IIIB	
		WEIS				0945.8	0945.9	2				IIIB	
		POTS				0958.2	0958.4	1				IIIG	
		POTS				1006.7	1009.0	1				IIIG,W	
		POTS				1033.5	1034.5	1				I,W	
		POTS				1047.1	1047.3	1				IIIB	
		POTS				1054.0	1121.7	1				I,DC	
		POTS				1142.7	1142.9	1				I,W	
		POTS				1204.7	1204.9	1				I,W	
		POTS				1244.9	1301.0	1				I,N,C,DC	
		POTS				1308.4	1443.0U	2				I,C,DC,DP	
		SGMR				1309.0	1309.0	1				III	
		POTS				1309.2	1309.6	1				IIIG	
		POTS				1410.4	1410.5	1				IIIB	
		SGMR				1649.0	1652.0	1				III	
14			LEAR				0234.0	0237.0	2				V

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

133
Aug 90

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
14				0234.0	0237.0	2				V
				0908.0	0909.0	2				III
0527 1135	BLEN	0908.6	0909.2	1	0908.6	0909.2	1			III
0604 1621	ONDR	0908.6	0909.1	1	1229.8	1230.1	1			IIIB
0631 1507	POTS				0908.6	0909.9	3			IIIGG
0455 1140	WEIS				0908.6	0909.5	3			IIIG
	POTS				0925.9	0926.0	1			IIIB
	POTS				1024.7	1031.2	1			I,W
	POTS				1103.2	1103.3	2			IIIB
	POTS				1112.3	1113.1	1			IIIG
	POTS				1115.7	1118.4	3			IIIGG
	ONDR				1229.8	1230.1	1			IIIG
	POTS				1229.8	1230.1	3			IIIG
1203 1812	WEIS				1229.9	1230.2	1			IIIG
	SGMR				1230.0	1230.0	1			III
	SVTO				1230.0	1230.0	2			III
	POTS				1328.4	1328.5	1			IIIB
	SGMR				1701.0	1701.0	1			III
	PALE				2005.0	2006.0	1			V
	PALE				2039.0	2039.0	1			V
	SGMR				2039.0	2039.0	1			III
	PALE				2205.0	2206.0	1			V
	SGMR				2205.0	2205.0	1			III
	PALE				2251.0	2251.0	1			V
15	0616 1621	ONDR			0625.8	0627.0	1			I,DC
	0625 1505	POTS			0707.5	0708.6	1			I
		POTS			0716.1	0716.4	1			IIIG
		POTS			0720.8	0721.2	1			IIIG
		POTS			0726.8	0728.4	1			I,DC
		POTS			0748.5	0901.0	1			I,W,H
		POTS			0752.1	0752.4	1			IIIG
		POTS			0854.9	0855.2	1			U
		POTS			0858.3	0858.5	2			IIIB
		POTS			1021.7	1021.9	1			IIIB
		POTS			1040.4	1459.0U	2			I,DC,DP
		POTS			1044.0	1044.1	1			IIIB
0927 1735	BLEN				1109.9	1110.1	1			IIIG
	POTS				1110.9	1111.4	3			IIIG,U
0458 1812	WEIS				1110.9	1111.2	2			IIIG,U
	POTS				1202.8	1203.0	1			UNCLF
	POTS				1209.3	1209.8	1			IIIG
	POTS				1248.0	1248.2	1			UNCLF
	SGMR				1249.0	1249.0	1			III
	POTS				1302.8	1303.0	2			U
	POTS				1313.5	1313.9	3			IIIG,U
	POTS				1327.6	1329.0	1			IIIG
	SGMR				1818.0	1819.0	1			III
	PALE				1939.0	1939.0	2			III
	SGMR				1939.0	1943.0	2			III
	SGMR				1955.0	1955.0	1			III
16		LEAR			0212.0	0213.0	1			III
		PALE			0212.0	0212.0	1			III
		LEAR			0230.0	0545.0	1			CONT
		LEAR			0402.0	0405.0	2			III
0525 1735	BLEN				0627.9	0628.0	1			IIIB
	POTS				0722.1	0740.0	1			I,DC
0625 1443	POTS				0740.0	0744.0	1			I
0535 1623	ONDR				0741.0	0812.0	2			S
	SVTO				0741.4	0741.7	1			IIIG
0458 1808	WEIS				0741.5	0741.6	1			IIIB
	WEIS				0746.2	0746.3	1			IIIB
	POTS				0749.8	0752.0	2			IIIG
	LEAR				0751.0	0752.0	2			III
	WEIS				0751.8	0752.2	3			IIIB,U
	POTS				0803.4	0805.0	1			IIIG,W

134
Aug 90

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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
16	LEAR			0804.0	0812.0	1				III
	WEIS			0804.7	0805.0	1				IIIG
	POTS			0811.7	0812.0	2				IIIG,U
	WEIS			0811.9	0812.1	2				U
	POTS			0823.5	1246.0	2				I,DC,DP
	POTS			0849.2	0849.5	2				U
	LEAR			0854.0	0855.0	2				III
	SVTO			0854.0	0855.0	3				III
	POTS			0854.7	0855.6	2				IIIG
	WEIS			0854.7	0855.2	3				IIIG
	WEIS			0909.4	0909.6	1				IIIB
	WEIS			0912.9	0913.0	1				IIIB
	WEIS			0915.2	0915.3	1				IIIB
	POTS			0917.5	0917.9	1				IIIG
	POTS			0921.8	0921.9	2				IIIB
	POTS			0929.5	0929.7	2				IIIG
	WEIS			1021.8	1021.9	1				IIIB
	POTS			1026.6	1027.1	1				IIIGG
	POTS			1051.9	1052.1	1				IIIG,W
	POTS			1107.1	1107.6	1				IIIG
	WEIS	1145.3	1145.4 2							IIIB
	SGMR			1215.0	1215.0	1				III
	SVTO			1215.0	1215.0	2				III
	POTS			1215.4	1215.6	2				IIIG,U
	WEIS			1215.4	1215.7	2				IIIB
	POTS			1317.8	1317.9	1				IIIB
	POTS			1339.8	1343.5	1				IIIG
	POTS			1347.5	1437.0U	3				I,DC,DP
	SVTO			1353.0	1432.0	2				S
	POTS			1353.5	1353.6	1				IIIB
	POTS			1401.6	1426.0	2				IIIGG
	WEIS			1402.0	1433.0	2				IIIN
	POTS			1411.2	1414.8	1				IIIG
	WEIS			1455.5	1455.7	1				IIIG
	SGMR			1620.0	1622.0	2				V
	SVTO			1620.0	1621.0	2				V
	WEIS			1620.5	1621.6	3				IIIG,U
	WEIS			1632.2	1632.3	1				IIIB
	SGMR			1739.0	1740.0	1				III
	SGMR			1759.0	1808.0	2				V
	PALE			1847.0	1847.0	1				III
	SGMR			1847.0	1847.0	1				III
	PALE			1955.0	1958.0	1				V
	SGMR			1955.0	1958.0	2				V
	PALE			2022.0	2023.0	1				V
	SGMR			2022.0	2024.0	2				V
	PALE			2238.0	2240.0	2				V
	PALE			2255.0	2257.0	2				III
	SGMR			2256.0	2257.0	1				III
	LEAR			2347.0	2350.0	1				III
	PALE			2347.0	2349.0	2				V
17	LEAR			0054.0	0054.0	1				III
	LEAR			0141.0	0144.0	2				III
	PALE			0141.0	0142.0	1				III
	LEAR			0235.0	0237.0	1				III
	PALE			0235.0	0236.0	1				III
	LEAR			0331.0	0336.0	2				III
	PALE			0335.0	0335.0	1				III
	LEAR			0418.0	0432.0	2				S
	PALE			0418.0	0426.0	1				III
	LEAR			0525.0	0526.0	2				III
	SVTO			0525.0	0526.0	2				III
	0500 0810 WEIS			0525.0	1709.0	3				IIIN
	0530 1735 BLEN									
	0627 1509 POTS			0628.0E	1509.0U	3				I,C,DC
	LEAR			0639.0	0639.0	1				III
	SVTO			0639.0	0639.0	1				III
	POTS			0639.2	0639.4	1				U

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

135
Aug 90

AUGUST 1990

Observation		Decimetric Band			Metric Band			Dekametric Band			Spectral Type
Day	Start End (UT) (UT)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
17					0656.0	0657.0	1				III
					0746.0	0746.0	2				III
					0746.0	0746.3	1				IIIB
					0746.0	0746.0	3				III
					0756.0	0757.0	2				III
	0832 1808										
					0843.0	0848.0	1				III
					0844.5	0844.7	1				IIIB
					0847.0	0848.0	2				III
					0847.8	0848.0	1				U
					1042.0	1046.0	1				III
					1042.6	1053.3	2				IIIG
					1053.0	1054.2	2				IIIG
					1238.0	1238.0	1				III
					1238.0	1238.0	2				III
					1256.0	1301.1	3				IIIGG
					1256.0	1300.0	2				V
					1257.0	1300.0	2				III
					1311.0	1314.0	3				III
					1312.0	1318.8	3				IIIG
					1312.0	1314.0	3				III
					1414.0	1419.0	1				III
					1414.0	1414.0	2				III
					1414.5	1414.6	1				IIIB
					1419.5	1419.9	3				IIIG
					1432.0	1433.0	2				V
					1432.0	1433.0	2				III
	0535 1623	1509.9	1510.0	1							I,B
					1526.0	1531.0	1				III
					1535.0	1537.0	2				V
					1535.0	1536.0	3				III
					1553.0	1557.0	1				III
					1620.0	1624.0	1				V
					1623.0	1623.0	2				III
					1654.0	1712.0	2				S
					1819.0	1842.0	1				S
					1852.0	1854.0	2				V
					1852.0	1856.0	2				V
					1923.0	1927.0	1				V
					1926.0	1927.0	1				III
					1958.0	1959.0	1				III
					1958.0	1959.0	1				III
					2120.0	2120.0	1				III
					2120.0	2120.0	1				III
					2130.0	2131.0	1				V
					2347.0	2350.0	1				III
18					0024.0	0025.0	2				III
					0024.0	0024.0	1				III
					0056.0	0056.0	1				III
					0258.0	0258.0	1				III
					0259.0	0303.0	2				III
					0434.0	0434.0	2				III
	0530 1735										
	0627 1439				0627.0E	1439.0U	3				I,N,C,DC,RS
					0818.0	0819.0	1				III
					0818.0	0819.0	1				III
					0818.7	0819.0	1				IIIG
	0500 1805				0818.8	0819.0	2				IIIG
					0822.5	0822.7	1				UNCLF
					0824.8	0824.9	1				IIIB
					0929.0	0929.2	2				IIIB
					0930.6	0931.0	1				IIIG
					0937.8	0938.0	2				IIIG
					1018.8	1019.1	1				UNCLF
					1131.0	1132.4	1				IIIG
					1131.0	1132.0	1				III
					1131.1	1131.3	2				IIIG,U
					1132.0	1132.0	2				III

136
Aug 90

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

AUGUST 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
18			POTS				1143.0	1145.4	1				IIIB
			SGMR				1151.0	1151.0	1				III
			SVTO				1151.0	1151.0	1				III
			WEIS				1151.3	1151.6	1				IIIG
			POTS				1151.4	1151.5	1				IIIB
			POTS				1204.3	1205.0	1				IIIG
			POTS				1253.0	1254.3	2				IIIG
	0535	1621	ONDR	1315.5	1324.5	1	1315.5	1324.5	1				IV P
			POTS				1359.6	1359.8	1				U
			SGMR				1657.0	1657.0	1				III
			WEIS				1657.3	1657.4	1				IIIB
			SGMR				1824.0	1825.0	1				III
			PALE				1921.0	1922.0	1				III
			SGMR				1922.0	1922.0	1				III
			PALE				2149.0	2152.0	1				III
		PALE				2314.0	2315.0	1				V	
19			PALE				0004.0	0004.0	1				III
			LEAR				0051.0	0051.0	1				III
			PALE				0051.0	0051.0	1				III
			LEAR				0118.0	0118.0	2				III
			PALE				0118.0	0118.0	1				III
			LEAR				0136.0	0137.0	2				III
			PALE				0136.0	0136.0	2				V
			LEAR				0150.0	0159.0	1				III
			PALE				0150.0	0150.0	1				III
			PALE				0159.0	0159.0	1				III
			LEAR				0218.0	0226.0	2				III
			PALE				0218.0	0226.0	2				V
			LEAR				0305.0	0306.0	2				III
			PALE				0305.0	0305.0	2				V
			LEAR				0314.0	0319.0	2				III
			PALE				0314.0	0319.0	2				V
			PALE				0344.0	0348.0	2				III
			LEAR				0502.0	0502.0	1				III
			LEAR				0538.0	0538.0	1				III
			LEAR				0603.0	0606.0	2				V
			SVTO				0603.0	0605.0	3				V
	0503	1805	WEIS				0603.0	1703.0	3				IIIN
	0627	1413	POTS				0701.3	0701.6	1				IIIG
			LEAR				0703.0	0711.0	1				III
	0532	1730	BLEN	0708.7	0710.2	1	0708.7	0710.2	1				IIIG
	0633	1621	ONDR	0708.7	0709.0	1	0708.7	0709.0	1				IIIG
			POTS				0708.7	0711.2	3				IIIGG,U
			WEIS				0708.7	0710.8	2				Spikes
			SVTO				0709.0	0711.0	2				III
			POTS				0711.6	0717.0	1				I
			SVTO				0727.0	0727.0	2				III
			LEAR				0739.0	0743.0	3				V
			SVTO				0739.0	0743.0	3				V
			POTS				0739.6	0744.3	2				IIIGG
			WEIS				0739.7	0743.8	3				IIIGG
			POTS				0744.8	1413.0U	1				I,N,DC
			LEAR				0813.0	0815.0	2				III
			SVTO				0813.0	0815.0	2				III
			POTS				0815.0	0819.8	1				IIIGG
			ONDR				0817.9	0818.0	1				IIIG
			SVTO				0842.0	0842.0	1				III
			POTS				0842.7	0842.8	1				IIIB
			POTS				0848.7	0850.9	2				IIIGG
			SVTO				1019.0	1020.0	2				V
			POTS				1019.8	1020.4	3				IIIG
		POTS				1025.7	1025.8	1				IIIB	
		POTS				1040.9	1049.4	1				IIIGG,U	
		SGMR				1046.0	1046.0	1				III	
		SVTO				1046.0	1049.0	2				III	
		POTS				1057.4	1058.5	1				IIIG	
		POTS				1109.0	1113.3	2				IIIG	
		SVTO				1109.0	1720.0	2				CONT	

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

137
Aug 90

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
19				1112.0	1113.0	3				III
				1134.0	1141.0	2				V
				1134.1	1141.8	3				IIIIGG
				1134.2	1142.0	3				IIIIGG
				1138.3	1139.8	2				UNCLF
				1208.5	1209.1	1				I,DC
				1233.0	1239.0	1				III
				1233.5	1244.1	1				IIIIG,U
				1259.0	1316.0	1				S
				1259.6	1314.0	2				IIIIGG
				1340.0	1340.1	1				IIIB
				1356.8	1357.0	3				IIIB
				1418.0	1423.0	1				III
				1439.0	1440.0	1				V
				1453.0	1453.0	1				III
				1513.0	1525.0	1				S
				1538.0	1538.0	1				V
				1614.0	1615.0	1				V
				1627.0	2112.0	1				CONT
				1642.0	1643.0	2				V
				1642.7	1642.9	3				IIIB,U
							1807.0	1807.0	1	III
				1807.0	1808.0	2				V
				1833.0	1834.0	1				III
				1833.0	1834.0	2				V
				1857.0	1905.0	2				III
				1900.0	1906.0	2				III
				1935.0	1936.0	2				III
				1950.0	2049.0	2				S
				2054.0	2112.0	3				S
				2055.0	2100.0	3				III
				2257.0	2305.0	1				V
				2354.0	2354.0	1				III
				2356.0	2357.0	2				III
20				0013.0	0013.0	1				III
				0143.0	0144.0	2				III
				0144.0	0145.0	1				V
				0220.0	0234.0	2				S
				0232.0	0234.0	1				III
				0243.0	0254.0	2				S
				0323.0	0333.0	2				S
				0323.0	0324.0	1				III
				0352.0	0410.0	2				S
				0417.0	0429.0	1				S
				0500.0	0506.0	1				III
				0528.0	0531.0	3				III
				0528.0	0530.0	3				III
				0528.0	1646.0					IIIN
0503 0536				0626.0	0630.0	2				III
0653 1527				0653.0E	1519.0U	3				I,C,DC,DP
				0656.0	0706.0	2				III
				0656.0	0706.0	3				III
				0658.1	0659.2	1				IIIIG
0635 1623				0705.1	0705.9	2				IIIIG
				0710.8	0711.8	1				I
				0727.0	0729.0	1				III
				0739.0	0805.0	2				S
				0739.0	0805.0	3				S
				0739.2	0741.9	3				IIIIGG,U
0549 1802				0739.5	0742.1	3				IIIIGG
				0740.2	0741.3	2				CONT P
0532 1730				0740.3	0741.4	1				DCIM,P
				0748.1	0803.0	1				I,N
				0748.9	0751.2	3				IIIIG
				0803.7	0805.3	2				IIIIG
				0810.0	0810.3	2				U
				0905.7	0907.3	1				IIIIG
				0935.9	0936.0	2				IIIB

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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
20	POTS			0941.5	1003.0	3				IIIGG
	SVTO			0942.0	0958.0	3				S
	WEIS			0954.8	0958.8	3				IIIGG
	ONDR			0956.3	0956.4	2				IIIB
	BLEN			0956.4	0956.5	2				III
	POTS			1009.8	1010.0	2				IIIB
	POTS			1051.7	1055.1	2				IIIGG,C
	POTS			1056.5	1112.0	3				II ? HARM,C
	SGMR			1059.0	1105.0	1				III
	WEIS			1100.4	1105.9	1				II
	POTS			1129.5	1133.4	3				IIIGG
	ONDR	1131.9	1133.4	2	1131.9	1133.4	2			CONT P
	BLEN				1132.0	1132.7	1			IIIG
	SGMR				1132.0	1134.0	2			V
	SVTO				1132.0	1135.0	3			V
	WEIS				1132.0	1134.6	3			IIIGG
	BLEN	1132.3	1133.5	2						DCIM,P
	SGMR				1212.0	1219.0	1			III
	SVTO				1212.0	1242.0	3			S
	POTS				1212.6	1224.5	2			IIIGG
	ONDR				1213.0	1214.7	1			CONT P
	BLEN				1213.3	1213.4	1			IIIG
	POTS				1231.0	1231.1	1			IIIB
	SGMR				1231.0	1239.0	1			III
	SGMR				1240.0	1242.0	3			V
	POTS				1240.4	1241.5	3			IIIGG
	WEIS				1240.4	1241.8	3			IIIG
	BLEN	1240.5	1255.8	1	1240.5	1255.8	2			IIIGG
	ONDR				1240.5	1241.2	2			III
	ONDR				1255.5	1255.9	1			IIIG
	POTS				1303.0	1303.2	1			IIIB
	SGMR				1303.0	1305.0	1			III
	SVTO				1304.0	1315.0	2			S
	ONDR				1304.7	1304.8	1			IIIB
	POTS				1311.2	1315.2	3			IIIGG
	SGMR				1312.0	1316.0	2			V
	SGMR				1337.0	1345.0	1			V
	SVTO				1337.0	1350.0	2			S
	POTS				1337.8	1337.9	1			IIIB
	SGMR				1350.0	1350.0	1			V
	BLEN				1356.1	1356.4	2			IIIG
	ONDR				1356.1	1356.3	1			IIIG
	POTS				1356.1	1356.6	3			IIIG,U
	SGMR				1403.0	2121.0	1			CONT
	SVTO				1414.0	1414.0	1			III
	POTS				1445.0	1446.3	1			IIIG,U
	SVTO				1455.0	1455.0	2			III
	POTS				1455.4	1455.8	3			IIIB
	ONDR				1555.4	1555.8	1			I,DC
	SGMR				1638.0	1645.0	2			V
	SVTO				1639.0	1644.0	3			III
	BLEN				1643.0	1644.7	2			IIIG
	WEIS				1643.2	1643.3	1			IIIB
	PALE				1840.0	1841.0	1			III
	PALE				1917.0	1917.0	1			III
	PALE				2016.0	2016.0	1			III
	PALE				2228.0	0442.0	1			CONT
	LEAR				2344.0	2347.0	2			III
	PALE				2344.0	2347.0	2			V
21	LEAR				0003.0	0003.0	1			III
	LEAR				0005.0	0952.0	1			CONT
	LEAR				0050.0	0051.0	2			III
	PALE				0050.0	0051.0	2			III
	PALE				0103.0	0115.0	2			S
	LEAR				0104.0	0115.0	2			S
	LEAR				0235.0	0244.0	2			III
	PALE				0235.0	0236.0	2			III
	LEAR				0256.0	0311.0	2			S

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

139
Aug 90

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
21				0337.0	0338.0	1				III
				0354.0	0425.0	3				S
				0415.0	0421.0	2				V
				0420.0	0421.0	3				V
				0455.0	0500.0	1				III
				0457.0	0718.0	2				CONT
				0503.0	0504.0	1				III
				0516.0	0603.0	3				S
				0548.0	0550.0	3				III
0535 1138				0548.6	0554.7	2				IIIIGG
0542 1801				0548.7	0549.8	3				IIIIGG
				0600.0	1752.0	3				IIIN
0629 0701				0629.0E	1505.0U	2				I,N,C,DC
				0638.9	0640.7	1				IIIIG,U
				0643.0	0643.0	1				III
				0648.0	0650.0	1				III
				0649.9	0650.1	1				IIIIG
				0710.0	0711.0	1				III
				0716.0	0718.0	2				III
				0716.0	0718.0	3				V
			0716.7 0718.3 1	0716.7	0718.3	2				IIIIG
				0716.7	0718.3	3				IIIIG
0535 1623				0716.8	0718.2	2				IIIIG
0719 1505										
				0728.0	0729.0	1				III
				0728.0	0728.8	1				IIIIG
				0728.0	0754.0	3				S
				0737.0	0737.0	2				III
				0737.3	0737.9	1				IIIIG
				0753.0	0754.0	2				III
				0753.1	0754.0	1				CONT GG
				0753.2	0754.3	2				IIIIGG
				0800.0	0831.0	2				S
				0800.0	0900.0	2				S
				0800.5	0800.7	1				IIIB
				0809.6	0834.0	1				IIIIGG
				0851.2	0901.0	1				IIIIGG
				0903.0	0922.0	2				S
				0919.1	0919.3	1				IIIB
				0922.0	0922.0	1				III
				0922.4	0922.8	2				IIIIG
			0928.9 0929.0 2							IIIB
			0930.3 0934.2 2	0930.3	0934.2	2				IIIIGG
			0930.4 0934.1 1	0930.4	0934.1	3				IIIIG,N
				0930.4	0933.8	2				IIIIG,DC
				0930.5	0930.8	2				IIIIG
				0950.0	0953.0	2				III
				0952.3	0952.9	1				IIIIG
				1019.2	1429.3	2				IIIIGG,N,U
				1043.0	1046.0	2				V
				1043.8	1048.8	3				IIIIGG
				1044.0	1046.0	2				III
				1048.7	1048.8	1				IIIIG
				1107.0	2314.0	1				CONT
				1152.0	1201.0	1				III
			1154.6 1154.9 1	1154.6	1154.9	2				IIIIGG
				1154.6	1154.9	3				IIIIG
				1306.8	1307.7	3				IIIIG
				1307.0	1314.0	2				III
				1307.0	1311.0	2				III
				1324.1	1329.6	1				UNCLF
				1401.3	1401.5	1				IIIB
				1427.0	1430.0	2				III
				1428.0	1430.0	2				III
				1428.2	1431.0	3				IIIIG
				1501.5	1501.6	2				IIIB
				1520.0	1521.0	3				III
				1520.8	1521.5	3				IIIIG
				1551.0	1559.0	1				III

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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
21				1602.0	1605.0	3				V
				1602.0	1607.0	3				V
				1602.8	1604.4	3				IIIGG
			1604.7 1605.1 2	1603.0	1605.1	2				IIIGG
				1604.7	1605.0	2				IIIG
				1610.0	1612.0	2				V
				1716.0	1716.0	2				III
				1716.0	1716.0	2				V
				1744.0	1744.2	3				IIIG,U
				1750.0	1824.0	2				S
				1751.0	1751.0	2				III
				1824.0	1824.0	2				III
				1919.0	1919.0	2				III
				2012.0	2013.0	2				III
				2305.0	0800.0	1				CONT
22				0041.0	0042.0	2				III
				0053.0	0053.0	2				III
				0132.0	0140.0	2				III
				0158.0	0201.0	2				III
				0215.0	0218.0	2				III
				0225.0	0232.0	3				III
				0247.0	0251.0	2				III
				0301.0	0337.0	2				S
				0339.0	0353.0	3				S
				0415.0	0435.0	2				S
				0452.0	0458.0	2				III
				0619.0	0621.0	2				III
0505 1703				0619.0	1747.0	3				IIIN
0629 1431				0629.0E	1431.0U	3				I,S,C,DC
				0645.0	1716.0	2				CONT
				0703.0	0703.0	2				III
0549 1550				0732.7	0736.0	2				IIIG
1714 1758				0732.7	0736.3	2				IIIG,Spikes
				0733.0	1147.0	3				IIIGG,N,U
				0820.9	0821.4	2				IIIG
				0821.0	0821.3	2				IIIG
0754 1720			0821.1 0827.5 2	0821.1	0827.5	2				IIIGG
				0825.4	0825.5	2				V
				0827.0	0827.0	2				III
			0827.2 0831.9 1	0827.2	0831.9	1				IV N
				0827.3	0827.7	3				IIIG,Spikes
				0854.0	0857.0	2				III
				0917.0	0918.0	2				III
				0917.0	0918.0	3				V
				0917.7	0918.6	3				IIIG
				0917.8	0918.3	2				IIIG,V
				0917.8	0918.2	2				IIIG
				0933.3	0934.3	1				I
				0942.7	0942.8	2				UNCLF
				0957.7	0958.7	3				IIIG
				1001.2	1002.2	2				IIIG,U
				1001.8	1002.0	2				IIIG
			1016.0 1659.0 1							I
				1018.7	1024.0	1				I,N
			1046.7 1051.3 1	1046.7	1051.3	2				III
			1048.4 1048.8 2	1048.4	1049.1	2				IIIG
				1048.5	1049.1	2				Spikes
				1058.0	1059.0	1				III
			1114.0 1720.0 1	1114.0	1720.0	1				I,DC
				1119.1	1122.4	3				IIIG,Spikes
				1120.0	1122.0	2				III
				1120.0	1123.0	3				V
			1120.2 1121.8 1							IIIGG
			1121.1 1121.9 1	1101.1	1121.9	1				IIIN
				1136.0	1139.0	2				III
				1136.0	1139.0	3				V
				1144.0	1233.0	3				IIIS
				1146.0	1246.0	3				I,C,N,DC

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

141
Aug 90

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
22	WEIS			1212.9	1213.6	3				IIIG,Spikes
	ONDR	1213.0	1228.2	2	1213.0	1228.2	2			IIIN
	WEIS			1228.1	1228.2	2				IIIG
	POTS			1242.1	1242.3	3				IIIB
	POTS			1310.5	1310.6	3				IIIB
	POTS			1318.5	1319.1	3				IIIG,U
	WEIS			1318.5	1319.1	3				IIIG
	ONDR			1318.6	1318.7	2				IIIB
	SGMR			1319.0	1320.0	2				III
	SVTO			1355.0	1451.0	2				S
	POTS			1355.8	1355.9	1				UNCLF
	POTS			1412.2	1431.0U	1				IIIGG
	SGMR			1430.0	1430.0	2				III
	SVTO			1500.0	1558.0	2				S
	SGMR			1529.0	1530.0	3				V
	SGMR			1535.0	1538.0	2				V
	SGMR			1547.0	1558.0	2				S
	SGMR			1616.0	1710.0	2				S
	SVTO			1621.0	1716.0	2				S
	PALE			1744.0	1759.0	2				S
	SGMR			1744.0	1746.0	2				V
	PALE			1813.0	0000.0	2				CONT
	SGMR			1855.0	1858.0	2				III
	SGMR			1915.0	1924.0	2				III
	SGMR			1931.0	1936.0	3				III
	SGMR			1942.0	1947.0	3				III
	SGMR			1944.0	1946.0	2				V
	SGMR			1948.0	1953.0	2				III
	PALE			1958.0	2010.0	2				II
	SGMR			1958.0	2008.0	1				II
	SGMR			2003.0	0000.0	2				IV
	PALE			2010.0	2100.0	2				IV
	PALE			2047.0	2048.0	3				III
SGMR			2047.0	2048.0	3				III	
SGMR			2212.0	2213.0	2				V	
LEAR			2349.0	2351.0	2				III	
LEAR			2359.0	0953.0	2				CONT	
23	LEAR			0015.0	0020.0	3				III
	LEAR			0052.0	0055.0	2				III
	LEAR			0116.0	0119.0	2				III
	LEAR			0136.0	0146.0	2				S
	LEAR			0158.0	0255.0	3				S
	LEAR			0306.0	0306.0	2				III
	SVTO			0427.0	1715.0	2				CONT
	LEAR			0502.0	0504.0	3				III
	SVTO			0502.0	0504.0	3				III
	WEIS	0508 1758			0531.0	1737.0	3			IIIN
	POTS	0633 1505			0633.0E	1455.0U	3			I,C,DC,DP,IIIGG
	POTS				0652.4	0652.5	1			UNCLF
	WEIS				0701.7	0706.2	3			IIIGG
	LEAR				0702.0	0706.0	3			III
	WEIS				0702.7	0704.9	2			Spikes
	BLN	0538 1720	0704.0	0705.3	1	0704.0	0705.3	1		IIIG
	BLN					0740.9	0748.0	3		IIIG
	LEAR					0741.0	0742.0	3		III
POTS					0741.1	0748.0	3		IIIG	
WEIS					0741.1	0742.2	3		IIIG	
WEIS					0747.6	0747.9	3		IIIG,U	
POTS					0754.0	0801.8	2		IIIG	
0808 1540	ONDR				0926.4	0927.5	1			IIIG
	POTS				1016.0	1016.4	1			IIIG
	POTS				1114.0	2225.0	1			CONT
	SGMR				1116.0	1122.0	2			III
	SVTO				1116.2	1116.3	1			IIIG
	POTS				1116.2	1116.4	3			IIIG
	WEIS				1149.0	1200.0	2			S
	SVTO				1151.8	1205.0	2			IIIGG

142
Aug 90

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

AUGUST 1990

Observation Start End Day (UT) (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
23	SGMR				1154.0	1157.0	2				V
	POTS				1333.6	1337.3	1				IIIG
	POTS				1354.1	1354.2	1				IIIB
	POTS				1359.5	1359.6	1				IIIB
	POTS				1412.8	1416.1	1				IIIG
	SGMR				1548.0	1550.0	2				V
	SGMR				1601.0	1603.0	3				V
	SVTO				1602.0	1602.0	3				III
	SGMR				1615.0	1615.0	2				III
	SGMR				1635.0	1637.0	2				V
	PALE				1734.0	1738.0	1				V
	SGMR							1736.0	1737.0	2	V
	PALE				1822.0	0439.0	2				CONT
	SGMR				1853.0	1854.0	2				III
	SGMR				1939.0	1945.0	2				V
	SGMR				1951.0	1956.0	2				V
	SGMR				2022.0	2025.0	2				III
	SGMR				2219.0	2225.0	2				III
	LEAR				2310.0	0953.0	2				CONT
24	LEAR				0048.0	0049.0	2				III
	LEAR				0108.0	0108.0	2				III
	LEAR				0122.0	0143.0	2				S
	LEAR				0157.0	0243.0	2				S
	LEAR				0344.0	0444.0	2				S
	SVTO				0423.0	0620.0	2				CONT
0508 1755	WEIS				0533.0	1822.0	3				IIIS,DP
0538 1720	BLEN				0538.0E	1720.0D	2				I,DC
	WEIS				0544.0	0807.0	1				IS
	LEAR				0547.0	0547.0	3				III
	SVTO				0547.0	0548.0	3				III
	SVTO				0620.0	0935.0	2				CONT
0625 1507	POTS				0625.0E	0824.0U	3				I,C,DC,DP
	POTS				0641.7	0700.7	1				IIIG
0535 1623	ONDR				0650.5	0848.9	1				I,N
	POTS				0651.3	0651.4	3				IIIB
	POTS				0710.0	0726.5	2				IIIG
	LEAR				0713.0	0715.0	3				III
	POTS				0714.0	0714.4	3				IIIG
	WEIS	0745.0	0850.U	1							Spikes
	POTS				0747.7	1507.0U	2				I,C,S,DC
	POTS				0809.2	0842.0	3				IIIG
	WEIS				0840.0	0920.0U	2				IS
	WEIS				0845.0	1130.0	3				Cont
	ONDR	0848.9	1058.0	1	0848.9	1058.0	1				IV P
	BLEN	0934.8	1003.8	2	0934.8	1003.8	1				IIIGG
	SVTO				0935.0	1430.0	3				CONT
	SGMR				1003.0	2040.0	2				CONT
	POTS				1012.9	1013.1	2				IIIB
	WEIS				1130.0	1610.0	3				IS
	BLEN	1158.8	1159.1	1	1158.8	1159.1	2				IIIG
	ONDR	1158.9	1159.0	1	1137.2	1213.0	1				I,N
	POTS				1324.4	1325.8	2				UNCLF
	WEIS				1324.4	1325.8	3				IIIGG
	BLEN				1324.7	1325.0	2				IIIG
	ONDR	1324.8	1325.0	1	1324.8	1325.0	2				IIIG
	SVTO				1430.0	1713.0	2				CONT
	PALE				1642.0	1642.0	1				III
	PALE				1703.0	1703.0	1				III
	PALE				1742.0	0000.0	2				CONT
	PALE				1926.0	1934.0	3				V
	SGMR				1931.0	1934.0	3				V
	SGMR				2040.0	2235.0	1				CONT
	LEAR				2309.0	2309.0	1				III
	LEAR				2322.0	2323.0	1				III
	LEAR				2335.0	0954.0	1				CONT
	LEAR				2352.0	0001.0	2				S
25	LEAR				0017.0	0018.0	2				III

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

143
Aug 90

AUGUST 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
25			LEAR				0206.0	0211.0	2				III	
			LEAR				0255.0	0302.0	2				III	
			LEAR				0306.0	0308.0	3				III	
			PALE				0306.0	0307.0	3				V	
			LEAR				0340.0	0353.0	3				S	
			LEAR				0450.0	0454.0	2				III	
			SVTO				0450.0	0451.0	2				III	
		0540	1720	BLEN			0540.0E	1720.00	2				I,DC	
				SVTO			0547.0	0847.0	2				CONT	
				SVTO			0626.0	0626.0	2				III	
		1546	1754	WEIS			0626.0	1701.0	3				IIIN	
		0646	1447	POTS			0646.0E	1445.00	3				I,IIIGG,C,DC,DP	
		0510	1507	WEIS	0646.4	0646.5	2						U	
				LEAR				0704.0	0714.0	2				III
				SVTO				0704.0	0710.0	3				III
		0535	1623	ONDR				0709.2	0711.6	1				I,N
				POTS				0711.5	0711.6	1				IIIB
				POTS				0733.0	0755.0	1				I,C,DP
				WEIS	0738.0	0753.0	1							I
				POTS				0830.0	1157.0	1				I,W,C,DC,DP
				POTS				0840.2	0840.5	1				IIIG,U
				BLEN	0844.3	0844.6	1							III
				WEIS	0844.3	0844.6	2							IIIG
				POTS				0959.3	0959.4	1				IIIB
				WEIS				1044.7	1045.1	1				Spikes
				SGMR				1046.0	1046.0	1				III
				SVTO				1057.0	1712.0	1				CONT
				SGMR				1103.0	2308.0	1				CONT
				SVTO				1103.0	1103.0	2				III
				WEIS				1204.2	1213.4	2				I Spikes
				ONDR	1210.7	1212.3	1	1202.8	1212.3	1				I,N
				BLEN	1210.8	1212.3	2							IIIG
				SVTO				1234.0	1235.0	2				III
				POTS				1241.0	1333.0	1				I,W,DC,DP
				SVTO				1308.0	1308.0	2				III
				BLEN	1310.7	1310.9	2	1310.7	1310.9	1				IIIG
				ONDR	1311.5	1312.1	1	1311.5	1312.1	1				I,N
				WEIS				1311.5	1312.3	2				Spikes
				SVTO				1348.0	1425.0	2				S
				POTS				1403.2	1404.0	1				IIIG
			ONDR	1431.2	1536.1	2	1531.2	1536.1	2				IIIG,N	
			SGMR				1528.0	1532.0	2				V	
			SVTO				1528.0	1536.0	3				III	
			BLEN	1531.3	1536.2	2	1531.3	1536.2	2				IIIGG	
			SGMR				1534.0	1536.0	3				III	
			SGMR				1553.0	1602.0	2				V	
			SGMR				1629.0	1631.0	2				V	
			SGMR				1752.0	1752.0	2				III	
			SGMR				1831.0	1923.0	2				S	
			PALE				1837.0	1923.0	2				S	
			PALE				1956.0	1957.0	2				III	
			SGMR				1956.0	2008.0	2				S	
			PALE				2006.0	2026.0	3				S	
			SGMR				2015.0	2020.0	3				III	
			PALE				2138.0	2144.0	2				III	
			PALE				2358.0	2359.0	1				III	
26			LEAR				0040.0	0049.0	2				III	
			PALE				0040.0	0052.0	2				S	
			PALE				0122.0	0241.0	2				CONT	
			LEAR				0126.0	0142.0	2				S	
			LEAR				0207.0	0219.0	2				S	
			LEAR				0352.0	0355.0	2				V	
			PALE				0352.0	0354.0	2				V	
			SVTO				0511.0	0524.0	2				S	
		0510	1751	WEIS			0512.0	1709.0	3				IIIN	
				SVTO			0530.0	0620.0	1				CONT	
		0540	1720	BLEN			0540.0E	1720.00	1				I,DC	
				SVTO			0620.0	1308.0	2				CONT	

144
Aug 90

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

AUGUST 1990

Observation Start End Day (UT) (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
26	WEIS				0627.7	0628.6	2				Spikes
	0655 1445	POTS			0655.0E	1445.0U	3				I,C,DC,IIIGG
		POTS			0706.0	0707.0	2				IIIG
		BLEN			0725.5	0733.3	2				IIIGG
		WEIS			0725.6	0726.2	3				Spikes
	0535 1621	ONDR			0725.7	0725.8	2				V
		LEAR			0727.0	0742.0	3				S
		SVTO			0727.0	0743.0	3				S
		POTS			0727.2	0743.0U	3				IV IIIGG,U,C
		WEIS			0727.7	0728.9	3				IIIG,U
		ONDR	0731.3	0733.3	2	0731.3	0733.3	2			IIIG,N
		WEIS			0731.3	0736.2	3				IIIGG,U,Spikes
		WEIS			0737.4	0742.4	3				IIIGG
		POTS			0813.5	0813.8	2				IIIG
		LEAR			0837.0	0841.0	3				III
		POTS			0838.0	0909.7	3				IIIGG
		SVTO			0838.0	0905.0	3				S
		LEAR			0853.0	0909.0	3				S
		POTS			0854.2	0900.0	3				IIIGG
		WEIS			0903.2	0909.6	3				IIIGG
		POTS			0932.0	0932.7	3				IIIG,U
		SVTO			1013.0	1013.0	2				III
		POTS			1013.2	1013.4	1				U
		SVTO			1024.0	1027.0	2				III
		POTS			1024.6	1026.7	1				IIIG
		POTS			1115.3	1117.6	3				IIIG
		SGMR			1116.0	1117.0	2				III
		SVTO			1116.0	1117.0	2				III
		WEIS			1116.7	1118.3	3				IIIG
		SGMR			1136.0	1136.0	1				III
		POTS			1136.5	1136.7	1				UNCLF
		SGMR			1147.0	1155.0	3				III
		WEIS			1147.0	1155.3	3				IIIGG
		POTS			1147.7	1155.5	3				I,IIIGG
		SVTO			1148.0	1151.0	3				III
		ONDR			1149.9	1150.0	1				V
		SGMR			1209.0	1643.0	1				CONT
		POTS			1217.1	1218.8	1				I
		SGMR			1226.0	1227.0	2				III
		POTS			1227.0	1227.2	1				IIIB
		BLEN	1346.3	1346.6	2						IIIG
		SGMR			1348.0	1401.0	3				S
		SVTO			1349.0	1401.0	3				S
		POTS			1349.1	1401.2	3				IV I,IIIGG,C,U
		WEIS			1349.1	1358.2	3				IIIGG
		SGMR			1452.0	1452.0	2				CONT
		SVTO			1452.0	1452.0	2				III
		SGMR			1503.0	1504.0	2				III
		SVTO			1503.0	1521.0	2				S
		SGMR			1520.0	1520.0	2				III
		SVTO			1535.0	1538.0	2				III
		SVTO			1543.0	1551.0	3				V
		WEIS	1543.2	1544.7	1						Spikes
		SGMR			1544.0	1546.0	2				III
		SGMR			1549.0	1550.0	3				III
		SGMR			1614.0	1620.0	3				III
		WEIS			1614.8	1616.9	3				IIIG
		WEIS			1616.9	1621.8	3				Spikes
		BLEN	1617.2	1618.1	2	1617.2	1618.1	1			IIIGG
		BLEN			1618.7	1626.3	3				II
		ONDR	1618.9	1621.0	3	1618.9	1621.0	3			IV
		WEIS			1619.2	1620.7	3				IIIGG
		WEIS			1619.2	1624.7	3				Cont
		WEIS			1621.8	1628.1	3				II H
		SVTO			1624.0	1628.0	2				II
		SGMR			1625.0	1628.0	1				II
		BLEN	1635.3	1720.0D	3	1635.3	1720.0D	1			IV P
		SVTO			1638.0	1643.0	2				III
		SGMR			1643.0	1815.0	1				CONT

146
Aug 90

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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
27				1851.0	1851.0	1				III
				1902.0	1912.0	2				III
				1902.0	1915.0	2				S
				1923.0	0000.0	1				CONT
				1923.0	0436.0	1				CONT
				1955.0	1958.0	2				III
				1955.0	2012.0	2				S
				2009.0	2013.0	2				V
				2056.0	2109.0	3				IV
				2057.0	2108.0	3				V
				2114.0	2117.0	1				III
				2126.0	2135.0	3				V
				2231.0	2232.0	2				III
	28				0007.0	0022.0	1			
				0026.0	0027.0	1				III
				0047.0	0054.0	1				III
				0136.0	0216.0	2				S
				0304.0	0335.0	2				S
				0336.0	0344.0	3				III
				0359.0	0414.0	3				S
				0435.0	0437.0	2				III
				0458.0	0500.0	2				III
				0459.0	0459.0	2				III
				0510.0	0515.0	2				III
				0511.0	0515.0	1				III
0513		1236	WEIS	0514.0	1738.0	3				IIIN
			LEAR	0544.0	0546.0	2				III
			SVTO	0544.0	0545.0	2				III
			LEAR	0553.0	0617.0	3				S
			SVTO	0601.0	0608.0	3				III
			LEAR	0632.0	0650.0	1				S
			SVTO	0650.0	0650.0	2				III
			SVTO	0806.0	0806.0	2				III
			SVTO	0833.0	0834.0	2				III
			SVTO	0849.0	0911.0	3				S
			LEAR	0851.0	0851.0	2				III
1248		1252	WEIS	0900.0	0931.0	2				Spikes
0540		1457	BLEN	0903.1	0908.2	2	0904.0	0909.0	2	IIIG
			LEAR				0905.4	0909.1	2	III
0631		1509	POTS							IIIGG
			BLEN	0922.6	0927.5	1				IIIG
0926		1338	ONDR				1001.0	1001.0	2	III
			SVTO				1018.5	1019.0	1	UNCLF
			POTS				1024.7	1028.3	1	I,DC
			POTS				1228.0	1229.0	1	III
		SGMR				1247.0	1257.0	2	III	
		SVTO				1247.0	1256.0	2	III	
		POTS				1247.1	1251.4	3	IIIG,U	
1305	1350	WEIS				1250.4	1251.7	3	IIIG,U	
		BLEN	1254.8	1300.6	3				DCIM,P	
		SGMR				1307.0	1307.0	1	III	
		POTS				1307.1	1307.2	1	UNCLF	
		SGMR				1328.0	1343.0	2	S	
		SVTO				1328.0	1343.0	2	S	
		POTS				1332.5	1343.4	3	IIIG	
		SGMR				1413.0	1413.0	1	III	
		SGMR				1431.0	1432.0	1	III	
		SGMR				1449.0	1503.0	3	III	
		SVTO				1449.0	1503.0	3	S	
		POTS				1449.2	1455.8	3	IIIG	
		BLEN	1451.4	1451.7	2	1451.4	1451.7	1	IIIGG	
		SGMR				1534.0	1539.0	3	V	
		SVTO				1535.0	1546.0	3	S	
1405	1747	WEIS				1535.8	1537.2	3	IIIG	
		SGMR				1545.0	1551.0	3	V	
		WEIS				1545.4	1546.7	3	IIIG	
		SGMR				1553.0	1553.0	1	III	

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

AUGUST 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
29				1423.0	1423.0	2				III
				1423.0	1706.0	2				CONT
				1423.1	1423.2	1				IIIB
				1423.1	1423.3	1				IIIG
				1514.9	1515.3	2				IIIG
				1514.9	1515.3	1				IIIG
				1714.0	1715.0	1				III
				1847.0	1850.0	3				III
				1855.0	1857.0	1				III
				1954.0	0000.0	1				CONT
				2005.0	2005.0	2				III
				2017.0	2026.0	2				V
				2214.0	2214.0	2				III
30				0102.0	0103.0	1				III
				0103.0	0103.0	1				III
				0110.0	0700.0	1				CONT
				0125.0	0403.0	1				CONT
				0152.0	0203.0	3				S
				0153.0	0203.0	3				S
				0514.0	0514.0	2				III
0543 1121				0554.0	0555.0	2				III
0515 1843				0554.8	0555.3	1				IIIG
0627 1528				0633.0E	1501.0U	3				I,C,P,DC,DP
				0658.0	0658.0	2				III
				0658.6	0658.7	1				IIIB
				0730.0	0731.0	2				III
				0730.0	0731.0	2				III
				0730.2	0731.2	1				IIIG
				0730.3	0731.1	2				IIIG
				0757.0	0759.0	2				III
				0757.0	0759.0	2				III
				0757.4	0757.6	1				IIIB
				0759.2	0759.8	2				IIIG
				0829.0	0831.0	2				III
				0913.0	0914.0	2				III
				0913.9	0914.2	2				IIIG
			0941.0 0941.5 1							Spike,RS
				1300.0	1300.0	1				III
				1413.0	1436.0	1				S
				1413.0	1414.0	2				III
				1413.6	1414.4	2				IIIG
				1414.0	1414.2	1				IIIG
				1435.0	1435.0	2				III
				1454.0	2300.0	1				CONT
				1526.0	1526.0	2				III
				1615.0	1616.0	3				V
				1615.0	1616.0	3				III
1359 1720			1615.9 1616.7 1	1615.9	1616.7	2				IIIGG
				1615.9	1616.8	3				IIIGG,Spikes
				1623.3	1623.4	1				IIIB
				1653.0	1657.0	2				V
				1654.9	1655.2	2				IIIB
				1715.4	1716.0	1				IIIG
				1803.0	1804.0	1				III
				1803.0	1805.0	2				V
				1829.0	1830.0	2				III
				1906.0	1912.0	1				III
				1943.0	1944.0	2				III
				1943.0	1944.0	2				III
				1949.0	1953.0	1				III
				2043.0	2100.0	2				S
				2150.0	2203.0	1				S
				2309.0	2310.0	2				III
				2309.0	2310.0	2				III
				2336.0	2337.0	2				III
31				0112.0	0117.0	1				III

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

149
Aug 90

AUGUST 1990

Observation Day (UT)	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
31			LEAR				0137.0	0143.0	2				III
			PALE				0142.0	0144.0	2				III
			LEAR				0155.0	0216.0	2				S
			PALE				0202.0	0213.0	2				S
			LEAR				0222.0	0240.0	3				S
			PALE				0225.0	0239.0	2				S
			LEAR				0311.0	0311.0	2				III
			LEAR				0315.0	0315.0	2				III
			LEAR				0325.0	0345.0	2				S
			LEAR				0329.0	0349.0	2				S
			LEAR				0441.0	0442.0	1				III
			LEAR				0445.0	0446.0	1				III
			LEAR				0450.0	0451.0	2				III
			LEAR				0454.0	0455.0	2				III
			SVTO				0454.0	0455.0	2				III
			LEAR				0504.0	0515.0	3				S
			SVTO				0507.0	0513.0	3				V
			LEAR				0646.0	0646.0	1				III
			SVTO				0646.0	0646.0	2				III
	0647	1505	POTS				0647.0E	1447.0U	3				I,C,P,N,DC,DP
			SVTO				0709.0	0714.0	2				III
			LEAR				0713.0	0714.0	2				III
	0528	1255	WEIS				0714.1	0714.3	1				IIIIG
			SVTO				0807.0	0807.0	2				III
			WEIS				0807.8	0807.9	1				IIIIB
			SVTO				0838.0	0842.0	1				III
			POTS				0838.7	0839.7	2				IIIIG
			WEIS				0842.7	0843.2	1				IIIIG
			WEIS				1030.3	1030.6	1				IIIIG
			SVTO				1046.0	1052.0	2				V
			POTS				1046.3	1048.6	3				IIIIGG
			POTS				1050.8	1052.4	3				IIIIGG
			SGMR				1051.0	1052.0	1				III
			WEIS				1051.3	1052.3	3				IIIIG
	0546	1720	BLEN				1051.7	1051.8	2				IIIIB
			POTS				1111.8	1112.3	1				IIIIG
			SGMR				1145.0	1152.0	1				III
			WEIS				1146.7	1150.8	1				IIIIG
			SGMR				1152.0	1327.0	1				CONT
			POTS				1203.0	1203.2	1				IIIIB
			POTS				1211.5	1211.6	1				UNCLF
	1344	1743	WEIS										III
			SGMR				1558.0	1600.0	1				V
			SGMR				1757.0	1800.0	2				III
			PALE				1857.0	1859.0	1				V
			SGMR				1857.0	1900.0	2				III
			PALE				2024.0	2025.0	1				III
			SGMR				2102.0	2102.0	1				III

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

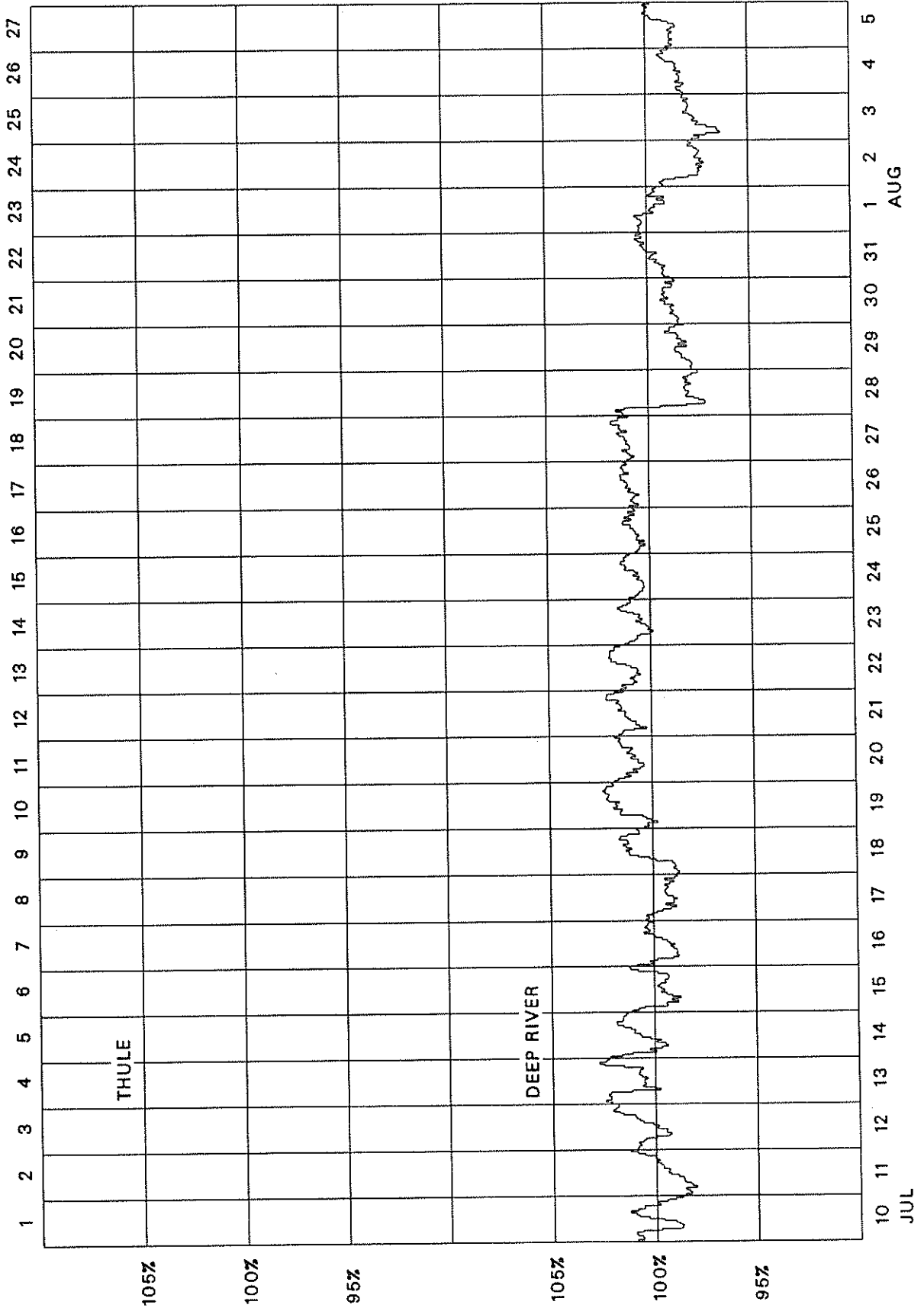
- | | |
|--|---|
| <p>B = Single burst
 G = Small group (< 10) of bursts
 GG = Large group (> 10) of burst
 C = Underlying continuum (particularly with Type I)
 S = Storm in the sense of intermittent but apparently connected activity
 N = Intermittent activity in this period
 U = U-shaped burst of Type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

Stations Reporting:

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

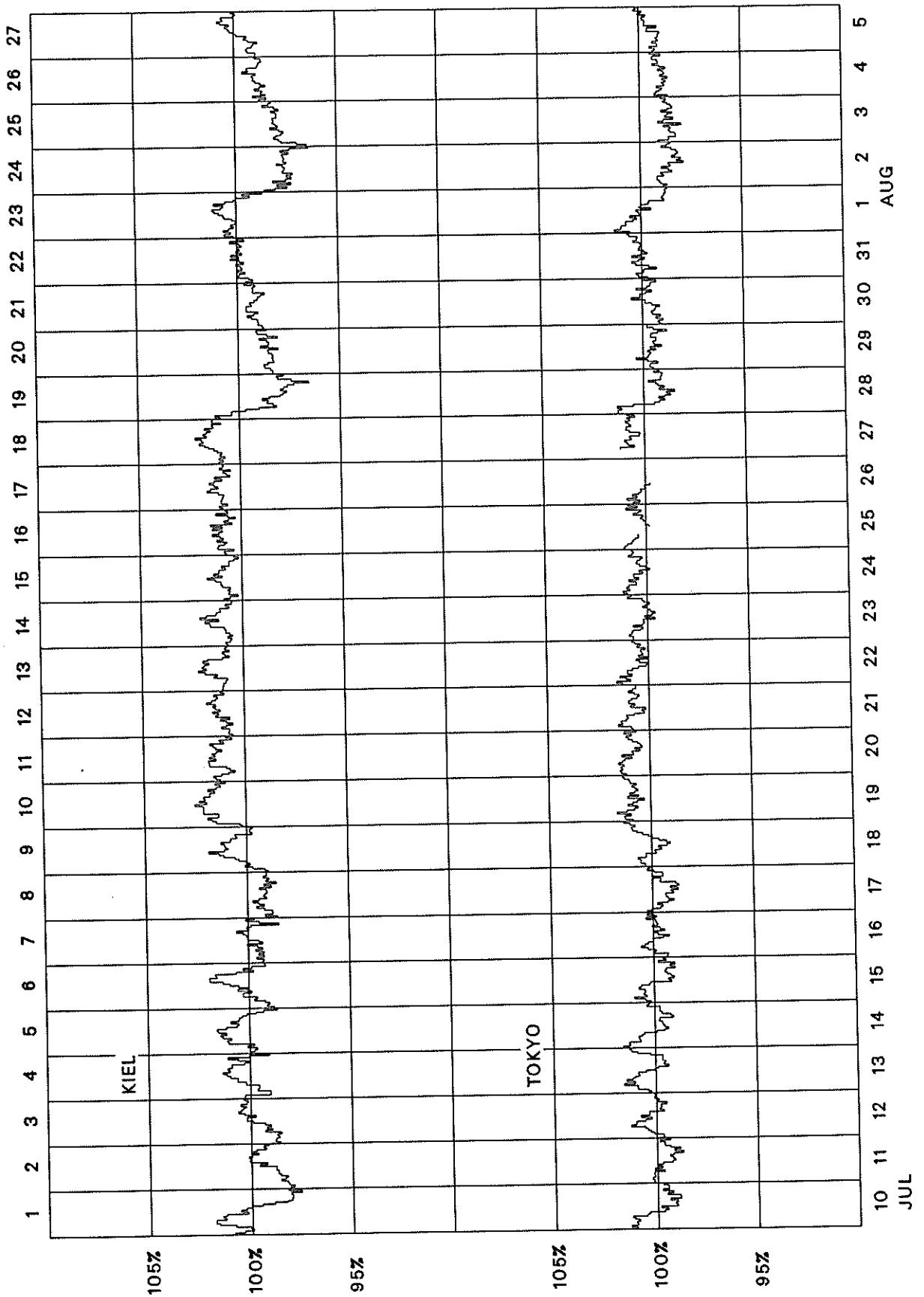
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2144 (July 1990-August 1990)



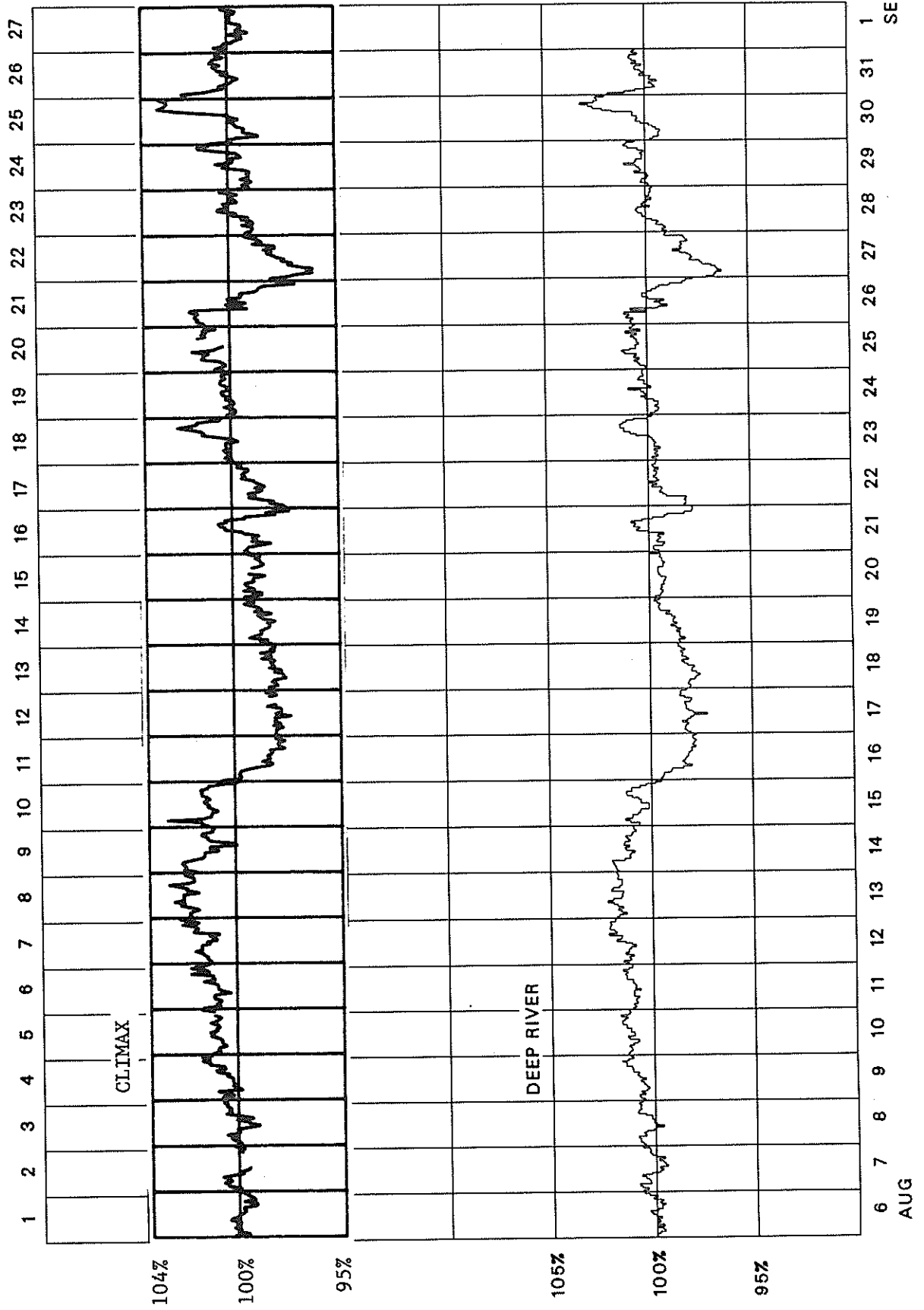
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2144 (July 1990-August 1990)



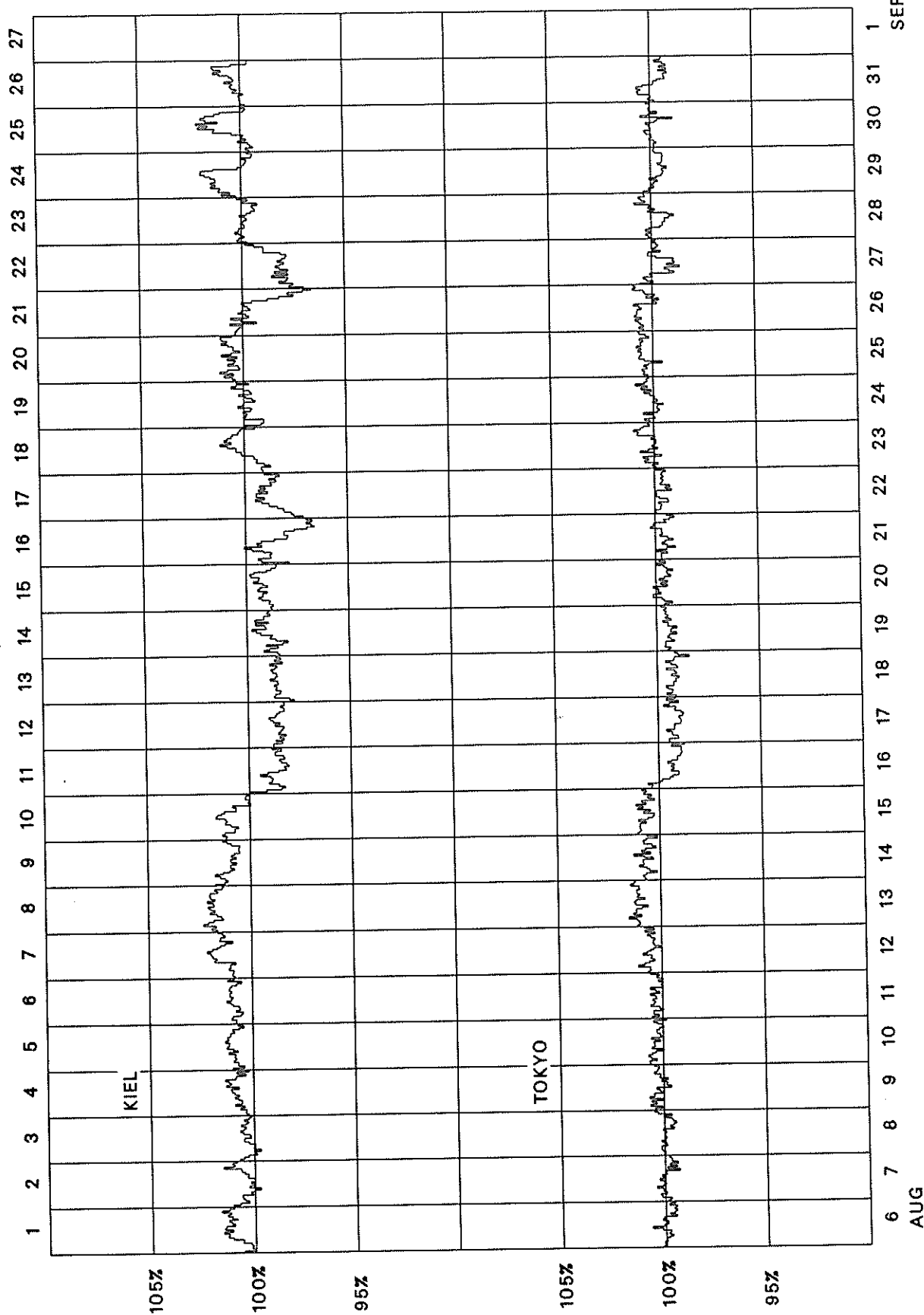
COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2145 (August 1990-September 1990)



COSMIC RAY INDICES (Neutron Monitor)

Bartels Rotation 2145 (August 1990-September 1990)



154
Aug 90

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

AUGUST 1990

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		5872.6	5322.8	3331.9	3393.7	
2		5753.0	5178.5	3261.4	3349.9	
3		5738.0	5194.9	3251.4	3350.0	
4		5797.5	5247.1	3292.4	3363.0	
5		5832.8	5294.1	3329.2	3380.0	
6		5870.4	5357.6	3338.8	3388.8	
7		5884.2	5330.5	3348.3(34)	3390.2	
8		5900.8	5321.0	3346.8	3390.7	
9		5923.7	5346.4	3367.4	3401.5	
10		5946.0	5355.6	3376.6	3404.7	
11		5935.2	5353.8	3383.0	3403.3	
12		5965.2	5380.4	3397.8	3412.5	
13		5973.1	5402.1	3419.9	3432.3	
14		5950.3	5359.7	3393.1	3416.2	
15		5911.2	5350.0	3387.9	3418.9	
16		5779.1	5235.4	3299.9	3372.3	
17		5768.1	5227.2	3278.3	3365.5	
18		5766.4	5229.7	3282.4	3366.5	
19		5813.8	5251.6	3301.3	3374.4	
20		5841.6	5260.9	3311.4	3382.1	
21		5847.1	5216.3	3319.5	3379.6	
22		5832.9	5237.3	3308.4	3382.2	
23		5886.6	5306.3	3367.7	3401.5	
24		5875.7	5297.8	3349.9	3398.0	
25		5909.8	5339.8	3374.8	3409.3	
26		5860.7	5276.5	3344.5	3410.9	
27		5739.8	5212.6	3267.4	3382.3	
28		5862.4	5298.5	3332.3	3391.2	
29		5894.0	5344.0	3335.9	3382.6	
30		5922.8	5338.7	3366.5	3391.5	
31		5892.7	5326.2	3362.5	3385.3	
Mean		5862.9	5296.6	3336.8	3389.3	

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.

GEOMAGNETIC ACTIVITY INDICES

August 1990

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								aa Provisional					
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M		
1	1	2-	3+	2+	5	4+	5	5-	27+	26	1.2	1	1+	3+	3-	4	4-	4	4	37	37	38	19	56	
2		3+	3-	3-	2-	2-	1	1+	17	9	0.5	3-	3-	2+	1+	1+	1-	1	2+	15	26	9	20	15	
3		2+	1	2	3	3	2+	3-	20-	11	0.6	2+	1+	2	3+	3	1-	3-	3-	20	30	20	18	33	
4	Q7K	3	2-	2	1	1+	1+	2-	13	6	0.3	3-	1+	2+	1	1+	1+	1	1	11	21	8	17	12	
5	Q1	1	1	1-	1	2	1+	1	2+	10+	5	0.2	1	1	1-	1	2-	1+	1+	9	14	6	6	14 CC	
6		2-	2	2	2-	1+	3-	3+	2+	17	9	0.5	2	2	2-	2	1+	3-	3	17	23	12	14	20	
7	Q9A	2+	2-	1+	2-	2	2-	2	2+	15	7	0.3	2+	1+	1+	2-	2	2-	1+	13	19	9	14	14	
8	Q3	2	3-	2-	1-	1+	1+	1-	1	11+	6	0.3	2	3-	2	1	1	1	0+	10	17	7	14	10 CC	
9	Q2	2	2-	1-	1+	1	2	2-	1	11+	5	0.2	2	1+	1	1+	1	2	2-	10	15	6	11	10 CC	
10	Q4	1-	1	1	2-	2-	1+	2+	3-	12+	6	0.3	1-	1+	1	2-	2-	1+	2-	10	15	6	7	14 CK	
11	Q10A	3+	2-	2+	2-	2+	2	1+	2+	17	9	0.5	3-	2	3-	2	2+	1+	1+	17	23	16	20	19	
12	Q8A	2+	3-	1+	2	1+	1	1+	2	14	7	0.3	2+	3	2-	2	2-	1+	2	14	16	10	16	10 C	
13		2	3	3-	3	3	3-	2+	2	21-	12	0.7	2	3	3	3+	3	3	2+	2-	26	28	34	30	32
14		3-	2+	5+	4	3	3-	2+	3	25+	19	1.0	3-	2+	5-	4	3	3	2+	3-	33	38	32	47	24
15		2+	2+	2-	5-	5	5-	5-	4-	29	26	1.2	2+	2+	2-	5-	4+	4-	4-	3+	41	46	41	28	59
16		3	3+	4+	4-	4+	5-	2+	4+	30	25	1.2	3+	3	4	3+	4-	4	2	4	41	40	30	33	36
17		3+	3+	3-	1+	2+	3	3	3	22	13	0.8	4-	3+	3-	1+	3-	3	3-	27	24	25	22	26	
18		3	3-	3-	3-	3	3-	2	2	21-	12	0.7	3-	3	3-	2+	3-	2+	1+	2-	19	26	12	22	16
19		4-	4-	2+	2+	3	3-	3-	3	23+	14	0.8	4-	3	2	2+	3-	2+	2	3-	23	38	13	25	26
20		3+	5-	4+	3	4-	3+	3+	1+	26+	20	1.0	3-	4	4-	3	3+	3	3-	1+	33	33	29	35	27
21	D4	3-	2-	3+	3+	5-	5+	6-	5-	31+	32	1.3	2+	2-	3	3	4-	4+	5-	46	54	40	22	72	
22	D3	5	5+	5	5	5-	4	4-	5-	37+	41	1.5	4	5-	5-	5-	4-	4-	3+	61	57	58	61	54	
23	D1	4	6	5	6-	7-	6	6	4	43+	65	1.7	3+	5	5-	6	6-	5-	5+	90	90	87	89	88	
24		1+	5	4-	3+	5-	3	2+	1-	27-	23	1.1	4-	5-	3+	3	3+	2	2-	33	41	20	31	29	
25	Q6	1+	1+	1+	1-	1	2	2+	3-	13	6	0.3	2-	1	1	1-	2-	2-	2+	11	16	8	6	18 C	
26	D2	2-	3	7-	6	7-	6	6-	4+	40	63	1.7	2	4-	6-	5+	6-	5	4	80	71	71	74	68	
27		4+	3+	3	3-	4-	2+	2	2	23+	15	0.9	4	4-	3	2+	3	2	2-	28	32	23	34	21	
28	Q5	2+	2-	2-	1+	2+	1	1	1+	13	6	0.3	2+	2+	2-	2-	2	1	1	12	11	10	13	8 C	
29		1+	2-	2-	4-	2+	2	4-	3-	19	11	0.6	1	2-	2	3+	2+	2-	4-	21	24	16	16	24	
30	D5	2+	3	3-	4	5	5+	4-	4-	30-	26	1.2	2+	3	3	3+	4+	4+	3	41	42	35	21	56	
31		5-	4-	3	3+	3-	2-	2	2-	23-	16	0.9	5-	3+	3	3-	3-	2-	2-	28	25	25	35	15	
Mean											18	0.78								28.3	32.0	24.4		28.2	
Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov							
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF		
1	1+	2-	3+	3	5-	4-	4+	4	41	1-	1-	3+	2	4-	3+	4	4+	33	199.0	146	149	153			
2	2+	3-	3-	2	2-	1	1+	3-	16	3	3-	2	1	1-	0+	1-	2+	13	208.6	175	151	163			
3	2	1+	2	3+	3	2+	2+	2+	20	2+	1+	2-	3	3-	1	3-	3	20	192.4	151	142	146			
4	2+	2-	3-	1+	2	2-	2-	1+	14	3-	1	2	1-	1	1	1+	1-	9	191.2	137	131	144			
5	1	1+	1	1	2-	2-	1+	2+	10	1-	1-	0+	1-	1+	1+	1	2+	8	180.8	128	125	133			
6	2	2	2	2+	2-	3	3	2	19	2+	2+	1+	2-	1	2	3	2+	16	174.6	124	116	127			
7	2+	1+	1+	2-	2+	2	2-	2	14	2+	1+	1+	1+	2-	1+	1+	2	11	172.1	120	121	124			
8	2	3-	2	1	2-	1+	1-	1	11	2	3-	2-	1-	0+	1-	0+	1-	9	184.8	136	125	138			
9	2	2-	1+	2	1+	2+	2	1+	13	2+	1+	1-	1-	1-	2-	1	1-	8	183.2	145	145	136			
10	1	2-	1	2	2	2-	2+	2+	13	0+	1	1	1+	1+	1-	1+	1+	7	186.3	160	161	139			
11	3	2	3	2+	3-	2	1+	3-	20	3-	2-	3-	2-	2+	1-	1	2	15	187.1	161	162	140			
12	2	3-	1+	2+	2	2-	2-	2	15	2+	3	2-	2	1+	1-	1-	2-	14	188.2	160	175	141			
13	2+	3	3	4-	3+	3	3-	2	29	2	3+	3	3	3	3-	2	2-	24	192.5	192	182	146			
14	3-	2+	5	4	3	3	2+	3-	36	2+	2+	4+	4-	3-	3-	2	3-	30	188.2*	215	210	141			
15	2+	2+	2	4	5	4-	4-	3+	42	2+	2+	1+	5-	4-	4-	4-	4-	39	199.6	229	218	154			
16	3+	3+	4+	4-	4-	4	2+	4-	43	3+	3-	4-	3+	4-	4	2-	4	39	211.0	232	226	166			
17	3+	3	3	2-	3-	3+	3-	3	28	4	3+	3-	1	2+	3	3-	2+	27	228.4	269	262	185			
18	3	3-	3-	3-	3-	3-	2-	2+	22	3-	3	3-	2-	2+	2-	1	1+	17	246.1	270	273	204			
19	3+	3	2+	2	3	3-	2+	2+	24	4	3-	2	2+	2+	2-	2	3-	23	268.0*	278	277	227			
20	3-	4	4-	3	4-	3	3-	2-	34	3-	4+	4-	3+	3	3-	3-	1	33	288.7	295	280	250			
21	2	2-	3	3+	4-	5-	5	5-	48	2+	1+	3+	3-	4-	4	5-	5-	44	298.3	278	262	260			
22	4	5-	5-	5-	5-	4-	3+	4	64	4+	5-	4	5-	4-	4-	3	4+	58	322.8*	262	249	287			
23	3+	5+	5	6	6	5	6-	4-	103	4	5	4	6	5	4	5-	3+	77	322.7	281	266	287			
24	4-	5-	3+	3+	4-	2+	2	1-	35	4-	5-	3+	3-	3	2	1+	1-	30	329.2	276	275	294			
25	1+	1+	1+	1	2-	2-	3-	3-	13	2	1-	1-	1-	1+	1+	2-	2	10	303.9	263	241	266			
26	2	3+	5+	5+	6-	5	4	4	78	2	4-	6-	6-	6-	5	4	3	81	285.1*	214	217	246			
27	4	4-	3+	3	4-	3-	2	2+	33	4	3+	3	2-	3-	1+	1+	1+	23	269.2	188	194	229			
28	3-	2+	2	2-	2+	2-	1+	2-	15	2	2	1+	1+	1+	1-	1-	1	9	250.2	170	163	208			
29	2-	1+	2+	4-	2+	2	4-	3-	23	1	2	2-	3-	2+	1+	4-	2+	18	225.2	186	172	181			
30	2-	3-	3-	4-	4	5-	3	4	42	3-	3	3	3+	4+	4	3	4	40	210.4	196	177	165			
31	4	4-	3	3	3-	2	2-	2-	29	5	3	3-	3-	2+	1+	1+	1+	28	182.9*	161	152	136			
Mean									30.5									26.2	228.1	199.9	193.5	184.3			

DAILY AVERAGE INDICES Ap

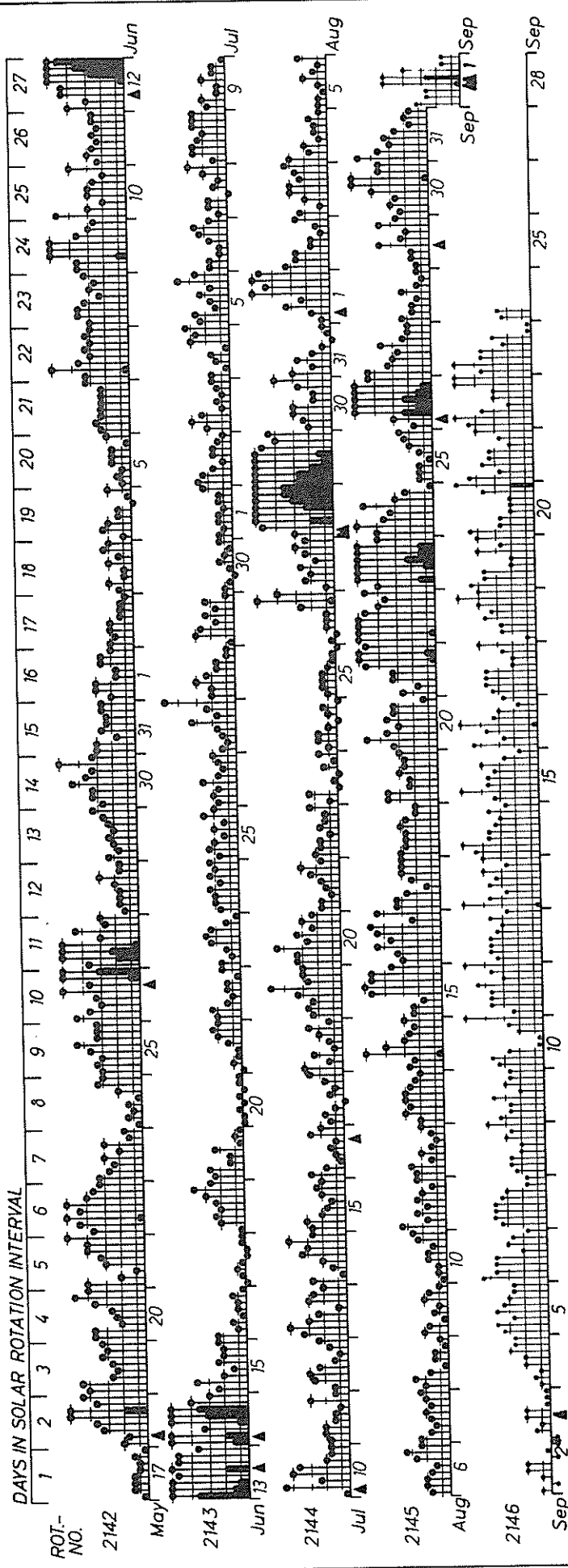
September 1989 to August 1990

DAY	1989				1990							
	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
1	8	13	8	38	16	22	20	6	8	10	5	26
2	8	9	21	22	17	25	14	11	10	6	6	9
3	8	12	26	26	15	8	10	17	18	6	7	11
4	30	6	28	31	12	28	6	10	12	5	8	6
5	21	5	19	14	17	24	11	10	10	5	10	5
6	12	10	11	5	7	10	21	7	5	10	7	9
7	22	12	19	10	6	25	8	8	7	22	6	7
8	16	9	15	6	11	8	10	6	11	16	10	6
9	11	11	25	4	14	7	8	34	16	32	5	5
10	10	12	10	3	16	8	8	124	33	17	14	6
11	3	7	18	6	18	10	14	64	24	11	7	9
12	12	8	10	8	15	6	42	99	7	89	8	7
13	9	1	43	7	9	9	29	38	11	70	13	12
14	5	1	14	12	8	30	26	45	3	79	12	19
15	42	4	6	10	9	36	11	24	5	9	8	26
16	24	10	5	16	10	50	7	10	3	5	7	25
17	7	12	109	11	9	33	3	40	4	3	6	13
18	52	17	45	7	8	23	35	24	31	10	8	12
19	70	24	8	6	4	33	16	9	18	6	16	14
20	6	112	8	6	14	38	30	18	20	2	16	20
21	8	146	12	8	17	16	76	13	22	5	7	32
22	23	51	6	26	19	21	28	16	32	6	6	41
23	4	22	6	15	20	36	29	37	11	7	4	65
24	7	17	8	20	32	29	18	30	8	8	4	23
25	5	23	2	16	19	29	39	19	20	7	4	6
26	54	24	11	22	10	19	41	16	47	7	14	63
27	8	17	16	25	4	26	34	15	45	12	9	15
28	8	9	28	10	7	31	24	20	7	7	102	6
29	8	13	19	50	24	27	27	30	10	8	75	11
30	12	23	20	30	24	69	19	23	4	12	26	26
31		14		35	18		7		11		6	16
MEAN	17	21	19	16	14	23	23	27	16	16	14	18

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

Kp through August 31, 1990

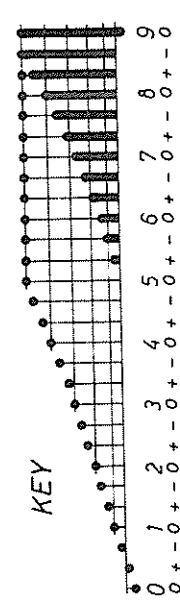
University of Göttingen



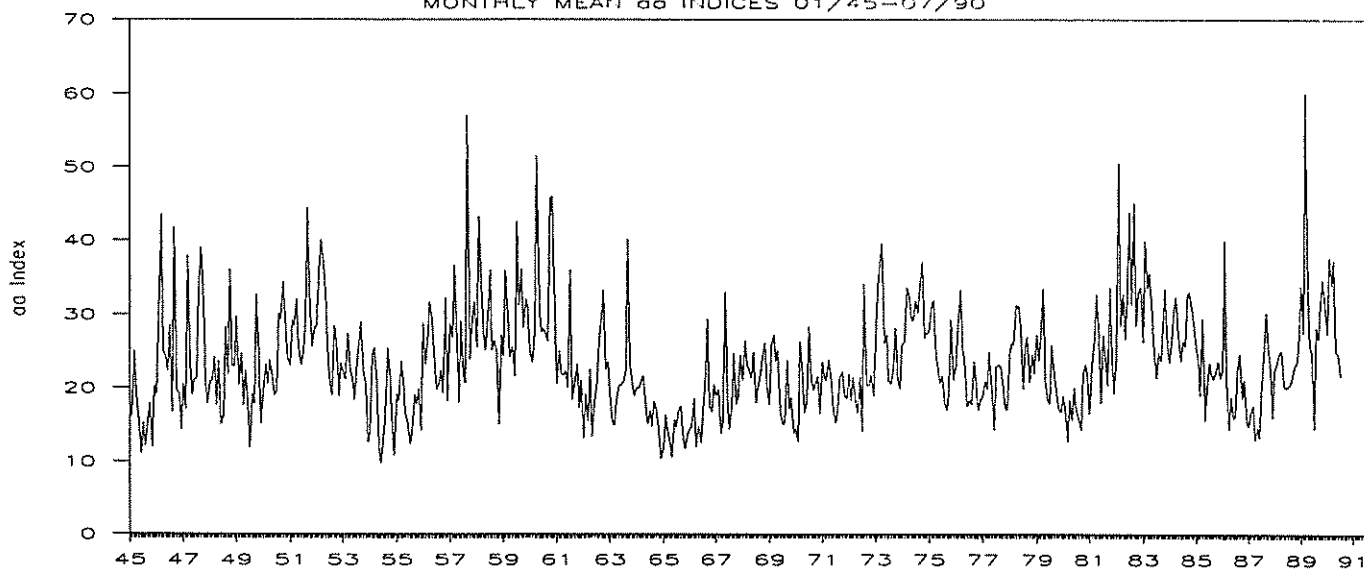
PLANETARY MAGNETIC
THREE-HOUR-RANGE INDICES
Kp (after Bartels)

Kp till 1990 August 31
Ks (from Wingst and Göttingen) till Sep 24

▲ = sudden commencement



MONTHLY MEAN $\delta\delta$ INDICES 01/45-07/90

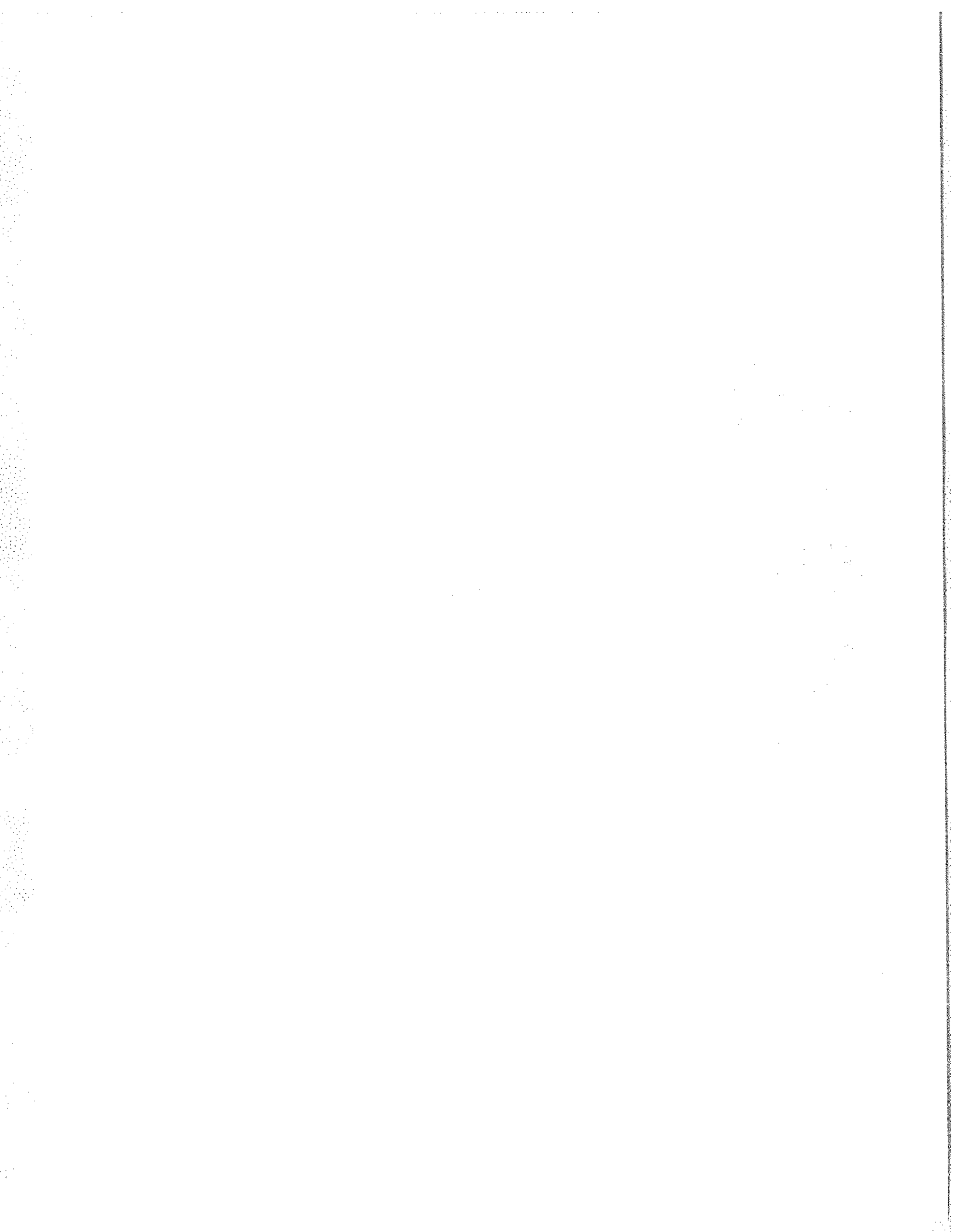


Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean
1945	16.1	16.4	25.0	19.1	15.4	11.1	15.3	12.1	15.6	17.9	12.0	20.2	16.3
1946	19.2	30.2	43.5	25.0	24.1	22.3	28.6	16.7	41.7	19.6	19.3	14.3	25.4
1947	20.6	17.1	37.9	23.3	19.1	21.1	21.4	32.9	39.1	31.3	20.7	17.9	25.2
1948	20.8	21.0	24.2	17.7	23.7	15.0	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						29.7

PRINCIPAL MAGNETIC STORMS

AUGUST 1990

Sta	Geomag Lat	Commencement Time (UT)		Type	SC Amplitudes			Maximum 3-Hour K Index Day(3-Hour Periods)	Ranges			End Hour Day (UT)
		Day	Time		D (Min)	H (Gamma)	Z (Gamma)		K (Min)	H (Gamma)	Z (Gamma)	
FRD 49.6N	01	0742	SC*	1.6	48	- 10	01(5,7)	5	25	145	67	02 01
BJI 28.5N	01	0741	SC	.8	20	2	01(5)	5	13	125	47	02 09
UJJ 13.5N	01	0739	SC	-.3	21	- 3		-	9	159	35	02 09
ABG 09.5N	01	0739	SC	-.7	17	- 3	01(3,5,6)	4	11	161	52	02 09
HYB 07.6N	01	0742	SC	-.5	34	- 3	01(3,6)	5	9	164	27	02 12
GUA 04.0N	01	0741	SC	.2	21	- 7	01(5)	5	--	90	20	02 00
ANN 01.5N	01	0739	SC	- 1.1	28	13		-	7	184	88	02 09
ETT 00.6S	01	0741	SC	- 1.3	60	44		-	9	204	104	02 14
KGL 56.5S	01	0740	SC	11	72	16	01(7)	5	27	152	184	02 11
GUA 04.0N	07	00--	..	..	..	..	07(1)	5	--	90	20	07 09
HYB 07.6N	13	0200	..	..	..	..	14(3,4)	5	6	132	31	14 21
BJI 28.5N	14	0600	..	..	..	..	15(5)	5	10	116	34	16 20
GUA 04.0N	14	06--	..	..	..	..	14(3)	6	--	140	10	14 19
ETT 00.6S	14	0030	..	..	..	..		-	6	211	74	14 21
COL 64.6N	15	09--	..	..	..	..	15(4,5) 16(4)	6	142	1110	660	16 20
HYB 07.6N	15	0000	..	..	..	..	15(4,5)	6	6	164	18	16 23
GUA 04.0N	15	09--	..	..	..	..	15(4)	5	--	100	10	15 18
ETT 00.6S	15	0000	..	..	..	..		-	7	195	57	16 20
COL 64.6N	21	06--	..	..	..	..	22(4)	7	290	1830	1400	22 19
FRD 49.6N	21	06--	..	..	..	..	23(2,3)	6	31	168	110	24 08
BJI 28.5N	21	0400	..	..	..	..	23(5)	6	17	156	56	24 15
HON 21.1N	21	0600	..	..	..	..	23(3,4)	7	--	--	--	24 22
UJJ 13.5N	21	0600	..	..	..	..		-	11	167	69	24 19
ABG 09.5N	21	0600	..	..	..	..	21(7,8) 22(1)	5	--	--	--	24 19
							23(5,6,7)					
HYB 07.6N	21	0500	..	..	..	..	21(7,8) 22(2) 23(4,5)	5	10	194	41	24 15
ETT 00.6S	21	0500	..	..	..	..		-	10	317	102	24 19
CNB 43.9S	21	05--	..	..	..	..	23(4)	7	34	226	106	24 15
KGL 56.5S	21	09--	..	..	..	..	21(8) 22(1)	6	44	448	296	22 12
GUA 04.0N	22	00--	..	..	..	..	22(1)	5	10	140	20	22 21
COL 64.6N	23	05--	..	..	..	..	23(4)	7	252	1990	1560	24 16
GUA 04.0N	23	23--	..	..	..	..	24(2)	5	10	120	20	24 15
GUA 04.0N	23	07--	..	..	..	..	23(4)	6	--	80	20	23 20
COL 64.6N	26	0543	SC	- 9	180	..	26(3,4,5,6,7)	6	216	1260	800	27 09
FRD 49.6N	26	0542	SC*	1.7	28	- 4	26(5)	6	28	186	94	28 --
BJI 28.5N	26	0542	SC	1.7	37	2	26(3)	7	15	175	45	27 18
HON 21.1N	26	0545	SC	--	..	..	26(3,4,5,6,7,8)	6	--	--	--	28 04
UJJ 13.5N	26	0540	SC	-.5	37	- 10		-	10	217	63	28 23
ABG 09.5N	26	0540	SC	-.6	32	- 9	26(3,4,5,6)	5	10	244	77	28 23
HYB 07.6N	26	0543	SC	-.2	34	- 4	26(3)	7	9	258	44	28 15
GUA 04.0N	26	0543	SC*	.7	32	- 9	26(3)	7	10	270	50	27 11
ETT 00.6S	26	0543	SC	- 1.3	63	40		-	10	407	141	28 15
GNA 43.2S	26	0541	SC	5.6	24	29	26(5)	6	24	150	200	26 16
CNB 43.9S	26	0543	SC	3.1	42	2	26(3)	6	20	190	62	27 10
KGL 56.5S	26	0542	SC	6	20	12	26(5,6)	8	80	696	200	27 16
HYB 07.6N	29	1123	SC	-.5	21	- 1	30(5,6)	5	10	126	31	31 14
ETT 00.6S	29	1121	SC	-.6	23	20		-	9	198	56	31 13
KGL 56.5S	29	1122	SC	7	64	16	29(7)	5	25	--	56	30 03
BJI 28.5N	30	0600	..	..	..	..	30(5)	6	14	121	34	31 11
UJJ 13.5N	30	1000	..	..	..	..		-	9	84	46	31 22
ABG 09.5N	30	1000	..	..	..	..	30(5,6)	5	9	103	58	31 22
GUA 04.0N	30	1057	..	..	..	..	30(5)	5	--	70	10	30 18
GUA 04.0N	30	22--	..	..	..	..	31(2)	5	10	50	20	31 06
KGL 56.5S	30	1056	SC	1	16	1	30(6) 31(1)	5	26	224	200	31 06



C O N T E N T S

Prompt Reports	LATE DATA	Number 554	Part I	Page
SOLAR RADIO SPECTRAL OBSERVATIONS				
	Potsdam and Weissenau July 1990 . . . . .			.162-170
COSMIC RAY MEASUREMENTS BY NEUTRON MONITOR				
Climax and Huancayo July 1990				
	Daily Counting Rates . . . . .			.171
	Chart of Variations. . . . .			.172
GEOMAGNETIC INDICES				
	Geomagnetic Activity Indices May-July 1990. . . . .			.173-175
	Sudden Commencements/Solar Flare Effects May-July 1990. . . . .			.176-178
	Provisional Values of Hourly Equatorial Dst May-December 1988 . . . .			.179-186

162
Late
Jul 90

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

JULY 1990

Observation Day	Start (UT)	End (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type			
				Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)				
01	0413	1858	WEIS				0438.2	0438.4	1				IIIB			
			WEIS				0633.4	0633.6	1				IIIB			
	0633	1435	POTS				0634.0E	1435.0	2				I,S,C,DC			
			WEIS				0726.2	0726.3	1				IIIB			
			POTS				0937.0	0937.1	2				IIIB			
			POTS				0941.7	0941.8	1				IIIB			
			POTS				1120.7	1120.9	2				IIIB			
			WEIS				1120.7	1121.2	3				IIIB			
			POTS				1139.2	1139.4	2				IIIG			
			POTS				1158.3	1158.4	2				IIIB			
			POTS				1159.5	1159.6	2				IIIB			
			WEIS				1225.0	1225.4	2				IIIB,U			
			WEIS				1249.5	1249.6	1				IIIG			
			POTS				1305.4	1305.5	1				IIIG			
			POTS				1312.0	1312.1	1				IIIB			
			POTS				1340.1	1340.2	1				IIIB			
			WEIS				1539.3	1539.6	2				IIIG			
			WEIS				1602.7	1603.2	3				IIIG,U			
			02	0412	0847	WEIS				0456.8	0457.4	3				IIIG,RS
						WEIS				0537.7	0537.7	1				IIIB
0633	1501	POTS					0633.0E	1457.0	2				I,S,C,DC			
		POTS					0855.5	0855.7	1				IIIG			
0854	1856	POTS					0910.9	0911.0	2				IIIB			
		WEIS					0941.3	0945.3	2				IIIGG			
		POTS					0941.6	0943.8	3				IIIG			
		WEIS					0941.6	0943.9	2				Spikes			
		WEIS		0943.3	0945.3	1							Cont			
		POTS					1206.3	1206.4	2				IIIB			
		POTS					1227.5	1227.6	1				U			
		POTS					1347.4	1347.6	1				IIIB			
		POTS					1422.8	1422.9	1				IIIB			
		WEIS					1507.1	1507.2	1				IIIB			
		WEIS					1509.1	1509.2	1				IIIG			
		WEIS					1537.2	1537.3	1				IIIB			
		WEIS					1546.4	1546.7	2				IIIB			
		WEIS					1729.3	1730.3	2				IIIG			
		WEIS					1733.9	1734.6	1				IIIG			
		WEIS					1835.2	1835.3	1				IIIB			
		03	0414	1857	WEIS				0419.3	0420.8	3				IIIGG	
					WEIS				0422.4	0423.3	2				IIIG	
0633	1443		WEIS				0510.6	0510.7	1				IIIB			
			WEIS				0555.4	0555.5	1				IIIB			
			WEIS				0606.6	0606.8					IIIB			
			POTS				0635.0E	1435.0U	3				I,S,C,DC			
			POTS				0706.3	0706.4	1				IIIB			
			WEIS				0706.3	0706.4	1				IIIB			
			POTS				0820.4	0820.5	1				IIIB			
			POTS				0842.6	0842.8	1				IIIB			
			POTS				0844.8	0846.7	3				IIIG			
			WEIS				0845.7	0847.2	3				IIIGG			
			WEIS				0858.2	0858.3	1				IIIB			
			WEIS				0908.1	0908.4	3				IIIG			
			POTS				0908.2	0908.4	2				IIIB			
			POTS				0913.8	0913.9	2				IIIB			
			WEIS				0945.1	0945.8	1				IIIG			
			POTS				0950.3	0950.5	2				IIIB			
			WEIS				0950.4	0950.7	1				IIIB			
			WEIS				1000.8	1000.9	1				IIIB			
POTS				1018.4	1018.6	1				IIIB						
POTS				1024.7	1024.8	2				IIIB						
WEIS				1024.7	1024.8	2				IIIB						
WEIS				1039.7	1040.3	1				IIIG						
POTS				1227.8	1443.0U	3				I,N,DC						
POTS				1310.3	1310.5	3				IIIG						
WEIS				1310.3	1310.5	3				IIIG						
WEIS				1318.0	1652.0	2				IIIN,IN						
POTS				1318.6	1318.7	2				IIIG						

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

163
Late
Jul 90

JULY 1990

Observation Start End Day (UT) (UT)	Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
03	WEIS				1509.4	1510.1	3				IIIG
04	0413 1532	WEIS			0434.0	1734.0	2				IIIS,DP
	0635 1523	POTS			0635.0E	1523.0U	2				I,N,C,DC,DP
		POTS			0750.8	0751.1	2				IIIG
		POTS			0810.5	0810.6	1				IIIB
		POTS			0833.2	0833.5	3				IIIG,U
		WEIS			0833.2	0833.3	2				IIIG
		WEIS			0956.2	0956.8	3				IIIG
		POTS			0956.3	0956.6	3				IIIG
	1540 1850	WEIS			1646.0	1854.0	2				I,N
		WEIS			1723.3	1724.3	3				IIIG
05	0415 1857	WEIS			0415.0	1857.0	3				IS,DC,Cont,RS
	0559 1507	POTS			0559.0E	1507.0U	3				I,C,N,DC,DP
		WEIS			0614.0	1708.0	2				IIIN,DP
		POTS			0841.3	0841.6	2				IIIG
		WEIS			1417.1	1417.3	3				IIIB
06	0415 0621	WEIS			0415.0	1718.0	3				IS,DC
		WEIS			0607.4	0607.7	3				IIIG
	0629 1435	POTS			0629.0E	1435.0U	3				I,N,C,DC,DP
		POTS			0838.7	0838.9	3				IIIB
	0627 1855	WEIS			0838.8	0838.9	3				IIIG
		WEIS			1008.0	1533.0	2				IIIN
		POTS			1013.5	1013.6	2				IIIB
		WEIS			1027.7	1029.9	3				IIIG
		POTS			1139.8	1140.3	3				IIIG
		POTS			1317.0	1317.1	1				IIIB
07	0417 1856	WEIS			0417.0	1851.0	2				IN,DC
		WEIS			0419.2	0419.9	2				IIIG
		WEIS			0614.0	1800.0	2				IIIN,DP
	0629 1445	POTS			0629.0E	1445.0U	3				I,C,N,DC
		WEIS			0629.9	0640.1	2				II
		POTS			0807.7	0807.9	2				IIIB
		WEIS			0807.8	0808.0	2				IIIG
	WEIS			1639.4	1646.7	3				IIIGG,RS	
08	0416 1257	WEIS			0511.9	0512.4	1				IIIG
		WEIS			0516.4	0517.9	3				IIIGG
	0633 1450	POTS			0633.0E	1441.0U	2				I,C,N,DC
		POTS			0841.5	0842.9	2				UNCLF
		POTS			0847.8	0848.0	1				IIIG
		POTS			0955.3	0955.7	1				IIIG
		WEIS			0955.5	0955.6	2				IIIB
		POTS			1210.9	1211.6	1				IIIG
		WEIS			1210.9	1211.7	2				IIIG
		WEIS			1235.8	1239.3	2				IIIG
		POTS			1237.0	1238.3	3				IIIG
		POTS			1252.0	1253.5	3				I,DC
		POTS			1412.3	1413.0	3				I,DC
	1356 1854	WEIS			1518.6	1519.9	2				IIIG
		WEIS			1521.7	1522.3	1				IIIG
	WEIS			1733.0	1733.2	3				IIIB	
09	0419 1855	WEIS			0509.6	0512.1	2				IIIG
		WEIS			0517.8	0518.9	1				IIIG
	0619 1513	POTS			0619.0E	0903.0	1				I,C,N,DC
		POTS			0644.7	0645.3	1				IIIG
		WEIS			0644.8	0645.3	1				IIIG
		WEIS			0748.4	0749.5	2				IIIG
		WEIS			0751.3	0751.4	1				IIIB
		POTS			0759.8	0800.7	2				IIIGG
		WEIS			0759.8	0800.0U	2				IIIG
		POTS			0910.9	0911.4	1				IIIG
		WEIS			0911.0	0913.1	2				IIIG
		POTS			0912.5	0912.9	1				UNCLF
		POTS			0914.7	0916.4	2				IIIG

164
Late
Jul 90

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

JULY 1990

Day (UT)	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
09			WEIS				0914.8	0915.9	2				IIIG
			POTS				0924.0	0925.3	3				IIIGG
			WEIS				0924.0	0925.8	3				IIIG
			POTS				0929.5	0929.6	1				IIIB
			POTS				0932.2	0932.4	1				IIIG
			POTS				0956.6	0957.5	1				IIIG
			WEIS				0957.2	0957.3	1				IIIB
			WEIS				0958.4	0958.9	1				IIIB
			WEIS				1000.4	1000.9	2				IIIG
			POTS				1001.4	1001.7	1				IIIG
			POTS				1003.0	1505.0U	1				I,C,N,DC
			POTS				1007.6	1008.8	3				IIIG
			WEIS				1007.6	1008.3	3				IIIG
			POTS				1020.7	1023.1	2				IIIGG
			WEIS				1020.8	1023.3	3				IIIG
			POTS				1025.4	1026.8	1				IIIG
			WEIS				1025.6	1026.8	2				IIIB,U
			WEIS				1034.3	1034.4	1				IIIG
			POTS				1204.6	1208.2	3				IIIGG
			WEIS				1204.7	1208.1	3				IIIGG
			WEIS				1312.8	1313.3	2				IIIG
			POTS				1313.0	1313.1	1				IIIB
			WEIS				1318.7	1318.9	2				IIIB
			POTS				1326.0	1326.4	1				IIIG
			POTS				1415.1	1418.3	2				IIIGG
			WEIS				1415.2	1418.4	3				IIIGG
			POTS				1428.4	1429.5	1				IIIG
			WEIS				1429.0	1429.7	2				IIIG
			POTS				1448.7	1448.8	1				IIIB
			WEIS				1612.7	1612.9	2				IIIG
			WEIS				1614.7	1619.4	3				IIIGG
10	0641	1457	POTS				1124.5	1126.0	1				IIIB
	0418	1853	WEIS				1125.7	1125.8	2				IIIB
			POTS				1225.2	1225.9	1				IIIG
			POTS				1227.9	1228.6	3				IV ,Z,IIIG
			WEIS				1227.9	1228.3	3				IIIG
			POTS				1230.4	1231.7	1				UNCLF
			POTS				1355.7	1406.8	3				IV ,C,IIIGG
			WEIS				1357.3	1400.0U					IIIGG,RS,U
			WEIS				1517.2	1518.3	3				IIIG
11	0420	0604	WEIS										
	0631	1854	WEIS										
	1137	1509	POTS										
12	0419	1853	WEIS										
	0629	1231	POTS										
13	0421	1329	WEIS										
	0957	1501	POTS				1022.0	1134.0	2				I,C,N,DC
	1408	1852	WEIS										
14	0421	1850	WEIS				0613.4	0613.8	1				IIIG
	0627	1421	POTS				0634.2	0634.7	2				IIIG
			WEIS				0634.2	0634.6	1				U
			POTS				0638.0	0638.1	1				IIIG
			POTS				1224.0	1236.0	1				I
			POTS				1310.0	1421.0U	2				I,N,C,DC
15	0424	1851	WEIS										
	0647	1435	POTS				1158.0	1235.0	1				I,N,C,DC
			POTS				1253.4	1253.7	1				IIIG
16	0423	1849	WEIS				1430.0	1431.1	2				IIIG
			WEIS				1617.8	1620.2	1				IIIG
			WEIS				1642.4	1642.8	3				IIIG,RS
17	0425	0954	WEIS				0643.4	0643.5	1				IIIB

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

165
Late
Jul 90

JULY 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
17			WEIS				0648.3	0648.6	3				111G,U
			WEIS				0805.0	0810.6	3				111GG
			WEIS				0920.2	0920.3	1				111B
			WEIS				0925.8	0929.3	2				111G
			WEIS				0940.2	0940.4	1				111G
	1000	1849	WEIS				1123.9	1125.1	2				111G
			WEIS				1158.4	1159.7	3				111G
			WEIS				1201.9	1203.9	3				111GG
			WEIS				1418.2	1418.4	3				111G
			WEIS				1501.3	1502.2	2				111G
			WEIS				1509.3	1509.4	1				111G
			WEIS				1515.9	1516.2	1				111B
			WEIS				1521.0	1521.8	2				111G
			WEIS				1625.7	1625.9	1				111B
			WEIS				1643.4	1644.6	1				111G
			WEIS				1724.7	1724.8	1				111B
18	0425	1541	WEIS				1113.1	1113.4	2				111G
	1235	1351	POTS										
	0937	1203	POTS				1255.5	1255.8	1				111G
	1553	1847	WEIS										
19	0427	1848	WEIS										
20	0427	0708	WEIS				0518.4	0518.9	3				111G
			WEIS				0600.8	0601.3	2				111G,U
			WEIS				0617.9	0618.0	2				111B
	0630	0916	POTS				0709.9	0710.0	1				111B
			POTS				0711.4	0711.7	3				111G
	0715	1845	WEIS				0719.4	0721.1	3				111G
			POTS				0720.5	0720.7	1				111B
			WEIS				0739.8	0739.9	1				111B
	0928	1421	POTS				1029.1	1029.4	3				111G
			WEIS				1029.3	1029.6	3				111G
			POTS				1038.0	1054.0	1				I
			POTS				1122.0	1406.0	1				I,N,DC
			POTS				1124.3	1124.5	1				111B
			POTS				1136.8	1137.1	2				111B
			WEIS				1136.9	1137.1	2				111B,U
			POTS				1141.2	1141.3	2				111B
			POTS				1150.7	1150.9	1				111G
			WEIS				1223.1	1223.2	1				111B
			POTS				1228.2	1228.9	1				111GG
			POTS				1241.4	1248.0	1				111GG
			POTS				1255.4	1255.5	2				111B
			WEIS				1255.4	1255.7	1				111B
			POTS				1309.6	1313.8	1				111GG
			WEIS				1312.3	1313.2	1				111G
			POTS				1324.2	1324.3	1				111B
			WEIS				1324.2	1324.9	3				111G
			POTS				1327.4	1328.3	1				111GG
			POTS				1400.0	1403.7	1				111GG
			WEIS				1402.3	1403.8	3				111G,U
			WEIS				1439.4	1439.5	3				111B
			WEIS				1441.8	1442.0	2				111G
			WEIS				1443.3	1443.5	1				111B
			WEIS				1515.8	1516.0	3				111B
			WEIS				1628.4	1628.6	1				111G
			WEIS				1645.8	1646.2	2				111G
			WEIS				1657.0	1657.1	2				111B
			WEIS				1659.3	1659.8	3				111G
			WEIS				1823.2	1823.3	3				111B
			WEIS				1826.3	1826.6	1				111G
			WEIS				1828.3	1828.9	3				111G
			WEIS				1830.3	1830.7	2				111G
21	0429	1846	WEIS				0434.6	0434.7	2				111G
			WEIS				0533.5	0534.7	3				111G
			WEIS				0555.2	0555.9	3				111GG

166
Late
Jul 90

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

JULY 1990

Observation Start End Day (UT) (UT) Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
21 0631 1443	POTS			0647.0	0857.0	1				I,N
	WEIS			0705.8	0706.3	3				IIIG
	POTS			0725.9	0726.2	1				IIIG
	POTS			0901.0	0901.1	2				IIIB
	WEIS			0903.5	0903.6	1				IIIB
	POTS			1005.0	1054.0	1				I,N
	POTS			1011.6	1011.9	2				IIIG
	WEIS			1011.9	1012.2	1				IIIB
	POTS			1013.8	1014.8	2				IIIG
	POTS			1019.0	1019.1	2				IIIB
	POTS			1047.8	1048.0	2				RS
	POTS			1056.5	1056.7	1				IIIB
	POTS			1122.2	1122.3	1				IIIB
	POTS			1126.4	1128.1	2				IIIG
	POTS			1135.0	1443.0U	1				I,N,DC
	POTS			1142.5	1143.7	2				IIIGG,U
	POTS			1153.2	1154.0	2				IIIG,RS
	WEIS			1153.4	1154.2	3				IIIG,U
	POTS			1207.1	1207.2	1				IIIG
	POTS			1238.0	1238.1	2				IIIB
	POTS			1301.2	1302.3	2				IIIG
	WEIS			1301.8	1302.2	2				IIIG
	POTS			1304.4	1305.7	1				IIIGG
	POTS			1309.9	1310.1	1				IIIG
	POTS			1320.2	1320.3	1				IIIB
	WEIS			1320.2	1320.3	1				IIIB
	POTS			1327.5	1333.4	2				IIIGG
	WEIS			1329.2	1329.5	1				IIIG
	WEIS			1331.1	1331.6	3				IIIG
	POTS			1358.8	1359.9	3				IIIG
	WEIS			1359.5	1400.0U	3				IIIG
	POTS			1402.2	1402.3	1				IIIB
	WEIS			1403.2	1403.7	3				IIIB,U
	POTS			1423.0	1423.2	1				IIIB
	WEIS			1452.3	1452.5	3				IIIB
	WEIS			1454.7	1455.3	2				IIIG
	WEIS			1547.0	1547.2	3				U
	WEIS			1624.3	1624.4	1				IIIB
	WEIS			1636.3	1636.4	1				IIIB
	WEIS			1657.7	1658.0	3				IIIG
	WEIS			1659.7	1659.8	2				IIIB
22 0631 1451	POTS			0657.0	0745.0	1				I,N,DC
	POTS			0707.6	0708.0	2				IIIG
0429 1449	WEIS			0707.9	0708.0	3				IIIB
	POTS			0716.6	0717.2	2				IIIG,U
	POTS			0910.6	0910.9	1				I
	POTS			0959.7	0959.9	1				IIIB
	POTS			1037.2	1037.5	1				I
	POTS			1040.2	1040.3	2				IIIB
	POTS			1128.3	1128.4	3				IIIB
	POTS			1132.5	1132.7	1				U
	POTS			1232.6	1234.2	1				IIIG
	POTS			1330.5	1330.7	1				I
	POTS			1333.4	1334.5	1				IIIB
	POTS			1413.0	1418.0	1				I
	WEIS			1420.8	1421.2	2				IIIG
1506 1843	WEIS									
23 0431 1844	WEIS			0431.6	0433.2	1				IIIG
	WEIS			0435.8	0435.9	1				IIIB
0629 1509	POTS			0638.3	0638.4	1				I
	POTS			0708.3	0708.4	1				UNCLF
	POTS			0829.5	1509.0U	1				I,N,DC
	POTS			0830.0	0834.4	2				IIIG
	WEIS			0833.9	0834.4	3				IIIG
	POTS			0855.5	0855.6	2				IIIB
	POTS			1049.8	1049.9	1				IIIB
	POTS			1120.5	1120.7	1				IIIG

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

167
Late
Jul 90

JULY 1990

Observation			Decimetric Band			Metric Band			Dekametric Band			Spectral Type
Day	Start (UT)	End (UT)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
23			POTS			1147.0	1147.1	1				IIIB
			POTS			1221.0	1222.0	1				IIIG
			WEIS			1235.7	1239.8	2				IIIG
			POTS			1235.8	1236.7	2				IIIG
			POTS			1238.7	1239.2	2				IIIG
			WEIS			1242.3	1245.9	3				IIIG
			POTS			1242.4	1243.0	3				IIIG
			POTS			1244.3	1245.9	2				IIIG
			POTS			1329.4	1329.8	1				IIIG
			POTS			1335.0	1335.1	1				IIIB
			POTS			1354.7	1355.1	2				IIIB
			POTS			1405.9	1406.4	2				IIIG
			WEIS			1432.3	1432.4	1				IIIB
			POTS			1444.5	1444.8	2				IIIG
			WEIS			1444.6	1444.9	3				IIIG
			WEIS			1516.0	1516.3	2				IIIG
			WEIS			1614.3	1614.8	3				IIIG
			WEIS			1621.2	1621.4	3				IIIB
			WEIS			1840.3	1840.4	1				IIIB
24	0431	0651	WEIS			0441.0	1758.0	2				IIIN,RS
			WEIS			0441.2	0441.6	3				IIIG
	0640	1501	POTS			0652.8	0657.7	2				IIIGG,U
			POTS			0715.8	0717.1	1				IIIGG
			POTS			0721.5	0732.5	2				IIIGG
	0657	1841	WEIS			0721.7	0722.4	3				IIIG
			WEIS			0725.9	0727.7	3				IIIG
			POTS			0735.0	0737.4	1				IIIG
			POTS			0745.5	0748.3	1				IIIGG
			POTS			0818.6	0818.8	1				UNCLF
			POTS			0833.3	0836.5	1				IIIG
			POTS			0847.8	0902.1	2				IIIGG
			POTS			0920.1	0937.5	3				IV ,IIIGG
			WEIS			0927.3	0932.4	3				IIIGG/V,U
			POTS			0954.0	1501.0U	3				I,N,DC
			POTS			0954.7	0954.8	1				IIIB
			POTS			1000.4	1000.5	1				IIIB
			POTS			1005.2	1005.3	1				IIIB
			POTS			1014.5	1014.6	1				IIIB
			POTS			1018.3	1115.6	3				IIIGG
			WEIS			1018.3	1019.4	3				IIIGG
			WEIS			1036.0	1042.4	3				IIIGG,U
			POTS			1124.1	1124.2	2				IIIB
			POTS			1137.9	1230.2	3				IIIGG,DCIM
			WEIS			1144.3	1146.5	3				IIIG
			WEIS			1150.9	1156.1	3				IIIGG
			POTS			1242.7	1242.8	1				IIIB
			POTS			1252.6	1309.0	2				IV ,IIIG
			POTS			1317.1	1346.8	1				IIIGG
			POTS			1358.9	1428.4	1				IIIGG
			POTS			1441.9	1442.0	1				IIIB
			POTS			1443.3	1457.2	2				IIIGG
25	0433	1842	WEIS			0449.3	0449.4	1				IIIB
			WEIS			0451.0	1152.0	2				IN
			WEIS			0451.1	0451.7	1				IIIG
			WEIS			0456.3	0456.7	1				IIIG
			WEIS			0547.2	0547.6	1				IIIG
			WEIS			0737.4	0737.8	3				IIIG,RS
			WEIS			0937.2	0937.4	2				IIIG
			WEIS			1009.4	1009.6	1				IIIB
			WEIS			1150.4	1151.1	2				IIIG
			WEIS			1200.4	1200.6	1				IIIB
			WEIS			1242.4	1242.6	1				IIIB
			WEIS			1524.2	1524.3	2				IIIB
			WEIS			1722.9	1723.2	1				IIIB
			WEIS			1742.8	1743.1	1				IIIB
26	0433	1445	WEIS			0610.6	0613.8	3				IIIG

168
Late
Jul 90

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

JULY 1990

Day (UT)	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
26			WEIS				0700.2	0700.8	2				IIIG	
			WEIS				0720.8	0720.9	1				IIIB	
			WEIS				0740.2	0740.3	1				IIIB	
			WEIS				0810.0	0811.3	3				IIIG	
			POTS				0902.6	0903.0	2				IIIG	
			WEIS				0922.2	0922.7	2				IIIG	
			WEIS				1046.3	1046.5	3				IIIB	
			WEIS				1104.9	1105.3	2				IIIG	
			WEIS				1112.9	1113.8	2				IIIG	
			WEIS				1134.1	1134.3	1				IIIG	
			WEIS				1151.9	1154.7	2				IIIG	
			WEIS				1200.9	1205.9	3				IIIG	
			WEIS				1209.1	1211.9	3				IIIG	
			WEIS				1247.3	1247.9	2				IIIG	
			WEIS				1314.7	1315.0	3				IIIG	
		1342	1459	POTS				1342.2	1342.3	1				IIIB
				POTS				1345.9	1346.0	1				IIIB
				POTS				1348.8	1348.9	1				IIIB
				POTS				1351.5	1351.6	1				IIIB
				POTS				1357.4	1357.5	1				IIIB
				POTS				1359.5	1359.6	2				IIIB
				POTS				1405.0	1459.00	1				I,N
				POTS				1417.1	1417.2	1				IIIB
				POTS				1428.7	1428.9	1				IIIG
				WEIS				1428.7	1428.8	1				IIIB
				POTS				1434.0	1434.1	1				IIIB
				POTS				1446.7	1448.5	1				IIIG
				POTS				1450.5	1451.0	1				IIIG
				POTS				1458.3	1458.4	1				IIIG
		1451	1839	WEIS				1507.0	1507.2	1				IIIB
				WEIS				1529.8	1530.5	3				IIIG
				WEIS				1623.6	1623.9	3				IIIG
				WEIS				1659.3	1700.4	3				IIIGG
				WEIS				1702.5	1704.9	3				IIIG
			WEIS				1823.7	1825.8	3				IIIGG	
27	0435	1243	WEIS				0556.7	0559.4	3				IIIGG	
	0631	1501	POTS				0631.0E	1501.00	2				I,N,DC,DP	
	1304	1839	WEIS				0720.0	1530.0	3				IIIN	
			POTS				0720.5	0720.9	1				IIIG	
			POTS				0726.1	0726.8	1				IIIG	
			POTS				0729.2	0729.5	1				IIIG	
			POTS				0800.2	0803.1	1				IIIG	
			POTS				0839.0	0839.2	1				IIIG	
			POTS				0846.9	0847.0	1				IIIB	
			POTS				0928.5	0928.6	2				IIIB	
			POTS				0937.7	0937.8	3				IIIB	
			POTS				0945.9	0946.1	1				IIIB	
			POTS				0948.1	0948.8	1				IIIG	
			POTS				0951.1	0952.4	1				IIIG	
			POTS				1023.3	1023.5	1				IIIB	
			POTS				1032.1	1033.9	3				IIIGG	
			POTS				1106.1	1106.9	3				IIIG	
			POTS				1141.6	1141.7	1				IIIB	
			POTS				1209.4	1209.5	1				IIIB	
			POTS				1215.8	1215.9	2				IIIB	
			POTS				1328.1	1328.4	1				U	
			POTS				1333.7	1333.8	1				IIIB	
			POTS				1345.7	1345.9	1				IIIG	
		POTS				1354.9	1355.0	2				IIIB		
		POTS				1412.2	1415.0	1				IIIGG		
		POTS				1418.1	1418.7	1				IIIGG		
		POTS				1448.1	1448.7	2				IIIG		
28	0435	0639	WEIS											
	0637	1445	POTS				0646.3	0646.5	1				IIIG	
			POTS				0712.3	1445.00	2				I,N,DC	
			POTS				0757.6	0758.9	2				IIIGG	
	0709	1837	WEIS				0757.8	0758.2	2				IIIG	

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

169
Late
Jul 90

JULY 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type
	Start (UT)	End (UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	
28			POTS				0847.2	0849.3	1				IIIGG
			POTS				0936.6	0936.7	1				IIIB
			POTS				0944.6	0946.3	3				IIIG
			POTS				1003.7	1003.8	1				IIIB
			POTS				1006.4	1007.7	1				IIIG
			POTS				1016.3	1016.4	1				IIIG
			POTS				1023.1	1023.7	3				IIIG
			WEIS				1023.2	1023.9	3				IIIG
			WEIS				1027.9	1028.0	2				IIIG
			POTS				1044.3	1045.3	2				IIIG,U
			WEIS				1044.8	1045.2	2				IIIG
			POTS				1103.1	1103.5	1				IIIG
			POTS				1107.8	1109.1	2				IIIG
			POTS				1125.1	1127.9	1				IIIG
			POTS				1138.6	1139.0	3				IIIG
			POTS				1147.6	1149.8	2				IIIG
			POTS				1200.4	1200.6	1				U
			POTS				1208.1	1208.2	1				IIIB
			POTS				1214.7	1214.8	1				IIIB
			POTS				1224.3	1226.5	3				IIIGG
			WEIS				1224.3	1224.5	1				IIIB
			WEIS				1226.2	1226.4	3				IIIG,U
			POTS				1229.0	1229.3	1				IIIG
			POTS				1235.1	1235.2	1				UNCLF
			POTS				1310.8	1311.2	1				IIIG
			POTS				1314.1	1314.3	1				IIIG
			WEIS				1314.2	1314.3	1				IIIB
			POTS				1337.3	1337.5	1				IIIB
			POTS				1349.5	1350.4	2				IIIG
			WEIS				1349.7	1349.9	1				IIIG
			POTS				1353.8	1354.3	1				IIIG
			POTS				1412.7	1413.2	1				IIIG
			WEIS	1415.0	1504.0	1							IS,DC
			POTS				1416.5	1417.1	1				IIIG
			POTS				1420.3	1420.4	2				IIIB
			POTS				1426.7	1426.9	3				IIIG
			WEIS				1426.7	1427.0	3				IIIG
			WEIS				1445.1	1445.4	3				IIIG
			WEIS				1510.8	1511.2	2				IIIG
			WEIS				1635.5	1637.9	3				IIIG
			WEIS				1755.4	1755.6	1				IIIB
	29	0438	1837	WEIS	0050.2	1821.0	1						
			WEIS				0553.8	0554.1	2				IIIB
0637		1445	POTS				0656.6	0657.1	1				IIIG
			POTS				0710.9	0711.2	1				IIIG
			WEIS				0717.8	0718.6	2				IIIG
			POTS				0803.9	0804.0	1				IIIB
			POTS				0831.3	0831.4	1				IIIG
			POTS				0848.1	0848.2	1				IIIB
			POTS				0857.1	0857.4	1				IIIG
			POTS				0859.0	0901.0	2				IIIG
			WEIS				0859.5	0859.9	1				IIIG
			WEIS				0901.0	0903.7	3				IIIG,U
			WEIS				0905.3	0905.4	1				IIIB
			POTS				0920.4	0920.5	1				IIIB
			POTS				0927.8	0927.9	1				IIIB
			POTS				0940.4	0940.7	1				IIIG
			POTS				0946.5	0946.6	2				IIIB
			POTS				0952.9	0953.1	3				IIIG
			WEIS				0952.9	0953.2	3				IIIG
			POTS				0957.5	0959.0	3				IIIG
			WEIS				0957.7	0958.1	3				IIIG
			POTS				1004.0	1445.0U	1				I,N,C,DC
			POTS				1007.0	1007.1	1				IIIB
			POTS				1016.2	1019.0	2				IIIGG
			WEIS				1016.4	1016.7	1				IIIB
			WEIS				1020.7	1020.9	3				IIIG
			WEIS				1028.4	1029.4	1				IIIG

170
Late
Jul 90

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

JULY 1990

Day	Observation		Sta	Decimetric Band			Metric Band			Dekametric Band			Spectral Type	
	(UT)	(UT)		Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)	Start (UT)	End (UT)	Int (1-3)		
29			POTS				1030.9	1031.2	1				IIIG	
			POTS				1041.6	1043.2	1				IIIG	
			WEIS				1042.8	1042.9	1				IIIB	
			POTS				1048.0	1050.2	2				IIIGG	
			WEIS				1048.2	1048.3	1				IIIB	
			WEIS				1049.4	1050.4	2				IIIG	
			POTS				1054.9	1055.9	1				IIIB	
			POTS				1117.6	1119.5	1				IIIG	
			POTS				1129.7	1129.8	1				IIIB	
			POTS				1134.6	1134.7	1				IIIG	
			POTS				1145.8	1145.9	2				IIIB	
			POTS				1209.3	1209.4	1				IIIB	
			POTS				1212.7	1214.0	1				IIIG	
			POTS				1216.1	1219.0	1				IIIG	
			POTS				1226.0	1226.1	1				IIIB	
			POTS				1257.5	1301.4	1				IIIG	
			POTS				1307.3	1311.6	1				IIIG	
			POTS				1321.5	1323.0	1				IIIG,U	
			POTS				1330.0	1330.2	1				IIIG	
			POTS				1336.0	1336.9	1				IIIG	
		POTS				1343.4	1349.3	3				IIIGG		
		POTS				1417.1	1417.3	2				U		
		POTS				1432.3	1432.4	1				IIIB		
		WEIS				1809.2	1809.3	2				IIIB		
30	0437	1512	WEIS	0512.0	1346.0	1							IN	
	0637	1517	POTS				0637.0U	1459.0U	2				I,N,DC	
			POTS				0655.0	0658.9	1				IIIGG	
			POTS				0701.1	1459.0U	1				IV ,C,P,RS CONT	
			WEIS	0714.0	0810.0	1							II	
			POTS				0715.1	0721.4	3				II	
			WEIS				0715.2	0736.2	3				II H	
			POTS				0724.3	0726.0	1				II HARM ?	
			WEIS				0732.0	0813.0	2				IIIS	
			WEIS				0912.9	0913.5	2				IIIG	
			WEIS				0938.8	0940.3	2				IIIG,U	
			WEIS				0942.4	0944.3	2				IIIG	
			POTS				1223.6	1223.8	2				U	
			WEIS				1231.0	1231.4	2				IIIG	
			POTS				1231.2	1239.3	3				IIIGG,U	
			WEIS				1236.2	1239.3	2				IIIG,U	
			WEIS				1238.2	1238.3	2				Spikes	
			WEIS				1315.0	1315.4	2				IIIG	
		1525	1834	WEIS				1558.9	1559.1	2				IIIB
				WEIS				1657.9	1652.6	2				IIIG
			WEIS				1659.8	1700.6	3				IIIG	
			WEIS				1801.3	1801.5	2				IIIB	
31	0633	1515	POTS				0729.9	0730.7	1				IIIG,U	
	0440	1831	WEIS				0730.5	0730.7	1				IIIB	
			POTS				0910.2	0910.3	1				U	
			WEIS				0928.0	0928.2	1				IIIB	
			POTS				0933.7	0937.9	1				IIIGG	
			WEIS				0935.7	0935.8	2				IIIB	
			POTS				1019.0	1054.0	1				I,N,DC	
			POTS				1133.8	1134.7	1				IIIG	
			POTS				1217.1	1217.3	2				IIIB	
			POTS				1236.0	1307.0	1				I,N	
			POTS				1247.1	1247.3	1				IIIB	
			POTS				1255.8	1256.1	1				IIIB,U	
			POTS				1303.4	1303.5	1				IIIB	
			POTS				1407.7	1411.3	1				IIIGG	
			POTS				1437.1	1437.2	1				IIIB	
			POTS				1450.0	1509.0U	1				I,N,DC	
			POTS				1455.2	1455.7	3				IIIG	
			WEIS				1620.4	1620.8	2				IIIG,U	
			WEIS				1652.3	1652.6	2				IIIG	

COSMIC RAY INDICES
(Neutron Monitor)

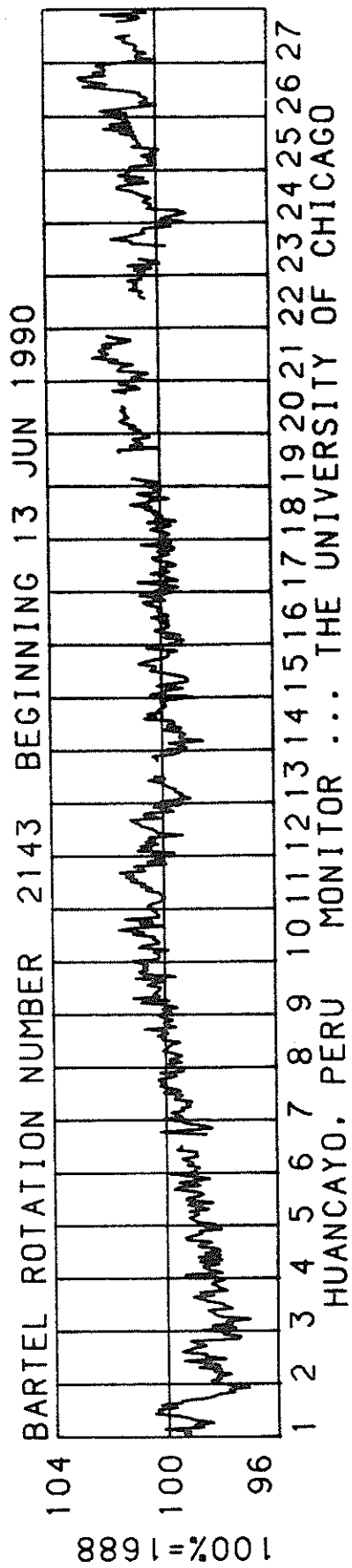
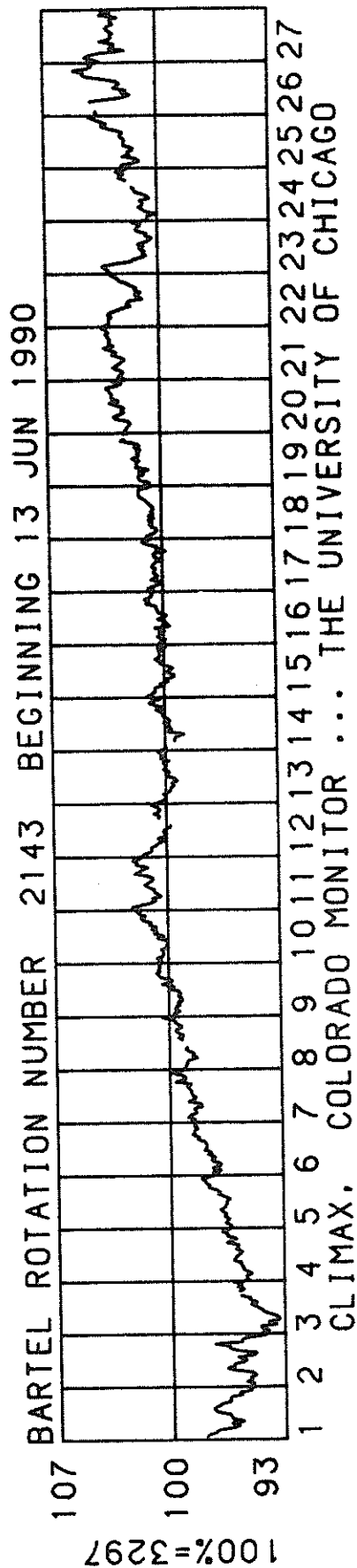
171
Late
Jul 90

JULY 1990

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		5887.3	5316.1	3346.7	3426.7	1700.2(24)
2		5939.9	5356.2	3383.0	3433.8	1707.2(38)
3		5943.1	5382.1	3390.6	3426.8	1712.3
4		5880.9	5353.4	3372.2	3407.5	1699.9(22)
5		5864.5	5273.7	3346.1	3402.8	1696.7(38)
6		5879.0	5276.5	3338.9	3403.9	1694.2
7		5932.3	5331.5	3373.0	3415.9	1699.8
8		5981.8	5376.7	3406.6	3438.7	1713.2
9		5946.1	5365.3	3398.3	3433.9	1701.9(38)
10		5884.5	5297.9	3341.6	3395.6	1688.4(38)
11		5836.3	5254.8	3305.9	3383.9	1686.6
12		5917.7	5285.4	3359.0	3403.7	1696.1
13		5956.5	5321.9	3389.2	3413.5	1698.7
14		5928.6	5331.2	3374.5	3400.5	1693.4
15		5865.2	5316.9	3350.8	3391.4	1693.6(38)
16		5860.6	5287.6	3370.1	3393.7	1686.7(38)
17		5842.6	5258.0	3330.1	3378.8	1686.1
18		5901.6	5328.1	3367.0	3404.8	1706.3
19		5964.0	5392.7	3408.9	3429.5	1715.1
20		5945.0	5373.9	3404.7	3432.2	1714.1
21		5958.9	5366.8	3407.7	3425.6	1707.2
22		5956.2	5373.2	3404.4	3419.2	1704.2
23		5921.0	5360.0	3381.0	3407.3	1700.2(24)
24		5926.2	5348.2	3384.2	3416.7	1702.2
25		5923.1	5353.3	3374.8	3413.5	1701.5
26		5939.9	5358.4	3375.8(26)	3407.8	1705.3
27		5950.7	5379.8	3386.4(36)	3422.2	1709.8
28		5792.5	5227.1	3295.6	3382.0	1678.0
29		5783.5	5226.8	3301.7	3381.7	1687.9
30		5813.6	5261.7	3316.5	3384.0	1690.3
31		5865.4	5298.1	3344.6	3400.4	1702.0
Mean		5902.9	5323.7	3365.0	3408.8	1699.4

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.

COSMIC RAY INDICES (Neutron Monitor)



GEOMAGNETIC ACTIVITY INDICES

May 1990

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								aa Provisional				
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M	
1	Q10A	3-	3	2-	2	2	2	1	17-	8	0.5	2+	3-	2-	2-	2-	2-	2-	1+	14	17	14	15	16
2		1	2	2+	4-	3+	2-	2-	18-	10	0.6	1	2-	2+	4-	4-	2-	1+	2-	19	20	27	22	25
3		2	3	3-	4-	4-	2	4+	25+	18	1.0	2-	3	3-	3+	4-	2	3	4-	30	34	28	24	38
4		3+	2+	2+	3	3+	3-	2+	21+	12	0.7	3-	2+	2+	3+	3	2+	2	2	21	29	16	21	24
5		2	2-	3	3+	2-	2+	3-	18	10	0.5	2-	1+	3-	4-	2-	2	3-	1+	18	24	21	26	19
6	Q4	1	2	1+	2-	2-	1+	1+	12-	5	0.2	1	2-	2-	2-	2-	1+	1+	1+	10	14	9	12	11 CC
7	Q7A	2-	2-	2-	1+	2+	3	1-	14-	7	0.3	1+	1+	2-	1+	2-	2+	1-	1	10	17	8	11	14 CC
8		2	3-	2-	2	3-	3-	2	19+	11	0.6	2-	3-	2-	2	2+	2+	2	3	18	27	11	15	23
9		3	2	3+	3	4-	2	3	24+	16	0.9	3-	2	3	3	4-	2	3-	4	31	31	31	26	36
10	D3	4-	5+	6-	5-	3+	3+	4+	33+	33	1.3	3	4+	5-	4+	3	3-	3-	3-	44	59	36	63	32
11		4	5+	4+	3-	4-	2+	3+	29	24	1.2	4-	4	4	3	3+	2+	3	3	37	38	26	39	26
12	Q6A	3+	2	2-	1+	1-	1-	1	13-	7	0.3	3	2	1+	1	1-	1-	1-	2-	11	15	5	12	8 C
13		1-	1+	1+	1+	2	4	3+	17+	11	0.6	1	1+	1+	2-	2	3	3	3-	17	23	14	9	28 K
14	Q2	1+	1-	1-	0+	1-	1-	1	6+	3	0.1	1+	1+	1-	1-	0+	1-	1	1-	6	7	5	5	7 CK
15	Q5	1+	2-	1+	1	2	2	2-	11+	5	0.2	1+	1+	1	1	2-	1+	1+	0+	8	11	7	9	9 CC
16	Q1	1-	1-	1-	0+	1-	1-	1-	5-	3	0.0	1-	1-	1	1-	1	1-	1-	0+	5	8	3	4	7 CC
17	Q3	1-	1+	1+	1+	1	1	1+	9-	4	0.1	1-	1+	1+	1+	1+	1	1-	1-	7	10	7	8	9 C
18	D5	2	2-	3+	4-	5	6+	4-	30	31	1.3	2	1+	3+	4	4+	5-	4-	4	44	45	49	31	63
19		4	4+	3-	2+	3-	3+	3+	26-	18	1.0	3+	4-	2	2-	3	3-	3-	3+	28	32	25	29	28
20		4-	4-	2	2+	3-	4-	5-	27-	20	1.0	3	3	2	2+	3-	3	4	3+	29	43	19	24	38
21		4	2	1	3	3+	4	4	26+	22	1.1	4-	2-	1	3+	3	4-	3+	4	33	38	27	25	40
22	D4	4-	4+	5+	4+	5	4	4-	34-	32	1.3	3+	4	5	4+	5-	4-	3+	3-	55	42	55	51	46
23		3+	3-	2+	3	2	3	1+	19+	11	0.6	3-	2+	2+	3-	2-	3-	1+	2-	18	28	11	22	18
24	Q9A	1-	1+	1	1+	1-	2	3+	13+	8	0.4	0+	1	1-	1+	1-	2-	2+	2+	10	21	4	9	16 C
25		3	3+	3	4-	4+	3+	3+	27+	20	1.0	3	3+	3-	4-	4-	3	3+	3-	34	32	28	28	32
26	D1	4+	4-	3	3+	5	4-	6-	36	47	1.5	4-	4-	3-	3+	4	3	4+	6-	55	74	38	35	77
27	D2	4-	6+	7-	5+	3	4+	3-	35	45	1.5	3+	5+	6-	4+	3	4	2+	3-	59	54	64	86	32
28	Q8A	1+	2-	2-	2-	2	3	2-	15-	7	0.4	1+	2-	2-	2	1+	2	1+	2-	12	17	9	9	17 C
29		2+	2-	2	2+	2	2+	3-	19-	10	0.5	2	1+	2+	2+	2	2	2	3+	18	24	15	17	22
30		3-	3+	3+	4+	4-	3+	5	29	23	1.1	3-	3+	3	4+	3+	3-	4-	3	36	45	27	32	40
31		3	3	2-	3-	2+	2+	3-	20+	11	0.6	3-	3-	1+	2+	2	2	3-	2	18	25	14	20	19
Mean										16	0.72									24.4	29.2	21.1	25.1	
Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov						
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF	
1	3-	3-	2-	2	2	2	2-	16	2	3-	1+	2-	1+	1+	2	1+	13	129.0	70	68	77			
2	1+	2-	2+	4-	3+	2	2	2-	21	1-	2	2	3+	4-	1+	1	2-	18	129.2	59	55	78		
3	1+	3	3-	4-	4-	2+	3+	4-	32	2	3	3-	3	3+	2	3	3+	27	125.2	61	58	73		
4	3	3-	3-	3+	3+	3-	2+	2	25	3-	2	2-	3	3-	2-	2-	2	18	123.6	86	84	71		
5	2	2-	3-	4-	2	3-	3-	1+	20	2-	1	2+	4-	1+	1	3-	1-	15	130.6	80	77	79		
6	1	2	2-	2	2	1+	1+	2-	12	1-	2-	2-	1+	1+	1	1+	9	151.0	106	106	101			
7	1+	2-	2-	1+	2	3-	1	1+	12	1+	1	2-	2-	1+	2	0+	0+	9	155.5	132	125	106		
8	2	3-	2	2+	3-	3-	2+	4-	23	1	3-	2-	2-	2-	2-	1	2+	13	170.7	138	135	122		
9	3	2	3+	3+	4-	2	3	4+	32	3-	2	3	3	4-	2	3-	4	30	174.6	133	138	127		
10	3	5-	5	4	3+	3	4-	3	49	3	4	4+	4+	3-	2	3+	2-	40	195.4	116	128	149		
11	4-	4+	4	3	3+	2+	3	3+	40	4-	4-	4	3	3	2	3-	3	34	205.4*	126	127	160		
12	3-	2-	2-	1+	1	1-	1	2	11	3+	2	1+	0+	0+	0+	1	10	215.2	146	142	170			
13	1+	2-	1+	2+	2+	3+	3	3	20	0+	1+	1+	1	1+	3-	3	2+	14	225.8	144	141	182		
14	2-	1	1	1	1-	1	1+	1-	7	1	1+	1-	0+	0+	0	1-	1-	4	224.2*	141	137	180		
15	1+	2-	1+	1	2+	2	2-	1-	10	1+	1+	1-	1	1	1-	0+	0	5	246.6	144	152	204		
16	1	1	1+	1+	1+	1	1	1-	7	1-	1-	1-	0+	1-	0+	0+	0+	3	251.5	157	168	210		
17	1	1+	2-	2-	2-	1+	2	1-	10	1-	1	1+	1-	1	1-	1-	0+	5	248.9	167	177	207		
18	2-	2-	4-	4	4+	5	4-	4-	47	2+	1	3+	4-	4	4+	3+	4+	41	271.8	170	181	232		
19	3+	4-	2	2	3	3	3-	3	28	3+	4	2	2-	3	2+	2	4-	27	280.0	187	190	240		
20	3+	3+	2	3-	3	3+	4	3+	33	3-	3-	2	2	2	3-	4	3+	26	272.5	187	183	232		
21	3+	1+	1+	3+	3	4-	4-	5-	37	4-	2+	1-	3	3-	4-	3-	3	28	259.2	193	197	218		
22	4-	4+	5+	4+	5	4-	3+	3-	60	3	4-	5	4	4+	4-	3+	3-	51	250.0	187	179	208		
23	3	3-	3-	3-	2+	3	1+	2-	20	3-	2	2	3-	1+	2	1	1+	15	239.5	160	156	197		
24	0+	1+	1	2-	1+	2+	3	3	15	0+	1-	1-	1-	0+	1-	1+	1	5	209.2	158	151	164		
25	3-	3+	3	4-	4	3+	3+	3	36	3	3+	2	4-	4-	3	3+	3-	31	189.1	146	147	142		
26	4-	4-	3-	4-	5-	3	5-	6	65	4-	4-	3-	3-	3+	3-	3+	5+	45	186.3	134	131	139		
27	4-	6-	6-	4+	3+	4	2	3	62	3+	5+	6-	4+	3-	4	2+	2-	57	164.6	139	137	116		
28	2-	2-	2	2+	2-	2+	2-	2	15	1-	2-	2-	2	1	2	1	1	10	159.3	116	118	110		
29	2+	2-	3-	3-	2+	2+	2+	3+	21	2-	1	2	2	2-	2-	2-	3+	16	144.8	118	113	94		
30	3-	3+	4-	5-	4-	3	4	3	42	3	3+	3-	4-	3-	2	4-	3-	31	142.5*	90	100	92		
31	3-	3-	2-	3-	2+	2	3-	2+	20	3-	3-	1+	2	2-	2-	3-	2-	16	142.5*	101	106	92		
Mean									27.4									21.5	194.0	132.0	132.5	147.5		

G E O M A G N E T I C A C T I V I T Y I N D I C E S

June 1990

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								aa Provisional				
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8	Am	N	S	M	
1	2	3	3	2-	2-	3-	3-	2	19-	10	0.6	2-	3-	3	2+	2-	2	2+	2-	18	27	19	26	20
2	09	2	2-	2	2	1+	1+	1+	13-	6	0.3	1+	1+	2	2	1+	1+	1	1-	10	15	8	13	10 CC
3	Q10	1+	2	1	1	2	1+	2+	13	6	0.3	1	2-	1	1+	2	1+	1+	2-	10	17	10	11	16 CC
4	Q7	1	2+	2	1+	1+	0+	1-	11	5	0.2	1-	2	2-	2-	1+	1-	1-	2-	9	17	8	14	11 CC
5	Q5	1	1+	1	2-	2-	2-	1-	11	5	0.2	1	1	1-	2-	1+	2-	1+	2-	9	15	7	11	10 CK
6		2+	3-	2+	2+	2+	2+	3+	20	10	0.6	3-	3-	2+	2	3-	3-	2+	3	22	30	21	22	29
7	D5	3+	5+	4-	3	3+	3	3+	28	22	1.1	3	4	3+	3-	3	3-	3-	2+	29	44	24	39	29
8		3	4-	4-	3+	2+	3	3-	25	16	0.9	3	3+	3+	3	2+	3-	2+	3	28	45	24	37	33
9	D4	4-	4-	6-	5	5	4-	3	32+	32	1.3	4-	4-	5	4+	4+	3	3-	2+	48	48	49	60	38
10		5-	3	2	3	3	3-	2	24+	17	0.9	4-	3	2	2+	3	3-	2-	4-	27	36	26	30	32
11		2+	3	3-	2+	3-	2+	3-	21-	11	0.6	3-	3	2+	2+	3	2	2	3	22	30	17	22	25
12	D1	4	3	4+	4+	5+	7	8-	44	89	1.8	3+	3	4	4+	4+	6-	6+	7-	96	124	72	46	151
13	D3	8-	6	6-	5-	6+	5-	5-	43+	70	1.7	6+	5	5	4+	5	4-	4-	3	83	99	62	98	63
14	D2	6	6+	3+	6-	7+	8-	4	43+	79	1.8	5-	6-	3+	5	5+	5+	3	3-	79	83	75	79	79
15		2+	4-	2	1+	2+	2	2	18	9	0.5	2+	4-	2	2-	2-	2	2	2	18	24	16	23	18
16	Q4	2+	1	1+	1-	1	1	1+	9+	5	0.2	2+	1	1+	1-	1	1	1+	1	8	13	5	11	7 CC
17	Q2	0+	1-	1	1-	0+	0+	1-	5-	3	0.0	0+	1-	1+	1-	2-	0+	1-	1-	5	7	3	5	5 CC
18		1-	2	2+	2	2+	3	4-	19-	10	0.6	1-	1+	2+	3-	2+	3-	3-	2+	17	26	14	16	24
19		2+	3-	1+	1+	2+	1	1-	12+	6	0.3	2+	2+	1+	1+	2-	1-	1	1	11	17	6	11	12 CK
20	Q1	0+	0+	1-	0+	1-	0+	1-	4	2	0.0	1-	0	1-	0+	1-	0+	1-	1-	3	7	2	3	6 CC
21	Q6	0+	1	1-	1-	1+	2	2+	10+	5	0.2	1-	1	1-	1	1+	1+	2	2-	8	15	5	5	15 CC
22	Q8	2	2+	1+	1	1+	1+	1-	12-	6	0.2	2+	3-	2-	1+	1	1+	1	2-	12	15	9	15	9 CC
23		2-	1	1+	2+	3-	2+	1+	13+	7	0.3	2-	1+	2-	2+	2+	2+	1	1-	12	17	15	14	18
24		2-	2	2	2+	2-	2	2+	16+	8	0.4	1+	2-	2	2	2-	2-	2-	2-	13	18	10	15	13
25		2-	2+	2	1+	2	1+	3-	15+	7	0.4	2-	2+	2	2-	2-	1+	2+	2-	13	18	11	14	15
26		2-	2	2-	3-	2-	1+	2-	15-	7	0.3	2-	2	2	2+	2-	2-	2-	2-	13	14	15	16	13 C
27		1+	1	1+	2-	3+	2-	2+	17+	12	0.7	2	1+	2-	2	3	1+	2	4-	18	24	14	10	29
28		2	2	3	2+	2-	2-	1	15-	7	0.4	2	2+	3	3-	2-	1+	1	1	15	14	18	22	9
29		1-	3	3-	2-	2+	2-	2+	15+	8	0.4	1	3+	3-	2	2-	2-	2	1	16	20	12	18	14 K
30	Q3	1	1-	0+	1-	1+	1	1+	7	4	0.1	1+	1	1-	1-	1+	1+	1	1+	7	11	6	5	11 CC

Mean 16 0.58 22.6 29.7 19.6 24.6

Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								Prov				
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8	As	Sa	Ri	Ra	Rs	IMF
1	2-	3	3	3-	2	2+	2+	2	20	2-	3-	3-	2	2-	2-	2+	1+	16	140.6	96	94	90
2	2-	2-	2-	2	2	2-	1	1-	11	1+	1+	2	2-	1	1	1-	1-	8	141.2	80	90	90
3	1+	2-	1+	2-	2+	2-	2	2	13	0+	1+	1	1-	2-	1	1	2-	7	146.1	73	84	96
4	1	2+	2+	2	2-	1	1	2	12	0+	2-	1	1+	1-	0+	0+	1+	6	148.1	77	85	98
5	1+	1	1	2+	2	2	1+	2	12	1	1-	1-	1+	1	1	1-	1	6	153.7	79	81	104
6	2+	2+	3-	2+	3	3-	3	3	24	3	3-	2	2-	3-	2+	2-	3	20	161.4	96	100	112
7	3+	4+	3	3	3	3	3-	3-	35	3-	4-	3+	3-	3-	2	2	2	24	183.6	107	100	136
8	3+	3+	3+	3+	3-	3	3-	3-	32	3-	3+	3	3-	2+	2	2	3	25	195.5	107	116	149
9	3+	4-	5	5-	5-	3	3-	3-	50	4-	4-	5+	4	4+	3-	2	2	47	203.9*	87	103	158
10	4-	3	2+	3-	3	3-	2	3+	27	4-	3	2-	2	3	2+	1+	4	27	207.5*	111	112	162
11	2+	3-	2+	3-	3	2+	2+	3-	22	3	3	2+	2	3-	2-	2-	3	21	217.2	131	131	173
12	3+	3	4+	5-	4+	6	7-	7-	110	3+	3-	3+	4+	4	5+	6-	6+	82	221.8*	115	130	178
13	6	5+	5+	4+	6-	4+	4	4-	95	7-	5-	5	4	4+	3	3	2+	72	208.8	115	124	164
14	5	6	4-	5+	6-	6-	4-	3-	92	5-	5+	3	5	5	5	3-	2+	67	206.8	111	121	161
15	2+	4-	3-	2	2-	2+	2+	2+	22	2+	3+	2-	1	1-	1+	1+	2-	14	196.3	102	105	150
16	2	1+	2-	1	1-	2-	1+	1+	10	3-	1	1-	0+	0+	0+	1+	1-	7	189.9	110	109	143
17	0+	1-	2-	1	3-	1-	1	1	8	0+	1-	1	0+	0	0+	0+	0+	3	187.5	100	104	141
18	1	2-	2+	2+	2-	3-	3	2+	19	0+	1	2+	3-	2	2	2+	2+	16	169.5	83	90	121
19	2+	2+	2-	2-	2-	1	1+	1+	13	2+	2+	1-	1	1+	0+	0+	1-	9	163.5	79	80	115
20	1-	0+	1-	1-	1	1	1	1	5	1-	0	0+	0	0+	0	0+	1-	2	161.2	73	74	112
21	1-	1+	1+	1+	2-	2	2+	2	11	0+	1	0+	0+	1-	1-	2-	1+	6	155.8	57	69	106
22	2	3-	2-	2-	1+	2-	1	2-	13	2+	2	2-	1	1-	1-	1+	1+	10	145.2	71	76	95
23	2-	1+	2-	2+	3-	3-	1+	1	14	1+	1+	1+	2+	2	2	0+	0+	10	139.1	64	73	88
24	2	2	2+	2+	2-	2	2	2+	17	1	1+	2-	2-	1	1+	1	1+	9	143.8	85	86	93
25	2	3-	2	2	2-	1+	3-	2+	16	1+	2-	2	2-	1+	1	2	1+	11	149.3	94	102	99
26	2	2	2	3-	2	2-	2-	2	15	1+	2	2	2	1+	2-	1+	1	11	154.5	103	121	105
27	2-	1+	2-	2+	3	2-	2+	4	21	2+	1+	1+	2-	3-	1-	1+	3	14	173.4*	140	151	125
28	2+	2+	3+	3-	2	2-	1+	1+	17	2	2+	3	3-	1+	1	1-	1	14	187.7	184	202	141
29	1	4-	3	3-	2-	2	2+	1+	20	1-	3-	2+	1+	1+	1	2-	1-	11	210.8	203	225	166
30	1	1+	1-	1	1-	1+	1+	1+	8	2-	1-	0+	0+	1+	1	1	1+	6	226.6	224	245	183

Mean 26.1 19.4 176.3 105.2 112.8 128.4

GEOMAGNETIC ACTIVITY INDICES

July 1990

Day	Kp Three-Hourly Indices								Sum	Ap	Cp	Km Three-Hourly Indices								Am	aa Provisional					
	1	2	3	4	5	6	7	8				1	2	3	4	5	6	7	8		N	S	M			
1	Q5	1+	1	1+	1+	1	1+	1+	2+	11	5	0.2	1+	1	1+	1	1	1+	1+	3-	10	15	7	9	13	CC
2	Q10	3-	2+	2-	1	2-	2-	1+	1	13+	6	0.3	3	3	2	1+	1+	2-	1+	1-	14	20	8	16	12	K
3		2	3	2+	1	1+	1	1+	2-	14-	7	0.3	2-	3	2+	1	1+	1-	1+	1+	12	15	6	13	8	CC
4		2-	1-	1+	2-	1-	3	3-	3+	15	8	0.5	1+	1-	2-	2	1	3-	3-	3	15	22	11	9	25	
5		2+	3-	1+	2-	2+	2-	4-	3-	18+	10	0.6	2	3-	1+	3-	3-	2	2+	2	18	28	15	20	23	
6		2-	2-	1	1	2-	2+	3-	2-	14-	7	0.3	1+	1+	1-	1-	1+	2+	2+	1+	10	16	8	9	15	C
7	Q8K	1	2-	2-	0+	1+	1	2	3	12	6	0.3	1	1+	2-	1-	1+	1	1+	3-	10	16	8	9	15	CC
8		1+	3-	3-	2+	2	3-	3-	3-	19	10	0.6	1+	3-	2+	2+	2	3-	2	3-	18	21	14	13	22	
9	Q4	2-	2	1	1	2	1+	1+	1-	11	5	0.2	2-	2-	1+	1+	1+	1	1-	1-	8	14	4	10	8	C
10	D5*	1-	4+	2+	4	4-	2	2-	2-	20+	14	0.8	1	4	3-	3	3+	2-	1+	2-	23	30	19	29	21	
11		2-	2	2	1+	1+	1	3	1+	14-	7	0.3	2-	2+	2	1+	2-	1+	3	1	14	16	11	13	14	
12		1+	3-	3	2+	1+	1	2-	2+	16-	8	0.4	1+	3-	3	3-	1+	1-	1+	2-	15	22	10	19	13	
13		3+	4	3	2+	1	3	3-	2	21+	13	0.8	3-	3	3	3-	1+	2	3-	2	22	27	18	29	16	
14		3-	1-	1+	2	3	3	4	3-	20-	12	0.7	2	1-	1+	2+	3	3-	3+	2+	19	27	20	15	31	
15		3-	3	2	2-	1+	2	2+	2	17	8	0.5	3-	3	2+	2-	2-	2-	3-	1+	17	19	14	18	15	
16		3-	2-	1-	1	1+	1	3-	2	13	7	0.3	3-	2	1	1+	1	1+	2	1+	12	17	7	12	13	CC
17	Q6	1+	2-	1	0+	1+	1	2-	3-	11	6	0.2	1	2	1+	1-	1+	1+	1+	2+	10	15	5	8	12	CC
18		3	1+	2+	1	1+	2	3-	1+	15	8	0.4	3-	2-	2	1	1	2	2+	1	13	21	11	13	18	
19	D4*	2+	3-	2+	3+	5-	3-	3	3	24	16	0.9	2-	3	2+	4-	4-	3-	3-	3-	27	29	29	26	33	
20	D3*	3+	3+	4+	3-	3+	2+	3	2+	25-	16	0.9	3-	3+	4-	3-	3-	2	2+	2	27	31	27	35	23	
21		2-	2-	1	1+	2-	2+	3	2-	14+	7	0.4	2-	1+	1	2-	1+	2	2+	1+	12	20	9	12	16	
22	Q7	2	2-	2-	1	2-	1+	1+	2+	13	6	0.3	2-	2	2	1	2	1	1	2-	11	17	8	14	11	CC
23	Q3	1	2+	0+	1-	0+	1+	1-	2-	8+	4	0.1	1	2-	1-	1-	0+	1+	1	1+	7	10	6	9	8	CC
24	Q2	1	2+	2-	1	0+	1	1+	0+	8+	4	0.1	1	2+	1+	1+	1-	1	1+	1-	8	10	7	12	5	CC
25	Q1	1	1+	1+	1+	1	1-	1-	0+	8-	4	0.1	1+	1+	2-	2-	1	1-	1-	0	7	9	6	9	6	CC
26		1-	0+	1	1	1	3-	5+	4	16	14	0.8	0+	0	1+	1	1	2+	4	3+	17	34	11	7	39	
27		1	2+	2	3-	2-	2+	3	2+	17+	9	0.5	1+	3-	2	2+	2-	2	3	2-	16	23	14	16	21	
28	D1	3	5-	6+	5	7-	7+	8-	8-	48+	102	1.9	3	4	6	5+	6-	6-	6+	6+	124	113	122	89	145	
29	D2	7	7	6+	6-	6	5-	4	4+	45	75	1.8	6	6-	6-	6-	5	4-	3	4-	99	93	72	117	49	
30		2	2+	3	3	2-	2-	3-	4	20+	12	0.7	2	2+	3	3-	2-	2-	2	3+	19	27	23	24	26	
31	Q9K	3	2-	3-	2-	1	0+	1-	1	12	6	0.3	3-	1+	3-	2-	1	0+	1-	1	11	22	6	20	8	
Mean											14	0.53									20.8	25.8	17.4	21.6		
Day	Kn Three-Hourly Indices								An	Ks Three-Hourly Indices								As	Sa	Prov						
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8			Ri	Ra	Rs	IMF			
1	1+	1+	1+	1+	1+	1+	2-	3-	12	1+	1-	1+	1-	0+	1-	0+	3-	7	248.3	272	261	206				
2	3-	3-	2-	2-	2-	2	2-	1+	15	3+	3	2	1	1	1+	1-	0+	14	267.6	253	242	227				
3	2	3+	2+	1+	2	1	2-	2-	15	1	3	2+	1-	1-	1-	1-	1-	10	253.8	245	240	212				
4	2-	1-	2+	3-	1+	3	3	3+	20	1-	1-	1+	1	1-	2+	2+	2	10	238.3*	229	209	195				
5	3-	3	2	3-	3-	2-	3	3-	22	2-	3-	1	3-	3-	2	2-	1+	15	231.6	202	184	188				
6	2-	2-	1	1+	2	3-	3-	2-	14	1	1-	0	0+	1-	2-	2	1	7	221.8	186	169	178				
7	1+	1+	1+	1	2-	1	2-	3	12	1	1+	2-	0+	1	1-	1+	2+	9	215.7	173	158	171				
8	2-	2+	2+	3-	2+	3-	2+	2+	19	1	3	2+	2	2-	3-	2	3-	17	189.6	135	132	143				
9	2-	2	1+	2-	2-	2-	1+	1	11	1+	1+	1	1-	1-	0+	1-	0+	5	170.9	102	104	123				
10	1	4+	2+	4-	4-	2	2-	2+	29	1-	4	3	2+	3	1	1-	1	18	164.0	88	94	115				
11	2-	3-	2	1+	2	2-	3	1+	16	1+	2-	2-	1-	2-	1-	3	1-	11	160.2	106	107	111				
12	1+	3-	3	3-	2	1+	2-	2+	17	1+	3-	3	2+	1	0+	1	1+	13	160.9	110	104	112				
13	3-	3+	3+	2+	2-	2+	3-	2+	23	3	3	3	3	1-	1+	3	2	22	161.5	114	106	112				
14	2+	1	2-	2+	3	3	3	2+	21	2	1-	1	2	3	2-	3+	2+	17	155.4	118	107	106				
15	2+	3-	2+	2	2	2+	3-	1+	17	3	3	3-	1+	1+	1+	3-	1	17	149.1	98	96	99				
16	2+	2+	1+	2-	2-	2-	3-	2	15	3	2-	1	1-	0+	1	1	1-	9	146.5	95	90	96				
17	1+	2	1+	1	2-	2	2-	2+	13	1-	2+	1+	0+	0+	0+	1-	2+	8	147.6	87	76	97				
18	3-	2-	2+	1+	2-	2	2	1+	14	3-	1+	2-	1-	0+	2	2+	1	11	144.7	57	55	94				
19	2+	3-	2+	4-	4+	3	3-	3	32	1	3	2+	3+	3+	2	3-	2	23	145.3	61	60	95				
20	3	4-	4+	3	3-	3-	2+	2+	32	2	3	3	3-	3-	2-	2+	2	21	154.0	81	84	104				
21	2-	2-	1+	2-	2	2+	3-	2-	14	2	1	1-	2-	1	1+	2+	1+	10	159.2	123	127	110				
22	2-	1+	2+	1+	2	1+	1+	2	12	1+	2+	2-	1-	2	1-	1-	2-	10	166.0*	143	144	117				
23	1	2	1	1-	1-	2-	1	1+	8	1-	2-	1-	0+	0+	1+	1-	1+	6	180.4	165	174	133				
24	1	2+	2-	1+	1-	1+	2	1	10	1-	2+	1+	1+	0+	0+	1-	0+	7	186.6	194	201	140				
25	1+	2-	2-	2+	1+	1	1	0+	10	1	1	1+	1	1-	1-	0+	0	5	213.6	194	199	169				
26	1-	0+	1+	1+	1+	3-	4+	4	23	0	0	1	1-	0+	1+	3+	3-	10	209.9	186	190	165				
27	1+	3-	2	3-	2	2+	3	2	19	1+	2+	2	2-	1	1+	3-	1+	13	197.2	177	173	151				
28	3+	5-	6+	5+	5+	6-	6+	6	126	3-	4-	5+	5	6-	6	6+	7-	122	193.1	159	154	147				
29	6-	6	6	6	6-	4	3	4-	106	7-	6-	5	5+	5-	3+	3	4	93	180.3	144	139	133				
30	2+	3-	3	3	2-	2	3-	4-	24	1+	2-	3-	2	1+	1+	1+	3	14	188.3	117	118	141				
31	3-	1+	3-	2	1+	1-	1-	1	13	2+	1+	2+	1+	1-	0+	0+	1-	9	183.4	142	141	136				
Mean											23.7									18.2	186.6	147.0	143.2	139.5		

176
Late
May 90

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

MAY 1990

Storm Sudden Commencements (ssc)									Solar Flare Effects (sfe)			
Day	Time	Quality:	Station Group*						Day	Begin-End	Station(s)	
09	1843	C:	EBR	COI	BJI	SPT	LNP	HYB	ETT	04	0829-0844	ETT
										04	1048-1124	MPO
18	0739	A:	BJI	SPT*	HYB	ETT	TAN	MPO		04	1444-1451	TEN
		B:	SOD	COL	NUR	LER	ESK	WNG		04	1502-1510	TEN
			HAD	GCK*	MMB*	AQU	EBR	FRD		07	1706-1725	TEN
			KNY*	GNA*	KGL					09	0405-0420	LNP
		C:	NGK	BDV*	CLF	NAC*	COI	KAK*		10	1013-1050	AQU EBR TEN
										10	1920-2038	LER ESK WNG HAD EBR
21	1021	A:	ETT							11	0541-0610	MMB KAK KNY LNP ETT
		B:	BJI	SPT	FRD	KNY*	TEN	LNP		11	2058-2125	KAK KNY
			HYB	MPO	KGL					12	0045-0100	LNP
		C:	CLF	GCK	MMB	EBR*	KAK			12	1129-1155	LER ESK WNG HAD GCK AQU EBR SPT TEN
										12	1230-1248	MPO
25	0510	B:	LER*	ESK*	HAD*	COI	BJI	LNP	ETT	13	0327-0336	LNP
		C:	SPT*	MPO						13	1449-1506	SPT
										14	1453-1500	TEN
26	2037	A:	DOB	NUR	LER*	ESK*	WNG*	HAD	CLF	15	0028-0033	LNP
			NAG	GCK	AQU	EBR*	COI*	BJI	SPT*	15	1253-1410	LER ESK WNG HAD EBR SPT TEN
			FRD*	KNY	TEN*	LNP	HYB	ETT	TAN	17	0323-0340	LNP
			MPO	GNA*						19	0536-0545	MPO
		B:	COL	NGK	BDV*	MMB	KAK	CNB*	KGL	19	1249-1325	WNG
										20	0411-0416	LNP
30	0904	A:	LNP	ETT	TAN					21	0121-0129	LNP
		B:	TEN*	HYB						21	0507-0518	LNP
		C:	FRD*							23	0410-0500	MMB KAK KNY LNP
										24	2047-2138	LER ESK HAD CLF MMB KAK KNY
										25	0256-0308	LNP
										26	0111-0128	LNP

Reporting Observatories: (up to the 3rd of July 1990):

SOD COL DOB NUR LER ESK WNG NGK HAD BDV CLF
NAG GCK MMB AQU EBR COI BJI SPT FRD KAK KNY
TEN LNP HYB ETT TAN MPO GNA 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.

177
Late
Jun 90

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

JUNE 1990

Storm Sudden Commencements (ssc)				Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*		Day	Begin-End	Station(s)
12	0820	A: SOD* DOB* NUR SPT* FRD LNP B: NGK* VAL BDV* COI* KAK* KNY	WNC* CLF* HRB* MMB BJI ETT TAN CZT* KGL* NAG* GCK* AQU* EBR* HYB AMS*	09	1647-1720	WNC BDV
				10	0716-0745	MMB KAK KNY LNP (SSC: HYB ETT)
				11	0937-0940	LNP
				11	0942-1020	WNC BDV CLF MMB HYB ETT (SSC: SPT TAN)
				11	1501-1505	TEN
13	1415	A: DOB* NUR* WNC* NAG* GCK* AQU* TEN* LNP ETT B: VAL* HYB AMS	NGK* BDV* CLF* HRB* COI* BJI SPT* TAN* CZT* KGL*	12	0050-0100	LNP
				12	0019-0615	MMB KAK KNY LNP
				12	1803-1806	TAN (SSC: NAG AQU)
				23	1541-1548	TEN
				24	0256-0315	LNP
14	0310	A: WNC* CLF* NAG* KNY* TEN ETT* B: NGK* BDV* HYB	MMB* AQU EBR* COI KAK* TAN	25	0131-0139	LNP
				25	1420-1434	TEN
29	0343	B: HRB COI C: WNC* BDV* LNP				

Reporting Observatories: (up to the 31st of July 1990):

SOD DOB NUR WNC NGK VAL BDV CLF HRB NAG GCK
MMB AQU EBR COI BJI SPT FRD KAK KNY TEN LNP
HYB ETT TAN 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.

178
Late
Jul 90

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

JULY 1990

Storm Sudden Commencements (ssc)			Solar Flare Effects (sfe)		
Day	Time	Quality: Station Group*	Day	Begin-End	Station(s)
10	0445	A: WNG* BJI LNP ETT* TAN CNB*	01	0025-0030	LNP
		B: SOD* DOB NUR* NAC* GCK* AQU* SPT*	05	0348-0353	LNP
		GNA*	06	0509-0520	LNP MPO
		C: NGK* EBR QUE	08	0444-0048	LNP
16	1800		09	1242-1306	WNG
		A: COI*	12	1342-1354	WNG
		B: WNC* AQU TAN	14	0715-0728	HYB ETT (SSC: LNP MPO)
		C: GCK EBR SPT* HYB ETT	25	1228-1243	AQU
		si: QUE	26	0810-0824	ETT
			26	2051-2100	TAN
28	0108	A: COI* BJI	27	0003-0006	LNP
		B: NUR* WNC* NAC* AQU* HYB ETT MPO	30	0708-0715	LNP
		C: NGK GCK* EBR* QUE			
		si: LNP			
28	0331	A: SOD* DOB* WNC* GCK* MMB* COT*			
		BJI SPT* FRD* KAK* HTY* KNY*			
		HYB ETT* MPO CNB* CZT DUM			
		B: NUR NGK* NAC* AQU* EBR* QUE GNA* AMS			

Reporting Observatories: (up to the 3rd of September 1990):

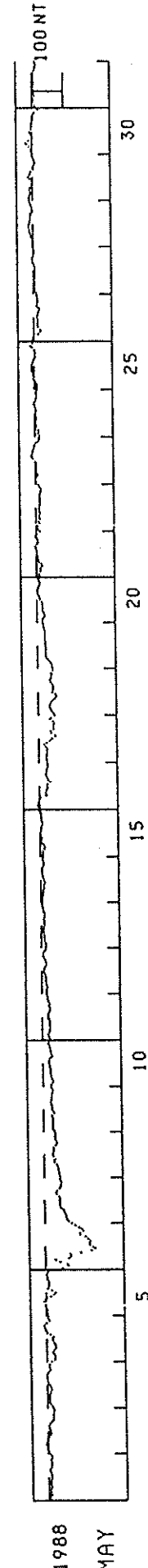
SOD DOB NUR WNC NGK NAC GCK MMB AQU EBR COI BJI SPT FRD
KAK HTY KNY QUE LNP HYB ETT TAN MPO GNA CNB AMS CZT DUM

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.

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

MAY 1988

DAY	UNIT+NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
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7	-76	-72	-70	-70	-66	-62	-59	-52	-50	-50	-47	-47	-51	-46	-39	-38	-41	-47	-51	-53	-53	-54	-53	-50	-51
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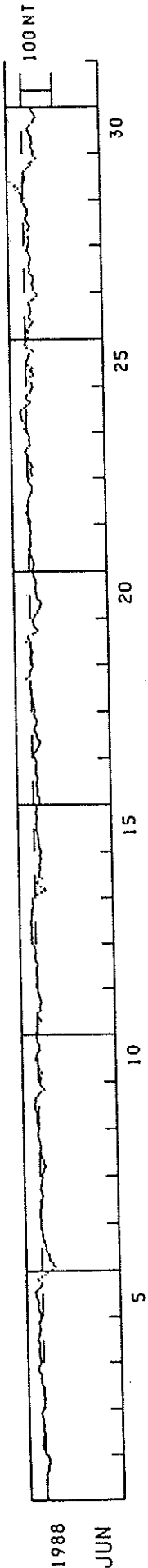
1988
MAY

WDC-C2 FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

JUNE 1988

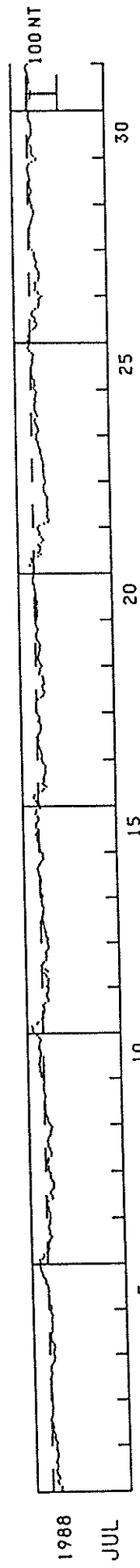
DAY	UNIT=NT		JUNE 1988																												U.T.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
1	-5	-4	-2	0	-1	-1	-2	-2	-6	-4	-3	-3	-2	-2	-6	-8	-8	-9	-11	-13	-12	-12	-10	-7							
2	-1	2	6	7	10	9	6	6	6	5	2	3	5	5	4	4	8	5	7	7	8	10	10	7							
3	3	0	0	0	-1	0	2	1	1	3	4	7	9	9	8	8	8	9	12	16	17	15	12	9							
4	10	10	11	13	12	13	13	12	10	11	13	16	15	12	11	11	11	10	10	12	11	9	7	7							
5	7	8	12	14	14	13	13	12	15	18	21	21	24	16	10	5	2	2	11	13	2	-8	-17	-23							
6	-33	-43	-38	-36	-29	-25	-23	-23	-22	-17	-14	-15	-13	-11	-7	-7	-5	-4	-4	-3	-2	1	0	1							
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8	-9	-10	-13	-15	-18	-14	-14	-13	-9	-8	-6	-2	-3	-4	-3	-2	-2	0	2	5	4	5	2	1							
9	3	5	7	8	7	7	6	6	9	12	12	13	11	8	11	8	1	-2	-7	-18	-15	-9	-5	-5							
10	-7	-9	-6	-12	-10	-6	-4	-2	2	1	9	7	5	3	0	-5	-5	-5	-3	1	2	3	3	5							
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13	12	17	11	11	13	14	13	11	12	14	15	13	12	12	11	10	10	10	8	6	7	9	9	9							
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20	-16	-17	-23	-25	-31	-33	-35	-35	-32	-25	-22	-22	-21	-18	-19	-19	-20	-20	-20	-19	-15	-14	-12	-10							
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24	4	8	2	0	6	11	14	17	17	20	20	15	7	-1	-8	-13	-6	2	-1	-5	-13	-16	-18	-20							
25	-18	-17	-10	-3	-15	-24	-24	-19	-17	-20	-9	-4	-2	-6	-10	-11	-12	-26	-20	-5	2	1	-1	-11							
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HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

JULY 1988

DAY	UNIT-MNT		HOURS																								U.T.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
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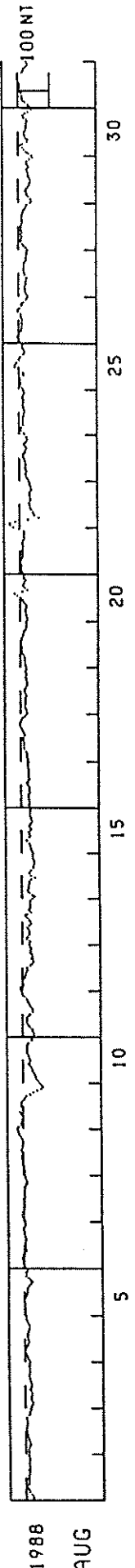


WDC-C2 FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

AUGUST 1988

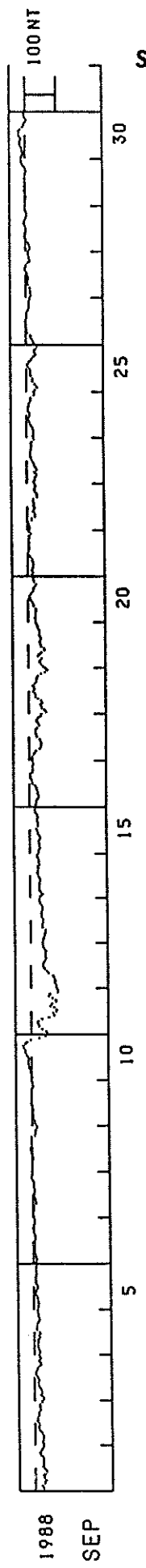
DAY	UNIT=NT		AUGUST 1988																								U.T.				
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HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

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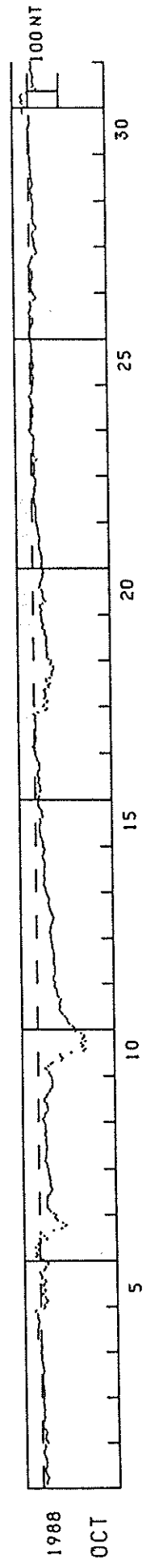
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HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

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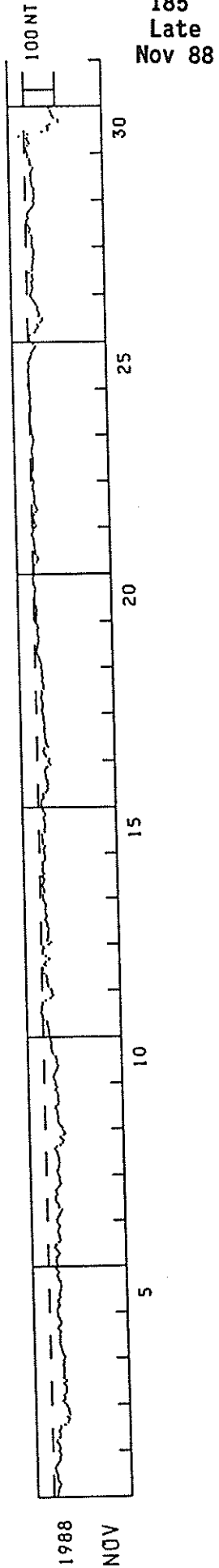
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HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

NOVEMBER 1988

DAY	UNIT=NT		NOVEMBER 1988																								U.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
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3	-42	-35	-43	-41	-40	-46	-47	-48	-50	-46	-41	-48	-48	-41	-40	-41	-40	-42	-42	-40	-40	-43	-41	-44				
4	-45	-41	-39	-36	-35	-34	-32	-31	-30	-30	-32	-31	-32	-34	-29	-26	-31	-36	-37	-32	-30	-26	-27	-25				
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6	-29	-25	-26	-27	-27	-34	-35	-32	-27	-22	-24	-27	-36	-41	-39	-36	-38	-33	-34	-36	-39	-37	-33	-31				
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20	-8	-7	-9	-9	-9	-10	-9	-7	-3	-2	-3	-3	-3	-3	-4	-7	-6	-3	0	0	2	1	-1	0				
21	-1	-3	-6	-3	-7	-12	-15	-19	-15	-10	-8	-8	-7	-7	-6	-5	-6	-4	-1	1	0	-4	-3	-9				
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25	3	5	2	0	0	1	0	0	3	3	0	-2	0	0	-4	-6	-9	-10	-10	-15	-21	-23	-15	-12				
26	-7	-6	-4	-9	-22	-25	-31	-34	-31	-40	-47	-48	-36	-37	-37	-33	-33	-32	-28	-24	-20	-15	-12	-11				
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28	-20	-17	-18	-19	-21	-17	-10	-11	-13	-12	-9	-4	-1	-6	-9	-6	-5	-8	-14	-18	-24	-28	-27	-24				
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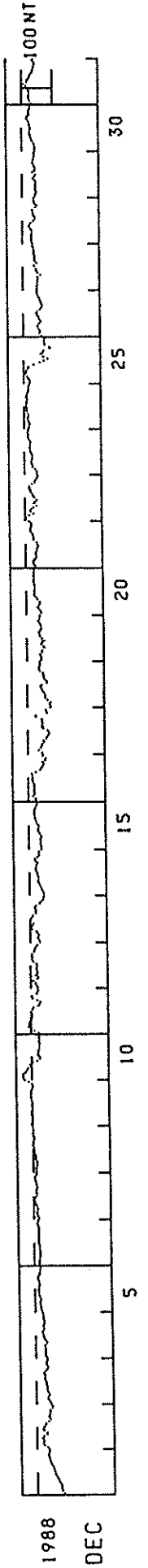


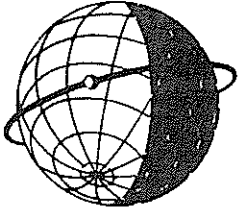
WDC-C2 FOR GEOMAGNETISM, KYOTO UNIVERSITY

HOURLY EQUATORIAL DST VALUES (PROVISIONAL)

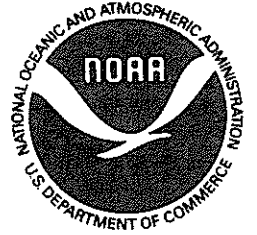
DECEMBER 1988

DAY	UNIT=NT		DECEMBER 1988																												U.T.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
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2	-35	-25	-20	-23	-22	-19	-34	-34	-34	-24	-20	-24	-29	-31	-39	-45	-40	-40	-44	-44	-44	-44	-51	-53	-47	-47	-47	-47	-47	-47	-47	
3	-45	-42	-38	-39	-42	-41	-36	-36	-36	-34	-33	-32	-29	-30	-26	-26	-27	-27	-27	-28	-28	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	
4	-35	-30	-32	-32	-33	-31	-30	-38	-36	-30	-26	-28	-24	-22	-27	-28	-26	-26	-28	-30	-28	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	
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6	-17	-17	-18	-19	-19	-20	-20	-19	-19	-18	-17	-14	-15	-16	-16	-15	-15	-15	-15	-15	-15	-13	-11	-13	-16	-16	-16	-16	-16	-16	-16	
7	-18	-13	-11	-12	-13	-13	-11	-9	-6	-4	-5	-9	-12	-11	-9	-11	-13	-13	-11	-9	-7	-6	-6	-11	-11	-11	-11	-11	-11	-11	-11	
8	-11	-10	-12	-14	-15	-13	-9	-10	-9	-6	-5	-3	-3	0	-2	-2	-6	-6	-6	-2	0	-2	-1	0	2	2	2	2	2	2	2	
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27	-45	-45	-47	-48	-48	-49	-50	-57	-50	-44	-44	-38	-37	-45	-41	-38	-39	-39	-36	-37	-36	-34	-33	-33	-33	-33	-33	-33	-33	-33	-33	
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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."